WESTERN POWERPOOL

Western Power Pool

Board of Directors Quarterly Meeting Agenda

September 30, 2026, 9:00 a.m.–12:00 p.m. PDT

Location: WPP Office, 7525 NE Ambassador Place, Suite M, Portland, Oregon, 97220 with virtual attendance via Microsoft Teams as noted

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Invited Attendees:

Board: Andy Ott (Chair), Bill Drummond, Susan Ackerman, Doug Howe, Michelle Bertolino

Staff and Guests: Sarah Edmonds, Lisa Hardie, Rebecca Sexton, Ryan Roy, Eric Campbell, Carla Hudson, Dave Zvareck, Charles Hendrix with SPP (virtual), Maya McNichol, Michael O'Brien

Time	Agenda Items	Presenter(s)
08:30 a.m.	Pastries & Coffee Served	
09:00 a.m.	Meeting Opening • Call to Order • Determination of a Quorum • Review of Agenda • Approval of June 4, 2026, Meeting Minutes	Andy Ott
09:05 a.m.	Public Comments	Andy Ott
09:10 a.m.	Updates/Reports • CEO Report • Statement on BPA Administrator Letter • Finance Committee Report	Sarah Edmonds, Susan Ackerman

09:20 a.m.	WRAP Consent Agenda	Dave Zvareck
	• Approve 2026-NTFP-03: Participant-to-Participant Joint Contract Accreditation Form (JCAF)	
	• Approve 2026-NTFP-04: Edits to BPM 202 on Multi-day/Operating-day File Prioritization	
	• Approve 2026-NTFP-05: Forward Showing (FS) Deadline Extension for Software System Failure + Deficiency Charge Clarification	
	• Approval 2026-EP-02: Updated Onboarding Timelines	
09:30 a.m.	WRAP Individual Approval Items	
	• Approve Demand Response Qualifying Capacity Contribution (QCC) Task Force Proposal	Michael O'Brien
	• Approve Qualifying Capacity Contribution (QCC) for Long Duration Storage Resources Task Force Proposal	Maya McNichol
10:25 a.m.	10-Minute Break	
10:35 a.m.	WRAP Individual Approval Items – Continued	
	• Approve 2026-EP-04: Rockies Subregion	Dave Zvareck
	• Approve 2026-EP-05: Capacity Critical Hours (CCH) by Subregion	Dave Zvareck
	• Review Rockies Subregion Planning Reserve Margins (PRM) for Summer 2027 and Winter 2027-2028 Presentation	Charles Hendrix

	• Conditionally Approve Rockies Subregion Planning Reserve Margins (PRM) for Summer 2027 and Winter 2027-2028	Dave Zvareck
	• Approve 2026-EP-03: Deficiency Charge Deferral / Removing Critical Mass	Dave Zvareck
12:00 p.m.	Adjourn	Andy Ott

Western Power Pool (WPP) Board of Directors Meeting
Meeting Minutes
June 4th, 2026, 9:00 AM - 10:25 AM PDT

Location: In-Person at the Western Power Pool Office at 7525 NE Ambassador Place, Suite M, Portland, OR, 97220 with Virtual Microsoft Teams Participants (as noted)

Attendees:

Board of Directors:	Andy Ott (Chair), Bill Drummond, Susan Ackerman (virtual), Doug Howe (virtual), Michelle Bertolino
Staff and Invited Presenters:	Sarah Edmonds, Lisa Hardie, Rebecca Sexton, Ryan Roy, Eric Campbell, Carla Hudson, Dave Zvareck, Charles Hendrix with SPP (virtual), Maya McNichol

1. **Call to Order**
   The regular meeting of the Western Power Pool Board of Directors was called to order at 9:00 AM on June 4th, 2026, by Chair Andy Ott.

2. **Determination of a Quorum**
   A quorum was confirmed by Secretary Doug Howe.

3. **Approval of the Agenda**
   Andy Ott asked whether there were any changes to the agenda. No changes were requested.

   A motion to approve the agenda was made by Bill Drummond and seconded by Michelle Bertolino. The motion passed unanimously.

4. **Approval of Meeting Minutes**
   Andy Ott asked whether there were any amendments to the March 19th, 2026, meeting minutes or the May 6th, 2026, supplemental meeting minutes. No amendments were requested.

   A motion to approve the March 19th, 2026, meeting minutes and the May 6th, 2026, supplemental meeting minutes was made by Bill Drummond and seconded by Michelle Bertolino. The motion passed unanimously.

5. **Public Comment**
   Andy Ott asked for public comments. None were provided.

6. **CEO Report**
   Sarah Edmonds discussed changes to WRAP, including WPP's assumption of forward showing responsibilities for binding participants. Ryan Roy reported that WPP expected to hire three new staff members over the next several months.

7. **Finance and Audit Committee Report**
   Michelle Bertolino reported that WPP received a clean audit report covering the 18-month period ended December 2025, reflecting WPP's transition to a fiscal year. She noted that the Finance and Audit Committee met three times, reviewed the audit presentation, and recommended approval of the amendment to the Delegation of Budget Authority Policy. KeyBank also provided an investment portfolio update, and WPP filed its annual Form 990 in May.

8. **WRAP Proposals**
   a. **2026-NTFP-02 BPM 105 and 202 Edits**
      Dave Zvareck presented 2026-NTFP-02 and described the proposed edits to Business Practice Manuals 105 and 202, including changes to the operational testing timelines in BPM 105. He confirmed that the Resource Adequacy Participant Committee supported the proposal unanimously.

      A motion to approve 2026-NTFP-02 and the associated edits to BPM 105 and BPM 202 was made by Michelle Bertolino and seconded by Bill Drummond. The motion passed unanimously.

   b. **2026/2027 PRC Workplan**
      Dave Zvareck reviewed the Program Review Committee change-control process, prioritized concepts list, and schedule. The committee received twelve change requests, narrowed the list to nine following a level-of-effort review, and established a cut line identifying the concepts planned for work during the year. He noted that the Board's approval included the workplan's implementation and proposal-development activities.

      A motion to approve the 2026/2027 PRC Workplan was made by Bill Drummond and seconded by Michelle Bertolino. The motion passed unanimously.

   c. **Planning Reserve Margin Task Force Proposal**
      Maya McNichol presented the Planning Reserve Margin Task Force proposal. The task force received five sets of comments and made significant revisions, including one change requested through the Committee of State Representatives process. The task force reevaluated the Forward Showing Planning Reserve Margin and Forward Showing Capacity Requirement, including their timing and modelling methodology.
      The proposal would replace the current nine-month-ahead approval schedule with a five-year planning outlook. The proposal would also shorten the winter binding season to November 20th through February 28th or 29th and align the treatment of

contingency reserves with the Reserve Sharing Group. Implementation would require changes to the WRAP tariff and eight business practice manuals. Andy Ott noted that the requested approval included both the proposal and the implementation timeline.

A motion to approve the Planning Reserve Margin Task Force proposal and its associated implementation timeline was made by Michelle Bertolino and seconded by Bill Drummond. The motion passed unanimously.

d. Winter 2027-2028 and Winter 2030-2031 Advisory Advance Assessment Results

Charles Hendrix reviewed the Winter 2027-2028 analysis and the five-year advisory analysis for Winter 2030-2031. His presentation covered loads and resources, the contribution study, and the loss-of-load expectation study. He also reviewed changes to the WRAP footprint resulting from participant withdrawals and the transition to binding operations, including the removal of Zones 6, 7, and 11 and the movement of Idaho to the Mid-Columbia subregion. He summarized subregional resources and the treatment of wind, solar, energy storage, run-of-river, thermal, storage hydro, and hybrid resources. No comments or questions were received from the Board or the public.

e. Winter 2027-2028 Planning Reserve Margins

Andy Ott noted the importance of the planning reserve margins because they would apply to WRAP's first binding season. Rebecca Sexton confirmed that there were no additional items beyond those included in the memorandum.

A motion to approve the Winter 2027-2028 Planning Reserve Margins Memorandum was made by Michelle Bertolino and seconded by Bill Drummond. The motion passed unanimously.

f. Summer 2028/Winter 2028-2029 Study Scope

Rebecca Sexton introduced the study scope that SPP will use for the Summer 2028 and Winter 2028-2029 binding seasons. Maya McNichol described proposed changes including moving Idaho to the Northwest subregion, adding Load and Resource Zone 10 in the Rockies subregion, and revising variable energy resource zones to reflect changes in participation. The related changes to the Planning Reserve Margin Task Force proposal, include limiting the analysis to 40 weather years and applying the peak-load methodology to the Summer 2028 season.

Charles Hendrix reviewed the revised zones and maps, resource locations, advance assessment LOLE and ELCC study timelines, load and area modelling, and the planned September draft results. No comments or questions were received from the Board or the public.

9. Amendment to Delegation of Budget Authority Policy

Eric Campbell presented the proposed amendment to the Delegation of Budget Authority Policy. The Board adopted the policy in the first quarter of 2026, authorizing the CEO to make budget adjustments of up to five percent without Board approval. The amendment recognizes the authority of WPP's legacy committees to approve similar within-year budget adjustments without prior Board approval. The policy also requires quarterly reporting to the Finance and Audit Committee and the Board.

Michelle Bertolino reported that the Finance and Audit Committee reviewed the amendment and recommended its approval by the Board.

A motion to approve the amendment to the Delegation of Budget Authority Policy was made by Bill Drummond and seconded by Michelle Bertolino. The motion passed unanimously.

10. Adjourn

The regular meeting of the Western Power Pool Board of Directors was adjourned at 10:25 AM on June 4th, 2026, by Chair Andy Ott.

_____

Doug Howe, Secretary

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Date Approved by the Board of Directors

Western Resource Adequacy Program

Change Request Form – 2026-NTFP-03 Post-Public Comment

Lead Sponsor Information	
Name: Dave Zvareck	Organization: Western Power Pool
Title: WRAP Director	Phone Number: (503) 445-1074
Email: WRAP@westernpowerpool.org	Date of Submission: ~~6/10/2026~~7/27/2026

Co-Sponsors Information (optional)	
Name:	Organization:
Phone Number:	Email:
Name:	Organization:
Phone Number:	Email:
Name:	Organization:
Phone Number:	Email:

Type of Change Requested

Check one*:

- ☐ Correction *(i.e., revising erroneous language or language that needs clean-up for grammatical errors or inconsistency across governing documents - no changes to intent or policy)*
- ☐ Clarification *(i.e., revising language to better represent existing intent, no changes to functionality or policy)*
- ☒ Enhancement *(i.e., revising language to expand upon existing intent or functionality)*
- ☐ New Protocol, Business Practice, Criteria, Tariff *(i.e., new language to accommodate new functionality or policy not existing today)*
- ☒ Change *(i.e., a change in the existing policy – will replace an existing language)*
- ☐ Other *(i.e., changes that do not fall into the categories listed above)*

Description of Change

Provide a description of the issue*:

Business Practice Manual (BPM) *106 Qualifying Contracts* describes how a contract may be able to receive Qualifying Capacity Contribution (QCC) towards a Participant's Forward Showing (FS) Capacity Requirement and explains when a Joint Contract Accreditation Form (JCAF) is required to ensure contractual resources are not double counted. The Proposed changes to BPM 106 in this NTFP would:

i) Reduce the administrative burden involved with verifying contracts between Participants via JCAFs by removing the JCAF and signature requirement for Participant-to-Participant transactions; and

ii) Allow a WRAP Participant and its customer whose load is served through a contract with an entity that is not the WRAP Participant ("Embedded Load Customer") to agree to the WRAP Participant's use of the customer's ~~loads and resources~~ contract(s) in its FS Demonstration.

Please provide the following information if known and/or available.

1. Provide a proposed solution to the issue described:

Participant-to-Participant JCAFs

BPM 106 currently requires JCAFs to be: (a) signed by both buyer and seller for Resource Specific Capacity Agreements and/or Systems Sales between WRAP Participants, and (b) submitted by the Participant buyer as part of its Forward Showing (FS) Demonstration. Under the proposed solution, the contents of the JCAF would instead be populated by the Participant buyer in the Forward Showing software system and acknowledged by both Participant buyer and Participant seller as part of their FS Demonstrations. ~~The FS Demonstration would also include an acknowledgement of WRAP Qualifying Transmission, removing the need for the seller to sign the current transmission attestation in BPM 106 Appendix A (see Section 4).~~

Embedded Load Customers

A WRAP Participant may have a customer (new definition: "Embedded Load Customer") whose load is served through a contract (new definition: "Embedded Load Qualifying Contract") with an entity that is not the WRAP Participant. This NTFP would allow such a WRAP Participant to agree with its Embedded Load Customer to use the latter's ~~loads and resources~~contracts in its FS Demonstration (new definition: "Embedded Load Acknowledgement and Resource Assurance Agreement"). A

Participant including an Embedded Load Qualifying Contract in its FS Demonstration via an Embedded Load Acknowledgement and Resource Assurance Agreement would also require a JCAF with the seller to the Embedded Load Customer.

2. Provide the specific document and language you would like changed:

Please see the attached redline changes to BPM 106 that have also been reflected in an attached redlined JCAF. Note that JCAF changes may be made outside of the WRAP Proposal process as it is a non-governed document.

3. Provide a suggestion for how language could be updated to address issue:

See above.

Impact of Change

Describe the benefits that will be realized from this change*:

Participant-to-Participant JCAFs

Removing the requirement for JCAFs and JCAF signatures between Participants will significantly reduce the administrative burden on Participants and could also lead to reduced FS Deficiencies.

Embedded Load Customers

This NTFP would allow a Participant and its Embedded Load Customer to acknowledge and agree that, solely for the purposes of the WRAP, the former can include the latter's ~~load and resources or~~ contract(s) as part of its FS Demonstration.

Please provide the following information if known and/or available.

1. Any data/information available that would characterize the importance or magnitude of the issue (allows for file attachments):

WRAP Participants have strongly advocated for the removal of the seller signature requirement on Participant-to-Participant JCAFs. As such, WPP proposes to reduce the administrative burden by removing the JCAF and requisite JCAF signature requirement for transactions between Participants. Participant-to-Participant transaction evidencing will instead be moved to the Forward Showing software system. This change is not intended to lower the barrier or create different accreditation requirements for Participants as compared to non-Participants.

Non-Task Force Proposal Request (optional)

A flag as a Non-Task Force Proposal indicates the Concept could be implemented without requiring further development into a Proposal by a Task Force. Please check the box below if you would like this to be considered as a Non-Task Force Proposal

☒ I would like this to be flagged as a Non-Task Force Proposal

WESTERN POWERPOOL

Western Resource Adequacy Program

106 Qualifying Contracts

100 – Forward Showing

Revision History

Manual Number	Version	Description	Revised by	Date
106	0.1	RAPC Glance Version	Michael O'Brien	3/12/2024
106	0.2	Public Comment Version	Michael O'Brien	3/20/2024
106	0.3	RAPC & PRC Discussion	Michael O'Brien	7/30/2024
106	0.3.1	RAPC Edits	Rebecca Sexton	8/20/2024
106	0.4	RAPC Endorsement	Michael O'Brien	9/4/2024
106	0.5	Board Consideration	Michael O'Brien	9/12/2024
106	1.0	Board Approved	Rebecca Sexton	9/14/2024
106	2.0	Firm Tx TF Updates	Maya McNichol	3/17/2026
106	3.0	Annual BPM Review	Dave Zvareck	3/19/2026
106	3.1	PTP JCAFs/Acknowledgement Agreement	WPP Staff	6/10/2026
106	3.2	Public Comment	WPP Staff	7/27/2026

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106 Qualifying Contracts

1. Introduction

The Qualifying Contracts Business Practice Manual (BPM 106): describes how a contract may be able to receive Qualifying Capacity Contribution (QCC); explains when a Joint Contract Accreditation Form (JCAF) is required for transactions between a Participant and a non-Participant to ensure resources are not double counted and QCC is tracked entering and leaving the WRAP Region; outlines the calculations for determining Net Contract QCC; and explains the process of Resource Adequacy (RA) Transfers (the transfer of QCC) between Participants. In addition, BPM 106 includes attestations required for certain specified Qualifying Contracts.

1.1. Intended Audience

BPM 106 is intended for Western Power Pool (WPP) Western Resource Adequacy Program (WRAP) Participants and other interested individuals or entities. BPM 106 will be particularly useful for individuals responsible for their organization's Forward Showing (FS) Submittal (see *BPM 108 FS Submittal Process*) that need to ensure their organization's Qualifying Contracts are recorded appropriately.

1.2. What You Will Find in This Manual

BPM 106 includes information on contract eligibility, JCAF and other requirements, QCC calculations, and RA Transfers.

1.3. Purpose

BPM 106 provides an overview of Qualifying Contracts and the processes for determining QCCs.

1.4. Definitions

All capitalized terms that are not otherwise defined in this BPM have the meaning set forth in the Tariff or in another BPM.

Resource-Specific Capacity Agreements: Bi-lateral agreements that convey capacity from specific resources from one party to another party.

Contracted Capacity Firm Delivery Point: The point up to which the seller of a Qualifying Contract attests to using ~~or affirms its use of~~ WRAP Qualifying Transmission rights to deliver the energy. This is the point from which the Participant is responsible for mapping transmission to load in the FS Submittal (see BPM 108).

Embedded Load Acknowledgment and Resource Assurance Agreement: An agreement (available on the WPP website) between a WRAP Participant and its Embedded Load Customer that the Embedded Load Customer's load and associated

Embedded Load Qualifying Contract(s) will be included as part of the WRAP Participant's FS Demonstration.

Embedded Load Customer: A WRAP Participant's customer whose load is wholly or partially served through a contract with an entity that is not the WRAP Participant, but whose load and associated Embedded Load Qualifying Contract is included as part of the WRAP Participant's FS Demonstration.

Embedded Load Qualifying Contract: A Resource-Specific Capacity Agreement or System Sale held by a WRAP Participant's Embedded Load Customer, as the buyer, with a third-party supplier, to which the WRAP Participant is not a party, that meets the requirements to be assigned QCC and that the Embedded Load Customer has agreed that the WRAP Participant can include it in the WRAP Participant's FS Demonstration pursuant to an Embedded Load Acknowledgement and Resource Assurance Agreement.

FS Demonstration: As defined in *BPM 108 FS Submittal Process*.

Joint Contract Accreditation Form (JCAF): A standard form available on the Western Power Pool (WPP) website, to be completed by a Participant or an Embedded Load Customer and its third-party supplier, to support ~~its~~ a Participant's claim in an FS Submittal for contracted capacity by demonstrating agreement ~~between the Participant and its selling counterparty~~ regarding details relevant to establishing a Qualifying Capacity Contribution (QCC) value for the capacity contract.

Qualifying Contract: A contract that meets the requirements to be assigned a QCC.

Resource Adequacy Transfer (RA Transfer): The transfer of QCC from one Participant to another in accordance with the requirements of the Tariff and BPM 106.

2. Background

A Participant's FS Submittal shall include a FS Demonstration with the necessary information for each Binding Season to demonstrate the Participant has sufficient capacity and transmission service to satisfy the FS Capacity Requirement and FS Transmission Requirement (see *BPM 108 FS Submittal Process*). The FS Demonstration will include the Participant's demonstration of QCC to meet its FS Capacity Requirement, which can be from Qualifying Resources and from Net Contract QCC. Net Contract QCC may be either positive or negative, to take account of, for example, a Participant's agreements for the sale of capacity to any other party. BPM 106 provides implementing details and supporting requirements to determine the QCC associated with a capacity contract. Note that while contract QCC in the FS Submittal is based on availability

during Capacity Critical Hours (CCH), the Operations Program assumes monthly FS Capacity Requirement is met each hour of the Preschedule Day.

JCAF requirements for Resource-Specific Capacity Agreements and Systems Sales are also explained~~: for contracts between Participants (to allow QCC to be tracked within the WRAP Region),~~ for contracts from Participants to non-Participants (to track QCC leaving the WRAP Region)~~,~~ and for contracts from non-Participants to Participants (to track QCC entering the WRAP Region). BPM 106 also describes how a Participant can transfer some of its Portfolio QCC to help meet another Participant's FS Capacity Requirement via an RA Transfer. A JCAF is not required for contracts between Participants as QCC within the WRAP Region will be tracked through Participants' FS Demonstrations.

A Participant including an Embedded Load Qualifying Contract in its FS Demonstration via an Embedded Load Acknowledgement and Resource Assurance Agreement will also be required to submit a JCAF with the seller to the Embedded Load Customer as described below.

3. Contracts Eligible for QCC value

In accordance with the Tariff, two distinct categories of capacity agreements can qualify to provide QCC: Resource-Specific Capacity Agreements and System Sales.

3.1. Resource-Specific Capacity Agreements

A Resource-Specific Capacity Agreement (for a resource, or group of resources of the same resource type, or percentage contracted of a resource or group of resources of the same resource type) qualifies to provide a QCC if:

i) the contract is specific to an identified generating resource or group of resources;

ii) there is an assurance that the generating capacity will not be used for another entity's FS Capacity Requirement or to meet the requirements of any other resource adequacy program;

iii) there is an assurance that the supplier will not fail to deliver in order to meet other commercial obligations;

iv) there is an affirmation that the energy will be delivered on WRAP Qualifying Transmission from the resource to an identified Contracted Capacity Firm Delivery Point; and

v) the identified resource meets the QCC accreditation requirements for its resource type.

The QCC associated with a Resource-Specific Capacity Agreement will be calculated as equivalent to the QCC of the resource(s) identified for the agreement. Resource(s) associated with a Resource-Specific Capacity Agreement must be registered consistent with *BPM 105 Qualifying Resources.* Participants unable to provide sufficient information to fully register the resource may have limitations on the amount of QCC that can be claimed (see *BPM 105* for additional information). Each Resource-Specific Capacity Agreement must have an associated and identified Contracted Capacity Firm Delivery Point acknowledged by the seller and buyer, or able to be inferred via a review of the power purchase agreement, depending upon the demonstration required as noted in sections below. If the Contracted Capacity Firm Delivery Point is not at a location sufficient to demonstrate firm deliverability from the identified resource to the Participant's load, then the Participant shall make such additional showings of WRAP Qualifying Transmission as necessary to ensure it meets its Forward Showing Transmission Requirement (see *BPM 108 Forward Showing Submittal Process*). A Participant seeking QCC for a Resource-Specific Capacity Agreement with a non-Participant must include a JCAF and/or other attestation, as applicable, as described below and summarized in Section 4.

3.1.1. Participant-Buyer – Participant Seller

A JCAF for a Resource-Specific Capacity Agreement where both buyer and seller are Participants is not required, as QCC within the WRAP Region will be tracked through Participants' FS Demonstrations~~ allows QCC to be tracked within the WRAP Region~~. In lieu of a JCAF, Participant buyers are required to enter Qualifying Contract information in the WRAP Forward Showing software system. Both the Participant buyer and Participant seller of a Qualifying Contract are required to confirm within the Forward Showing software system that the resource(s) identified, the QCC values being claimed, and other supporting information is accurate. Additionally, Participant sellers must attest to having WRAP Qualifying Transmission rights to deliver the capacity to the identified Contracted Capacity Firm Delivery Point, or that such capacity will be deliverable to the identified Contracted Capacity Firm Delivery Point on a path with counterflow from a Qualifying Resource to load on WRAP Qualifying Transmission rights. ~~The amount of QCC matches the resource(s) identified and agreed to in the JCAF without the need for the Program Operator to review the contract. This scenario requires an initial one-off JCAF signed by both the Participant buyer and seller, and then an annual attestation signed by the Participant buyer that the contract has not changed (see Appendix C – Attestation in lieu of an Annual JCAF).~~

3.1.2. Participant-Buyer – Non-Participant Seller

For scenarios where a Participant is the buyer of a Resource-Specific Capacity Agreement but a non-Participant is the seller, a demonstration is required to track QCC entering the WRAP Region. BPM 106 considers three sub-scenarios:

i) No JCAF is necessary for Participants required to purchase energy from a resource as available from such resource, including but not limited to a qualifying facility as defined under the Public Utility Regulatory Policies Act (PURPA), and purchasing 100% of that output (referred to as "100% off take and must take" in Table 1). In lieu of a JCAF, the Participant must attest that it is receiving 100% of the output of such resource and is unable to decline any of it (see Appendix D – Attestation for 100% Off-Take, Must Take Resources).

ii) For Participants voluntarily purchasing 100% of the output of a resource (i.e. not "must take" and referred to as "100% off take" in Table 1):

- When a Participant first claims the capacity or experiences a change in the terms of the power purchase agreement, the Participant buyer may demonstrate the terms in Section 3.1 are met by providing either:
  - A JCAF completed by the Participant buyer and supported by language from the executed power purchase agreement; Participants will provide the Program Operator a copy of the agreement annotated to identify terms relevant to supporting the terms in Section 3.1 (commercial terms related to pricing may be redacted). If the Program Operator determines that any terms within the agreement make it such that the agreement cannot meet any of the requirements in Section 3.1, that agreement will not qualify to provide QCC; or
  - A JCAF completed and signed by both the Participant buyer and the non-Participant seller, including a seller attestation as provided in Appendix B – JCAF: Non-WRAP Participant Seller's Attestation.
- In years following the first year, the Participant buyer may make an annual attestation that the terms of the contract have not changed (see Appendix C – Attestation in lieu of an Annual JCAF).

iii) For contracts in which the buyer is purchasing less than 100% of the output of a resource,

- When a Participant first claims the capacity or experiences a change in the terms of the power purchase agreement, the Participant buyer will demonstrate the terms in Section 3.1 are met by providing a JCAF completed and signed by both the Participant buyer and the non-Participant seller, including a seller attestation as provided in Appendix B – JCAF: Non-WRAP Participant Seller's Attestation.

- In years following the first year, the Participant buyer will make an annual attestation that the terms of the contract have not changed (see Appendix C – Attestation in lieu of an Annual JCAF).

3.1.3. Non-Participant-Buyer –Participant Seller

A Resource-Specific Capacity Agreement where a non-Participant is the buyer and the seller is a Participant requires a JCAF to track QCC leaving the WRAP Region. The amount of QCC matches the resource(s) identified and agreed to in the JCAF without the need for the Program Operator to review the contract. This scenario requires a JCAF signed by both the Participant seller, and then an annual attestation by the Participant seller that the contract has not changed (see Appendix C – Attestation in lieu of an Annual JCAF).

3.2. System Sale

A Participant that is part of a System Sale (whether as buyer or seller) with a non-Participant must provide a JCAF and/or other attestation, as applicable, as described in Section 4 of this BPM so QCC can be tracked ~~within the WRAP Region (Participant Buyer – Participant Seller),~~ entering the WRAP Region (Participant Buyer – non-Participant Seller)~~,~~ and leaving the WRAP Region (non-Participant Buyer – Participant Seller). Each System Sale must have an associated and identified Contracted Capacity Firm Delivery Point acknowledged by the seller and buyer. If the Participant is the buyer and the Contracted Capacity Firm Delivery Point is not at a location sufficient to demonstrate firm deliverability from the identified resource to the Participant's load, then the Participant shall make such additional showings of WRAP Qualifying Transmission as necessary to ensure it meets its Forward Showing Transmission Requirement (see *BPM 108 Forward Showing Submittal Process*).

3.2.1. Participant Buyer – Participant Seller

A JCAF for a System Sale where both buyer and seller are Participants is not required as QCC within the WRAP Region will be tracked through Participants' FS Demonstrations. In lieu of a JCAF, Participant buyers are required to enter Qualifying Contract information in the WRAP Forward Showing software system. Both the Participant buyer and Participant seller of a Qualifying Contract are required to confirm within the Forward Showing software system that the QCC value(s) being claimed and other

supporting information is accurate. The QCC will accrue to the purchasing Participant's FS Submittal, and the selling Participant will debit the QCC available from its Qualifying Resources associated with the System Sale as reported in its FS Submittal (see *BPM 108 FS Submittal Process).*

Participant sellers must attest to having WRAP Qualifying Transmission rights to deliver the capacity to the identified Contracted Capacity Firm Delivery Point, or that such capacity will be deliverable to the identified Contracted Capacity Firm Delivery Point on a path with counterflow from a Qualifying Resource to load on WRAP Qualifying Transmission rights.~~A System Sale where buyer and seller are Participants will require a JCAF to track QCC within the WRAP Footprint for the first FS Demonstration claiming the System Sale. Subsequent FS Demonstrations will require an attestation by the Participant buyer (see Appendix C – Attestation in Lieu of an Annual JCAF) updated at least once every Forward Showing Year.~~ ~~The QCC of such a System Sale will match the MW value of the agreement as reported in the jointly signed JCAF signed by the buyer , acknowledged by both Participants in their FS Demonstrations, without the need for the Program Operator to review the contract between Participants. The QCC will accrue to the purchasing Participant's FS Submittal, and the selling Participant will debit the QCC available from its Qualifying Resources associated with the System Sale as reported in its FS Submittal (see *BPM 108 FS Submittal Process).*~~

3.2.2. Participant Buyer – Non-Participant Seller

A System Sale for which a Participant is a buyer, but a non-Participant is the seller, will require a jointly signed JCAF (updated at least once every Forward Showing Year) to track QCC entering the WRAP Region and be assigned a QCC upon demonstration of the following supporting conditions:

i) the system capacity sold is surplus to the seller's needs to meet its own loads and other obligations (as attested to with Appendix B – JCAF: Non-Participant Seller's Attestation);

ii) there is an assurance that the seller will not fail to deliver to meet other commercial obligations; and

iii) there is an affirmation that the energy will be delivered on WRAP Qualifying Transmission rights from the resource to the Contracted Capacity Firm Delivery Point.

Resources associated with qualified System Sales from sellers that are not Participants do not have to be registered unless the Participant buyer is seeking allocation of

over/under performance or forced outages in the Operations Program (see variable output System Sales in Section 4.1).

3.2.3. Non-Participant Buyer – Participant Seller

A System Sale where a non-Participant is the buyer and the seller is a Participant will require an initial JCAF signed by the Participant seller for the first FS Demonstration claiming the System Sale to track QCC leaving the WRAP Region. Subsequent FS Demonstrations will require an attestation by the Participant seller (see Appendix C – Attestation in Lieu of an Annual JCAF) updated at least once every Forward Showing Year. The Participant seller will debit the QCC available from its Qualifying Resources associated with the System Sale as reported in its FS Submittal (see *BPM 108 FS Submittal Process)*. The QCC of such a System Sale will match the MW value of the agreement as reported in the JCAF.

4. Joint Contract Accreditation Forms

~~With limited exceptions~~For Qualifying Contracts with non-Participants, a Participant shall provide a completed JCAF for each Resource-Specific Capacity Agreement (Table 1) and each System Sale (Table 2) included in its FS Submittal. JCAFs allow the QCC of contracts to be agreed between Participants and non-Participants ~~buyer and seller~~ while avoiding the need for contracts to be reviewed and evaluated by the WRAP. JCAFs will be validated by the Program Administrator and the Program Operator; validation may require additional supporting information from Participants, as determined by the Program Administrator or Program Operator. The JCAF is available on the WPP website and includes sufficient information for the Program Operator to determine the QCC value of the contract. Signatories to the JCAF vary depending upon circumstance, but JCAFs will always be signed by the Participant using the JCAF for demonstration in its FS Submittal. The intent of the JCAF is to ensure capacity is not double counted and that QCC is tracked entering~~, transferring within,~~ and leaving the WRAP Region. The JCAF is intended to be used for ~~Participant-to-Participant transactions as well as~~ transactions made by Participants with external parties ~~for capacity to meet Participants' FS Capacity Requirement~~. For any Participant-to-Participant transactions, ~~a JCAF will only have to be signed by the buyer, with~~ the details of the transaction will be acknowledged by the buyer and seller through ~~its~~their FS Demonstrations, including an attestation by the seller of the required WRAP Qualifying Transmission.~~;~~

Table 1 and Table 2 below show which types of agreements require a JCAF, how frequently a JCAF must be submitted to ensure it is current, and which other forms of attestation may be required in addition to or in lieu of a JCAF, in certain circumstances.

4.1. Allocation of Over/Under Performance or Forced Outages in the Operations Program

In the Operations Program a Participant may be exposed to the impact of contract over/under performance or associated forced outages depending upon the transaction type (for more details see *BPM 202 Sharing Calculation Inputs*). A Participant buyer must identify a contract's transaction type in the JCAF based on the guidance below and indicate whether the Participant buyer assumes the risk associated with under/over performance and forced outages and therefore be allocated those impacts in the Operations Program.

- For Resource-Specific Capacity Agreements any associated over/under performance or forced outages in the Operations Program are allocated to the Participant buyer.
- For fixed output System Sales any associated over/under performance or forced outages in the Operations Program remain allocated to the Participant seller.
- For variable output System Sales any associated over/under performance or forced outages in the Operations Program are allocated to the Participant buyer provided the identified resources meet the QCC accreditation requirements for their resource type.

Table 1 – Resource Specific Capacity Agreements - JCAF and Similar Attestation Requirements and Frequency

<table>
<tr><th colspan="3"></th><th colspan="2">Buyer</th></tr>
<tr><th colspan="3"></th><th>Participant</th><th>Non-Participant</th></tr>
<tr><td rowspan="4">Seller</td><td colspan="2">Participant</td><td colspan="2">~~JCAF must be provided first time a contract is claimed; JCAF must be signed by both Participant buyer and Participant seller in its FS Demonstration. No updated JCAF need be submitted thereafter, but the Participant buyer must provide the attestation shown in Appendix C with each subsequent FS Demonstration, updated at least once per Forward Showing Year.~~JCAF not required. Resource information, transaction details, attestations, and acknowledgments captured through Participants' FS Demonstrations.</td><td>JCAF must be provided for new or updated contracts; JCAF must be signed by the Participant seller. No updated JCAF need be submitted thereafter if contract terms are unchanged, but the Participant seller must provide the attestation shown in Appendix C with each subsequent FS Demonstration, updated at least once per Forward Showing Year.</td></tr>
<tr><td rowspan="3">Non-Participant</td><td>100% off take and must take (i.e., PURPA Resources)</td><td>No JCAF necessary.
Participant buyer must submit Attestation provided in Appendix D.</td><td rowspan="3">For Embedded Load Qualifying Contracts, the Embedded Load Customer must supply Participant with a JCAF that is executed with the Embedded Load Customer's third-party supplier.

In first year claimed, or when contract terms change, provide JCAF signed by both Embedded Load Customer and third-party supplier. No updated JCAF need be submitted thereafter if terms are unchanged, but the Embedded Load Customer must provide the Participant with the attestation shown in Appendix C with each subsequent FS Demonstration, updated at least once per Forward Showing Year.</td></tr>
<tr><td>100% off take</td><td>In first year contract is claimed, or when contract terms change, provide either:
• JCAF signed by both Participant buyer and non-Participant seller, or,
• JCAF signed by buyer and supported by an executed power purchase agreement.
No updated JCAF need be submitted thereafter if terms are unchanged, but the Participant buyer must provide the attestation shown in Appendix C with each subsequent FS Demonstration, updated at least once per Forward Showing Year.</td></tr>
<tr><td>Less than 100% off take</td><td>In first year claimed, or when contract terms change, provide JCAF signed by both Participant buyer and non-participant seller. No updated JCAF need be submitted thereafter if terms are unchanged, but the Participant buyer must provide the attestation shown in Appendix C with each subsequent FS Demonstration, updated at least once per Forward Showing Year.</td></tr>
</table>

Table 2 - System Sales - JCAF and Similar Attestation Requirements and Frequency

		Buyer	
		Participant	Non-Participant
Seller	Participant	~~JCAF must be provided the first time a contract is claimed; JCAF must be signed by both Participant buyer and Participant seller in its FS Demonstration. No updated JCAF need be submitted thereafter, but the Participant buyer must provide the attestation shown in Appendix C with each subsequent FS Demonstration, updated at least once per Forward Showing Year.~~ JCAF not required. Transaction details, attestations, and acknowledgments captured through Participants' FS Demonstrations.	JCAF must be provided for new and updated contracts; JCAF must be signed by the Participant seller. No updated JCAF need be submitted thereafter, but the Participant seller must provide the attestation shown in Appendix C with each subsequent FS Demonstration, updated at least once per Forward Showing Year.
	Non-Participant	JCAF required with each FS Demonstration, updated at least once per Forward Showing Year signed by both non-Participant seller and Participant buyer, including attestation by non-Participant seller shown in Appendix B.	For Embedded Load Qualifying Contracts, the Embedded Load Customer must supply Participant with a JCAF that is executed with the Embedded Load Customer's third-party supplier. JCAF between Embedded Load Customer and its third-party supplier required with each FS Demonstration, updated at least once per Forward Showing Year, signed by Embedded Load Customer and its third-party supplier, including the attestation by third-party supplier shown in Appendix B.

The JCAF includes a seller's transmission attestation (for ~~both Participants and~~ non-Participant sellers~~s~~), in the form shown in Appendix A to this BPM, to affirm the contracts meet the transmission requirements for Resource-Specific Capacity Agreements and System Sale found in Sections 3.1 and 3.2 of this BPM. The JCAF also

includes a non-Participant seller's attestation that a System Sale meets the requirements of Section 3.2, in the form shown in Appendix B to this BPM.

While a JCAF is not required for Participant-to-Participant transactions, Participant sellers must complete the Seller's Transmission Attestation for Participant-to-Participant transactions found in Appendix A.1. A Participant seller may submit a single Seller's Transmission Attestation covering all of its Participant-to-Participant Qualifying Contract sales provided the attestation is uploaded to each corresponding transaction in the Forward Showing software system.

If the seller is a~~:~~

~~Participant; or~~

non-Participant in a Resource-Specific Capacity Agreement as to which there is a 100% off-take obligation for the identified resource~~;~~,

then the Participant buyer need only submit a JCAF the first time a contract is claimed, but will subsequently be required to complete the attestation in the form shown in Appendix C to this BPM as part of its FS Submittal each year thereafter during the life of the contract, attesting that the contract still meets the requirements affirmed in the JCAF.

5. Calculating Net Contract QCC

The Net Contract QCC for a Participant will be calculated by the Program Operator using the FS Submittal. The Net Contract QCC is a monthly value equal to the sum of the Participant's contract QCCs. In terms of a Participant's monthly QCCs, import contracts (purchases) are additive while exports (sales) are subtractive. The Net Contract QCC may be positive (net supply of capacity) or negative (net obligation of capacity). The Net Contract QCC formula is as follows:

$$Net\ Contract\ QCC = \sum QCC\ of\ all\ Participant\ qualified\ contracts$$

Firm capacity sales by a Participant to parties outside the WRAP Region must be declared and included as a capacity obligation in the Participant's FS Submittal. Non-firm capacity exports will not be deducted from a Participant's FS portfolio but must be curtailable in the operational timeframe, i.e. they must still be curtailable after the determination of any Sharing Event in the Operations Program (*see BPM 201 Operations Timeline*).

6. Embedded Load Qualifying Contracts

An Embedded Load Qualifying Contract may be used by a Participant to demonstrate QCC in its FS Submittal. In this circumstance, the Embedded Load Customer has entered into an agreement with a third party for capacity through a Resource-Specific Capacity Agreement or System Sale, the Participant includes the Embedded Load Customer's load in its FS Submittal, and the Participant relies on such contracted capacity to meet its FS Capacity Requirement as provided herein.

To qualify as an Embedded Load Qualifying Contract, the underlying capacity contract must be held by an Embedded Load Customer of the Participant, and the Participant is not a signatory to such contract.

For an Embedded Load Qualifying Contract to qualify to provide QCC, the Participant must demonstrate that:

i) the Embedded Load Customer has a contractual right to capacity through a Resource-Specific Capacity Agreement or System Sale under an executed JCAF with a third-party;

ii) there is an assurance that the capacity associated with the Embedded Load Customer's contract will not be used for another entity's FS Capacity Requirement or to meet the requirements of any other resource adequacy program;

iii) there is an assurance that the third-party supplier will not fail to deliver in order to meet other commercial obligations;

iv) there is an affirmation that the energy associated with such capacity will be delivered on WRAP Qualifying Transmission to an identified Contracted Capacity Firm Delivery Point; and

v) the Participant has executed an Embedded Load Acknowledgement and Resource Assurance Agreement, demonstrating that the Participant may rely on such capacity to meet the requirements of its FS Demonstration.

A Participant seeking QCC for an Embedded Load Qualifying Contract must include, as part of its FS Submittal (see BPM 108 Forward Showing Submittal Process), a JCAF executed by the Embedded Load Customer and its third-party supplier and an Embedded Load Acknowledgment and Resource Assurance Agreement. The JCAF shall include the applicable attestations necessary to demonstrate that the requirements of this Section are satisfied and remains responsible for ensuring that all information

provided in support of the Embedded Load Qualifying Contract is accurate and sufficient for the Program Operator to determine the applicable QCC value.

~~6.~~7. Resource Adequacy Transfers (RA Transfers)

A Participant may agree with another to transfer some of its Portfolio QCC to meet the other Participants' FS Capacity Requirement. Such transfer is available only between WRAP Participants and must be submitted by both Participants to the Program Operator along with the transmission service arrangement(s) between the two Participants' systems supporting such transfer as part of the FS Demonstration as described in the FS Instruction Manual. RA Transfer transmission must be met with WRAP Qualifying Transmission rights from the RA Transfer seller's system to the RA Transfer buyer's load; a Contracted Capacity Firm Delivery point for the RA Transfer must be identified, to which the seller will deliver energy with WRAP Qualifying Transmission and from which the Buyer will be responsible for demonstrating WRAP Qualifying Transmission rights as further detailed in the FS Submittal Instruction Manual and as with other contracts and resources.

Upon verification, each RA Transfer shall result in an adjustment to the Portfolio QCC values of the transferor and transferee Participants. Specifically, the amount of each RA Transfer will be added to the purchasing Participant's Portfolio QCC and subtracted from the selling Participant's Portfolio QCC. The contracts for these transfers will be provided to the Program Operator. For Participants engaged in multiple RA Transfers, as either a purchaser or seller, the overall adjustment to the Participant's Portfolio QCC will be determined by the following formula:

$$Total\ RA\ Transfer = \sum Participant\ RA\ transfer\ contracts$$

Appendix A – JCAF: Seller's Transmission Attestation for ~~both Participants and~~ Non-Participants

I, the undersigned, who as [title], serve as a senior official of [seller], hereby attest to having WRAP Qualifying Transmission rights to deliver the capacity that is the subject of this Joint Contract Accreditation Form to the identified Contracted Capacity Firm Delivery Point, or that such capacity will be deliverable to the identified Contracted Capacity Firm Delivery Point on a path with counterflow from a Qualifying Resource to load on WRAP Qualifying Transmission rights.

Appendix A.1. – Seller's Transmission Attestation for Participant-to-Participant Transactions

I, the undersigned, who as [title], serve as a senior official of [seller], hereby attest to having WRAP Qualifying Transmission rights to deliver the capacity to the identified Contracted Capacity Firm Delivery Point(s), or that such capacity will be deliverable to the identified Contracted Capacity Firm Delivery Point(s) on a path with counterflow from a Qualifying Resource to load on WRAP Qualifying Transmission rights, for all Qualifying Contracts listed below.

Appendix B – JCAF: Non-WRAP Participant Seller's Attestation

I, the undersigned, who as [title], serve as a senior official of [seller], hereby attest that the capacity subject to the contract is not used for another entity's resource adequacy requirements, is surplus to [seller's] estimated need and that the energy will not fail to be delivered in order to meet [seller's] other commercial obligations.

Appendix C – Attestation in lieu of an Annual JCAF

I, the undersigned, who as [title], serve as a senior official of [~~Participant buying from another Participant OR~~ Participant selling to a non-Participant OR Participant buying resource-specific contract from a non-Participant OR Embedded Load Customer buying from a third-party supplier], hereby attest that terms of the contract between [seller] and [buyer] with Contract ID [identifying # from Participant's FS Submittal] have not changed since the latest review (JCAF or power purchase agreement review) on [date of last demonstration].

Appendix D – Attestation for 100% Off Take, Must Take Resources

I, the undersigned, who as [title], serve as a senior official of [Participant], hereby attest that any resources claimed within [Participant's] FS Submittal that are not owned and operated by [Participant] are resources where [Participant] receives 100% of the output of the resource without an option to decline to take any of such output.

Joint Contract Accreditation Form

Western Resource Adequacy Program

Revision History:

Version	Description	Revised by	Date
0	Initial post-BPM 106 Approval Draft		9/27/2024
1.0	Format and layout improvements. No additional requirements were introduced. Added clarifying edits in the Instructions. Adjusted Transaction Types drop-down menu to display the 2 options listed in BPM 106	WPP	6/20/2025
2.0	Edited in response to 2026-NTFP-03	WPP	6/10/2026
2.1	Edits in response to 2026-NTFP-03 Public Comment	WPP Staff	7/27/2026

NOTE: Any prior version of this JCAF submitted for FS Submittals before the effective date of the current version will be deemed accepted. No further action or resubmission is required.

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Purpose:

As described in *Business Practice Manual 106 Qualifying Contracts* (BPM 106), this Joint Contract Accreditation Form (JCAF) is for Participants in the Western Resource Adequacy Program (WRAP) to support their claim to contracted capacity when meeting their monthly Forward Showing (FS) Capacity Requirements and FS Transmission Requirements in a Forward Showing submission.

JCAFs allow the QCC of contracts with non-Participants to be agreed between buyer and seller while avoiding the need for contracts to be reviewed, evaluated and validated by the Program Administrator and the Program Operator; validation may require additional supporting information from Participants, as determined by the Program Administrator or Program Operator. A JCAF is not required for contracts where both buyer and seller are Participants as QCC within the WRAP Region will be tracked through Participants' FS Demonstrations. In lieu of a JCAF, Participant buyers are required to enter Qualifying Contract information in the WRAP Forward Showing software system. Both the Participant buyer and Participant seller of a Qualifying Contract are required to confirm within the Forward Showing software system that the QCC value(s) being claimed and other supporting information is accurate.

When required, the JCAF demonstrates agreement between a WRAP Participant and their non-Participant counterparty regarding details of agreements relevant to establishing Qualifying Capacity Contribution (QCC) value for contracts. Per BPM 106, with limited exceptions, a Participant shall provide a completed JCAF for each Resource-Specific Capacity Agreement and each System Sale it has with a non-Participant included in its FS Submittal.

Furthermore, BPM 106 provides specific details for under which circumstances and how often a JCAF is required and whether ~~non-Participant seller~~ signatures are necessary.

In summary, when a JCAF is required the relevant signatures in Section 1 of the JCAF are necessary as described in the Instructions section below.

Instructions:

Signatories to the JCAF vary depending upon circumstance, but when required, JCAFs will always be signed by the Participant using the JCAF for demonstration in its FS Submittal unless both parties are Participants, in which case the contents of the JCAF will be acknowledged as part of the Participants' FS Demonstrations, including the seller's attestation of WRAP Qualifying Transmission up to the Contracted Capacity Firm Delivery Point (CCFDP). The JCAF also allows WRAP to ensure capacity is not double counted and that QCC is tracked entering~~, transferring within,~~ and leaving the WRAP Region. The JCAF is intended to be used for ~~Participant-to-Participant transactions as well as~~ transactions made by Participants with external parties (i.e., non-Participants) for capacity to meet Participants' FS Capacity Requirements. The JCAF contains the following sections:

SECTION 1.1:
~~SECTION 1.1 CONTRACT DETAILS~~

Transaction Type:	**System Sale**
Description: ***(optional)***	

Contracted Capacity Firm Delivery Point :						
Contract Term						
Start Date:	Click or tap to enter a date.		End Date:	Click or tap to enter a date.		
Contract Value (QCC MW)	Summer	June	July	Aug	Sept	
	Winter	Nov	Dec	Jan	Feb	Mar

SECTION 1.2:

~~SECTION 1.2 NON-WRAP PARTICIPANT SELLER ATTESTATIONS~~

SECTION 1.3:
~~SECTION 1.3 SIGNATURES~~
SECTION 2
~~SECTION 2: ADDITIONAL CONTRACT INFORMATION~~

Sections 1.1, 1.2 & 1.3 ~~i~~Instructions:

When a JCAF is required to validate a Qualifying Contract in a Participant's FS Submittal (per the requirements set forth in BPM 106), Sections 1.1, 1.2 & 1.3 must be completed and signed by the appropriate parties, as identified below:

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Transaction Type	Parties and Off-take *(Section 1.1)*	Seller Transmission Attestation *(Section 1.2)*	Non-WRAP Participant Seller Attestation *(Section 1.2)*	Affirmation of Contract Details *(Section 1.3)*
Resource Specific[1]	Participant Seller / Participant Buyer	Seller signs unless CCFDP is busbar*	Not required	~~Both buyer and seller sign~~Forward Showing Demonstration*
	Participant Seller / Non-Participant Buyer	Not required	Not required	Seller Participant signs
	Non-Participant Seller / Participant Buyer *100% of the resource's output is purchased by the buyer*	Seller signs unless contract is provided or CCFDP is busbar	Seller signs unless contract is provided	Buyer signs: seller signs unless contract is provided
	Non-Participant Seller / Participant Buyer *Less than 100% of the resource's output is purchased by the buyer*	Seller signs unless CCFDP is busbar	Seller signs	Both buyer and seller sign
System Sale[2]	Participant Seller / Participant Buyer	Seller signs-*	Not required	~~Both buyer and seller sign~~Forward Showing Demonstration*
	Participant Seller / Non-Participant Buyer	Not required	Not required	Seller Participant signs
	Non-Participant Seller / Participant Buyer	Seller signs	Seller signs	

* The contents of the JCAF will be acknowledged by both Participants as part of their FS Demonstrations, including a single seller's attestation of WRAP Qualifying Transmission up to the CCFDP (unless CCFDP is the generator busbar) accompanied by a list of all applicable Qualifying Contracts.

WRAP Participants and selling counterparties must identify a point where the contract is deliverable on WRAP Qualifying Transmission. If the contract does not include such transmission, the point identified for WRAP transmission demonstration purposes may be different than the point of receipt identified in the contract itself (e.g. if the contract includes non-firm transmission to some point, the ~~Contracted Capacity Firm Delivery Point (~~CCFDP~~)~~ in the JCAF may be identified as the generator busbar); in such a situation, neither the "Seller's Transmission Attestation for Non-Participants~~Seller's Transmission Attestation for both Participants and Non-Participants~~" nor the "Seller Transmission Attestation for Participant-to-Participant Transactions" is ~~not~~ required.

Section 2 ~~i~~Instructions:

[1] No JCAF is required for contracts where the Participant buyer is required to take 100% of the output of the resource (i.e.~~e.g.~~, PURPA contracts), also called "100% off take and must-take" contracts in BPM 106.

[2] Expectations for RA Transfers and contracts regarding Contingency Reserve~~s~~ obligations are the same as those for System Sales.

This section is to be filled out by the WRAP- Participant (buyer/seller) only. The information entered in Section 2 is intended for verification purposes with the associated FS Submittal data reviewed by the Program Administrator and Program Operator.

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SECTION 1.1:

"CONTRACT DETAILS"

All information is required unless specifically called out as optional.

Buyer:	[Entity Name]
Phone: *(Optional)*	
Email: *(Optional)*	
WRAP Participant? ☐	

Seller:	[Entity Name]
Phone: *(Optional)*	
Email: *(Optional)*	
WRAP Participant? ☐	

Complete this table if Resource-Specific Qualifying Contract

Transaction Type:			**Resource-Specific**			
Description: ***(optional)***						
Contracted Capacity Firm Delivery Point [3]:						
Contract Term						
Start Date: Click or tap to enter a date.			**End Date:** Click or tap to enter a date.			
Contract Value (% of nameplate)[4]	**Summer**	**June**	**July**	**Aug**	**Sept**	
	Winter	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**

Complete this table if System Sale Qualifying Contract

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[3] WRAP Participants and selling counterparties must identify a point where the contract is deliverable on WRAP Qualifying Transmission. If the contract does not include such transmission, the point identified for WRAP transmission demonstration purposes may be different than the point of receipt identified in the contract itself (e.g., if the contract includes non-firm transmission to some point, the ~~Contracted Capacity Firm Delivery Point (~~CCFDP~~)~~ in the JCAF may be identified as the generator busbar).

[4] ~~For System Sale, enter monthly values in MW. For Resource-Specific, enter monthly values as % of nameplate.~~ Mark "n/a" for months the contract is not applicable.

Transaction Type:			**System Sale**			
Description: *(optional)*						
Contracted Capacity Firm Delivery Point [5]:						
Contract Term						
Start Date:	Click or tap to enter a date.		**End Date:**	Click or tap to enter a date.		
Contract Value (QCC MW) [6]	**Summer**	**June**	**July**	**Aug**	**Sept**	
	Winter	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**

SECTION 1.2:

"SELLER ATTESTATIONS" [7]

(if applicable)

Seller's Transmission Attestation for ~~both Participants and~~ Non-Participants

I, the undersigned, who as [title], serve as a senior official of [seller], hereby attest to having WRAP Qualifying Transmission rights to deliver the capacity that is the subject of this Joint Contract Accreditation Form to the identified Contracted Capacity Firm Delivery Point or that such capacity will be deliverable to the identified Contracted Capacity Firm Delivery Point on a path with counterflow from a Qualifying Resource to load on WRAP Qualifying Transmission rights.

Seller Signature[8]:

By: _____
(Signature)

Name: _____
(Print Name)

Title: _____

Date: _____

[5] WRAP Participants and selling counterparties must identify a point where the contract is deliverable on WRAP Qualifying Transmission. If the contract does not include such transmission, the point identified for WRAP transmission demonstration purposes may be different than the point of receipt identified in the contract itself (e.g., if the contract includes non-firm transmission to some point, the CCFDP in the JCAF may be identified as the generator busbar).

[6] Mark "n/a" for months the contract is not applicable.

[7] Seller's signature required only if applicable. See BPM 106 for when these attestations are required.

[8] If the Seller's signature is not required ~~for the "Seller's Transmission Attestation for both Participants and Non-Participants" and the "Non-WRAP Participant Seller Attestation" below~~, please mark "n/a" in the signature and date fields.

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Seller's Transmission Attestation for Participant-to-Participant Transactions

I, the undersigned, who as [title], serve as a senior official of [seller], hereby attest to having WRAP Qualifying Transmission rights to deliver the capacity to the identified Contracted Capacity Firm Delivery Point(s), or that such capacity will be deliverable to the identified Contracted Capacity Firm Delivery Point(s) on a path with counterflow from a Qualifying Resource to load on WRAP Qualifying Transmission rights, for all Qualifying Contracts listed below.[9]

Seller Signature[10]:

By: _____
(Signature)

Name: _____
(Print Name)

Title: _____

Date: _____

Non-WRAP Participant Seller Attestation

I, the undersigned, who as [title], serve as a senior official of [seller], hereby attest that the capacity subject to the contract is not used for another entity's resource adequacy requirements, is surplus to [seller's] estimated need, and that the energy will not fail to be delivered in order to meet [seller's] other commercial obligations.

Seller ~~Signature~~[6]Signature[10]:

By: _____
(Signature)

Name: _____
(Print Name)

Title: _____

Date: _____

SECTION 1.3:

[9] Participant seller may submit a single Seller's Transmission Attestation covering all of its Participant-to-Participant Qualifying Contract sales provided the attestation is uploaded to each corresponding transaction in the Forward Showing software system.
[10] If the Seller's signature is not required, please mark "n/a" in the signature and date fields.

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"SIGNATURES"[11]

Affirmation of Contract Details: *Signatures below indicate that all information provided above is accurate and complete (see instructions and BPM 106 for information on when these signatures are required).*

Buyer Signature	**Seller Signature**
By: _____ *(Signature)*	**By:** _____ *(Signature)*
Name: _____ *(Print Name)*	**Name:** _____ *(Print Name)*
Title: _____	**Title:** _____
Date: _____	**Date:** _____

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[11] Signatures not required for JCAFs in which both ~~B~~buyer and ~~S~~seller are WRAP Participants. In such a scenario the contents of the JCAF will be acknowledged as part of the Participants' FS Demonstrations~~, including the seller's acknowledgment of WRAP Qualifying Transmission up to the CCFDP.~~

SECTION 2

"ADDITIONAL CONTRACT INFORMATION"

Contract or Resource Identifier(s)[12]:	
Transaction Specifics:	Choose an item.
Comments: *(optional, unless **"Other"** is selected)*	
Contract provided[13]:	Choose an item.
Risk of Over/Under Performance Assumed by Purchaser:	Choose an item.
Risk of Forced Outages Assumed by Purchaser:	Choose an item.
Contingency Reserve Obligation Assumed by Purchaser:	Choose an item.

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[12] Must match information provided in Forward Showing ~~Data~~ Submittal. ~~For System Sales that only include a subset of a Participant's registered resources, list all Resource Identifiers.~~

[13] Optional unless ~~(i)~~ Participant buyer is the only one who signed the JCAF (i.e., Non-Participant ~~S~~seller did not sign)~~, (ii) RA Transfer.~~

EMBEDDED LOAD ACKNOWLEDGMENT
AND RESOURCE ASSURANCE AGREEMENT
BY AND AMONG
[ENTITY]
AND [PARTICIPANT]
REGARDING WESTERN RESOURCE ADEQUACY PROGRAM

Through this Embedded Load Acknowledgement and Resource Assurance Agreement (the "Assurance Agreement"), [Entity Name] ("Entity") and [Participant] ("Participant") acknowledge and agree that, solely for purposes of Participant's participation in the Western Resource Adequacy Program ("WRAP") administered by Northwest Power Pool d/b/a Western Power Pool ("WPP"), Participant and Entity intend for Participant to include Entity's load, identified as [Identify Entity's Load, including location and size] ("Covered Load") as part of Participant's load for WRAP purposes. Participant and Entity also agree for Participant to utilize Entity's identified resource or contract dedicated to serving that Covered Load, identified as [Identify Resource/Contract] ("Covered Resource"), as part of Participant's WRAP participation and that Entity will take certain steps to assure the Covered Resource is both eligible and available for WRAP purposes, as detailed below.

RECITALS

WHEREAS, WPP is the Program Administrator for the Federal Energy Regulatory Commission ("FERC") approved WRAP and the Western Resource Adequacy Program Tariff on file at FERC ("WRAP Tariff"); and

WHEREAS, Participant is a [corporate type] incorporated under the laws of [state] with its principal place of business at [address]; and

WHEREAS, Entity is a [corporate type] incorporated under the laws of [state] with its principal place of business at [address]; and

WHEREAS, Participant is a Participant in the WRAP; and

WHEREAS, Participant intends to include Covered Load as part of its load for WRAP purposes and desires to utilize Covered Resource in the WRAP as though they were Participant's load and resource; and

WHEREAS, Entity acknowledges and agrees to Participant's use of Covered Load and Covered Resource for WRAP purposes; and

WHEREAS Participant agrees that it accepts all rights and is responsible for all obligations under the WRAP Tariff and Participant's WRAP Agreement with respect to Covered Load and Covered Resource dedicated to serving Covered Load; and

Entity agrees to obtain and provide any and all attestations, assurances, and acknowledgements from seller as required under the WRAP Tariff and WPP Business Practice Manuals for Participant's use in its WRAP submissions; and

Entity and Participant, in consideration of the mutual promises and covenants set forth below, the adequacy of which all parties hereby acknowledge, agree to the terms and conditions set forth in this Assurance Agreement.

TERMS OF AGREEMENT

1 Purpose of Assurance Agreement. The purpose of this Assurance Agreement is to set forth the terms and conditions by which Entity authorizes Participant to include Entity's Covered Resource devoted to serving Entity's Covered Load in the WRAP as part of Participant's WRAP participation, and to obtain a QCC value for such Covered Resource in accordance with the WRAP Tariff. Entity and Participant acknowledge that Participant will incur binding obligations under the WRAP Tariff as a result of Participant's inclusion of Entity's Covered Load and Covered Resource in Participant's WRAP submissions.

2 Participant's Obligation to Comply with the WRAP Tariff and WRAP Participation Agreement. Nothing in this Assurance Agreement shall excuse Participant from satisfying all of its obligations under the WRAP Tariff and its WRAP Agreement with respect to all of the resources and loads (including Entity's Covered Load and Covered Resource) that Participant includes in its WRAP submissions.

3 Participant's Authority to Include Covered Load and Covered Resource for WRAP Purposes. Entity appoints Participant as its agent for the sole and limited purpose of allowing Participant to include Entity's Covered Load and Entity's Covered Resource in the WRAP for the purpose of engaging in resource adequacy planning under the WRAP Tariff and Business Practice Manuals, as either may be amended from time to time. Entity agrees that the actions and obligations of Participant in the WRAP with respect to the Covered Load and Covered Resource will be binding on Entity. Participant and Entity acknowledge that Participant includes Covered Load in the total load for which Participant is responsible in its WRAP Forward Showing, and is therefore responsible for all requirements applicable to such load under the WRAP Tariff.

4 Dedication of Covered Resource. Entity agrees that it will not modify, cancel, terminate, or otherwise divert Covered Resource, which is relied upon to serve Entity's Covered Load, without prior written notice to Participant. Entity will notify Participant as soon as practicable *before* any material change occurs in the availability of any generation resource or transmission service relied upon in serving Entity's Covered Load; except that, if a resource or transmission service relied on by Entity to serve Entity's Covered Load experiences an unplanned or forced outage, Entity will inform Participant as soon as Entity learns of such forced outage.

5 Performance By Entity. Entity agrees to obtain all attestations, assurances, and acknowledgements from seller(s) of Covered Resource as required under the WRAP Tariff

and WPP Business Practice Manuals and to provide such attestations, assurances, and acknowledgments to Participant for inclusion in Participant's WRAP submittals. Entity agrees to provide all information and take all actions reasonably necessary or appropriate for Participant to perform its duties and responsibilities under this Assurance Agreement, the WRAP Tariff, and the WRAP Business Practice Manuals with respect to Entity's Covered Load in accordance with good utility practice. Entity will take all actions necessary to facilitate Participant's compliance with any holdback directives made by WPP to Participant under the WRAP. Entity acknowledges that failure to provide information requested by Participant or take actions as directed by Participant under this Assurance Agreement may result in financial charges assessed against Participant in the WRAP.

6 **Effectiveness and Duration of Assurance Agreement.** This Assurance Agreement shall become effective upon its execution by all of the named parties, and shall remain in effect so long as (i) Participant remains a WRAP Participant, and (ii) neither party terminates this Assurance Agreement in accordance with Section 7 of this Assurance Agreement or the agreement terminates automatically under Section 7 of this Assurance Agreement.

7 **Termination.** This Assurance Agreement may be terminated by either party by providing written notice to the other party and to WPP (in accordance with Section 17 of this Assurance Agreement) of its intent to terminate along with the date of such termination, which shall not be earlier than the end of any Binding Season in which Participant has included Covered Resource and Covered Load in its WRAP submissions. Following delivery of the written notice, this Assurance Agreement shall remain in force and effect until the conclusion of any Summer Season or Winter Season for which Participant submitted data in a Forward Showing that included Entity's Covered Load and Covered Resource. Notwithstanding the foregoing, this Assurance Agreement will terminate immediately if Participant at any time ceases to include Covered Load in its WRAP submittals or otherwise disclaims responsibility for Covered Load.

8 **No Economic Or Commercial Terms; No Third-Party Obligations.** This Assurance Agreement governs only the designation of Participant as limited agent for Entity as described herein for purposes of participation in the WRAP. It does not establish or govern any commercial, financial, or risk allocation arrangements between Participant and Entity with respect to Entity's load, resources, or any other matter. Any such arrangements shall be set forth in separate agreements between Participant and Entity. Nothing in this Agreement shall be construed to create any obligation of WPP with respect to any payment, indemnity, or remedy between Participant and Entity.

9 **Relationship of Parties.** Nothing contained in this Assurance Agreement shall create or imply any affiliation, partnership, or joint venture between Participant and Entity or between Participant and/or Entity with WPP.

10 **Force Majeure.** Force Majeure: an event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, pandemic, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation, or restriction imposed by governmental military or lawfully established civilian authorities, or

any other cause beyond a party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither Participant nor Entity will be considered in default as to any obligation under this Assurance Agreement if prevented from fulfilling the obligation due to an event of Force Majeure. However, a party whose performance under this Assurance Agreement is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Assurance Agreement. Notwithstanding the foregoing, the physical inability to perform because of an event of Force Majeure shall not relieve the party of any financial or other obligations incurred under this Assurance Agreement or the WRAP Tariff.

11 Extent of Agreement. This Assurance Agreement governs the relationship between Participant and Entity only as to the matters contained herein, and does not modify, supersede, or terminate any other agreement between the parties.

12 No Conflict. Each party represents and warrants that the execution, delivery, and performance of this Assurance Agreement does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement of such party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such party or any of its assets. Furthermore, each party hereto represents and warrants to each other party that the person executing this Assurance Agreement on its behalf is authorized to execute this Assurance Agreement and bind such party to its terms, and that such authorization has been made in compliance with all applicable laws, articles of incorporation, bylaws, and resolutions and in a manner that the authorization is binding upon the party.

13 Assignment. This Assurance Agreement may be assigned by any party hereto only with the written consent of the other party, which shall not be unreasonably withheld. Any attempted assignment that violates this section is void and ineffective. Any valid assignment of this Assurance Agreement shall not relieve a party of its obligations, nor shall a party's obligations be enlarged, in whole or in part, by reason thereof. The parties agree that WPP must be provided written notice of any assignment of this Assurance Agreement in accordance with Section 17 of this Assurance Agreement.

14 Successors and Assigns. This Assurance Agreement is binding upon and for the benefit of the parties and their respective successors and assigns.

15 Non-Severability. It is specifically understood and agreed that this Assurance Agreement is an integrated document and that the various terms hereof are not severable without upsetting the balance of consideration achieved among the Parties.

16 Captions and Section Headings. The captions and section headings in this Assurance Agreement are used solely for convenience of reference and shall not be used to interpret or modify this Assurance Agreement.

17 Notice to WPP. Any notice to WPP required under this Assurance Agreement shall be provided via email to the WRAP Director at wrap@westernpowerpool.org as soon as

practicable but no later than within ten business days of the event triggering the need for notice, and is effective upon confirmation of receipt.

18 WPP Tariff and Filing. Participant and Entity acknowledge and agree that this Assurance Agreement is entered into to meet certain requirements under the WRAP Tariff and that WPP may at its discretion file this agreement with the Federal Energy Regulatory Commission and/or report it in WPP's Electronic Quarterly Report to FERC.

Now therefore, the parties have caused their respective, duly authorized officers or representatives to execute this Assurance Agreement:

For [Participant]:

Name: _____

Signature: _____

Title: _____

Date: _____

For [Entity]:

Name: _____

Signature: _____

Title: _____

Date: _____

Western Resource Adequacy Program

Change Request Form

Lead Sponsor Information	
Name: Patrick Flaherty	Organization: Western Power Pool
Title: WRAP Operations Manager	Phone Number: (865) 804-2618
Email: WRAP@westernpowerpool.org	Date of Submission: 6/10/2026

Co-Sponsors Information (optional)	
Name:	Organization:
Phone Number:	Email:
Name:	Organization:
Phone Number:	Email:
Name:	Organization:
Phone Number:	Email:

Type of Change Requested

Check one*:

- ☐ Correction *(i.e., revising erroneous language or language that needs clean-up for grammatical errors or inconsistency across governing documents - no changes to intent or policy)*
- ☒ Clarification *(i.e., revising language to better represent existing intent, no changes to functionality or policy)*
- ☐ Enhancement *(i.e., revising language to expand upon existing intent or functionality)*
- ☐ New Protocol, Business Practice, Criteria, Tariff *(i.e., new language to accommodate new functionality or policy not existing today)*
- ☐ Change *(i.e., a change in the existing policy – will replace an existing language)*
- ☐ Other *(i.e., changes that do not fall into the categories listed above)*

Description of Change

Provide a description of the issue*:

Business Practice Manual (BPM) *202 Participant Sharing Calculation Inputs* describes the Multi-Day (MD) files necessary to run the Operations Program Sharing Calculation, which includes at least seven Operating Days' worth of forecast data, and Operating Day (OD) files used to post updated Sharing Calculation results, hour by hour, for the Operating Day.

BPM 202 currently states that the OD file "is mainly used for informational purposes in the Operations Program." While this statement is accurate, OD files are also utilized during the Preschedule Day Sharing Calculation process when both MD and OD files are available for the same operating hour. This functionality was implemented at the request of Participants to ensure the Sharing Calculations incorporate the most current forecast information that is available within the OD files.

Accordingly, BPM 202 should be updated to clarify the purpose and use of both MD and OD files, as well as provide greater transparency regarding the logic that the Operations Client applies when processing these files. These revisions will better align the BPM language with current operational practices and system functionality.

Please provide the following information if known and/or available.

1. Provide a proposed solution to the issue described:

2026-NTFP-04 modifies WRAP BPM 202 as detailed below:

BPM 202 Participant Sharing Calculation Inputs – Language in *Section 7.2 Operating Day File* has been amended to bring clarity and transparency to OD file specifications as well as reflect the OD file prioritization over MD files in the Sharing Calculation when both files are available.

2. Provide the specific document and language you would like changed:

See attached redlines to BPM 202.

3. Provide a suggestion for how language could be updated to address issue:

See attached redlines to BPM 202.

Impact of Change

Describe the benefits that will be realized from this change*:

Improved clarity and transparency regarding the Ops Client file input logic will support a more accurate representation of Participant positions and contribute to improved outcomes for both the Sharing Calculation process and the Operations Program overall.

Please provide the following information if known and/or available.

1. Any data/information available that would characterize the importance or magnitude of the issue (allows for file attachments):

This issue was highlighted during the Operations Working Group and brought to WPP's attention by Participants who identified a need for greater clarity and transparency regarding the processes used within the WRAP Operations Program.

Non-Task Force Proposal Request (optional)
A flag as a Non-Task Force Proposal indicates the Concept could be implemented without requiring further development into a Proposal by a Task Force. Please check the box below if you would like this to be considered as a Non-Task Force Proposal ☒ I would like this to be flagged as a Non-Task Force Proposal

WESTERN POWERPOOL

Western Resource Adequacy Program

202 Participant Sharing Calculation Inputs

200 – Operations

Revision History

Manual Number	Version	Description	Revised By	Date
202	0.1	RAPC Glance Version	Beau Beljean	7/5/2024
202	0.2	Public Comment	Beau Beljean	7/9/2024
202	0.3	RAPC & PRC Discussion	Beau Beljean	8/14/2024
202	0.4	RAPC Endorsement	Beau Beljean	9/4/2024
202	0.5	Board Consideration	Beau Beljean	9/13/2024
202	1.0	Board Approved	Rebecca Sexton	9/19/2024
202	2.0	Firm Tx TF Updates	Maya McNichol	3/17/2026
202	3.0	Annual BPM Changes	Michael O'Brien	3/19/2026
202	4.0	2026-NTFP-02	Dave Zvareck	6/4/2026
202	4.1	MD and OD File Prioritization	WPP Staff	6/10/206

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1. Introduction

The Participant Sharing Calculation Inputs Business Practice Manual (BPM 202) outlines data inputs submitted by Participants in the Operations Program and used in the Sharing Calculation to identify any hour in which a Participant is forecast to have a capacity deficit and other Participants are forecast to have a capacity surplus (a Sharing Event). BPM 202 describes each of these Participant inputs and explains the Sharing Calculation.

1.1 Intended Audience

BPM 202 is intended for individuals or entities that are interested in or currently participating in the Western Resource Adequacy Program (WRAP). BPM 202 is particularly useful for those that support and have responsibility for the Operations Program on a day-to-day basis. This could include trading and scheduling staff, front-office technology and systems support staff, or other similar roles.

1.2 What You Will Find in This Manual

BPM 202 contains an explanation on all inputs to the Sharing Calculation that Participants submit for the Operations Program.

1.3 Purpose

The purpose of BPM 202 is to explain Participant-supplied inputs to the Sharing Calculation and how they are used in the Operations Program.

1.4 Definitions

All capitalized terms that are not otherwise defined in BPM 202 or another BPM have the meaning set forth in the Tariff:

Contingency Reserves Adjustment: As defined in *BPM 103 Forward Showing Capacity Requirement*.

Contingency Reserves Obligation (CRO): The amount of contingency reserves the Participant is carrying during the operating hour equal to:

> i) 3% of Load Forecast for which the Participant is the LRE and maintains the contingency reserve requirement
> ii) plus 3% of load for which the Participant is not the LRE but has assumed an obligation to carry Contingency Reserve through a contractual arrangement
> iii) plus 3% of generation used to meet any load for which the Participant is the LRE and maintains its Contingency Reserve requirement
> iv) plus 3% of generation utilized to meet load for which the Participant is not the LRE but has assumed an obligation to carry Contingency Reserve through a contractual arrangement.

Forced Outages: For Thermal Resources, Storage Hydro Qualifying Resources (using QCC MWs) or Energy Storage Resources, the immediate reduction in capacity, output, unanticipated failure, curtailment or derate of WRAP Qualifying Transmission or other cause that is beyond the control of the owner or operator of the resource.

Operations Program Capacity Need: A Sharing Calculation component that refers to the total hourly capacity requirement a Participant has forecasted in the Operations Program. The Hourly Capacity Need is the sum of a Participant's Load Forecast adjusted for Demand Response Capacity Resource (i.e. load reduction) plus the hourly forecasted CRO and the Uncertainty Factor.

Performance Adjustments: A Sharing Calculation component that is the sum of variances of over and under performance for hourly forecasts of Run-of-River, wind and solar resources and the net hourly value of Forced Outages relative to the monthly value submitted in the Participant's FS Submittal.

Program Interface Tool (PIT): As defined in *BPM 201 Operations Program Timeline*.

Resource-Specific Capacity Agreements: As defined in *BPM 106 Qualifying Contracts*

Thermal Resource: As defined in *BPM 101 Advance Assessment*.

2. Background

Participants are required to submit specific data for the Forward Showing (see *BPM 108 Forward Showing Submittal Process*). Some of these data are also used as inputs into the Operations Program. For example, VERs, ROR, Contingency Reserves, and Forced Outages included in or submitted as part of the FS Submittal are compared to nearer term forecasts submitted during the Operations Program. This leads to a comparison between near term forecast values in the Operations Program and the values submitted in the Forward Showing, resulting in delta values for the inputs that are used in the Sharing Calculation. BPM 202 describes the required Participant inputs to the Sharing Calculation.

3. Components of the Sharing Calculation equation

The Sharing Calculation compares each Participant's FS Capacity Requirement (see *BPM 103 Forward Showing Capacity Requirement*) - adjusted for Forced Outages and hourly forecasts of resource availability, resource performance, load, and Contingency Reserves relative to those included in or submitted as part of the FS Submittal - to each Participant's capacity need for each hour in the Multi-Day-Ahead Assessment, Preschedule Day, and Operating Day. The values submitted by the Participant for each hour are compared to the values submitted in the in the corresponding monthly FS Submittal. For a given hour the Sharing Calculation identifies Sharing Events in which any Participants are forecast to have

negative Sharing Calculation results. Additional program (i.e., non-Participant) inputs to the Sharing Calculation, such as the Uncertainty Factor, are described in *BPM 203 Program Sharing Calculation Inputs*. The Sharing Calculation is defined as:

Equation 1 – Simplified Sharing Calculation

$$\boldsymbol{Sharing\ Calculation} = \boldsymbol{FS\ Capacity\ Requirement} - \boldsymbol{Operations\ Program\ Capacity\ Need} + \boldsymbol{Performance\ Adjustments}$$

where

$$\boldsymbol{FS\ Capacity\ Requirement} = (P50\ Peak\ Load\ Forecast) * (1 + FSPRM) + Contingency\ Reserve\ Adjustment$$

and

$$\boldsymbol{Operations\ Program\ Capacity\ Need} = \boldsymbol{Load\ Forecast} - \boldsymbol{Demand\ Response\ Capacity\ Resources} + \boldsymbol{Contingency\ Reserve\ Obligation} + \boldsymbol{Uncertainty\ Factor}$$

and

$$\boldsymbol{Performance\ Adjustments} = \Delta\boldsymbol{Forced\ Outages} + \Delta\boldsymbol{RoR\ Performance} + \Delta\boldsymbol{VER\ Performance}$$

Where:

Demand Response Capacity Resource, as defined in the Tariff, refers to a capacity resource with a demonstrated capability to provide a reduction in load or otherwise control load. Its value is treated as a reduction to the hourly Load Forecast in the Operations Capacity Need component of the Sharing Calculation.

Load Forecast is the hourly forecast of a Participant's WRAP load, expressed in MW, and to be submitted for each operating hour.

Uncertainty Factor, as described in the Tariff, is an input to the Sharing Calculation and is meant to account for the variances between forecasts of load, VERs, and Run-of-River Qualifying Resources for each operating hour on the Preschedule Day and the actual load and resource performance during such hour on the Operating Day. See *BPM 203 Program Sharing Calculation Inputs* for more details.

***Δ** Forced Outages* refers, for any given operating hour, to the sum of:

(i) any change in Forced Outages of any of the Thermal Resources included in a Participant's Portfolio QCC, relative to the Forced Outages assumed in the FS Submittal by application of the Forced Outage Factor;

(ii) any change in Forced Outages of any of the Storage Hydro Qualifying Resources relative to the Forced Outages assumed in the calculation of a Participant's Resource QCC (expressed as forced QCC MWs);

(iii) any reduction in output capability of any of the Energy Storage Resources due to equipment failure or protection.

a. In the first four (4) hours the Forced Outages MWs that can be claimed are equal to [(charge MW x duration)/ 4].

b. For all hours beyond four (4) hours, the Forced Outages MW amount that can be claimed for an Energy Storage Resource shall not be greater than the monthly QCC.

(iv) any reduction in capacity of a Participant's Portfolio QCC resulting curtailment or derate on WRAP Qualifying Transmission.

Δ *ROR Performance* refers to any change, for any given operating hour, in expected performance of any of the ROR in the Participant's Portfolio QCC relative to the QCC of that Qualifying Resource.

Δ *VER Performance* refers to any change, for the subject hour, in expected performance of the VERs in the Participant's Portfolio QCC relative to the QCC of that Qualifying Resource. As defined in the Tariff, VERs are resources powered by a renewable energy source that cannot be stored by the facility owner or operator and that has variability that is beyond the control of the facility owner or operator, including but not limited to a solar or wind resource.

In summary:

Equation 2 – Detailed Sharing Calculation

$$\begin{aligned}&\boldsymbol{Sharing\ Calculation} = \\ &[(\boldsymbol{P50\ Peak\ Load\ Forecast}) * (\boldsymbol{1} + \boldsymbol{FSPRM}) + \boldsymbol{Contingency\ Reserve\ Adjustment}] \\ &- [\boldsymbol{Load\ Forecast} - \boldsymbol{Demand\ Response\ Capacity\ Resource} \\ &\qquad + \boldsymbol{Contingency\ Reserve\ Obligation} + \boldsymbol{Uncertainty\ Factor}] \\ &+ [\boldsymbol{\Delta Forced\ Outages} + \boldsymbol{\Delta RoR\ Performance} + \boldsymbol{\Delta VER\ Performance}]\end{aligned}$$

4. Inputs from Forward Showing Submittal

The Operations Program relies on data submitted in the Forward Showing Submittal (FS Submittal) that includes monthly values of the following:

(i) P50 Peak Load Forecast
(ii) FSPRM
(iii) Forced Outages
(iv) ROR QCC

(v) Solar QCC
(vi) Wind QCC
(vii) Contingency Reserves Adjustments

In addition, for Resource-Specific Capacity Agreements included in the FS Submittal such as "slice" contracts, adjustments are applied to the calculation of Forced Outages and Over/Under Performance. These adjustments are accounted for in data sent to the Operations Program, prior to the start of each Binding Season.

5. Inputs from the Operations Program

In the Operations Program, Participants are required to prepare and provide data in a format specified by the Program Operator. This data must adhere to a submission schedule to allow the Sharing Calculations to run with as up-to-date and complete data as possible. The Program Operator is responsible for the transfer of input data that is processed according to a predefined schedule to inform Participants of any Sharing Events. A user interface provides Participants the means to view input upload status and error details, notifications and alerts, and Sharing Calculation results – this is called the Program Interface Tool (PIT) or Ops Client.

Moreover, it is the responsibility of the Program Operator to develop, test, implement and maintain the form and format of all inputs and to ensure the latest version of these are made available to Participants. The Program Operator also ensures that Participants are given access to portals, links, and/or any other data upload protocols prior to the start of any Binding Season to allow successful participation in the Operations Program. Any procedures, guides or reference materials can be found in the Input Data File Specification document located on the WPP website.

The Sharing Calculation, which is the mechanism to determine whether a participant is surplus or deficit on any given hour of the operating day, relies on data submitted in the Operations Program by the Participant which includes hourly values of the following:

(i) Load Forecast
(ii) Forced Outages
(iii) Forecasted ROR output
(iv) Forecasted wind output
(v) Forecasted solar output
(vi) Contingency Reserves Obligation

The Sharing Calculation also includes an Uncertainty Factor as a term in the equation. The Uncertainty Factor is not a Participant provided value and is described in more detail in *BPM 203 Program Sharing Calculation Inputs*.

5.1 Load Forecast

The Load Forecast is the Participant's hourly forecast of its WRAP load, expressed in MW, submitted for each operating hour. The data submitted for Load Forecasts shall account for the total load the Participant is responsible for serving under WRAP and be based on the same load that was utilized in the FS Submittal. If there are additional third-party loads or excluded loads within a Participant's Balancing Authority Area (BAA), these shall not be accounted for in the Load Forecasts submitted in the Operations Program.

5.2 Forced Outages Forecast

The Forced Outage is the hourly forecast of a Participant's Forced Outages (including derate), expressed in MW, and to be submitted for each operating hour. The data submitted for Forced Outages forecasts shall account for MW reduction in:

1. Total generating capability portfolio where the portfolio is defined as:
    a. Any resource in the Forward Showing for which the Program Operator has calculated an Equivalent Forced Outage Factor (EFOF) or the Participant has supplied a Forced Outage Factor.
    b. Any Resource-Specific Capacity Agreement in the Forward Showing where the Participant has assumed the outage risk as the purchaser. It is the responsibility of the Participant to work with the seller to determine how much of an outage is attributable to the Participant's contract.
2. A curtailment or derate of WRAP Qualifying Transmission being utilized to bring resources and/or contracts shown in the Forward Showing Submittal to load. Curtailments and derates to non-firm transmission shall not be accounted for in the Forced Outages forecasts.

Additionally, the Forced Outages or derate must result in an actual loss of generating capability. If, for example, the outage is on a hydro unit and there is insufficient water in storage or inflow to utilize the lost capacity then the outage may not be claimed.

Due to limited dispatchability and dependency on fuel supply, must-take Thermal Resources are not given a Forced Outage Factor. Any derate, outage, or transmission curtailment resulting in a reduction of generation capability for must-take resources, shall not be accounted for and shall be excluded from Forced Outages forecasts.

5.3 Forecasted ROR

The ROR forecast is the hourly forecast of a Participant's ROR performance, expressed in MW, and to be submitted for each operating hour. The data submitted for ROR forecasts shall account for the forecasted MW output on any given operating hour for the Participants' ROR included in the FS Submittal.

Unless specified under a Resource-Specific Capacity Agreement listed in a Participant's FS Submittal, a Participant with ROR will be responsible for over/under performance of ROR forecasts.

5.4 Forecasted Wind Output

The wind resource forecast is the hourly forecast of a Participant's wind resource performance, expressed in MW, and to be submitted for each operating hour. The data submitted for wind resource forecasts shall account for the forecasted MW output on any given operating hour for the Participant's wind resources included in the FS Submittal.

Unless otherwise specified under a Resource-Specific Capacity Agreement listed in the FS Submittal, a Participant with wind resources will be responsible for over/under performance of wind resource forecasts.

5.5 Forecasted Solar Output

The solar resource forecast is the hourly forecast of a Participant's solar resources performance, expressed in MW, and to be submitted for each operating hour. The data submitted for solar resource forecasts shall account for the forecasted MW output on any given operating hour for the Participants' solar resources included in the FS Submittal.

Unless otherwise specified under a Resource-Specific Capacity Agreement listed in a Participant's FS Submittal, a Participant with solar resources will be responsible for over/under performance of solar resources forecasts.

5.6 Contingency Reserves Obligation

As defined above, the CRO is the total amount of contingency reserves the Participant is carrying during the operating hour.

The data submitted for CRO is intended to help ensure that sufficient capacity is withheld to cover a Participant's CRO in MW for any given hour.

5.7 Uncertainty Factor

The Uncertainty Factor is meant to account for the variances between forecasts of load, VERs, and ROR for each operating hour on the Preschedule Day and the actual load and resource performance during such hour on the Operating Day. The Uncertainty Factor

helps ensure that Participants retain capacity to account for near-term forecast error that would underestimate capacity needs, overestimate generation capability/availability (i.e., variances in the upward direction for load and variances in the downward direction for resource performance). See more details in *BPM 203 Program Sharing Calculation Inputs*.

6. Forecasting Methodology and Data Evaluation

There are two (2) types of forecast methodologies a Participant may use for forecasting Load, ROR, wind output and solar output:

(i) a third-party forecasting tool/software or
(ii) a proprietarily developed algorithmic forecasting tool.

A Participant may elect to use one or both of these methodologies, but in any case, is required to submit to the Program Administrator, at least 90 days prior to the start of its first Binding Season, a narrative description of the methodology used for forecasting. This narrative shall include at minimum and without limitation:

- Type of methodology (i.e., third-party or proprietarily developed)
- Description of methodology
- List of data types forecasted using the methodology submitted in the Operations Program (i.e., Load, ROR, wind output and solar output)
- Description of limitations of methodology, particularly describing any inability to manually override forecast data and inputs to the Sharing Calculation. The purpose here is to demonstrate that the Participant is not able to manually modify forecasts with the intent of increasing a Participant's access to Holdback Capacity in the Operations Program or limiting their requirement to provide Holdback Capacity in the Operations Program.

In the event there is a change in methodology, the Participant must provide an updated narrative description to the Program Administrator as soon as practicable.

In addition, the Program Administrator and the Program Operator shall monitor and evaluate on a regular basis forecast data performance and ensure feedback is provided back to Participants to help identify inaccurate data.

7. Input Data Files

7.1 Multi-Day File

The data requested in the Multi-Day (MD) file is necessary to run the Operations Program Sharing Calculation, which is the mechanism to determine whether a Participant is surplus or deficit on any given hour of the Operating Day.

MD files shall include at least seven Operating Days' worth of forecast data.

Per *BPM 201 Operations Program Timeline*, Participants are required to submit a MD file no later than 05:20 Pacific Prevailing Time (PPT) on the Preschedule Day and according to the WECC scheduling calendar.

7.2 Operating Day File

The data requested in the Operating Day (OD) files ~~(OD files)~~ is necessary to run the Operations Program Sharing Calculation, which is the mechanism to determine whether a Participant is surplus or deficit on any given hour of the Operating Day.~~mainly used for informational purposes in the Operations Program.~~ As the binding obligations are set on the Preschedule Day under the Tariff, input data submitted in the OD files is additionally used to post updated Sharing Calculation results, hour by hour, for the Operating Day. These updated Sharing Calculation results help inform a Participant about its position relative to the Sharing Calculation result posted on the Preschedule Day.

For operating hours in which MD and OD files are available, the Sharing Calculation prioritizes the use of OD files for hours containing concurrent data.

OD files include at least 24 (or 23 for the spring transition to daylight savings time) operating hours' worth of forecast data and are to be submitted every hour throughout the Binding Season.

Per *BPM 201 Operations Program Timeline*, Participants are required to submit an Operating Day file no later than one hundred and twenty (120) minutes prior to the start of any given operating hour.

7.3 Point Limit File

The data requested in the Point Limit (PL) files is to inform the Operations Program about the transmission points a Participant can deliver to and take receipt from other Participants.

PL file inputs are essential to determine allocation and deliverability of any Holdback Requirement in a Subregion without a Central Hub.

PL files shall include at least 24 (or 23 for the spring transition to daylight savings time) operating hours' worth of data including but not limited to transmission points for delivery of any Holdback Requirement and order of priority.

Per *BPM 201 Operations Program Timeline*, Participants shall ensure the PL files are submitted after 05:20 PPT when the Sharing Calculation results post and before 06:35 PPT. Data submitted in the PL files serve as input needed for optimization and validation in the Operations Program.

7.4 Point-To-Point Limit File

The Operations Program is designed to optimize allocation and deliverability of any Holdback Requirement. Given potential transmission constraints within a Subregion and the desire to share as much diversity as possible, the data requested in the Point-To-Point Limit (PTPL) is to inform the Operations Program about the transmission points where wheeling capability may occur. Inputs from the PTPL files are essential to determine a Participant's ability and order of priority to deliver any Holdback Requirement on defined transmission wheeling paths and inter-Subregion transmission connectivity.

PTPL files shall include at least 24 (or 23 for the spring transition to daylight savings time) operating hours' worth of data including but not limited to point-to-point transmission wheeling paths and order of priority.

Per *BPM 201 Operations Program Timeline*, Participants shall ensure the PTPL files are submitted after 05:20 PPT when the Sharing Calculation results are posted and before 06:35 PPT. Data submitted in the PTPL files serve as input needed for optimization and validation in the Operations Program.

7.5 Voluntary Holdback File

The Voluntary Holdback data submission allows Participants to indicate to the WRAP the amount of Holdback Capacity that they would like to make available in excess of the surplus resulting from the Sharing Calculation. The intent of this submission is to indicate the MW value that can be made available. The points at which the Voluntary Holdback could be made available must be included in the Point Limits File.

The data requested in the Voluntary Holdback (VH) files is to inform the Operations Program about any additional capacity made available to the Subregion for any given hour. Input from the VH files is essential to determine allocation and prioritization of any Holdback Requirement.

Per *BPM 201 Operations Program Timeline*, Participants shall ensure the VH files are submitted after 05:20 PPT when the Sharing Calculation results are posted and before 06:35 PPT. Data submitted in the VH files serve as input needed for optimization and validation of the Operations Program, particularly for any given Sharing Event.

7.6 Actuals File

The data requested in the Actuals (AC) files is after-the-fact in nature - equivalent to the data submitted in the MD and OD files - reflecting the actual values of the data that was forecasted. The data collected from AC files is not a Sharing Calculation input. The Program Administrator and Program Operator use AC files data for analysis and reporting, particularly for data accuracy and performance.

Participants shall ensure that AC files are submitted no later than 168 hours after any given operating hour.

8. Sharing Calculation Results

The Sharing Calculation relies on inputs from both the Forward Showing and Operations Program. The Sharing Calculation result for any operating hour is calculated using the Sharing Calculation equation and its inputs listed in the sections above.

If a Sharing Calculation result for any given hour is positive, this indicates the Participant has surplus capacity.

Conversely, if a Sharing Calculation result for any given hour is negative, this indicates the Participant is capacity deficient and therefore would constitute a potential Sharing Event.

The forecast data submitted for each operating hour is compared to the values assumed in the FS Submittal. This means the values submitted for each operating hour should use the same assumptions and the same general source data as the values submitted in the Forward Showing. Any mismatch can result in a Participant being erroneously identified as surplus or deficient. A Participant's ability to ensure that the Forward Showing and the Operations Program data submissions align with one another will streamline testing and trials and maximize both individual and group benefits.

9. Planned Outages

In the FS Submittal, Participants are required to provide information on all Qualifying Resources that are currently out of service with a scheduled return date that falls during or after the Binding Season. Capacity associated with such resources is then deducted from

Participants' Portfolio QCC to ensure no credit is granted for such resources during the planned outage.

The aggregate of any additional outages that are planned to occur during the Binding Season but have not yet begun at the FS Submittal deadline must be within the Participant's remaining surplus or replaced with other supply. If a Participant takes a planned outage during the Binding Season, they are responsible for backfilling for the entirety of the reduction in capacity and shall submit zero Forced Outage MWs for that resource during the period of the planned outage.

A planned outage shall not justify a waiver of or exception to a Participant's holdback or energy delivery obligations under the Tariff. It is the Participant's responsibility to ensure necessary capacity is available to meet the Operations Program requirements, regardless of planned outage schedules or FS Submittal acceptance. In addition, planned outages MW amounts will not be included in the Forced Outages hourly data submitted in the Operations Program. Furthermore, if a planned outage that was included in the FS Submittal ends earlier in the month than expected and the resource becomes available, the Participant shall not include any Forced Outages MWs for that resource in the Operations Program.

Western Resource Adequacy Program

Change Request Form

Lead Sponsor Information	
Name: Dave Zvareck/Maya McNichol	Organization: Western Power Pool
Title: WRAP Director/WRAP Policy & Stakeholder Engagement Manager	Phone Number: 503-445-1074
Email: WRAP@westernpowerpool.org	Date of Submission: 6/5/2026

Co-Sponsors Information (optional)	
Name:	Organization:
Phone Number:	Email:
Name:	Organization:
Phone Number:	Email:
Name:	Organization:
Phone Number:	Email:

Type of Change Requested
☐ Correction *(i.e., revising erroneous language or language that needs clean-up for grammatical errors or inconsistency across governing documents - no changes to intent or policy)*
☐ Clarification *(i.e., revising language to better represent existing intent, no changes to functionality or policy)*
☒ Enhancement *(i.e., revising language to expand upon existing intent or functionality)*
☒ New Protocol, Business Practice, Criteria, Tariff *(i.e., new language to accommodate new functionality or policy not existing today)*
☐ Change *(i.e., a change in the existing policy – will replace an existing language)*
☐ Other *(i.e., changes that do not fall into the categories listed above)*

Description of Change

Provide a description of the issue*:

Tariff & BPM 107: The calculation of Forward Showing (FS) Deficiency Charges is dependent on a FS Year and does not contemplate the situation where there is both a Non-Binding Season and a Binding Season in a FS Year. This modification to the Tariff and to BPM 107 will provide guidance on the calculation of FS Deficiency Charges for such scenarios.

Tariff & BPM 108: The current WRAP Tariff does not contemplate time extensions for software outages that impact Forward Showing and Cure Period deadlines. This modification to the Tariff and BPM 108 will provide for an extension of time for Participants to make Forward Showing and Cure Period submissions in the event of Forward Showing software system outage.

Please provide the following information if known and/or available.

1. Provide a proposed solution to the issue described:

Tariff & BPM 107: WPP proposed for the Tariff and BPM 107 to be modified such that if a Non-Binding Summer Season is followed by a Binding Winter Season, for the purposes of calculating the maximum Monthly Deficiency for Winter, the maximum Monthly Deficiency for Summer is considered to be 0 MW. Since FS Deficiency Charges are calculated for a FS Year which starts with a Summer Season, there is no change needed for a Binding Summer Season followed by a Non-Binding Winter Season.

Tariff & BPM 108: WPP proposes for the WRAP Tariff and BPM 108 to be modified to include a provision for extending Forward Showing and/or Cure Period deadlines in the event of a Forward Showing software system outage during the final seven (7) days prior to the applicable deadline. WPP proposes to extend the Forward Showing or Cure Period deadline by a commensurate time period in which the software outage occurred. For example, if during the final seven (7) days prior to a deadline the Forward Showing software system was unavailable for two (2) days, the Forward Showing or Cure Period deadline would be extended for two (2) days. If the outage occurred for five (5) days, the deadline would be extended by five (5) days. Additionally, for outages that occur prior to the Forward Showing deadline, WPP would be granted an extension for validating Forward Showing Submittals for the commensurate number of days that the outage persisted.

2. Provide the specific document and language you would like changed:

See attached edits to the WRAP Tariff, BPM 107, and BPM 108.

3. Provide a suggestion for how language could be updated to address issue:

See proposed edits to the WRAP Tariff, BPM 107, and BPM 108.

Impact of Change

Describe the benefits that will be realized from this change*:

Tariff & BPM 107: This will align the written policy with the intention of the FS Deficiency Charges and decrease potential gaming opportunities.

Tariff & BPM 108: If a Forward Showing software system outage were to occur during the final seven (7) days prior to a Forward Showing or Cure Period deadline, Participants will have an opportunity to continue their Forward Showing Submittal during the extended time period and will therefore avoid harm. WPP will also receive an extension for FS Submittal validations for an outage that occurs prior to the Forward Showing deadline.

Please provide the following information if known and/or available.

1. Any data/information available that would characterize the importance or magnitude of the issue (allows for file attachments):

Tariff & BPM 107: Without changing this language, there are potential gaming opportunities that could incentivize Participants to artificially inflate a Summer Season FS Deficiency in order to minimize the Winter FS Deficiency Charge. This change is in line with intended policy and is an edge case that was erroneously excluded.

Tariff & BPM 108: Without providing a time extension for Forward Showing software system outages, Participants that had not yet completed their Forward Showing Submittal or had remaining deficiencies during the Cure Period could be exposed to deficiency charges due to no fault of their own. WPP is attempting to mitigate this risk by providing a deadline extension if such a software outage were to occur during the final (7) days prior to a deadline.

Non-Task Force Proposal Request (optional)

A flag as a Non-Task Force Proposal indicates the Concept could be implemented without requiring further development into a Proposal by a Task Force. Please check the box below if you would like this to be considered as a Non-Task Force Proposal

☒ I would like this to be flagged as a Non-Task Force Proposal

WESTERN POWERPOOL

Western Resource Adequacy Program

107 Forward Showing Deficiency Charge

100 – Forward Showing

Revision History

Manual Number	Version	Description	Revised by	Date
107	0.1	RAPC Glance Version	Maya McNichol	1/16/2024
107	0.2	Public Comment Version	Maya McNichol	1/18/2024
107	0.3	RAPC & PRC Discussion	Maya McNichol	2/12/2024
107	0.4	RAPC Endorsement	Maya McNichol	2/23/2024
107	0.5	Board Approval	Maya McNichol	2/29/2024
107	1.0	Board Approved	Maya McNichol	3/7/2024
107	2.0	2024-NTFP-2 Edits	Katie Gregor	1/27/2025
107	3.0	Annual BPM Review	Dave Zvareck	3/19/2026
107	3.1	2026-NTFP-005 – public comment	Maya McNichol	6/10/2026

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107 Forward Showing Deficiency Charge

1. Introduction

A Participant that submits a Forward Showing Demonstration that the Program Operator or Program Administrator finds to be deficient, and that does not cure that deficiency prior to the end of the prescribed Cure Period, is assessed a Deficiency Charge. BPM 107 provides implementing details and practices relevant to the calculation of the Deficiency Charge, and allocation of the revenues received from collection of Deficiency Charges.

1.1 Intended Audience

BPM 107 is intended for the Western Power Pool (WPP) Western Resource Adequacy Program (WRAP) Participants and other interested individuals or entities. BPM 107 is particularly useful for those individuals that are responsible for, and support, participation in the Forward Showing Program.

1.2 What You Will Find in This Manual

BPM 107 contains information regarding the calculation of the Deficiency Charge, including calculation of Capacity Deficiencies, Transmission Deficiencies, and Deficiency Charges, and allocation of revenues received from the collection of Deficiency Charges. Certain adjustments to the Deficiency Charge that are available during the Transition Period are addressed in *BPM 109 Forward Showing Transition Period*.

1.3 Purpose

To provide implementing details and practices relevant to the calculation of the WRAP Deficiency Charge.

Nothing in BPM 107 changes in any way the exclusive authority of the independent Board of Directors, under Section 3.1 of the Tariff, to approve and direct WPP to file Tariff amendments and the independent Board's ultimate authority over all aspects of the WRAP.

1.4 Definitions

All capitalized terms that are not otherwise defined in BPM 107 have the meaning set forth in the Tariff or in another BPM.

Catastrophic Failure Monthly Report: As defined in *BPM 108 Forward Showing Submittal Process*.

Cure Period: As defined in *BPM 108 Forward Showing Submittal Process*.

Monthly P50 Peak Load Forecast: The P50 Peak Load Forecast for each month in a given Binding Season.

Monthly Transmission Exception Check-In: As defined in *BPM 108 Forward Showing Submittal Process*.

Summer % Deficit: A value greater than zero that is the Aggregate Capacity Deficiency for the WRAP as a whole for a Summer Season divided by the sum of the maximum Monthly P50 Peak Load Forecasts for each Participant for that Summer Season.

Winter % Deficit: A value greater than zero that is the Aggregate Capacity Deficiency for the WRAP as a whole for a Winter Season divided by the sum of the maximum Monthly P50 Peak Load Forecasts for each Participant for that Winter Season.

2. Background

The WRAP is a regional resource adequacy program in which Participants demonstrate, in advance of a defined season when resources may need to be deployed, that they have sufficient resources to meet their expected peak loads and a reserve margin. The WRAP imposes standards and requirements related to such matters as the resources that qualify to meet resource adequacy objectives, the calculation of peak loads, and the required minimum reserve margin. Each Participant is required to submit a Forward Showing Submittal in advance of each Binding Season to demonstrate a minimum required quantity of capacity, known as the FS Capacity Requirement, and a minimum required quantity of transmission service rights, known as the FS Transmission Requirement. The WRAP provides for imposition of significant charges on Participants that do not show in advance sufficient resources to meet their loads. Any Participant that fails to cure identified deficiencies in its Forward Showing Submittal is assessed a Deficiency Charge. Specifically, if a Participant fails during the Cure Period to demonstrate that it has resolved any identified deficiencies in either or both of its FS Capacity Requirement and/or its FS Transmission Requirement, the Participant will be assessed a Deficiency Charge for each Month for which a deficiency is identified.

3. Calculating the Deficiency Charge

3.1 Calculating the Deficiency

Deficiencies are calculated for each Month of a Binding Season, in accordance with the following:

Definition: Monthly Deficiency
$$\textit{Participant's Monthly Capacity Deficiency} = \textit{Maximum}(\textit{Monthly FS Capacity Requirement} - \textit{Monthly Portfolio QCC}, 0)$$ $$\textit{Participant's Monthly Transmission Deficiency} = \textit{Maximum}((75\% \times \textit{Monthly FS Capacity Requirement}) - (\textit{Monthly Transmission Demonstrated} + \textit{Approved Monthly Transmission Exemptions}), 0)$$
Where: **Monthly FS Capacity Requirement** is reduced to account for approved catastrophic resource failure exemption requests submitted at the time of Forward Showing Submittal (see *BPM 108 Forward Showing Submittal Process*) and **Monthly Transmission Demonstrated** is the amount of transmission service rights submitted by a Participant per the requirements in Tariff Section 16.3 and validated by the Program Administrator as per *BPM 108* *Forward Showing Submittal* for each month. Then: $$\textit{Monthly Deficiency} = \textit{Maximum of } (\textit{Monthly Capacity Deficiency}, \textit{Monthly Transmission Deficiency})$$

The Transition Period rules, as discussed in *BPM 109 Forward Showing Transition Period* may, depending on a Participant's circumstances, change or adjust calculation of Deficiencies during the Transition Period.

3.2 Calculating the Deficiency Charge

Deficiency Charge calculations take account of multiple Monthly Deficiencies within a Forward Showing for a single Binding Season, and multiple Deficiencies across a Forward Showing Year, consisting of a Summer Season and the immediately succeeding Winter Season, in accordance with the following formulas and principles. The formulas are drafted to apply to an individual Participant as to its Forward Showings for a Forward Showing Year.

The Monthly Deficiency with the highest MW value in a Forward Showing for a Summer Season shall be assessed a Deficiency Charge as calculated per Formula 1.

Formula 1: Maximum Summer Month
$\boldsymbol{Max\ Monthly\ Summer\ Deficiency} \times \boldsymbol{Annual\ CONE} \times \mathbf{1000} \times \boldsymbol{Summer\ Season\ Annual\ CONE\ Factor}$
where the Annual CONE is expressed as a dollars per kW-year calculated in accordance with Section 3.3.1~~3.3.1~~, and where Summer Season Annual CONE Factor is determined in accordance with Section 3.3.2.

Any other Monthly Deficiency in the Participant's Forward Showing for the same Summer Season shall be assessed a Deficiency Charge as calculated per Formula 2.

Formula 2: Other Summer Months
$\boldsymbol{Additional\ Summer\ Deficiency} \times (\boldsymbol{Annual\ CONE}\ /\mathbf{12}) \times \mathbf{1000} \times \mathbf{200\%}$
where the Annual CONE is expressed as a dollars per kW-year calculated in accordance with Section 3.3.1~~3.3.1~~.

Any Monthly Deficiency in the Forward Showing for the immediately succeeding Winter Season with a higher MW value than the highest MW value of the Monthly Deficiency in the Summer Season shall be assessed a Deficiency Charge on the incremental MW value above the Summer Season as calculated per Formula 3.

Formula 3: Maximum Winter Month
$\boldsymbol{Maximum\ of}\ (\boldsymbol{Max\ Winter\ Deficiency} - \boldsymbol{Max\ Summer\ Deficiency}, \mathbf{0}) \times \boldsymbol{Annual\ CONE} \times \mathbf{1000} \times \boldsymbol{Winter\ Season\ Annual\ CONE\ Factor}$
where the Annual CONE is expressed as a dollars per kW-year calculated in accordance with Section 3.3.1~~3.3.1~~, and where Winter Season Annual CONE Factor is determined in accordance with Section 3.3.2.

If there is a Monthly Deficiency in the Winter Season with a higher MW value than the highest MW value of any Monthly Deficiency in the Summer Season, the Monthly Deficiency with the highest MW value in the Summer Season shall be assessed an additional Deficiency Charge calculated per Formula 2.

Any other Monthly Deficiency in the Participant's Forward Showing Submittal for the same Winter Season shall be assessed a Deficiency Charge as calculated per Formula 4.

Formula 4: Other Winter Months
$\boldsymbol{Additional\ Winter\ Capacity\ Deficiency} \times (\boldsymbol{Annual\ CONE}/12) \times 1000 \times 200\%$
where the Annual CONE is expressed as a dollars per kW-year calculated in accordance with Section 3.3.1~~3.3.1~~.

The Transition Period rules, as discussed in *BPM 109 Forward Showing Transition Period* may, depending on a Participant's circumstances, change or adjust calculation of Deficiency Charges during the Transition Period.

Should a Subregion fail to achieve Critical Mass in a Binding Season, Participants electing to participate as Non-Binding Participants will not be subject to Deficiency Charges under the FS Program as described in Section 7.

3.3 Determining Certain Components of the Deficiency Charge Calculation

3.3.1 Cost of New Entry

The Cost of New Entry, also known as CONE, is used in the Deficiency Charge calculation as an indication of the type of cost a deficient Participant avoids by not having sufficient capacity to serve its peak loads. It is not intended to reflect any Participant's actual avoided capacity costs or to establish any precedent as to the types of resources any Participant can or should obtain to meet their marginal capacity needs, or that any type of resource is the expected marginal capacity resource in the WRAP Region or any Subregion.

In accordance with the Tariff, CONE is the estimated cost of a hypothetical new peaking natural gas-fired generation facility. The CONE estimate is based on publicly available information relevant to the estimated annual capital and fixed operating costs of a hypothetical natural gas-fired peaking facility. The estimate of CONE does not consider net revenue from the sale of capacity, energy, or ancillary services from the hypothetical facility, nor does it consider variable operating costs necessary for generating energy.

The Program Administrator posts on its website the current value of CONE, along with key supporting calculations and information that materially affects the estimate. The Program Administrator may initiate a change to CONE at any time. The Program Administrator reviews the CONE estimate annually, but is not required to change the

CONE annually, and can initiate a change to CONE more frequently than annually. Any proposed changes in the CONE are subject to review through the stakeholder process for program rule changes as outlined in *BPM 301 Program Review Committee Workplan Development and Approval*, *BPM 302 Program Review Committee Proposal Development and Consideration*, and *BPM 303 Expedited Review Process*.

3.3.2 Summer Season and Winter Season Annual CONE Factors

The Deficiency Charge calculation uses a CONE Factor to reflect that individual Participant deficiencies are of even greater concern when the Region as a whole is expected to be short of targeted capacity needs. Per the Tariff, there are separate CONE Factors for each Winter Season and each Summer Season, depending on the total deficiency of the WRAP Region.

The Summer Season Annual CONE Factor varies based on the ratio ("Summer % Deficit") of the Aggregate Capacity Deficiency for the WRAP Region (all Participants) that Summer Season, divided by the aggregated maximum Monthly P50 Peak Load Forecast of all Participants for the Summer Season, as follows:

1) If the Summer % Deficit is less than or equal to 1%, the Summer Season Annual CONE Factor = 125%

2) If the Summer % Deficit is greater than 1% but less than or equal to 2%, the Summer Season Annual CONE Factor = 150%

3) If the Summer % Deficit is greater than 2% but less than or equal to 3%, the Summer Season Annual CONE Factor = 175%

4) If the Summer % Deficit is greater than 3%, the Summer Season Annual CONE Factor = 200%

The Winter Season Annual CONE Factor varies based on the ratio ("Winter % Deficit") of the Aggregate Capacity Deficiency for the WRAP Region (all Participants) that Winter Season, divided by the aggregated maximum Monthly P50 Peak Load Forecast of all Participants for the Winter Season, as follows:

1) If the Winter % Deficit is less than or equal to 1%, the Winter Season Annual CONE Factor = 125%

2) If the Winter % Deficit is greater than 1% but less than or equal to 2%, the Winter Season Annual CONE Factor = 150%

3) If the Winter % Deficit is greater than 2% but less than or equal to 3%, the Winter Season Annual CONE Factor = 175%

4) If the Winter % Deficit is greater than 3%, the Winter Season Annual CONE Factor = 200%

If there is no deficiency in the Summer or Winter Binding Season, there is no Summer % Deficit or Winter % Deficit.

If a Participant incurred any FS Deficiency Charges in a Forward Showing Year, then for the immediately following Forward Showing Year, both the Summer Season Annual CONE Factor and the Winter Season Annual CONE Factor shall be 200% for such Participant.

A detailed example is provided in the FS Deficiency Charge Examples document, which is posted on the WPP website.

4. Dispute Resolution Process

Nothing in this BPM limits the ability of a Participant that believes it has been assessed a Deficiency Charge in error from raising such concerns with the Program Administrator staff or invoking the Tariff dispute resolution process.

5. Timing of Deficiency Charge Revenue Collection

Any Deficiency Charges will be calculated and invoiced to deficient Participants within 45 Days following the end of the Cure Period for each season, or seven Days following a Participant's failure to timely submit a required Catastrophic Failure Monthly Report or Monthly Transmission Exception Check-In (see *BPM 108 Forward Showing Submittal Process*).

6. Allocation of Revenues from Deficiency Charges

To the extent WPP collects payment of Deficiency Charges for a Binding Season, revenues from those collected Deficiency Charges will be allocated among those Participants with no Deficiency Charges for that Binding Season, pro rata based on each non-deficient Participant's share of all such Participants' Median Monthly P50 Peak Loads consistent with Schedule 1 of the Tariff. WPP will distribute this revenue only after the deadline for Internal Dispute Resolution request for a Deficiency Charge has passed and no Internal Dispute Resolution request has been requested; or, alternatively, after a timely request for dispute resolution has been made and all proceedings related to that dispute resolution have been exhausted. Participants have

no entitlement to receive revenues from Deficiency Charges except to the extent such charges are assessed, invoiced, and collected by WPP.

The Transition Period rules, as discussed in *BPM 109 Transition Period* may, depending on a Participant's circumstances, change, or adjust the allocation of Deficiency Charge revenues during the Transition Period.

7. Critical Mass and Non-Binding Participation

After the Transition Period as described in *BPM 109 Transition Period*, in the scenario that a Subregion fails to meet a sufficient amount of load or number of Participants for a Participant's selected Transition Binding Season or any future Binding Seasons, Participants within the affected Subregion may elect to be Non-Binding for the season where Critical Mass is not achieved. Table 1~~Table 5~~ below shows the minimum values for the amount of load and number of Participants needed to meet Critical Mass by Subregion.

Table 1~~5~~. Threshold load and number of Participants for Critical Mass

Threshold Values	Northwest Subregion	Southwest and East Subregion
Load Volume	20 GW	15 GW
Participant Count	3	3

The Program Administrator will contact the Participant by emailing its Resource Adequacy Participant Committee (RAPC) representative alerting the Participant if Critical Mass in one or more of the Subregions that Participant operates in is not reached. Once the Program Administrator has notified a Subregion that Critical Mass has not been achieved, Participants within that Subregion have 30 days to provide notice from the Participant RAPC representative to WPP by email at wrap@westernpowerpool.org indicating whether they intend to participate as Non-Binding Participants in the Subregion(s) for that Binding Season.

A Participant electing to participate in a Non-Binding manner for a Binding Season outside of the Transition Period will operate under the guidelines described here:

1. The Participant will not be subject to Deficiency Charges under the FS Program, or to mandatory Holdback Requirements as a result of a positive Sharing Calculation Result, mandatory Energy Deployments, or Delivery Failure Charges under the Operations Program.

2. The Participant will be subject to all other FS Program requirements, including the requirement to timely provide data in connection with the Advance Assessment, the requirement to timely provide FS Submittals, and Operations

Program requirements as appropriate and detailed in *BPM 210 Binding and Non-Binding Participation in Operations Program*.

3. The Participant may participate in the Operations Program as outlined in *BPM 210 Binding and Non-Binding Participation in Operations Program*.

7.1 Binding and Non-Binding Seasons in a Forward Showing Year

In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations):

- If a Participant will participate in a Summer Season as a Non-Binding Participant, for the purposes of calculating the maximum Monthly Deficiency for Winter, the Max Summer Deficiency (MW) is considered to be 0 MW.
- If the Participant will participate in a Winter Season as a Non-Binding Participant, the Max Summer Monthly Deficiency remains unchanged.

WESTERN POWERPOOL

Western Resource Adequacy Program

108 Forward Showing Submittal Process

100 – Forward Showing

Revision History

Manual Number	Version	Description	Revised By	Date
108	0.1	RAPC Glance Version	Michael O'Brien	12/5/2024
108	0.2	Public Comment	Michael O'Brien	12/11/2024
108	0.3	RAPC & PRC Review	Michael O'Brien	2/14/2024
108	0.4	RAPC Endorsement	Michael O'Brien	2/22/2024
108	0.5	Board Approval	Michael O'Brien	2/29/2024
108	1.0	Board Approved	Michael O'Brien	3/7/2024
108	2.0	2025-NTFP-01 & 2025-NTFP-02	Elise Mousseau	9/25/25
108	3.0	Firm Tx TF Updates	Maya McNichol	3/17/2026
108	4.0	Annual BPM Review	Danie Williams	3/19/2026
108	4.1	226-NTFP-05-public comment	Maya McNichol	6/10/2026

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108 Forward Showing Submittal Process

1. Introduction

Forward Showing (FS) Submittal Process Business Practice Manual (BPM) 108 describes when and how each Participant provides its projected load and resource portfolio data to meet the Western Resource Adequacy Program (WRAP) FS Capacity Requirements and FS Transmission Requirements in the months of the Binding Seasons. The Western Power Pool's (WPP) FS Program is the forward-looking planning portion of the WRAP that aims to ensure the WRAP footprint has sufficient capacity to adequately serve projected peak load under a variety of possible scenarios. The FS Program includes the Advance Assessment (see *BPM 101 Advance Assessment*) that recommends FS Planning Reserve Margins (FSPRM) for Board approval and provides Qualifying Capacity Contribution (QCC) values for registered resources (see *BPM 105 Qualifying Resources*). The FSPRMs are applied to the P50 load forecasts of each Participant to set the FS Capacity Requirement for each month of a Binding Season. The FS Capacity Requirements shall be met by QCC from Qualified Resources and delivered consistent with the Tariff's FS Transmission Requirements, at a minimum.

1.1. Intended Audience

BPM 108 is intended for WRAP Participants and other interested individuals or entities. BPM 108 is particularly useful for those individuals responsible for the Participant Organization's FS Submittal, which includes the FS Demonstration of the FS Capacity Requirement and FS Transmission Requirement, along with FS supporting materials on Qualifying Resource Capability Testing, treatment of Thermal Resources without North American Electric Reliability Corporation (NERC) Generating Availability Data System (GADS) data, Hydro Resource QCC results, late registered resources, and Transition Period exceptions (Excused Transition Deficits and Joint Contract Accreditation Forms (JCAFs)).

1.2. What You Will Find in This Manual

This document describes: the FS Deadline, Deficiency Notices and FS Cure Deadline Dates; the required FS Submittal materials, including the FS Demonstration and FS supporting materials, along with associated Senior Official Attestations; and Program Operator and Program Administrator review of Participants' FS Submittals.

1.3. Purpose

BPM 108 is intended to assist Participants in completing their FS Submittals, including the FS Demonstration and the required supporting material, on or before the FS Deadline for the applicable Binding Season.

1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 108 have the meaning set forth in the Tariff or in another BPM.

Catastrophic Failure Monthly Report: A demonstration by a Participant with an approved catastrophic resource failure exemption that either the circumstances necessitating the exception have not changed or that Qualifying Resources have become available, and the Participant has acquired them and no longer requires the exception.

Cure Deadline: The date 120 Days after the FS Deadline after which any uncured deficiencies in a Participant's FS Submittal shall be assessed a FS Deficiency Charge.

Cure Period: The time period 120 Days after the FS Deadline during which a Participant shall submit revisions to its FS Submittal to fully cure all identified deficiencies.

FS Demonstration: A demonstration that a Participant has met satisfactorily its FS Capacity Requirement and FS Transmission Requirement.

FS Instruction Manual: A set of instructions available on the WPP website.

Monthly Transmission Exception Check-In: A demonstration by a Participant with an approved Monthly Transmission Exception for Enduring Constraints or Future Firm ATC Expected that its inability to meet the FS Transmission Requirement has not changed.

2. FS Deadline, Deficiency Notices and FS Cure Deadline Dates

The Forward Showing Program has two Binding Seasons: The Summer Season and the Winter Season. The FS Deadline, serving of Deficiency notices, and FS Cure Deadline for the Summer Season and Winter Season are 5:00 pm Pacific Prevailing Time (PPT) on the respective date indicated in Table 1. The Program Administrator shall serve a deficiency notice to each Participant where one or more deficiencies have been identified as part of the FS Submittal by 5:00 pm PPT on the respective date indicated in Table 1. Participants who served a deficiency notice may cure their deficiencies by resubmitting their FS Submittal with the missing or correct data by 5:00 pm PPT on the respective date indicated in Table 1. Deficiencies uncured by the FS Cure Deadline will be subject to the FS Deficiency Charge (see *BPM 107 Forward Showing Deficiency Charge*).

Table 1. FS Deadline, Deficiency Notices and FS Cure Deadline Dates

	Winter Season	Summer Season
FS Deadline	March 31 of each Year	October 31 of each Year
Program Administrator serve Deficiency notices	By May 30 of each Year	By December 30 of each Year
FS Cure Deadline	July 29 of each Year	February 28 of each Year

2.1. FS Deadline Extensions Due to Forward Showing Software System Failures

In the event that a failure of the Forward Showing software system occurs in the seven days preceding a FS Deadline and prevents a Participant from meeting the FS Deadline, the FS Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the FS Deadline. In the event that such Forward Showing software system failure triggers an extension of the FS Deadline, the deadline for WPP to respond to the Participant's FS Submittal shall be extended by a commensurate number of Days as the FS Deadline. For example, if during the final seven Days preceding a FS Deadline, the Forward Showing software system was unavailable for two Days, the FS Deadline would be extended by two Days and the deadline for WPP to respond to the Participant's FS Submittal would be extended by two Days.

In the event that a failure of the Forward Showing software system occurs within seven Days of the deadline for WPP to respond to FS Submittals, the deadline for WPP to respond shall be extended by one Day for each Day that the Forward Showing software system failure persists and prevents WPP from meeting the deadline.

In the event that a failure of the Forward Showing software system occurs in the seven days preceding the Cure Deadline and prevents a Participant from meeting the Cure Deadline, the Cure Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the Cure Deadline.

For example, if during the final seven Days preceding a Cure Deadline, the Forward Showing software system was unavailable for two Days, the Cure Deadline would be extended by two Days and the deadline for WPP to respond would be extended by two Days.

3. Forward Showing Submittal Materials

A Participant's FS Submittal shall include a FS Demonstration with the necessary information for each Binding Season to demonstrate the Participant has sufficient capacity and transmission service to satisfy the FS Capacity Requirement and FS Transmission Requirement. The FS Demonstration shall include the Participant's: load forecast for the upcoming Binding Season (see *BPM 103 Forward Showing Capacity Requirement*); demonstration of Qualifying Capacity Contribution (QCC) to meet its FS Capacity Requirement which can be from Qualifying Resources or contracts; demonstration of the FS Transmission Requirement needed for the reliable delivery of the QCC of the Participant's Qualifying Resources and Contracts to the Participant's load; applicable Monthly Transmission Exception requests and associated Senior Official Attestations; and a Senior Official Attestation for the FS Demonstration. In addition to the FS Demonstration, the FS Submittal shall include supporting FS materials including information on Qualifying Resource Capability Testing, Thermal Resources without GADS data, Hydro Resource QCCs and forced outages, late registered resources, and Transition Period exceptions.

3.1. FS Demonstration

As described in the FS Instruction Manual, a Participant must provide the Program Operator with the following information on loads, Qualifying Resources, contracts, and WRAP Qualifying Transmission to demonstrate it has satisfactorily met the FS Capacity Requirement and FS Transmission Requirement. A Participant's FS Demonstration shall be accompanied by the Senior Official Attestation found in Appendix A – FS Demonstration Attestation. The Program Operator determines whether a Participant has met its FS Capacity Requirement and FS Transmission Requirement using the method described in Appendix G – FS Summary.

3.1.1. Loads

Each Participant shall provide the following FS Demonstration load information as described in the FS Instruction Manual:

- Load name assigned for identification purposes and used for transmission mapping
- Balancing Authority Area (BAA) in which the load is located
- The load point of delivery (POD) on the transmission system
- Forecasted monthly peak demand (see methodology in *BPM 103 Forward Showing Capacity Requirement*)

A Participant shall include all loads in its FS Demonstration for which it is responsible as well as documenting all loads it seeks to exclude (see *BPM 103 Forward Showing*

Capacity Requirement): i.e. all loads within the western interconnection for which it is the LRE (or the exclusive wholesale electricity provider to the LRE) that are not covered by another resource adequacy program.

A Participant responsible for loads in two Subregions seeking to use the lower Monthly FSPRM may submit a single FS Submittal if the Participant can demonstrate sufficient WRAP Qualifying Transmission from the load in the Subregion with the lower Monthly FSPRM to the load in the Subregion with the higher Monthly FSPRM. The Participant will demonstrate WRAP Qualifying Transmission in the quantity equal to the difference between the two FSPRMs multiplied by the amount of load in the Subregion with the higher FSPRM. For example, if Region A has a FSPRM of 20% in July and Region B has a FSPRM of 15% in July, and Participant has 1000 MW of load in Region A, the Participant will demonstrate (20% - 15%) * 1,000 MW or 50 MW of WRAP Qualifying Transmission from its load in Region B to its load in Region A. This WRAP Qualifying Transmission shall be distinct from any transmission demonstrated for delivering Qualifying Resources to participant load. See *BPM 103 Forward Showing Capacity Requirement* for information on calculating the FS Capacity Requirement in circumstances where loads from two Subregions are included in a single FS Submittal. In addition, a Participant responsible for loads in two Subregions seeking to use the higher monthly FSPRM may also submit a single FS Submission if the Participant can sign the FS Demonstration attestation in Appendix A.

All load submitted by a Participant within a single FS Demonstration must be able to be served interchangeably by all Qualifying Resources and Qualifying Contracts in that same FS Demonstration, without the expectation that additional transmission rights will be required to deliver resources to load. In accordance with this, a Participant may be required to submit separate FS demonstrations, even as to loads residing in the same Subregion, if the Program Administrator determines it is not practicable to treat such loads as if they can share in load and resource diversity for reasons that may diminish the integrity of WRAP reliability metrics, including but not limited to, if the Participant is responsible for (i) loads that are geographically distinct; (ii) loads that are separated by constrained transmission paths; or (iii) loads and resources that are not operated collectively (see *BPM 103 Forward Showing Capacity Requirement*).

Participant loads that cannot be served with a common set of Qualifying Resources and Qualifying Contracts shall therefore be submitted in separate FS Demonstrations. Each FS Demonstration will have a unique FS Capacity Requirement and a unique FS Transmission Requirement, and each of those two requirements shall be met individually and separately from any other FS Demonstrations submitted by a Participant.

3.1.2. Qualifying Resources

As part of the FS Demonstration, each Participant shall submit Qualifying Resources to satisfy the FS Capacity Requirement as described in the FS Instruction Manual. Qualifying Resources can be fully or partially owned by the Participant. The Participant shall use QCCs supplied by the Program Operator as part of the Advance Assessment (see *BPM 101 Advance* Assessment) unless the resource is being registered late (see *BPM 105 Qualifying Resources)*. The components of a hybrid resource should be described separately (for example, solar separately from a battery) and the overall limits of the facility considered when submitting the QCC for each component (see *BPM 101 Advance Assessment* -*Data Request Instruction Manual* for hybrid resource limitations). The Qualifying Resource information provided in the FS Demonstration should be consistent with the information provided by the Program Operator as a result of Resource Registration (see *BPM 105 Qualifying Resources*).

If a Participant experiences a catastrophic Qualifying Resource failure and is unable to replace the QCC on commercially reasonable terms prior to the FS Deadline, the Participant can seek an exception by submitting the attestation in Appendix B – Catastrophic Resource Failure Exception. For each month following the FS Deadline that a Participant sought a catastrophic resource failure exception, the Participant shall complete a Catastrophic Failure Monthly Report (available on the WPP website) demonstrating either:

- the circumstances necessitating the exception have not changed; or
- that Qualifying Resources (either the ones experiencing the catastrophic failure or other resources) have become available, and the Participant has acquired them and no longer requires the exception.

The Catastrophic Failure Monthly Report will be due on the last day of each Month and will cover any catastrophic Qualifying Resource exception requested for the upcoming (or ongoing) Binding Season, except the Month directly preceding the earliest Month that is the subject of catastrophic Qualifying Resource request. For example, if a Participant has requested a catastrophic Qualifying Resource exemption for July and August of 2035 at the FS Deadline (October 31, 2034), such Participant will submit a Catastrophic Failure Monthly Report for the July and August exception requests on or before the last days of November and December, 2034, and on or before the last days of January, February, March, April, and May, 2035, but need not submit such report for the July exception request on the last day of June 2035. The Participant will submit a Catastrophic Failure Monthly Report solely as to the August exception request on or before the last day of June 2035.

If at any time there is a change in the circumstances that necessitated the exception such that the reasons for the exception no longer exist, or the Participant acquires other Qualifying Resources, the Participant will describe and demonstrate such acquisition in the next Catastrophic Failure Monthly Report, and upon acceptance of the demonstration, need not continue to provide a Catastrophic Failure Monthly Report for the exception no longer needed. Failure to submit a required Catastrophic Failure Monthly Report will result in an assessment of a Deficiency Charge, unless the deficiency is cured with seven days of notice of non-compliance.

The Program Operator and Program Administrator will seek to inform the Participant whether its exception request has been accepted within 14 Days of receiving the request. The impact of a successful exception request is explained in *BPM 107 Forward Showing Deficiency Charge*. If a Participant submits a request for exception that WPP denies in whole or in part, the Participant may appeal such denial to the Board of Directors. To make such appeal, the Participant should submit an appeal, in the form outlined on the WPP website, including all information the Participant considers necessary to support its view that WPP erred in denying the requested exception. Any such appeal must be submitted no later than 14 Days after WPP's denial of the exception request. The Board may request that the Participant provide such additional information as the Board considers necessary for its action on the appeal. The timing of the Board's action on an appeal is in the Board's discretion.

3.1.3. Contracts

Each Participant shall also provide notification and representation of contractual purchases and sales as described in *BPM 106 Qualifying Contracts* and in the FS Instruction Manual.

3.1.4. Transmission

Each Participant shall demonstrate the FS Transmission Requirement. As described in the FS Instruction Manual, a Participant shall demonstrate it has secured transmission rights sufficient to deliver a MW quantity equal to at least 75% of the MW quantity of its FS Capacity Requirement. The FS Transmission Requirement must be met with WRAP Qualifying Transmission from the Participant's Qualifying Resource(s) or from the delivery points for the Qualifying Resources identified for its Net Contract QCC (or for its RA Transfer) to the Participant's load. The FS Demonstration shall include information on a Participant's transmission service reservations that it plans to utilize in the upcoming Binding Season to meet its FS Transmission Requirement. The FS Demonstration shall also map Qualifying Resources (see Section 3.1.2) and contracts (see Section 3.1.3) to a Participant's loads (see Section 3.1.1) using the transmission service reservation information provided, as described in the FS Instruction Manual. A

Participant that has Qualifying Resource in its balancing area, but is not a transmission service provider – and is therefore unable to provide transmission service reservation information – will attest that it has the transmission rights from the generation to the load on its system (see Appendix J – Transmission Rights Attestation).

3.1.4.1. Transmission Exceptions

If a Participant's FS Demonstration does not include the required transmission service reservations to satisfy the FS Transmission Requirement, the Participant may request Monthly Transmission Exceptions. As described in more detail below, there are four categories of Monthly Transmission Exception available to a Participant [terminology mirrors terms used in standard form Open Access Transmission Tariffs (OATTs) and on Open Access Same-time Information Systems (OASIS)]:

- Enduring Constraints;
- Future Firm Available Transmission Capability (ATC) Expected;
- Transmission Outages and Derates; and
- Counterflow of a Qualifying Resource.

All Participants requesting a Monthly Transmission Exception are responsible for submitting the completed Transmission Exception request form found on the WPP website, along with the Senior Official Attestation found in Appendix C – Monthly Transmission Exception General Attestation – as part of their FS Submittal along with their FS Demonstration.

The Program Operator will review a Participant's Monthly Transmission Exceptions and notify the Participant of the status of its Monthly Transmission Exceptions for each month requested by 5:00 pm PPT on the 60th day after the FS Deadline.

If a Monthly Transmission Exception is denied (either because it is invalid or because circumstances changed and transmission has become available during the Program Operator's review of the Monthly Transmission Exception), the Participant will have the opportunity to cure its Transmission Deficiency on or before the last day of the Cure Period established for the relevant FS Submittal. The Participant may also appeal the rejection to the Board.

The Program Operator and Program Administrator will seek to inform the Participant whether its exception request has been accepted within 14 Days of receiving the request. If a Participant submits a request for exception that WPP denies in whole or in part, the Participant may appeal such denial to the Board of Directors. To make such appeal, the Participant should submit an appeal, in the form outlined on the WPP website, including all information the Participant considers necessary to support its view

that WPP erred in denying the requested exception. Any such appeal must be submitted no later than 14 Days after WPP's denial of the exception request. The Board may request that the Participant provide such additional information as the Board considers necessary for its action on the appeal. The timing of the Board's action on an appeal is in the Board's discretion.

For each month following the FS Deadline that a Participant sought a Monthly Transmission Exception for Enduring Constraints or Future Firm ATC Expected, the Participant shall complete a Monthly Transmission Exceptions Check-in (available on the WPP website) demonstrating either:

- the circumstances necessitating the exception have not changed; or
- transmission has become available and the Participant has acquired it; or
- the Participant has acquired a different Qualifying Resource with the necessary firm transmission and no longer requires the Monthly Transmission Exception.

The Monthly Transmission Exception Check-Ins will be due on the last day of each Month and will cover any Monthly Transmission Exceptions requested for the upcoming (or ongoing) Binding Season, except the Month directly preceding the earliest Month that is the subject of the Monthly Transmission Exception request. For example, if a Participant has requested a Monthly Transmission Exception for July and August of 2035 at the FS Deadline (October 31, 2034), such Participant will submit a Monthly Transmission Exception Check-In for the July and August exception requests on or before the last days of November and December, 2034, and on or before the last days of January, February, March, April, and May, 2035, but need not submit such check-in or the July exception request on the last day of June 2035. The Participant will submit a Monthly Transmission Exception Check-In solely as to the August exception request on or before the last day of June 2035.

If at any time, the Participant either acquires the necessary transmission or acquires a different resource and associated transmission, the Participant will describe and demonstrate such acquisition on the next Monthly Transmission Exception Check-In, and upon acceptance of the demonstration, need not continue to provide Monthly Transmission Exception Check-Ins for the exception no longer needed. Failure to submit a required Monthly Transmission Exception Check-In or rejection of the Monthly Transmission Exception Check-In in part or in whole (e.g. if contrary information is available to the Program Administrator, indicating transmission has become available for the month in question) will result in an assessment of a Deficiency Charge unless the deficiency is cured within seven days of notice of non-compliance.

3.1.4.1.1. Enduring Constraints

The Enduring Constraints Monthly Transmission Exception may be granted if the Participant is unable to demonstrate the necessary and sufficient WRAP Qualifying Transmission on any single segment of a source-to-sink path for a resource (exceptions will not be granted for two segments of a source-to-sink path) and the Participant demonstrates:

- there was no sufficiently firm ATC posted by a transmission service provider at the FS Deadline on the applicable segment for the months required; and
- there was remaining available ATC (non-firm ATC after the fact) for all CCHs in the same season of the most recent year for which CCHs have been calculated; or
- if the path was constrained in at least one CCH in the most recent same season from the most recently available CCH data set, that the Participant is:
    - constructing or contracting for a new local resource for at least the amount of Monthly Transmission Exception requested; or
    - pursuing long-term firm rights by entering the long-term queue and taking all appropriate steps for at least the amount of Monthly Transmission Exception requested.

If the required transmission rights for the applicable segment are only available for a duration of more than one year at the FS Deadline, a Participant is not required to obtain that service to qualify for the Enduring Constraints exception. However, in that circumstance, the Participant shall not qualify for an Enduring Constraint exception for the same path (or across the same constraint) for the same month of the same season of the subsequent year if the Participant again declines the transmission rights that are available for a duration of more than one year.

In addition to the Monthly Transmission general exception discussed above in Section 3.1.4.1, a Participant requesting an Enduring Constraint Monthly Transmission Exception will need to include the Senior Official Attestation found in Appendix D – Enduring Constraint Additional Attestation as part of its FS Submittal.

3.1.4.1.2. Future Firm ATC Expected

The Future Firm ATC Expected exception may be granted when there is a reasonable expectation that sufficiently firm ATC will be made available following the FS Deadline and all the following criteria are met:

1. WRAP Qualifying Transmission is not posted or available prior to the FS Deadline; and
2. The Participant provides evidence that its transmission service provider has released additional WRAP Qualifying Transmission on the applicable path for all

CCHs in the same season of the most recent year for which CCHs have been calculated following the FS Deadline; and

3. The Participant demonstrates that the amount of FS Transmission Requirement being requested for the Future Firm ATC Expected exception is equal to or less than the minimum volume of WRAP Qualifying Transmission rights ATC released in the previous year's CCHs for the appropriate Binding Season.

If the required ATC on the applicable segment for the Month(s) needed is only posted or available prior to the FS Deadline for a duration of more than one year, a Participant is not required to obtain that service to qualify for the Future Firm ATC Expected exception. However, in that circumstance, the Participant shall not qualify for a Future Firm ATC Expected exception for the same path (or across the same constraint) for the same month of the same season of the subsequent year if the Participant again declines the ATC for transmission service rights that are available for a duration of more than one year.

The total amounts of Future Firm ATC Expected exceptions on specific paths is limited to the amount of transmission demonstrated to likely become available. If multiple Participants have requested a Future Firm ATC Expected exception on the same path, the available volume will be granted on a pro-rata basis to requesting Participants based on the size of their requests.

3.1.4.1.3. Transmission Outages and Derates

The Transmission Outages and Derates exception may be granted when a Participant that has not met its FS Transmission Requirement demonstrates that all of the following criteria are met:

1. That an applicable segment of its existing transmission service rights from its source to sink path for its Qualifying Resource is expected to be derated or out-of-service and that additional ATC of WRAP Qualifying Transmission is not otherwise available; and
2. The duration of the Transmission Outages and Derates exception request coincides with the months of the outage or derate; and
3. The volume of the Transmission Outages and Derates exception being requested is either:
    a. equal to or less than the reduction in the Participant's existing transmission service rights on that path for the applicable derate or outage period; or
    b. equal to or less than the WRAP Qualifying Transmission for the applicable derate or outage period that would otherwise be posted and available for reservation were it not for the transmission limitation.

If multiple Participants have requested a Transmission Outages and Derates exception on the same path, the available volume (per Section 3.1.4.1.3 (3) above) will be granted on a pro-rata basis to requesting Participants based on the size of their requests.

3.1.4.1.4. Counterflow of a Qualifying Resource

A Counterflow of a Qualifying Resource exception may be granted if a Participant demonstrates that either:

1. The Participant's use of WRAP Qualifying Transmission service in connection with the delivery of capacity from Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to Participant's load (or other qualifying delivery point permitted by the WRAP); or
2. A second Participant's use of WRAP Qualifying Transmission service in connection with the delivery of capacity from the second Participant's Qualifying Resource (or from the Qualifying Resource associated with its Net Contract QCC) to the second Participant's load (or other qualifying delivery point permitted by the WRAP)
   provides a direct and proportional counterflow transmission that supports the first Participant's delivery of capacity from the first Participant's Qualifying Resource (or from the Qualifying Resource associated with its Net Contract QCC) to the first Participant's load (or other qualifying delivery point permitted by the WRAP) Qualifying Resource to its load.

If the Counterflow of a Qualifying Resource exception is requested under subpart (2) of this Section, the Participant requesting the exception shall include a written acknowledgement from the second Participant that it is aware of such exception request. Counterflow of a Qualifying Resource must be directly between two BAAs. Counterflows that involve three or more BAAs will not qualify for the Counterflow of a Qualifying Resource exception.

3.1.5. Planned Outages

Per the requirements of Tariff Section 16.2.8, any planned outages during a Binding Season must be taken from a Participant's surplus (above its FS Capacity Requirement).

3.1.5.1. Planned Outages underway at the time of FS Submittal

Any Qualifying Resource that is out of service at the time of the FS Deadline and is planned to remain out of service for the first five or more days of a month in the Binding Season cannot have such Qualifying Resource's QCC counted toward meeting the Participant's FS Capacity Requirement for that month.

To ensure QCC from resources is not utilized to meet a monthly FS Capacity Requirement during the planned outage, the Capacity associated with such resources shall be deducted by identifying the planned outages in the FS Demonstration.

3.1.5.2. Planned Outages not underway at the time of the FS Submittal

Participants have the discretion to take planned outages at any time during the Binding Season but are required to take planned outages out of their surplus FS Demonstration capacity or to procure additional supply to replace such capacity on outage. This requirement ensures the participant's FS Capacity Requirement is available during the Operation Program timeframe.

Participants may provide information on Qualifying Resources that are planned to be out of service during the Binding Season as part of their FS Submittal to ensure QCC from those resources is not utilized to meet a monthly FS Capacity Requirement during the planned outage. Capacity associated with such resources shall be deducted from the FS Demonstration for such month(s).

Each Participant shall provide a Senior Official Attestation (found in Appendix E – Planned Outages Attestation) by the FS Deadline that:

- The sum of expected planned outages at any one time during the Binding Season will be equal to or less than the surplus stated in its FS Demonstration at the time of such planned outage, or
- The Participant is expected to procure the necessary capacity or energy to meet the Operations Program requirements regardless of planned outage schedules.

A planned outage shall not justify a waiver of, or exception to, a Participant's Holdback Requirement or Energy Deployment obligations.

3.2. Forward Showing Supporting Materials

In addition to the FS Demonstration (see Section 3.1), accompanying Monthly Transmission Exception Requests (see Appendix C – Monthly Transmission Exception General Attestation) and required Senior Official Attestations, a Participant's FS Submittal shall also include supporting information on Qualifying Resource testing, Thermal Resources without GADS data, Hydro Resource QCCs, late registered resources, and transition exceptions.

3.2.1. Testing

As described in *BPM 105 Qualifying Resources*, Participants shall perform annual Operational Tests on all Qualifying Resources. In addition, Capability Tests shall be

required for Thermal Resources, Long Duration Storage resources, and Demand Response Resources. Each Participant's FS Submittal must include a completed resource testing report, employing for such purpose the resource testing form that is made available on the WPP website.

3.2.2. Thermal Resources that are not Required to Report GADS Data

BPM 101 Advance Assessment describes the data request sent out by the Program Operator to gather the information required to calculate QCC values for Qualifying Resources. The Advance Assessment data request includes NERC GADS or equivalent outage data that can be used to calculate the outage rates and factors for existing Thermal Resources. However, as discussed in *BPM 105 Qualifying Resources*, certain Thermal Resources are not required to report GADS data. For all Qualifying Resources not providing GADS reporting data, the Participant will be required to provide a Senior Official Attestation (provided in Appendix F – Non-GADS QCC Calculation Attestation) as part of its FS Submittal that attests the resource is not subject to GADS reporting and the FS Demonstration submitted by the Participant is an accurate depiction of either the historical performance or historical outage data of the resource.

3.2.3. Hydro Resources

As discussed in *BPM 105 Qualifying Resources*, QCCs for Storage Hydro resources are calculated by the Participant owners. The result of those calculations shall be submitted as part of a Participant's FS Submittal in the format described in *BPM 105 Qualifying Resources* and the FS Instruction Manual. The Storage Hydro QCC Methodology utilizes an equivalent demand forced outage rate (EFORd) value as an input. Participants shall supply as part of their FS Submittal a NERC GADS report showing the EFORd value. For all Storage Hydro resources that do not report NERC GADS data, the Participant shall similarly calculate an EFORd value from historical performance data and the non-GADS outage calculation tool as posted on the WPP website. The Participant will provide the output of this tool and a Senior Official Attestation (provided in Appendix F – Non-GADS QCC Calculation Attestation) attesting that the resource is not subject to GADS reporting and that the Participant has utilized the non-GADS outage calculation tool with complete and correct information. Participants will also provide a Senior Official Attestation (in the form provided in *Appendix I*) that their calculation of the Storage Hydro QCC value is correct, accurate, and in compliance with the requirements of the Tariff.

3.2.4. Late Registered Resources

As discussed in *BPM 105 Qualifying Resources*, resources that are unable to register by the deadline of the Advance Assessment data request (see *BPM 101 Advance*

Assessment) may still be able to register prior to the FS Deadline so long as the necessary information is provided.

3.2.5. Transition Exceptions

BPM 109 Forward Showing Transition Period discusses how a new Participant application to the Program Administrator prior to March 31, 2027, shall be required to select an initial Binding Season during the Transition Period (Summer seasons for 2025, 2026, and 2027, and the Winter seasons for 2025-2026, 2026-2027, and 2027-2028). During its Transition Binding Seasons, a Participant may be able to request potential reductions in Deficiency Charges as described below.

3.2.5.1. Excused Transition Deficits

During a Participant's Transition Binding Seasons, Deficiency Charges otherwise applicable to the Participant under Section 17.1 of the Tariff, and calculated under Section 17.2, shall be reduced to the extent the Participant has an Excused Transition Deficit (ETD). To obtain an ETD for a Binding Season, the Participant must provide a Senior Official Attestation, as included in *BPM 109 Forward Showing Transition Period*.

3.2.5.2. Legacy Contract – No Joint Contract Accreditation Form (JCAF) Option

In addition to an ETD, during the Transition Period a Participant may be able to reduce its Monthly Capacity Deficiency to the extent the deficiency is due to the Participant's failure to obtain assent to a JCAF from the supplier under a Legacy Agreement (a power supply agreement entered into prior to October 1, 2021), as explained in *BPM 109 Forward Showing Transition Period* (the No-JCAF Option). To obtain that relief, the Participant must provide a Senior Official Attestation (in the form set forth in *BPM 109 Forward Showing Transition Period*) as part of its FS Submittal attesting that the Participant made commercially reasonable efforts to execute the required JCAF with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the JCAF.

4. Cure Period

The Program Operator and Program Administrator shall review Participants' FS Submittals and the Program Administrator shall serve deficiency notices in writing to any Participant that has not, by the FS Deadline shown in Table 1, submitted all required FS Submittal information and materials (see Section 3), or that has submitted information or materials that the Program Operator has found is or may be incorrect or deficient. Participants served a deficiency notice will have until the dates shown in Table 1 to cure their deficiencies. Deficiencies uncured by the time of the FS Cure Deadline shall be subject to the FS Deficiency Charge (*see BPM 107 Forward Showing Deficiency Charge*).

Appendix A – FS Demonstration Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that I have reviewed [Participant]'s FS Submittal provided this day by [Participant] to Western Power Pool, and that to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein, and that the statements therein are true, correct and complete per all of the requirements of Business Practice Manual 108.

Appendix B – Catastrophic Resource Failure Exception Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that, as set forth in the accompanying request for an exception from the FS Capacity Requirement for the [specify season] Binding Season, (i) [Participant] has experienced a catastrophic failure of its [identify] Qualifying Resource[s] due to an event of Force Majeure as defined by Section 8.1 of the WRAP Tariff; (ii) [Participant] is unable to replace the QCC quantity of such Qualifying Resource[s] on commercially reasonable terms prior to the FS Deadline of [specify date] as a result of the timing and magnitude of such catastrophic failure and its consequences; and (iii) the statements in the accompanying FS Capacity Requirement exception request, including the information provided therein on the nature, causes and consequences of the catastrophic failure[s], and [Participant]'s specific, concrete efforts prior to the referenced FS Deadline to secure replacement Qualifying Resources for the [specify season] Binding Season, are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix C – Monthly Transmission Exception General Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that, as set forth in the accompanying request for an exception from the FS Transmission Requirement for the [specify season] Binding Season, (i) [Participant] meets the stated WRAP requirements for the exception; and (ii) the statements in the accompanying FS Transmission Requirement exception request are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix D – Enduring Constraint Additional Attestation

I further attest, in support of [Participant]'s request for the Enduring Constraints Transmission Exception, that (i) no ATC for transmission service rights for which the exception is requested is available (either from the transmission service provider or through a secondary market) as of the FS Deadline, on the applicable segment for the Month(s) needed (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less; (ii) [Participant] has taken commercially reasonable efforts to procure firm transmission service rights, and (iii) [Participant] has posted a request for the necessary firm transmission rights on the relevant bulletin board, (i.e., OASIS) prior to the FS Deadline.

Appendix E – Planned Outages Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that: (i) as set forth in [Participant]'s FS Submittal provided this day by [Participant] to Western Power Pool, Participant has included information on all Qualifying Resources that are currently out of service with a scheduled return date that falls during the [specify season] Binding Season; (ii) Participant [has] [does not have] certain additional outages at Qualifying Resources that are planned to occur during the [specify season] Binding Season but have not yet begun at the time of submission of the FS Submittal; (iii) Participant has made reasonable efforts to obtain and provide information on any such additional outages, but such data cannot be supplied with reasonable specificity; (iv) the aggregate of any such additional outages is either expected to be equal to or less than [Participant]'s remaining surplus as defined by [Participant]'s Portfolio QCC in excess of [Participant]'s FS Capacity requirement or to the extent it is not excess it will be replaced with the necessary capacity or energy to meet the Operations Program requirements, consistent with Section 16.2.8.2 and Part III of the Tariff; and (v) that the foregoing statements are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein.

Appendix F – Non-GADS QCC Calculation Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that the resource that is the subject of this form is not subject to GADS data reporting; and that the resource's performance data (historical output or historical outage evaluation) for the Capacity Critical Hours of the [specify season] Binding Season is accurately accounted for in the accompanying FS Submittal.

Appendix G – FS Summary

A Participant's total Portfolio QCC is defined as the Participant's Resource QCC plus its Net Contract QCC plus its total RA transfer minus its planned outages for each month of the Binding Season.

$$Portfolio\ QCC = Resource\ QCC + Net\ Contract\ QCC + Total\ RA\ Transfer - Planned\ Outages$$

Where:

Resource QCC is the summation of all QCC values for the Participant's Qualified Resources calculated for each month of a Binding Season.

$$Resource\ QCC = \sum QCC\ of\ all\ Participant\ Qualifying\ Resources$$

The Net Contracted QCC is a monthly value equal to the sum of the Participant's Contract QCCs. Import contracts (purchases) are additive to the Participant's QCC value and exports (sales) are a negative QCC value. The Net Contract QCC formula is as follows:

$$Net\ Contract\ QCC = \sum QCC\ of\ all\ Participant\ Qualified\ Contracts$$

Resource adequacy transfers are added to the purchasing Participant's Portfolio QCC value and subtracted from the selling Participant's Portfolio QCC value. The contracts for these transfers will be provided to the Program Operator for validation.

$$Total\ RA\ Transfer = \sum Participant\ RA\ Transfer\ Contracts$$

The Participant's Total Portfolio QCC should be at least equal to the Participant's FS Capacity Requirement for each month of the Binding Season. If the Participant's Total Portfolio QCC meets or exceeds that threshold, then the Participant's FS Capacity Requirement has been satisfied.

$$Total\ Portfolio\ QCC \geq FS\ Capacity\ Requirement$$

Where:

The Participant's FS Capacity Requirement is its forecasted monthly demand multiplied by 100% plus the applicable Monthly FSPRM according to the following equation:

$$FS\ Capacity\ Requirement = Monthly\ P50 * (100\% + Monthly\ FSPRM)$$

The over and underperformance of VERs, forced outages, and Run-of-River hydro in the Participant's portfolio will be used to calculate performance changes in the Operations Program. The Participant's additional planned maintenance or short-term sales will be made from its excess Portfolio QCC.

The Participant's total demonstrated FS Transmission shall be at least equal to 75% of the Participant's FS Capacity Requirement at the FS Deadline. If the Participant's Total Portfolio QCC meets or exceeds that threshold, then the Participant's FS Transmission Requirement has been satisfied.

$$Demonstrated\ FS\ Transmission \geq FS\ Capacity\ Requirement * 75\%$$

Where:

Demonstrated FS Transmission is equal to the sum of all transmission demonstrated with completed paths and Approved Transmission Exceptions.

$$\begin{aligned} &Demonstrated\ FS\ Transmission \\ &\quad = \sum Trasnmission\ Demonstrated\ (completed\ paths) \\ &\quad \mp\ Approved\ Transmission\ Exceptions \end{aligned}$$

Appendix H – Demand Response Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that for each Demand Response Qualifying Resource included in the accompanying FS Submittal, [Participant,] upon due investigation, has determined whether the demand response capability of such resource has been previously deployed to reduce load, and if such capability has been deployed to reduce load, Participant has, for purposes of developing the P50 Peak Load Forecast employed in such FS Submittal, added back to each historic hour when such capability was deployed the MWs of load reduction provided by such capability in such hour.

Appendix I – Storage Hydro Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that I have reviewed [Participant]'s Storage Hydro Qualifying Capacity Contribution (QCC) provided this day by [Participant] to Western Power Pool (i.e., Program Administrator) ; and, to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein, that such QCC has been calculated in accordance with the methodology set forth in *BPM 105 Qualifying Resources* and such calculation meets all requirements of Tariff Section 16.2.5.5; that [Participant] has provided the Program Administrator with all information necessary to review such QCC that is stated in Tariff, Section 16.2.5.5, to the extent requested by the Program Administrator, and that all statements and information included in the FS Submittal with respect to the calculation of such QCC are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix J – Transmission Rights Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that [Participant] has the transmission rights from [insert Qualifying Resources] Qualifying Resources to the load on [Participant's] system, but [Participant] is unable to provide transmission service reservation information.

WESTERN RESOURCE ADEQUACY PROGRAM

TARIFF

OF

NORTHWEST POWER POOL

D/B/A

WESTERN POWER POOL

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SCHEDULE 1
WESTERN RESOURCE ADEQUACY PROGRAM ADMINISTATIVE COST RECOVERY CHARGE

ATTACHMENT A
Western Resource Adequacy Program Agreement

PART I GENERAL PROVISIONS

1. Definitions

Unless the context otherwise specifies or requires, capitalized terms used in this Tariff shall have the respective meanings assigned herein for all purposes of this Tariff (such definitions to be equally applicable to both the singular and the plural forms of the terms defined). Unless otherwise specified, all references herein to Parts, Sections, Schedules, or Attachments, are to Parts, Sections, Schedules, or Attachments of this Tariff.

Applicable Price Index: A published index of wholesale electric prices, or Locational Marginal Prices duly calculated and posted by a FERC-regulated market operator, in either case as designated under Part III of this Tariff for use in connection with an identified Subregion.

Administration Charge or WRAP Administration Charge: The charge established under Schedule 1 of this Tariff for recovery of the costs of the WRAP.

Advance Assessment: Analyses and calculations of Participant load, resource, and other information performed in advance of each Binding Season as set forth in Part II of this Tariff.

Aggregate Capacity Deficiency: As to a Binding Season, the sum of the maximum Monthly Deficiencies of all Participants that submitted FS Submittals for such Binding Season, as determined following completion of the Cure Period for such Binding Season.

Available Transfer Capability ("ATC"): Transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses.

Balancing Authority: The responsible entity that integrates resource plans ahead of time, maintains demand and resource balance within a Balancing Authority Area, and supports interconnection frequency in real time.

Balancing Authority Area: The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

Base Charge: A component of the WRAP Administration Charge as established under Schedule 1 of this Tariff.

Base Costs: Base Costs shall have the meaning provided in Schedule 1 of this Tariff.

Base Services Cost Centers: The cost centers comprising the Base Charge as defined in Schedule 1 of this Tariff.

Base Services Percentage: Base Services Percentage shall have the meaning provided in Schedule 1 of this Tariff.

Binding Season: The Summer Season or the Winter Season.

Board of Directors or Board: The Board of Directors of the Northwest Power Pool d/b/a Western Power Pool.

Business Day: Any Day that is a Monday through Friday, excluding any holiday established by United States federal authorities.

Business Practice Manuals: The manuals compiling further details, guidance, and information that are appropriate or beneficial to the implementation of the rules, requirements, and procedures established by this Tariff. Business Practice Manuals do not include such internal rules or procedures as the Western Power Pool may adopt for its operation and administration, including but not limited to any corporate by-laws of the Western Power Pool, or for any services or functions provided by the Western Power Pool other than those established by this Tariff.

CAISO: The California Independent System Operator Corporation, a California nonprofit public benefit corporation.

Capacity Benefit Margin: An amount of transmission transfer capability permitted under open access transmission rules to be reserved by load serving entities to ensure access to generation from interconnected systems to meet generation reliability requirements.

Capacity Critical Hours ("CCH"): Those hours during which the net regional capacity need for the WRAP Region is expected to be above the 95th percentile, based on historical and synthesized data for the WRAP Region's gross load, variable energy resource performance, and interchange.

Capacity Deficiency: A shortfall in a Participant's Portfolio QCC relative to that Participant's FS Capacity Requirement, as further defined in Part II of this Tariff.

Cash Working Capital Fund: Cash Working Capital Fund shall have the meaning provided in Schedule 1 of this Tariff.

Cash Working Capital Support Charge: A charge assessed to Participants under Schedule 1 of this Tariff to fund the Cash Working Capital Fund.

Cash Working Capital Support Charge Rate: Cash Working Capital Support Charge Rate shall have the meaning provided in Schedule 1 of this Tariff.

Central Hub: A designated point or named group of points on the transmission system within a Subregion identified by the Program Administrator that permits energy deliveries from multiple points within such Subregion.

Cost of New Entry ("CONE"): The estimated cost of new entry of a new peaking natural gas-fired generation facility, as determined under, and used in, Part II of this Tariff.

CONE Factor: A factor employed in the calculation of Deficiency Charges under Part II of this Tariff, to reflect whether, and the extent to which, the WRAP Region as a whole is expected to have a capacity deficiency during the period for which the Deficiency Charge is being calculated or a factor employed when a Participant has had repeated deficiencies in sequential years.

Committee of State Representatives ("COSR"): Committee of State Representatives, as established in Part I of this Tariff.

Contingency Reserve: As more fully described in the NERC WECC reliability standards, a quantity of reserves, consisting of generation, load, interchange, or other resources, that are deployable within ten minutes, equal to the greater of (i) the MW quantity of the loss of the most severe contingency and (ii) the megawatt quantity equal to the sum of 3% of hourly integrated load plus 3% of hourly integrated generation.

Critical Mass: *The threshold level of participation in a Subregion, as established in the Business Practice Manuals, below which each Participant of such Subregion may elect to participate as a Non-Binding Participant.*

Cumulative Delivery Failure Period: Any period of five consecutive years, ending with and including the most recent Energy Delivery Failure as of the time of determination of a possible Delivery Failure Charge.

Day: A calendar day.

Day-Ahead Price: A price for wholesale electric transactions designated as a day-ahead price in an Applicable Price Index.

Default Allocation Assessment: A charge assessed on non-defaulting Participants to recover the costs associated with a default by a Participant, as set forth in Part I of this Tariff.

Deficiency Charge: A charge assessed for a Capacity Deficiency or Transmission Deficiency, as set forth in Part II of this Tariff.

Delivery Failure Charge: A charge assessed for a Participant's failure to deliver a required Energy Deployment, as set forth in Part III of this Tariff.

Delivery Failure Charge Rate: A rate employed in the determination of a Delivery Failure Charge as more fully set forth in Part III of this Tariff.

Delivery Failure Factor: A factor used in the determination of a Delivery Failure Charge to recognize the relative severity or impact of an Energy Delivery Failure, as set forth in Part III of this Tariff.

Demand Response: A quantifiable load reduction or otherwise controllable load for which a Participant has two mutually-exclusive options to use to affect its FS Capacity Requirements in a FS for a Binding Season: (1) leave the effects of historically deployed demand response as part of its load provided for the Advance Assessment; or (2) utilize as a Demand Response Capacity Resource.

Demand Response Capacity Resource: A Qualifying Resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with the requirements established under Part II of this Tariff utilized to meet a Participant's FS Capacity Requirement.

Demonstrated FS Transmission: A Participant's demonstration in its Forward Showing Submittal that it has secured WRAP Qualifying Transmission in a quantity sufficient to provide reasonable assurance, as of the time of the Forward Showing Submittal, of delivery of capacity

from the Qualifying Resources and the resources associated with the power purchase agreements in the Participant's Portfolio QCC.

Discounted Deficiency Change: *A reduced Deficiency Charge during the Transition Period that enables a deficient Participant that demonstrates commercially reasonable efforts but is unable to cure deficiencies to access Operations Program capacity.*

Dual Benefit Cost Centers: Dual Benefit Cost Centers shall have the meaning provided in Schedule 1 of this Tariff.

Effective Load Carrying Capability ("ELCC"): A methodology employed to determine the Qualified Capacity Contribution of certain types of Qualifying Resources, as more fully set forth in Part II of this Tariff.

Energy Declined Settlement Price: A pricing component used as part of the calculation of settlements for Holdback Requirements and Energy Deployments under Part III of this Tariff.

Energy Delivery Failure: A failure by a Participant to provide an Energy Deployment assigned to such Participant under Part III of this Tariff.

Energy Deployment: A delivery of energy that a Participant is required to provide during an Operating Day, as set forth in Part III of this Tariff.

Energy Storage Resource: A resource, not including a Storage Hydro Qualifying Resource, designed to capture energy produced at one time for use at a later time.

Excused Transition Deficit: A Participant's inability during the Transition Period to demonstrate full satisfaction of the Participant's FS Capacity Requirement, which, under certain conditions and limitations prescribed by Part II of this Tariff, permits *the Participant to pay a Discounted* Deficiency Charge.

Federal Power Marketing Administration: A United States federal agency that operates electric systems and sells the output of federally owned and operated hydroelectric dams located in the United States.

FERC: The Federal Energy Regulatory Commission.

Forced Outage Factor: The factor resulting from dividing the number of hours a generating unit or set of generating units is not synchronized to the grid system, not in reserve shutdown state and considered to be out of service for unplanned outages—or a startup failure, by the number of total hours in the period multiplied by 100% or a Program Administrator calculated equivalent forced outage factor that reflects the likelihood and extent to which a resource will be unavailable from time to time due to factors outside management control.

Forward Showing Program: The program and requirements as set forth in Part II of this Tariff.

Forward Showing Submittal ("FS Submittal"): The submissions a Participant is required to submit in advance of each Binding Season to demonstrate its satisfaction of the FS Capacity Requirement and FS Transmission Requirement, as set forth in Part II of this Tariff.

Forward Showing Year: A period consisting of a Summer Season and the immediately succeeding Winter Season.

FS Capacity Requirement: The minimum quantity of capacity a Participant is required to demonstrate for a Binding Season, as set forth in Part II of this Tariff.

FS Deadline: The deadline for Participants' submissions of their FS Submittals for a Binding Season, as established under Part II of this Tariff.

FS Planning Reserve Margin ("FSPRM"): An increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages, or lower availability of resources, expressed as a percentage of the applicable peak load forecast, as determined in accordance with Part II of this Tariff.

FS Transmission Requirement: The minimum quantity of WRAP Qualifying Transmission a Participant is required to demonstrate for a Binding Season, as set forth in Part II of this Tariff.

High-Priced Day: The most recent day in the CAISO in which prices in the day-ahead market were at least $200/MWh.

Holdback Capacity: Capacity that is voluntarily supplied or is the result of a positive Sharing Calculation result that is bindingly committed to the WRAP after it is claimed by one or more Participants with a negative Sharing Calculation result.

Holdback Requirement: A MW quantity, as determined on a Preschedule Day, that a Participant is required to be capable of converting into an Energy Deployment on a given hour of the succeeding Operating Day, as more fully set forth in Part III of this Tariff.

ICE Index: A wholesale electric price index prepared and published by the Intercontinental Exchange.

Incremental Cash Working Capital Support Charge: Incremental Cash Working Capital Support Charge shall have the meaning provided in Schedule 1 of this Tariff.

Independent Evaluator: An independent entity engaged to provide an independent assessment of the performance of the WRAP and any potential beneficial design modifications, as set forth in Part I of this Tariff.

Installed Capacity: Nameplate capacity adjusted for conditions at the site of installation.

International Power Marketing Entity: An entity that (i) owns, controls, purchases and/or sells resource adequacy supply and is responsible under the WRAP program for meeting LRE obligations associated with one or more loads physically located outside the United States.

Legacy Agreement: A power supply agreement entered into prior to October 1, 2021.

Load Charge: A component of the WRAP Administration Charge as established under Schedule 1 of this Tariff.

Load Charge Rate: Load Charge Rate shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Costs: Load Services Costs shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Cost Centers: Load Services Cost Centers shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Percentage: Load Services Percentage shall have the meaning provided in Schedule 1 of this Tariff.

Load Responsible Entity ("LRE"): An LRE is an entity that (i) owns, controls, purchases and/or sells resource adequacy supply, or is a Federal Power Marketing Administration or an International Power Marketing Entity, and (ii) has full authority and capability, either through statute, rule, contract, or otherwise, to:

(a) submit capacity and system load data to the WRAP Program Operator at all hours;

(b) submit Interchange Schedules within the WRAP Region that are prepared in accordance with all NERC and WECC requirements, including providing E-Tags for all applicable energy delivery transactions pursuant to WECC practices and as required by the rules of the WRAP Operations Program;

(c) procure and reserve transmission service rights in support of the requirements of the WRAP Forward Showing Program and Operations Program; and

(d) track and bilaterally settle holdback and delivery transactions.

Subject to the above-mentioned criteria, an LRE may be a load serving entity, may act as an agent of a load serving entity or multiple load serving entities, or may otherwise be responsible for meeting LRE obligations under the WRAP.

Locational Marginal Price: The cost of delivering an additional unit of energy to a given node, as calculated under a FERC-regulated wholesale electric tariff.

Loss of Load Expectation ("LOLE"): An expression of the frequency with which a single event of failure, due to resource inadequacy, to serve firm load would be expected (based on accepted reliability planning analysis methods) to result from a given FS Planning Reserve Margin.

Make Whole Adjustment: A component used as part of the calculation of settlements for Holdback Requirements and Energy Deployments under Part III of this Tariff.

Maximum Base Charge: The maximum amount prescribed in Schedule 1 of the Tariff that the Base Charge cannot exceed.

Maximum Load Charge Rate: The maximum rate prescribed in Schedule 1 of the Tariff that the Load Charge Rate cannot exceed.

Median Monthly P50 Peak Loads: Median Monthly P50 Peak Loads has the meaning prescribed by Schedule 1 of this Tariff.

Month: A calendar month.

Monthly Capacity Deficiency: A Participant's Capacity Deficiency for a given Month.

Monthly Deficiency: An identification under Part II of this Tariff whether, and the extent to which, a Participant's need for capacity or transmission for a given Month is greater than the capacity or transmission, respectively, the Participant can demonstrate for such Month.

Monthly FS Capacity Requirement: FS Capacity Requirement determined as to a Month.

Monthly FSPRM: The FS Planning Reserve Margin applicable to a given Month of a given Binding Season, as determined in accordance with Part II of this Tariff.

Monthly Transmission Deficiency: A Participant's Transmission Deficiency for a given Month.

Monthly Transmission Demonstrated: A Participant's Demonstrated FS Transmission for a given Month.

Monthly Transmission Exceptions: Exceptions from the FS Transmission Requirement approved under Part II of this Tariff for a Participant for a given Month.

Multi-Day-Ahead Assessment: A period of days preceding each Operating Day, and ending on the Preschedule Day, during which Sharing Calculations are successively performed based in each case on Operating Day conditions expected at the time of calculation.

North American Electric Reliability Corporation ("NERC"): A not-for-profit international regulatory authority that serves as the designated electric reliability organization for the continental United States, Canada, and a portion of Mexico.

Net Contract QCC: The QCC, which may be a positive or negative value, calculated, in sum and on net, for a Participant's power purchase agreements and power sale agreements, in accordance with Part II of this Tariff.

Non-Binding Season: As to a Participant, *any* Binding Season during which the *provisions of Section 15A.1* of this Tariff *apply*.

Non-Binding Participant: For any Binding Season, a Participant that has made an election by which such Binding Season is a Non-Binding Season for that Participant.

Open Access Transmission Tariff: A governing document on file with FERC establishing the rates, terms, and conditions of open access transmission service, or equivalent tariff of a transmission service provider that is not required to file its transmission service tariff with FERC.

Operating Day: A current Day of actual electric service from resources to load, for which Sharing Events are determined and Energy Deployments may be required, as set forth in Part III of this Tariff.

Operations Program: The program and requirements set forth in Part III of this Tariff.

P50 Peak Load Forecast: A peak load forecast prepared on a basis, such that the actual peak load is statistically expected to be as likely to be above the forecast as it is to be below the forecast.

Participant: A Load Responsible Entity that is a signatory to the WRAPA.

Portfolio QCC: As to a Participant, the sum of the Resource QCC provided by all of a Participant's Qualifying Resources plus the Net Contract QCC of such Participant, as adjusted to reflect RA Transfers as described in Section 16.2 7 and Planned Outages as described in Section 16.2.8.

Preschedule Day: The applicable scheduling Day for a given Operating Day as defined in scheduling calendar established by WECC.

Program Administrator: The Western Power Pool, in its role as the entity responsible for administering the WRAP.

Program Operator: A third party that has contracted with the Program Administrator to provide technical, analytical, and implementation support to the Program Administrator for the WRAP.

Program Review Committee ("PRC"): The stakeholder sector committee as established in Section 4.2 of this Tariff.

Pure Capacity: A MW quantity of capacity without any assigned forced outage rate employed in ELCC determinations under Part II of this Tariff.

Qualifying Capacity Contribution ("QCC"): The MW quantity of capacity provided by a resource, contract, or portfolio which qualifies to help satisfy a Participant's FS Capacity Requirement, as determined in accordance with Part II of this Tariff.

Qualifying Resource: A generation or load resource that meets the qualification and accreditation requirements established by and under Part II of this Tariff.

Real-Time Price: A price for wholesale electric transactions designated as a real-time price in an Applicable Price Index.

Resource Adequacy Participant Committee ("RAPC"): The committee comprised of representatives from each Participant as established in Part I of this Tariff.

Resource QCC: The QCC provided by a Qualifying Resource, as determined in accordance with Part II of this Tariff.

Run-of-River Qualifying Resource ("ROR"): A hydro-electric power project that does not have the capability to store a sufficient volume of water to support continuous generation at the project's stated maximum capacity for a period of one hour. Resource does not meet the definition of a Storage Hydro Qualifying Resource.

Safety Margin: An additional factor allocated among Participants with positive sharing calculations when warranted by certain conditions as prescribed by Part III of this Tariff.

Senior Official Attestation: A signed statement of a senior official of a Participant attesting that it has reviewed such Participant's information submission required under this Tariff, that the statements therein are true, correct and complete to the best of such official's knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein, and containing such further statements as required by this Tariff or the applicable Business Practice Manual for the information submission at issue.

Sharing Calculation: A calculation used in the Operations Program under Part III of this Tariff to identify any hour in which any Participant is forecast to have a capacity deficit.

Sharing Event: An hour or hours of an Operating Day for which one or more Participants has a negative Sharing Calculation result, as determined in accordance with Part III of this Tariff.

Storage Hydro Qualifying Resource: A hydro-electric power project with an impoundment or reservoir located immediately upstream of the powerhouse intake structures that can store a sufficient volume of water to support continuous generation at the project's stated maximum capacity for a period of one hour or longer.

Subregion: An area definition approved by the Board of Directors and identified in the Business Practice Manuals, that is wholly contained within the WRAP Region, which is separated from one or more other Subregions by transmission constraints on capacity imports or on capacity exports that result, or are expected to result, in differing FSPRM determinations for that Subregion relative to such other Subregion.

Summer Season: A period of time that commences on June 1 of a Year and terminates on September 15 of the same Year.

System Sale: A bilateral agreement that conveys generating capacity from a group of generating resources from one party to another.

Transition Period: The Binding Seasons within the time period from June 1, 2025, through March 15, *2029*, plus the time period required to implement the requirements and procedures of Part II of this Tariff applicable to such Binding Seasons.

Transmission Deficiency: A shortfall in a Participant's demonstration of secured WRAP Qualifying Transmission, after accounting for any approved transmission exceptions, relative to that Participant's FS Transmission Requirement, as further defined in Part II of this Tariff.

Unforced Capacity: The percentage of Installed Capacity available after a unit's forced outage rate is taken into account.

Variable Energy Resource ("VER"): An electric generation resource powered by a renewable energy source that cannot be stored by the facility owner or operator and that has variability that is beyond the control of the facility owner or operator, including but not limited to a solar or wind resource.

VER Zone: A geographic area delineated in accordance with Section 16.2.5.2 of this Tariff for a given type of VER, where each VER of that type located in such area is anticipated to be comparably affected by meteorological or other expected conditions in such area to a degree that warrants distinct calculation of ELCC allocations for such VERs of that type in such area.

Voluntary Holdback: Capacity that is offered to the Operations Program by a Participant with excess supply that is not obligated to the WRAP through a positive Sharing Calculation result, some or all of which can used as part of the offering Participant's Holdback Requirement. For a Participant in a Subregion without a Central Hub, Voluntary Holdback for an hour must additionally include a total quantity for all identified points from Section 19.4 at which it can deliver that is no less than the amount of the Voluntary Holdback capacity for such hour.

Western Electricity Coordinating Council ("WECC"): A non-profit corporation that has been approved by FERC as the regional entity for the western interconnection and that also has NERC delegated authority to create, monitor, and enforce reliability standards.

Western Resource Adequacy Program Agreement ("WRAPA"): The participation agreement for the Western Resource Adequacy Program, as set forth as Attachment A to this Tariff, or as set forth for an individual Participant in a non-conforming version of such participation agreement accepted by FERC.

Western Resource Adequacy Program ("WRAP"): The Western Resource Adequacy Program, as established under this Tariff.

Western Power Pool ("WPP"): Northwest Power Pool, d/b/a Western Power Pool, which serves as Program Administrator for the WRAP under this Tariff and holds exclusive rights under section 205 of the Federal Power Act to file amendments to this Tariff.

Winter Season: A period of time that commences on November 1 of a Year and terminates on March 15 of the immediately following Year.

WRAP Cost Assignment Matrix: The matrix set forth in Schedule 1 of this Tariff to identify which WRAP costs are assessed to the Base Charge and the Load Charge components of the WRAP Administration Charge.

WRAP Qualifying Transmission: Transmission service that is (i) NERC Priority 6 or NERC Priority 7 point-to-point transmission service, (ii) network integration transmission service, or (iii) any firm transmission product that constitutes the highest priority transmission service offered by a transmission service provider, is reserved in advance, cannot be curtailed for higher priority

transmission service, and is subject to curtailment only under reliability conditions necessary to maintain transmission system operations.

WRAP Region: The area comprising, collectively, (i) the duly recognized and established load service areas of all loads in the United States that all Participants are responsible for serving, (ii) the duly recognized and established load service areas of all loads in the United States that all load serving entities, on whose behalf a Participant acts in accordance with this Tariff, are responsible for serving, and (iii) the applicable location(s) on the United States side of the United States international border that form the basis for an International Power Marketing Entity's participation under the WRAP, in all cases excluding, for any Binding Season, any loads permitted by this Tariff to be excluded from Participants' Forward Showing Submittal for such Binding Season.

Year: A calendar year.

2. Role of Western Power Pool

2.1 WPP, acting under the direction of its Board of Directors, shall administer the WRAP as Program Administrator. Except as specified in Section 3 of this Tariff, WPP, as authorized by its Board of Directors, shall have the sole authority to submit to FERC amendments to the rates, terms, and conditions set forth in this Tariff under section 205 of the Federal Power Act, 16 U.S.C. § 824d. Nothing contained herein shall be construed as affecting in any way the right of any Participant or any other entity to apply to FERC for amendments to the rates, terms, and conditions contained herein under section 206 of the Federal Power Act, 16 U.S.C. § 824e, or any other applicable provision of that Act.

2.1.1 WPP president and staff shall support the Board of Directors in overseeing all aspects of the WRAP, including oversight and management of the Program Operator(s) in accordance with any Program Operator agreement(s) entered into by WPP under Section 2.2 of this Tariff.

2.1.2 WPP and its staff shall provide all legal, regulatory, and accounting support for the WRAP, including support for making filings with FERC as authorized by the Board of Directors.

2.1.3 WPP staff shall provide all logistical support necessary to facilitate implementation of the WRAP and specifically all logistical needs of the Board of Directors and reasonable logistical assistance to facilitate meetings and activities of the RAPC, PRC, and all subordinate organizational groups.

2.2 As Program Administrator, WPP shall undertake all actions as necessary to implement and administer the WRAP, including but not limited to engaging one or more Program Operator(s) to perform technical operations of the WRAP including both the Forward Showing Program and Operations Program. Except as otherwise provided herein, WPP may contract for certain activities required by this Tariff to be provided by one or more Program Operator(s) subject to oversight by the Board of Directors, provided, however, that the Program Operator shall operate solely as a contractor under the oversight of WPP, and WPP shall remain the sole point of compliance with this Tariff. WPP shall have the sole authority to enter into contracts for such engagements and is responsible for providing support and compensation for such Program Operator(s) pursuant to any contract(s).

2.2.1 WPP will contract with Program Operator(s) to assist WPP with providing reasonable technical support and expertise to all WRAP organizational groups as governed by the Program Operator's contract with WPP.

3. Role of the Board of Directors and Limitations on Board Authority

3.1 Authority: Ultimate authority over all aspects of the WRAP as established under this Tariff shall be vested in the independent Board of Directors. Each member of the Board of Directors shall at all times exhibit financial independence from all Participants and classes of Participants, as further provided in the WPP Bylaws and policies. As set forth in Section 2.1 of this Tariff, the Board of Directors shall have the exclusive authority to approve and direct WPP to file amendments to this Tariff with FERC under section 205 of the Federal Power Act, 16 U.S.C. § 824d, subject to the limitations and prohibitions imposed under Section 3.4 of this Tariff. The Board of Directors shall also have the exclusive authority to approve the Business Practice Manuals and any amendments to the Business Practice Manuals, subject to the terms, conditions, and limitations imposed under this Tariff.

3.2 The Board of Directors generally shall meet in open session for all matters related to the WRAP; however, the Board of Directors may meet in closed session as the chair deems necessary to safeguard the confidentiality of sensitive information, including but not limited to discussing matters related to personnel, litigation, or proprietary, confidential, or security sensitive information. The Board of Directors shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session. During open session, the chair of the Board of Directors will reasonably accommodate stakeholder requests to address the Board within the discretion of the chair.

3.3 The Board of Directors shall only consider amendments to this Tariff or the Business Practice Manuals after such amendments are first acted upon by the RAPC, subject to the following additional conditions:

3.3.1 In the event that the RAPC has voted to reject or has not voted to support a proposed amendment to this Tariff or the Business Practice Manuals, any stakeholder may appeal such decision to the Board of Directors, and the Board of Directors shall consider the appeal.

3.3.2 In the event that the RAPC has voted to reject or has not voted to support a proposed amendment to this Tariff or the Business Practice Manuals and a stakeholder has not appealed such decision, the Board of Directors may, on its own motion or motion of any member of the Board of Directors, consider the proposed amendment.

3.3.3 In the event that the COSR as a body opposes or appeals a RAPC decision to the Board of Directors regarding an amendment to this Tariff or the Business Practice Manuals, the process set forth in Section 4.3.3 of this Tariff shall apply prior to the Board of Directors' consideration of the RAPC decision.

3.3.4 In the event that the Board of Directors wishes to initiate an amendment to this Tariff or the Business Practice Manuals that has not undergone PRC

and RAPC review, the Board of Directors shall first submit such proposed amendment to the PRC for review under the processes set forth in Sections 4.1 and 4.2 of this Tariff.

3.3.5 Expedited Review Process: In the event that the RAPC determines that an expedited review process is necessitated by an exigent circumstance as set forth in Section 4.1.3.1.1 of this Tariff, the Board of Directors shall review the RAPC's recommended Tariff or Business Practice Manual amendment expeditiously and invite comment from the PRC, COSR, and stakeholders concurrently with its consideration of the RAPC proposal.

3.4 WPP is specifically prohibited from amending this Tariff to:

3.4.1 Alter, usurp, control, or otherwise materially modify the Participants' existing functional control and responsibility over their generation and transmission assets, including but not limited to planning and operation of such assets, Open Access Transmission Tariff administration, interfering with Balancing Authority duties and responsibilities, or imposing a must-offer requirement on any specific generation resources.

3.4.2 Administer Open Access Transmission Tariff service, engage in Balancing Authority operations, impose transmission planning requirements, or assume any transmission planning responsibilities with regard to any of the Participant's transmission assets.

3.4.3 Form any type of organized market, including but not limited to a capacity market, a regional transmission organization, a real-time market, or any other type of FERC-approved regional construct, unless such action is also approved by the RAPC under its voting procedures set forth in Section 4.1.6 of this Tariff.

3.4.4 Impose any requirements on Participants beyond the assessment of financial charges as specified in this Tariff or suspension or termination of participation for failure to meet any WRAP requirements.

3.4.5 Amend in any way this Section 3 of this Tariff without the approval of the RAPC under its voting procedures set forth in Section 4.1.6 of this Tariff.

3.4.6 Amend the RAPC voting thresholds set forth in Section 4.1.6 of this Tariff.

3.5 Subject to the limitations and prohibitions imposed under Section 3.4 of this Tariff, if the Board of Directors votes to file at FERC to expand the WRAP to include market optimization or transmission planning services, WPP will initiate a formal process with COSR and other stakeholders to conduct a full review of governance structures and procedures, including the role of states. If COSR does not support any revised governance structure that emerges from such WPP review process, the WPP will file, along with any WPP governance proposal to FERC, an alternative

governance structure on behalf of the COSR so long as such COSR alternative governance structure is supported by 75% of the COSR.

4. Organizational Groups for the WRAP

4.1 Resource Adequacy Participants Committee

4.1.1 Authority and Purpose: The RAPC shall be the highest level of authority for representation by Participants in the WRAP governance structure and shall represent the interests of Participants directly to the Board of Directors.

4.1.2 Composition: The RAPC shall be composed of one representative from each Participant. Such representative shall be a senior management official with binding decision-making authority on behalf of the Participant, or a designated representative of a Participant's senior management official. A designated representative shall be required to have binding decision-making authority on behalf of the Participant and shall have all voting rights delegated from the senior management official. Participant shall appoint a designated representative no less than one Business Day in advance of a meeting for that designated representative to be eligible to vote during the meeting.

4.1.3 Functions: The RAPC:

4.1.3.1 Shall consider and recommend that the Board of Directors approve or reject all proposed amendments to this Tariff or Business Practice Manuals prior to the Board of Directors considering such amendments, including any amendments reviewed and referred by the PRC.

4.1.3.1.1 Exigent Circumstances: When the RAPC determines that an amendment to the Tariff or the Business Practice Manuals requires expedited Board of Directors review due to exigent circumstances, it may propose such amendment directly to the Board of Directors without awaiting review by other committees and stakeholders. Exigent circumstances include: (i) a FERC-mandated amendment to this Tariff or the Business Practice Manuals; (ii) an amendment to this Tariff or the Business Practice Manuals to address an immediate reliability impact; or (iii) an amendment to this Tariff or the Business Practice Manuals that the RAPC has determined has significant impacts to utility service.

4.1.3.2 Shall consider and vote to recommend that the Board of Directors approve or reject any proposed amendments to this Tariff or the Business Practice Manuals.

4.1.3.3 May provide input to the Board of Directors on any proposed WPP rules that apply both to the WRAP and other WPP services.

4.1.3.4 May evaluate and provide input to the Board of Directors on the WRAP administration budget and budget allocation to Participants, including amendments to the WRAP Administration Charge as calculated in accordance with Schedule 1 of this Tariff.

4.1.3.5 Shall form and organize all of the organizational groups under its responsibilities.

4.1.3.6 May take other actions reasonably related to its role as the senior-level Participant advisory committee to the Board of Directors regarding WRAP matters.

4.1.4 Leadership: The RAPC shall select from among its members a chair and vice chair.

4.1.5 Meetings:

4.1.5.1 Meetings of the RAPC will generally be open to all stakeholders. WPP shall provide advanced written notice of the date, time, place, and purpose of each RAPC meeting. All RAPC decisional items shall be placed on the open meeting agenda and allotted adequate time for public comment and deliberation.

4.1.5.1.1 The RAPC may meet in closed session as the RAPC chair deems necessary; provided, however, that the RAPC shall allow the designated COSR support staff member as specified in Section 4.3 of this Tariff to attend any closed meeting. The RAPC shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session.

4.1.5.2 The quorum for a meeting of the RAPC or any organizational group organized under it shall be one-half of the representatives thereof, but not less than three representatives, provided that a lesser number may serve as a quorum for the sole purpose of voting to adjourn the meeting to a later time.

4.1.6 Voting:

4.1.6.1 Each RAPC representative shall have one vote.

4.1.6.2 Voting in the RAPC shall utilize a “House and Senate” model.

4.1.6.2.1 Each Participant’s “House” vote shall represent the proportion of the Participant’s Median Monthly P50 Peak Load, as described in Section 2 of Schedule 1 of this Tariff, compared to the sum of all Participants’ Median Monthly P50 Peak Loads. A Participant may choose to divide its

House vote but is responsible for announcing such at the time of voting.

4.1.6.2.2 Each Participant shall receive a single, non-weighted "Senate" vote.

4.1.6.2.3 For an action to be approved by the RAPC, it must pass both "House" and "Senate" votes as follows. For purposes of voting, the percentages identified below specify the percentage threshold of the entire RAPC (whether in attendance or not) that is needed for passage of an action.

4.1.6.2.3.1 Actions to amend any of the limitations on Board authority set forth in Section 3.4 of this Tariff require an 80% affirmative approval by both the House and the Senate vote tallies to be approved.

4.1.6.2.3.2 Actions brought before the RAPC that have been approved by the PRC require a 67% affirmative approval by both the House and Senate vote tallies to be approved.

4.1.6.2.3.3 All other actions not specified in this Section 4.1.6.2.3 require a 75% affirmative approval by both the House and Senate vote tallies to be approved.

4.1.6.2.4 If at any time a single Participant's P50 load for voting purposes would result in that Participant possessing a veto over any votes taken under Section 4.1.5.2.3, such Participant's House vote shall be capped at 1% below the amount that would convey such a veto, such that no single Participant will possess a veto over any action taken under Section 4.1.6.2.3.

4.2 Program Review Committee

4.2.1 Authority and Purpose: The PRC is a sector-representative group comprised in accordance with Section 4.2.2 of this Tariff. The PRC is responsible for receiving, considering, and proposing amendments to this Tariff and the Business Practice Manuals. The PRC shall serve as a clearinghouse of all recommended amendments to this Tariff or the Business Practice Manuals, except for those designated by the RAPC as involving an exigent circumstance under Section 4.1.3.1.1 of this Tariff, amendments to Schedule 1 of this Tariff and cost allocation for the WRAP, and amendments to the WRAPA set forth as Attachment A of this Tariff. The PRC shall serve in an advisory capacity to the RAPC and, when applicable, the Board of Directors.

4.2.1.1 The PRC shall present all proposals received to the RAPC, along with the PRC's recommendation and summaries of all comments and feedback received.

4.2.1.2 The PRC's decisions are advisory-only and are not binding on the RAPC, the Board of Directors, or WPP.

4.2.2 Composition: The PRC shall be composed of up to twenty representatives from the following ten sectors: four representatives of RAPC Participant investor-owned utilities; four representatives of RAPC Participant publicly-owned (consumer or municipal) utilities; two representatives of RAPC Participant retail competition load serving entities; two representatives from RAPC Participant Federal Power Marketing Administrations; two representatives of independent power producers; two representatives of public interest organizations; one representative of retail consumer advocacy groups; one representative of industrial customer advocacy groups; one representative of load serving entities with loads in the WRAP that are represented by other LREs and are not otherwise eligible for any other sector; a representative from the COSR. Expectations for sectors to consider regional, operational, geographic, demographic, and other forms of diversity in selecting their sector representatives are set forth in more detail in the PRC charter, which shall be posted and maintained on the WRAP website or other appropriate public location.

4.2.3 The PRC shall establish a process and criteria for receiving and reviewing proposed amendments to this Tariff and the Business Practice Manuals. Such review will include procedures for stakeholder comment.

4.2.4 Meetings: The PRC shall meet primarily in open session; provided that the PRC may schedule closed meetings if it determines that doing so would be beneficial to safeguard the confidentiality of sensitive information. The PRC shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session.

4.2.5 Voting: The PRC shall endeavor to operate by consensus. When voting is necessary, voting shall consist of one sector one vote, with an affirmative vote of six sectors (as specified in Section 4.2.2 of this Tariff) constituting approval of an action before the PRC.

4.2.5.1 For sectors with four seats, three sector representatives must agree with the action for the sector to be considered an affirmative vote for the action.

4.2.5.2 For sectors with two seats, both sector representatives must agree with the action for the sector to be considered an affirmative vote for the action.

4.2.6 Participants and other entities shall participate in no more than one PRC sector. If a Participant or other entity is eligible to participate in more than one sector, such Participant or other entity shall declare in which sector it will participate.

4.3 Committee of State Representatives

4.3.1. Composition: The COSR is a committee composed of one representative from each state or provincial jurisdiction (either public utility commission or state/provincial energy office) that regulates at least one Participant.

4.3.2 Leadership: The COSR shall determine its leadership, including a chair and vice chair. The chair or vice chair will be requested to attend all open sessions of the RAPC to provide input and advice.

4.3.2.1 The COSR shall designate a COSR support staff member to attend and audit closed meetings of the RAPC under a non-disclosure agreement.

4.3.3 Authority:

4.3.3.1 If the COSR determines that a proposal approved by the RAPC is substantially different from the proposal submitted to the RAPC by the PRC, the COSR may engage in additional public review and comment before the RAPC decision is presented to the Board of Directors; provided that this additional public review and comment does not unreasonably delay presentation to the Board of Directors.

4.3.3.2 If the COSR as a body opposes or appeals a RAPC decision to the Board of Directors, the Board of Directors will not consider the RAPC's decision until the RAPC engages with the COSR to discuss, in at least two public discussions, to attempt to reach a mutually agreeable solution.

4.3.3.2.1 If the appeal relates to an amendment that the RAPC designated as involving an exigent circumstance under Section 4.1.3.1.1 of this Tariff, COSR can require no more than one public discussion, provided that such additional discussion does not unreasonably hinder the timeline for Board of Directors consideration of the proposed amendment.

4.3.4 Voting, Meetings, and Quorum: The COSR may develop its own rules governing voting, meetings, and quorum for action. COSR shall be responsible for its own costs.

5. Independent Evaluator

5.1 WPP shall engage an Independent Evaluator to provide an independent assessment of the performance of the WRAP and any potential beneficial design modifications. The Independent Evaluator shall report directly to the Board of Directors.

5.2 The Independent Evaluator shall conduct an annual review of the WRAP, including but not limited to analyzing prior year program performance, accounting and settlement, and program design.

5.3 The Independent Evaluator shall prepare an annual report of its findings, and any recommended modifications to WRAP design, and present its findings to the WRAP committees and the Board of Directors, subject to any necessary confidentiality considerations. Any data included in the Independent Evaluator's report shall be reported on an aggregated basis as applicable to preserve confidentiality. The Independent Evaluator's annual reports shall be available to the public, except to the extent they contain information designated as confidential under this Tariff, or information designated as confidential by the Independent Evaluator.

5.4 The Independent Evaluator shall not:

5.4.1 Evaluate individual Participants.

5.4.2 Possess any decision-making authority regarding the WRAP or design modifications.

5.4.3 Evaluate WPP's day-to-day operations of the WRAP (except as part of review of prior year program performance).

6. WPP Invoicing and Settlement

6.1 WPP shall be responsible for issuing invoices to, and collecting from, Participants all charges under Schedule 1 of this Tariff for recovery of all WPP costs associated with administering the WRAP.

6.2 WPP shall be responsible for invoicing, collecting, and (as applicable) distributing revenues from Deficiency Charges under Part II of this Tariff and Delivery Failure Charges under Part III of this Tariff.

6.3 Participants are not required to provide credit assurances to WPP to cover charges under Schedule 1 of this Tariff, Deficiency Charges under Part II of this Tariff, or Delivery Failure Charge under Part III of this Tariff.

6.4 Participants shall make full payment of all invoices rendered by WPP for which payment is required to WPP within thirty calendar days following the receipt of the WPP invoice, notwithstanding any disputed amount, but any such payment shall not be deemed a waiver of any right with respect to such dispute. Any Participant that fails to make full and timely payment to WPP of amounts owed upon expiration of the cure period specified in Section 6.4.1 of this Tariff will be in default.

6.4.1 If a Participant fails to make timely payment as required by Section 6.4, WPP shall so notify such Participant. The notified Participant may remedy such asserted breach by paying all amounts due, along with interest on such amounts calculated in accordance with the methodology specified for interest on refunds in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii); provided, however, that any such payment may be subject to a reservation of rights, if any, to refer such matter to dispute resolution procedures under Section 9 of this Tariff. If the Participant has not remedied such asserted breach by 5:00 p.m. Pacific Prevailing Time on the second Business Day following WPP's issuance of a written notice of breach, then the Participant shall be in default.

6.4.2 In the event of a Participant's default under Section 6.4.1 of this Tariff, WPP in its discretion may pursue collection through such actions, legal or otherwise, as it reasonably deems appropriate, including but not limited to the prosecution of legal actions and assertion of claims in the state and federal courts as well as under the United States Bankruptcy Code. After deducting any costs associated with pursuing such claims, any amounts recovered by WPP with respect to defaults for which there was a Default Allocation Assessment shall be distributed to the Participants who have paid their Default Allocation Assessment in proportion to the Default Allocation Assessment paid by each Participant, as calculated pursuant to Section 6.4.3 of this Tariff. In addition to any amounts in default, the defaulting Participant shall be liable to WPP for all reasonable costs incurred in enforcing the defaulting Participant's obligations.

6.4.3 In the event of a Participant's default with respect to an invoice issued by WPP for charges under Schedule 1 of this Tariff, in order to ensure that WPP remains revenue neutral, the Board of Directors may assess against, and collect from, the Participants not in default a Default Allocation Assessment to recover the costs associated with the default. Such assessment shall in no way relieve the defaulting Participant of its obligations.

6.4.3.1 The Default Allocation Assessment shall be equal to:

(20% × (1/N) + (80% × (Participant Median Monthly P50 Peak Load / Sum Participants Median Monthly P50 Peak Load)

where:

N = the total number of Participants, calculated as of the date WPP declares a Participant in default.

Participant Median Monthly P50 Peak Load = for each Participant included in factor "N" above, the Participant's Median Monthly P50 Peak Load as determined in Section 2 of Schedule 1 of this Tariff, recalculated on the day the WPP declares a Participant in default.

All Participants Median Monthly P50 Peak Load = the sum of the Participant Median Monthly P50 Peak Load values for all Participants included in factor "N" above.

7. Credit Requirements and Settlement for Holdback and Delivered Energy

7.1 Credit and Settlement for Holdback and Delivered Energy: Settlement of holdback and delivered energy shall be completed bilaterally between Participants, subject to the following:

7.1.1 Neither WPP nor the Program Operator(s) shall take title to energy or be party to any settlement of holdback or delivered energy.

7.1.2 Participants shall establish credit with each other through one of the following mechanisms. Neither WPP nor the Program Operator(s) shall be involved in the calculation of credit or credit limits.

7.1.2.1 Establish credit directly with each Participant: Participants may establish credit directly with other Participants from whom they may receive delivered energy.

7.1.2.1.1 Such credit should be established in advance of the applicable season.

7.1.2.1.2 The amount of such credit and any credit limit shall be at the discretion of each Participant.

7.1.2.2 WPP shall conduct a competitive solicitation process to identify a third-party service provider to serve as central credit organization and clearing house for credit and settlement. Once such central credit organization is selected, Participants that have not already directly established credit with all other Participants under Section 7.2.2.1 of this Tariff shall establish credit with the central credit organization.

7.1.2.2.1 WPP will provide the central credit organization any Operations Program related information necessary for them to perform their obligations as set forth in the agreement between WPP and the central credit organization.

7.1.2.2.2 All costs associated with the central credit organization service shall be borne by Participants as established in the agreement between WPP and the central credit organization and either billed directly on a transactional basis or else recovered under Schedule 1 of this Tariff.

7.1.2.3 The obligation to arrange sufficient credit shall at all times be on the deficient Participant (i.e., a Participant with a negative sharing calculation in the Operations Program). If a deficient Participant has not made good faith and commercially reasonable efforts to

obtain sufficient credit with a delivering Participant, such delivering Participant shall so notify WPP and shall be excused from any obligation to deliver to such deficient Participant. Nothing in this Section 7 requires a Participant to violate its written risk or credit policy.

7.2 All settlement pricing calculated under this Tariff shall be final and no adjustments to settlement prices shall be allowed after the later of: (1) ninety Days after such settlement prices are posted by WPP; or (2) the final outcome of any dispute resolution process that is initiated by a Participant to dispute a settlement price pursuant to the Dispute Resolution Procedures set forth in Section 9 of this Tariff.

7.2.1 A Participant may invoke the Dispute Resolution Procedures set forth in Section 9 of this Tariff to address calculation errors in any settlement price, but may not invoke the Dispute Resolution Procedures to dispute data sources or to request the use of alternative data sources.

8. Force Majeure, Limitation of Liability, and Indemnification

8.1 Force Majeure: An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, pandemic, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation, or restriction imposed by governmental military or lawfully established civilian authorities, or any other cause beyond a party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither WPP nor the Participant will be considered in default as to any obligation under this Tariff if prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Tariff is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Tariff. Notwithstanding the foregoing, the physical inability to perform because of an event of Force Majeure shall not relieve the party of any financial obligations incurred under this Tariff or as a result of the Force Majeure event, unless, and to the extent, such financial obligation is waived or excused under provisions of Part II or Part III of this Tariff expressly providing for such waiver or excuse.

8.2 Limitation of Liability:

8.2.1 Neither WPP nor the Program Operator shall be liable, whether based on contract, indemnification, warranty, tort, strict liability or otherwise, to any Participant, other entity owning a Qualifying Resource, third party, or other person for any damages whatsoever, including, without limitation, direct, incidental, consequential, punitive, special, exemplary, or indirect damages arising or resulting from any act or omission in any way associated with service provided under this Tariff or any agreement hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, except to the extent that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of WPP or Program Operator, in which case WPP shall only be liable for direct damages.

8.2.2 Neither WPP nor the Program Operator shall be liable for damages arising out of services provided under this Tariff or any agreement entered into hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency, or imperfection of service, occurring as a result of conditions or circumstances beyond the control of WPP, or resulting from electric system design common to the domestic electric utility industry or electric system operation practices or conditions common to the domestic electric utility industry.

8.2.3 To the extent that a Participant or other person has a claim against WPP, the amount of any judgment or arbitration award on such claim entered in favor of such entity shall be limited to the value of WPP's assets. No party may seek to enforce any claims under this Tariff or any Agreements entered into

hereunder against the directors, managers, members, shareholders, officers, employees, or agents of WPP, or against the Program Operator, who shall have no personal liability for obligations of WPP by reason of their status as directors, managers, members, shareholders, officers, employees, or agents of WPP or by virtue of their status as Program Operator.

8.2.4 To the extent that WPP is required to pay any money damages or compensation or pay amounts due to its indemnification of any other party as it relates to any services provided, acts, or omissions under this Tariff or any agreement entered into hereunder, WPP shall be allowed to recover any such amounts under Schedule 1 of this Tariff as part of the WRAP Administration Charge. Notwithstanding the foregoing, WPP shall be prohibited from recovering under this Tariff any costs associated with any damages, compensation, or indemnification costs that arise: (i) with regard to any acts or omissions that occur outside of this Tariff and any agreements entered into hereunder, or (ii) if a court of competent jurisdiction determines that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of WPP or the Program Operator.

8.2.5 A Participant's liability to another Participant under this Tariff for failure to comply with obligations under this Tariff shall be limited to any charges or payments calculated pursuant to this Tariff; provided, however, that nothing in this Section 8.2.5 shall limit or is intended to foreclose any Participant's liability that may arise under any bilateral agreements between Participants.

8.3 Indemnification: The Participants shall at all times indemnify, defend, and save WPP (and any of its Program Operator(s), agents, consultants, directors, officers, or employees) harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties arising out of or resulting from the performance of activities under this Tariff by WPP, any Program Operator(s), or agents, consultants, directors, officers, or employees of WPP, except in cases of gross negligence or intentional wrongdoing by WPP or the Program Operator. WPP shall credit any proceeds from insurance or otherwise recovered from third parties to Participants who have paid to indemnify WPP under this Section 8.3.

8.4 Actions upon Unavailability of Program Operator(s): In the event that the Program Operator(s) become(s) unwilling, unable, or otherwise unavailable to perform contractual duties necessary for WPP to discharge its obligations under this Tariff and WPP’s agreement(s) with the Program Operator(s), WPP shall engage with Participants as soon as practicable to determine what actions to take, including but not limited to filing with FERC a request to waive one or more provisions of this Tariff up to and including immediate suspension of all rights and obligations under this Tariff until a replacement Program Operator(s) can assume all relevant Program Operator functions.

9. Dispute Resolution Procedures

9.1 Internal Dispute Resolution Procedures: Subject to the limitations set forth in Section 7.2.1 of this Tariff, any dispute between a Participant and WPP under the Tariff (excluding amendments to the Tariff or to any agreement entered into under the Tariff, which shall be presented directly to the FERC for resolution) shall be referred to a designated senior representative of WPP and a senior representative of the Participant for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty days (or such other period as the parties may agree upon) by mutual agreement, such dispute shall then be referred to the chief executive officer or comparable executive of each party for resolution. In the event that the executives are unable to resolve the dispute within thirty days (or such other period as the parties may agree upon), such dispute may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.

9.2 External Arbitration Procedures: Any arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the parties to the dispute. If the parties fail to agree upon a single arbitrator within ten days of the referral of the dispute to arbitration, each party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association and any applicable FERC regulations.

9.3 Arbitration Decisions: Unless otherwise agreed by the parties, the arbitrator(s) shall render a decision within ninety days of appointment and shall notify the parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and/or any agreement entered into under the Tariff and shall have no power to modify or change any of the above in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act and/or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with the FERC if it affects jurisdictional rates, terms and conditions of service or facilities.

9.4 Costs: Each party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (i) the cost of the arbitrator chosen by the party to sit on the three-member panel and one half of the

cost of the third arbitrator chosen; or (ii) one half the cost of the single arbitrator jointly chosen by the Parties.

9.5 Rights Under the Federal Power Act: Nothing in this section shall restrict the rights of any person to file a complaint with the FERC under relevant provisions of the Federal Power Act or of WPP to file amendments to this Tariff under the relevant provisions of the Federal Power Act.

10. Treatment of Confidential and Commercially Sensitive Information of Participants

10.1 Terms: For purposes of this Section 10 only, the term "WPP" shall also include, as applicable, any directors, officers, employees, agents, or consultants of WPP, the Independent Evaluator established under Section 5 of this Tariff, and any central credit organization established under Section 7 of this Tariff. WPP shall be bound by the rights, obligations, and conditions set forth in this Section 10. For purposes of this Section 10, the term "Disclosing Entity" shall include any Participant that discloses information to WPP that the Disclosing Entity deems and identifies as confidential or commercially sensitive. WPP's collection and handling of non-Participant data shall be governed by separate non-disclosure agreements with such non-Participants.

10.2 Treatment of Confidential or Commercially Sensitive Information: WPP shall identify in the Business Practice Manuals categories of Participant-specific data and information received from Participants that shall be treated as confidential or commercially-sensitive, which WPP shall not disclose publicly or to any other Participant or other entity except as provided for in this Section 10. In addition, WPP shall maintain the confidentiality of all of the documents, data, and information provided to it by any Participant that such disclosing Participant deems and specifically identifies as confidential or commercially sensitive. Notwithstanding the foregoing, WPP need not keep confidential: (i) information that is publicly available or otherwise in the public domain; or (ii) information that is required to be disclosed under this Tariff or any applicable legal or regulatory requirement (subject to the procedures set forth in Section 10.4 of this Tariff).

10.2.1 WPP staff may develop and release publicly composite or aggregated data based upon Participant confidential or commercially sensitive information, provided that such composite or aggregated data cannot be used to identify or attribute a disclosing Participant's confidential or commercially sensitive data. Such release of composite or aggregated data shall be governed by the following process.

10.2.1.1 Prior to the initial release of such composite or aggregated data, WPP staff shall present the form and format of such data to each Participant whose confidential information or data will be used to create the composite or aggregated data. If any such Participant objects to the form and format as revealing or allowing for attribution of confidential or commercially sensitive Participant-specific data, WPP staff shall determine whether to modify the form and format or to retain the proposed form and format for release. If WPP staff elects to retain the proposed form and format, the Participant shall have the right to appeal to the RAPC and WPP staff shall be prohibited from releasing the composite or aggregated data in the proposed form and format until the Participant's appeal rights as specified in this Section 10.2.1

are exhausted.

10.2.1.2 If a Participant appeals a WPP staff decision regarding the form and format of composite or aggregated data to the RAPC, the RAPC shall consider whether the form and format reveals or allows for attribution of confidential or commercially sensitive Participant-specific data. If the RAPC determines that the proposed form and format is sufficient to protect against the release of confidential or commercially sensitive Participant-specific data, WPP staff is authorized to release the composite or aggregated data in the proposed form and format unless the Participant timely appeals the RAPC decision to the Board of Directors.

10.2.1.3 If a Participant appeals a RAPC decision regarding the form and format of composite or aggregated data to the Board of Directors, the Board of Directors shall consider whether the form and format is sufficient to protect against the release or attribution of confidential or commercially sensitive Participant-specific data. If the Board of Directors determines that the proposed form and format is sufficient to protect against the release of confidential or commercially sensitive Participant-specific data, WPP staff is authorized to release the composite or aggregated data in the proposed form and format.

10.2.1.4 Once a proposed form and format of composite or aggregated data is approved by the WPP staff and is not appealed or appeals are unsuccessful, such form and format may be used for all future disclosures of composite or aggregate information and no Participant may dispute such release. If WPP staff proposes to alter the form and format, including but not limited to changing the granularity of data, WPP staff shall be required to follow the process set forth in this Section 10.2.1 and Participants shall have the right to appeal such changes in form and format as set forth herein. Notwithstanding the foregoing, if the composition of Participants in the WRAP changes in such a way that the form and format of composite or aggregated data is no longer sufficient to protect against disclosure or attribution of confidential or commercially sensitive Participant-specific data, an aggrieved Participant shall have a one-time right to raise the issue promptly with WPP Staff for presentation to and review by the Board of Directors, and the Board of Directors in its sole discretion shall decide whether the change in composition results in the form and format of the composite or aggregated data becoming insufficient to

protect against the release or attribution of confidential or commercially sensitive Participant-specific data; provided, however, that if an aggrieved Participant does not raise its concerns with the Board of Directors promptly following the change in composition, such Participant shall have waived its right to contest the release of such composite or aggregated data.

10.2.2 Notwithstanding anything to the contrary in this Section 10.2, if the RAPC unanimously votes to disclose publicly any particular category of Participant-specific data, such data shall no longer be deemed confidential regardless of any such designation by a disclosing Participant, and this election shall be binding on any current and future Participants until such time as the RAPC votes unanimously to prohibit public release of such category of data. A list of the categories of Participant-specific data that the RAPC unanimously votes to make public shall be included in the Business Practice Manuals.

10.3 Access to Confidential or Commercially Sensitive Information: Except as otherwise provided in Section 10.2 of this Tariff, no Participant, entity owning a Qualifying Resource, or any third party shall have the right hereunder to receive from WPP or to otherwise obtain access to any documents, data or other information that has been identified as or deemed to be confidential or commercially sensitive under Section 10.2 of this Tariff by a disclosing Participant. The provisions of this Section 10.3 do not apply to WPP (including any Independent Evaluator, member of the Board of Directors, or any WPP officer, employee, agent, or consultant that requires access to confidential or commercially sensitive information); provided that access to Participant-specific confidential or commercially sensitive information shall be solely for the purpose of performing the duties or functions under this Tariff or otherwise advising or assisting WPP. WPP shall develop internal policies and controls governing the handling and protection of confidential or commercially sensitive Participant-specific data by members of the Board of Directors, officers, employees, agents, consultants, or any Independent Evaluator.

10.4 Exceptions: Notwithstanding anything in this Section 10 to the contrary:

10.4.1 If WPP is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence pursuant to this Section 10, WPP may disclose such information; provided, however, that as soon as practicable after WPP learns of the disclosure requirement and prior to making such disclosure, WPP shall notify any affected disclosing Participant of the requirement and the terms thereof. Any such disclosing Participant may, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement and WPP shall cooperate with such disclosing Participant to take all reasonable available steps to oppose

or otherwise minimize the disclosure of the information permitted by applicable legal and regulatory requirements. WPP shall further cooperate with such disclosing Participant to the extent reasonably practicable to obtain proprietary or confidential treatment of confidential or commercially sensitive information by the person to whom such information is disclosed prior to any such compelled disclosure.

10.4.2 WPP may disclose confidential or commercially sensitive information, without notice to any affected disclosing Participant(s), in the event that FERC, during the course of an investigation or otherwise, requests information that is confidential or commercially sensitive. In providing the information to FERC, WPP shall take action, consistent with 18 C.F.R. §§ 1b.20 and/or 388.112, to request that the information be treated by FERC as confidential and non-public and, if appropriate, as Critical Energy Infrastructure Information and that the information be withheld from public disclosure. WPP shall provide the requested information to FERC within the time provided for in the request for information. WPP shall notify any affected disclosing Participant(s) within a reasonable time after WPP is notified by FERC that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive information has been received, at which time WPP and any affected disclosing Participant may respond before such information would be made public.

10.5 Notwithstanding any efforts undertaken pursuant to Section 10.4 to prevent or limit the release of a Participant's confidential or commercially sensitive information, in the event that FERC or a court of competent jurisdiction orders or otherwise permits the public release of a Participant's confidential or commercially sensitive information, the affected Participant shall have a one-time right to elect to terminate its participation in the WRAP under the expedited termination provisions set out in Section 11.2 of the WRAPA.

10.6 WPP shall handle any information identified or deemed to be Controlled Unclassified Information/Critical Energy Infrastructure Information in accordance with FERC's regulations set forth at 18 C.F.R. § 388.113 and any applicable FERC policies or other regulations, including but not limited to restricting access to such information on a password-protected portion of WPP's website or similar precautions.

10.7 Nothing in this Section 10 is intended to limit a Participant's ability to disclose or release publicly its own confidential or commercially sensitive information or data, or to limit a Participant's ability to authorize WPP's disclosure of such material to a specified recipient.

11. Timing

11.1 In the event that any deadline specified in this Tariff shall fall on a day that is not a Business Day, the deadline shall be extended to the next Business Day.

12. Application and Registration

12.1 Any entity wishing to participate in the WRAP must submit an application and registration in accordance with the Business Practices Manuals and must execute the WRAPA as set forth in Attachment A of this Tariff, or a non-conforming version of such participation agreement that is approved by FERC for an individual Participant. Such application and registration must be submitted in accordance with the timelines set forth in the Business Practices Manuals in advance of the next Binding Season.

12.2 Each Participant must register all of its resources and loads, regardless of whether such resources will be used to satisfy the WRAP requirements and regardless of whether certain loads will be subject to the requirements of the WRAP. Participants may modify their registration of resources and loads in accordance with the timing procedures set forth in the Business Practices Manuals.

12.3 In the event that more than one Participant attempts to register the same resource or load, the following procedure will be used to assign the resource or load to a Participant:

12.3.1 If a Participant attempts to register a load or resource that has already been registered by a different Participant, the resource or load will remain registered by the original Participant registering the resource or load until such time as both Participants mutually inform WPP that a change to the registration is required.

12.3.2 If two or more Participants attempt to register the same resource or load during the same registration window, WPP shall request that the Participants determine among themselves the appropriate registration of the resource or load before that resource or load is included in the WRAP.

PART II FORWARD SHOWING PROGRAM

13. Overview

13.1 In the Forward Showing Program, as set forth in this Part II of the Tariff, and as further detailed in the Business Practice Manuals, each Participant shall, in advance of each Binding Season, show as to such Binding Season: (i) the total capacity, referred to and defined herein as the FS Capacity Requirement, required by the provisions of this Tariff for such Binding Season for reliable service to the loads for which such Participant is responsible; (ii) the demonstration of capacity, referred to and defined herein as the Qualifying Capacity Contribution, or QCC, provided by the Qualifying Resources the Participant provides or procures to meet its FS Capacity Requirement; and (iii) a quantity of WRAP Qualifying Transmission, referred to and defined herein as the FS Transmission Requirement, needed for reliable delivery of the QCC of the Participant's Qualifying Resources from such resources to the loads for which the Participant is responsible.

13.2 As also set forth in this Part II of the Tariff, and as further detailed in the Business Practice Manuals: (i) WPP shall, in advance of each Binding Season, review the Forward Showing Submittals of each Participant for such Binding Season; (ii) WPP shall identify to the Participant any deficiencies in the Participant's Portfolio QCC (whether as to contracts or directly owned or controlled resources) relative to the FS Capacity Requirement, and any deficiencies in the identified WRAP Qualifying Transmission relative to the FS Transmission Requirement, within sixty days of the Forward Showing Submittal deadline; (iii) the Participant shall have an opportunity to cure such deficiencies, within sixty days of notification of deficiency; and (iv) if the Participant fails to cure all such deficiencies on or before the deadlines prescribed herein, the Participant shall be assessed a Forward Showing Deficiency Charge.

14. Forward Showing Program Process and Timeline

14.1 The Forward Showing Program has two Binding Seasons, defined as the Summer Season and the Winter Season. The Summer Season is the period beginning on June 1 of each Year and ending on September 15 of that same Year. The Winter Season is the period beginning on November 1 of each Year and ending on March 15 of the succeeding Year. This Tariff does not establish resource or showing obligations outside the periods defined by the Summer Season and Winter Season.

14.2 Each Participant shall submit its Forward Showing Submittals for each Month of each Binding Season, with all required supporting materials and information as detailed in the Business Practice Manuals, on or before the FS Deadline for the Binding Season. The FS Deadline for each Binding Season shall be seven months before the start of such Binding Season.

14.2.1 Forward Showing Submittal:

14.2.1.1 Absent the exception in Section 14.2.1.2, each Participant shall submit a separate Forward Showing Submittal for loads for which it is responsible if transmission constraints between areas where its loads are located, including, without limitation, when Participant is responsible for loads in more than one Subregion, prevent application, in the manner more fully described in the Business Practice Manuals, of Resource QCC or Net Contract QCC from one load area to the FS Capacity Requirement of another load area.

14.2.1.2 Notwithstanding Section 14.2.1.1, a Participant responsible for loads in two Subregions may submit for a given Month a single Forward Showing Submittal for such loads, and may employ for determination of its FS Capacity Requirement for such Month the lower of the two FSPRM values determined for the Subregions where its loads are located, if the Participant demonstrates in such Forward Showing Submittal, in accordance with the procedures and requirements set forth in the Business Practice Manuals, WRAP Qualifying Transmission in a quantity, in addition to that required by the FS Transmission Requirement, equal to the difference in the two FSPRM values multiplied by the Participant's P50 Peak Load Forecast for such Month, with a point of delivery in the Subregion with the higher FSPRM value and the point of receipt in the Subregion with the lower FSPRM value. Each such showing shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such WRAP Qualifying Transmission, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission.

14.2.2 Each Participant's Forward Showing Submittal shall include a Senior Official Attestation.

14.3 The FSPRM values used in the Forward Showing Submittals for a Binding Season shall be those values approved by the Board of Directors as the culmination of an Advance Assessment process. No later than twelve months before the FS Deadline for each Binding Season, WPP will determine and post the recommended FSPRM for each Subregion for each Month of such Binding Season. Participants shall provide their load, resource and other information reasonably required to perform the analyses and calculations required for the Advance Assessment, in accordance with the Advance Assessment information submission details and schedule specified in the Business Practice Manuals. No later than nine months before the FS Deadline for such Binding Season, the Board of Directors shall take its final action regarding approval of the FSPRM values for each Month of such Binding Season.

14.3.1 In connection with an Advance Assessment process, or otherwise in connection with consideration of a change to the Business Practice Manuals, the Board of Directors may determine that designation of Subregions would encourage the relief, in whole or part, of transmission constraints on the transfer of capacity within the WRAP Region (whether through development or commitment of transmission, of Qualifying Resources, or by other means) to the benefit of the WRAP Region and the advancement of the objectives of the WRAP. Each such Subregion shall be identified in the Business Practice Manuals.

14.3.2 Any Participant may choose to offer in the Advance Assessment process WRAP Qualifying Transmission owned or controlled by such Participant for delivery of capacity from one Subregion to another Subregion, for use by other Participants under the terms of Part III of this Tariff during any or all identified Months of the applicable Binding Season. Each such offer shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such transmission service rights, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission. No Participant is obligated to offer any such transmission service rights in the Advance Assessment process, but any offer so made and not withdrawn before the deadline during the Advance Assessment process specified in the Business Practice Manuals shall be considered a binding offer of the identified transmission service rights which may not be withdrawn before the end of the last Day of the Month for which such transmission service is offered. WPP shall take account of such offered transmission service rights, along with other transmission deliverability reasonably anticipated to be available for use by Participants for WRAP purposes during the applicable Binding Season in its determination of the recommended FSPRM values for each Month of the applicable Binding Season for the WRAP Region and for each affected Subregion.

14.4 No later than sixty Days after the FS Deadline for a Binding Season, WPP will (i) provide the values of the Participant's FS Capacity Requirement and FS Transmission Requirement for each Month of the Binding Season; (ii) affirm that the Portfolio QCC of such Participant for each Month of the Binding Season equals or exceeds the FS Capacity Requirement of such Month for such Participant or notify such Participants of any deficiencies in the Forward Showing Submittal that result in a failure to demonstrate satisfaction of the FS Capacity Requirement; and (iii) affirm that the Demonstrated FS Transmission plus approved Monthly Transmission Exceptions of such Participant for each Month of the Binding Season equals or exceeds the FS Transmission Requirement of such Month for such Participant or notify such Participants of any deficiencies in the Forward Showing Submittal that result in a failure to demonstrate satisfaction of the FS Transmission Requirement.

14.5 Within 120 Days after the FS Deadline, the Participant shall (i) submit revisions to its Forward Showing Submittal, including, without limitation, additions or revisions to the Participant's Resource QCC, Net Contract QCC, or Demonstrated FS Transmission; (ii) in order to fully cure all identified deficiencies and demonstrate that such Participant's Portfolio QCC for each Month of the Binding Season equals or exceeds its FS Capacity Requirement; and (iii) fully provide Demonstrated FS Transmission for each Month of the Binding Season that equals or exceeds its FS Transmission Requirement for the same Month of the Binding Season where WPP identified deficiencies.

14.5.1 Any Participant that fails to cure identified deficiencies in its Forward Showing Submittal within the period prescribed above shall be assessed a Deficiency Charge.

14.6 In the event that a failure of the Forward Showing software system (i) occurs in the seven days preceding a FS Deadline and (ii) prevents a Participant from meeting the FS Deadline, the FS Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the FS Deadline. In the event that a failure of the Forward Showing software system triggers an extension of the FS Deadline pursuant to this Section, the deadline for WPP to respond to the Forward Showing Submittal set forth in Section 14.4 shall be extended by a commensurate number of days as the FS Deadline.

14.7 In the event that a failure of the Forward Showing software system occurs within seven days of the deadline for WPP to respond to Forward Showing Submittals pursuant to Section 14.4, the deadline for WPP to respond set forth in Section 14.4 shall be extended by one Day for each day that the Forward Showing software system failure persists and prevents WPP from meeting the deadline provided in Section 14.4.

14.8 In the event that a failure of the Forward Showing software system (i) occurs in the seven days preceding the deadline to cure deficiencies in the Forward Showing

Submittal set forth in Section 14.5 and (ii) prevents a Participant from meeting the deadline to cure deficiencies in the Forward Showing Submittal provided in Section 14.5, the deadline set forth in Section 14.5 shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the deadline set forth in Section 14.5.

15. Transition Period

15.1 Except as specified in Section 15.1.1, the Binding Season beginning November 1, 2027, will be the first Binding Season for which all Participants will assume the obligations of demonstrating capacity and making surplus capacity available to other Participants and will receive the benefits of reliance upon other Participants' surplus capacity. Any Binding Season during the Transition Period occurring before November 1, 2027, shall be a Non-Binding Season, as specified in Section 15A of this Tariff.

15.1.1 No later than January 15, 2026, a Participant may elect the Binding Season beginning June 1, 2027, as the first Binding Season for which it will assume the obligations of demonstrating capacity and making surplus capacity available to other Participants and will receive the benefits of reliance upon other Participants' surplus capacity by providing written notice of its election.

15.2 Within two years prior to the start of the first Binding Season of the WRAP, a Participant who has elected to participate in the first Binding Season may request a vote of all Participants who have elected to participate in the first Binding Season to delay implementation of the first Binding Season for up to two Seasons. Delayed implementation of the first Binding Season shall be approved if 75% of the Participants who elected to participate in the first Binding Season vote in favor of such delay, with approval requiring a vote of 75% of both the House and Senate vote tallies (as described in Sections 4.1.6.2.1 and 4.1.6.2.2 of this Tariff) of all Participants who elected to participate in the first Binding Season.

15.2.1 The deferral vote may only occur for the first Binding Season of the WRAP. If the Participants who elected to participate in the first Binding Season of the WRAP vote to delay implementation of the first Binding Season, all compliance charges for the Forward Showing Program and Operations Program are automatically deferred; except that the Participants may vote to delay implementation only of the Operations Program portion of the first Binding Season and retain the binding Forward Showing Program portion of the first Binding Season.

15A. Non-Binding Seasons

15A.1 A Participant will participate as a Non-Binding Participant for certain Binding Seasons in the Transition Period, as detailed in Section 15.1 of this Tariff, and when Critical Mass is not achieved for a given Binding Season, as detailed in Section 15A.2 of this Tariff. As to a Non-Binding Season, the Participant:

15A.1.1 Shall not be subject to Deficiency Charges, Transmission Deficiency Charges, Holdback Requirements, Energy Deployment obligations, or Delivery Failure Charges;

15A.1.2 Shall submit Forward Showing Submittals but shall not be required to cure deficiencies;

15A.1.3 Shall not have a mandatory Holdback Requirement as a result of the Sharing Calculation;

15A.1.4 May only receive Holdback Capacity offered voluntarily by other Participants in accordance with Part III of this Tariff; and

15A.1.5 Shall have all rights and be subject to all obligations under Part I of this Tariff and the Participant's WRAPA, including, without limitation, voting rights, committee participation, and the obligation to pay the WRAP Administration Charge.

15A.2 Once WPP has given notice to Participants that their Subregion does not have Critical Mass for a given Binding Season, each such Participant will have 30 days to provide notice to WPP if it intends to participate as a Non-Binding Participant for that Binding Season. Such notice and election will be given similarly for each season without Critical Mass participation.

15A.3 In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations):

15A.3.1 If a Participant will participate in a Summer Season as a Non-Binding Participant, for the purposes of calculating the maximum Monthly Deficiency for Winter, the Max Summer Deficiency (MW) is considered to be 0 MW.

15A.3.2 If the Participant will participate in Winter Season as a Non-Binding Participant, the Max Summer Monthly Deficiency remains unchanged.

16. Components of the Forward Showing

16.1 FS Capacity Requirement. The FS Capacity Requirement shall be determined for each Participant on a monthly basis by applying the applicable Monthly FSPRM for a Month to such Participant's peak load forecast for that Month. The Participant's peak load forecast for a given Month of a Binding Season will be the P50 Peak Load Forecast for the Binding Season multiplied by a shaping factor based on the historical relationship, for such Participant, of the seasonal peak for the Winter Season or Summer Season, as applicable, and the monthly peaks for the Months in such season, as more fully described in the Business Practice Manuals.

16.1.1 P50 Peak Load Forecast. The P50 Peak Load Forecast is a peak load forecast prepared on a basis, such that the actual peak load is statistically expected to be as likely to be above the forecast as it is to be below the forecast. The Business Practice Manuals shall specify an approved load forecasting methodology for use by all Participants for their WRAP-required load forecasts which shall include (i) a base monthly peak derived from a recent historical period that recognizes additions and removals of load during the historical period, (ii) adjustments for known additions and removals of load during the forecast window; and (iii) a specified load growth factor.

16.1.2 FS Planning Reserve Margin

16.1.2.1 The FSPRM is an increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages, expressed as a percentage of the applicable peak load forecast. The FSPRM shall be determined based on probabilistic analysis, taking account of uncertainties in generation and load, as the margin above peak load that provides an expectation of no more than a single event-day of loss of load in ten years (sometimes referred to herein as the "1-in-10 LOLE") for each Binding Season. The FSPRM shall be determined in a manner that accounts for the governing principles of QCC value determinations set forth in Section 16.2.5 of this Tariff and shall employ the applicable peak load for the applicable Binding Season and Months. Additional details, assumptions, methodologies, and procedures for determination of the FSPRM shall be as set forth in the Business Practice Manuals.

16.1.2.2 WPP shall calculate in the Advance Assessment process the recommended Monthly FSPRM for each Month of each Binding Season, for approval by the Board of Directors as set forth in this Part II.

16.1.2.3 The FSPRM shall employ (i) a simulated resource stack using capacity accreditation principles consistent with those used for WRAP QCC determinations; (ii) an adjustment in the total WRAP-required QCC value as needed to meet a 1-in-10 LOLE for each Binding Season, and (iii) while maintaining the 1-in-10 LOLE for each Binding Season in (ii), include a monthly reduction of capacity to ensure that each Month has at least 0.01 annual LOLE. The FSPRM for a Month shall be the simulated QCC as adjusted to meet the 1-in-10 LOLE for each Binding Season minus the P50 Peak Load Forecast for the Month, divided by the P50 Peak Load Forecast for the Month.

16.1.2.4 The FSPRM shall include an approximation of Contingency Reserves as set forth in the Business Practice Manuals.

16.1.3 Contingency Reserves Adjustment. A Participant's FS Capacity Requirement will be adjusted as set forth in the Business Practice Manuals to account for changes in Contingency Reserve requirements resulting from energy contract purchases and contract sales.

16.1.4 A Participant responsible for loads located in a Subregion for which an FSPRM value has been determined that is higher than the FSPRM value determined for a different Subregion may, in lieu of demonstrating a MW increment of Portfolio QCC otherwise required to satisfy such Participant's FS Capacity Requirement for a given Month, demonstrate in its Forward Showing Submittal, in accordance with the procedures and requirements set forth in the Business Practice Manuals, WRAP Qualifying Transmission, in a quantity, in addition to that required by the FS Transmission Requirement, that is no greater than the difference in the two FSPRM values multiplied by the Participant's P50 Peak Load Forecast, with the point of delivery in the Subregion with the higher FSPRM value and the point of receipt in the Subregion with the lower FSPRM value. The MW quantity of the additional WRAP Qualifying Transmission so demonstrated shall reduce for such Month, by the same MW quantity, the Portfolio QCC the Participant would otherwise be required to demonstrate to satisfy its FS Capacity Requirement for such Month. Each such demonstration shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such transmission service rights, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission.

16.2 Qualified Capacity Contribution

16.2.1 For each Participant and each Binding Season, the Forward Showing shall show and support the Portfolio QCC, which shall be the sum of the QCC of the Participant's Qualifying Resources ("Resource QCC"), the QCC of its contracted capacity ("Net Contract QCC"), and any transfers of capacity

already accredited by another Participant ("Total RA Transfer," which could be positive or negative). The Portfolio QCC effective for a Binding Season shall be the value determined by WPP.

16.2.2 A resource will not be assigned a Resource QCC or counted toward Portfolio QCC unless it is a Qualifying Resource. Qualifying Resources are those that, before they are included in a Forward Showing Submittal, are first registered with WPP. A Participant seeking registration of a resource must submit a request for registration providing the resource information described in the Business Practice Manuals.

16.2.3 The minimum resource size for registration of a resource is 1 MW, provided, however, that Participants with responsibility for individual resources of less than 1 MW may aggregate them to meet the 1 MW minimum requirement, under the conditions and limitations specified in the Business Practice Manuals.

16.2.4 A Participant may include in its Forward Showing Submittal a request for an exception from its FS Capacity Requirement for an insufficiency of its Portfolio QCC solely due to (i) a catastrophic failure of one or more Qualifying Resources due to an event of Force Majeure as defined by Section 8.1 of this Tariff that (ii) the Participant is unable to replace on commercially reasonable terms prior to the FS Deadline as a result of the timing and magnitude of such catastrophic failure and its consequences. As more fully set forth in the Business Practice Manuals, such exception request shall be supported by a Senior Official Attestation. The exception request must include complete information on the nature, causes and consequences of the catastrophic failure, and must describe the Participant's specific, concrete efforts prior to the FS Deadline to secure replacement Qualifying Resources for the applicable Binding Season. WPP will consider the exception criteria established by this section, the information provided in the exception request, the completeness of the exception request, and other relevant data and information, in determining whether to grant or deny an FS Capacity Requirement exception request. WPP shall provide such determination no later than sixty days after submission of such Participant's FS Submittal containing such FS Capacity Requirement exception request. A Participant granted an exception hereunder must complete a monthly exception check report demonstrating that either the circumstances necessitating the exception have not changed; or that Qualifying Resources have become available, and the Participant has acquired them and no longer requires the exception. Failure to timely submit a required monthly report will result in assessment of a Deficiency Charge, unless the deficiency is cured within seven days of notice of non-compliance. A Participant denied an exception request hereunder may appeal such denial to the Board of Directors in accordance with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested exception shall be denied or permitted as, when

and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall give notice of any exception granted hereunder in the time and manner provided by the Business Practice Manuals.

16.2.5 QCC: WPP shall determine QCC values for the resource types specified below in accordance with the governing principles specified below for each resource type, and consistent with further details specified for each resource type in the Business Practice Manuals.

16.2.5.1 For resources that use conventional thermal fuels, including but not limited to, coal, natural gas, nuclear, and biofuel, WPP will determine QCC based on an Unforced Capacity methodology that employs resource-specific capability testing and capability requirements to determine an Installed Capacity value, and a forced outage calculation methodology based on historical performance during Capacity Critical Hours over a specified multi-year period (excluding outages properly reported as "outside management control"), or based on class-average forced outage data, as specified in the Business Practice Manuals, if there is insufficient data on historical performance.

16.2.5.2 For resources that are Variable Energy Resources, including, but not limited to, wind and solar resources, WPP will determine QCC based on an ELCC methodology, that accounts for synergistic portfolio effects within and among VER types at different resource penetration levels that influence the extent to which the WRAP Region can rely on those VER categories to meet overall capacity needs.

16.2.5.2.1 For such purpose, a separate ELCC value will be calculated in the aggregate for all VER resources of a given type in an identified VER Zone, to be delineated in the Business Practice Manuals based on factors such as geography, performance, meteorological considerations, and penetration.

16.2.5.2.2 As more fully described in the Business Practice Manuals, the zonal aggregate VER-resource-type value will be calculated by (i) conducting a benchmark LOLE study that includes all resource types except the VER resource type being studied, employing a model and assumptions consistent with those used to calculate FSPRM, and adding, or subtracting, the same MW quantity of Pure Capacity to every hour of the applicable Binding Season until, respectively, an initial LOLE value above 0.1 day per

Binding Season becomes 0.1 day per Binding Season, or an initial LOLE value below 0.1 day per Binding Season becomes 0.1 day per Binding Season; (ii) conducting an LOLE study that includes all resource types including the VER resource type being studied, employing a model and assumptions consistent with those used to calculate FSPRM, and adding, or subtracting, the same MW quantity of Pure Capacity to every hour of the applicable Binding Season until, respectively, an initial LOLE value above 0.1 day per Binding Season becomes 0.1 day per Binding Season, or an initial LOLE value below 0.1 day per Binding Season becomes 0.1 day per Binding Season; and (iii) subtracting the Pure Capacity value determined under subpart (ii) from the Pure Capacity value determined under subpart (i) (for which calculation a Pure Capacity value subtracted from each hour in either subpart (i) or subpart (ii) will be assigned a negative value; (iv) repeating steps (i) through (iii) for each Binding Season of the study period employing historical, or as necessary, synthesized, data; and (v) basing the aggregate value of the studied VER resource type for the studied VER Zone on the results of the calculation in step (iii) for the Binding Seasons studied, which may include differential weighting of the Binding Seasons studied as appropriate to improve the quality and predictive capacity of the final result.

16.2.5.2.3 The aggregate capacity calculated for each VER resource type in each VER Zone will then be allocated to VERs of that type in that VER Zone based on each such resource's average historical performance if at least three years of historical performance or three years of synthesized forecast data during the WRAP Region's CCH is available at the time of such allocation. If three years historical performance or synthesized forecast data is not then available, the average ELCC from the VER Zone will be assigned.

16.2.5.3 For resources that are Energy Storage Resources, WPP will determine QCC based on an ELCC methodology comparable to that used for VERs. The ELCC methodology will model Energy Storage Resources at the level of their usable capacity that can be sustained for a minimum duration of four hours. An Energy

Storage Resource need not have a nameplate rating that assumes a minimum of four hours in order to receive a QCC determination, but the QCC in that case will be scaled to reflect the capability that can be sustained for four hours, as more fully described in the Business Practice Manuals.

16.2.5.4 A Participant's Demand Response used as a Demand Response Capacity Resource must be controllable and dispatchable by the Participant or by the host utility, and must have met certain testing requirements consistent with Business Practice Manuals. WPP will determine Demand Response Load Modifier QCC by multiplying the load reduction in MWs by the number of hours the resource can demonstrate load reduction capability (for a period of up to five continuous hours) divided by five. The effects of Demand Response used as a Demand Response Capacity Resource must not be included in load provided for a Participant's Advance Assessment.

16.2.5.5 For Storage Hydro Qualifying Resources, the Participant will calculate a QCC based on a methodology detailed in the Business Practice Manuals that: (i) considers each resource's actual generation output, residual generating capability, water in storage, reservoir levels, and flow or project constraints over the previous ten-year historical period; (ii) determines the project's QCC by assessing the historical generation during CCHs on any given day and ability to increase generation during CCHs on the same day, subject to useable water in storage, inflows/outflows, and expected project operating parameters/constraints and limitations; (iii) incorporates forced outage rates; and (iv) determines QCC as average contribution to the CCH for each Winter Season and Summer Season over the previous ten years. If ten years of historical data is not available for the Storage Hydro Qualifying Resource, the Participant may alternatively employ data on the same metrics from a demonstrably comparable facility or apply another method that provides reasonable confidence in the reliability of the predicted values, as more fully set forth in the Business Practice Manuals. The Participant's QCC calculation shall be subject to review and validation by WPP. In connection with such review, the Participant shall provide WPP with the following information necessary to calculate a QCC for Storage Hydro Qualifying Resources: (i.a) historical reservoir elevation levels; (ii.a) historical plant generation; (iii.a) elevation versus capacity curves; (iv.a) any minimum or maximum reservoir level constraints; (v.a) forced outage rates; (vi.a) volume of water versus reservoir elevation storage tables; and (vii.a) turbine discharge versus generation efficiency curve.

16.2.5.6 For Run of River Qualifying Resources, WPP will determine QCC based on the monthly average performance of such resource during Capacity Critical Hours, as further specified in the Business Practice Manuals

16.2.5.7 For resources that (i) are not within the meaning of any of Sections 16.2.5.1 through 16.2.5.5, and that (ii) either (a) are not dispatchable; or (b) require the purchaser of energy from the resource to take energy as available from such resource, including but not limited to a qualifying facility as defined under the Public Utility Regulatory Policies Act of 1978, WPP will determine QCC based on the monthly average performance of such resource during Capacity Critical Hours, as further specified in the Business Practice Manuals.

16.2.6 Net Contract QCC: WPP shall determine Net Contract QCC for the agreement types specified below in accordance with the governing principles specified below for each agreement type, and consistent with further details specified for each agreement type in the Business Practice Manuals. Net Contract QCC may be either positive or negative, to take account of, for example, a Participant's agreements for the sale of capacity to any other party.

16.2.6.1 Absent one of the exceptions described and limited below, capacity supply agreements qualifying for a Net Contract QCC in the WRAP must be resource specific, and therefore must include, among other requirements, an identified source, an assurance that the capacity is not used for another entity's resource adequacy requirements, an assurance that the seller will not fail to deliver in order to meet other supply obligations, and affirmation of WRAP Qualifying Transmission from the identified resource to the point of delivery/load. The specific resources identified in a capacity supply agreement qualifying for Net Contract QCC shall meet the same Resource QCC accreditation requirements for the given resource type, as specified in Section 16.2.5.

16.2.6.2 A system sales contract can qualify for a Net Contract QCC value, provided that if the seller is not a Participant, the system capacity that is the subject of the agreement must be deemed surplus to the seller's estimated needs, there must be an assurance that the seller will not fail to deliver in order to meet other commercial obligations, and there must be an assurance that the seller will have WRAP Qualifying Transmission from the identified resource to the point of delivery/load. Surplus status may be demonstrated by a Senior Official Attestation with pertinent supporting details for such surplus status, including

written assent of the non-Participant Seller, secured by the purchasing Participant. Such attestation is not required if the seller is a Participant, because the information needed to verify surplus status is already available.

16.2.6.3 A supply agreement entered into prior to October 1, 2021 ("Legacy Agreement") can qualify for a Net Contract QCC value; provided that where a legacy agreement does not identify the source, it must be possible for WPP to presume a source or sources for the contract, including with the written assent of the supplier under such Legacy Agreement, conveyed in the form and manner set forth in the Business Practice Manuals. A Legacy Agreement for which such resource determination cannot be reasonably made will not be counted as adding to the Portfolio QCC.

16.2.7 Total RA Transfer: A Participant may agree with another Participant on a transfer of a portion of its Portfolio QCC to meet the other's FS Capacity Requirement ("RA Transfer"), provided that the details and duration of such transfer are reported to WPP for validation in accordance with procedures and information requirements specified in the Business Practice Manuals. Where such transfers have been duly reported and validated, an RA Transfer will be added to the purchasing Participant's Portfolio QCC and subtracted from the selling Participant's Portfolio QCC.

16.2.8 Planned Outages: Participants shall include in their Forward Showing Submittal for a Binding Season information on all Qualifying Resources that are currently out of service with a scheduled return date that falls during the Binding Season or after the Binding Season. Capacity associated with such resources must be deducted from Participants' Portfolio QCC as specified in the Business Practice Manuals to ensure no credit is granted for such resources during the planned outage. The aggregate of any additional outages that are planned to occur during the Binding Season but have not yet begun at the time of submission must be within the Participant's remaining surplus (or replaced with other supply). Participants may provide information on all Qualifying Resources that are planned to be out of service but if such data cannot be supplied with reasonable specificity, a Participant may provide a Senior Official Attestation at the time of the submission of its FS Submittal that it expects the sum of planned outages to be equal to or less than the surplus stated in its FS Submittal throughout the Binding Season.

16.2.8.1 If a Qualifying Resource is planned to return to service within the first five days of a Binding Season, WPP may approve a qualified acceptance of the FS Submittal, provided the deficiency is less than 500 MW.

16.2.8.2 A planned outage shall not justify a waiver of or exception to a Participant's holdback or energy delivery obligations under Part III of this Tariff. Participants will be expected to procure the necessary capacity or energy to meet the Operations Program requirements, regardless of planned outage schedules or FS Submittal acceptance.

16.3 FS Transmission Requirement

16.3.1 As part of its Forward Showing Submittal for a Binding Season, each Participant must demonstrate, as specified in the Business Practice Manuals, that it has secured transmission service rights, including under supply arrangements with a third party that holds or has committed transmission service rights, sufficient to deliver a MW quantity equal to at least 75% of the MW quantity of its FS Capacity Requirement. To the extent a Participant holds transmission service rights with a point of receipt at a Qualifying Resource, or in connection with an RA Transfer to such Participant, any such rights from such point in a MW quantity, respectively, in excess of the QCC of such Qualifying Resource, or in excess of the value of such RA Transfer, shall not contribute toward satisfaction of such Participant's FS Transmission Requirement. The FS Transmission Requirement must be met with WRAP Qualifying Transmission, from such Participant's Qualifying Resource(s) or from the delivery points for the resources identified for its Net Contract QCC or for its RA Transfer to such Participant's load. Notwithstanding the foregoing, authorized use of Capacity Benefit Margin, provided it is WRAP Qualifying Transmission, will satisfy the FS Transmission Requirement. Demonstration of the FS Transmission Requirement shall not, in and of itself, relieve any Participant of responsibility for a Delivery Failure Charge as determined under Section 20.7 if such Participant's failure to obtain or maintain WRAP Qualifying Transmission of the type and quantity expected by the Operations Program, as described in Section 20.6 of this Tariff, caused or contributed to an Energy Delivery Failure.

16.3.2 A Participant may include in its Forward Showing Submittal a request for an exception from a limited part of its FS Transmission Requirement, provided the exception request meets the terms, conditions, and limitations of one or more of the following four exception categories below. As more fully set forth in the Business Practice Manuals, such exceptions may be subject to overall WRAP limits, and shall be supported by a Senior Official Attestation. WPP will consider the exception category terms, conditions and limitations set forth below, and may consider the completeness of the exception request, information from transmission service providers, OASIS data, and data readily available to WPP from other reliable and validated sources concerning the duration, timing, firmness and quantity of available transmission service or equivalent options (including transmission construction), in determining whether to grant or deny a transmission

exception request. WPP shall provide such determination no later than sixty days after submission of such Participant's FS Submittal containing such transmission exception request. A Participant denied an exception request hereunder may appeal such denial to the Board of Directors in accordance with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested exception shall be denied or permitted as, when and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall give notice of any exception granted hereunder in the time and manner provided by the Business Practice Manuals. A Participant granted a transmission exception under either Section 16.3.2.1 or Section 16.3.2.2 must complete a monthly transmission exception check report demonstrating that either (i) the circumstances necessitating the exception have not changed; (ii) WRAP Qualifying Transmission has become available and the Participant has acquired it; or (iii) the Participant has acquired a different resource, and associated WRAP Qualifying Transmission, and no longer requires the exception. Failure to timely submit a required monthly report will result in assessment of a Deficiency Charge, unless the deficiency is cured within seven days of notice of non-compliance.

16.3.2.1 Enduring Constraints. Participant is unable to demonstrate sufficient WRAP Qualifying Transmission rights on any single segment of a source to sink path for a Qualifying Resource; and Participant demonstrates that no ATC for such transmission service rights is available (either from the transmission service provider or through a secondary market) at the FS Deadline on the applicable segment for the Month(s) needed (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less; and Participant submits a Senior Official Attestation that Participant has taken commercially reasonable efforts to procure WRAP Qualifying Transmission, and that Participant has posted Firm Transmission Requirements on a relevant bulletin board prior to the FS Deadline. In the event such WRAP Qualifying Transmission is only available for a duration of more than one year (whether from the transmission service provider or through a secondary market) at the FS Deadline on the applicable segment for the Month(s) needed at the applicable Open Access Transmission Tariff rate or less, a Participant is not required to obtain such service in order to qualify for the Enduring Constraints exception hereunder. Notwithstanding the foregoing, if such Participant declines to obtain such available WRAP Qualifying Transmission and is granted the exception hereunder, such Participant shall not qualify for an exception hereunder for the same path (or across the same constraint) for the same season of the subsequent year if the Participant again declines to obtain such WRAP Qualifying Transmission that is available for a duration of more than one year. In addition to the foregoing, Participant must

further demonstrate that there was remaining available transmission transfer capability (i.e., non-firm ATC after the fact) for all CCHs in the same season of the most recent year for which CCHs have been calculated; or, if the path was constrained in at least one CCH of the CCHs in the same season of the most recent year for which CCHs have been calculated, Participant in that case must demonstrate either that it is constructing or contracting for a new local resource for at least the amount of the exception requested, or that it is pursuing long-term WRAP Qualifying Transmission by entering the long-term queue and taking all appropriate steps to obtain at least the amount of the exception requested.

16.3.2.2 Future Firm ATC Expected. Participant demonstrates that ATC of WRAP Qualifying Transmission rights is not posted or available prior to the FS Deadline (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less, and that the transmission service provider has, after the FS Deadline, released additional ATC for such transmission service rights in every one of the CCHs of the most recent year for which CCHs have been calculated on the applicable path. In the event ATC for such WRAP Qualifying Transmission is only posted or available prior to the FS Deadline for a duration of more than one year (whether from the transmission service provider or through a secondary market) on the applicable segment for the Month(s) needed at the applicable Open Access Transmission Tariff rate or less, a Participant is not required to obtain such service in order to qualify for the Future Firm ATC Expected exception hereunder. Notwithstanding the foregoing, if such Participant declines to obtain such available WRAP Qualifying Transmission and is granted the exception hereunder, such Participant shall not qualify for an exception hereunder for the same path (or across the same constraint) for the same season of the subsequent year if the Participant again declines to obtain such WRAP Qualifying Transmission that is available for a duration of more than one year. The Participant must also demonstrate that the exception request meets volume and duration limitations specified in the Business Practice Manuals.

16.3.2.3 Transmission Outages and Derates. Participant demonstrates that an applicable segment of its existing transmission service rights from its source to sink path for its Qualifying Resource is expected to be derated or out-of-service and the ATC of WRAP Qualifying Transmission is not otherwise available, and that the exception request meets volume and duration limitations specified in the Business Practice Manuals.

16.3.2.4 Counterflow of a Qualifying Resource. Participant demonstrates that either: (i) Participant's use of WRAP Qualifying

Transmission in connection with the delivery of capacity from Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to Participant's load (or other qualifying delivery point permitted by the WRAP) or (ii) a second Participant's use of WRAP Qualifying Transmission in connection with the delivery of capacity from the second Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to the second Participant's load (or other qualifying delivery point permitted by the WRAP) provides a direct and proportional counterflow transmission that supports the first Participant's delivery of capacity from the first Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to the first Participant's load (or other qualifying delivery point permitted by the WRAP) Qualifying Resource to their load. If the exception is requested under subpart (ii) of this subsection, the Participant requesting the exception shall include a written acknowledgement from the second Participant that it is aware of such exception request.

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16.3.3 To the extent a Participant does not demonstrate satisfaction of its FS Transmission Requirement by the FS Deadline, the Participant may correct any such deficiency on or before the end of the cure period prescribed by Section 14.5 of this Tariff to avoid a Deficiency Charge.

16.3.4. Any deficiency of transmission service rights ultimately determined by WPP will be treated, for purposes of Deficiency Charge determinations, as in conjunction with, and not additive to, any deficiencies of QCC determined pursuant to Section 16.2.

17. Forward Showing Deficiency Charge

17.1 If a Participant fails during the cure period to demonstrate that it has resolved any identified deficiencies in either or both of its FS Capacity Requirement and its FS Transmission Requirement, the Participant will be assessed a Deficiency Charge for each Month for which a deficiency is identified in accordance with this section. In such case, the deficiency for which the Participant will be assessed a Deficiency Charge will be calculated in accordance with the following:

Participant's Monthly Capacity Deficiency = Maximum of (Monthly FS Capacity Requirement – Monthly Portfolio QCC, 0)

Participant's Monthly Transmission Deficiency (MW) = Maximum of ((75% × Monthly FS Capacity Requirement) – (Monthly Transmission Demonstrated + Approved Monthly Transmission Exemptions), 0)

Where Monthly Transmission Demonstrated is the amount of WRAP Qualifying Transmission submitted by a Participant per the requirements in Section 16.3 and validated by WPP for each month.

Monthly Deficiency (MW) = Maximum of (Monthly Capacity Deficiency, Monthly Transmission Deficiency)

17.2 A Participant's Deficiency Charges shall be calculated as set forth in this Section 17.2, subject to the Transition Period rules in Section 17.3, and shall take account of multiple Monthly Deficiencies within a Forward Showing for a single Binding Season, multiple Deficiencies across a Forward Showing Year, consisting of a Summer Season and the immediately succeeding Winter Season, and any Monthly Deficiencies in a previous Forward Showing Year, in accordance with the following:

17.2.1 The Monthly Deficiency with the highest MW value in a Forward Showing for a Summer Season shall be assessed a Deficiency Charge equal to:

Max Summer Deficiency (MW) × Annual CONE ($/kW-year) × 1000 × Summer Season Annual CONE Factor

17.2.2 Any other Monthly Deficiency in the Participant's Forward Showing for the same Summer Season shall be assessed a Deficiency Charge equal to:

Additional Summer Deficiency (MW) × (Annual CONE ($/kW-year)/12) × 1000 × 200%

17.2.3 Any Monthly Deficiency in the Forward Showing for the immediately succeeding Winter Season with a higher MW value than the highest MW value of the Monthly Deficiency in the Summer Season shall be assessed a Deficiency Charge on the incremental MW value above the Summer Season equal to:

Maximum of (Max Winter Deficiency – Max Summer Deficiency, 0) (MW) × Annual CONE ($/kW-year) × 1000 × Winter Season Annual CONE Factor

and in such case where there is a Monthly Deficiency in the Winter Season with a higher MW value than the highest MW value of any Monthly Deficiency in the Summer Season, the Monthly Deficiency with the highest MW value in the Summer Season shall be assessed an additional Deficiency Charge calculated in accordance with Section 17.2.2.

17.2.4 Any other Monthly Deficiency in the Participant's Forward Showing Submittal for the same Winter Season shall be assessed a Deficiency Charge equal to:

Additional Winter Capacity Deficiency × (Annual CONE/12) × 1000 × 200%

17.2.5 For purposes of the above, CONE is the estimated cost of new entry of a new peaking natural gas-fired generation facility. The CONE estimate shall be based on publicly available information relevant to the estimated annual capital and fixed operating costs of a hypothetical natural gas-fired peaking facility. The CONE estimate shall not consider the anticipated net revenue from the sale of capacity, energy, or ancillary services from the hypothetical facility, nor shall it consider variable operating costs necessary for generating energy.

17.2.6 WPP shall review the CONE estimate annually for a possible update. Any proposed changes in the CONE estimate shall be subject to review through the stakeholder process for program rule changes.

17.2.7 The Summer Season Annual CONE Factor shall vary based on the ratio ("Summer % Deficit") of the Aggregate Capacity Deficiency for the WRAP as a whole for that Summer Season, divided by the P50 Peak Load Forecast for the Summer Season, as follows:

If the Summer % Deficit is less than or equal to 1%, the Summer Season Annual CONE Factor = 125%

If the Summer % Deficit is greater than 1% but less than or equal to 2%, the Summer Season Annual CONE Factor = 150%

If the Summer % Deficit is greater than 2% but less than or equal to 3%, the Summer Season Annual CONE Factor = 175%

If the Summer % Deficit is greater than 3%, the Summer Season Annual CONE Factor = 200%

17.2.8 The Winter Season Annual CONE Factor shall vary based on the ratio ("Winter % Deficit") of the Aggregate Capacity Deficiency for the WRAP as a whole for that Winter Season, divided by the P50 Peak Load Forecast for the Winter Season, as follows:

If the Winter % Deficit is less than or equal to 1%, the Winter Season Annual CONE Factor = 125%

If the Winter % Deficit is greater than 1% but less than or equal to 2%, the Winter Season Annual CONE Factor = 150%

If the Winter % Deficit is greater than 2% but less than or equal to 3%, the Winter Season Annual CONE Factor = 175%

If the Winter % Deficit is greater than 3%, the Winter Season Annual CONE Factor = 200%

17.2.9 Notwithstanding Sections 17.2.7 and 17.2.8, if a *Participant incurred any FS Deficiency Charges* in a Forward Showing Year *after the Transition Period*, then for the immediately following Forward Showing Year, both the Summer Season Annual CONE Factor and the Winter Season Annual CONE Factor shall be 200% *for such Participant*.

17.2.10. Subject to the Transition Period rules in Section *15A.1*, revenues from the payment of Deficiency Charges as to a Binding Season shall be allocated among those Participants with no Deficiency Charges for that Binding Season, pro rata based on each Participant's share of all such Participants' Median Monthly P50 Peak Loads for such Binding Season.

17.3 During the Transition Period, Deficiency Charges otherwise calculated under Section 17.2 shall be reduced as, when, and to the extent, and subject to the conditions, provided in Section 17.3.2; and revenue allocations otherwise calculated under Section 17.2 shall be adjusted as, when, and to the extent, and subject to the conditions, provided in Section 17.3.4.

17.3.1. During the Transition Period, a Participant with a Monthly Capacity Deficiency can pay a *Discounted* Deficiency Charge for so much of such Monthly Capacity Deficiency as was due to an Excused Transition Deficit. To obtain an Excused Transition Deficit for a Binding Season, the Participant must provide a Senior Official Attestation attesting that the Participant *or a relevant third party servicing load for which the Participant is the LRE* has made commercially reasonable efforts to secure Qualifying Resources in the quantity needed to satisfy the Participant's FS Capacity Requirement for the Binding Season, but is unable to obtain Qualifying Resources in the quantity required for the Binding Season because the supply of such resources on a timely basis and on commercially reasonable

terms is at that time inadequate. *If the attestation relates to a third-party servicing load for which the Participant is the LRE, the Senior Official Attestation may be signed by a Senior Official of the third party load service provider, as further detailed in the Business Practices.* Excused Transition Deficits are not resource specific, relate to a MW quantity of the Participant's FS Capacity Requirement, and are limited for each Participant as to a Binding Season during the Transition Period to a maximum permissible MW quantity equal to a percentage value times the FSPRM applicable to such Participant for all Forward Showing Submittals submitted by such Participant for such Binding Season. For purposes of such calculation, the percentage value is*: 200*% for each of the *2027* Summer Season and *2027-2028* Winter Season*; and 100*% for each of the *2028* Summer Season and *2028-2029* Winter Season.

17.3.2 A Participant will pay a *Discounted* Deficiency Charge as to the portion of its Monthly Capacity Deficiency for which it obtained an Excused Transition Deficit. The *FS* Deficiency Charge otherwise applicable to such Participant under Section 17.2 shall be reduced by a percentage value equal to 75% for each of the *2027* Summer Season and *2027-2028* Winter Season*; and* 50% for each of the *2028* Summer Season and *2028-2029* Winter Season. The Participant will be assessed a*n FS* Deficiency Charge calculated under Section 17.2, without reduction or adjustment, for any of its Monthly Capacity Deficiency that is in excess of the amount of such deficiency for which it obtained an Excused Transition Deficit.

17.3.3 Whether or not a Participant obtains an Excused Transition Deficit as to a Binding Season, the Participant may reduce a Monthly Capacity Deficiency otherwise calculated under Section 17.1 for a Binding Season during the Transition Period to the extent such deficiency is due to the Participant's inability to obtain assent from the supplier under a Legacy Agreement to the accreditation required for such Legacy Agreement under Part II of this Tariff and the Business Practice Manuals. To obtain such relief, the Participant must provide a Senior Official Attestation attesting that the Participant made commercially reasonable efforts to execute the required accreditation form with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the accreditation form. The reduction in Monthly Capacity Deficiency permitted by this Section 17.3.3 as to any Participant for all Forward Showing Submittals submitted by such Participant for any Binding Season during the Transition Period shall not exceed a MW quantity equal to 25% times the FSPRM applicable for such Participant for such Binding Season. To the extent a Participant reduces a Monthly Capacity Deficiency under this subsection, the percentage of the Participant's FSPRM corresponding to the reduction hereunder shall reduce the maximum permissible percentage of FSPRM reduction allowed under Section 17.3.1 for Excused Transition Deficits for the same Binding Season.

17.3.4 A Participant that, as a result of application of this Section 17.3, pays no Deficiency Charge as to a Binding Season, shall not be deemed a "Participant[ ] with no Deficiency Charges" for purposes of Section 17.2.10, and shall not receive an allocation of revenues from the payment of Deficiency Charges as to such Binding Season.

17.4 In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations), FS Deficiencies shall be calculated per Section 15A.3.

PART III OPERATIONS PROGRAM

18. Operations Program Overview

18.1 The Operations Program facilitates access to collective capacity made available through regional load and resource diversity of all Participants under the terms of this Part III.

18.2 The Operations Program evaluates forecasted system conditions across the seven-day period ("Multi-Day-Ahead Assessment") preceding the Operating Day, commencing at the outset of the assessment period with an initial Sharing Calculation and initial identification of potential Sharing Events for the Operating Day. The assessment is refined as forecasted conditions for the Operating Day are revised and established on the Preschedule Day, a Holdback Requirement for any Sharing Events is then identified. To the extent a Sharing Event continues to be identified for the Operating Day, Holdback Requirements shall be converted into Energy Deployments on the Operating Day.

18.3 The Operations Program prescribes pricing designed to incent Participants to resolve any forecast Operating Day deficiencies before the Operating Day, including through transactions outside the Operations Program, and to fully compensate Participants that provide support through the Operations Program to Participants with Operating Day deficiencies.

19. Operations Program Timeline and Supporting Information

19.1 The Operations Program includes a Multi-Day Ahead Assessment that looks ahead at the next seven Operating Days by performing an indicative Sharing Calculation from Participant forecast data for each future Operating Day up until the Preschedule Day. The Sharing Calculation for the Preschedule Day is not indicative but is binding, subject to Sections 20.2.4 and 20.3. Participants shall provide WPP with forecasts for the next seven Operating Days of expected (i) load, (ii) output of VERs, (iii) output of RORs, (iv) Contingency Reserves, and (v) forced outages, including outages on transmission facilities the Participant utilized to meet its Forward Showing Capacity Requirement, as further described in the Business Practice Manuals. WPP shall utilize the forecast data obtained in the Multi-Day-Ahead Assessment to calculate or revise the indicative Sharing Calculations for each day thereafter, up until the Preschedule Day, and will use such forecast data to revise the indicative Sharing Calculation hourly during the Operating Day. Such forecast data will also be used to calculate the binding Sharing Calculation for the Preschedule Day.

19.2 The Operations Program, during any Binding Season, shall rely on and employ (among other data) the following information from the Forward Showings for such Binding Season: (i) the P50 Peak Load Forecast for each Participant; (ii) the Monthly FSPRMs for each Participant during such Binding Season; (iii) expected performance by Qualifying Resource type and any RA Transfers; (iv) expected forced outage rates by resource type; (v) expected Contingency Reserves; and (vi) WRAP Qualifying Transmission made available for purposes of regional diversity sharing under the WRAP, permitted under Part II of this Tariff, which shall be assumed to be available for all hours of each Month for which such WRAP Qualifying Transmission rights were made available.

19.3 To facilitate WPP's conduct of the Multi-Day-Ahead Assessment, each Participant shall provide the Program Operator information relevant to the Participant's expected demand and supply conditions on each Operating Day, of the type, in the manner, and with the frequency, specified in the Business Practice Manuals.

19.4 Each Participant in any Subregion identified in the Business Practice Manuals as not containing a central transmission hub permitting energy deliveries to that hub from any point within such Subregion, shall, in addition to providing the information required by Section 19.3, identify, on or before the deadline during the Preschedule Day specified in the Business Practice Manuals, for each Hour of the Operating Day each point to which it can deliver energy, each point at which it can take receipt of energy, the quantity it can deliver or receive at each such point, and a numeric factor intended to prioritize use of transmission made available by Participants with positive Sharing Calculations and needed by Participants with negative Sharing Calculations for each such hour. A Participant with a positive Sharing Calculation for an hour must provide a total quantity for all identified points at which it can deliver that is no less than the amount of its positive Sharing Calculation for such hour (adjusted as necessary for any RA Transfer in accordance

with Section 20.1.2). A Participant with a negative Sharing Calculation for an hour must provide a total quantity for all identified points at which it can take receipt that is no less than the amount of its negative Sharing Calculation for such hour (adjusted as necessary for any RA Transfer in accordance with Section 20.1.2). Participants shall provide this same information for each Operating Day on an expected or preliminary basis on each day of the Multi-Day-Ahead Assessment following, and based on, the expected Holdback Requirement estimates provided on each such day for the Operating Day.

19.5 Any Participant with excess supply that is not obligated to the WRAP through a positive Sharing Calculation result may, at its sole election, offer such supply to the WRAP as Voluntary Holdback. If the offering Participant has a positive Sharing Calculation result, the offered capacity shall be in addition to that Sharing Calculation result; if the offering Participant has a negative Sharing Calculation result, the offered capacity will only be included in the allocation of Holdback Requirement so long as the offering Participant did not confirm a need for Holdback Capacity for such hour. Such offers must be submitted within the time window identified in the Business Practice Manuals, must include the information identified in Sections 19.3 and 19.4, as applicable, and must conform to the format and content identified in the Business Practice Manuals. An offer of Voluntary Holdback may become part of the Participant's Holdback Requirement when it is included in the allocation on the Preschedule Day prescribed by Section 20.2.

20. Components of the Operations Program

20.1 Sharing Calculation

20.1.1 WPP shall implement, as more fully described in the Business Practice Manuals, with respect to each Forward Showing Submittal accepted by WPP for a Participant under Part II of this Tariff, or with respect to each Subregion in which the Participant is responsible for load regardless of whether the Participant submitted a single Forward Showing Submittal encompassing its loads in both Subregions, the following Sharing Calculation to identify any hour in which any Participant is forecast to have a capacity deficit (known as a "Sharing Event"). This calculation takes into account changes in a Participant's resource availability, resource performance, forecast load, and Contingency Reserve relative to the Forward Showing, plus an Uncertainty Factor. The Sharing Calculation is equal to:

[(P50) * (1 + FSPRM) + Contingency Reserve Adjustment] – [Load Forecast – Demand Response Capacity Resources + Contingency Reserve Obligation + Uncertainty Factor] + [ΔForced Outages + ΔRoR Performance + ΔVER Performance]

Where:

P50 refers to the Participant's Monthly P50 Peak Load for that Binding Season's Month;

FSPRM, as described in Section 16.1.2, is an increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages and is expressed as a percentage of the applicable Participant P50 Peak Load Forecast for that Binding Season's month;

Contingency Reserve Adjustment accounts for changes in Contingency Reserve expectations (relative to the 6% Contingency Reserve assumed in the FSPRM) resulting from energy contract purchases and contract sales as set forth in the Business Practice Manuals;

Load Forecast refers to the forecast of expected load for the subject hour for the loads for which the Participant is the Load Responsible Entity and that have not been excluded from WRAP participation;

Demand Response Capacity Resource as described in Section 16.2.5.4.

Contingency Reserve Obligation refers to the amount of Contingency Reserve the Participant is carrying during the operating hour equal to (i) 3% of Load Forecast for which the Participant is the WRAP LRE and maintains

its Contingency Reserve, (ii) plus 3% of WRAP load for which the Participant is not the LRE but has assumed the Contingency Reserve through a contractual arrangement, (iii) plus 3% of generation used to meet any load for which the Participant is the LRE and maintains the Contingency Reserve, (iv) plus 3% of generation utilized to meet WRAP Load for which the Participant is not the LRE but has assumed the Contingency Reserve through a contractual arrangement;

Uncertainty Factor refers to a factor determined by WPP, as more fully set forth in the Business Practice Manuals, to account for the potential variance between forecasts of load, solar resources, wind resources, and run-of-river resources, and the Operating Day conditions of such load and resources;

Δ Forced Outages refers, for the subject hour, to the sum of:

(i) any change in forced outages of any of the thermal resources included in the Participant's Portfolio QCC, relative to the forced outages assumed in the Forward Showing Submittal by application of the Forced Outage Factor; plus

(ii) any change in forced outages of any of the Storage Hydro Qualifying Resources relative to the forced outages assumed in the calculation of the Participant's Resource QCC as more fully described in the Business Practice Manuals; plus

(iii) any reduction in output capability of any of the Energy Storage Resources due to equipment failure or protection

a. In the first four (4) hours the Forced Outages MWs that can be claimed are equal to [(charge MW x duration)/4]

b. For all hours beyond four (4) hours, the Forced Outages MW amount that can be claimed for an Energy Storage Resource shall not be greater than the monthly QCC; plus

(iv) any impacts of transmission conditions on previously acquired WRAP Qualifying Transmission that result in capacity reductions up to the level of the Resource QCC of the associated Qualifying Resource;

ΔRoR Performance refers to any change, for the subject hour, in expected performance of any of the run-of-river resources in the Participant's Portfolio QCC relative to the QCC of those Qualifying Resources; and

ΔVER Performance refers to any change, for the subject hour, in expected performance of the VER Resources in the Participant's Portfolio QCC relative to the QCC of those Qualifying Resources;

20.1.2 In addition to the foregoing, the Sharing Calculation for a Participant that is a purchaser of an RA Transfer shall be performed in two passes, with and without such purchase. If the result of assuming in the first pass that the Participant had not purchased the RA Transfer is that the Participant has a

negative Sharing Calculation, then the Participant that sold the RA Transfer must agree, for the time period addressed by the Sharing Calculation, to an energy delivery to the Participant that purchased the RA Transfer, in an amount equal to the lesser of: (i) the MW quantity needed to result in a net zero Sharing Calculation for the Participant that purchased the RA Transfer; and (ii) the MW amount of the RA Transfer. If the result of recognizing the Participant's purchase of the RA Transfer in the second pass is that the Participant has a positive Sharing Calculation, then the Participant that sold the RA Transfer must assume a share of the purchasing Participant's resulting obligation to the Operations Program in an amount equal to the MW quantity of the RA Transfer, minus the MW quantity of the delivery made by the seller of the RA Transfer to the purchaser of the RA Transfer as a result of the first pass.

20.1.3 The Sharing Calculation of any Participant that was found to have a Monthly Capacity Deficiency under Sections 16.1 and 16.2, for which such Participant paid a Deficiency Charge, including any Deficiency Charge reduced by application of Section 17.3 during the Transition Period, shall be reduced by the MW quantity of such Monthly Deficiency.

20.2 Holdback Requirement

To the extent that: (i) WPP's application of the Sharing Calculation identifies on the Preschedule Day a Sharing Event for any hour(s) of the Operating Day; and (ii) the Participant(s) found to be deficient for such hour(s) by the Sharing Calculation confirms to WPP on the Preschedule Day, in accordance with notification and confirmation procedures set forth in the Business Practice Manuals, such Participant's need for capacity for such hour(s), then WPP shall determine the Participants having a Holdback Requirement for such hour(s) and the quantity of the Holdback Requirement for each such Participant in accordance with this Section 20.2. The Operations Program will prioritize offers of Voluntary Holdback in the allocation and assignment of Holdback Requirements. Holdback Requirements shall be expressed as whole MWs for each hour for which they are estimated or established and shall not be specific to any Qualifying Resource.

20.2.1 Subregion with Central Hub

For any hour, as to any Subregion identified in the Business Practice Manuals as containing a central transmission hub permitting energy deliveries to that hub from any point within such Subregion ("Central Hub"), the aggregate of the holdback needed to meet the requirements of all Participants with negative Sharing calculation results that have confirmed their need for holdback will be allocated and assigned first among offers of Voluntary Holdback, and second, to the extent such needs remain unmet, among Participants with positive Sharing Calculation results.

20.2.1.1 Allocation of Voluntary Holdback: Voluntary Holdback will be allocated in one of three alternative ways, based on comparing the aggregate confirmed need for holdback among Participants with negative Sharing Calculation results against the aggregate of all offers for Voluntary Holdback.

20.2.1.1.1 If the total MW quantity of all Voluntary Holdback offered is equal to the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant that offered Voluntary Holdback is assigned its offered Voluntary Holdback as its Holdback Requirement.

20.2.1.1.2 If the total MW quantity of all Voluntary Holdback offered is more than the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant that offered Voluntary Holdback is assigned as its Holdback Requirement a percentage of the total confirmed need for holdback based on the ratio of the Participant's MWs of offered Voluntary Holdback to the sum of all Participants' MWs of offered Voluntary Holdback.

20.2.1.1.3 If the total MW quantity of all Voluntary Holdback offered is less than the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant's Holdback Requirement is determined as set forth in section 20.2.1.2.

20.2.1.2 Allocation of Remaining Holdback Requirement: Sharing Calculation Results

If the total MW quantity of all Voluntary Holdback offered is less than the total MW quantity of all deficient Participants' confirmed requests for holdback, then the maximum Voluntary Holdback offered is used as the first term in the Holdback Requirement. The remaining term of the Holdback Requirement is met by application of the Sharing Calculation, and the results of the two terms are summed for each Participant. The remaining need for holdback that is not met by Voluntary Holdback is allocated among all Participants with positive Sharing Calculation results pro rata based on the ratio for each Participant of the Participant's positive Sharing Calculation result to the sum of the positive Sharing Calculation results. The

sum of these two values for each applicable Participant is the Holdback Requirement for that Participant.

20.2.2 Subregion without Central Hub

For any hour, any Subregion not containing a Central Hub, the Program Operator shall conduct an optimization-based allocation to pair surplus and deficient Participants. The allocation methodology will utilize the points at which surplus Participants can deliver their Holdback Requirement, the points at which deficient Participants can take receipt of their allocation of the total Holdback Capacity, and the transfer capability that exists to the points at which surplus Participants can deliver and the points at which deficient Participants can take receipt.

The optimization will generally attempt to prioritize (i) Voluntary Holdback; (ii) Holdback Capacity matched pursuant to the information provided per Section 19.4 on a nearest neighbor and cluster basis, allocated pro rata among Participants within such cluster; (iii) Holdback Capacity matched pursuant to the information provided and allocated among Participants within the same Subregion to the extent not matched and allocated under category (ii); and finally (iv) Holdback Capacity from Participants in another Subregion, paired with any transmission service per Section 14.3.2.

20.2.3 Absent a Holdback Requirement Transfer as described below, a Participant's Holdback Requirement for any hour of an Operating Day shall not exceed the level first set by WPP on the Preschedule Day for that Participant for that hour.

20.2.4 Any Participant may agree with any other Participant for the first Participant to transfer to the second Participant some or all of the Holdback Requirement established for the first Participant for any hour on any Operating Day. Any such Holdback Requirement Transfer shall be a bilateral arrangement settled outside the Operations Program, provided, however, that both Participants must timely notify WPP, by the time and in the manner described in the Business Practice Manuals, of such Holdback Requirement Transfer. Any necessary transmission arrangements and any transaction settlements shall be the sole responsibility of the Participants that are the parties to such bilateral arrangement.

20.2.4.1 No Holdback Requirement transfer for any hour shall be permitted if notice of such bilateral transaction is not fully reported to WPP, in the form required by the Business Practice Manuals, by 120 minutes before the start of such hour.

20.3 Release of Surplus Capacity

20.3.1 As detailed in the Business Practice Manuals, WPP will review the indicative Sharing Calculation results from the Multi-Day Ahead Assessment and to the extent the WPP determines any indicative Sharing Calculations can be reduced, it may release all or a portion of Participants' future Holdback Requirements. WPP may permit a release of future Holdback Requirements to the extent WPP has not applied a Safety Margin for such hour and (i) WPP's continued Sharing Calculations determine that no Participant has a negative indicative Sharing Calculation result for such hour; and (ii) WPP determines there is a low probability of a Sharing Event for the hour; or (iii) WPP grants a Participant's request for extenuating circumstances of all or any portion of that Participant's future Holdback Requirement for the hour.

20.3.2 Upon release of all or any portion of a future Holdback Requirement, the quantity of future Holdback Requirement so released shall no longer be subject to an Energy Deployment requirement under the Operations Program for the subject hour.

20.4 Energy Deployment

20.4.1 Participants shall provide energy during an hour, in support of any Participants with a negative Sharing Calculation result and a confirmed need for energy under the Operations Program for such hour, in accordance with WPP's calculation of the Energy Deployment for such hour. The total Energy Deployment required of all Participants that are subject to Energy Deployment shall equal the sum, in MWh for that hour, of the energy confirmed as being needed in that hour by Participants in such Subregion with negative Sharing Calculation results in such hour, to the extent that can be supported by the Program. The Energy Deployment assigned to each Participant shall not exceed that Participant's Holdback Requirement calculated on the Preschedule Day, adjusted for any applicable transfer of Holdback Requirement as allocated and assigned for the Preschedule Day, and, as further adjusted to reflect the election, made after the Preschedule Day, of any Participant with a negative Sharing Calculation result on the Preschedule Day to decline all or any part of the Holdback Capacity to which it would have been entitled based on the Holdback Requirements determined on the Preschedule Day.

20.4.1.1 In Subregions with a Central Hub, Energy Deployments required hereunder shall be delivered to the Central Hub in such Subregion, or to an alternate delivery point mutually agreed by the parties to a specific Energy Deployment, provided both parties to the transaction report such alternative delivery arrangements to WPP in the form and manner described in the Business Practice Manuals.

20.4.1.2 In Subregions without a Central Hub, Energy Deployments required hereunder shall be delivered to the receipt point and delivery point as indicated by the optimization allocation, or to an alternate delivery point mutually agreed by the parties to a specific Energy Deployment, provided both parties to the transaction report such alternative delivery arrangements to WPP in the form and manner described in the Business Practice Manuals.

20.4.2 The Energy Deployment a Participant may receive for any hour shall be no greater than the negative Sharing Calculation result calculated for such Participant for such hour. Such Participant shall confirm, by no later than 85 minutes before the start of such hour, the quantity of Energy Deployment for which it requires delivery for such hour, through the procedures outlined in the Business Practice Manuals. Any Participant that does not confirm required Energy Deployment deliveries for such hour by such deadline will be deemed to waive all deliveries of Energy Deployment under the Operations Program for such hour.

20.4.3 The Energy Deployment a Participant can be required to supply for an hour shall not exceed the final Holdback Requirement calculated for such Participant on Preschedule Day, including any duly reported exchange of Holdback Requirement, as of 85 minutes before the start of such hour.

20.4.4 WPP shall advise each Participant with a required Energy Deployment for an hour of the required MWh quantity and delivery point of such Energy Deployment by no later than 80 minutes before the start of such hour.

20.5 Safety Margin

20.5.1 WPP may establish on the Preschedule Day a Safety Margin for the WRAP Region or any identified Subregion thereof for any hour of an Operating Day when warranted by such circumstances as potential large resource trips, heavy transmission outage conditions, significant environmental conditions, or other similar regional or subregional conditions, as more fully set forth in the Business Practice Manuals.

20.5.2 Any Safety Margin so determined for an hour shall be allocated pro rata among Participants with a positive Sharing Calculation result, based on their relative shares of the sum of all positive Sharing Calculation results for such hour, provided, however, that the Safety Margin allocated to a Participant may not result in a Holdback Requirement for such Participant greater than such Participant's Sharing Calculation result. A Participant allocated holdback for a Safety Margin hereunder does not receive compensation under this Tariff for such allocation of holdback.

20.5.3 WPP shall notify all Participants of application of a Safety Margin for any hour, including in such notice the total timeframe, the MW amount, and the rationale for such Safety Margin.

20.6 Operations Program Transmission Service Requirements

Participant shall have in place, prior to the Operating Day, WRAP Qualifying Transmission for each hour of such Operating Day for which a Sharing Event has been established, in a quantity sufficient for deliveries from the Qualifying Resources relied upon in such Participant's Forward Showing Submittal to demonstrate satisfaction of such Participant's FS Capacity Requirement (or from replacement Qualifying Resources) to serve such Participant's loads during such hours. In the event a Participant has an Energy Delivery Failure, the review associated with the possible assessment of a Delivery Failure Charge on such Participant shall, as further described in the Business Practice Manuals, include whether a failure to secure sufficient WRAP Qualifying Transmission caused or contributed to such Energy Delivery Failure. For such purpose, the Participant will have been expected to have complied with the transmission service requirement stated in this subsection.

20.7 Failure to Deliver Energy Deployments

20.7.1 A Participant assigned a required Energy Deployment pursuant to Section 20.4.4 of this Tariff for any hour that fails to deliver the specified energy during such hour, and that does not obtain a waiver of its Energy Deployment obligation, shall be assessed a Delivery Failure Charge.

20.7.2 A Participant shall be deemed to have an Energy Delivery Failure if Participant fails to deliver the Energy Deployment quantity established under Section 20.4.1, absent grant of a waiver pursuant to Section 20.7.3 of this Tariff.

20.7.3 A Participant anticipating an Energy Delivery Failure should provide WPP notice of such expected Energy Delivery Failure as soon as practicable after becoming aware of the anticipated failure. Whether anticipated or not, a Participant may request a waiver of an Energy Deployment obligation after an Energy Delivery Failure has occurred. The WPP shall review all such waiver requests and shall determine whether the Participant's justification for the Energy Delivery Failure is valid and warrants waiver of its Energy Deployment obligation. The WPP also shall consider whether the Participant knew in advance, or reasonably should have known in advance, of an Energy Delivery Failure, and what efforts the Participant took to notify the WPP in advance of such Energy Delivery Failure. The procedures for addressing such waiver requests, including a non-exclusive list of valid justifications for an Energy Delivery Failure shall be set forth in the Business Practice Manuals. A Participant denied a waiver request hereunder may appeal such denial to the Board of Directors in accordance

with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested waiver shall be denied or permitted as, when and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall report on the disposition of each waiver request received.

20.7.4 The Delivery Failure Charge for each hour shall be the Charge Rate applicable for such hour times the MWhs of energy that were required to be, but were not, delivered pursuant to an Energy Deployment during such hour. The Charge Rate shall be the higher of the Day-Ahead price or Real-Time price provided by the Day-Ahead Applicable Price Index and Real-Time Applicable Price Index as specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery, respectively, for the hour, times a Delivery Failure Factor, as follows:

20.7.4.1 If the deficit is fully covered by other Participants through the Operations Program, in each instance of failure, the Delivery Failure Factor shall be five for the first non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; ten for the second non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; and twenty for the third and subsequent non-waived Energy Delivery Failures in a Cumulative Delivery Failure Period. For purposes of applying the Delivery Failure Factors under this Section 20.7.4 or the review referenced in Section 20.7.5, multiple Energy Delivery Failures occurring in one day shall be treated as a single instance of failure.

20.7.4.2 If the deficit is not fully covered by other Participants through the Operations Program, the Delivery Failure Factor is twenty-five for the first non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; and fifty for the second and subsequent non-waived Energy Delivery Failures (regardless of whether the prior instance(s) of delivery failure were fully covered by other Participants) in a Cumulative Delivery Failure Period.

20.7.4.3 Revenues from Delivery Failure Charges assessed in cases where the deficit was fully satisfied by other Participants will be used to reduce WPP costs that are recovered under Schedule 1, WRAP Administration Charge. Revenues from Delivery Failure Charges assessed in cases where the deficit was not fully met by other Participants will be collected by the WPP and provided to the Participant that had an unserved deficit.

20.7.4.4 Notwithstanding anything to the contrary in this Section 20.7.4, the Delivery Failure Charges assessed on a Participant, regardless of application of the Delivery Failure Factor, shall not

exceed, over the course of a Summer Season and the immediately succeeding Winter Season, the dollar amount that, as more fully detailed in the Business Practice Manuals, would have been assessed cumulatively under Section 17 as Deficiency Charges if the Participant had one or more Forward Showing Capacity Deficiencies over the course of such Summer Season and Winter Season in the same MW amounts as the highest MW amount of Delivery Failure experienced by such Participant in each Month of such Summer Season and Winter Season. The maximum dollar amount described herein shall be calculated on an ongoing basis during such Summer Season and Winter Season, and increased or reduced accordingly, without awaiting the end of the combined period of such Summer Season and Winter Season.

20.7.5 In addition to assessment of the Delivery Failure Charge, a third or subsequent instance of non-waived delivery failure, when all such delivery failures are fully covered by other Participants, or a second or subsequent instance of non-waived delivery failure when such instance is not fully covered by other Participants, will subject the Participant to review for expulsion from the WRAP.

20.8 Voluntary Response to Increased Deficiencies Identified After Preschedule Day

20.8.1 A Participant that identifies an unmet need for energy for any hour of an Operating Day that is outside of assistance provided or to be provided by Holdback Requirements or Energy Deployments established hereunder may, in accordance with procedures specified in the Business Practice Manuals, notify WPP of the need for such assistance. WPP will establish a portal or other procedure, as specified in the Business Practice Manuals, to facilitate provision of assistance, on a voluntary, bilateral basis, by other Participants to the Participant that identified the unmet need. Compensation, terms, and conditions of any resulting bilateral transactions will be determined by the affected parties outside of this Tariff. While Participant response to any such notification is voluntary, Participants are encouraged to provide assistance to other Participants in the circumstances described in this subsection, in consideration of the mutual support each Participant has agreed to provide to each other Participant by its agreement to participate in the WRAP, including this Operations Program.

21. Operations Program Settlements

21.1 Nature of Operation Program Settlements

21.1.1 Operations Program settlements are bilateral transactions; they are not purchases from or sales to a central market.

21.1.2 Operations Program transactions use existing transaction systems and processes.

21.1.3 The WPP will calculate and post settlement quantities and prices based on the Energy Deployment and Holdback Requirement, in accordance with procedures specified in the Business Practice Manuals for provision of transaction information by and among Participants and WPP, but WPP has no role in the transaction itself. WPP is not a settlement entity.

21.1.4 Settlement Prices calculated under Section 21.2 shall recognize pricing differences among Subregions. Where the seller and buyer are located in the same Subregion, the Applicable Price Index shall be the price index specified for that Subregion in the Business Practice Manuals. Where the seller and buyer are located in different Subregions, the following components of the settlement price calculation in Section 21.2 will be calculated using the Applicable Price Index for the Subregion that provides the higher index price: (i) Possible Block Sale Revenue; (ii) Total Settlement Price; (iii) Energy Declined Settlement Price; and (iv) Realtime Value of Unheld Energy. If a third participant is involved by providing transmission service rights between Subregions, the Participant that provided holdback or Energy Deployment shall receive the settlement price of the Subregion from which the holdback or Energy Deployment was sourced, and the Participant that provided Subregion to Subregion transmission service rights pursuant to Section 19.4 shall receive the difference between each Subregion's Total Settlement Price, or zero, whichever is greater.

21.2 Settlement Price Calculation. Settlement prices shall be calculated in accordance with the following, as more fully set forth in the Business Practice Manuals.

21.2.1 A Participant assigned a Holdback Requirement on a Preschedule Day for any hour of an Operating Day shall be paid the Holdback Settlement Price times the MW quantity of the Holdback Requirement. A Participant that provides energy to another Participant pursuant to an Energy Deployment shall be paid the Energy Declined Settlement Price, defined in Section 21.2.4, times the MWhs of energy provided to such other Participant, and its total payments shall be reduced by the Energy Declined Settlement Price times the MWhs of energy that would have been provided under a Holdback Requirement but were declined by the other Participant. A Participant

assigned a Holdback Requirement also shall be paid, when applicable, a Make Whole Adjustment, as provided below in Section 21.2.5.

21.2.2 A Participant that had a negative Sharing Calculation result for any hour of an Operating Day, which was incorporated in the calculation of Holdback Requirements of any Participants for such hour, determined as of the Preschedule Day, shall pay the Holdback Settlement Price times the MW quantity of such negative Sharing Calculation result. In addition, any Participant that had a negative Sharing Calculation result that was incorporated in the calculation of a Holdback Requirement shall contribute to the payment of the Make Whole Adjustment based on its negative Sharing Calculation. A Participant that declines energy that would have been provided under a Holdback Requirement shall be credited the Energy Declined Settlement Price times the MWhs of energy declined by such Participant.

21.2.3 The Holdback Settlement Price shall equal the Total Settlement Price minus the Energy Declined Settlement Price.

21.2.4 The Energy Declined Settlement Price shall equal the Applicable Real-Time Index Price for the hour.

21.2.5 The Make Whole Adjustment is applied in the event that the settlement revenue and the estimated value of the non-dispatched energy is less than the estimated revenues the selling entity would have received had such entity not been subject to a Holdback Requirement and had sold a day-ahead block of energy with a MW value equal to the maximum amount of Holdback Requirement for the hours in the block. The Make Whole Adjustment has a minimum value of zero and is determined as follows:

Make Whole Adjustment (when applicable) =
Maximum of (Possible Block Sale Revenue
– Final Settlement Revenue
– Realtime Value of Declined Energy
– Realtime Value of Unheld Energy, 0)

Where:

Realtime Value of Declined Energy = Energy Declined × Energy Declined Settlement price

provided that Declined Energy is only applicable to those hours where there was a positive Holdback Requirement.

Realtime Value of Unheld Energy = (Maximum Holdback MW in Block – Holdback MW Requested) × Applicable Index Price

21.2.6 The Total Settlement Price used in the above calculations shall be determined in accordance with the following formula:

Total Settlement Price = Maximum of (Minimum of (Hourly Shaping Factor × Day Ahead Applicable Index Price × 110%, 2000 $/MWh), 0)

where:

Hourly Shaping Factor is based on the most recent High-Priced Day for the relevant season, defined as a day in which at least one hour has a system marginal energy cost ("SMEC") greater than $200/MWh, and shall be calculated as follows:

1 + {[CAISO Hourly Day Ahead SMEC - CAISO Average Day Ahead SMEC (on- or off-peak hours)] / [CAISO Average Day Ahead SMEC (on- or off-peak hours)]}

Day-Ahead Applicable Index Price is the day-ahead heavy load/light load ICE Index price that is specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery. If transmission via Section 14.3.2 was used to facilitate holdback, the Applicable Index Price shall be the higher of the two subregional day-ahead index prices for that portion of the holdback.

Real-Time Applicable Index Price is the real-time index price that is specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery.

SCHEDULE 1

WESTERN RESOURCE ADEQUACY PROGRAM ADMINISTATIVE COST RECOVERY CHARGE

The Western Power Pool's Costs of administering and operating the Western Resource Adequacy Program including, without limitation, all costs incurred or obligated by WPP as Program Administrator, all costs paid or payable by WPP to the Program Operator or other service providers, all costs of the Board of Directors in directing, supervising, or overseeing the WRAP, and the costs of maintaining a reasonable reserve as provided in Section 1 of this Schedule 1, shall be recovered from Participants pursuant to the charges set forth in this Schedule 1.

Section 1. WRAP Costs

1. As used herein, Costs shall mean WPP's costs, expenses, disbursements and other amounts incurred (whether paid or accrued) or obligated of administering and operating the WRAP as described above, including, without limitation, operating expenses, general and administrative expenses, costs of outside services, taxes, fees, capital costs, depreciation expense, interest expense, working capital expense, any costs of funds or other financing costs, and the costs of a reasonable reserve as provided herein.

2. The Costs included in a WRAP Administration Charge assessed for a Month shall be the Costs determined as being incurred for that Month, including, without limitation, for each Month, one-twelfth of any annual charge(s).

3. The Costs included in the WRAP Administration Charge for a reasonable reserve shall be those designed to establish over the first twelve months that this WRAP Administration charge is in effect an amount equal to 6% of the expected Costs, exclusive of such reserve, for one year; and to maintain such reserve thereafter at an amount equal to 6% of the expected Costs, exclusive of such reserve for the then-current year. WPP shall record on its income statement deferred regulatory expense, and WPP's balance sheet will reflect as a cumulative deferred regulatory liability, revenues collected under this Schedule 1 that are in excess of the Costs exclusive of such reserve and taking account of and including any accrued tax expense effects of this regulatory liability. The deferred regulatory liability will be reduced when after-tax WPP revenues collected under this Schedule 1 during any Month are less than the Costs exclusive of such reserve. Within thirty days after the end of each Year, to the extent WPP determines that the deferred regulatory liability exceeds 6% of WPP's revenues that were collected under this Schedule 1 during such Year, such excess amounts in the deferred regulatory liability shall be refunded evenly over the applicable billing determinant volumes in the remainder of the subsequent Year through credits to charges to then-current customers under this Schedule 1.

Section 2. WRAP Administration Charge

Each Participant shall be assessed each Month a WRAP Administration Charge equal to the sum of the Base Charge and the Load Charge,

where:

The Base Charge for each Participant equals the Base Costs divided by the number of Participants being assessed the Base Charge for the Month for which the WRAP Administration Charge is being calculated;

The Load Charge for each Participant equals the Load Charge Rate of the Load Services Costs divided by the sum of the Median Monthly P50 Peak Loads of the Participants being assessed the Load Charge for the Month for which the WRAP Administration Charge is being calculated, times that Participant's Median Monthly P50 Peak Load;

And where:

Base Costs means the Costs for the Month of the Base Services Cost Centers shown in the WRAP Cost Assignment Matrix, plus the Base Services Percentage times the Costs for that Month of the Dual Benefit Cost Centers shown below in Section 4: WRAP Cost Assignment Matrix;

Load Services Costs means the Costs for the Month of the Load Services Cost Centers shown in the WRAP Cost Assignment Matrix, plus the Load Services Percentage times the Costs for that Month of the Dual Benefit Cost Centers shown in the WRAP Cost Assignment Matrix; and

Median Monthly P50 Peak Loads means, for each Participant, the median of the Monthly P50 Peak Loads used in the FS Capacity Requirement of such Participant for two Binding Seasons corresponding to the two FS Submittal most recently validated by WPP.

If before or during a Binding Season, a Participant has need to update their Monthly P50 Peak Load for allowable reasons, those updated Monthly P50 Peak Loads will be replaced and the Median Monthly P50 Peak Load value recalculated upon validation of the change in participating load.

A Participant joining the Program will supply data such that WPP can validate Monthly P50 Peak Loads for the first two Binding Seasons for which the Participant will submit an FS Submittal for use in calculating Load Services Costs until these FS Submittals are submitted and reviewed in the normal timeframe.

Section 3. Maximum Charge Rates

3.1 Notwithstanding anything to the contrary in this Schedule 1, the sum of the Base Charges for all Months in a Year shall not exceed the Annual Maximum Base Charge of $59,000/Year, and the sum of the Load Charge Rates for all Months in a Year shall not exceed the Annual Maximum Load Charge Rate of $199/MW. WPP shall, to the extent reasonably practicable, provide two-months' notice prior to WPP's filing at FERC of an application to change the Maximum Base Charge or the Maximum Load Charge Rate, provided that nothing herein shall limit the Board of Director's authority and discretion to seek at FERC a change in the maximum rates in the time and manner the Board determines in the best interests of the Western Resource Adequacy Program. For purposes of clarity, these specified maximum rates on the Base Charge and the Load Charge do not limit the level of the Cash Working Capital Support Charge established under Section 5 of this Schedule 1, nor do they limit the amount of the default Allocation assessment provided under Part I of this Tariff.

3.2 To facilitate Participant planning, the WPP shall prepare, and provide to the RAPC, good faith, non-binding estimates of: (i) reasonably anticipated WRAP budgets for three Years beyond the most recently approved WRAP budget, including sensitivity analyses for reasonably identified major contingencies; (ii) reasonably anticipated numbers of Participants and MWs of Winter and Summer P50 Loads for each such Year; and (iii) reasonably anticipated highest monthly Base Charges and Load Charge Rates for each such Year. All assumptions and estimates in such forecasts and analyses shall be in WPP's sole discretion, which may be informed by RAPC discussion of such topics.

Section 4. WRAP Cost Assignment Matrix

	BASE COSTS	LOAD COSTS	DUAL BENEFIT
Program Administration (non-participant)		100%	
Program Administration (Participant engagement, RAPC facilitation)	100%		
WRAP portion of WPP BOD costs			50%/50%
Program Operations Staffing and Overhead		100%	
Program Operations Technology		100%	
Legal Services		100%	
Independent Evaluator		100%	

Section 5. Cash Working Capital Support Charge

5.1 In addition to the WRAP Administration Charge, each Participant shall be assessed a Cash Working Capital Support Charge, to support WPP's maintenance of sufficient funds on hand to make payments required for the operation and administration of the WRAP on a timely basis. Cash Working Capital Support Charges shall be designed to maintain a Cash Working Capital Fund that, at its maximum level over a twelve-month cycle, equals approximately nine-twelfths of the expected annual payment due from the WPP to the Program Operator for its Program Operator services.

5.2 A Participant shall pay a Cash Working Capital Support Charge no later than thirty days after that Participant executes a WRAPA. The Cash Working Capital Support Charge due following WRAPA execution equals the Cash Working Capital Support Charge Rate, calculated as the Cash Working Capital Fund at its required maximum twelve-month cycle level divided by the sum of the Median Monthly P50 Peak Loads of all Participants, times that Participant's Median Monthly P50 Peak Load.

5.3 To the extent the Cash Working Capital Fund is adequately funded at the time a new Participant executes a WRAPA, the revenue from such Participant's payment of the Cash Working Capital Support Charge shall be distributed to all Participants that previously have paid a Cash Working Capital Support Charge, pro rata based on the Median Monthly P50 Peak Loads of all Participants that have previously paid such charge.

5.4 To the extent, and at such time, WPP determines that an incremental addition to the Cash Working Capital Fund is needed due to such causes as, for example, an expected increase in the annual payment to the Program Operator, each Participant shall be assessed an Incremental Cash Working Capital Support Charge equal to the desired incremental addition, divided by the sum of the Median Monthly P50 Peak Loads of all Participants being assessed the Incremental Cash Working Capital Support Charge for the Month for which the Incremental Cash Working Capital Support Charge is being calculated, times that Participant's Median Monthly P50 Peak Load.

ATTACHMENT A

Western Resource Adequacy Program Agreement

This Western Resource Adequacy Program Agreement ("Agreement") dated as of _____ ("Effective Date") is entered into by and between Western Power Pool Corporation ("WPP") and _____ ("Participant"). WPP and Participant are each sometimes referred to in the Agreement as a "Party" and collectively as the "Parties."

In consideration of the mutual promises contained herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, the Parties agree as follows:

1. The Parties agree that this agreement shall be governed by the rates, terms, and conditions of the Western Resource Adequacy Program Tariff ("Tariff") and all such rates, terms, and conditions contained therein are expressly incorporated by reference herein. All capitalized terms that are not otherwise defined herein shall have the meanings ascribed by the Tariff.

2. Participant wishes to participate in the Western Resource Adequacy Program ("WRAP") administered by WPP under the Tariff.

3. Participant certifies that it satisfies all of the following qualifications:

    3.1 Participant is a Load Responsible Entity as that term is defined in the Tariff.

    3.2 Participant commits to complying with all applicable terms and conditions of WRAP participation as set forth in the Tariff and Business Practice Manuals adopted thereunder, including all Forward Showing Program and Operations Program requirements.

4. Participant will register all resources and supply contracts and shall disclose any other obligations associated with those resources and supply contracts.

5. Participant represents and warrants that it is authorized by all relevant laws and regulations governing its business to enter into this Agreement and assume all rights and obligations thereunder.

6. It is understood that, in accordance with the Tariff, WPP, as authorized by its independent Board of Directors, may amend the terms and conditions of this Agreement or the Tariff by notifying the Participant in writing and making the appropriate filing with FERC, subject to any limitations on WPP's authority to amend the Tariff as set forth therein.

7. Participant agrees to pay its share of all costs associated with the WRAP, as calculated pursuant to Schedule 1 of the Tariff. The manner and timing of such payment shall be as specified in Schedule 1 of the Tariff.

8. WPP agrees to provide all services as set forth in the Tariff.

9. Term and termination. This Agreement shall commence upon the Effective Date and shall continue in effect until terminated either by WPP by vote of its Board of Directors or by Participant's withdrawal as set forth herein. WPP and Participant agree that participation in the WRAP is voluntary, subject to the terms and conditions of this Agreement and the Tariff. The date upon which a Participant's withdrawal is effective and its participation in the program terminates is referred to as the "Withdrawal Date."

9.1 Normal Withdrawal: In general, Participant may withdraw from this Agreement by providing written notice to WPP no less than twenty-four months prior to commencement of the next binding Forward Showing Program period. Once notice has been properly given, Participant remains in a "Withdrawal Period" until the Withdrawal Date.

9.1.1 During Participant's Withdrawal Period, Participant remains subject to all requirements and obligations imposed by the Tariff and this Agreement, including but not limited to all obligations imposed in the Forward Showing Program and Operations Program and obligation to pay Participant's share of all costs associated with the WRAP.

9.1.2 All financial obligations incurred prior to and during the Withdrawal Period are preserved until satisfied.

9.1.3 During the Withdrawal Period, Participant is not eligible to vote on any actions affecting the WRAP that extend beyond the Withdrawal Period.

9.2 Expedited Withdrawal: Participant may withdraw from this agreement with less than the required twenty-four month notice as set forth below. Participant shall negotiate with WPP regarding the timing of the Expedited Withdrawal.

9.2.1 Extenuating Circumstances: The following such events and circumstances shall constitute "extenuating circumstances" justifying a withdrawal on less than twenty-four months. Participant invoking an extenuating circumstance shall negotiate with WPP regarding potential ways to minimize the impact of the expedited withdrawal on all other Participants and WPP. Such extenuating circumstances and any mitigation plan to minimize the impact of the expedited withdrawal must be reviewed and approved by the Board of Directors prior to termination of Participant's WRAP obligations. Regardless of the extenuating circumstance, all financial obligations incurred prior to the Withdrawal Date remain in effect until satisfied.

9.2.1.1 A governmental authority takes an action that substantially impairs Participant's ability to continue to

participate in the WRAP to the same extent as previously; provided, however, that Participant shall be obligated to negotiate with WPP regarding potential ways to address the impact of the regulatory action without requiring a full withdrawal of Participant from the WRAP if possible.

9.2.1.2 Continued participation in the WRAP conflicts with applicable governing statutes or other applicable legal authorities or orders.

9.2.1.3 Participant voted against a RAPC determination and disagreed with a Board of Directors decision to release composite or aggregated data under Section 10.2.1 of the Tariff, provided that such right to expedited withdrawal is exercised promptly after the first time that the Board of Directors determines that the form and format of composite or aggregated data sufficiently protects against the release of confidential or commercially sensitive Participant data. Failure to exercise this right promptly upon the first occurrence of the Board of Directors voting on a specific form and format of composite or aggregated data shall constitute a waiver of the right to expedited withdrawal for any future disclosures of composite or aggregated data in the same or substantially similar form and format.

9.2.1.4 FERC or a court of competent jurisdiction requires the public disclosure of a Participant's confidential or commercially sensitive information, as further described in Section 10.5 of the Tariff; provided however that such right to expedited withdrawal shall be exercised promptly upon the exhaustion of all legal or administrative remedies aimed at preventing the release.

9.2.2 Exit Fee: If the impact of Participant's withdrawal on WRAP operations can calculated with a high degree of confidence and mitigated by the payment of an "exit fee" to be calculated by WPP, an expedited withdrawal will be permitted. Such exit fee shall include (but not be limited to): (i) any unpaid WRAP fees or charges; (ii) Participant's share of all WRAP administrative costs incurred up to the next Forward Showing Program period; (iii) any costs, expenses, or liabilities incurred by WPP and/or the Program Operator directly resulting from Participant's withdrawal; and (iv) any costs necessary to hold other participants harmless from the voluntary expedited withdrawal. The exit fee may be waived to the extent that it would violate any federal, state, or local statute, regulation, or ordnance or exceed the statutory authority of a federal

agency. The exit fee shall be paid in full prior to the Withdrawal Date.

9.2.3 Amendments to Section 3.4 of the Tariff: In the event that amendments to Section 3.4 of the Tariff are approved by the RAPC and Board of Directors, a Participant that voted against such a change may withdraw with less than the required twenty-four month notice, provided that the Participant satisfy all obligations in the Forward Showing Program and Operations Program and satisfy all other financial obligations incurred prior to the date that the amendments to Section 3.4 of the Tariff are made effective by FERC.

9.2.4 Expulsion: The Board of Directors, in its sole discretion, may terminate Participant's participation in the WRAP and may terminate this Agreement with Participant for cause, including but not limited to material violation of any WPP rules or governing documents or nonpayment of obligations. Prior to exercising such right to terminate, the Board of Directors shall provide notice to Participant of the reasons for such contemplated termination and a reasonable opportunity to cure any deficiencies. Such Board of Directors termination shall be after an affirmative vote consistent with the Board of Directors standard voting procedures. Such termination shall not relieve the Participant of any financial obligations incurred prior to the termination date, and WPP may take all legal actions available to recover any financial obligations from Participant.

10. No Waiver of Non-FERC-Jurisdictional Status. If Participant is not subject to the jurisdiction of FERC as a public utility under the Federal Power Act, Participant shall not be required to take any action or participate in any filing or appeal that would confer FERC jurisdiction over Participant that does not otherwise exist. Participant acknowledges that FERC has jurisdiction over the WRAP, including Participant's activities in the WRAP.

[SIGNATURE BLOCKS]

Western Resource Adequacy Program

Expedited Proposal

Requester	
Name: Tyler Moore, Arizona Public Service	Organization: ■ Participant _____ ☐ Program Operator ☐ Program Administrator
Title: N/A	Phone Number:
Email:	Date of Request to Resource Adequacy Participant Committee (RAPC): 7/16/2026

Exigent Circumstance

Check one:

- ☐ A FERC-mandated amendment to the Tariff or the Business Practice Manuals
- ☐ An amendment to the Tariff or the Business Practice Manuals to address an immediate reliability impact
- ■ An amendment to this Tariff or the Business Practice Manuals that the RAPC has determined has significant impacts to utility service

Date Exigent Circumstance determined by RAPC:

Type of Change Requested

Check one:

- ☐ Correction *(i.e., revising erroneous language or language that needs clean-up for grammatical errors or inconsistency across governing documents - no changes to intent or policy)*
- ☐ Clarification *(i.e., revising language to better represent existing intent, no changes to functionality or policy)*
- ■ Enhancement *(i.e., revising language to expand upon existing intent or functionality)*
- ☐ New Protocol, Business Practice, Criteria, Tariff *(i.e., new language to accommodate new functionality or policy not existing today)*
- ☐ Change *(i.e., a change in the existing policy – will replace an existing language)*
- ☐ Other *(i.e., changes that do not fall into the categories listed above)*

Description of Change

Provide a description of the issue:

BPM 401 presently supports a single annual onboarding process whereby new Participants execute a WRAPA effective September 15 and follow a sequence of registration, data submission, Forward Showing, and testing activities that culminate in participation in the Summer Binding Season. The current single annual onboarding opportunity creates an immediate and time-sensitive barrier for entities whose WRAP participation depends on external regulatory approvals, tariff changes, contractual arrangements, or Markets+ implementation activities that may occur after the existing onboarding deadline.

Absent expedited action, otherwise qualified entities may be unable to enter WRAP in time to support Winter Binding Season participation, Markets+ implementation readiness, and coordinated regional resource adequacy planning. Delaying consideration through the ordinary stakeholder process could therefore create significant impacts to utility service, reduce timely participation opportunities, and impair the ability of affected entities to align WRAP obligations with regional market implementation timelines.

Please provide the following information if known and/or available.

1. Provide a proposed solution to the issue described:
   Modify BPM 401 on an expedited basis to permanently establish the summer (previously called Fall) onboarding pathway effective August 1 starting in 2027, while creating a temporary winter onboarding pathway effective January 1, 2027 and January 1, 2028.

   The August 1 summer change should be permanent because the Program Administrator has recognized, based on prior onboarding experience, that the current September 15 effective date does not provide sufficient time for registration, data submission, Forward Showing preparation, Operations Program testing, and participant readiness before the applicable Binding Season. Moving the summer onboarding date to August 1 is therefore a durable correction to the standard annual onboarding cycle.

   The winter pathway would remain temporary, subject to evaluation after two onboarding cycles, and would permit Participants to execute a WRAPA effective January 1 and begin participation in the immediately following Winter Binding Season. The January 1, 2028 window would also give entities that previously exited WRAP, or deferred participation during the initial Markets+ transition, a targeted opportunity to return before the Winter 2028/2029 Binding Season and align with Wave 2 Markets+ participation. This would allow those entities to complete WRAPA execution, limited data submissions, registration, Forward Showing preparation, and operational-readiness activities before the relevant WRAP obligations and Markets+ participation requirements apply.

1. Provide the specific document and language you would like changed:

   See Redlines attached.

2. Provide a suggestion for how language could be updated to address issue:

   See Redlines attached.

Impact of Change

Please provide the following information if known and/or available.

1. Any data/information available that would characterize the importance or magnitude of the issue (allows for file attachments):

The proposed expedited BPM 401 change addresses a time-sensitive onboarding gap that could prevent otherwise qualified entities from participating in WRAP on a timeline aligned with Markets+ implementation and applicable Binding Seasons. Because BPM 303 authorizes expedited review for immediate reliability impacts or significant impacts to utility service, this proposal is appropriate for expedited treatment.

Expedited approval supports reliability by allowing qualified entities to complete onboarding, registration, Forward Showing preparation, and operational-readiness activities in time for the relevant Binding Season, rather than waiting up to an additional year. Earlier participation allows resources and loads to be incorporated into WRAP planning and operational processes during a period of significant change across the Western Interconnection.

2. Describe the benefits that will be realized from this change:

The proposal also supports Markets+ and other regional market implementation efforts by accommodating entities whose WRAP participation depends on tariff filings, regulatory approvals, contractual arrangements, or other external milestones. Without expedited approval, the existing September-centered onboarding framework may prevent timely alignment between WRAP obligations and regional market implementation schedules.

The January 1, 2028 winter window would further support Wave 2 Markets+ participation by creating a defined re-entry pathway for entities that exited WRAP or deferred participation during the initial Markets+ transition but need to return before the Winter 2028/2029 Binding Season. This reduces the risk that entities miss alignment with Wave 2 Markets+ implementation solely because of the current annual onboarding cycle, while supporting reliability and market readiness.

The proposal maintains all existing WRAP requirements. Participants onboarding through either cycle would remain subject to the same resource qualification, Advance Assessment, Forward Showing,

financial security, Operations Program testing, and compliance obligations. The proposal modifies only onboarding timing and does not alter substantive program requirements.

The proposed schedules also align onboarding activities with Forward Showing deadlines and operational-readiness milestones, improving onboarding efficiency and participant readiness while maintaining program reliability standards.

The proposal is narrowly tailored because it changes only onboarding timing. The summer change would be permanent because the Program Administrator has identified, based on prior onboarding experience, that the regular annual cycle requires more lead time for registration, data validation, readiness testing, and Forward Showing coordination. The winter pathway would be temporary and evaluated after two onboarding cycles because it addresses a near-term transition need rather than a permanent change to the standard annual structure.

In summary, expedited approval is needed to remove timing-related participation barriers before they create significant utility-service or reliability impacts, support alignment with Markets+ and WRAP implementation milestones, preserve existing WRAP requirements, and allow stakeholders to evaluate whether the temporary winter pathway should continue after the transition period.

Note from WPP: Onboarding new participants is a time-consuming effort for WRAP staff. While WPP is not proposing this change would necessitate additional staff at this time, were two onboarding windows per year to remain beyond two years or if additional changes to WRAP also increased the need for resources, WPP may request funding for additional resources.

WESTERN POWERPOOL

Western Resource Adequacy Program

401 New Participant Onboarding

400 – Auxiliary

Revision History

Manual Number	Version	Description	Revised By	Date
401	0.1	RAPC Glance Version	Rebecca Sexton	3/21/2024
401	0.2	Public Comment	Rebecca Sexton	4/3/2024
401	0.3	RAPC & PRC Discussion	Rebecca Sexton	5/2/2024
401	0.4	RAPC Endorsement	Rebecca Sexton	5/9/2024
401	0.5	Board Approval	Rebecca Sexton	5/17/2024
401	1.0	Board Approved	Rebecca Sexton	6/13/2024
401	2.0	2024-NTFP-2 Edits	Katie Gregor	1/27/2025
401	3.0	Annual BPM Review	Elise Mousseau	3/19/2026
401	3.1	2026-EP-02 Updated Onboarding Timelines	Maya McNichol	7/16/2026

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401 New Participant Onboarding

1. Introduction

The New Participant Onboarding Business Practice Manual (BPM) consists of three sections. The Application and Registration section outlines the activities to occur in conjunction with the execution of a Western Resource Adequacy Program (WRAP) Agreement (WRAPA), which initiates Participant involvement in the WRAP. The WRAP Administration section describes the process by which new Participants are incorporated into WRAP committees and receive Participant resources. The WRAP Program Implementation section describes activities necessary to begin involvement in the Forward Showing Program and Operations Program.

1.1. Intended Audience

BPM 401 is intended for entities in the process of or considering joining the WRAP. BPM 401 is particularly useful for individuals who will be responsible for Participant implementation and participation in various aspects of the WRAP, including but not limited to the Resource Adequacy Participant Committee (RAPC), Forward Showing Program, or Operations Program.

1.2. What You Will Find in This Manual

BPM 401 includes three main sections: Application and Registration, WRAP Administration, and WRAP Program Implementation.

1.3. Purpose

BPM 401 provides guidance for new Participants that are being onboarded into the WRAP and for interested entities to gather information and start preparing for potential future onboarding.

1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 401 have the meaning set forth in the Tariff or in another BPM.

Forward Showing Demonstration: As defined in *BPM 108 Forward Showing Submittal Process*.

Participant Technology Solutions Overview (PTSO): Document produced by the Program Administrator and Program Operator that provides Participants an overview of the technical details necessary to set up, implement, and test WRAP systems.

Program Signatory: A class of corporate membership in the WPP, as defined in the bylaws of WPP.

Request Management System (RMS): As defined in *BPM 101 Advance Assessment*.

2. Application

Any Load Responsible Entity applying to participate in the WRAP must execute the WRAPA as set forth in Attachment A of the Tariff.

2.1. ~~Fall~~Summer Onboarding Window

Entities who execute WRAPAs for ~~fall~~summer onboarding participate in the following Summer Season as their first Binding Season. WRAPAs are to be executed by incoming Participants no later than ~~September 15~~August 1. Regardless of a signing date after January 1 but prior to August 1, new Participant WRAPAs become effective on ~~September 15~~August 1, except when FERC by order has established a different effective date for a non-conforming WRAPA.

2.2. Winter Onboarding Window

Entities who execute WRAPAs for winter onboarding participate in the next Winter Season as their first Binding Season. WRAPAs are to be executed by incoming Participants no later than January 1. Regardless of a signing date after August 1 but prior to January 1, new Participant WRAPAs become effective on January 1, except when FERC by order has established a different effective date for a non-conforming WRAPA.

The winter onboarding window will be available for WRAPAs (or non-conforming WRAPAs) signed before January 1, 2029. Unless RAPC takes an affirmative vote to retain this window, BPM 401 will be modified to remove the winter onboarding window. If RAPC does take an affirmative vote to retain the winter onboarding window, this paragraph will be removed and the winter onboarding window content will remain. Alternatively, if RAPC takes an affirmative vote to remove the summer onboarding window but retain the winter onboarding window prior to January 1, 2028, such changes will be made to BPM 401.

~~WRAPAs are to be executed by incoming Participants no later than September 15. Regardless of a signing date prior to September 15, new Participant WRAPAs become effective on September 15, except when FERC by order has established a different effective date for a non-conforming WRAPA.~~

Table 1 shows the general timeline of activities to be expected by an incoming Participant from signing a WRAPA, registering loads and resources though a limited data request (see Section 2.2) and completing its first Forward Showing Submittal ~~(in year T-1)~~, through to its first Binding Season participating in the Operations Program ~~(denoted as year T-0)~~, and its first Forward Showing Submittal using Qualifying Capacity Contribution (QCC) derived from data turned in at its first Advance Assessment ~~(in T+1, two years after joining)~~.

Table 1. New Participant Entry Timeline

Activity/Milestone	Description	~~Date~~ Summer Onboarding	Winter Onboarding
WRAPA Signing Deadline	Participants execute WRAPA (Attachment A in Tariff) for participation in (T-0) Operations Program. Participants may sign before this date.	~~September~~ August 1~~5~~ (T[1]-1)	January 1 (T)
Effective WRAPA Date	All new participant WRAPAs will be effective on same date	August 1 (T-1)[2]	January 1 (T)
Payment of Cash Working Capital Support Charge	Tariff Schedule 1 details the calculation of the Cash Working Capital Charge	~~No later than 30 days after WRAPA execution~~ August 30 (T-1)	January 30 (T)
~~**Effective WRAPA Date**~~	~~All new participant WRAPAs will be effective on same date~~	~~September 15[3]~~	
Registration with Program Operator RMS	Participants provide information to Program Operator to gain access to RMS	~~September 15 – October~~	January 1-31 (T)

[1] In BPM 401, T refers to the Year in which the first Binding Season in which a new Participant participates begins. T-x refers to the Year that is x Years before T, and T+x refers to the Year that is x Years after T.

[2] For non-conforming WRAPA's the effective date is August 1, January 1, or the date established by FERC in an order accepting the non-conforming WRAPA.

~~[3] For non-conforming WRAPA's the effective date is September 15 or the date established by FERC in an order accepting the non-conforming WRAPA.~~

		~~15~~August 1-31 (T-1)	
Deadline for New Participant Limited Data Request for Registration of Resources and Loads	Participants complete an initial limited Data Request to inform approximated QCC values	~~October 1~~August 15 (T-1)	January 15 (T)
First ~~Summer~~ FS Deadline	Participant will complete a FS Submittal for the following ~~Summer~~ Binding Season (Summer for summer onboarding and Winter for winter onboarding); this showing will necessarily include some class average QCC values (from (T-2) Advance Assessment) for resources claimed	October 31 (T-1)	March 31 (T)
Deadline for First Advanced Assessment data submittal	Participant submits data for modeling future Monthly Forward Showing Planning Reserve Margins (FSPRMs) and QCCs (see BPM 101)	March 1 (T)	March 1 (T)
Operations Program Testing	Participant engages in testing during the shoulder season between two Binding Seasons~~Winter and Summer~~	March 15 – May 31 (T)	September 15 – October 31 (T)
~~First~~ Second ~~Winter~~ FS Deadline	Participant will complete a FS Submittal for their second Binding ~~following Winter~~ Season (Winter for summer onboarding and Summer for winter onboarding); this showing will necessarily include some class average QCC values for resources claimed	March 31 (T)	October 31 (T)
First ~~Binding~~ Operations Season	Participant will begin Operations Program participation (uses, in part, inputs from FS Submittal from First Summer FS Deadline)	June 1 – September 15 (T)	November 1 (T) – March 15 (T+1)
Participant completes FS Submittals and participates in Operations Program as specified in the Tariff; participation will necessarily utilize some class average QCC values for resources claimed on FS Submittal for an additional one to two Binding Seasons			
Summer FS Deadline	Participant will complete a FS Submittal for the following Summer Season; this showing will be the first using QCC values for resources	October 31 (T+1)	October 31 (T+1)

	Participant turned in at its first Advance Assessment (T-0)		

Table 2 is an example timeline for a Participant executing a WRAPA prior to August 1 in 2024.

Table 2. Example New Participant ~~Entry~~ Summer Onboarding Timeline

Activity/Milestone	Deadline	Year
WRAPA Signing Deadline	~~September 15~~ August 1	2024
Effective WRAPA Date	August 1~~September 15~~	2024
Payment of Cash Working Capital Support Charge Due Date	~~No later than 30 days after WRAPA execution/signing~~ August 30	2024
Registration with Program Operator RMS	August 1~~September 15 – October 15~~-31	2024
New Participant Limited Data Request Deadline	~~October 1~~August 15	2024
First Summer FS Deadline	October 31	2024
Deadline for First Advanced Assessment data submittal	March 1	2025
Operations Testing	March 15 – May 1	2025
First Winter FS Deadline	March 31	2025
First ~~Binding~~ Operations Season	June 1 – September 15	2025
Participant completes FS Submittals and participates in Operations Program as specified in the Tariff; participation will necessarily utilize some class average QCC values for resources claimed on FS Submittal for an additional ~~Summer (T-0) and Winter (T+1) FS Submittal~~two Binding Seasons		
Summer FS Deadline	October 31	2026

Table 3 is an example timeline for a Participant executing a WRAPA after August 1 in 2024.

Table 3. Example New Participant Winter Onboarding Timeline

Activity/Milestone	Deadline	Year

WRAPA Signing Deadline	January 1	2025
Effective WRAPA Date	January 1	2025
Payment of Cash Working Capital Support Charge Due Date	January 30	2025
Registration with Program Operator RMS	January 1-31	2025
New Participant Limited Data Request Deadline	January 15	2025
Deadline for First Advanced Assessment data submittal	March 1	2025
First Winter FS Deadline	March 31	2025
Operations Testing	September 15 – October 31	2025
First Summer FS Deadline	October 31	2025
First Operations Season	November 1 – March 15	2025-2026
Participant completes FS Submittals and participates in Operations Program as specified in the Tariff; participation will necessarily utilize some class average QCC values for resources claimed on FS Submittal for an additional Binding Season		
Summer FS Deadline	October 31	2026

The vast majority of Participants will execute a *pro forma* WRAPA as set forth in Attachment A of the WRAP Tariff. A Participant may also join with a non-conforming version of the WRAPA, provided that the Participant's circumstances conform to FERC's standards for non-conforming agreements and the non-conforming WRAPA is approved by FERC.

- Summer onboarding: Any non-conforming WRAPA developed between the new Participant and WPP must be submitted to FERC by ~~July 15~~June 1 such that FERC approval could be granted and the non-conforming WRAPA could become effective by the ~~September 15~~ August 1 deadline. Participants seeking a non-conforming WRAPA must notify WPP of such a need by providing a proposed draft non-conforming WRAPA for WPP consideration at the earliest opportunity and no later than ~~June 15~~May 1.

- Winter onboarding: Any non-conforming WRAPA developed between the new Participant and WPP must be submitted to FERC by November 1 such that FERC approval could be granted and the non-conforming WRAPA could become effective by the January 1 deadline. Participants seeking a non-conforming WRAPA must notify WPP of such a need by providing a proposed draft non-conforming WRAPA for WPP consideration at the earliest opportunity and no later than October 1.

~~2.2.~~2.3. Election of Transition Binding Seasons

Any Participant whose WRAPA becomes effective before September 15, 2026, shall give notice of its elected first Transition Binding Season according to the processes provided in *BPM 109 Forward Showing Transition Period*.

The Binding Season beginning November 1, 2027, will be the first Binding Season for all Participants whose WRAPA is effective by September 15, 2026. Transition Period provisions will continue to apply according to the guidelines provided in *BPM 109 Forward Showing Transition Period*.

~~2.3.~~2.4. Registration of Resources and Loads

Each Participant must register all resources and loads, regardless of whether such resources will be used to satisfy WRAP requirements and whether certain loads will be subject to the requirements of the WRAP. Participants will submit and may modify their registration of resources and loads in accordance with the procedures and timelines set forth in *BPM 101 Advance Assessment*, *BPM 103 Forward Showing Capacity Requirements*, and *BPM 105 Qualifying Resources*.

If more than one Participant attempts to register the same resource or load, the following procedure will be used to assign the resource or load to a Participant:

- If a Participant attempts to register a resource or load that has already been registered by another Participant, the resource or load will remain registered by the original Participant until both Participants mutually inform WPP in writing that a change to the registration is required.

- If two or more Participants attempt to register the same resource or load during the same window, the Program Administrator will request the Participants determine among themselves the appropriate registration of the resource or load before that resource or load is included in the WRAP.

The treatment of resource registration for immediate participation in the WRAP is discussed further in Section 4.1.1.

~~2.4.~~2.5. Cash Working Capital Support Charge

A Participant shall pay a Cash Working Capital Support Charge as described in Schedule 1 of the Tariff by the time required under Schedule 1.

~~2.5.~~2.6. Membership in WPP

WPP is a 501(c)(6) membership organization with corporate members. Program Signatory membership is granted to any Load Responsible Entity participating in a WPP-facilitated reliability program such as the WRAP. Participants must complete a member intake form – located on the WPP website – within 60 Days of executing a WRAPA (or non-conforming WRAPA).

3. WRAP Administration

Upon execution of a WRAPA, a new Participant shall gain access to WRAP committees and sub-committees as appropriate, as well as Participant resources.

3.1. Committee Involvement

WPP will provide incoming Participants with information about all active committees and workgroups that a new Participant is eligible to join, including discussion about expected time commitment and responsibilities for committee members. The incoming Participant shall provide names and contact information for the committees and workgroups in which it is required to or elects to participate.

3.1.1. RAPC Representation

Upon entry, new Participants must designate and provide to WPP the contact information of a representative to serve on the Resource Adequacy Participant Committee (RAPC).

The RAPC is the main venue for Participants to engage in program implementation and compliance, as well as being the highest form of Participant engagement in the governance and decision making of the WRAP. Additional information on the eligibility of individuals to serve, the role of RAPC representatives, and the designation of informational representatives can be found in the RAPC Charter located on the WPP website.

3.1.1.1. Forward Showing and Operations Program Workgroups

New Participants shall also designate contacts for the Forward Showing and Operations Program workgroups. Participants are required to select a primary contact for each workgroup and may elect to designate additional informational contacts.

3.1.1.2. Other RAPC Workgroups

Additional workgroups may be active under the RAPC at the time of Participant entry. Incoming Participants shall be notified of active supplementary workgroups and may choose to provide WPP with contact information of individuals who wish to participate.

3.1.2. Program Review Committee and Nominating Committee

The Program Review Committee (PRC) is generally responsible for receiving, considering, and proposing changes to the WRAP design. Per the Tariff, the PRC is composed of 20 representatives from 10 sectors – four sectors are composed solely of Participants. Upon execution of a WRAPA, the PRC shall be notified of new Participant(s) entry. Additionally, the contact information of the appropriate PRC sector representative(s) will be shared by WPP with the incoming RAPC representative(s), and vice versa. Additional information on the PRC, its role, and the composition of sectors can be found in the PRC Charter on the WPP website.

The Nominating Committee (NC) is responsible for nominating new directors to the WPP Board. The NC is composed of 12 sectors, four of which are composed of Participants. Upon execution of a WRAPA, the same introductions shall take place as those required of the PRC.

3.2. Participant Resources

Upon execution of a WRAPA, WPP will provide incoming Participants with resources for program onboarding, including but not limited to:

- WRAP educational materials;
- Information regarding WRAP committee involvement and stakeholder engagement;
- Information to understand WRAP compliance obligations; and
- The PTSO and information on IT support.

4. WRAP Program Implementation

Prior to submitting a Forward Showing (FS) Submittal and beginning the Operations Program registration process, an incoming Participant must select modeling assumptions that best describe its business practices. These assumptions determine whether all resource and load information will be in a single or multiple groupings, as further described in the PTSO.

WPP will assign Participants to an appropriate Subregion per *BPM 102 Forward Showing Reliability Metrics*.

4.1. Forward Showing Program

Upon execution of a WRAPA, an incoming Participant will immediately engage in WRAP activities. Timelines for Advance Assessment and Data Submittal, as well as FS Submittal and Cure Period deadlines for Summer and Winter, can be found in *BPM 101 Advance Assessment* and *BPM 108 FS Submittal Process* respectively.

4.1.1. Approximating QCCs

An incoming Participant shall complete a limited Data Request to determine class average QCC values for resources it is unable to self-evaluate (see Section 4.1.2) and register loads and resources (as discussed in Section 2.2). A new Participant's resources will be assigned 100% of the class average of all registered resources of the same resource type, taking into account location where appropriate (see the discussion of late registered resources in *BPM 105 Qualifying Resources*), but unlike late registered Qualified Resources for existing Participants there is no limit on the amount of resources assigned average QCC values for a new Participant's first four FS Submittals (two Summer, two Winter).

To facilitate the process of documenting their Resource QCCs as well as preparing for the next applicable Advance Assessment, new Participants will complete a limited Data Request based on the requirements outlined in *BPM 101 Advance Assessment*, including non-Storage Hydro Qualifying Resources, Demand Response program data, and Historical Load Data. Participants have until October 1 to complete this request.

4.1.2. Calculating QCCs

For select resources, Participants will calculate their own QCCs prior to the FS Deadline. These resources include Storage Hydro, Demand Response, and thermal resources that are not subject to NERC GADS requirements (non-GADS thermal units). The methodologies for calculating these resource QCCs can be found in *BPM 105 Qualifying Resources*.

4.2. Operations Program

An incoming Participant will begin participating in the Operations Program during the Summer Binding Season the year following its execution of the WRAPA. Participants shall complete registration and testing in advance of participation in the Operations Program. For additional details on registration, Operations Program Testing, and connectivity testing, refer to the PTSO.

Western Resource Adequacy Program Demand Response (DR) Qualifying Capacity Contribution (QCC) Proposal

Task Force Proposal
This Proposal has been prepared by the Program Review Committee's 2025 Workplan Task Force 03 – Demand Response (DR) Qualifying Capacity Contribution Proposal (aka DR QCC Task Force).

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Overview

The Program Review Committee's (PRC) 2025 Workplan included Concept 2024-CRF-003 leading to the implementation of the DR QCC Task Force. The charge was to explore the incorporation of call limits (and other possible constraints on availability) into the calculation of QCC for use-limited resources such as certain DR programs used as DR Capacity Resources in the Western Resource Adequacy Program (WRAP), and for the Task Force to develop a Proposal for

stakeholder review in accordance with *BPM 302 - Program Review Committee Proposal Development and Consideration*.[1]

The Task Force discussed the issues in the submitted Change Request Form (CRF) found in Appendix I and is proposing the following changes to the WRAP:

- A new QCC methodology for DR Capacity Resources based on the monthly average availability of such a resource during the appropriate ten-Year set of Capacity Critical Hours (CCH) subject to the constraints of the DR program; and
- An updated Capability Testing requirement for DR Capacity Resources that is a demonstration of the maximum load reduction at either: the daily hourly limit (maximum number of hours per day claimed); or, for resources with weekly or monthly hourly limits, for one hour.
- Operational Testing Requirements will remain the same.

Impact

This Proposal will affect the QCC value of DR Capacity Resources in the Forward Showing (FS), moving from a single seasonal QCC value to more granular monthly QCC reflective of a DR program's availability during CCH subject to operational constraints. This will also affect the Operations Program Capacity Need Adjustment in the Sharing Calculation, in which the collective QCC of DR Capacity Resources for the month in question (used previously to meet the month's FS Capacity Requirement) is reduced from the Load Forecast for the hour under evaluation before being deducted from the FS Capacity Requirement.

I. Task Force Solution

Principles

During its review of potential solutions, the Task Force considered the impacts on the connection between the Forward Showing planning component of the WRAP and the Operations Program sharing component. The Operations Program Sharing Calculation takes into account performance adjustments for variable energy resources (including run-of-river) as well as changes to the forced outages of any thermal resources relative to the amount assumed in the FS; however, the Sharing Calculation is not adjusted for operational decisions that affect

[1] WPP, WRAP, BPM 302 - Proposal Development and Consideration, available at: WPP

resource performance (such as whether to deploy or not). Given this, the Task Force chose not to pursue methodologies that would affect the Sharing Calculation due to a Participant's choice of when or if to use a DR Capacity Resource.

Current DR QCC Methodology

The specific remit of the Task Force was to explore ways to improve the methodology for determining the QCC of DR Capacity Resources. A Participant demonstrates its ability to meet FS Capacity Requirements through Forward Showings submitted seven months ahead of the start of a Season (Summer runs June 1st through September 15th and Winter runs November 1st through March 15th).[2] A Participant then attempts to meet its monthly FS Capacity Requirements by stacking the QCC of its resources and contracts (the monthly FS Capacity Requirements are participant-specific monthly P50 Peak Load Forecasts combined with subregion-specific monthly Planning Reserve Margins).

The QCC of a DR Capacity Resource is currently determined through a demonstration of a sustained load reduction of five continuous hours leading to a seasonal QCC for each season.[3] A Capability Test is also required every five years showing a controlled and dispatchable load reduction to confirm the claimed QCC.[4] In addition, an annual Operational Test is required at 50% of the claimed load reduction for one hour (with the intent of minimizing customer interruption).[5] If these tests are not passed the DR Capacity Resource QCC will be limited to the tested values.

Proposed DR QCC Methodology

The Task Force's Proposal is to determine DR Capacity Resource monthly QCC values based on the monthly average performance of such resources during the ten-Year set of CCH subject to the DR program's constraints. The Participant will input the peak load reduction and the DR program's constraints into a workbook located on the WPP website. The DR QCC workbook will include the following constraints:

- Peak load reduction (MW)
- Blackout functionality that prevents the DR program from contributing to QCC during any identified:
    - Hours of the day;

[2] Duration of Seasons may be subject to change following potential Board Approval of the PRC's PRM Task Force Proposal.
[3] WPP, WRAP, BPM 105 §4.6, available at: WPP
[4] WPP, WRAP, BPM 105 §3.4.2.3
[5] WPP, WRAP, BPM 105 §3.4.3.6

    - Days of the week;
    - Weeks of the year; and, or
    - Months of the year (also enabling the blackout of Seasons)
- Hourly dispatch limits (non-interactive, i.e., choose one):
    - Daily – maximum number of hours per day;
    - Weekly – maximum number of hours per week; or
    - Monthly – maximum number of hours per month.
- Hourly fatigue – if a DR program is called upon in consecutive CCH its peak load reduction can be reduced hour-on-hour, reflecting a customer's potential decreasing willingness to keep adjusting its load down hour after hour (for example, industrial loads).
- Daily fatigue – if a DR program is called upon in consecutive days its peak load reduction can be reduced day-on-day, reflecting customers' potential decreasing willingness to keep adjusting their loads down day after day (for example, aggregated residential DR programs).

The DR QCC workbook will allow the Participant to calculate monthly QCC values taking the average of the DR program's demand reduction availability during CCH subject to the imposed program-specific constraints. The monthly QCCs of a Participant's Demand Response Capacity Resources can then be used to meet its monthly FS Capacity Requirements along with the QCC of its other resources and contracts.

If a DR Capacity Resource has constraint permutations that the DR QCC workbook is unable to account for, the DR program's contribution to load reduction may be captured in the historical data used to calculate the monthly P50 Peak Load Forecasts in the Forward Showing (as is currently an option).

Proposed DR Testing Requirements

This Proposal also includes changes to the Capability Testing of DR Capacity Resources that better comport with the proposed monthly QCC methodology while trying to minimize customer disruption. The Capability Test will be a demonstration every five years of a DR Capacity Resource's maximum claimed monthly peak load reduction (in MW, for Summer or Winter) at either: the maximum hourly daily limit; or, for one hour for resources with weekly or monthly hourly dispatch limits. For example:

- If a DR Capacity Resource calculated its monthly QCC with a claimed peak load reduction of 10 MW with a daily dispatch limit of eight hours, it would need to undertake a Capability Test with a sustained load reduction of 10 MW for eight hours in one day. This requirement reflects the high QCC values calculated when a DR Capacity Resource is available for multiple hours a day.

    - If that same resource used hourly fatigue in its monthly QCC calculation, it would need to demonstrate a 10 MW load reduction for the initial hour of demand response.

- If a DR Capacity Resource calculated its monthly QCCs with a claimed peak load reduction of 20 MW with a weekly (or monthly) hourly dispatch limit of five hours, it would only need to demonstrate a load reduction of 20 MW for one hour.

The annual Operational Test will remain at 50% of the claimed peak load reduction for one hour.

As is currently the case, a Participant would not need to perform an additional test if it already had historical performance data that met the required Capability or Operational Testing requirements.

Proposed Language Updates

Exact changes to business practice manual language are included in Appendix III: BPM 105 Redlines.

II. Implementation Plan and Feasibility

Assumptions

This Proposal maintains the connection between the Forward Showing and the Operations Program, in that while the Sharing Calculating takes into account changes to a resource's forecast performance beyond a Participant's control (such as the impacts of weather on variable energy generation or changes to anticipated thermal forced outage forecasts) it does not take into account decisions regarding when or if a resource that was used to meet the Forward Showing is then used in the operational timeframe. As is currently the case, this Proposal assumes that DR Capacity Resources are available for every hour of the Sharing Calculation, hence the remit of this Task Force to more accurately and granularly calculate QCC.

Risks

There is a risk that DR Capacity Resources would not be available in a particular hour, but – as per the assumptions above – this is a risk that applies to all Qualifying Resources and comes down to Participant operational choices and risk tolerance. The specific risks associated with treating DR Capacity Resources in this way can be ameliorated by leaving the demand reduction effects in the historical load data used to calculate the monthly P50 Peak Load Forecasts that in turn are a component of the monthly FS Capacity Requirements (along with the monthly FS Planning Reserve Margins).

Schedule for Implementation

Assuming the Task Force Proposal successfully navigates through the *BPM 302 PRC Proposal Development and Consideration*[6] governance timeline ahead of potential adoption by the Board of Directors at its Q3 Meeting on September 30th, 2026, the schedule for implementation of the DR tool to calculate QCC (along with the updated Capability Testing requirements) would be:

- Use for the October 31st, 2026, FS Deadline for Summer 2027 (Non-Binding)
- The first Advance Assessment to factor in this methodology and affect PRMs would be undertaken March 31st, 2027, for Winter 2029-2030 (Binding).

Cost of Implementation

At this time, there are no identified additional costs to implementation.

Program Administrator / Operator Impacts

Beyond updating BPM 105, there will be changes to the Program Administrator and Program Operator work processes to implement this Proposal, including:

- Maintaining and distributing the DR tool as required (along with a user-guide), and updating it with the appropriate CCH; and
- Ensuring the Sharing Calculation uses the appropriate month-specific DR Capacity Resource QCCs (rather than the currently seasonal-wide QCCs).

[6] WPP, WRAP, BPM 302 - Proposal Development and Consideration, available at: WPP

Appendix I: Change Request Form 003

2024-CRF-003 / APS / Demand Response QCC

WRAP Area: Resource Accreditation	**Tariff Change**: Yes	**Time Score:** Long

Lead Sponsor: Brandon Holmes brandon.holmes@aps.com	**Co-Sponsor:**

Summary: Incorporation of call limits in calculation of QCC for use-limited resources.

Description of the issue: Tariff and Protocols cover use-limited resource duration for calculation of QCC, but not in number of seasonal events or calls.

Proposed solution to the issue described:
Calculation of QCC should be informed by modeling of call limits for use-limited resources.

Specific document and language you would like changed:
BPM 105 Section 4.6 **Demand Response**
DR can be utilized as a Qualifying Resource if it is greater than 1 MW in aggregate (see Section 3.3) and can be demonstrated to be controllable and dispatchable by the Participant or host utility. DR programs that register as Qualifying Resources will be assigned a seasonal QCC value (one value for each Binding Season) and will need to meet testing criteria and demonstrate load reduction (see Section 3.4.2.3) for a period of up to five continuous hours. A DR program may be able to demonstrate load reduction for a period beyond five continuous hours, but cannot receive QCC above 100% of what is demonstrated for the five hour duration.11 Programs that are not able to provide five hours of load reduction will have their load reduction prorated over the course of five hours for the determination of QCC value. Participants registering a DR Qualifying Resource must either i) demonstrate that the DR program was not operated historically and has therefore not impacted the Historical Load Data provided by the Participant for determination of their P50 load value, or ii) provide historical information about the operations of the DR program such that the load reduction impacts of the DR program can be removed from the historical data prior to determination of the P50 load value.

The QCC value of the DR Qualified Resource is determined by multiplying the maximum load reduction (in MW) the resource is capable of sustaining by the number of hours the resource can demonstrate such sustained load reduction capability (up to five hours, maximum) divided by five.

A DR Qualifying Resource will be reflected in the FS Submittal as a capacity resource by submitting it as a 'Resource' in the FS Submittal. As with all resources, the QCC value of the DR Qualifying Resource will count toward a Participant meeting its FS Capacity Requirement. If DR does not meet the criteria of a Qualifying Resource, its contribution to the load reduction may be captured in the historical data used to calculate the P50 load in the FS. ***4.6.1 New, Expanded, or Late Registered DR Resources*** DR programs intended to be used as Qualifying Resources in the first Year of operation or expansion of an existing program or DR programs not registered at the time of the Advance Assessment will be reported at 50% of the expected capability, unless validated by testing the program to 100% of the claimed capability prior to the Binding Season. See the section related to DR testing requirements (within Section 3.4.2) for more information
Suggestion for how language could be updated to address issue: -
Describe the benefits that will be realized from this change: More accurate capacity accreditation for use-limited resources.
Any data/information that would characterize the importance of the issue: -

Appendix II: DR QCC Methodology Alternatives Considered

The Task Force considered four main methodologies before deciding to pursue Option 1: DR during performance during CCH.

- **Option 1: DR Performance During CCH**: this bottom-up method would adapt the existing methodology used for Thermal Resources not required to report GADs data (BPM 105 §4.2.3), non-dispatchable, must-take resources such as PURPA (BPM 105 §4.8.2), and Contract QCC in the FS Submittal (BPM 106 §2). This method would look at the performance of a Participant's particular Demand Response Capacity Resource during the ten-Year set of CCH (BPM 104). The Task Force determined that it would be more straightforward to generate monthly QCCs using synthetically generated performance data (based on limits and constraints) rather than actual historical performance data. The pros for this approach would be that it would adapt existing methodology, while the con was that a specialized tool would need to be developed. Originally the Task Force envisioned that the tool would need to optimize the spread of DR performance to maximize QCC, but as the tool was only considering CCH, and all CCH are equally weighted, such optimization was not necessary. This treatment of Demand Response Capacity Resources would bring its QCC methodology closer in line with that of the ELCC treatment of variable energy resources (BPM 105 §4.3)

- **Option 2 - DR Availability Factor**: this top-down treatment of Demand Response Capacity resources would consider a program was not available, bringing the methodology more in line with a Thermal Resource that has its QCC determined by reducing its perfect capacity (confirmed through a Capability Test) by a GADS informed Forced Outage Factor (BPM 105 §4.2). This method would require generating a Demand Response Availability Factor (DRAF) and applying it to the result of the DR Capability Test. This method was ultimately not pursued as the Task Force decided Option 1 allowed for more accurate modeling of the impact on QCC of DR program limits and constraints.

- **Option 3 – Operations Program Load Need Adjustment**: this option would only use Demand Response Capacity Resources term in the Sharing Calculation (BPM 202 §3) during CCH. However, the CCH data set is in the past, and there is currently no method of forecasting future capacity constrained hours. In addition, the Task Force did not develop this option further as it would impact the Sharing Calculation based on a Participant's operational choices (such as whether the Participant deployed DR during a CCH or not).

- **Option 4 – Operations Program Sharing Calculation ΔDR term**: similar to Option 3, this methodology would adapt the Sharing Calculation by introducing a performance adjustment for Demand Response (ΔDR) alongside the adjustments for forced outages, run-of-river performance, and VER performance (BPM 202 §3). Unlike DR, the current performance adjustments operationally relate to terms the Participant has no control over (unlike DR) and

terms that can both over and under-perform (DR never over performs). As with Option 3, given that this would increase the disparate treatment of DR compared to other resources, Option 4 was not pursued further.

Appendix III: BPM 105 Redlines

Western Resource Adequacy Program

105 Qualifying Resources

100 – Forward Showing

Revision History

Manual Number	Version	Description	Revised By	Date
105	0.1	RAPC Glance Version	Rebecca Sexton	5/9/2023
105	0.2	Public Comment	Rebecca Sexton	6/23/2023
105	0.3	RAPC & PRC Discussion	Rebecca Sexton	8/10/2023
105	0.4	RAPC Endorsement	Rebecca Sexton	8/11/2023
105	0.5	Board Consideration	Rebecca Sexton	8/17/2023
105	1.0	Board Approved	Rebecca Sexton	8/23/2023
105	2.0	2026-Expedited-Proposal-1	Maya McNichol	2/3/2026
105	3.0	Annual BPM Review	Maya McNichol	3/19/2026
105	3.1	Demand Response QCC Task Force Edits	Michael O'Brien	X

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105 Qualifying Resources

1. Introduction

The Qualifying Resources Business Practice Manual (BPM) consists of two sections. The Resource Registration~~Resource Registration~~ section outlines the processes for Participants to register their Qualifying Resources with the Program Operator to be included in the Advance Assessment to receive a Qualifying Capacity Contribution (QCC). The Qualifying Capacity Contribution of Resources~~Qualifying Capacity Contribution of Resources~~ section outlines the processes that the Program Operator will undertake to calculate QCC values for all registered Qualifying Resources.

1.1 Intended Audience

BPM 105 is intended for Western Power Pool (WPP) Western Resource Adequacy Program (WRAP) Participants and other interested individuals or entities. BPM 105 is particularly useful for those individuals that are responsible for their Participant organization's Forward Showing (FS) Submittal and need to ensure that their organization's Qualifying Resources are properly registered, will be included in the Advance Assessment, and will receive QCC values.

1.2 What You Will Find in This Manual

BPM 105 includes two separate Business Practices: 1) Resource Registration~~Resource Registration~~ and 2) Qualifying Capacity Contribution of Resources~~Qualifying Capacity Contribution of Resources~~.

1.3 Purpose

To provide an overview of resource registration and qualification processes and the process for determining the QCC for Qualified Resources.

1.4 Definitions

All capitalized terms that are not otherwise defined in BPM 105 have their meaning set forth in the Tariff. Any capitalized terms not found in the Tariff that are specific to BPM 105 are defined here.

Advance Assessment Data Request: As defined in *BPM 101 Advance Assessment.*

ASHRAE Rated Ambient Temperature: The ambient temperature employed for Capability Testing of a resource for the Summer Season, as determined for the resource location on a dry-bulb basis in accordance with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Fundamentals Handbook,[1] Climatic Design Information, Cooling and Dehumidification Design Conditions Appendix

[1] ASHRAE Fundamentals Handbook

using the – "Cooling DB/MCWB 0.4%" values. If the resource is located within 30 miles of the nearest weather station reported in the Handbook, then the temperatures employed for the Rated Ambient Temperature will be those reported for the nearest station. For all other resource locations, the Rated Ambient Temperatures shall be determined by interpolating between those reported for appropriate weather stations using the resource location's latitude and longitude.

Capability Test: The demonstration of capability of certain Qualifying Resources by generating at their rated capability under specified test conditions and test duration.

Cascaded Dual Plant: Two Storage Hydro Qualifying Resources that are on the same river systems and operated in a coordinated manner.

Cure Period: As defined in *BPM 108 Forward Showing Submittal Process*

Data Request Instruction Manual: As defined in *BPM 101 Advance Assessment*.

Fuel Type: A resource's primary fuel source, such as coal, natural gas, wind, or hydroelectric.

Hybrid Facility: A resource that is composed of two or more resources of different fuel or technology types where one of those resources is an Energy Storage Resource with the same interconnection point.

Hydro QCC Workbook: The workbook that determines the QCC of a Storage Hydro resource(s).

Long Duration Storage: A resource designed to capture energy produced at one time for use at a later time, and capable of sustained delivery for over eight hours (such as pumped Storage Hydro facilities or thermal energy storage devices).

Net Generating Capability: The gross maximum output of a Qualifying Resource reduced by any power used for auxiliary power requirements demonstrated through a Capability Test. May be used interchangeably with Installed Capacity when referencing Thermal Resources.

Operational Test: The annual demonstration of the functional ability of a Qualifying Resource.

2. Background

Participant owned and contracted Qualifying Resources capable of providing capacity may be used to meet a Participant's FS Capacity Requirement. In order to receive a

QCC for these Qualifying Resources, a Participant must provide the necessary information and data to the Program Operator. The Program Operator will develop and maintain a registration and certification process for all Qualifying Resources identified for the FS Program as outlined in BPM 105. BPM 105 does not cover timelines associated with Participants and the Program Operator completing the registration and QCC assessment process. Timelines for registration can be found in *BPM 101 Advance Assessment*.

3. Resource Registration

3.1 Resource Eligibility

A Participant will register all owned resources in its portfolio and all resources acquired in resource specific contracts in order for those resources to receive QCC values, subject to the exceptions described in BPM 105.

Resource registrations, including the appropriate modeling data required by the Program Operator, shall be submitted in accordance with deadlines stated in *BPM 101 Advance Assessment*, relating to the timeline for the Advance Assessment.

Participants shall employ the Advance Assessment Data Request, and the guidance and instructions in the Data Request Instruction Manual for providing resource registration information. The then-effective versions of the Advance Assessment Data Request and the Data Request Instruction Manual are available on the WPP website. The QCC calculations for all Qualified Resources will be updated during each Advance Assessment to be used for the applicable Binding Season.

Resources owned and operated by entities that are not Participants and contracted to Participants with resource specific contracts (i.e., not System Sales or block contracts) must be registered with the Program Operator and provide the necessary data in order for Participants to claim the full QCC from these resources toward their FS Capacity Requirements.

Qualified Resources must be 1 MW minimum to qualify for registration (see Section 3.3). The registration process for all Qualifying Resources, other than Storage Hydro Qualifying Resources, will require, but will not be limited to, provision of the information set forth in Table 1~~Table 1~~ and Table 2~~Table 2~~ to the Program Operator, by means of the Advance Assessment Data Request. Registration of Storage Hydro Qualifying Resources will require, but will not be limited to, the provisions of items set forth in Table 3~~Table 3~~ to the Program Operator, by means of the Advance Assessment Data Request.

3.2 Late Registration of Resources

Resources that are unable to register by the deadline of the Advance Assessment Data Request may still be able to register through the following processes. Such resources may include those owned by Participants or those contracted to Participants with resource specific contracts.

A Participant may register a resource after the Advance Assessment deadline and prior to the FS Submittal Deadline (the process and timeline for submitting the FS Submittal can be found in *BPM 108 Forward Showing Submittal*) provided the Participant provides the necessary information in Table 1~~Table 1~~ and Table 2~~Table 2~~ (or Table 3~~Table 3~~ for Storage Hydro resources). The QCC that will be allowed for late registered resources will be either the class average of similar resources or will be a discounted QCC based on the circumstances of the data provided as further described in Generator Testing (Section 3.4) and Qualifying Capacity Contribution of Resources (Section 4).

Given that the program has very little information about late registered Qualified Resources, such resources may constitute no more than 10% of the total FS Capacity Requirement for an individual Participant, unless that Participant can demonstrate an increase in the load participating in the WRAP after the Advance Assessment data collection deadline. During the Transition Period, late registered resources may constitute as much as 20% of an individual Participant's total FS Capacity Requirement, unless that Participant can demonstrate an increase in the load participating in the WRAP after the Advance Assessment data collection deadline. In the case of increased load, the Participant may provide late registered resources to meet the FS Capacity Requirement for the additional load, as well as for the load anticipated to participate at the time of the Advance Assessment data collection deadline.

Table 1. Information Required for Resource Registration

Description / Instructions	
Facility Name	Plant name of the resources. If possible, utilize the Energy Information Administration (EIA)-860[2] plant name given for U.S. resources.
Unit ID	The unique generator identification commonly used by plant management. If possible, utilize the EIA-860 Generator ID given for U.S. resources.
Prime Mover	Utilize the predetermined dropdown list of EIA-860 Prime Mover identifiers. For combined

[2] https://www.eia.gov/electricity/data/eia860/

Description / Instructions	
	cycle resources, a prime mover code must be entered for each generator.
Fuel Type	Utilize the predetermined dropdown list in the workbook of Fuel Types used as the primary energy source to power the generator.
Host Balancing Authority	Provide the Balancing Authority Area (BAA) in which the resource is located.
Ownership or Contracted Percentage for Participant	Enter the percentage of resource capability owned or contracted by the Participant. This should also include the percentage of any power purchase agreement (PPA) where the Participant has fully contracted for the capacity from a facility but would not include a PPA with another Participant. For example, if the Participant has a PPA with a wind developer, solar developer, or city that has local generation for an extended period of time (i.e., 15 Years or life of the facility) then the percentage of the offtake of that facility should be listed here.
Summer Max Capacity or Nameplate (MW)	Provide the generator's Net Generating Capability for the primary energy source. This can be i) the net expected capacity, as determined from a summer Capability Test performed in accordance with the procedures on generator testing, Section 3.4 ii) the EIA-860 nameplate capacity for Wind, Solar, Run-of-River (ROR), and Energy Storage Resources (ESR) located in the U.S. and iii) the nameplate capacity for Wind, Solar, ROR and ESR located outside of the U.S.
Winter Max Capacity or Nameplate (MW)	Provide the generator's Net Generating Capability for the primary energy source. This can be i) the net expected capacity, as determined from a winter Capability Test performed in accordance with the procedures on generator testing, Section 3.4 ii) the EIA-860 nameplate capacity for Wind, Solar, ROR, and ESR located in the U.S. and iii) the

Description / Instructions	
	nameplate capacity for Wind, Solar, ROR and ESR located outside of the U.S.
In-Service Date Month-Year	Provide the Month and Year of the original in-service date (or commercial operation date) that the resource became operational (if possible, the operating Year used in EIA-860 should be submitted for all resources within the U.S.). For details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.
Retirement Date Month-Year	Provide the Month and Year for resources that have been either formally announced or marked for retirement.
State or Province	Enter the state acronym where the resource is physically located. For resources in Canada, enter the province.
County	For resources in the U.S., enter the county (or county equivalent) where the resource is located.
Inverter Loading Ratio (Only for Solar and Wind)	For solar and wind resources only, enter the loading ratio of the inverter compared to the nameplate of the resource. As an example, if the nameplate of a solar resource is 150 MW and the inverter is limited to 125 MW (oversizing of solar panels), then the ratio would be 1.2 (150 / 125). If the nameplate of the resource is the same as the inverter, or the loading ratio is not known, the provided loading ratio would be 1.0.
ESR Duration (Only for ESRs)	For ESRs, enter the maximum continuous number of hours for which the ESR can be utilized at its maximum capacity.
Facility Limitation MW (Only for Hybrid Facilities)	For Hybrid Facilities, provide the maximum capability which the combined amount of the component resources can output to the system. This is typically based on the inverter limit before generation is output to the system.

Description / Instructions	
Comments	Enter, if applicable, any additional comments about the submitted information.

Table 2. Additional Information Required for Resource Registration

Description / Instructions
Thermal Resources - North American Electric Reliability Corporation (NERC) Generating Availability Data System (GADS) or equivalent data is required for all Thermal Resources. For further details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.
Wind, ROR, Solar Resources – hourly output profiles for the last 10 Years or as much as is available. For further details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.

The registration process for all Storage Hydro Qualifying Resources will require, but will not be limited to, the items in Table 3~~Table 3~~, as follows:

Table 3. Storage Hydro Qualifying Resource Registration

Description / Instructions	
Facility Name	Plant name of the Storage Hydro Qualifying Resource. If possible, utilize the EIA-860 plant name given for U.S. Storage Hydro Qualifying Resources.
Unit ID	The unique generator identification commonly used by plant management. If possible, utilize the EIA-860 Generator ID given for U.S. Storage Hydro Qualifying Resources.
Prime Mover	Utilize the predetermined dropdown list of EIA-860 prime mover identifiers.
Host Balancing Authority	Provide the BAA location of the Storage Hydro Qualifying Resources.
Ownership or Contracted Percentage for Participant	Enter the percentage owned or contracted by the Participant. This should also include the percentage of any PPA where the Participant has fully contracted for the capacity from a facility but would not include a PPA with another Participant.
Individual Monthly QCC (MW)	QCC values by Month (all Months of the Year) for all Storage Hydro Qualifying Resources. The QCC of the Storage Hydro Qualifying Resources is determined by Section 4.
In-Service Date Month-Year	Provide the Month and Year of the original in-service or commercial operation date that the Storage Hydro Qualifying Resource became operational (if possible, the operating Year used in EIA-860 should be

	Description / Instructions
	submitted for all Storage Hydro Qualifying Resources within the U.S.). For planned Storage Hydro resources, enter the Month and Year the Storage Hydro Qualifying Resource is projected to become operational.
Retirement Date Month-Year	Provide the Month and Year for resources that have been either formally announced or marked for retirement.
State or Province	Enter the state abbreviation where the Storage Hydro Qualifying Resource is physically located. For Storage Hydro Qualifying Resources in Canada, enter the province.
County	For Storage Hydro Qualifying Resources in the U.S., enter the county (or county equivalent) where the Storage Hydro Qualifying Resource is located.
Comments	Enter, if applicable, any additional comments about the submitted information.

3.3 Qualifying Resource Aggregation (Resources <1 MW)

Qualifying Resources that are less than 1 MW in size may be aggregated to obtain the minimum 1 MW registration requirement.

Qualifying Resources that are aggregated will need to have a common injection point of capacity to the transmission system. Aggregations of generators at different distribution substations may be allowed provided the generators are in the same BAA, same zone (as applicable by resource type), and are the same resource type.

For Qualifying Resources that are requested to be aggregated, the following information should be provided to the Program Operator.

- For the aggregated facility:
  - Quantity of generators being aggregated.
  - Combined nameplate of generators being aggregated.
  - One-line diagram of the transmission/distribution system at which the generators are located.
- For each generator being aggregated:
  - Nameplate.
  - Location of power injection to the transmission system (substation).
  - Supporting information for QCC evaluation.

This information will be provided to the Program Operator during the Advance Assessment Data Request submission.

3.4 Generator Testing

3.4.1 Background

Qualifying Resources must have Capability Tests and Operational Tests performed and provided by the Participant, as applicable and in accordance with the guidelines contained in BPM 105. Capability Tests will be required for resources as detailed below. All Qualifying Resources must perform annual Operational Tests completed in the 12-Month period prior to the FS Submittal due date that may be conducted within or outside of a Bidning Season (at Participant's discretion).

3.4.2 Capability Testing

Capability Tests will be required for Thermal Resources, Long Duration Storage resources, and Demand Response resources (as defined in BPM 105) with exceptions as noted in this section.

For units that are required to perform Capability Tests, the Participant may choose whether to use Capability Tests on a unit-by-unit basis or on a plant-level basis; regardless of the approach, all units requiring a QCC must be tested (see bullet 3 below). Capability Test duration shall be a minimum of one hour. Once a qualifying Capability Test is submitted to the Program Operator by the FS Submittal Deadline, the five-Year submittal window will be reset. The Capability Test may be performed at the convenience of the Participant and can be completed more often than every five Years. The most recent testing data will be used to determine a generator's QCC if a Capabilty Test is performed between the Advance Assessment and the FS Submittal.

For Storage Hydro, ROR Hydro, Wind, Solar, and ESR, the annual Operational Test will suffice as the Capability Test.

3.4.2.1 Capability Test Requirements for Thermal Resources

Capability Tests conducted for Thermal Resources are used as the base accredited value to which Unforced Capacity (UCAP) calculations are applied (see Section 4.2) to determine final QCC values. A Thermal Resource that is not subject to generator testing requirements (i.e., are not subject to NERC MOD-025 requirements) may have its QCC values determined in accordance with Section 4.2, Option 1, in lieu of performing the Capability Test.

Capability Tests for Thermal Resources will be performed during the Summer Season and must meet the testing requirements specified in BPM 105. A resource may use its Summer Season Capability Test value for both the Summer Season and the Winter

Season. If a unit has a greater Net Generating Capability for the Winter Season than for the Summer Season, a separate Capability Test will need to be performed during the Winter Season to claim the higher Net Generating Capability value.

The following requirements must be met for a Thermal Resource Capability Test, documentation of which will be provided to the Program Operator at the time of the FS Submittal Deadline:

1) Summer Capability Tests are to be conducted during a time when the ambient dry-bulb temperature is no more than 10 degrees Fahrenheit below the station ASHRAE Rated Ambient Temperature. At the time of testing, the most recent version of the ASHRAE Fundamentals Handbook shall be utilized. If the dry-bulb temperature exceeds 10 degrees below the ASHRAE Rated Ambient Temperature, a penalty of 5% plus an additional 0.5% per degree for each additional degree below 10 degrees, up to 20 degrees, will be applied to the Capability Test result. A summer Capability Test shall not be performed below 20 degrees of the ASHRAE Rated Ambient Temperature. There is no ambient temperature requirement for Winter Capability Tests.
2) The unit shall be brought to the desired test load and allowed to stabilize. Once the test period has begun, only minor changes in unit controls shall be made as required to maintain the unit in normal, steady-state operation.
3) The unit capability shall be determined separately for each generating unit in a power plant where the input to the prime mover of the unit is independent of the others. Units that are aggregated into a single Resource Registration and prefer testing aligned with their registered resource and/or are dependent upon common systems (i.e., fuel, steam supply, auxiliary equipment, transmission, etc.) which restrict total output shall be tested simultaneously. Each unit shall be assigned an individual capability by apportioning the combined capability among the units.
4) The fuel used during testing shall be the type expected to be used during peak load conditions.
5) The capability of a unit or plant obtained through non-typical operation (i.e., bypassing feedwater heaters, varying steam conditions, alternate control mode, etc.) is acceptable.

3.4.2.2 Capability Testing of Long Duration Storage Resources

Capability Tests for Long Duration Storage resources are used as the base accredited value to which UCAP calculations are applied (See Section 4.2) to determine final QCC values. A Long Duration Storage resource that is not subject to generator testing requirements (i.e., are not subject to NERC MOD-025 requirements) may have its QCC

values determined in accordance with Section 4.2, Option 1, in lieu of performing the Capability Test. There are no temperature or timing requirements on the Long Duration Storage Capability Test, other than the five-Year frequency.

1) The unit shall be brought to the desired test load and allowed to stabilize. Once the test period has begun, only minor changes in unit controls shall be made as required to maintain the unit in normal, steady-state operation.
2) The unit capability shall be determined separately for each generating unit in a plant where the input to the prime mover of the unit is independent of the others. Units that are aggregated into a single Resource Registration and prefer testing aligned with their registered resource and/or are dependent upon common systems (i.e., fuel, steam supply, auxiliary equipment, transmission, etc.) which restrict total output shall be tested simultaneously. Each unit shall be assigned an individual capability by apportioning the combined capability among the units.
3) The fuel used during testing shall be the type expected to be used during peak load conditions.
4) The capability of a unit or plant obtained through non-typical operation (i.e., bypassing feedwater heaters, varying steam conditions, alternate control mode, etc.) is acceptable.

3.4.2.3 Capability Testing of Demand Response Programs

A Capability Test for a Demand Response (DR) program registered as a Qualifying Resource will be used to confirm the claimed maximum load reduction capability of the DR program~~, as well as the claimed duration of the load reduction (up to five hours)~~. Capacity testing of the DR program will consist of a sustained reduction in load attributable to the deployment of the controllable and dispatchable program by the Participant for:

- the maximum number of hours per day for Demand Response Capacity Resources with a daily hourly dispatch limit; or
- one hour, for Demand Response Capacity Resources with a weekly or monthly hourly dispatch dispatch limit. ~~up to five hours.~~

If a DR program fails to achieve the claimed load reduction capability and duration during the Capability Test, the DR program's QCC will be determined using the tested values instead. If the DR resource has a higher capacity value in one of the two Binding Seasons, the Capability Test must be conducted during the Binding Season with the higher capacity value; the DR resource does not need to be re-tested during the season

with a lower capacity value. There are no temperature requirements for the DR ~~Capacity~~ Capability Test.

As noted in Section 4.6, new DR programs, or the newly expanded portion of a DR program, will be assigned a QCC of 50% of the expected capability. If the Participant desires a higher QCC than 50% of the expected capability, Participant may conduct a Capability Test outside of the expected peak season of the DR program. Testing outside of the peak season will only be considered a Capability Test during the first Year of operation or during the expansion of an existing DR program. An Operational Test shall then be performed during the upcoming Binding Season and reported to the Program Operator (see Section 3.4.3.6).

3.4.2.4 Forced Outages Affecting Capability Testing

If a unit is due for a Capability Test, but unable to perform the Capability Test due to a forced outage, a maintenance outage, or a forced de-rate, the most current Capability Test results may be used, provided it is used only for the immediately succeeding Summer Season and Winter Season. The unit will be required to perform an Operational Test per the Operational Testing~~Operational Testing~~ procedures (Section 3.4.3) before the next Summer Season. For example, if a unit enters a forced outage while performing a Capability Test and the repair for the unit cannot be completed until after the Summer Season, then when the unit is repaired, an Operational Test must be completed. In that case, the previous Capability Test will be used to satisfy the generator testing requirements for the upcoming Summer Season FS submittal. A Capability Test must be performed in the next Summer Season for the next FS submittal. If the unit fails to complete the make-up Capability Test, the unit cannot be claimed on the FS Submittal.

3.4.3 Operational Testing

3.4.3.1 Thermal Resources and Long Duration Storage

An Operational Test serves as an annual demonstration of the functional capability of a Qualifying Resource to generate at a high-level of its Net Generating Capability in the upcoming Binding Season. This test must be completed in the 12-Month period prior to the FS Submittal due date and can be conducted within or outside of a Binding Season (at Participant's discretion). Test data shall be compiled and submitted via the FS Submittal process, as outlined in *BPM 108 Forward Showing Submittal*. The Operational Test must be conducted at a minimum of 90% of the Summer Net Generating Capability. The Operational Test shall be conducted for a minimum of one hour, and for Thermal Resources there are no Rated Ambient Temperature requirements for Operational Tests. Any hour with the unit operating at or above 90% of the Net Generating Capability may be deemed a successful Operational Test. In case of failure

to meet 90% of the Net Generating Capability, the resource can only claim what it can achieve on the Operational Test (to which the UCAP calculations are applied – see Section 4.2) for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.2 Storage Hydro Resources

An Operational Test serves as a verification that the resource can meet its QCC values on a plant-level basis as determined by the Storage Hydro QCC methodology. This test must be completed in the 12-Month period directly prior to the FS Submittal due date and can be conducted within or outside a Binding Season (at Participant's discretion). Test data shall be compiled and submitted via the FS Submittal process, as outlined in *BPM 108 Forward Showing Submittal*. The Operational Test must achieve a minimum of 90% of the plant's highest monthly QCC value from the FS Submittal being submitted. The Operational Test shall be conducted for a minimum of one hour and there are no Rated Ambient Temperature requirements for Operational Tests. Any hour with the plant operating at or above 90% of the highest monthly QCC submitted for the current and previous Binding Season may be deemed a successful Operational Test. In case of failure to meet 90% of the highest monthly QCC, the resource can claim no more than what it achieved on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

Given that the Operational Test can be performed on any hour in a 12-Month period, the Operational Test should be scheduled (or re-scheduled) for a time when outages/de-rates are not occurring. If one or more units were on outage or de-rated at the time of the Operational Test, in order to claim the full QCC value provided by the Storage Hydro QCC methodology, the Participant shall:

1) Demonstrate that the unit(s) out/de-rated at the time of the Operational Test were offline/de-rated for more than 90 consecutive days of the 12 Months preceding the FS Submittal due date.
2) Demonstrate that the unit was out/de-rated for the entirety of one of the Months with the three highest monthly QCC values for the plant.
3) Provide operational data demonstrating the unit(s) performance on any hour within the 12 Months preceding the FS Submittal due date, or within the Cure Period.
4) Add the sustained hour-long operational value from the hour identified in (3) to the Operational Test values.

If 90% of the highest monthly QCC value cannot be achieved after this addition, the Participant can claim no more than the Operational Test (after the addition in (4) above) for any Month's QCC value.

3.4.3.3 ESRs

Operational Tests for ESRs should at least be conducted for the claimed duration of the device – i.e., two-hour, four-hour, etc. An ESR must be able to achieve its full QCC as determined in the QCC process for ESRs.

3.4.3.4 ROR Hydro

Operational Tests shall be conducted at a minimum of 90% of the QCC for either Binding Season. Any hour with the resource operating at or above 90% of the QCC may be deemed a successful Operational Test. In case of failure to meet 90% of the QCC, the resource can only claim what it can achieve on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.5 Wind and Solar Qualifying Resources

Operational Tests shall be conducted at a minimum of 100% of the seasonal QCC for either Binding Season. Any hour with the resource operating at or above 100% of the QCC may be deemed a successful Operational Test. In case of failure to meet 100% of the QCC, the resource can only claim what it can achieve on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.6 Demand Response Resources

An Operational Test will be conducted yearly during the Participant's peak Binding Season and at a minimum of 50% of the DR program's claimed peak load reduction ~~capability~~ (to avoid unnecessary disruption to the Participant's customers). The duration of an Operational Test shall be for a minimum of one hour. In case of failure to meet 50% of the QCC, the resource can only claim what it can achieve on the Operational Test as a peak load reduction input for purposes of determining its QCC for the upcoming FS Submittal as described in Appendix B.

3.4.4 New or Upgraded Resource Operational Testing

For newly installed resources and resources undergoing a physical or operational modification which could impact the Net Generating Capability, design output may be used for the first FS Submittal of the appropriate Binding Season to allow sufficient time for Operational and Capability Tests to be conducted. For resources required to do so, a Capability/Operational Test shall be performed in the Binding Season addressed by such first FS Submittal, in order to establish the new Net Generating Capability for all succeeding Binding Seasons.

3.4.5 Operational Testing for Late Registered Resources

Late Registered resources will be required to submit applicable generator Operational Test reports as required by the resource Fuel Type. If a Participant demonstrates that it has contracted for a resource not previously registered with the WRAP after the

Advance Assessment Data Request deadline for the Binding Season in which capacity is being claimed to meet FS Capacity Requirements, the resource will be treated as if it had tested at 95% of its Installed Capacity. A resource previously registered with the WRAP that does not have any form of generator test results provided will be assumed to have tested at 70% of its Installed Capacity. Resources not owned or operated by a Participant that have test reports provided in a form other than the WRAP format, will be evaluated by the Program Operator and assigned an appropriate testing value based on comparability to testing requirements established in BPM 105; testing reports determined not comparable will be assumed to have tested at 70% of Installed Capacity. If the resource is newly installed or upgraded, the applicable section on new and upgraded resources will be followed.

3.4.6 Provision of Test Reports in the FS Submittal

Test reports will be provided to the Program Operator in the FS Submittal (see *BPM 108 Forward Showing Submittal* for more details). The QCC values for resources will be based on the Capability Tests and/or Operational Tests provided in the FS Submittal.

4. Qualifying Capacity Contribution of Resources

4.1 Background

A resource will not be assigned a Resource QCC or counted toward Portfolio QCC unless it is a Qualifying Resource. Qualifying Resources are those that, before they are included in an FS Submittal, are first registered in the WRAP. A Participant seeking registration of a resource must submit a request for registration providing the resource information described in Section 3.

This section describes the methodology used to assign Resource QCCs to Qualifying Resources when resources are registered through the Advance Assessment based on resource type, as well as when Qualifying Resources of each resource type are registered after the Advance Assessment Data Request deadline (as a late registered resource).

4.2 Thermal or Long Duration Storage Resources

For dispatchable resources that use conventional thermal fuels such as coal, gas, Equivalent Forced Outage Factors (EFOF) biofuel, and nuclear, or Long Duration Storage, the FS Program will use an EFOF methodology to determine the QCC. Accreditation of non-dispatchable Thermal Resources is covered in Section 4.8.2.

The seasonal QCC will be determined for each resource by applying the $EFOF_{CCH}$ to the Net Generating Capability (or Installed Capacity) as determined in Section 3. The

Capacity Critical Hours (CCH)[3] will be used to determine the hours to be used in calculating the EFOF for each resource. The $EFOF_{CCH}$ calculation, as set forth in the formula in Section 4.2.1 below, will be performed for each Year of the most recent six-Year historical look-back period. The equivalent outage factor is calculated by removing the worst performing Year (for each Summer and Winter Season) and then taking an average of the remaining five Years of data. The final calculated $EFOF_{CCH}$ will be applied to the Net Generating Capability to calculate the QCC amount for the thermal generator for the entire Binding Season.

Planned outages and any outage properly reported as "outside management control" are not included in $EFOF_{CCH}$ calculations[4].

For resources new to the FS Program that do not have sufficient data over the historical period used for determining a QCC, class average data for resources of similar size will be used.

4.2.1 $EFOF_{CCH}$ Equation

$$EFOF(CCH) = 1 - \frac{\sum FOH_{CCH} + EFDH_{CCH}}{total_{CCH}} * 100\%$$

Where:

FOH_{CCH} is Forced Outage Hours occurring on CCH,

$EFDH_{CCH}$ is Equivalent Forced Derating Hours occurring on CCH, and

$Total_{CCH}$ is total number of CCH for the timeframe of interest.

Definitions of FOH_{CCH} and $EFDH_{CCH}$ can be found in Table 4~~Table 4~~.

Table 4. Definitions of FOH and EFDH

Definitions	
FOH_{CCH}	Sum of all CCH experienced during Forced Outages (U1, U2, and U3) + Startup Failures[5].

[3] CCH are calculated in accordance with *BPM 104 Capacity Critical Hours.*

[4] https://www.nerc.com/pa/RAPA/gads/Pages/Data%20Reporting%20Instructions.aspx

[5] See NERC GADS reporting instructions at https://www.nerc.com/pa/RAPA/gads/DataReportingInstructions/GADS_DRI_2023.pdf

Definitions	
$EFDH_{CCH}$	Each forced derating (D1, D2, and D3)[6] transformed into equivalent full outage hour(s). This is calculated by multiplying the actual duration of the derating (hours) by the size of the reduction (MW) and dividing by the net maximum capacity. These equivalent hour(s) are then summed by CCH. $$\frac{\textit{Derating Hours} * \textit{Size of Reduction}}{\textit{Net Maximum Capacity}}$$

Additional Thermal QCC calculation considerations:

- Calculation is performed for each resource seasonally and for each historical Year. QCC will be assigned to each resource for the entire Binding Season.
- Six Years of data will be used for the calculation. The worst performing Winter Season and the worst performing Summer Season will be removed from the calculations, allowing for a five-Year average.
- Only forced outages or de-rates occurring during CCHs will be used to calculate QCC. Outages during hours that are not deemed to be capacity critical will not negatively impact QCC.
- All Years (of the five Years) will have equal weighting.
- Outside of Management Control outages as reported under NERC GADS Appendix K[7] (or equivalent) will be excluded from the calculation.
- For Participants relying on resource specific transactions external to the FS Program, those Qualified Resources will follow the same QCC calculation for Thermal Resources and the Participant will be responsible to make sure the information is provided to the Program Operator.
- The Program Operator will break out each event by hour. If the NERC GADS (or equivalent) data is reported in minutes, then the hour that contains the outage

[6] Ibid.

[7] Appendix K of NERC GADS: https://www.nerc.com/globalassets/programs/rapa/gads/conventional/appendix_k_outside_management_control_2024_dri.pdf

will be equalized to account for the minutes. For example: if an outage starts on June 1, 2020 at 4:25 PPT, then the hour duration for that hour will be less than one since the outage does not start at the top of the hour. The total hours for June 1, 2020 on hour beginning 4:00 PPT would be 0.583 *([60 Minutes – 25 minutes] / 60 minutes in an hour).*

- Diversity of time zones will be considered. Participants are required to list the time zone that is appropriate for their respective data.
- When comparing the event hours to the CCH hour identification should be consistent.

4.2.2 Late Registered Thermal Resources

If a Participant seeks to claim capacity from a Thermal Resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options (described generally in Section 3.2), choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question, in which case the resource will be permitted to use the class average QCC for Thermal Resources in the program; or
2) Claim a decremented QCC of 70% of the class average for Thermal Resources in the program.

4.2.3 Thermal Resources That Are Not Required to Report GADS Data

Certain Thermal Resources are not required to report GADS data. GADS data applies to generator owners who are NERC registered with Qualified Resources that are 1) connected to the Bulk Electric System and 2) are synchronous machines of 20MVA or larger, or distributed generation facilities of 75MVA or larger. Smaller Qualified Resources interconnected to the power system as well as behind the meter resources may not be required to report GADS data. For these Qualified Resources, the Participant will have two options to pursue in order to have QCC determined.

Option 1 – Historical Output. The first option will determine QCC based on the monthly average performance of such resource during CCH. The Participant will provide 10 Years of historical hourly dispatch data. This data will be provided with the data submittal (see *BPM 101 Advance Assessment*). A workbook posted on the WPP website that contains the latest set of CCH will allow the Participant to calculate their QCC for the FS Submittal. The workbook will allow the

Participant to calculate the QCC values taking the average of the facility output during the CCH. If less than 10 Years of historical data is available for use in determining the QCC, the Program Operator will utilize the methodology described in Section 4.8.2.

Option 2 – Historical Outage Evaluation – The second option will determine QCC based on the monthly outage records provided by the Participant for the resource in question. A workbook detailing what outage information is required for a QCC calculation can be found on the WPP website. The Participant will provide five Years of outage information as provided in the workbook. The Program Operator will determine the QCC of the resource in question using a methodology similar to the $EFOF_{CCH}$ methodology applied to all Thermal Resources.

For all Qualified Resources not providing GADS reporting data, the Participant will be required to provide an attestation (provided in *BPM 108 Forward Showing Submittal*) attesting that the resource is not subject to GADS reporting and the workbooks submitted by the Participant are an accurate depiction of either the historical performance or historical outage data of the resource.

4.3 Variable Energy Resources

The QCC for Variable Energy Resources (VERs), including but not limited to wind and solar resources, will be determined for each Month of the Binding Season through the use of an Effective Load Carrying Capability (ELCC) analysis and a subsequent allocation process. Each Binding Season will have its own ELCC analysis performed during the Advance Assessment and each resource will be assigned a new QCC in advance of each Binding Season. Each Binding Season's ELCC analysis will have a scope document that will detail the study.

4.3.1 Source Data for Resources Under Study

In accordance with Section 3 and the Advance Assessment data submittal described in *BPM 101 Advance Assessement*, the Participant will submit historical output data for wind and solar resources that are requested to have QCC determined. A Participant must submit three and may submit up to 10 Years of historical output data for wind and solar resources.

For newer resources that do not have 10 Years of operational data and historical output, the Participant may provide engineering data from the wind or solar plant operator. The Program Operator will evaluate the data provided and determine its

usefulness in the ELCC process. The engineering data will need to provide synthesized outputs for the facility for at least the most recent three Years of historical conditions. Otherwise, the Program Operator will use either synthesized data or average output data of other VER resources in the appropriate VER Zone.

4.3.2 Late Registered VERs

If a Participant seeks to claim capacity from a VER not registered at the time of the Advance Assessment Data Request, the Participant may use options for late registering a resource, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and claim the average ELCC of the VER Zone in which the resource is located, or
2) Claim a decremented QCC of 70% the average ELCC in the VER Zone in which the resource is located.

4.3.3 ELCC Study Process

The ELCC will be determined for the VERs in the WRAP Region. The ELCC study will consist of analyses utilizing Loss of Load Expectation (LOLE) metrics to determine the capacity provided by the VERs being analyzed. The LOLE benchmark metric to be used in the ELCC accreditation study will be a one event in 10-Year threshold.The ELCC of VERs will be calculated first on a seasonal basis then later prorated to a monthly QCC value. For the ELCC study, loss of load events will be tabulated during the Binding Season months for determination of the 1-in-10 LOLE. Loss of load events that occur outside of the Binding Season months will not go into the calculation of the capacity value of VERs. Pure Capacity will be applied to the simulation process to derive the 0.1 Day per Year reliability threshold. If the resulting LOLE is greater than the 0.1 Day per Year threshold, Pure Capacity will be added until the 0.1 threshold is achieved. If LOLE is less than the 0.1 Day per Year threshold, negative Pure Capacity will be added until the 0.1 threshold is achieved. The VER of interest will be excluded from the benchmark system. All other VER types will be included. For example, if the wind resource type is being analyzed, only wind will be excluded from the benchmark system.

The capacity calculated is designated in Figure 1 as Pure Capacity 1.

Figure 1. Diagram of system without renewable resources.

Next, a LOLE value for all wind generating resources will be determined, repeating the steps described previously. The Pure Capacity value calculated is designated in Figure 2~~Figure 2~~ as Pure Capacity 2.

Figure 2. Diagram of system with renewable resources.

The difference between the results of these two steps is considered the ELCC QCC value of the resources being studied.

$$ELCC\ of\ VER\ (under\ study) = Pure\ Capacity\ 1 - Pure\ Capacity\ 2$$

These processes are repeated to determine QCC for all weather Years that are studied. This process is repeated for summer and winter separately.

Zonal shapes have been developed for the LOLE study based on facility locations in each VER Zone and correlated wind and solar activity with temperatures in those VER Zones dating back to 1980. The ELCC study will be performed using the synthetic shapes dating back to 1980, which are also used in the LOLE studies. The data provided by the Participants will be used in the establishment of the synthetic shapes and used in the allocation process for establishing the QCC of each VER resource as later outlined in Section 4.3.5.

The Program Operator will conduct the ELCC study by performing probabilistic simulations in a manner that resources in the WRAP Region will be randomly forced out of service during each hour of the study. Each simulation accounts for a different

variation of forced outages and load uncertainty for all hours of the Year, similar to the LOLE study utilized to establish the FS Planning Reserve Margin.

4.3.4 Determination of ELCC Within VER Zones

The ELCC study will determine the amount of capacity provided by all VERs (of the specified type, e.g., wind) analyzed in the WRAP Region. The FS Program will employ the VER Zones for each VER type set forth inSection 4.3.6, as they may be revised from time to time. Each VER of a given type will be assigned to one of the VER Zones for that type. ELCC studies will be performed for each VER Zone (and VER type), calculating a total capacity value for the resource of interest in that zone. The capacity calculated for each VER Zone will be allocated to VERs of that type in that zone on a pro-rata basis.

4.3.5 Determination of System Wide ELCC and Allocation to Individual VER Zones

To avoid over-accreditation of VERs the Program Operator will conduct an ELCC study of the entire WRAP Region and calculate a total capacity value for all VERs in the WRAP Region. Additionally, all ESRs in a Subregion will be studied together. After all VER Zone capacity totals (for each VER type) and the capacity totals of ESRs in each Subregion have been determined, the sum of the VER Zone and ESR Subregion totals will be compared to the regional VER plus ESR total. If the sum of the VER Zones and ESR Subregion is greater than the regional total, all VER Zone and ESR Subregion totals will be scaled down until the totals match the regional total. Table 5~~ Table 5~~ provides an example of the calculations to determine total VER capacity.

Table 5. Example[8] ELCC Study of WRAP Region to Calculate Total Capacity.

A study of two wind zones and two solar zones reveals the following capacity values for each zone:				
Wind Zone 1	Wind Zone 2	Solar Zone 1	Solar Zone 2	Total
1,000 MW	800 MW	700 MW	1,000 MW	3,500 MW
A study of the region reveals the following capacity value for the **region's** wind and solar:				
Regional VERs				
The zones will be recalculated as follows:				
Wind Zone 1	Wind Zone 2	Solar Zone 1	Solar Zone 2	Total

[8] These examples are strictly illustrative, and do not set or limit any actual ELCC study results.

1,000 * (3,200/3,500)	800 * (3,200/3,500)	700 * (3,200/3,500)	1,000 * (3,200/3,500)	
914 MW	732 MW	640 MW	914 MW	3,200 MW

ESRs, which are discussed in more detail below (Section 4.4), are also included in the system ELCC allocation and study.

4.3.6 VER Zones for Wind and Solar

WPP has established separate VER Zones for wind resources and solar resources, as shown, respectively, in Figure 3 and Figure 4.

Figure 3. Wind VER Zones

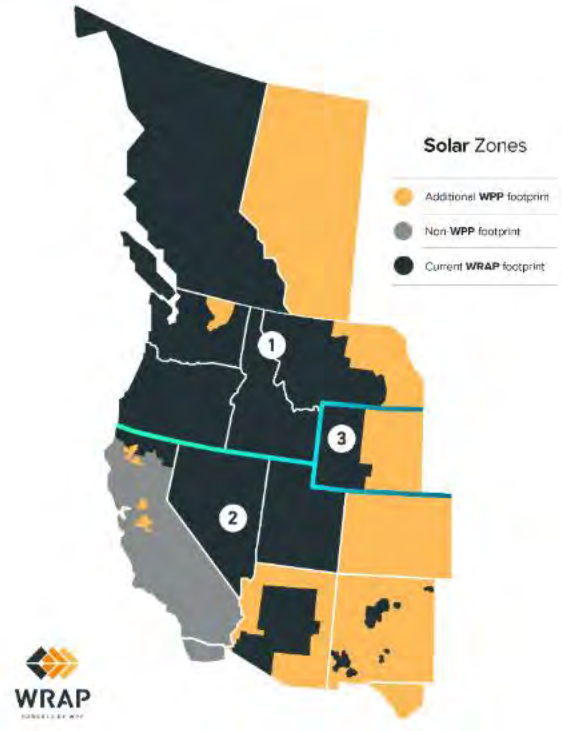

Figure 4. Solar VER Zones

4.3.7 Allocation of VER ELCC

4.3.7.1 Allocation of System Wide ELCC On a Resource Basis

Once the ELCC has been determined for each VER Zone for each Binding Season, two additional calculations must occur. The first step, which will occur before the system ELCC adjustment, takes the ELCC seasonal values for each VER Zone and converts them to a monthly basis for monthly QCC. Monthly QCC values for each VER Zone will be calculated by shaping the seasonal ELCC value in accordance with aggregate performance of all resources in the VER Zone during the CCH. Months that have higher resource performance during the CCH will be allocated a higher portion of the ELCC across the Binding Season. The QCC of each Month will average to the seasonal ELCC value. An example is given below in Table 6~~Table 6~~.

Table 6. Example[9] Monthly QCC Calculation for Wind VER Zone

		Summer Season			
		June	July	Aug	Sept
Average Production on CCH per Month	Calculated from historical performance data from wind in this VER Zone on a monthly basis	120MW	95MW	90MW	130MW
Average Production on CCH Across Season	Calculated from historical performance data from wind in this VER Zone on a seasonal basis	108.75MW			
Monthly Multiplier	Divides each Month's production on CCH by the seasonal average	110%	87%	83%	120%
Seasonal ELCC	Value resulting from ELCC study	100MW			
Monthly QCC	Multiplies the monthly multiplier by the seasonal ELCC value	110MW	87MW	83MW	120MW

The monthly QCC values for each VER Zone are then used to determine the system ELCC value discussed in the section above.

The second step, which occurs after the system ELCC adjustment, will allocate the monthly QCC values to each resource based on the individual resource's performance during the CCH.

$$\textit{Resource ELCC} = \textit{Monthly ELCC MW} * \left(\frac{\textit{Resource average hourly net power output on top 5\% of net load hours (CCH)}}{\textit{Zone total average hourly net power output on top 5\% of net load hours (CCH)}}\right)$$

4.3.7.2 QCC Allocations for VERs with Three Years or More of Operational Data

To allocate the ELCC MW to each resource, the Program Operator will utilize the historical hourly data for each resource provided by the Participant. For resources that have at least three Years of actual historical data, or at least three Years of engineered data for newer resources, the Program Operator will utilize the most recent three Years

[9] These examples are strictly illustrative, and do not set or limit any actual ELCC study results.

(up to 10 Years) of data when determining the resource's average hourly net power output.

4.3.7.3 QCC Allocations for New VERs or VERs with less than Three Years of Operational Data

The Program Operator will utilize the following method for newer VERs when determining the historical average hourly net power output:

1) No less than three Years will be utilized; and
2) A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a) Manufacturer's engineering or performance data and actual weather (preferably from on-site, but not from outside of 50-mile radius); or
    b) Historical performance of similar resources within a 50-mile radius.
3) If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource will receive an ELCC value equal to the product of a calculated class average ELCC percentage times the nameplate capacity of the resource at issue. The Program Operator will use the synthesized wind output shape for the appropriate VER Zone to determine the class average ELCC percentage.

As actual data is accrued, it will replace synthesized data as it becomes available (e.g., one Year of actuals plus two Years of synthesized; two Years actuals plus one Year synthesized, then eventually three Years of actuals). Once a new or repowered facility has a full Year of operational data the synthesized data for Years two and three will be evaluated for reasonableness. If the synthesized data significantly understated or overstated the forecasted generation of the resource, the Year two and three synthesized data will be adjusted by the Program Operator accordingly.

4.3.7.4 Determination of ELCC for Future VERs

It is understood that as VERs are added to a system, the capacity value provided by all similar VERs as a function of the nameplate value of those resources will decrease. It therefore becomes important for Participants to have an understanding of how VER QCC values may change over time as the penetration of similar VERs increases.

After the QCC values of all existing and near-term planned VERs have been calculated and allocated, additional ELCC studies will be performed to account for future VERs of each type. These additional wind and solar resource amounts will be created by scaling up the number of wind turbines (nameplate capacity) or solar photovoltaic panels in each VER Zone. The Program Operator will provide an ELCC curve, useful for guidance purposes on a strictly non-binding basis, that can be used to estimate future capacity

values for new resources dependent upon the penetration of resources in that VER Zone.

4.4 Energy Storage

The QCC for ESRs will be determined using the same general ELCC methodology used for wind and solar resources (see Section 4.3) with any specific differences being highlighted in this section and will be limited to ESRs that have the capability to store energy equal to or greater than the energy output by the ESR over four continuous hours (or longer) of operation. The ELCC study for each Binding Season will have a scope document that details the analysis. ESRs with eight-hour or longer durations are considered Long Duration Storage (Section 4.2).

ESRs will be modeled as energy limited devices that will charge and discharge in accordance with their equipment specifications. ESRs will be modeled to charge and discharge in a preserve reliability mode, which means they will only be discharged to mitigate potential loss of load when there is a lack of other resources available to serve load.

4.4.1 ESR with Four- to Eight-Hour Rating

Based on the four-hour minimum continuous time duration requirement, four-hour ESR or ESRs with longer duration ratings will receive QCC values based on the four-hour curve for the ESR penetration level of all ESRs on the system at the time of the ELCC assessment.

4.4.2 ESR with Rating Less than Four Hours

Based on the four-hour minimum continuous time duration requirement, ESRs with ratings less than four hours will receive QCC values based on the four-hour curve for the ESR penetration level of all ESRs on the system at the time of the ELCC assessment. For example, two-hour rated ESRs would receive no more than 50% QCC value of a four-hour ESR with the same maximum output.

4.4.3 Allocation of ELCC for ESRs

All ESRs in a WRAP defined Subregion will be studied together. All ESRs within a Subregion will receive the average ELCC value of ESRs with a four-hour rating in that Subregion, subject to the limitations outlined in Section 4.4.2. To ensure that over-accreditation of ESRs does not occur, ESRs will be included in the ELCC study of all VERs of the WRAP Region and a total combined capacity value for all VERs and ESRs in the WRAP Region will be calculated. After all ESR Subregions and VER Zone capacity totals have been determined, the sum of the VER Zone and ESR Subregion totals will be compared to the WRAP Region VER total. If the sum of the VER Zones and ESR

Subregion is greater than the regional total, all VER Zone and ESR Subregion totals will be scaled down until the totals match the regional total.

4.4.4 Late Registered ESRs

If a Participant seeks to claim capacity from an ESR not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options (described generally in Section 3.2), choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question, in which case the resource will be permitted to use the class average QCC for the ESRs within the Subregion; or
2) Claim a decremented QCC of 70% of the class average for ESRs in the Subregion.

4.5 Hybrid Facilities

Hybrid Facilities are resources that have at least two different fuels or technologies at a common location where one of those resources is an ESR. The QCC for hybrid resources will be determined by applying the appropriate methodology to each component of the facility and summing them and capping the total at the interconnection limit. While hybrid resources are modeled as they would operate in the LOLE study, determining QCC for combined hybrid resource is not performed due to the inability to perform ELCC analysis for similar type resources.

4.6 Demand Response

DR can be utilized as a Qualifying Resource if it is greater than 1 MW in aggregate (see Section 3.3) and can be demonstrated to be controllable and dispatchable by the Participant or host utility. DR programs that register as Qualifying Resources will ~~be assigned a seasonal~~ have monthly QCC values calculated by the Participant per the methodology in Appendix B – Qualifying Capacity Contribution of Demand Response Capacity Resources ~~(one value for each Binding Season)~~ and will need to meet testing criteria and demonstrate load reduction as described in ~~(see~~ Section 3.4.2.3) ~~for a period of up to five continuous hours. A DR program may be able to demonstrate load reduction for a period beyond five continuous hours, but cannot receive QCC above 100% of what is demonstrated for the five hour duration. Programs that are not able to provide five hours of load reduction will have their load reduction prorated over the course of five hours for the determination of QCC value.~~ DR prorgram QCC results will be provided to the Program Operator for review. The Program Operator may ask the Participant for information from the DR QCC methodology, subject to limitations described in the Tariff, as part of the verification and validation process. Participants

registering a DR Qualifying Resource must either i) demonstrate that the DR program was not operated historically and has therefore not impacted the Historical Load Data provided by the Participant for determination of their P50 load value, or ii) provide historical information about the operations of the DR program such that the load reduction impacts of the DR program can be removed from the historical data prior to determination of the P50 load value.

~~The QCC value of the DR Qualified Resource is determined by multiplying the maximum load reduction (in MW) the resource is capable of sustaining by the number of hours the resource can demonstrate such sustained load reduction capability (up to five hours, maximum) divided by five.~~

A DR Qualifying Resource will be reflected in the FS Submittal as a Demand Response C~~c~~apacity R~~r~~esource by submitting it as a 'Resource' in the FS Submittal. As with all resources, the monthly QCC values of ~~the~~ DR Qualifying Resources will count toward a Participant meeting its monthly FS Capacity Requirements.

If a DR program does not meet the criteria of a Qualifying Resource, its contribution to ~~the~~ load reduction may be captured in the historical data used to calculate the P50 load in the FS.

4.6.1 New, Expanded, or Late Registered DR Resources

DR programs intended to be used as Qualifying Resources in the first Year of operation or expansion of an existing program or DR programs not registered at the time of the Advance Assessment will be reported at 50% of the expected capability, unless validated by testing the program to 100% of the claimed capability prior to the Binding Season. See the section related to DR testing requirements (within Section 3.4.2) for more information.

4.7 Hydro Resources

4.7.1 Storage Hydro (Also see Appendix A – Qualified Capacity Contribution for Storage Hydro Resources)

QCCs for Storage Hydro resources are calculated by the Participant owners and the results are provided to the Program Operator for review, through the provision of the 'results tab' of the workbook. The Program Operator may ask the Participant for information from the Storage Hydro QCC methodology, subject to limitations described in the Tariff, as part of the verification and validation process. The Storage Hydro QCC methodology is based on the ability of Storage Hydro to maximize output during the CCHs each Day of the historical record, subject to operational limitations and non-power constraints of each plant. Limitations include available water in storage and all constraints that restrict the use of the Net Generating Capability. These constraints

include, but are not limited to, discharge limits, tailrace and forebay elevation limits, and rate of change limits.

The methodology considers each resource's actual generation output, residual generating capability, water in storage, reservoir levels (if applicable), upstream discharge from Cascaded Dual Plants and plant constraints over the most recent 10-Year historical period. The QCC of the Storage Hydro resource is determined using a calculation of how much historical actual generation could have been increased during CCHs by utilizing water in storage each Day to increase generation, while respecting all operating constraints. The QCC is the monthly average of this hypothetical increased generation during the CCHs, for the same Month of the historical record. The resulting QCC is determined as the average contribution to the CCHs for each Winter Season and Summer Season over the previous 10 Years. The Storage Hydro QCC Workbook captures the aforementioned Storage Hydro QCC methodology and is available for use by WRAP Participants. If historical data is not available for 10 Years, a comparable facility may be utilized or some other reasonable approach that provides similar confidence in the computed QCC may be proposed by the Participant and adopted at the discretion of the WPP. The Participant will provide all required detailed data for the plant.

The detailed Storage Hydro QCC methodology can be found in Appendix A – Qualified Capacity Contribution for Storage Hydro Resources~~Appendix A – Qualified Capacity Contribution for Storage Hydro Resources~~.

4.7.1.1 Late Registered Storage Hydro Resources

If a Participant seeks to claim capacity from a Storage Hydro resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and utilize the established Storage Hydro QCC methodology described above, or
2) Claim a decremented QCC of 70% of the average Storage Hydro QCCs in the program.

4.7.2 Run-of-River (ROR) Hydro

ROR Hydro resources will have their QCC determined on the historical performance of the resources during the CCH over the most recent 10-Year period. The data provided by the Participant in the Advance Assessment data submittal (see *BPM 101 Advance Assessment*) will be used for the determination of QCC.

If less than 10 Years of historical data is available for use in determining the QCC of a ROR Hydro plant, the Program Operator will utilize the following method when determining the historical average hourly net power output:

1. No less than three Years will be utilized.
2. A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a. Manufacturer's engineering or performance data;
    b. Actual water conditions (preferably from on-site, but not from a different river); or
    c. Historical performance of similar resources on the same river system.
3. If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource cannot receive a QCC value.

As actual data is accrued, it will replace synthesized data as it becomes available (e.g., one Year of actuals plus two Years of synthesized; two Years actuals plus one Year synthesized, then eventually three Years of actuals). Once a new or repowered facility has a full Year of operational data, the synthesized data for Years two and three will be evaluated for reasonableness. If the synthesized data significantly understated or overstated the forecasted generation of the resource, the Year two and three synthesized data will be adjusted by the Program Operator accordingly.

4.7.2.1 Late Registered ROR Hydro Resources

If a Participant seeks to claim capacity from a ROR Hydro resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and execute the methodology described above for ROR Hydro Resources (for validation by the Program Operator), or
2) Claim a decremented QCC of 70% of the average ROR Hydro QCCs in the program.

4.8 Other Resources

4.8.1 Customer Resources

Resources that are generally located on the customer-side of the meter can be included in the FS Program. To be eligible as a Qualifying Resource, the Customer Resource must 1) be controllable and dispatchable by the Participant or host transmission operator and 2) not have already been used to modify the Participant's Load Forecast (i.e., serving a portion or all of the load not included in Load Forecast). The resource

shall meet testing criteria applicable for resource type and will be awarded a QCC value based on the appropriate methodolgy for the resource type. Customer Resources (behind the meter resources) can be aggregated to the 1 MW requirement to be considered a capacity resource, granted that they are in the same BAA, controllable and dispatchable, and visible to the Ops Program.

4.8.2 Non-Dispatchable, Must Take Resources

For resources that are either i) not dispatchable; or ii) require the purchaser of energy from the resource to take energy as available from such resource, including but not limited to a qualifying facility as defined under the Public Utility Regulatory Policies Act (PURPA), the QCC will be determined based on the monthly average performance of such resource during CCH. The Participant will provide 10 Years of historical hourly dispatch data. This data may be provided within the Advance Assessment data submittal (see *BPM 101 Advance Assessement*) or a workbook found on the WPP website. The workbook will allow the Participant to calculate the QCC values taking the average of the facility output during the CCH.

If less than 10 Years of historical data is available for use in determining the QCC of a non-dispatchable, must take resource, the Program Operator will utilize the methodology described in BPM 105 for the specific resource type. If the resource type is not covered in Sections 4.2 through 4.7 the Program Operator will utilize the following method when determining the historical average hourly net power output:

1. No less than three Years will be utilized.
2. A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a. Manufacturer's engineering or performance data;
    b. Known or historical information about fuel availability;
    c. Known or historical information about unit performance; or
    d. Historical performance characteristics of similar resources.
3. If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource cannot receive a QCC value.

4.8.2.1 Late Registered Non-Dispatchable, Must Take Resources

If a Participant seeks to claim capacity from a non-dispatachable, must take resource not registered at the time of the Advance Assessment Data Request, the Participant will be required to execute the methodology described above for such resource (for validation by the Program Operator).

Appendix A – Qualified Capacity Contribution for Storage Hydro Resources

A.1 Time Period Approach for Summer and Winter Season Requirements

Storage Hydro resources will use a "time period" approach to determine the QCC. A time period approach consists of a historical look-back of the generation output during CCH to determine how much capacity should be expected to be available during high load periods in the future. While this approach is limited to a daily window for determining available capacity, it does establish a common and transparent method for determining the QCC for Storage Hydro Resources.

The following methodology would be used to determine the QCC value using the time period approach described above, and Table A-1~~Table A-1~~ summarizes the resource information required to apply the methodology:

- For each Day found to contain one or more CCHs, the Storage Hydro resource will be evaluated to determine the maximum available capacity for each CCH, based on the conditions of the storage associated with the hydro resource on that Day.
- For each Storage Hydro resource, for each CCH, determine:
    - Maximum generation output during the CCH.
    - Usable water in storage at the end of the CCH.
    - QCC for each hour, which would be the historical generation output plus additional generation for capacity, up to the maximum generation capability (adjusted for reservoir elevation head as applicable), taking into account plant or unit-specific limitations (e.g., units on a common penstock, transformer limitations, etc.) and the resource's Equivalent Demand Forced Outage Rate (EFORd).
    - For calendar days with multiple CCHs, the QCC will be limited to the actual historical generation, plus the usable energy in storage over that Day.Non-power operational constraints that limit the use of energy in storage.

Table A-1. Resource information required to apply the time period methodology for QCC.

Information Needed	Notes
Reservoir Elevation Range	Min and Max – this may be seasonally adjusted.
Reservoir Storage Curve	Indicating volume of water in storage based on the reservoir elevation.
Capacity as a Function of Elevation	Plant maximum capacity at a given forebay elevation.
CCH Adjusted $EFOF_{CCH}$ or Historical Outage Evaluation Equivalent	Historical Forced Outage Factor.
Power as a Function of Discharge	For the "discharge method".
H/K as a Function of Elevation	For the "elevation method".
Hourly Historical Data	– Actual generation – Starting reservoir elevation – Ending reservoir elevation

From the information in Table A-1~~Table A-1~~, the hourly values in Table A-2~~Table A-2~~ can be estimated for each CCH:

Table A-2. Hourly values that can be estimated for each CCH.

Estimated Values	Notes
Actual water in storage	Using the elevation and storage (kcfs or cms) tables.
Additional capacity available beyond the actual generation	Subject to forebay elevation restrictions.
Cumulative additional generation	The running total of the additional generation claimed in each CCH for the Day, used to deplete the elevation of the reservoir to validate the feasibility of using additional capacity in each CCH on each calendar Day.
Hourly QCC	The sum of the actual generation plus the additional capacity available.

The Storage Hydro capacity contribution towards the FS Capacity Requirement is calculated by the resource owner as the simple average of the hourly QCC values in each CCH over the 10 Years studied. These QCC values are averaged over each Month in each Binding Season to determine final monthly QCC values.

A.2 Treatment of Planned Outages

In addition to accounting for forced outages, the UCAP values used in the FS workbooks may (at the Participant's option), be reduced for planned outages. Planned outages that are not included in the UCAP values will need to be planned in a manner similar to Thermal Resources, meaning those planned outages will be taken from the Participant's surplus capacity in excess to the Participant's FS Capacity Requirement.

Table A-3~~Table A-3~~ and Table A-4~~Table A-4~~ below illustrate the QCC calculation over a four-hour consecutive period using the UCAP methodology and the UCAP + planned outages methodology.

Table A-3. Calculating QCC using UCAP = 125 MW.

Consecutive CCHs	Historical Generation	Historical Storage	UCAP (125 MW)	Draft to Maximize Capacity	Storage After Draft	QCC
	MW	MWh	MW	MWh	MWh	MW
1	50	250	125	75	175	125
2	50		125	75	100	125
3	50		125	75	25	125
4	50		125	25	0	75
Storage empty after 25 MW draft				4-hour average		113

Table A-4. Calculating QCC using UCAP + Planned Outages = 100 MW.

Consecutive CCHs	Historical Generation	Historical Storage	UCAP + Planned Outages (100 MW)	Draft to Maximize Capacity	Storage After Draft	QCC
	MW	MWh	MW	MWh	MWh	MW
1	50	250	100	50	200	100
2	50		100	50	150	100
3	50		100	50	100	100
4	50		100	50	50	100
A 25 MW planned outage decreased QCC by 13 MW				4-hour average		100

The four consecutive CCHs in Table A-3~~Table A-3~~ illustrate how the QCC is limited due to insufficient storage. In Table A-4~~Table A-4~~, the UCAP is reduced by a 25 MW planned outage. This reduced capacity requires less draft from storage in CCHs 1-3 to maximize the QCC in those hours. This reduction in draft provides sufficient storage in CCH 4 to maximize the QCC.

For FS purposes, planned outages may be included or excluded in the QCC calculation at the choice of the Participant pursuant to the requirements in Section 16.2.8 of the Tariff.

A.3 Treatment of Non-Power Constraints

Each Participant is asked to review the methodology and incorporate the specific non-power constraints that are applicable to the individual plants, thus reducing the QCC value of each plant to a level that is believed to reflect the plants operational capability for the upcoming Binding Season. This is done through creating additional constraint logic in the spreadsheet that adds current and future non-power constraints to all 10 Years' worth of evaluation.

It is expected that Participants will include such non-power constraints that accurately reflect their forecasted QCC capability, to facilitate reliance on Storage Hydro Resource QCC values in the Operations Program and for other purposes.

A.4 Treatment of Cascaded and Coordinated Hydro Systems

A Cascaded Dual Plant methodology was also developed specifically for cascaded and coordinated hydro systems. For cascaded hydro resources on the same river systems that are operated in a coordinated manner, when determining the QCC, the useable water in storage at the downstream resource could be enhanced by the operations at the upstream resource, thereby maximizing the contribution of the combined cascaded systems. The Cascaded Dual Plant methodology does not attempt to optimize use of the upstream storage to maximize the combined QCC, but it does allow the downstream plant to utilize the discharge from the upstream plant.

A.5 Form To Complete Storage Hydro Resource QCC

The Hydro QCC Workbook will be completed by the Participant. The workbook is located on the WPP website.

Appendix B - Qualified Capacity Contribution for Demand Response Capacity Resources

Demand Response Capacity Resource QCC will be determined based on the monthly average availability of such a resource during the appropriate ten-Year set of CCH subject to the DR program's constraints. The Participant will input the peak load reduction (as determined by a Capability Test) and the DR program's constraints into a workbook located on the WPP website.

The DR QCC workbook includes the following constraints:

- Peak load reduction (MW)
- Blackout functionality that prevents the DR program from contributing to QCC during any identified:
    - Hours of the day;
    - Days of the week;
    - Weeks of the Season; and, or
    - Months of the Season.
- Hourly dispatch limits (non-interactive, i.e. choose one):
    - Daily – maximum number of hours per day
    - Weekly – maximum number of hours per week
    - Monthly – maximum number of hours per month
- Hourly fatigue – if a DR program is called upon in consecutive CCH its peak load reduction can be reduced hour-on-hour, reflecting a customer's potential decreasing willingness to keep adjusting its load down hour after hour (for example, industrial loads).
- Daily fatigue – if a DR program is called upon in consecutive days its peak load reduction can be reduced day-on-day, reflecting customers' potential decreasing willingness to keep adjusting their loads down day after day (for example, aggregated residential DR programs).

The DR QCC workbook will allow the Participant to calculate monthly QCC values taking the average of the DR programs demand reduction availability during CCH subject to, at a minimum, the imposed program-specific constraints listed above. The monthly QCCs of a Participant's Demand Response Capacity Resources can then be used to meet its monthly FS Capacity Requirements along with the QCC of its other resources and contracts.

If a DR program has constraint permutations not captured by the workbook, its contribution to load reduction may be captured in the historical data used to calculate the P50 Peak Load Forecast in the FS.

Western Resource Adequacy Program
ELCC + QCC Task Force

Task Force Proposal
This Proposal has been prepared by the Program Review Committee's 2025 Workplan Task Force 12 – resulting from 2024-CRF-012 and 2024-CRF-026. This Task Force was chartered to develop the Concept on Effective Load Carrying Capability (ELCC) + Qualifying Capacity Contribution (QCC) for Long Duration Storage resources that do not fit into an existing class (aka "ELCC+QCC" Task Force).

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I. Background

a. Overview

The Task Force was convened to review both the ELCC methodology and the QCC methodology for new Long Duration Storage resources that do not fit into an existing resource class. The Task Force decided to bifurcate the two topics, and this proposal addresses the QCC for new Long Duration Storage resources only.

When registering a Long Duration Storage resource through the Advance Assessment process, there is currently a gap for new Long Duration Storage resources that do not fit into an existing resource class. This omission from WRAP policy creates uncertainty for Participants and others as to how or if such a resource can be counted to meet a Participant's Forward Showing Capacity Requirement.

This proposal adds details to Business Practice Manual (BPM) 105 Qualifying Resources to provide instructions on how a Participant may register a new Long Duration Storage resource that does not fit into an existing resource class.

b. Impact

This change allows a Participant to register and obtain a QCC value for a new Long Duration Storage resource (i.e., does not have operational data) and does not fit into an existing resource class.

II. Objectives

The proposed changes align with the original intended treatment of Long Duration Storage resources which did not intentionally exclude new Long Duration Storage resources without operational data. This proposal clarifies and provides details on how to register such resources so they can be used to meet a Participant's Forward Showing Capacity Requirement.

III. Solution

a. Sponsor Proposed Solution

The Change Request Form (CRF) submitted by Form Energy is included as Appendix I.

Through conversation with Form Energy as the CRF sponsor and the Task Force, the Task Force determined a more targeted solution to accrediting new Long Duration Storage resources that do not fit into an existing resource class was preferred.

b. Task Force Solution

When registering a Long Duration Storage resource, the two values needed are: Net Generating Capability (NGC) and Equivalent Forced Outage Factor calculated over Capacity Critical Hours ($EFOF_{CCH}$).

For existing Long Duration Storage resources, the NGC is derived from a Capability Test and the $EFOF_{CCH}$ is calculated by looking at six years of historical data (removing the worst performing year). For new Long Duration Storage resources, BPM 105 Qualifying Resources states that class average data for resources of a similar size will be used.

This leaves a gap for registering new Long Duration Storage resources that do not fit into an existing class. The Task Force proposes the following solution:

NGC – BPM 105 Section 3.4.4 allows for use of synthesized data/design output to determine NCG for the first Binding Season

$EFOF_{CCH}$ – Use synthesized data to calculate $EFOF_{CCH}$. Once actual data becomes available, replace synthesized data with actual data, weighting actual data more heavily than synthesized data.

WRAP currently allows the use of synthesized data in the accreditation of new resources for other resource types, so the Task Force proposes this as a solution based on existing WRAP policy.

In order to weight actual data over synthetic data, the Task Force proposes the following registration mechanics:

Binding Season	**Registration Mechanics**
1st Binding Season	**NGC** – Use design output **$EFOF_{CCH}$** – 5 years of synthesized data
2nd Binding Season	**NGC** – Perform Capability Test before end of Cure Period **$EFOF_{CCH}$** – 5 years of synthesized data
3rd and 4th Binding Seasons	**NGC** – Capability Test **$EFOF_{CCH}$** – 3 years of synthesized data + 1 year actual data: (year 1)x2
5th and 6th Binding Seasons	**NGC** – Capability Test **$EFOF_{CCH}$** – 1 year of synthesized data + 2 years actual data: (years 1 and 2)x2
7th and 8th Binding Seasons	**NGC** – Capability Test **$EFOF_{CCH}$** – 3 years actual data: (year 1)x1 and (years 2 and 3)x2
9th and 10th Binding Seasons	**NGC** – Capability Test **$EFOF_{CCH}$** – 4 years actual data: (year 1, 2, and 3)x1 and (year 4)x2
11th and 12th Binding Seasons	**NGC** – Capability Test **$EFOF_{CCH}$** – 5 years actual data
13th and 14th Binding Seasons	**NGC** – Capability Test **$EFOF_{CCH}$** – 6 years actual data (removing the worst performing year)

c. Proposed Language Updates

Exact changes to BPM 105 are included in the redlines in Appendix II.

IV. Implementation Plan and Feasibility

a. Assumptions

Reasonable synthetic data is available from the resource owner for the WRAP Participant to submit to WRAP.

b. Risks

Heavy reliance on synthetic data and design output for the first year could lead to over/under-accreditation. Due to the time-limited nature of this risk and that it is partially mitigated by weighting actual data more heavily than synthetic data, the Task Force is comfortable with this risk.

c. Schedule for implementation

Once the revised language is approved and adopted, the updated BPM 105 policy will be used for all subsequent Advance Assessment and Forward Showing Submittals.

d. Cost of Implementation

There is no cost to implementation.

e. Program Administrator / Operator Impacts

There are no impacts to the Program Operator or Program Administrator.

Appendix I

V. 2024-CRF-026 / Form Energy / Indicative QCCs

WRAP Area:	**Tarriff Change**:	**Time Score:**
Resource Accreditation	Yes	Medium

Lead Sponsor: Mark Thompson mthompson@formenergy.com	**Co-Sponsor:**

Summary: Establish a process for providing indicative accreditations to new resource types.

Description of the issue:

As utilities determine optimal resources to add to their portfolio to ensure reliability, affordability, and to serve loads in accordance with state policies, it seems likely that emerging resource technologies will be considered. This could include geothermal, hydrogen, long-duration energy storage, multi-day energy storage, or a variety of other technologies. The ability of such resources to bolster resource adequacy, and to count toward compliance with required resource adequacy showings under the WRAP is a significant portion of the value of such resources to utilities.

Under the current WRAP practices, it appears that resource types will not be accredited (i.e. receive a QCC value) until a participant utility shows it owns or has contracted for the resource. (See BPM 105, Section 3.1). With respect to emerging resource technologies, this means that the QCC value of the resource, an important piece of the value of the resource to the utility, cannot be known until the resource has been acquired. And, because the resource is an emerging technology, there may be heightened uncertainty about how an accreditation for a QCC will play out. In short, the accreditation process for emerging resource technologies may lead to a "chicken and egg" scenario, where utilities are hesitant to acquire emerging resources before knowing their QCC, and yet they will not know their QCC until they have acquired the resources. Even though many emerging technologies are focused on trying to solve future challenges of the grid (including resource adequacy and reliability), this conundrum could lead to a situation where beneficial new technologies are not brought to the region's grid or, at the least, such progress may be unnecessarily slowed.

Proposed solution to the issue described:

The WRAP could include a process for emerging resources to be given an "indicative accreditation." Such an accreditation could be provided for emerging technologies where requested by a participant utility, or some number of participants or stakeholders. This indicative accreditation would give participant utilities guidance about the resource adequacy value that would be expected from a resource, which could assist them in evaluating the overall business case for emerging technologies. In order to receive an indicative value, a utility would not have to show ownership or rights to the resource.

Specific document and language you would like changed:

Section 3.1 of BPM 105 sets forth the process by which resource registration occurs, and describes how that leads to an accreditation under the WRAP. This language could be modified to describe that emerging technologies are able to receive an indicative accreditation. Or, it could refer to a new subsection that describes the process for an indicative accreditation.

Suggestion for how language could be updated to address issue:

Section 3.1 could be modified to say, after the first full paragraph, "A Participant may request that a resource receive an indicative accreditation in order to give more clarity to the expected accreditation, or a range of potential accreditations, that such a resource would receive under the program, upon a showing that the resource is an emerging technology, for which the QCC value may be unclear. An indicative accreditation will be provided in accordance with subsection XX.XX." A new section could then describe the process and conditions for receiving an indicative accreditation. This description could include: • Requiring a description of why an indicative accreditation is appropriate and beneficial; • A requirement to provide available information about the resource to allow for a reasonable assessment, along the lines of the information provided for resources that are owned or contracted; • The conditions under which an indicative accreditation will be granted; and • An explanation that the accreditation is indicative only, and not binding or necessarily an accurate assessment of any future accreditation of QCC.
Describe the benefits that will be realized from this change: 1. An indicative accreditation will allow Participant utilities to better understand the value proposition associated with emerging technologies, and would make the process of deploying beneficial new technologies in the region more efficient. Given that many new emerging technologies are intended to benefit reliability and resource adequacy in new and important ways, this will benefit customers and provide utilities with more clarity around their choices as they evaluate what resource to acquire. 2. Providing an indicative accreditation for emerging technologies will also benefit the WRAP program by allowing a process whereby ambiguities or uncertainties can be worked through prior to the time an actual, final QCC must be determined for new resource types.
Any data/information that would characterize the importance of the issue: -

Appendix II

Redlines to BPM 105 – Qualifying Resources are attached here.

WESTERN POWERPOOL

Western Resource Adequacy Program

105 Qualifying Resources

100 – Forward Showing

Revision History

Manual Number	Version	Description	Revised By	Date
105	0.1	RAPC Glance Version	Rebecca Sexton	5/9/2023
105	0.2	Public Comment Version	Rebecca Sexton	6/23/2023
105	0.3	RAPC & PRC Discussion	Rebecca Sexton	8/10/2023
105	0.4	RAPC Endorsement	Rebecca Sexton	8/11/2023
105	0.5	Board Consideration	Rebecca Sexton	8/17/2023
105	1.0	Board Approved	Rebecca Sexton	8/23/2023
105	2.0	2026-Expedited-Proposal-1	Maya McNichol	2/3/2026
105	3.0	Annual BPM Review	Dave Zvareck	3/19/2026
105	4.0	2026-NTFP-02	Dave Zvareck	6/4/2026
105	4.1	Demand Response QCC Task Force Edits	Michael O'Brien	9/15/2026
105	4.2	QCC Task Force Update	Maya McNichol	9/15/2026

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105 Qualifying Resources

1. Introduction

The Qualifying Resources Business Practice Manual (BPM) consists of two sections. The Resource Registration section outlines the processes for Participants to register their Qualifying Resources with the Program Operator to be included in the Advance Assessment to receive a Qualifying Capacity Contribution (QCC). The Qualifying Capacity Contribution of Resources section outlines the processes that the Program Operator will undertake to calculate QCC values for all registered Qualifying Resources.

1.1 Intended Audience

BPM 105 is intended for Western Power Pool (WPP) Western Resource Adequacy Program (WRAP) Participants and other interested individuals or entities. BPM 105 is particularly useful for those individuals that are responsible for their Participant organization's Forward Showing (FS) Submittal and need to ensure that their organization's Qualifying Resources are properly registered, will be included in the Advance Assessment, and will receive QCC values.

1.2 What You Will Find in This Manual

BPM 105 includes two separate Business Practices: 1) Resource Registration and 2) Qualifying Capacity Contribution of Resources.

1.3 Purpose

To provide an overview of resource registration and qualification processes and the process for determining the QCC for Qualified Resources.

1.4 Definitions

All capitalized terms that are not otherwise defined in BPM 105 have their meaning set forth in the Tariff.

Advance Assessment Data Request: As defined in *BPM 101 Advance Assessment*.

ASHRAE Rated Ambient Temperature: The ambient temperature employed for Capability Testing of a resource for the Summer Season, as determined for the resource location on a dry-bulb basis in accordance with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Fundamentals Handbook,[1] Climatic Design Information, Cooling and Dehumidification Design Conditions Appendix using the – "Cooling DB/MCWB 0.4%" values. If the resource is located within 30 miles of the nearest weather station reported in the Handbook, then the temperatures employed for the Rated Ambient Temperature will be those reported for the nearest

[1] ASHRAE Fundamentals Handbook

station. For all other resource locations, the Rated Ambient Temperatures shall be determined by interpolating between those reported for appropriate weather stations using the resource location's latitude and longitude.

Capability Test: The demonstration of capability of certain Qualifying Resources by generating at their rated capability under specified test conditions and test duration.

Cascaded Dual Plant: Two Storage Hydro Qualifying Resources that are on the same river systems and operated in a coordinated manner.

Cure Period: As defined in *BPM 108 Forward Showing Submittal Process*.

Data Request Instruction Manual: As defined in *BPM 101 Advance Assessment*.

Fuel Type: A resource's primary fuel source, such as coal, natural gas, wind, or hydroelectric.

Hybrid Facility: A resource that is composed of two or more resources of different fuel or technology types where one of those resources is an Energy Storage Resource with the same interconnection point.

Hydro QCC Workbook: The workbook that determines the QCC of a Storage Hydro resource(s).

Long Duration Storage: A resource designed to capture energy produced at one time for use at a later time, and capable of sustained delivery for over eight hours (such as pumped Storage Hydro facilities or thermal energy storage devices).

Net Generating Capability: The gross maximum output of a Qualifying Resource reduced by any power used for auxiliary power requirements demonstrated through a Capability Test. May be used interchangeably with Installed Capacity when referencing Thermal Resources.

Operational Test: The annual demonstration of the functional ability of a Qualifying Resource.

2. Background

Participant owned and contracted Qualifying Resources capable of providing capacity may be used to meet a Participant's FS Capacity Requirement. In order to receive a QCC for these Qualifying Resources, a Participant must provide the necessary information and data to the Program Operator. The Program Operator will develop and maintain a registration and certification process for all Qualifying Resources identified

for the FS Program as outlined in BPM 105. BPM 105 does not cover timelines associated with Participants and the Program Operator completing the registration and QCC assessment process. Timelines for registration can be found in *BPM 101 Advance Assessment*.

3. Resource Registration

3.1 Resource Eligibility

A Participant will register all owned resources in its portfolio and all resources acquired in resource specific contracts in order for those resources to receive QCC values, subject to the exceptions described in BPM 105.

Resource registrations, including the appropriate modeling data required by the Program Operator, shall be submitted in accordance with deadlines stated in *BPM 101 Advance Assessment*, relating to the timeline for the Advance Assessment.

Participants shall employ the Advance Assessment Data Request, and the guidance and instructions in the Data Request Instruction Manual for providing resource registration information. The then-effective versions of the Advance Assessment Data Request and the Data Request Instruction Manual are available on the WPP website. The QCC calculations for all Qualified Resources will be updated during each Advance Assessment to be used for the applicable Binding Season.

Resources owned and operated by entities that are not Participants and contracted to Participants with resource specific contracts (i.e., not System Sales or block contracts) must be registered with the Program Operator and provide the necessary data in order for Participants to claim the full QCC from these resources toward their FS Capacity Requirements.

Qualified Resources must be 1 MW minimum to qualify for registration (see Section 3.3). The registration process for all Qualifying Resources, other than Storage Hydro Qualifying Resources, will require, but will not be limited to, provision of the information set forth in Table 1 and Table 2 to the Program Operator, by means of the Advance Assessment Data Request. Registration of Storage Hydro Qualifying Resources will require, but will not be limited to, the provisions of items set forth in Table 3 to the Program Operator, by means of the Advance Assessment Data Request.

3.2 Late Registration of Resources

Resources that are unable to register by the deadline of the Advance Assessment Data Request may still be able to register through the following processes. Such resources may include those owned by Participants or those contracted to Participants with resource specific contracts.

A Participant may register a resource after the Advance Assessment deadline and prior to the FS Submittal Deadline (the process and timeline for submitting the FS Submittal can be found in *BPM 108 Forward Showing Submittal Process* provided the Participant provides the necessary information in Table 1 and Table 2 (or Table 3 for Storage Hydro resources). The QCC that will be allowed for late registered resources will be either the class average of similar resources or will be a discounted QCC based on the circumstances of the data provided as further described in Generator Testing (Section 3.4) and Qualifying Capacity Contribution of Resources (Section 4).

Given that the program has very little information about late registered Qualified Resources, such resources may constitute no more than 10% of the total FS Capacity Requirement for an individual Participant, unless that Participant can demonstrate an increase in the load participating in the WRAP after the Advance Assessment data collection deadline. During the Transition Period, late registered resources may constitute as much as 20% of an individual Participant's total FS Capacity Requirement, unless that Participant can demonstrate an increase in the load participating in the WRAP after the Advance Assessment data collection deadline. In the case of increased load, the Participant may provide late registered resources to meet the FS Capacity Requirement for the additional load, as well as for the load anticipated to participate at the time of the Advance Assessment data collection deadline.

Table 1. Information Required for Resource Registration

Description / Instructions	
Facility Name	Plant name of the resources. If possible, utilize the Energy Information Administration (EIA)-860[2] plant name given for U.S. resources.
Unit ID	The unique generator identification commonly used by plant management. If possible, utilize the EIA-860 Generator ID given for U.S. resources.
Prime Mover	Utilize the predetermined dropdown list of EIA-860 Prime Mover identifiers. For combined cycle resources, a prime mover code must be entered for each generator.
Fuel Type	Utilize the predetermined dropdown list in the workbook of Fuel Types used as the primary energy source to power the generator.

[2] https://www.eia.gov/electricity/data/eia860/

Description / Instructions	
Host Balancing Authority	Provide the Balancing Authority Area (BAA) in which the resource is located.
Ownership or Contracted Percentage for Participant	Enter the percentage of resource capability owned or contracted by the Participant. This should also include the percentage of any power purchase agreement (PPA) where the Participant has fully contracted for the capacity from a facility but would not include a PPA with another Participant. For example, if the Participant has a PPA with a wind developer, solar developer, or city that has local generation for an extended period of time (i.e., 15 Years or life of the facility) then the percentage of the offtake of that facility should be listed here.
Summer Max Capacity or Nameplate (MW)	Provide the generator's Net Generating Capability for the primary energy source. This can be i) the net expected capacity, as determined from a summer Capability Test performed in accordance with the procedures on generator testing, Section 3.4 ii) the EIA-860 nameplate capacity for Wind, Solar, Run-of-River (ROR), and Energy Storage Resources (ESR) located in the U.S. and iii) the nameplate capacity for Wind, Solar, ROR and ESR located outside of the U.S.
Winter Max Capacity or Nameplate (MW)	Provide the generator's Net Generating Capability for the primary energy source. This can be i) the net expected capacity, as determined from a winter Capability Test performed in accordance with the procedures on generator testing, Section 3.4 ii) the EIA-860 nameplate capacity for Wind, Solar, ROR, and ESR located in the U.S. and iii) the nameplate capacity for Wind, Solar, ROR and ESR located outside of the U.S.
In-Service Date Month-Year	Provide the Month and Year of the original in-service date (or commercial operation date) that the resource became operational (if possible, the operating Year used in EIA-860

Description / Instructions	
	should be submitted for all resources within the U.S.). For details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.
Retirement Date Month-Year	Provide the Month and Year for resources that have been either formally announced or marked for retirement.
State or Province	Enter the state acronym where the resource is physically located. For resources in Canada, enter the province.
County	For resources in the U.S., enter the county (or county equivalent) where the resource is located.
Inverter Loading Ratio (Only for Solar and Wind)	For solar and wind resources only, enter the loading ratio of the inverter compared to the nameplate of the resource. As an example, if the nameplate of a solar resource is 150 MW and the inverter is limited to 125 MW (oversizing of solar panels), then the ratio would be 1.2 (150 / 125). If the nameplate of the resource is the same as the inverter, or the loading ratio is not known, the provided loading ratio would be 1.0.
ESR Duration (Only for ESRs)	For ESRs, enter the maximum continuous number of hours for which the ESR can be utilized at its maximum capacity.
Facility Limitation MW (Only for Hybrid Facilities)	For Hybrid Facilities, provide the maximum capability which the combined amount of the component resources can output to the system. This is typically based on the inverter limit before generation is output to the system.
Comments	Enter, if applicable, any additional comments about the submitted information.

Table 2. Additional Information Required for Resource Registration

Description / Instructions
Thermal Resources - North American Electric Reliability Corporation (NERC) Generating Availability Data System (GADS) or equivalent data is required for all Thermal Resources.

For further details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.
Wind, ROR, Solar Resources – hourly output profiles for the last 10 Years or as much as is available. For further details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.

The registration process for all Storage Hydro Qualifying Resources will require, but will not be limited to, the items in Table 3, as follows:

Table 3. Storage Hydro Qualifying Resource Registration

Description / Instructions	
Facility Name	Plant name of the Storage Hydro Qualifying Resource. If possible, utilize the EIA-860 plant name given for U.S. Storage Hydro Qualifying Resources.
Unit ID	The unique generator identification commonly used by plant management. If possible, utilize the EIA-860 Generator ID given for U.S. Storage Hydro Qualifying Resources.
Prime Mover	Utilize the predetermined dropdown list of EIA-860 prime mover identifiers.
Host Balancing Authority	Provide the BAA location of the Storage Hydro Qualifying Resources.
Ownership or Contracted Percentage for Participant	Enter the percentage owned or contracted by the Participant. This should also include the percentage of any PPA where the Participant has fully contracted for the capacity from a facility but would not include a PPA with another Participant.
Individual Monthly QCC (MW)	QCC values by Month (all Months of the Year) for all Storage Hydro Qualifying Resources. The QCC of the Storage Hydro Qualifying Resources is determined by Section 4.
In-Service Date Month-Year	Provide the Month and Year of the original in-service or commercial operation date that the Storage Hydro Qualifying Resource became operational (if possible, the operating Year used in EIA-860 should be submitted for all Storage Hydro Qualifying Resources within the U.S.). For planned Storage Hydro resources, enter the Month and Year the Storage Hydro Qualifying Resource is projected to become operational.
Retirement Date Month-Year	Provide the Month and Year for resources that have been either formally announced or marked for retirement.

Description / Instructions	
State or Province	Enter the state abbreviation where the Storage Hydro Qualifying Resource is physically located. For Storage Hydro Qualifying Resources in Canada, enter the province.
County	For Storage Hydro Qualifying Resources in the U.S., enter the county (or county equivalent) where the Storage Hydro Qualifying Resource is located.
Comments	Enter, if applicable, any additional comments about the submitted information.

3.3 Qualifying Resource Aggregation (Resources <1 MW)

Qualifying Resources that are less than 1 MW in size may be aggregated to obtain the minimum 1 MW registration requirement.

Qualifying Resources that are aggregated will need to have a common injection point of capacity to the transmission system. Aggregations of generators at different distribution substations may be allowed provided the generators are in the same BAA, same zone (as applicable by resource type), and are the same resource type.

For Qualifying Resources that are requested to be aggregated, the following information should be provided to the Program Operator.

- For the aggregated facility:
  - Quantity of generators being aggregated.
  - Combined nameplate of generators being aggregated.
  - One-line diagram of the transmission/distribution system at which the generators are located.
- For each generator being aggregated:
  - Nameplate.
  - Location of power injection to the transmission system (substation).
  - Supporting information for QCC evaluation.

This information will be provided to the Program Operator during the Advance Assessment Data Request submission.

3.4 Generator Testing

3.4.1 Background

Qualifying Resources must have Capability Tests and Operational Tests performed and provided by the Participant, as applicable and in accordance with the guidelines contained in BPM 105. Capability Tests will be required for resources as detailed below.

3.4.2 Capability Testing

Capability Tests will be required for Thermal Resources, Long Duration Storage resources, and Demand Response resources (as defined in BPM 105) with exceptions as noted in this section.

For units that are required to perform Capability Tests, the Participant may choose whether to use Capability Tests on a unit-by-unit basis or on a plant-level basis; regardless of the approach, all units requiring a QCC must be tested (see bullet 3 below). Capability Test duration shall be a minimum of one hour. Once a qualifying Capability Test is submitted to the Program Operator by the FS Submittal Deadline, the five-Year submittal window will be reset. The Capability Test may be performed at the convenience of the Participant and can be completed more often than every five Years. The most recent testing data will be used to determine a generator's QCC if a Capabilty Test is performed between the Advance Assessment and the FS Submittal.

For Storage Hydro, ROR Hydro, Wind, Solar, and ESR, the annual Operational Test will suffice as the Capability Test.

3.4.2.1 Capability Test Requirements for Thermal Resources

Capability Tests conducted for Thermal Resources are used as the base accredited value to which Unforced Capacity (UCAP) calculations are applied (see Section 4.2) to determine final QCC values. A Thermal Resource that is not subject to generator testing requirements (i.e., are not subject to NERC MOD-025 requirements) may have its QCC values determined in accordance with Section 4.2, Option 1, in lieu of performing the Capability Test.

Capability Tests for Thermal Resources will be performed during the Summer Season and must meet the testing requirements specified in BPM 105. A resource may use its Summer Season Capability Test value for both the Summer Season and the Winter Season. If a unit has a greater Net Generating Capability for the Winter Season than for the Summer Season, a separate Capability Test will need to be performed during the Winter Season to claim the higher Net Generating Capability value.

The following requirements must be met for a Thermal Resource Capability Test, documentation of which will be provided to the Program Operator at the time of the FS Submittal Deadline:

1) Summer Capability Tests are to be conducted during a time when the ambient dry-bulb temperature is no more than 10 degrees Fahrenheit below the station ASHRAE Rated Ambient Temperature. At the time of testing, the most recent version of the ASHRAE Fundamentals Handbook shall be utilized. If the dry-bulb

temperature exceeds 10 degrees below the ASHRAE Rated Ambient Temperature, a penalty of 5% plus an additional 0.5% per degree for each additional degree below 10 degrees, up to 20 degrees, will be applied to the Capability Test result. A summer Capability Test shall not be performed below 20 degrees of the ASHRAE Rated Ambient Temperature. There is no ambient temperature requirement for Winter Capability Tests.

2) The unit shall be brought to the desired test load and allowed to stabilize. Once the test period has begun, only minor changes in unit controls shall be made as required to maintain the unit in normal, steady-state operation.
3) The unit capability shall be determined separately for each generating unit in a power plant where the input to the prime mover of the unit is independent of the others. Units that are aggregated into a single Resource Registration and prefer testing aligned with their registered resource and/or are dependent upon common systems (i.e., fuel, steam supply, auxiliary equipment, transmission, etc.) which restrict total output shall be tested simultaneously. Each unit shall be assigned an individual capability by apportioning the combined capability among the units.
4) The fuel used during testing shall be the type expected to be used during peak load conditions.
5) The capability of a unit or plant obtained through non-typical operation (i.e., bypassing feedwater heaters, varying steam conditions, alternate control mode, etc.) is acceptable.

3.4.2.2 Capability Testing of Long Duration Storage Resources

Capability Tests for Long Duration Storage resources are used as the base accredited value to which UCAP calculations are applied (See Section 4.2) to determine final QCC values. A Long Duration Storage resource that is not subject to generator testing requirements (i.e., are not subject to NERC MOD-025 requirements) may have its QCC values determined in accordance with Section 4.2, Option 1, in lieu of performing the Capability Test. There are no temperature or timing requirements on the Long Duration Storage Capability Test, other than the five-Year frequency.

1) The unit shall be brought to the desired test load and allowed to stabilize. Once the test period has begun, only minor changes in unit controls shall be made as required to maintain the unit in normal, steady-state operation.
2) The unit capability shall be determined separately for each generating unit in a plant where the input to the prime mover of the unit is independent of the others. Units that are aggregated into a single Resource Registration and prefer testing aligned with their registered resource and/or are dependent upon common systems (i.e., fuel, steam supply, auxiliary equipment, transmission,

etc.) which restrict total output shall be tested simultaneously. Each unit shall be assigned an individual capability by apportioning the combined capability among the units.

3) The fuel used during testing shall be the type expected to be used during peak load conditions.
4) The capability of a unit or plant obtained through non-typical operation (i.e., bypassing feedwater heaters, varying steam conditions, alternate control mode, etc.) is acceptable.

3.4.2.3 Capability Testing of Demand Response Programs

A Capability Test for a Demand Response (DR) program registered as a Qualifying Resource will be used to confirm the claimed maximum load reduction capability of the DR program. Capacity testing of the DR program will consist of a sustained reduction in load attributable to the deployment of the controllable and dispatchable program by the Participant for:

- the maximum number of hours per day for Demand Response Capacity Resources with a daily hourly dispatch limit; or
- one hour, for Demand Response Capacity Resources with a weekly or monthly hourly dispatch dispatch limit.

If a DR program fails to achieve the claimed load reduction capability and duration during the Capability Test, the DR program's QCC will be determined using the tested values instead. If the DR resource has a higher capacity value in one of the two Binding Seasons, the Capability Test must be conducted during the Binding Season with the higher capacity value; the DR resource does not need to be re-tested during the season with a lower capacity value. There are no temperature requirements for the DR Capability Test.

As noted in Section 4.6, new DR programs, or the newly expanded portion of a DR program, will be assigned a QCC of 50% of the expected capability. If the Participant desires a higher QCC than 50% of the expected capability, Participant may conduct a Capability Test outside of the expected peak season of the DR program. Testing outside of the peak season will only be considered a Capability Test during the first Year of operation or during the expansion of an existing DR program. An Operational Test shall then be performed during the upcoming Binding Season and reported to the Program Operator (see Section 3.4.3.6).

3.4.2.4 Forced Outages Affecting Capability Testing

If a unit is due for a Capability Test, but unable to perform the Capability Test due to a forced outage, a maintenance outage, or a forced de-rate, the most current Capability Test results may be used, provided it is used only for the immediately succeeding Summer Season and Winter Season. The unit will be required to perform an Operational Test per the Operational Testing procedures (Section 3.4.3) before the next Summer Season. For example, if a unit enters a forced outage while performing a Capability Test and the repair for the unit cannot be completed until after the Summer Season, then when the unit is repaired, an Operational Test must be completed. In that case, the previous Capability Test will be used to satisfy the generator testing requirements for the upcoming Summer Season FS submittal. A Capability Test must be performed in the next Summer Season for the next FS submittal. If the unit fails to complete the make-up Capability Test, the unit cannot be claimed on the FS Submittal.

3.4.3 Operational Testing

All Qualifying Resources must perform annual Operational Tests completed in the 12-Month period prior to the FS Submittal due date, or within the Cure Period, that may be conducted within or outside of a Binding Season (at Participant's discretion).

3.4.3.1 Thermal Resources and Long Duration Storage

An Operational Test serves as an annual demonstration of the functional capability of a Qualifying Resource to generate at a high-level of its Net Generating Capability in the upcoming Binding Season. Test data shall be compiled and submitted via the FS Submittal process, as outlined in *BPM 108 Forward Showing Submittal Process*. The Operational Test must be conducted at a minimum of 90% of the Summer Net Generating Capability. The Operational Test shall be conducted for a minimum of one hour, and for Thermal Resources there are no Rated Ambient Temperature requirements for Operational Tests. Any hour with the unit operating at or above 90% of the Net Generating Capability may be deemed a successful Operational Test. In case of failure to meet 90% of the Net Generating Capability, the resource can only claim what it can achieve on the Operational Test (to which the UCAP calculations are applied – see Section 4.2) for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.2 Storage Hydro Resources

An Operational Test serves as a verification that the resource can meet its QCC values on a plant-level basis as determined by the Storage Hydro QCC methodology. Test data shall be compiled and submitted via the FS Submittal process, as outlined in *BPM 108 Forward Showing Submittal Process*. The Operational Test must achieve a minimum of 90% of the plant's highest monthly QCC value from the FS Submittal being submitted. The Operational Test shall be conducted for a minimum of one hour and there are no Rated Ambient Temperature requirements for Operational Tests. Any hour with the

plant operating at or above 90% of the highest monthly QCC submitted for the current and previous Binding Season may be deemed a successful Operational Test. In case of failure to meet 90% of the highest monthly QCC, the resource can claim no more than what it achieved on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

Given that the Operational Test can be performed on any hour in a 12-Month period, the Operational Test should be scheduled (or re-scheduled) for a time when outages/de-rates are not occurring. If one or more units were on outage or de-rated at the time of the Operational Test, in order to claim the full QCC value provided by the Storage Hydro QCC methodology, the Participant shall:

1) Demonstrate that the unit(s) out/de-rated at the time of the Operational Test were offline/de-rated for more than 90 consecutive days of the 12 Months preceding the FS Submittal due date.
2) Demonstrate that the unit was out/de-rated for the entirety of one of the Months with the three highest monthly QCC values for the plant.
3) Provide operational data demonstrating the unit(s) performance on any hour within the 12 Months preceding the FS Submittal due date, or within the Cure Period.
4) Add the sustained hour-long operational value from the hour identified in (3) to the Operational Test values.

If 90% of the highest monthly QCC value cannot be achieved after this addition, the Participant can claim no more than the Operational Test (after the addition in (4) above) for any Month's QCC value.

3.4.3.3 ESRs

Operational Tests for ESRs should at least be conducted for the claimed duration of the device – i.e., two-hour, four-hour, etc. An ESR must be able to achieve its full QCC as determined in the QCC process for ESRs.

3.4.3.4 ROR Hydro

Operational Tests shall be conducted at a minimum of 90% of the QCC for either Binding Season. Any hour with the resource operating at or above 90% of the QCC may be deemed a successful Operational Test. In case of failure to meet 90% of the QCC, the resource can only claim what it can achieve on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.5 Wind and Solar Qualifying Resources

Operational Tests shall be conducted at a minimum of 100% of the seasonal QCC for either Binding Season. Any hour with the resource operating at or above 100% of the QCC may be deemed a successful Operational Test. In case of failure to meet 100% of the QCC, the resource can only claim what it can achieve on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.6 Demand Response Resources

An Operational Test will be conducted yearly during the Participant's peak Binding Season and at a minimum of 50% of the DR program's claimed peak load reduction capability (to avoid unnecessary disruption to the Participant's customers). The duration of an Operational Test shall be for a minimum of one hour. In case of failure to meet 50% of the QCC, the resource can only claim what it can achieve on the Operational Test as a peak load reducition input for purposes of determining its QCC for the upcoming FS Submittal as described in Appendix B.

3.4.4 New or Upgraded Resource Capability and Operational Testing

For newly installed resources and resources undergoing a physical or operational modification which could impact the Net Generating Capability, design output may be used for the first FS Submittal of the appropriate Binding Season to allow sufficient time for Operational and Capability Tests to be conducted. For resources required to do so, a Capability/Operational Test shall be performed in the Binding Season addressed by such first FS Submittal (this may occur during the Cure Period for the second Binding Season), in order to establish the new Net Generating Capability for all succeeding Binding Seasons. If the resource type requires a Capability Test be performed in a Summer Season, the registering Participant will conduct a Capability test in the first Summer Season in which the new or upgraded resource is operational.

3.4.5 Operational Testing for Late Registered Resources

Late Registered resources will be required to submit applicable generator Operational Test reports as required by the resource Fuel Type. If a Participant demonstrates that it has contracted for a resource not previously registered with the WRAP after the Advance Assessment Data Request deadline for the Binding Season in which capacity is being claimed to meet FS Capacity Requirements, the resource will be treated as if it had tested at 95% of its Installed Capacity. A resource previously registered with the WRAP that does not have any form of generator test results provided will be assumed to have tested at 70% of its Installed Capacity. Resources not owned or operated by a Participant that have test reports provided in a form other than the WRAP format, will be evaluated by the Program Operator and assigned an appropriate testing value based on comparability to testing requirements established in BPM 105; testing reports

determined not comparable will be assumed to have tested at 70% of Installed Capacity. If the resource is newly installed or upgraded, the applicable section on new and upgraded resources will be followed.

3.4.6 Provision of Test Reports in the FS Submittal

Test reports will be provided to the Program Operator in the FS Submittal (see *BPM 108 Forward Showing Submittal Process* for more details). The QCC values for resources will be based on the Capability Tests and/or Operational Tests provided in the FS Submittal.

4. Qualifying Capacity Contribution of Resources

4.1 Background

A resource will not be assigned a Resource QCC or counted toward Portfolio QCC unless it is a Qualifying Resource. Qualifying Resources are those that, before they are included in an FS Submittal, are first registered in the WRAP. A Participant seeking registration of a resource must submit a request for registration providing the resource information described in Section 3.

This section describes the methodology used to assign Resource QCCs to Qualifying Resources when resources are registered through the Advance Assessment based on resource type, as well as when Qualifying Resources of each resource type are registered after the Advance Assessment Data Request deadline (as a late registered resource).

4.2 Thermal or Long Duration Storage Resources

For dispatchable resources that use conventional thermal fuels such as coal, gas, Equivalent Forced Outage Factors (EFOF) biofuel, and nuclear, or Long Duration Storage, the FS Program will use an EFOF methodology to determine the QCC. Accreditation of non-dispatchable Thermal Resources is covered in Section 4.8.2.

The seasonal QCC will be determined for each resource by applying the $EFOF_{CCH}$ to the Net Generating Capability (or Installed Capacity) as determined in Section 3. The Capacity Critical Hours (CCH)[3] will be used to determine the hours to be used in calculating the EFOF for each resource. The $EFOF_{CCH}$ calculation, as set forth in the formula in Section 4.2.2 below, will be performed for each Year of the most recent six-Year historical look-back period. The equivalent outage factor is calculated by removing the worst performing Year (for each Summer and Winter Season) and then taking an average of the remaining five Years of data. The final calculated $EFOF_{CCH}$ will be applied to the Net Generating Capability to calculate the QCC amount for the thermal generator for the entire Binding Season.

[3] CCH are calculated in accordance with *BPM 104 Capacity Critical Hours.*

Planned outages and any outage properly reported as "outside management control" are not included in $EFOF_{CCH}$ calculations[4].

For resources new to the FS Program that do not have sufficient data over the historical period used for determining a QCC, class average data for resources of similar size will be used.

4.2.1 New Long Duration Storage Resources that Do Not Fit into an Existing Class

For Long Duration Storage Resources new to the FS Program that do not have sufficient data over the historical period used for determining a QCC and do not fit into an existing class of resources in order to receive a class average QCC, synthesized data will be used to calculate the EFOF until actual historical data is generated through operations. Once actual historical data is available, that data will be weighted more heavily than the synthesized data in the EFOF calculation.

Table 4. Data used in EFOF for new Long Duration Storage Resources that do not fit into an existing class

Binding Season	Data used for EFOF Calculation
1st Binding Season	5 years of synthesized data
2nd Binding Season	5 years of synthesized data
3rd and 4th Binding Seasons	3 years of synthesized data 1 year of actual data: (year 1)x2
5th and 6th Binding Seasons	1 year of synthesized data 2 years of actual data: (years 1 and 2)x2
7th and 8th Binding Seasons	3 years of actual data: (year 1)x1 and (years 2 and 3)x2
9th and 10th Binding Seasons	4 years of actual data: (year 1, 2, and 3)x1 and (year 4)x2
11th and 12th Binding Seasons	5 years of actual data
13th and 14th Binding Seasons	6 years of actual data

Once the resource has a full Year of operational data, the synthesized data for Binding Seasons 3-6 will be evaluated for reasonableness. If the synthesized data significantly understated or overstated the forecasted output of the resource, the synthesized data will be adjusted by the Program Operator accordingly.

[4] https://www.nerc.com/pa/RAPA/gads/Pages/Data%20Reporting%20Instructions.aspx

~~4.2.1~~4.2.2 $EFOF_{CCH}$ Equation

$$EFOF(CCH) = 1 - \frac{\sum FOH_{CCH} + EFDH_{CCH}}{total_{CCH}} * 100\%$$

Where:

FOH_{CCH} is Forced Outage Hours occurring on CCH,

$EFDH_{CCH}$ is Equivalent Forced Derating Hours occurring on CCH, and

$Total_{CCH}$ is total number of CCH for the timeframe of interest.

Definitions of FOH_{CCH} and $EFDH_{CCH}$ can be found in Table 5.

Table 5. Definitions of FOH and EFDH

Definitions	
FOH_{CCH}	Sum of all CCH experienced during Forced Outages (U1, U2, and U3) + Startup Failures[5].
$EFDH_{CCH}$	Each forced derating (D1, D2, and D3)[6] transformed into equivalent full outage hour(s). This is calculated by multiplying the actual duration of the derating (hours) by the size of the reduction (MW) and dividing by the net maximum capacity. These equivalent hour(s) are then summed by CCH. $\frac{Derating\ Hours * Size\ of\ Reduction}{Net\ Maximum\ Capacity}$

Additional Thermal QCC calculation considerations:

- Calculation is performed for each resource seasonally and for each historical Year. QCC will be assigned to each resource for the entire Binding Season.

[5] See NERC GADS reporting instructions at https://www.nerc.com/pa/RAPA/gads/DataReportingInstructions/GADS_DRI_2023.pdf

[6] Ibid.

- Six Years of data will be used for the calculation. The worst performing Winter Season and the worst performing Summer Season will be removed from the calculations, allowing for a five-Year average.
- Only forced outages or de-rates occurring during CCHs will be used to calculate QCC. Outages during hours that are not deemed to be capacity critical will not negatively impact QCC.
- All Years (of the five Years) will have equal weighting.
- Outside of Management Control outages as reported under NERC GADS Appendix K[7] (or equivalent) will be excluded from the calculation.
- For Participants relying on resource specific transactions external to the FS Program, those Qualified Resources will follow the same QCC calculation for Thermal Resources and the Participant will be responsible to make sure the information is provided to the Program Operator.
- The Program Operator will break out each event by hour. If the NERC GADS (or equivalent) data is reported in minutes, then the hour that contains the outage will be equalized to account for the minutes. For example: if an outage starts on June 1, 2020 at 4:25 PPT, then the hour duration for that hour will be less than one since the outage does not start at the top of the hour. The total hours for June 1, 2020 on hour beginning 4:00 PPT would be 0.583 *([60 Minutes – 25 minutes] / 60 minutes in an hour).*
- Diversity of time zones will be considered. Participants are required to list the time zone that is appropriate for their respective data.
- When comparing the event hours to the CCH hour identification should be consistent.

~~4.2.2~~4.2.3 *Late Registered Thermal Resources*

If a Participant seeks to claim capacity from a Thermal Resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options (described generally in Section 3.2), choosing one of the following approaches:

[7] Appendix K of NERC GADS: https://www.nerc.com/globalassets/programs/rapa/gads/conventional/appendix_k_outside_management_control_2024_dri.pdf

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question, in which case the resource will be permitted to use the class average QCC for Thermal Resources in the program; or
2) Claim a decremented QCC of 70% of the class average for Thermal Resources in the program.

~~4.2.3~~4.2.4 *Thermal Resources That Are Not Required to Report GADS Data*

Certain Thermal Resources are not required to report GADS data. GADS data applies to generator owners who are NERC registered with Qualified Resources that are 1) connected to the Bulk Electric System and 2) are synchronous machines of 20MVA or larger, or distributed generation facilities of 75MVA or larger. Smaller Qualified Resources interconnected to the power system as well as behind the meter resources may not be required to report GADS data. For these Qualified Resources, the Participant will have two options to pursue in order to have QCC determined.

Option 1 – Historical Output. The first option will determine QCC based on the monthly average performance of such resource during CCH. The Participant will provide 10 Years of historical hourly dispatch data. This data will be provided with the data submittal (see *BPM 101 Advance Assessment*). A workbook posted on the WPP website that contains the latest set of CCH will allow the Participant to calculate their QCC for the FS Submittal. The workbook will allow the Participant to calculate the QCC values taking the average of the facility output during the CCH. If less than 10 Years of historical data is available for use in determining the QCC, the Program Operator will utilize the methodology described in Section 4.8.2.

Option 2 – Historical Outage Evaluation – The second option will determine QCC based on the monthly outage records provided by the Participant for the resource in question. A workbook detailing what outage information is required for a QCC calculation can be found on the WPP website. The Participant will provide five Years of outage information as provided in the workbook. The Program Operator will determine the QCC of the resource in question using a methodology similar to the $EFOF_{CCH}$ methodology applied to all Thermal Resources.

For all Qualified Resources not providing GADS reporting data, the Participant will be required to provide an attestation (provided in *BPM 108 Forward Showing Submittal*

Process) attesting that the resource is not subject to GADS reporting and the workbooks submitted by the Participant are an accurate depiction of either the historical performance or historical outage data of the resource.

4.3 Variable Energy Resources

The QCC for Variable Energy Resources (VERs), including but not limited to wind and solar resources, will be determined for each Month of the Binding Season through the use of an Effective Load Carrying Capability (ELCC) analysis and a subsequent allocation process. Each Binding Season will have its own ELCC analysis performed during the Advance Assessment and each resource will be assigned a new QCC in advance of each Binding Season. Each Binding Season's ELCC analysis will have a scope document that will detail the study.

4.3.1 Source Data for Resources Under Study

In accordance with Section 3 and the Advance Assessment data submittal described in *BPM 101 Advance Assessement*, the Participant will submit historical output data for wind and solar resources that are requested to have QCC determined. A Participant must submit three and may submit up to 10 Years of historical output data for wind and solar resources.

For newer resources that do not have 10 Years of operational data and historical output, the Participant may provide engineering data from the wind or solar plant operator. The Program Operator will evaluate the data provided and determine its usefulness in the ELCC process. The engineering data will need to provide synthesized outputs for the facility for at least the most recent three Years of historical conditions. Otherwise, the Program Operator will use either synthesized data or average output data of other VER resources in the appropriate VER Zone.

4.3.2 Late Registered VERs

If a Participant seeks to claim capacity from a VER not registered at the time of the Advance Assessment Data Request, the Participant may use options for late registering a resource, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and claim the average ELCC of the VER Zone in which the resource is located, or
2) Claim a decremented QCC of 70% the average ELCC in the VER Zone in which the resource is located.

4.3.3 ELCC Study Process

The ELCC will be determined for the VERs in the WRAP Region. The ELCC study will consist of analyses utilizing Loss of Load Expectation (LOLE) metrics to determine the capacity provided by the VERs being analyzed. The LOLE benchmark metric to be used in the ELCC accreditation study will be a one event in 10-Year threshold.The ELCC of VERs will be calculated first on a seasonal basis then later prorated to a monthly QCC value. For the ELCC study, loss of load events will be tabulated during the Binding Season months for determination of the 1-in-10 LOLE. Loss of load events that occur outside of the Binding Season months will not go into the calculation of the capacity value of VERs. Pure Capacity will be applied to the simulation process to derive the 0.1 Day per Year reliability threshold. If the resulting LOLE is greater than the 0.1 Day per Year threshold, Pure Capacity will be added until the 0.1 threshold is achieved. If LOLE is less than the 0.1 Day per Year threshold, negative Pure Capacity will be added until the 0.1 threshold is achieved. The VER of interest will be excluded from the benchmark system. All other VER types will be included. For example, if the wind resource type is being analyzed, only wind will be excluded from the benchmark system.

The capacity calculated is designated in Figure 1 as Pure Capacity 1.

Figure 1. Diagram of system without renewable resources.

Next, a LOLE value for all wind generating resources will be determined, repeating the steps described previously. The Pure Capacity value calculated is designated in Figure 2 as Pure Capacity 2.

Figure 2. Diagram of system with renewable resources.

The difference between the results of these two steps is considered the ELCC QCC value of the resources being studied.

$$ELCC\ of\ VER\ (under\ study) = Pure\ Capacity\ 1 - Pure\ Capacity\ 2$$

These processes are repeated to determine QCC for all weather Years that are studied. This process is repeated for summer and winter separately.

Zonal shapes have been developed for the LOLE study based on facility locations in each VER Zone and correlated wind and solar activity with temperatures in those VER Zones dating back to 1980. The ELCC study will be performed using the synthetic shapes dating back to 1980, which are also used in the LOLE studies. The data provided by the Participants will be used in the establishment of the synthetic shapes and used in the allocation process for establishing the QCC of each VER resource as later outlined in Section 4.3.5.

The Program Operator will conduct the ELCC study by performing probabilistic simulations in a manner that resources in the WRAP Region will be randomly forced out of service during each hour of the study. Each simulation accounts for a different variation of forced outages and load uncertainty for all hours of the Year, similar to the LOLE study utilized to establish the FS Planning Reserve Margin.

4.3.4 Determination of ELCC Within VER Zones

The ELCC study will determine the amount of capacity provided by all VERs (of the specified type, e.g., wind) analyzed in the WRAP Region. The FS Program will employ the VER Zones for each VER type set forth inSection 4.3.6, as they may be revised from time to time. Each VER of a given type will be assigned to one of the VER Zones for that type. ELCC studies will be performed for each VER Zone (and VER type), calculating a total capacity value for the resource of interest in that zone. The capacity calculated for each VER Zone will be allocated to VERs of that type in that zone on a pro-rata basis.

4.3.5 Determination of System Wide ELCC and Allocation to Individual VER Zones

To avoid over-accreditation of VERs the Program Operator will conduct an ELCC study of the entire WRAP Region and calculate a total capacity value for all VERs in the WRAP Region. Additionally, all ESRs in a Subregion will be studied together. After all VER Zone capacity totals (for each VER type) and the capacity totals of ESRs in each Subregion have been determined, the sum of the VER Zone and ESR Subregion totals will be compared to the regional VER plus ESR total. If the sum of the VER Zones and ESR Subregion is greater than the regional total, all VER Zone and ESR Subregion totals will

be scaled down until the totals match the regional total. Table 6 provides an example of the calculations to determine total VER capacity.

Table 6. Example[8] ELCC Study of WRAP Region to Calculate Total Capacity.

A study of two wind zones and two solar zones reveals the following capacity values for each zone:				
Wind Zone 1	Wind Zone 2	Solar Zone 1	Solar Zone 2	**Total**
1,000 MW	800 MW	700 MW	1,000 MW	**3,500 MW**
A study of the region reveals the following capacity value for the region's wind and solar:				
Regional VERs				
The zones will be recalculated as follows:				
Wind Zone 1	Wind Zone 2	Solar Zone 1	Solar Zone 2	**Total**
1,000 * (3,200/3,500)	800 * (3,200/3,500)	700 * (3,200/3,500)	1,000 * (3,200/3,500)	
914 MW	732 MW	640 MW	914 MW	**3,200 MW**

ESRs, which are discussed in more detail below (Section 4.4), are also included in the system ELCC allocation and study.

4.3.6 VER Zones for Wind and Solar

WPP has established separate VER Zones for wind resources and solar resources, as shown, respectively, in Figure 3 and Figure 4.*Error! Reference source not found.*

[8] These examples are strictly illustrative, and do not set or limit any actual ELCC study results.

Figure 3. Wind VER Zones

Figure 4. Solar VER Zones

4.3.7 Allocation of VER ELCC

4.3.7.1 Allocation of System Wide ELCC On a Resource Basis

Once the ELCC has been determined for each VER Zone for each Binding Season, two additional calculations must occur. The first step, which will occur before the system ELCC adjustment, takes the ELCC seasonal values for each VER Zone and converts them to a monthly basis for monthly QCC. Monthly QCC values for each VER Zone will be calculated by shaping the seasonal ELCC value in accordance with aggregate performance of all resources in the VER Zone during the CCH. Months that have higher resource performance during the CCH will be allocated a higher portion of the ELCC across the Binding Season. The QCC of each Month will average to the seasonal ELCC value. An example is given below in Table 7.

Table 7. Example[9] Monthly QCC Calculation for Wind VER Zone

		Summer Season			
		June	**July**	**Aug**	**Sept**
Average Production on CCH per Month	Calculated from historical performance data from wind in this VER Zone on a monthly basis	120MW	95MW	90MW	130MW
Average Production on CCH Across Season	Calculated from historical performance data from wind in this VER Zone on a seasonal basis	108.75MW			
Monthly Multiplier	Divides each Month's production on CCH by the seasonal average	110%	87%	83%	120%
Seasonal ELCC	Value resulting from ELCC study	100MW			
Monthly QCC	Multiplies the monthly multiplier by the seasonal ELCC value	110MW	87MW	83MW	120MW

The monthly QCC values for each VER Zone are then used to determine the system ELCC value discussed in the section above.

The second step, which occurs after the system ELCC adjustment, will allocate the monthly QCC values to each resource based on the individual resource's performance during the CCH.

$$\textit{Resource ELCC} = \textit{Monthly ELCC MW} * \left(\frac{\textit{Resource average hourly net power output on top 5\% of net load hours (CCH)}}{\textit{Zone total average hourly net power output on top 5\% of net load hours (CCH)}}\right)$$

4.3.7.2 QCC Allocations for VERs with Three Years or More of Operational Data

To allocate the ELCC MW to each resource, the Program Operator will utilize the historical hourly data for each resource provided by the Participant. For resources that have at least three Years of actual historical data, or at least three Years of engineered data for newer resources, the Program Operator will utilize the most recent three Years

[9] These examples are strictly illustrative, and do not set or limit any actual ELCC study results.

(up to 10 Years) of data when determining the resource's average hourly net power output.

4.3.7.3 QCC Allocations for New VERs or VERs with less than Three Years of Operational Data

The Program Operator will utilize the following method for newer VERs when determining the historical average hourly net power output:

1) No less than three Years will be utilized; and
2) A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a) Manufacturer's engineering or performance data and actual weather (preferably from on-site, but not from outside of 50-mile radius); or
    b) Historical performance of similar resources within a 50-mile radius.
3) If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource will receive an ELCC value equal to the product of a calculated class average ELCC percentage times the nameplate capacity of the resource at issue. The Program Operator will use the synthesized wind output shape for the appropriate VER Zone to determine the class average ELCC percentage.

As actual data is accrued, it will replace synthesized data as it becomes available (e.g., one Year of actuals plus two Years of synthesized; two Years actuals plus one Year synthesized, then eventually three Years of actuals). Once a new or repowered facility has a full Year of operational data the synthesized data for Years two and three will be evaluated for reasonableness. If the synthesized data significantly understated or overstated the forecasted generation of the resource, the Year two and three synthesized data will be adjusted by the Program Operator accordingly.

4.3.7.4 Determination of ELCC for Future VERs

It is understood that as VERs are added to a system, the capacity value provided by all similar VERs as a function of the nameplate value of those resources will decrease. It therefore becomes important for Participants to have an understanding of how VER QCC values may change over time as the penetration of similar VERs increases.

After the QCC values of all existing and near-term planned VERs have been calculated and allocated, additional ELCC studies will be performed to account for future VERs of each type. These additional wind and solar resource amounts will be created by scaling up the number of wind turbines (nameplate capacity) or solar photovoltaic panels in each VER Zone. The Program Operator will provide an ELCC curve, useful for guidance purposes on a strictly non-binding basis, that can be used to estimate future capacity

values for new resources dependent upon the penetration of resources in that VER Zone.

4.4 Energy Storage

The QCC for ESRs will be determined using the same general ELCC methodology used for wind and solar resources (see Section 4.3) with any specific differences being highlighted in this section and will be limited to ESRs that have the capability to store energy equal to or greater than the energy output by the ESR over four continuous hours (or longer) of operation. The ELCC study for each Binding Season will have a scope document that details the analysis. ESRs with eight-hour or longer durations are considered Long Duration Storage (Section 4.2).

ESRs will be modeled as energy limited devices that will charge and discharge in accordance with their equipment specifications. ESRs will be modeled to charge and discharge in a preserve reliability mode, which means they will only be discharged to mitigate potential loss of load when there is a lack of other resources available to serve load.

4.4.1 ESR with Four- to Eight-Hour Rating

Based on the four-hour minimum continuous time duration requirement, four-hour ESR or ESRs with longer duration ratings will receive QCC values based on the four-hour curve for the ESR penetration level of all ESRs on the system at the time of the ELCC assessment.

4.4.2 ESR with Rating Less than Four Hours

Based on the four-hour minimum continuous time duration requirement, ESRs with ratings less than four hours will receive QCC values based on the four-hour curve for the ESR penetration level of all ESRs on the system at the time of the ELCC assessment. For example, two-hour rated ESRs would receive no more than 50% QCC value of a four-hour ESR with the same maximum output.

4.4.3 Allocation of ELCC for ESRs

All ESRs in a WRAP defined Subregion will be studied together. All ESRs within a Subregion will receive the average ELCC value of ESRs with a four-hour rating in that Subregion, subject to the limitations outlined in Section 4.4.2. To ensure that over-accreditation of ESRs does not occur, ESRs will be included in the ELCC study of all VERs of the WRAP Region and a total combined capacity value for all VERs and ESRs in the WRAP Region will be calculated. After all ESR Subregions and VER Zone capacity totals have been determined, the sum of the VER Zone and ESR Subregion totals will be compared to the WRAP Region VER total. If the sum of the VER Zones and ESR

Subregion is greater than the regional total, all VER Zone and ESR Subregion totals will be scaled down until the totals match the regional total.

4.4.4 Late Registered ESRs

If a Participant seeks to claim capacity from an ESR not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options (described generally in Section 3.2), choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question, in which case the resource will be permitted to use the class average QCC for the ESRs within the Subregion; or
2) Claim a decremented QCC of 70% of the class average for ESRs in the Subregion.

4.5 Hybrid Facilities

Hybrid Facilities are resources that have at least two different fuels or technologies at a common location where one of those resources is an ESR. The QCC for hybrid resources will be determined by applying the appropriate methodology to each component of the facility and summing them and capping the total at the interconnection limit. While hybrid resources are modeled as they would operate in the LOLE study, determining QCC for combined hybrid resource is not performed due to the inability to perform ELCC analysis for similar type resources.

4.6 Demand Response

DR can be utilized as a Qualifying Resource if it is greater than 1 MW in aggregate (see Section 3.3) and can be demonstrated to be controllable and dispatchable by the Participant or host utility. DR programs that register as Qualifying Resources will have monthly QCC value calculated by the Participant per the methodology in Appendix B – Qualifying Capacity Contribution of Demand Response Capacity Resources and will need to meet testing criteria and demonstrate load reduction as described in Section 3.4.2.3 DR prorgram QCC results will be provided to the Program Operator for review. The Program Operator may ask the Participant for information from the DR QCC methodology, subject to limitations described in the Tariff, as part of the verification and validation process. Participants registering a DR Qualifying Resource must either i) demonstrate that the DR program was not operated historically and has therefore not impacted the Historical Load Data provided by the Participant for determination of their P50 load value, or ii) provide historical information about the operations of the DR program such that the load reduction impacts of the DR program can be removed from the historical data prior to determination of the P50 load value.

A DR Qualifying Resource will be reflected in the FS Submittal as a Demand Response Capacity Resource by submitting it as a 'Resource' in the FS Submittal. As with all resources, the monthly QCC values of DR Qualifying Resource will count toward a Participant meeting its monthly FS Capacity Requirements.

If a DR program does not meet the criteria of a Qualifying Resource, its contribution to load reduction may be captured in the historical data used to calculate the P50 load in the FS.

4.6.1 New, Expanded, or Late Registered DR Resources

DR programs intended to be used as Qualifying Resources in the first Year of operation or expansion of an existing program or DR programs not registered at the time of the Advance Assessment will be reported at 50% of the expected capability, unless validated by testing the program to 100% of the claimed capability prior to the Binding Season. See the section related to DR testing requirements (within Section 3.4.2) for more information.

4.7 Hydro Resources

4.7.1 Storage Hydro (Also see Appendix A – Qualified Capacity Contribution for Storage Hydro Resources)

QCCs for Storage Hydro resources are calculated by the Participant owners and the results are provided to the Program Operator for review, through the provision of the 'results tab' of the workbook. The Program Operator may ask the Participant for information from the Storage Hydro QCC methodology, subject to limitations described in the Tariff, as part of the verification and validation process. The Storage Hydro QCC methodology is based on the ability of Storage Hydro to maximize output during the CCHs each Day of the historical record, subject to operational limitations and non-power constraints of each plant. Limitations include available water in storage and all constraints that restrict the use of the Net Generating Capability. These constraints include, but are not limited to, discharge limits, tailrace and forebay elevation limits, and rate of change limits.

The methodology considers each resource's actual generation output, residual generating capability, water in storage, reservoir levels (if applicable), upstream discharge from Cascaded Dual Plants and plant constraints over the most recent 10-Year historical period. The QCC of the Storage Hydro resource is determined using a calculation of how much historical actual generation could have been increased during CCHs by utilizing water in storage each Day to increase generation, while respecting all operating constraints. The QCC is the monthly average of this hypothetical increased generation during the CCHs, for the same Month of the historical record. The resulting

QCC is determined as the average contribution to the CCHs for each Winter Season and Summer Season over the previous 10 Years. The Storage Hydro QCC Workbook captures the aforementioned Storage Hydro QCC methodology and is available for use by WRAP Participants. If historical data is not available for 10 Years, a comparable facility may be utilized or some other reasonable approach that provides similar confidence in the computed QCC may be proposed by the Participant and adopted at the discretion of the WPP. The Participant will provide all required detailed data for the plant.

The detailed Storage Hydro QCC methodology can be found in Appendix A – Qualified Capacity Contribution for Storage Hydro Resources.

4.7.1.1 Late Registered Storage Hydro Resources

If a Participant seeks to claim capacity from a Storage Hydro resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and utilize the established Storage Hydro QCC methodology described above, or
2) Claim a decremented QCC of 70% of the average Storage Hydro QCCs in the program.

4.7.2 Run-of-River (ROR) Hydro

ROR Hydro resources will have their QCC determined on the historical performance of the resources during the CCH over the most recent 10-Year period. The data provided by the Participant in the Advance Assessment data submittal (see *BPM 101 Advance Assessment*) will be used for the determination of QCC.

If less than 10 Years of historical data is available for use in determining the QCC of a ROR Hydro plant, the Program Operator will utilize the following method when determining the historical average hourly net power output:

1. No less than three Years will be utilized.
2. A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a. Manufacturer's engineering or performance data;
    b. Actual water conditions (preferably from on-site, but not from a different river); or
    c. Historical performance of similar resources on the same river system.

3. If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource cannot receive a QCC value.

As actual data is accrued, it will replace synthesized data as it becomes available (e.g., one Year of actuals plus two Years of synthesized; two Years actuals plus one Year synthesized, then eventually three Years of actuals). Once a new or repowered facility has a full Year of operational data, the synthesized data for Years two and three will be evaluated for reasonableness. If the synthesized data significantly understated or overstated the forecasted generation of the resource, the Year two and three synthesized data will be adjusted by the Program Operator accordingly.

4.7.2.1 Late Registered ROR Hydro Resources

If a Participant seeks to claim capacity from a ROR Hydro resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and execute the methodology described above for ROR Hydro Resources (for validation by the Program Operator), or
2) Claim a decremented QCC of 70% of the average ROR Hydro QCCs in the program.

4.8 Other Resources

4.8.1 Customer Resources

Resources that are generally located on the customer-side of the meter can be included in the FS Program. To be eligible as a Qualifying Resource, the Customer Resource must 1) be controllable and dispatchable by the Participant or host transmission operator and 2) not have already been used to modify the Participant's Load Forecast (i.e., serving a portion or all of the load not included in Load Forecast). The resource shall meet testing criteria applicable for resource type and will be awarded a QCC value based on the appropriate methodolgy for the resource type. Customer Resources (behind the meter resources) can be aggregated to the 1 MW requirement to be considered a capacity resource, granted that they are in the same BAA, controllable and dispatchable, and visible to the Ops Program.

4.8.2 Non-Dispatchable, Must Take Resources

For resources that are either i) not dispatchable; or ii) require the purchaser of energy from the resource to take energy as available from such resource, including but not limited to a qualifying facility as defined under the Public Utility Regulatory Policies Act (PURPA), the QCC will be determined based on the monthly average performance of

such resource during CCH. The Participant will provide 10 Years of historical hourly dispatch data. This data may be provided within the Advance Assessment data submittal (see *BPM 101 Advance Assessement*) or a workbook found on the WPP website. The workbook will allow the Participant to calculate the QCC values taking the average of the facility output during the CCH.

If less than 10 Years of historical data is available for use in determining the QCC of a non-dispatchable, must take resource, the Program Operator will utilize the methodology described in BPM 105 for the specific resource type. If the resource type is not covered in Sections 4.2 through 4.7 the Program Operator will utilize the following method when determining the historical average hourly net power output:

1. No less than three Years will be utilized.
2. A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a. Manufacturer's engineering or performance data;
    b. Known or historical information about fuel availability;
    c. Known or historical information about unit performance; or
    d. Historical performance characteristics of similar resources.
3. If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource cannot receive a QCC value.

4.8.2.1 Late Registered Non-Dispatchable, Must Take Resources

If a Participant seeks to claim capacity from a non-dispatachable, must take resource not registered at the time of the Advance Assessment Data Request, the Participant will be required to execute the methodology described above for such resource (for validation by the Program Operator).

Appendix A – Qualified Capacity Contribution for Storage Hydro Resources

A.1 Time Period Approach for Summer and Winter Season Requirements

Storage Hydro resources will use a "time period" approach to determine the QCC. A time period approach consists of a historical look-back of the generation output during CCH to determine how much capacity should be expected to be available during high load periods in the future. While this approach is limited to a daily window for determining available capacity, it does establish a common and transparent method for determining the QCC for Storage Hydro Resources.

The following methodology would be used to determine the QCC value using the time period approach described above, and Table A-1 summarizes the resource information required to apply the methodology:

- For each Day found to contain one or more CCHs, the Storage Hydro resource will be evaluated to determine the maximum available capacity for each CCH, based on the conditions of the storage associated with the hydro resource on that Day.
- For each Storage Hydro resource, for each CCH, determine:
    - Maximum generation output during the CCH.
    - Usable water in storage at the end of the CCH.
    - QCC for each hour, which would be the historical generation output plus additional generation for capacity, up to the maximum generation capability (adjusted for reservoir elevation head as applicable), taking into account plant or unit-specific limitations (e.g., units on a common penstock, transformer limitations, etc.) and the resource's Equivalent Demand Forced Outage Rate (EFORd).
    - For calendar days with multiple CCHs, the QCC will be limited to the actual historical generation, plus the usable energy in storage over that Day.Non-power operational constraints that limit the use of energy in storage.

Table A-1. Resource information required to apply the time period methodology for QCC.

Information Needed	Notes
Reservoir Elevation Range	Min and Max – this may be seasonally adjusted.
Reservoir Storage Curve	Indicating volume of water in storage based on the reservoir elevation.
Capacity as a Function of Elevation	Plant maximum capacity at a given forebay elevation.
CCH Adjusted $EFOF_{CCH}$ or Historical Outage Evaluation Equivalent	Historical Forced Outage Factor.
Power as a Function of Discharge	For the "discharge method".
H/K as a Function of Elevation	For the "elevation method".
Hourly Historical Data	– Actual generation – Starting reservoir elevation – Ending reservoir elevation

From the information in Table A-1, the hourly values in Table A-2 can be estimated for each CCH:

Table A-2. Hourly values that can be estimated for each CCH.

Estimated Values	Notes
Actual water in storage	Using the elevation and storage (kcfs or cms) tables.
Additional capacity available beyond the actual generation	Subject to forebay elevation restrictions.
Cumulative additional generation	The running total of the additional generation claimed in each CCH for the Day, used to deplete the elevation of the reservoir to validate the feasibility of using additional capacity in each CCH on each calendar Day.
Hourly QCC	The sum of the actual generation plus the additional capacity available.

The Storage Hydro capacity contribution towards the FS Capacity Requirement is calculated by the resource owner as the simple average of the hourly QCC values in each CCH over the 10 Years studied. These QCC values are averaged over each Month in each Binding Season to determine final monthly QCC values.

A.2 Treatment of Planned Outages

In addition to accounting for forced outages, the UCAP values used in the FS workbooks may (at the Participant's option), be reduced for planned outages. Planned outages that are not included in the UCAP values will need to be planned in a manner similar to Thermal Resources, meaning those planned outages will be taken from the Participant's surplus capacity in excess to the Participant's FS Capacity Requirement.

Table A-3 and Table A-4 below illustrate the QCC calculation over a four-hour consecutive period using the UCAP methodology and the UCAP + planned outages methodology.

Table A-3. Calculating QCC using UCAP = 125 MW.

Consecutive CCHs	Historical Generation	Historical Storage	UCAP (125 MW)	Draft to Maximize Capacity	Storage After Draft	QCC
	MW	MWh	MW	MWh	MWh	MW
1	50	250	125	75	175	125
2	50		125	75	100	125
3	50		125	75	25	125
4	50		125	25	0	75
Storage empty after 25 MW draft				4-hour average		113

Table A-4. Calculating QCC using UCAP + Planned Outages = 100 MW.

Consecutive CCHs	Historical Generation	Historical Storage	UCAP + Planned Outages (100 MW)	Draft to Maximize Capacity	Storage After Draft	QCC
	MW	MWh	MW	MWh	MWh	MW
1	50	250	100	50	200	100
2	50		100	50	150	100
3	50		100	50	100	100
4	50		100	50	50	100
A 25 MW planned outage decreased QCC by 13 MW				4-hour average		100

The four consecutive CCHs in Table A-3 illustrate how the QCC is limited due to insufficient storage. In Table A-4, the UCAP is reduced by a 25 MW planned outage. This reduced capacity requires less draft from storage in CCHs 1-3 to maximize the QCC in those hours. This reduction in draft provides sufficient storage in CCH 4 to maximize the QCC.

For FS purposes, planned outages may be included or excluded in the QCC calculation at the choice of the Participant pursuant to the requirements in Section 16.2.8 of the Tariff.

A.3 Treatment of Non-Power Constraints

Each Participant is asked to review the methodology and incorporate the specific non-power constraints that are applicable to the individual plants, thus reducing the QCC value of each plant to a level that is believed to reflect the plants operational capability for the upcoming Binding Season. This is done through creating additional constraint logic in the spreadsheet that adds current and future non-power constraints to all 10 Years' worth of evaluation.

It is expected that Participants will include such non-power constraints that accurately reflect their forecasted QCC capability, to facilitate reliance on Storage Hydro Resource QCC values in the Operations Program and for other purposes.

A.4 Treatment of Cascaded and Coordinated Hydro Systems

A Cascaded Dual Plant methodology was also developed specifically for cascaded and coordinated hydro systems. For cascaded hydro resources on the same river systems that are operated in a coordinated manner, when determining the QCC, the useable water in storage at the downstream resource could be enhanced by the operations at the upstream resource, thereby maximizing the contribution of the combined cascaded systems. The Cascaded Dual Plant methodology does not attempt to optimize use of the upstream storage to maximize the combined QCC, but it does allow the downstream plant to utilize the discharge from the upstream plant.

A.5 Form To Complete Storage Hydro Resource QCC

The Hydro QCC Workbook will be completed by the Participant. The workbook is located on the WPP website.

Appendix B – Qualified Capacity Contribution for Demand Response Capacity Resources

Demand Response Capacity Resource QCC will be determined based on the monthly average availability of such a resource during the appropriate ten-Year set of CCH subject to the DR program's constraints. The Participant will input the peak load reduction (as determined by a Capability Test) and the DR program's constraints into a workbook located on the WPP website.

The DR QCC workbook includes the following constraints:

- Peak load reduction (MW)
- Blackout functionality that prevents the DR program from contributing to QCC during any identified:
    - Hours of the day;
    - Days of the week;
    - Weeks of the Season; and, or
    - Months of the Season.
- Hourly dispatch limits (non-interactive, i.e. choose one):
    - Daily – maximum number of hours per day
    - Weekly – maximum number of hours per week
    - Monthly - maximum number of hours per month
- Hourly fatigue – if a DR program is called upon in consecutive CCH its peak load reduction can be reduced hour-on-hour, reflecting a customer's potential decreasing willingness to keep adjusting its load down hour after hour (for example, industrial loads).
- Daily fatigue – if a DR program is called upon in consecutive days its peak load reduction can be reduced day-on-day, reflecting customers' potential decreasing willingness to keep adjusting their loads down day after day (for example, aggregated residential DR programs).

The DR QCC workbook will allow the Participant to calculate monthly QCC values taking the average of the DR programs demand reduction availability during CCH subject to, at a minimum, the imposed program-specific constraints listed above. The monthly QCCs of a Participant's Demand Response Capacity Resources can then be used to meet its monthly FS Capacity Requirements along with the QCC of its other resources and contracts.

If a DR program has constraint permutations not captured by the workbook, its contribution to load reduction may be captured in the historical data used to calculate the P50 Peak Load Forecast in the FS.

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Friday, September 18, 2026

To: Western Power Pool Board of Directors

From: WRAP Staff

Date: September 30, 2026

Subject: Transition Period Deficiency Charge Deferral (2026-EP-03) and Rockies Subregion Development (2026-EP-04)

Overview

This memorandum provides the Western Power Pool (WPP) Board of Directors (Board) with the background, development approach, timeline, and practical effect of two expedited Western Resource Adequacy Program (WRAP) proposals: 2026-EP-03 Transition Period Deficiency Charge Deferral, and 2026-EP-04 Rockies Subregion. Both proposals address implementation needs that must be resolved before binding operations begin in Winter 2027-2028. This memorandum also provides Staff's recommendations.

The proposals address different problems. The Deficiency Charge Deferral establishes a temporary mechanism during the Transition Period for handling certain Forward Showing Deficiency Charges while preserving incentives to procure capacity and resolve deficiencies. The establishment of the Rockies Subregion is necessary to accommodate new Participants in the Colorado area and enable planning reserve margins (PRM) and other modeling activities for that group.

Transition Period Deficiency Charge Deferral (2026-EP-03): Background and Recommendation

As WRAP moves toward binding operations, Participants continue to evaluate the impact of Forward Showing Deficiency Charges given the capacity constraints in the Western Interconnection. On October 16, 2025, the Resource Adequacy Participants Committee (RAPC) adopted a resolution directing the development of an Expedited Proposal for a temporary Forward Showing Deficiency Charge deferral mechanism. Over the course of the next 11 months, WPP staff and WRAP Participants refined the framework through multiple iterations and ultimately converted the resulting policy into coordinated Tariff and Business Practice Manual (BPM) revisions.

The RAPC discussed the Deficiency Charge Deferral, generally in closed session, on February 20, April 30, May 21, June 11, June 25, July 16, July 30, August 13, and August 27, 2026. The RAPC

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ultimately approved the Deficiency Charge Deferral at its September 10, 2026 in-person open meeting.

The Forward Showing Deficiency Charge Deferral is a transitionary measure rather than a final policy determination; however, Participants have expressed the eventual need for an enduring Deficiency Charge deferral policy.

Staff Recommendation: Staff recommends the Board approve the Transition Period Deficiency Charge Deferral and direct staff to take all actions necessary or appropriate to implement the Board's decision. The measure is interim in nature, has been discussed extensively with stakeholders, and falls within the Board's discretion. It provides a practical means of addressing an immediate need while facilitating an orderly transition toward a more durable, long-term policy framework.

Rockies Subregion (2026-EP-04): Background and Recommendation

New Participants signed WRAP Agreements (WRAPA) for loads and resources in an area (Colorado) that does not fit the existing Northwest or Southwest Subregion definitions. Without a defined Subregion, WRAP could not complete the full set of reliability metrics, accreditation, submittal, and settlement steps needed for those Participants.

Recognizing this could be a challenging issue for incoming participants, WPP staff established contact with prospective Rockies Participants starting in early November 2025 when Public Service Company of Colorado (PSCo) hosted an in-person customer meeting at its Denver, CO headquarters. In early December, WPP staff presented to the Markets+ Change User Forum in Tempe, AZ, which prospective Rockies Participants attended.

WPP staff maintained frequent communication with prospective Rockies Participants during early 2026. WPP staff encouraged Rockies Participants to execute their WRAPAs well in advance of the September 15, 2025 effective date. PSCo executed its WRAPA on May 5, 2026 and CORE Electric Cooperative (CORE) executed its WRAPA on June 2, 2026. Upon signing the WRAPA, new Participants were permitted to attend closed RAPC sessions.

In May 2026, Southwest Power Pool (SPP), WRAP's Program Operator, expeditiously began modeling the Rockies Subregion to establish PRMs and Qualifying Capacity Contribution (QCC) values for the new Subregion. Given that the Summer 2027 and Winter 2027-2028 modeling cycle had already been completed, SPP modeled the Summer 2028 and Winter 2028-2029 binding seasons. The results of that modeling would be used for Summer 2027 and Winter 2027-2028, respectively.

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Friday, September 18, 2026

To effectuate this approach, WPP filed a Limited Waiver of Tariff Revisions (Waiver) with the Federal Energy Regulatory Commission (FERC) on June 29, 2026. The Waiver offered the following timeline for modeling the Rockies Subregion and subsequent WPP Board approval:

> **September 15, 2026:** Summer 2028 draft modeling, including Rockies Participants, complete
>
> **September 30, 2026:** WPP Board consideration and endorsement of Summer 2027 FSPRM values for Rockies Subregion using Summer 2028 draft results
>
> **October 31, 2026:** Non-binding Summer 2027 Forward Showing (FS) Submittal due
>
> **February 15, 2027:** Expedited Rockies Winter 2027-2028 Modeling complete and draft Winter 2028-2029 results published
>
> **February 28, 2027:** WPP Board consideration and endorsement of Winter 2027-2028 FSPRM for Rockies Subregion using draft Winter 2028-2029 results

In an effort to address prospective Rockies Participants' concerns around proactively signing a WRAPA without a defined Subregion and modeling results, WPP staff coordinated an in-person meeting with those Participants on July 15, 2026, in Denver, CO.[1]

Discussions around treatment of the Rockies Subregion began at the July 28, 2026 closed RAPC meeting.[2] Given the development of the Rockies Subregion impacted all Participants in that Subregion, the RAPC ultimately concluded that it would be appropriate to invite all prospective Rockies Participants to the closed RAPC sessions that occurred on August 13, August 27, and September 10, 2026.

SPP presented the Summer 2028 PRM and QCC values (to be used for the Summer 2027 non-binding season) and the Winter 2028-2029 PRM and draft QCC values (to be used for the Winter 2027-2028 binding season) to Rockies Participants on September 3, 2026. The PRMs for both seasons are to be considered at the WPP Board's September 30, 2026 meeting.

WPP staff developed an integrated package that adds the Rockies Subregion and updates each affected Tariff and BPM provision at the same time. The proposal enables more than 7,500 MW of load to participate in WRAP.

---

[1] *Rockies Subregion attendees included: PSCo, CORE, Guzman Energy, LLC, Tri-State Generation and Transmission Association, Inc., United Power, Black Hills Colorado Electric, LLC, and Municipal Energy Agency of Nebraska.*

[2] *Although the session was closed, PSCo was permitted to attend and did so.*

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Friday, September 18, 2026

Staff Recommendation: Staff recommend the Board approve the new Rockies Subregion and direct staff to take all actions necessary or appropriate to implement the Board's decision. After extensive stakeholder discussions, and considering the available alternatives and applicable constraints, Staff believes the proposed approach is reasonable and appropriate. It allows WRAP to accommodate new participants and enables both mandatory PRM adoption and continued LOLE and ELCC modeling for the Subregion.

Western Resource Adequacy Program

Expedited Proposal

Requester	
Name: The WRAP Team	Organization: ☐ Participant _____ ☐ Program Operator ■ Program Administrator
Title: N/A	Phone Number:
Email: wrap@westernpowerpool.org	Date of Request to Resource Adequacy Participant Committee (RAPC): 9/4/2026

Exigent Circumstance

Check one:

- ☐ A FERC-mandated amendment to the Tariff or the Business Practice Manuals
- ☐ An amendment to the Tariff or the Business Practice Manuals to address an immediate reliability impact
- ■ An amendment to this Tariff or the Business Practice Manuals that the RAPC has determined has significant impacts to utility service

Date Exigent Circumstance determined by RAPC: 9/10/2026

Type of Change Requested

Check one:

- ☐ Correction *(i.e., revising erroneous language or language that needs clean-up for grammatical errors or inconsistency across governing documents - no changes to intent or policy)*
- ☐ Clarification *(i.e., revising language to better represent existing intent, no changes to functionality or policy)*
- ■ Enhancement *(i.e., revising language to expand upon existing intent or functionality)*
- ☐ New Protocol, Business Practice, Criteria, Tariff *(i.e., new language to accommodate new functionality or policy not existing today)*
- ☐ Change *(i.e., a change in the existing policy – will replace an existing language)*
- ☐ Other *(i.e., changes that do not fall into the categories listed above)*

Western Resource Adequacy Program

Expedited Proposal

Description of Change

Provide a description of the issue:

New Participants that are located in areas that do not fit into the existing Subregion definitions have signed WRAP Agreements (WRAPA). This proposal would make the changes in the WRAP Business Practice Manuals (BPM) to add a new Rockies Subregion. The changes are found in BPMs 102, 103, 105, 108, 206, and the WRAP Tariff.

Note that this change does not preclude or prevent the eventual adoption of policies to further revise the Subregions as a result of day ahead market integration efforts, but it is essential to enabling the timely approval of planning reserve margins (PRM) for Summer 2027 (using Summer 2028 values as proxy) and to continue LOLE and ELCC modeling for Winter 2027-2028 for the new Rockies Subregion (using Winter 2028-2029 as proxy).

Please provide the following information if known and/or available.

1. Provide a proposed solution to the issue described:
   The solution is to update the BPMs as follows:
   - Introducing new language to BPM 102 to add the new Rockies Subregion.
   - Updating language in BPM 103 to open the possibility that a Participant could have loads in more than two Subregions.
   - Updating the VER Zones maps in BPM 105 to align with the new Rockies Subregion.
   - Updating language in BPM 108 to open the possibility that a Participant could have loads in more than two Subregions.
   - Defining Day-Ahead and Real Time Price Indices for the new Rockies Subregion in BPM 206, as well as adding a note for blocks for daylight savings time.
   - Update the WRAP Tariff settlement prices to allow the use of a Locational Marginal Price (LMP) as an Applicable Index Price, given ICE prices do not exist in the Rockies Subregion.

1. Provide the specific document and language you would like changed:

   See Redlines attached for the following documents:

   - WRAP Tariff (pages 41, 67, and 79)
   - BPM 102 Forward Showing Reliability Metrics
   - BPM 103 Forward Showing Capacity Requirement
   - BPM 105 Qualifying Resources
   - BPM 108 Forward Showing Submittal Process
   - BPM 206 Settlement Pricing
2. Provide a suggestion for how language could be updated to address issue:

   See Redlines attached.

Impact of Change
Please provide the following information if known and/or available. 1. Any data/information available that would characterize the importance or magnitude of the issue (allows for file attachments): The changes proposed here are necessary to allow over 7500 MW of peak P50 load into the WRAP. 2. Describe the benefits that will be realized from this change: Enable new Participants in the Rockies Subregion to fully participate in WRAP.

WESTERN RESOURCE ADEQUACY PROGRAM

TARIFF

OF

NORTHWEST POWER POOL

D/B/A

WESTERN POWER POOL

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SCHEDULE 1
WESTERN RESOURCE ADEQUACY PROGRAM ADMINISTATIVE COST RECOVERY CHARGE

ATTACHMENT A
Western Resource Adequacy Program Agreement

PART I GENERAL PROVISIONS

1. Definitions

Unless the context otherwise specifies or requires, capitalized terms used in this Tariff shall have the respective meanings assigned herein for all purposes of this Tariff (such definitions to be equally applicable to both the singular and the plural forms of the terms defined). Unless otherwise specified, all references herein to Parts, Sections, Schedules, or Attachments, are to Parts, Sections, Schedules, or Attachments of this Tariff.

Applicable Price Index: A published index of wholesale electric prices, or Locational Marginal Prices duly calculated and posted by a FERC-regulated market operator, in either case as designated under Part III of this Tariff for use in connection with an identified Subregion.

Administration Charge or WRAP Administration Charge: The charge established under Schedule 1 of this Tariff for recovery of the costs of the WRAP.

Advance Assessment: Analyses and calculations of Participant load, resource, and other information performed in advance of each Binding Season as set forth in Part II of this Tariff.

Aggregate Capacity Deficiency: As to a Binding Season, the sum of the maximum Monthly Deficiencies of all Participants that submitted FS Submittals for such Binding Season, as determined following completion of the Cure Period for such Binding Season.

Available Transfer Capability ("ATC"): Transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses.

Balancing Authority: The responsible entity that integrates resource plans ahead of time, maintains demand and resource balance within a Balancing Authority Area, and supports interconnection frequency in real time.

Balancing Authority Area: The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

Base Charge: A component of the WRAP Administration Charge as established under Schedule 1 of this Tariff.

Base Costs: Base Costs shall have the meaning provided in Schedule 1 of this Tariff.

Base Services Cost Centers: The cost centers comprising the Base Charge as defined in Schedule 1 of this Tariff.

Base Services Percentage: Base Services Percentage shall have the meaning provided in Schedule 1 of this Tariff.

Binding Season: The Summer Season or the Winter Season.

Board of Directors or Board: The Board of Directors of the Northwest Power Pool d/b/a Western Power Pool.

Business Day: Any Day that is a Monday through Friday, excluding any holiday established by United States federal authorities.

Business Practice Manuals: The manuals compiling further details, guidance, and information that are appropriate or beneficial to the implementation of the rules, requirements, and procedures established by this Tariff. Business Practice Manuals do not include such internal rules or procedures as the Western Power Pool may adopt for its operation and administration, including but not limited to any corporate by-laws of the Western Power Pool, or for any services or functions provided by the Western Power Pool other than those established by this Tariff.

CAISO: The California Independent System Operator Corporation, a California nonprofit public benefit corporation.

Capacity Benefit Margin: An amount of transmission transfer capability permitted under open access transmission rules to be reserved by load serving entities to ensure access to generation from interconnected systems to meet generation reliability requirements.

Capacity Critical Hours ("CCH"): Those hours during which the net regional capacity need for the WRAP Region is expected to be above the 95th percentile, based on historical and synthesized data for the WRAP Region's gross load, variable energy resource performance, and interchange.

Capacity Deficiency: A shortfall in a Participant's Portfolio QCC relative to that Participant's FS Capacity Requirement, as further defined in Part II of this Tariff.

Cash Working Capital Fund: Cash Working Capital Fund shall have the meaning provided in Schedule 1 of this Tariff.

Cash Working Capital Support Charge: A charge assessed to Participants under Schedule 1 of this Tariff to fund the Cash Working Capital Fund.

Cash Working Capital Support Charge Rate: Cash Working Capital Support Charge Rate shall have the meaning provided in Schedule 1 of this Tariff.

Central Hub: A designated point or named group of points on the transmission system within a Subregion identified by the Program Administrator that permits energy deliveries from multiple points within such Subregion.

Cost of New Entry ("CONE"): The estimated cost of new entry of a new peaking natural gas-fired generation facility, as determined under, and used in, Part II of this Tariff.

CONE Factor: A factor employed in the calculation of Deficiency Charges under Part II of this Tariff, to reflect whether, and the extent to which, the WRAP Region as a whole is expected to have a capacity deficiency during the period for which the Deficiency Charge is being calculated or a factor employed when a Participant has had repeated deficiencies in sequential years.

Committee of State Representatives ("COSR"): Committee of State Representatives, as established in Part I of this Tariff.

Contingency Reserve: As more fully described in the NERC WECC reliability standards, a quantity of reserves, consisting of generation, load, interchange, or other resources, that are deployable within ten minutes, equal to the greater of (i) the MW quantity of the loss of the most severe contingency and (ii) the megawatt quantity equal to the sum of 3% of hourly integrated load plus 3% of hourly integrated generation.

Critical Mass: *The threshold level of participation in a Subregion, as established in the Business Practice Manuals, below which each Participant of such Subregion may elect to participate as a Non-Binding Participant.*

Cumulative Delivery Failure Period: Any period of five consecutive years, ending with and including the most recent Energy Delivery Failure as of the time of determination of a possible Delivery Failure Charge.

Day: A calendar day.

Day-Ahead Price: A price for wholesale electric transactions designated as a day-ahead price in an Applicable Price Index.

Default Allocation Assessment: A charge assessed on non-defaulting Participants to recover the costs associated with a default by a Participant, as set forth in Part I of this Tariff.

Deficiency Charge: A charge assessed for a Capacity Deficiency or Transmission Deficiency, as set forth in Part II of this Tariff.

Delivery Failure Charge: A charge assessed for a Participant's failure to deliver a required Energy Deployment, as set forth in Part III of this Tariff.

Delivery Failure Charge Rate: A rate employed in the determination of a Delivery Failure Charge as more fully set forth in Part III of this Tariff.

Delivery Failure Factor: A factor used in the determination of a Delivery Failure Charge to recognize the relative severity or impact of an Energy Delivery Failure, as set forth in Part III of this Tariff.

Demand Response: A quantifiable load reduction or otherwise controllable load for which a Participant has two mutually-exclusive options to use to affect its FS Capacity Requirements in a FS for a Binding Season: (1) leave the effects of historically deployed demand response as part of its load provided for the Advance Assessment; or (2) utilize as a Demand Response Capacity Resource.

Demand Response Capacity Resource: A Qualifying Resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with the requirements established under Part II of this Tariff utilized to meet a Participant's FS Capacity Requirement.

Demonstrated FS Transmission: A Participant's demonstration in its Forward Showing Submittal that it has secured WRAP Qualifying Transmission in a quantity sufficient to provide reasonable assurance, as of the time of the Forward Showing Submittal, of delivery of capacity

from the Qualifying Resources and the resources associated with the power purchase agreements in the Participant's Portfolio QCC.

Discounted Deficiency Change: *A reduced Deficiency Charge during the Transition Period that enables a deficient Participant that demonstrates commercially reasonable efforts but is unable to cure deficiencies to access Operations Program capacity.*

Dual Benefit Cost Centers: Dual Benefit Cost Centers shall have the meaning provided in Schedule 1 of this Tariff.

Effective Load Carrying Capability ("ELCC"): A methodology employed to determine the Qualified Capacity Contribution of certain types of Qualifying Resources, as more fully set forth in Part II of this Tariff.

Energy Declined Settlement Price: A pricing component used as part of the calculation of settlements for Holdback Requirements and Energy Deployments under Part III of this Tariff.

Energy Delivery Failure: A failure by a Participant to provide an Energy Deployment assigned to such Participant under Part III of this Tariff.

Energy Deployment: A delivery of energy that a Participant is required to provide during an Operating Day, as set forth in Part III of this Tariff.

Energy Storage Resource: A resource, not including a Storage Hydro Qualifying Resource, designed to capture energy produced at one time for use at a later time.

Excused Transition Deficit: A Participant's inability during the Transition Period to demonstrate full satisfaction of the Participant's FS Capacity Requirement, which, under certain conditions and limitations prescribed by Part II of this Tariff, permits *the Participant to pay a Discounted* Deficiency Charge.

Federal Power Marketing Administration: A United States federal agency that operates electric systems and sells the output of federally owned and operated hydroelectric dams located in the United States.

FERC: The Federal Energy Regulatory Commission.

Forced Outage Factor: The factor resulting from dividing the number of hours a generating unit or set of generating units is not synchronized to the grid system, not in reserve shutdown state and considered to be out of service for unplanned outages—or a startup failure, by the number of total hours in the period multiplied by 100% or a Program Administrator calculated equivalent forced outage factor that reflects the likelihood and extent to which a resource will be unavailable from time to time due to factors outside management control.

Forward Showing Program: The program and requirements as set forth in Part II of this Tariff.

Forward Showing Submittal ("FS Submittal"): The submissions a Participant is required to submit in advance of each Binding Season to demonstrate its satisfaction of the FS Capacity Requirement and FS Transmission Requirement, as set forth in Part II of this Tariff.

Forward Showing Year: A period consisting of a Summer Season and the immediately succeeding Winter Season.

FS Capacity Requirement: The minimum quantity of capacity a Participant is required to demonstrate for a Binding Season, as set forth in Part II of this Tariff.

FS Deadline: The deadline for Participants' submissions of their FS Submittals for a Binding Season, as established under Part II of this Tariff.

FS Planning Reserve Margin ("FSPRM"): An increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages, or lower availability of resources, expressed as a percentage of the applicable peak load forecast, as determined in accordance with Part II of this Tariff.

FS Transmission Requirement: The minimum quantity of WRAP Qualifying Transmission a Participant is required to demonstrate for a Binding Season, as set forth in Part II of this Tariff.

High-Priced Day: The most recent day in the CAISO in which prices in the day-ahead market were at least $200/MWh.

Holdback Capacity: Capacity that is voluntarily supplied or is the result of a positive Sharing Calculation result that is bindingly committed to the WRAP after it is claimed by one or more Participants with a negative Sharing Calculation result.

Holdback Requirement: A MW quantity, as determined on a Preschedule Day, that a Participant is required to be capable of converting into an Energy Deployment on a given hour of the succeeding Operating Day, as more fully set forth in Part III of this Tariff.

ICE Index: A wholesale electric price index prepared and published by the Intercontinental Exchange.

Incremental Cash Working Capital Support Charge: Incremental Cash Working Capital Support Charge shall have the meaning provided in Schedule 1 of this Tariff.

Independent Evaluator: An independent entity engaged to provide an independent assessment of the performance of the WRAP and any potential beneficial design modifications, as set forth in Part I of this Tariff.

Installed Capacity: Nameplate capacity adjusted for conditions at the site of installation.

International Power Marketing Entity: An entity that (i) owns, controls, purchases and/or sells resource adequacy supply and is responsible under the WRAP program for meeting LRE obligations associated with one or more loads physically located outside the United States.

Legacy Agreement: A power supply agreement entered into prior to October 1, 2021.

Load Charge: A component of the WRAP Administration Charge as established under Schedule 1 of this Tariff.

Load Charge Rate: Load Charge Rate shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Costs: Load Services Costs shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Cost Centers: Load Services Cost Centers shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Percentage: Load Services Percentage shall have the meaning provided in Schedule 1 of this Tariff.

Load Responsible Entity ("LRE"): An LRE is an entity that (i) owns, controls, purchases and/or sells resource adequacy supply, or is a Federal Power Marketing Administration or an International Power Marketing Entity, and (ii) has full authority and capability, either through statute, rule, contract, or otherwise, to:

(a) submit capacity and system load data to the WRAP Program Operator at all hours;

(b) submit Interchange Schedules within the WRAP Region that are prepared in accordance with all NERC and WECC requirements, including providing E-Tags for all applicable energy delivery transactions pursuant to WECC practices and as required by the rules of the WRAP Operations Program;

(c) procure and reserve transmission service rights in support of the requirements of the WRAP Forward Showing Program and Operations Program; and

(d) track and bilaterally settle holdback and delivery transactions.

Subject to the above-mentioned criteria, an LRE may be a load serving entity, may act as an agent of a load serving entity or multiple load serving entities, or may otherwise be responsible for meeting LRE obligations under the WRAP.

Locational Marginal Price: The cost of delivering an additional unit of energy to a given node, as calculated under a FERC-regulated wholesale electric tariff.

Loss of Load Expectation ("LOLE"): An expression of the frequency with which a single event of failure, due to resource inadequacy, to serve firm load would be expected (based on accepted reliability planning analysis methods) to result from a given FS Planning Reserve Margin.

Make Whole Adjustment: A component used as part of the calculation of settlements for Holdback Requirements and Energy Deployments under Part III of this Tariff.

Maximum Base Charge: The maximum amount prescribed in Schedule 1 of the Tariff that the Base Charge cannot exceed.

Maximum Load Charge Rate: The maximum rate prescribed in Schedule 1 of the Tariff that the Load Charge Rate cannot exceed.

Median Monthly P50 Peak Loads: Median Monthly P50 Peak Loads has the meaning prescribed by Schedule 1 of this Tariff.

Month: A calendar month.

Monthly Capacity Deficiency: A Participant's Capacity Deficiency for a given Month.

Monthly Deficiency: An identification under Part II of this Tariff whether, and the extent to which, a Participant's need for capacity or transmission for a given Month is greater than the capacity or transmission, respectively, the Participant can demonstrate for such Month.

Monthly FS Capacity Requirement: FS Capacity Requirement determined as to a Month.

Monthly FSPRM: The FS Planning Reserve Margin applicable to a given Month of a given Binding Season, as determined in accordance with Part II of this Tariff.

Monthly Transmission Deficiency: A Participant's Transmission Deficiency for a given Month.

Monthly Transmission Demonstrated: A Participant's Demonstrated FS Transmission for a given Month.

Monthly Transmission Exceptions: Exceptions from the FS Transmission Requirement approved under Part II of this Tariff for a Participant for a given Month.

Multi-Day-Ahead Assessment: A period of days preceding each Operating Day, and ending on the Preschedule Day, during which Sharing Calculations are successively performed based in each case on Operating Day conditions expected at the time of calculation.

North American Electric Reliability Corporation ("NERC"): A not-for-profit international regulatory authority that serves as the designated electric reliability organization for the continental United States, Canada, and a portion of Mexico.

Net Contract QCC: The QCC, which may be a positive or negative value, calculated, in sum and on net, for a Participant's power purchase agreements and power sale agreements, in accordance with Part II of this Tariff.

Non-Binding Season: As to a Participant, *any* Binding Season during which the *provisions of Section 15A.1* of this Tariff *apply*.

Non-Binding Participant: For any Binding Season, a Participant that has made an election by which such Binding Season is a Non-Binding Season for that Participant.

Open Access Transmission Tariff: A governing document on file with FERC establishing the rates, terms, and conditions of open access transmission service, or equivalent tariff of a transmission service provider that is not required to file its transmission service tariff with FERC.

Operating Day: A current Day of actual electric service from resources to load, for which Sharing Events are determined and Energy Deployments may be required, as set forth in Part III of this Tariff.

Operations Program: The program and requirements set forth in Part III of this Tariff.

P50 Peak Load Forecast: A peak load forecast prepared on a basis, such that the actual peak load is statistically expected to be as likely to be above the forecast as it is to be below the forecast.

Participant: A Load Responsible Entity that is a signatory to the WRAPA.

Portfolio QCC: As to a Participant, the sum of the Resource QCC provided by all of a Participant's Qualifying Resources plus the Net Contract QCC of such Participant, as adjusted to reflect RA Transfers as described in Section 16.2 7 and Planned Outages as described in Section 16.2.8.

Preschedule Day: The applicable scheduling Day for a given Operating Day as defined in scheduling calendar established by WECC.

Program Administrator: The Western Power Pool, in its role as the entity responsible for administering the WRAP.

Program Operator: A third party that has contracted with the Program Administrator to provide technical, analytical, and implementation support to the Program Administrator for the WRAP.

Program Review Committee ("PRC"): The stakeholder sector committee as established in Section 4.2 of this Tariff.

Pure Capacity: A MW quantity of capacity without any assigned forced outage rate employed in ELCC determinations under Part II of this Tariff.

Qualifying Capacity Contribution ("QCC"): The MW quantity of capacity provided by a resource, contract, or portfolio which qualifies to help satisfy a Participant's FS Capacity Requirement, as determined in accordance with Part II of this Tariff.

Qualifying Resource: A generation or load resource that meets the qualification and accreditation requirements established by and under Part II of this Tariff.

Real-Time Price: A price for wholesale electric transactions designated as a real-time price in an Applicable Price Index.

Resource Adequacy Participant Committee ("RAPC"): The committee comprised of representatives from each Participant as established in Part I of this Tariff.

Resource QCC: The QCC provided by a Qualifying Resource, as determined in accordance with Part II of this Tariff.

Run-of-River Qualifying Resource ("ROR"): A hydro-electric power project that does not have the capability to store a sufficient volume of water to support continuous generation at the project's stated maximum capacity for a period of one hour. Resource does not meet the definition of a Storage Hydro Qualifying Resource.

Safety Margin: An additional factor allocated among Participants with positive sharing calculations when warranted by certain conditions as prescribed by Part III of this Tariff.

Senior Official Attestation: A signed statement of a senior official of a Participant attesting that it has reviewed such Participant's information submission required under this Tariff, that the statements therein are true, correct and complete to the best of such official's knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein, and containing such further statements as required by this Tariff or the applicable Business Practice Manual for the information submission at issue.

Sharing Calculation: A calculation used in the Operations Program under Part III of this Tariff to identify any hour in which any Participant is forecast to have a capacity deficit.

Sharing Event: An hour or hours of an Operating Day for which one or more Participants has a negative Sharing Calculation result, as determined in accordance with Part III of this Tariff.

Storage Hydro Qualifying Resource: A hydro-electric power project with an impoundment or reservoir located immediately upstream of the powerhouse intake structures that can store a sufficient volume of water to support continuous generation at the project's stated maximum capacity for a period of one hour or longer.

Subregion: An area definition approved by the Board of Directors and identified in the Business Practice Manuals, that is wholly contained within the WRAP Region, which is separated from one or more other Subregions by transmission constraints on capacity imports or on capacity exports that result, or are expected to result, in differing FSPRM determinations for that Subregion relative to such other Subregion.

Summer Season: A period of time that commences on June 1 of a Year and terminates on September 15 of the same Year.

System Sale: A bilateral agreement that conveys generating capacity from a group of generating resources from one party to another.

Transition Period: The Binding Seasons within the time period from June 1, 2025, through March 15, *2029*, plus the time period required to implement the requirements and procedures of Part II of this Tariff applicable to such Binding Seasons.

Transmission Deficiency: A shortfall in a Participant's demonstration of secured WRAP Qualifying Transmission, after accounting for any approved transmission exceptions, relative to that Participant's FS Transmission Requirement, as further defined in Part II of this Tariff.

Unforced Capacity: The percentage of Installed Capacity available after a unit's forced outage rate is taken into account.

Variable Energy Resource ("VER"): An electric generation resource powered by a renewable energy source that cannot be stored by the facility owner or operator and that has variability that is beyond the control of the facility owner or operator, including but not limited to a solar or wind resource.

VER Zone: A geographic area delineated in accordance with Section 16.2.5.2 of this Tariff for a given type of VER, where each VER of that type located in such area is anticipated to be comparably affected by meteorological or other expected conditions in such area to a degree that warrants distinct calculation of ELCC allocations for such VERs of that type in such area.

Voluntary Holdback: Capacity that is offered to the Operations Program by a Participant with excess supply that is not obligated to the WRAP through a positive Sharing Calculation result, some or all of which can used as part of the offering Participant's Holdback Requirement. For a Participant in a Subregion without a Central Hub, Voluntary Holdback for an hour must additionally include a total quantity for all identified points from Section 19.4 at which it can deliver that is no less than the amount of the Voluntary Holdback capacity for such hour.

Western Electricity Coordinating Council ("WECC"): A non-profit corporation that has been approved by FERC as the regional entity for the western interconnection and that also has NERC delegated authority to create, monitor, and enforce reliability standards.

Western Resource Adequacy Program Agreement ("WRAPA"): The participation agreement for the Western Resource Adequacy Program, as set forth as Attachment A to this Tariff, or as set forth for an individual Participant in a non-conforming version of such participation agreement accepted by FERC.

Western Resource Adequacy Program ("WRAP"): The Western Resource Adequacy Program, as established under this Tariff.

Western Power Pool ("WPP"): Northwest Power Pool, d/b/a Western Power Pool, which serves as Program Administrator for the WRAP under this Tariff and holds exclusive rights under section 205 of the Federal Power Act to file amendments to this Tariff.

Winter Season: A period of time that commences on November 1 of a Year and terminates on March 15 of the immediately following Year.

WRAP Cost Assignment Matrix: The matrix set forth in Schedule 1 of this Tariff to identify which WRAP costs are assessed to the Base Charge and the Load Charge components of the WRAP Administration Charge.

WRAP Qualifying Transmission: Transmission service that is (i) NERC Priority 6 or NERC Priority 7 point-to-point transmission service, (ii) network integration transmission service, or (iii) any firm transmission product that constitutes the highest priority transmission service offered by a transmission service provider, is reserved in advance, cannot be curtailed for higher priority

transmission service, and is subject to curtailment only under reliability conditions necessary to maintain transmission system operations.

WRAP Region: The area comprising, collectively, (i) the duly recognized and established load service areas of all loads in the United States that all Participants are responsible for serving, (ii) the duly recognized and established load service areas of all loads in the United States that all load serving entities, on whose behalf a Participant acts in accordance with this Tariff, are responsible for serving, and (iii) the applicable location(s) on the United States side of the United States international border that form the basis for an International Power Marketing Entity's participation under the WRAP, in all cases excluding, for any Binding Season, any loads permitted by this Tariff to be excluded from Participants' Forward Showing Submittal for such Binding Season.

Year: A calendar year.

2. Role of Western Power Pool

2.1 WPP, acting under the direction of its Board of Directors, shall administer the WRAP as Program Administrator. Except as specified in Section 3 of this Tariff, WPP, as authorized by its Board of Directors, shall have the sole authority to submit to FERC amendments to the rates, terms, and conditions set forth in this Tariff under section 205 of the Federal Power Act, 16 U.S.C. § 824d. Nothing contained herein shall be construed as affecting in any way the right of any Participant or any other entity to apply to FERC for amendments to the rates, terms, and conditions contained herein under section 206 of the Federal Power Act, 16 U.S.C. § 824e, or any other applicable provision of that Act.

2.1.1 WPP president and staff shall support the Board of Directors in overseeing all aspects of the WRAP, including oversight and management of the Program Operator(s) in accordance with any Program Operator agreement(s) entered into by WPP under Section 2.2 of this Tariff.

2.1.2 WPP and its staff shall provide all legal, regulatory, and accounting support for the WRAP, including support for making filings with FERC as authorized by the Board of Directors.

2.1.3 WPP staff shall provide all logistical support necessary to facilitate implementation of the WRAP and specifically all logistical needs of the Board of Directors and reasonable logistical assistance to facilitate meetings and activities of the RAPC, PRC, and all subordinate organizational groups.

2.2 As Program Administrator, WPP shall undertake all actions as necessary to implement and administer the WRAP, including but not limited to engaging one or more Program Operator(s) to perform technical operations of the WRAP including both the Forward Showing Program and Operations Program. Except as otherwise provided herein, WPP may contract for certain activities required by this Tariff to be provided by one or more Program Operator(s) subject to oversight by the Board of Directors, provided, however, that the Program Operator shall operate solely as a contractor under the oversight of WPP, and WPP shall remain the sole point of compliance with this Tariff. WPP shall have the sole authority to enter into contracts for such engagements and is responsible for providing support and compensation for such Program Operator(s) pursuant to any contract(s).

2.2.1 WPP will contract with Program Operator(s) to assist WPP with providing reasonable technical support and expertise to all WRAP organizational groups as governed by the Program Operator's contract with WPP.

3. Role of the Board of Directors and Limitations on Board Authority

3.1 Authority: Ultimate authority over all aspects of the WRAP as established under this Tariff shall be vested in the independent Board of Directors. Each member of the Board of Directors shall at all times exhibit financial independence from all Participants and classes of Participants, as further provided in the WPP Bylaws and policies. As set forth in Section 2.1 of this Tariff, the Board of Directors shall have the exclusive authority to approve and direct WPP to file amendments to this Tariff with FERC under section 205 of the Federal Power Act, 16 U.S.C. § 824d, subject to the limitations and prohibitions imposed under Section 3.4 of this Tariff. The Board of Directors shall also have the exclusive authority to approve the Business Practice Manuals and any amendments to the Business Practice Manuals, subject to the terms, conditions, and limitations imposed under this Tariff.

3.2 The Board of Directors generally shall meet in open session for all matters related to the WRAP; however, the Board of Directors may meet in closed session as the chair deems necessary to safeguard the confidentiality of sensitive information, including but not limited to discussing matters related to personnel, litigation, or proprietary, confidential, or security sensitive information. The Board of Directors shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session. During open session, the chair of the Board of Directors will reasonably accommodate stakeholder requests to address the Board within the discretion of the chair.

3.3 The Board of Directors shall only consider amendments to this Tariff or the Business Practice Manuals after such amendments are first acted upon by the RAPC, subject to the following additional conditions:

3.3.1 In the event that the RAPC has voted to reject or has not voted to support a proposed amendment to this Tariff or the Business Practice Manuals, any stakeholder may appeal such decision to the Board of Directors, and the Board of Directors shall consider the appeal.

3.3.2 In the event that the RAPC has voted to reject or has not voted to support a proposed amendment to this Tariff or the Business Practice Manuals and a stakeholder has not appealed such decision, the Board of Directors may, on its own motion or motion of any member of the Board of Directors, consider the proposed amendment.

3.3.3 In the event that the COSR as a body opposes or appeals a RAPC decision to the Board of Directors regarding an amendment to this Tariff or the Business Practice Manuals, the process set forth in Section 4.3.3 of this Tariff shall apply prior to the Board of Directors' consideration of the RAPC decision.

3.3.4 In the event that the Board of Directors wishes to initiate an amendment to this Tariff or the Business Practice Manuals that has not undergone PRC

and RAPC review, the Board of Directors shall first submit such proposed amendment to the PRC for review under the processes set forth in Sections 4.1 and 4.2 of this Tariff.

3.3.5 Expedited Review Process: In the event that the RAPC determines that an expedited review process is necessitated by an exigent circumstance as set forth in Section 4.1.3.1.1 of this Tariff, the Board of Directors shall review the RAPC's recommended Tariff or Business Practice Manual amendment expeditiously and invite comment from the PRC, COSR, and stakeholders concurrently with its consideration of the RAPC proposal.

3.4 WPP is specifically prohibited from amending this Tariff to:

3.4.1 Alter, usurp, control, or otherwise materially modify the Participants' existing functional control and responsibility over their generation and transmission assets, including but not limited to planning and operation of such assets, Open Access Transmission Tariff administration, interfering with Balancing Authority duties and responsibilities, or imposing a must-offer requirement on any specific generation resources.

3.4.2 Administer Open Access Transmission Tariff service, engage in Balancing Authority operations, impose transmission planning requirements, or assume any transmission planning responsibilities with regard to any of the Participant's transmission assets.

3.4.3 Form any type of organized market, including but not limited to a capacity market, a regional transmission organization, a real-time market, or any other type of FERC-approved regional construct, unless such action is also approved by the RAPC under its voting procedures set forth in Section 4.1.6 of this Tariff.

3.4.4 Impose any requirements on Participants beyond the assessment of financial charges as specified in this Tariff or suspension or termination of participation for failure to meet any WRAP requirements.

3.4.5 Amend in any way this Section 3 of this Tariff without the approval of the RAPC under its voting procedures set forth in Section 4.1.6 of this Tariff.

3.4.6 Amend the RAPC voting thresholds set forth in Section 4.1.6 of this Tariff.

3.5 Subject to the limitations and prohibitions imposed under Section 3.4 of this Tariff, if the Board of Directors votes to file at FERC to expand the WRAP to include market optimization or transmission planning services, WPP will initiate a formal process with COSR and other stakeholders to conduct a full review of governance structures and procedures, including the role of states. If COSR does not support any revised governance structure that emerges from such WPP review process, the WPP will file, along with any WPP governance proposal to FERC, an alternative

governance structure on behalf of the COSR so long as such COSR alternative governance structure is supported by 75% of the COSR.

4. Organizational Groups for the WRAP

4.1 Resource Adequacy Participants Committee

4.1.1 Authority and Purpose: The RAPC shall be the highest level of authority for representation by Participants in the WRAP governance structure and shall represent the interests of Participants directly to the Board of Directors.

4.1.2 Composition: The RAPC shall be composed of one representative from each Participant. Such representative shall be a senior management official with binding decision-making authority on behalf of the Participant, or a designated representative of a Participant's senior management official. A designated representative shall be required to have binding decision-making authority on behalf of the Participant and shall have all voting rights delegated from the senior management official. Participant shall appoint a designated representative no less than one Business Day in advance of a meeting for that designated representative to be eligible to vote during the meeting.

4.1.3 Functions: The RAPC:

4.1.3.1 Shall consider and recommend that the Board of Directors approve or reject all proposed amendments to this Tariff or Business Practice Manuals prior to the Board of Directors considering such amendments, including any amendments reviewed and referred by the PRC.

4.1.3.1.1 Exigent Circumstances: When the RAPC determines that an amendment to the Tariff or the Business Practice Manuals requires expedited Board of Directors review due to exigent circumstances, it may propose such amendment directly to the Board of Directors without awaiting review by other committees and stakeholders. Exigent circumstances include: (i) a FERC-mandated amendment to this Tariff or the Business Practice Manuals; (ii) an amendment to this Tariff or the Business Practice Manuals to address an immediate reliability impact; or (iii) an amendment to this Tariff or the Business Practice Manuals that the RAPC has determined has significant impacts to utility service.

4.1.3.2 Shall consider and vote to recommend that the Board of Directors approve or reject any proposed amendments to this Tariff or the Business Practice Manuals.

4.1.3.3 May provide input to the Board of Directors on any proposed WPP rules that apply both to the WRAP and other WPP services.

4.1.3.4 May evaluate and provide input to the Board of Directors on the WRAP administration budget and budget allocation to Participants, including amendments to the WRAP Administration Charge as calculated in accordance with Schedule 1 of this Tariff.

4.1.3.5 Shall form and organize all of the organizational groups under its responsibilities.

4.1.3.6 May take other actions reasonably related to its role as the senior-level Participant advisory committee to the Board of Directors regarding WRAP matters.

4.1.4 Leadership: The RAPC shall select from among its members a chair and vice chair.

4.1.5 Meetings:

4.1.5.1 Meetings of the RAPC will generally be open to all stakeholders. WPP shall provide advanced written notice of the date, time, place, and purpose of each RAPC meeting. All RAPC decisional items shall be placed on the open meeting agenda and allotted adequate time for public comment and deliberation.

4.1.5.1.1 The RAPC may meet in closed session as the RAPC chair deems necessary; provided, however, that the RAPC shall allow the designated COSR support staff member as specified in Section 4.3 of this Tariff to attend any closed meeting. The RAPC shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session.

4.1.5.2 The quorum for a meeting of the RAPC or any organizational group organized under it shall be one-half of the representatives thereof, but not less than three representatives, provided that a lesser number may serve as a quorum for the sole purpose of voting to adjourn the meeting to a later time.

4.1.6 Voting:

4.1.6.1 Each RAPC representative shall have one vote.

4.1.6.2 Voting in the RAPC shall utilize a “House and Senate” model.

4.1.6.2.1 Each Participant’s “House” vote shall represent the proportion of the Participant’s Median Monthly P50 Peak Load, as described in Section 2 of Schedule 1 of this Tariff, compared to the sum of all Participants’ Median Monthly P50 Peak Loads. A Participant may choose to divide its

House vote but is responsible for announcing such at the time of voting.

4.1.6.2.2 Each Participant shall receive a single, non-weighted "Senate" vote.

4.1.6.2.3 For an action to be approved by the RAPC, it must pass both "House" and "Senate" votes as follows. For purposes of voting, the percentages identified below specify the percentage threshold of the entire RAPC (whether in attendance or not) that is needed for passage of an action.

4.1.6.2.3.1 Actions to amend any of the limitations on Board authority set forth in Section 3.4 of this Tariff require an 80% affirmative approval by both the House and the Senate vote tallies to be approved.

4.1.6.2.3.2 Actions brought before the RAPC that have been approved by the PRC require a 67% affirmative approval by both the House and Senate vote tallies to be approved.

4.1.6.2.3.3 All other actions not specified in this Section 4.1.6.2.3 require a 75% affirmative approval by both the House and Senate vote tallies to be approved.

4.1.6.2.4 If at any time a single Participant's P50 load for voting purposes would result in that Participant possessing a veto over any votes taken under Section 4.1.5.2.3, such Participant's House vote shall be capped at 1% below the amount that would convey such a veto, such that no single Participant will possess a veto over any action taken under Section 4.1.6.2.3.

4.2 Program Review Committee

4.2.1 Authority and Purpose: The PRC is a sector-representative group comprised in accordance with Section 4.2.2 of this Tariff. The PRC is responsible for receiving, considering, and proposing amendments to this Tariff and the Business Practice Manuals. The PRC shall serve as a clearinghouse of all recommended amendments to this Tariff or the Business Practice Manuals, except for those designated by the RAPC as involving an exigent circumstance under Section 4.1.3.1.1 of this Tariff, amendments to Schedule 1 of this Tariff and cost allocation for the WRAP, and amendments to the WRAPA set forth as Attachment A of this Tariff. The PRC shall serve in an advisory capacity to the RAPC and, when applicable, the Board of Directors.

4.2.1.1 The PRC shall present all proposals received to the RAPC, along with the PRC's recommendation and summaries of all comments and feedback received.

4.2.1.2 The PRC's decisions are advisory-only and are not binding on the RAPC, the Board of Directors, or WPP.

4.2.2 Composition: The PRC shall be composed of up to twenty representatives from the following ten sectors: four representatives of RAPC Participant investor-owned utilities; four representatives of RAPC Participant publicly-owned (consumer or municipal) utilities; two representatives of RAPC Participant retail competition load serving entities; two representatives from RAPC Participant Federal Power Marketing Administrations; two representatives of independent power producers; two representatives of public interest organizations; one representative of retail consumer advocacy groups; one representative of industrial customer advocacy groups; one representative of load serving entities with loads in the WRAP that are represented by other LREs and are not otherwise eligible for any other sector; a representative from the COSR. Expectations for sectors to consider regional, operational, geographic, demographic, and other forms of diversity in selecting their sector representatives are set forth in more detail in the PRC charter, which shall be posted and maintained on the WRAP website or other appropriate public location.

4.2.3 The PRC shall establish a process and criteria for receiving and reviewing proposed amendments to this Tariff and the Business Practice Manuals. Such review will include procedures for stakeholder comment.

4.2.4 Meetings: The PRC shall meet primarily in open session; provided that the PRC may schedule closed meetings if it determines that doing so would be beneficial to safeguard the confidentiality of sensitive information. The PRC shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session.

4.2.5 Voting: The PRC shall endeavor to operate by consensus. When voting is necessary, voting shall consist of one sector one vote, with an affirmative vote of six sectors (as specified in Section 4.2.2 of this Tariff) constituting approval of an action before the PRC.

4.2.5.1 For sectors with four seats, three sector representatives must agree with the action for the sector to be considered an affirmative vote for the action.

4.2.5.2 For sectors with two seats, both sector representatives must agree with the action for the sector to be considered an affirmative vote for the action.

4.2.6 Participants and other entities shall participate in no more than one PRC sector. If a Participant or other entity is eligible to participate in more than one sector, such Participant or other entity shall declare in which sector it will participate.

4.3 Committee of State Representatives

4.3.1. Composition: The COSR is a committee composed of one representative from each state or provincial jurisdiction (either public utility commission or state/provincial energy office) that regulates at least one Participant.

4.3.2 Leadership: The COSR shall determine its leadership, including a chair and vice chair. The chair or vice chair will be requested to attend all open sessions of the RAPC to provide input and advice.

4.3.2.1 The COSR shall designate a COSR support staff member to attend and audit closed meetings of the RAPC under a non-disclosure agreement.

4.3.3 Authority:

4.3.3.1 If the COSR determines that a proposal approved by the RAPC is substantially different from the proposal submitted to the RAPC by the PRC, the COSR may engage in additional public review and comment before the RAPC decision is presented to the Board of Directors; provided that this additional public review and comment does not unreasonably delay presentation to the Board of Directors.

4.3.3.2 If the COSR as a body opposes or appeals a RAPC decision to the Board of Directors, the Board of Directors will not consider the RAPC's decision until the RAPC engages with the COSR to discuss, in at least two public discussions, to attempt to reach a mutually agreeable solution.

4.3.3.2.1 If the appeal relates to an amendment that the RAPC designated as involving an exigent circumstance under Section 4.1.3.1.1 of this Tariff, COSR can require no more than one public discussion, provided that such additional discussion does not unreasonably hinder the timeline for Board of Directors consideration of the proposed amendment.

4.3.4 Voting, Meetings, and Quorum: The COSR may develop its own rules governing voting, meetings, and quorum for action. COSR shall be responsible for its own costs.

5. Independent Evaluator

5.1 WPP shall engage an Independent Evaluator to provide an independent assessment of the performance of the WRAP and any potential beneficial design modifications. The Independent Evaluator shall report directly to the Board of Directors.

5.2 The Independent Evaluator shall conduct an annual review of the WRAP, including but not limited to analyzing prior year program performance, accounting and settlement, and program design.

5.3 The Independent Evaluator shall prepare an annual report of its findings, and any recommended modifications to WRAP design, and present its findings to the WRAP committees and the Board of Directors, subject to any necessary confidentiality considerations. Any data included in the Independent Evaluator's report shall be reported on an aggregated basis as applicable to preserve confidentiality. The Independent Evaluator's annual reports shall be available to the public, except to the extent they contain information designated as confidential under this Tariff, or information designated as confidential by the Independent Evaluator.

5.4 The Independent Evaluator shall not:

5.4.1 Evaluate individual Participants.

5.4.2 Possess any decision-making authority regarding the WRAP or design modifications.

5.4.3 Evaluate WPP's day-to-day operations of the WRAP (except as part of review of prior year program performance).

6. WPP Invoicing and Settlement

6.1 WPP shall be responsible for issuing invoices to, and collecting from, Participants all charges under Schedule 1 of this Tariff for recovery of all WPP costs associated with administering the WRAP.

6.2 WPP shall be responsible for invoicing, collecting, and (as applicable) distributing revenues from Deficiency Charges under Part II of this Tariff and Delivery Failure Charges under Part III of this Tariff.

6.3 Participants are not required to provide credit assurances to WPP to cover charges under Schedule 1 of this Tariff, Deficiency Charges under Part II of this Tariff, or Delivery Failure Charge under Part III of this Tariff.

6.4 Participants shall make full payment of all invoices rendered by WPP for which payment is required to WPP within thirty calendar days following the receipt of the WPP invoice, notwithstanding any disputed amount, but any such payment shall not be deemed a waiver of any right with respect to such dispute. Any Participant that fails to make full and timely payment to WPP of amounts owed upon expiration of the cure period specified in Section 6.4.1 of this Tariff will be in default.

6.4.1 If a Participant fails to make timely payment as required by Section 6.4, WPP shall so notify such Participant. The notified Participant may remedy such asserted breach by paying all amounts due, along with interest on such amounts calculated in accordance with the methodology specified for interest on refunds in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii); provided, however, that any such payment may be subject to a reservation of rights, if any, to refer such matter to dispute resolution procedures under Section 9 of this Tariff. If the Participant has not remedied such asserted breach by 5:00 p.m. Pacific Prevailing Time on the second Business Day following WPP's issuance of a written notice of breach, then the Participant shall be in default.

6.4.2 In the event of a Participant's default under Section 6.4.1 of this Tariff, WPP in its discretion may pursue collection through such actions, legal or otherwise, as it reasonably deems appropriate, including but not limited to the prosecution of legal actions and assertion of claims in the state and federal courts as well as under the United States Bankruptcy Code. After deducting any costs associated with pursuing such claims, any amounts recovered by WPP with respect to defaults for which there was a Default Allocation Assessment shall be distributed to the Participants who have paid their Default Allocation Assessment in proportion to the Default Allocation Assessment paid by each Participant, as calculated pursuant to Section 6.4.3 of this Tariff. In addition to any amounts in default, the defaulting Participant shall be liable to WPP for all reasonable costs incurred in enforcing the defaulting Participant's obligations.

6.4.3 In the event of a Participant's default with respect to an invoice issued by WPP for charges under Schedule 1 of this Tariff, in order to ensure that WPP remains revenue neutral, the Board of Directors may assess against, and collect from, the Participants not in default a Default Allocation Assessment to recover the costs associated with the default. Such assessment shall in no way relieve the defaulting Participant of its obligations.

6.4.3.1 The Default Allocation Assessment shall be equal to:

(20% × (1/N) + (80% × (Participant Median Monthly P50 Peak Load / Sum Participants Median Monthly P50 Peak Load)

where:

N = the total number of Participants, calculated as of the date WPP declares a Participant in default.

Participant Median Monthly P50 Peak Load = for each Participant included in factor "N" above, the Participant's Median Monthly P50 Peak Load as determined in Section 2 of Schedule 1 of this Tariff, recalculated on the day the WPP declares a Participant in default.

All Participants Median Monthly P50 Peak Load = the sum of the Participant Median Monthly P50 Peak Load values for all Participants included in factor "N" above.

7. Credit Requirements and Settlement for Holdback and Delivered Energy

7.1 Credit and Settlement for Holdback and Delivered Energy: Settlement of holdback and delivered energy shall be completed bilaterally between Participants, subject to the following:

7.1.1 Neither WPP nor the Program Operator(s) shall take title to energy or be party to any settlement of holdback or delivered energy.

7.1.2 Participants shall establish credit with each other through one of the following mechanisms. Neither WPP nor the Program Operator(s) shall be involved in the calculation of credit or credit limits.

7.1.2.1 Establish credit directly with each Participant: Participants may establish credit directly with other Participants from whom they may receive delivered energy.

7.1.2.1.1 Such credit should be established in advance of the applicable season.

7.1.2.1.2 The amount of such credit and any credit limit shall be at the discretion of each Participant.

7.1.2.2 WPP shall conduct a competitive solicitation process to identify a third-party service provider to serve as central credit organization and clearing house for credit and settlement. Once such central credit organization is selected, Participants that have not already directly established credit with all other Participants under Section 7.2.2.1 of this Tariff shall establish credit with the central credit organization.

7.1.2.2.1 WPP will provide the central credit organization any Operations Program related information necessary for them to perform their obligations as set forth in the agreement between WPP and the central credit organization.

7.1.2.2.2 All costs associated with the central credit organization service shall be borne by Participants as established in the agreement between WPP and the central credit organization and either billed directly on a transactional basis or else recovered under Schedule 1 of this Tariff.

7.1.2.3 The obligation to arrange sufficient credit shall at all times be on the deficient Participant (i.e., a Participant with a negative sharing calculation in the Operations Program). If a deficient Participant has not made good faith and commercially reasonable efforts to

obtain sufficient credit with a delivering Participant, such delivering Participant shall so notify WPP and shall be excused from any obligation to deliver to such deficient Participant. Nothing in this Section 7 requires a Participant to violate its written risk or credit policy.

7.2 All settlement pricing calculated under this Tariff shall be final and no adjustments to settlement prices shall be allowed after the later of: (1) ninety Days after such settlement prices are posted by WPP; or (2) the final outcome of any dispute resolution process that is initiated by a Participant to dispute a settlement price pursuant to the Dispute Resolution Procedures set forth in Section 9 of this Tariff.

7.2.1 A Participant may invoke the Dispute Resolution Procedures set forth in Section 9 of this Tariff to address calculation errors in any settlement price, but may not invoke the Dispute Resolution Procedures to dispute data sources or to request the use of alternative data sources.

8. Force Majeure, Limitation of Liability, and Indemnification

8.1 Force Majeure: An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, pandemic, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation, or restriction imposed by governmental military or lawfully established civilian authorities, or any other cause beyond a party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither WPP nor the Participant will be considered in default as to any obligation under this Tariff if prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Tariff is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Tariff. Notwithstanding the foregoing, the physical inability to perform because of an event of Force Majeure shall not relieve the party of any financial obligations incurred under this Tariff or as a result of the Force Majeure event, unless, and to the extent, such financial obligation is waived or excused under provisions of Part II or Part III of this Tariff expressly providing for such waiver or excuse.

8.2 Limitation of Liability:

8.2.1 Neither WPP nor the Program Operator shall be liable, whether based on contract, indemnification, warranty, tort, strict liability or otherwise, to any Participant, other entity owning a Qualifying Resource, third party, or other person for any damages whatsoever, including, without limitation, direct, incidental, consequential, punitive, special, exemplary, or indirect damages arising or resulting from any act or omission in any way associated with service provided under this Tariff or any agreement hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, except to the extent that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of WPP or Program Operator, in which case WPP shall only be liable for direct damages.

8.2.2 Neither WPP nor the Program Operator shall be liable for damages arising out of services provided under this Tariff or any agreement entered into hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency, or imperfection of service, occurring as a result of conditions or circumstances beyond the control of WPP, or resulting from electric system design common to the domestic electric utility industry or electric system operation practices or conditions common to the domestic electric utility industry.

8.2.3 To the extent that a Participant or other person has a claim against WPP, the amount of any judgment or arbitration award on such claim entered in favor of such entity shall be limited to the value of WPP's assets. No party may seek to enforce any claims under this Tariff or any Agreements entered into

hereunder against the directors, managers, members, shareholders, officers, employees, or agents of WPP, or against the Program Operator, who shall have no personal liability for obligations of WPP by reason of their status as directors, managers, members, shareholders, officers, employees, or agents of WPP or by virtue of their status as Program Operator.

8.2.4 To the extent that WPP is required to pay any money damages or compensation or pay amounts due to its indemnification of any other party as it relates to any services provided, acts, or omissions under this Tariff or any agreement entered into hereunder, WPP shall be allowed to recover any such amounts under Schedule 1 of this Tariff as part of the WRAP Administration Charge. Notwithstanding the foregoing, WPP shall be prohibited from recovering under this Tariff any costs associated with any damages, compensation, or indemnification costs that arise: (i) with regard to any acts or omissions that occur outside of this Tariff and any agreements entered into hereunder, or (ii) if a court of competent jurisdiction determines that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of WPP or the Program Operator.

8.2.5 A Participant's liability to another Participant under this Tariff for failure to comply with obligations under this Tariff shall be limited to any charges or payments calculated pursuant to this Tariff; provided, however, that nothing in this Section 8.2.5 shall limit or is intended to foreclose any Participant's liability that may arise under any bilateral agreements between Participants.

8.3 Indemnification: The Participants shall at all times indemnify, defend, and save WPP (and any of its Program Operator(s), agents, consultants, directors, officers, or employees) harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties arising out of or resulting from the performance of activities under this Tariff by WPP, any Program Operator(s), or agents, consultants, directors, officers, or employees of WPP, except in cases of gross negligence or intentional wrongdoing by WPP or the Program Operator. WPP shall credit any proceeds from insurance or otherwise recovered from third parties to Participants who have paid to indemnify WPP under this Section 8.3.

8.4 Actions upon Unavailability of Program Operator(s): In the event that the Program Operator(s) become(s) unwilling, unable, or otherwise unavailable to perform contractual duties necessary for WPP to discharge its obligations under this Tariff and WPP's agreement(s) with the Program Operator(s), WPP shall engage with Participants as soon as practicable to determine what actions to take, including but not limited to filing with FERC a request to waive one or more provisions of this Tariff up to and including immediate suspension of all rights and obligations under this Tariff until a replacement Program Operator(s) can assume all relevant Program Operator functions.

9. Dispute Resolution Procedures

9.1 Internal Dispute Resolution Procedures: Subject to the limitations set forth in Section 7.2.1 of this Tariff, any dispute between a Participant and WPP under the Tariff (excluding amendments to the Tariff or to any agreement entered into under the Tariff, which shall be presented directly to the FERC for resolution) shall be referred to a designated senior representative of WPP and a senior representative of the Participant for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty days (or such other period as the parties may agree upon) by mutual agreement, such dispute shall then be referred to the chief executive officer or comparable executive of each party for resolution. In the event that the executives are unable to resolve the dispute within thirty days (or such other period as the parties may agree upon), such dispute may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.

9.2 External Arbitration Procedures: Any arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the parties to the dispute. If the parties fail to agree upon a single arbitrator within ten days of the referral of the dispute to arbitration, each party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association and any applicable FERC regulations.

9.3 Arbitration Decisions: Unless otherwise agreed by the parties, the arbitrator(s) shall render a decision within ninety days of appointment and shall notify the parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and/or any agreement entered into under the Tariff and shall have no power to modify or change any of the above in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act and/or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with the FERC if it affects jurisdictional rates, terms and conditions of service or facilities.

9.4 Costs: Each party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (i) the cost of the arbitrator chosen by the party to sit on the three-member panel and one half of the

cost of the third arbitrator chosen; or (ii) one half the cost of the single arbitrator jointly chosen by the Parties.

9.5 Rights Under the Federal Power Act: Nothing in this section shall restrict the rights of any person to file a complaint with the FERC under relevant provisions of the Federal Power Act or of WPP to file amendments to this Tariff under the relevant provisions of the Federal Power Act.

10. Treatment of Confidential and Commercially Sensitive Information of Participants

10.1 Terms: For purposes of this Section 10 only, the term "WPP" shall also include, as applicable, any directors, officers, employees, agents, or consultants of WPP, the Independent Evaluator established under Section 5 of this Tariff, and any central credit organization established under Section 7 of this Tariff. WPP shall be bound by the rights, obligations, and conditions set forth in this Section 10. For purposes of this Section 10, the term "Disclosing Entity" shall include any Participant that discloses information to WPP that the Disclosing Entity deems and identifies as confidential or commercially sensitive. WPP's collection and handling of non-Participant data shall be governed by separate non-disclosure agreements with such non-Participants.

10.2 Treatment of Confidential or Commercially Sensitive Information: WPP shall identify in the Business Practice Manuals categories of Participant-specific data and information received from Participants that shall be treated as confidential or commercially-sensitive, which WPP shall not disclose publicly or to any other Participant or other entity except as provided for in this Section 10. In addition, WPP shall maintain the confidentiality of all of the documents, data, and information provided to it by any Participant that such disclosing Participant deems and specifically identifies as confidential or commercially sensitive. Notwithstanding the foregoing, WPP need not keep confidential: (i) information that is publicly available or otherwise in the public domain; or (ii) information that is required to be disclosed under this Tariff or any applicable legal or regulatory requirement (subject to the procedures set forth in Section 10.4 of this Tariff).

10.2.1 WPP staff may develop and release publicly composite or aggregated data based upon Participant confidential or commercially sensitive information, provided that such composite or aggregated data cannot be used to identify or attribute a disclosing Participant's confidential or commercially sensitive data. Such release of composite or aggregated data shall be governed by the following process.

10.2.1.1 Prior to the initial release of such composite or aggregated data, WPP staff shall present the form and format of such data to each Participant whose confidential information or data will be used to create the composite or aggregated data. If any such Participant objects to the form and format as revealing or allowing for attribution of confidential or commercially sensitive Participant-specific data, WPP staff shall determine whether to modify the form and format or to retain the proposed form and format for release. If WPP staff elects to retain the proposed form and format, the Participant shall have the right to appeal to the RAPC and WPP staff shall be prohibited from releasing the composite or aggregated data in the proposed form and format until the Participant's appeal rights as specified in this Section 10.2.1

are exhausted.

10.2.1.2 If a Participant appeals a WPP staff decision regarding the form and format of composite or aggregated data to the RAPC, the RAPC shall consider whether the form and format reveals or allows for attribution of confidential or commercially sensitive Participant-specific data. If the RAPC determines that the proposed form and format is sufficient to protect against the release of confidential or commercially sensitive Participant-specific data, WPP staff is authorized to release the composite or aggregated data in the proposed form and format unless the Participant timely appeals the RAPC decision to the Board of Directors.

10.2.1.3 If a Participant appeals a RAPC decision regarding the form and format of composite or aggregated data to the Board of Directors, the Board of Directors shall consider whether the form and format is sufficient to protect against the release or attribution of confidential or commercially sensitive Participant-specific data. If the Board of Directors determines that the proposed form and format is sufficient to protect against the release of confidential or commercially sensitive Participant-specific data, WPP staff is authorized to release the composite or aggregated data in the proposed form and format.

10.2.1.4 Once a proposed form and format of composite or aggregated data is approved by the WPP staff and is not appealed or appeals are unsuccessful, such form and format may be used for all future disclosures of composite or aggregate information and no Participant may dispute such release. If WPP staff proposes to alter the form and format, including but not limited to changing the granularity of data, WPP staff shall be required to follow the process set forth in this Section 10.2.1 and Participants shall have the right to appeal such changes in form and format as set forth herein. Notwithstanding the foregoing, if the composition of Participants in the WRAP changes in such a way that the form and format of composite or aggregated data is no longer sufficient to protect against disclosure or attribution of confidential or commercially sensitive Participant-specific data, an aggrieved Participant shall have a one-time right to raise the issue promptly with WPP Staff for presentation to and review by the Board of Directors, and the Board of Directors in its sole discretion shall decide whether the change in composition results in the form and format of the composite or aggregated data becoming insufficient to

protect against the release or attribution of confidential or commercially sensitive Participant-specific data; provided, however, that if an aggrieved Participant does not raise its concerns with the Board of Directors promptly following the change in composition, such Participant shall have waived its right to contest the release of such composite or aggregated data.

10.2.2 Notwithstanding anything to the contrary in this Section 10.2, if the RAPC unanimously votes to disclose publicly any particular category of Participant-specific data, such data shall no longer be deemed confidential regardless of any such designation by a disclosing Participant, and this election shall be binding on any current and future Participants until such time as the RAPC votes unanimously to prohibit public release of such category of data. A list of the categories of Participant-specific data that the RAPC unanimously votes to make public shall be included in the Business Practice Manuals.

10.3 Access to Confidential or Commercially Sensitive Information: Except as otherwise provided in Section 10.2 of this Tariff, no Participant, entity owning a Qualifying Resource, or any third party shall have the right hereunder to receive from WPP or to otherwise obtain access to any documents, data or other information that has been identified as or deemed to be confidential or commercially sensitive under Section 10.2 of this Tariff by a disclosing Participant. The provisions of this Section 10.3 do not apply to WPP (including any Independent Evaluator, member of the Board of Directors, or any WPP officer, employee, agent, or consultant that requires access to confidential or commercially sensitive information); provided that access to Participant-specific confidential or commercially sensitive information shall be solely for the purpose of performing the duties or functions under this Tariff or otherwise advising or assisting WPP. WPP shall develop internal policies and controls governing the handling and protection of confidential or commercially sensitive Participant-specific data by members of the Board of Directors, officers, employees, agents, consultants, or any Independent Evaluator.

10.4 Exceptions: Notwithstanding anything in this Section 10 to the contrary:

10.4.1 If WPP is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence pursuant to this Section 10, WPP may disclose such information; provided, however, that as soon as practicable after WPP learns of the disclosure requirement and prior to making such disclosure, WPP shall notify any affected disclosing Participant of the requirement and the terms thereof. Any such disclosing Participant may, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement and WPP shall cooperate with such disclosing Participant to take all reasonable available steps to oppose

or otherwise minimize the disclosure of the information permitted by applicable legal and regulatory requirements. WPP shall further cooperate with such disclosing Participant to the extent reasonably practicable to obtain proprietary or confidential treatment of confidential or commercially sensitive information by the person to whom such information is disclosed prior to any such compelled disclosure.

10.4.2 WPP may disclose confidential or commercially sensitive information, without notice to any affected disclosing Participant(s), in the event that FERC, during the course of an investigation or otherwise, requests information that is confidential or commercially sensitive. In providing the information to FERC, WPP shall take action, consistent with 18 C.F.R. §§ 1b.20 and/or 388.112, to request that the information be treated by FERC as confidential and non-public and, if appropriate, as Critical Energy Infrastructure Information and that the information be withheld from public disclosure. WPP shall provide the requested information to FERC within the time provided for in the request for information. WPP shall notify any affected disclosing Participant(s) within a reasonable time after WPP is notified by FERC that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive information has been received, at which time WPP and any affected disclosing Participant may respond before such information would be made public.

10.5 Notwithstanding any efforts undertaken pursuant to Section 10.4 to prevent or limit the release of a Participant's confidential or commercially sensitive information, in the event that FERC or a court of competent jurisdiction orders or otherwise permits the public release of a Participant's confidential or commercially sensitive information, the affected Participant shall have a one-time right to elect to terminate its participation in the WRAP under the expedited termination provisions set out in Section 11.2 of the WRAPA.

10.6 WPP shall handle any information identified or deemed to be Controlled Unclassified Information/Critical Energy Infrastructure Information in accordance with FERC's regulations set forth at 18 C.F.R. § 388.113 and any applicable FERC policies or other regulations, including but not limited to restricting access to such information on a password-protected portion of WPP's website or similar precautions.

10.7 Nothing in this Section 10 is intended to limit a Participant's ability to disclose or release publicly its own confidential or commercially sensitive information or data, or to limit a Participant's ability to authorize WPP's disclosure of such material to a specified recipient.

11. Timing

11.1 In the event that any deadline specified in this Tariff shall fall on a day that is not a Business Day, the deadline shall be extended to the next Business Day.

12. Application and Registration

12.1 Any entity wishing to participate in the WRAP must submit an application and registration in accordance with the Business Practices Manuals and must execute the WRAPA as set forth in Attachment A of this Tariff, or a non-conforming version of such participation agreement that is approved by FERC for an individual Participant. Such application and registration must be submitted in accordance with the timelines set forth in the Business Practices Manuals in advance of the next Binding Season.

12.2 Each Participant must register all of its resources and loads, regardless of whether such resources will be used to satisfy the WRAP requirements and regardless of whether certain loads will be subject to the requirements of the WRAP. Participants may modify their registration of resources and loads in accordance with the timing procedures set forth in the Business Practices Manuals.

12.3 In the event that more than one Participant attempts to register the same resource or load, the following procedure will be used to assign the resource or load to a Participant:

12.3.1 If a Participant attempts to register a load or resource that has already been registered by a different Participant, the resource or load will remain registered by the original Participant registering the resource or load until such time as both Participants mutually inform WPP that a change to the registration is required.

12.3.2 If two or more Participants attempt to register the same resource or load during the same registration window, WPP shall request that the Participants determine among themselves the appropriate registration of the resource or load before that resource or load is included in the WRAP.

PART II FORWARD SHOWING PROGRAM

13. Overview

13.1 In the Forward Showing Program, as set forth in this Part II of the Tariff, and as further detailed in the Business Practice Manuals, each Participant shall, in advance of each Binding Season, show as to such Binding Season: (i) the total capacity, referred to and defined herein as the FS Capacity Requirement, required by the provisions of this Tariff for such Binding Season for reliable service to the loads for which such Participant is responsible; (ii) the demonstration of capacity, referred to and defined herein as the Qualifying Capacity Contribution, or QCC, provided by the Qualifying Resources the Participant provides or procures to meet its FS Capacity Requirement; and (iii) a quantity of WRAP Qualifying Transmission, referred to and defined herein as the FS Transmission Requirement, needed for reliable delivery of the QCC of the Participant's Qualifying Resources from such resources to the loads for which the Participant is responsible.

13.2 As also set forth in this Part II of the Tariff, and as further detailed in the Business Practice Manuals: (i) WPP shall, in advance of each Binding Season, review the Forward Showing Submittals of each Participant for such Binding Season; (ii) WPP shall identify to the Participant any deficiencies in the Participant's Portfolio QCC (whether as to contracts or directly owned or controlled resources) relative to the FS Capacity Requirement, and any deficiencies in the identified WRAP Qualifying Transmission relative to the FS Transmission Requirement, within sixty days of the Forward Showing Submittal deadline; (iii) the Participant shall have an opportunity to cure such deficiencies, within sixty days of notification of deficiency; and (iv) if the Participant fails to cure all such deficiencies on or before the deadlines prescribed herein, the Participant shall be assessed a Forward Showing Deficiency Charge.

14. Forward Showing Program Process and Timeline

14.1 The Forward Showing Program has two Binding Seasons, defined as the Summer Season and the Winter Season. The Summer Season is the period beginning on June 1 of each Year and ending on September 15 of that same Year. The Winter Season is the period beginning on November 1 of each Year and ending on March 15 of the succeeding Year. This Tariff does not establish resource or showing obligations outside the periods defined by the Summer Season and Winter Season.

14.2 Each Participant shall submit its Forward Showing Submittals for each Month of each Binding Season, with all required supporting materials and information as detailed in the Business Practice Manuals, on or before the FS Deadline for the Binding Season. The FS Deadline for each Binding Season shall be seven months before the start of such Binding Season.

14.2.1 Forward Showing Submittal:

14.2.1.1 Absent the exception in Section 14.2.1.2, each Participant shall submit a separate Forward Showing Submittal for loads for which it is responsible if transmission constraints between areas where its loads are located, including, without limitation, when Participant is responsible for loads in more than one Subregion, prevent application, in the manner more fully described in the Business Practice Manuals, of Resource QCC or Net Contract QCC from one load area to the FS Capacity Requirement of another load area.

14.2.1.2 Notwithstanding Section 14.2.1.1, a Participant responsible for loads in ~~two~~ multiple Subregions may submit for a given Month a single Forward Showing Submittal for such loads, and may employ for determination of its FS Capacity Requirement for such Month the lower of the ~~two~~ FSPRM values determined for the Subregions where its loads are located, if the Participant demonstrates in such Forward Showing Submittal, in accordance with the procedures and requirements set forth in the Business Practice Manuals, WRAP Qualifying Transmission in a quantity, in addition to that required by the FS Transmission Requirement, equal to the difference in the ~~two~~ FSPRM values multiplied by the Participant's P50 Peak Load Forecast for such Month, with a point of delivery in the Subregion with the higher FSPRM value and the point of receipt in the Subregion with the lower FSPRM value. Each such showing shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such WRAP Qualifying Transmission, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission.

14.2.2 Each Participant's Forward Showing Submittal shall include a Senior Official Attestation.

14.3 The FSPRM values used in the Forward Showing Submittals for a Binding Season shall be those values approved by the Board of Directors as the culmination of an Advance Assessment process. No later than twelve months before the FS Deadline for each Binding Season, WPP will determine and post the recommended FSPRM for each Subregion for each Month of such Binding Season. Participants shall provide their load, resource and other information reasonably required to perform the analyses and calculations required for the Advance Assessment, in accordance with the Advance Assessment information submission details and schedule specified in the Business Practice Manuals. No later than nine months before the FS Deadline for such Binding Season, the Board of Directors shall take its final action regarding approval of the FSPRM values for each Month of such Binding Season.

14.3.1 In connection with an Advance Assessment process, or otherwise in connection with consideration of a change to the Business Practice Manuals, the Board of Directors may determine that designation of Subregions would encourage the relief, in whole or part, of transmission constraints on the transfer of capacity within the WRAP Region (whether through development or commitment of transmission, of Qualifying Resources, or by other means) to the benefit of the WRAP Region and the advancement of the objectives of the WRAP. Each such Subregion shall be identified in the Business Practice Manuals.

14.3.2 Any Participant may choose to offer in the Advance Assessment process WRAP Qualifying Transmission owned or controlled by such Participant for delivery of capacity from one Subregion to another Subregion, for use by other Participants under the terms of Part III of this Tariff during any or all identified Months of the applicable Binding Season. Each such offer shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such transmission service rights, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission. No Participant is obligated to offer any such transmission service rights in the Advance Assessment process, but any offer so made and not withdrawn before the deadline during the Advance Assessment process specified in the Business Practice Manuals shall be considered a binding offer of the identified transmission service rights which may not be withdrawn before the end of the last Day of the Month for which such transmission service is offered. WPP shall take account of such offered transmission service rights, along with other transmission deliverability reasonably anticipated to be available for use by Participants for WRAP purposes during the applicable Binding Season in its determination of the recommended FSPRM values for each Month of the applicable Binding Season for the WRAP Region and for each affected Subregion.

14.4 No later than sixty Days after the FS Deadline for a Binding Season, WPP will (i) provide the values of the Participant's FS Capacity Requirement and FS Transmission Requirement for each Month of the Binding Season; (ii) affirm that the Portfolio QCC of such Participant for each Month of the Binding Season equals or exceeds the FS Capacity Requirement of such Month for such Participant or notify such Participants of any deficiencies in the Forward Showing Submittal that result in a failure to demonstrate satisfaction of the FS Capacity Requirement; and (iii) affirm that the Demonstrated FS Transmission plus approved Monthly Transmission Exceptions of such Participant for each Month of the Binding Season equals or exceeds the FS Transmission Requirement of such Month for such Participant or notify such Participants of any deficiencies in the Forward Showing Submittal that result in a failure to demonstrate satisfaction of the FS Transmission Requirement.

14.5 Within 120 Days after the FS Deadline, the Participant shall (i) submit revisions to its Forward Showing Submittal, including, without limitation, additions or revisions to the Participant's Resource QCC, Net Contract QCC, or Demonstrated FS Transmission; (ii) in order to fully cure all identified deficiencies and demonstrate that such Participant's Portfolio QCC for each Month of the Binding Season equals or exceeds its FS Capacity Requirement; and (iii) fully provide Demonstrated FS Transmission for each Month of the Binding Season that equals or exceeds its FS Transmission Requirement for the same Month of the Binding Season where WPP identified deficiencies.

14.5.1 Any Participant that fails to cure identified deficiencies in its Forward Showing Submittal within the period prescribed above shall be assessed a Deficiency Charge.

14.6 In the event that a failure of the Forward Showing software system (i) occurs in the seven days preceding a FS Deadline and (ii) prevents a Participant from meeting the FS Deadline, the FS Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the FS Deadline. In the event that a failure of the Forward Showing software system triggers an extension of the FS Deadline pursuant to this Section, the deadline for WPP to respond to the Forward Showing Submittal set forth in Section 14.4 shall be extended by a commensurate number of days as the FS Deadline.

14.7 In the event that a failure of the Forward Showing software system occurs within seven days of the deadline for WPP to respond to Forward Showing Submittals pursuant to Section 14.4, the deadline for WPP to respond set forth in Section 14.4 shall be extended by one Day for each day that the Forward Showing software system failure persists and prevents WPP from meeting the deadline provided in Section 14.4.

14.8 In the event that a failure of the Forward Showing software system (i) occurs in the seven days preceding the deadline to cure deficiencies in the Forward Showing

Submittal set forth in Section 14.5 and (ii) prevents a Participant from meeting the deadline to cure deficiencies in the Forward Showing Submittal provided in Section 14.5, the deadline set forth in Section 14.5 shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the deadline set forth in Section 14.5.

15. Transition Period

15.1 Except as specified in Section 15.1.1, the Binding Season beginning November 1, 2027, will be the first Binding Season for which all Participants will assume the obligations of demonstrating capacity and making surplus capacity available to other Participants and will receive the benefits of reliance upon other Participants' surplus capacity. Any Binding Season during the Transition Period occurring before November 1, 2027, shall be a Non-Binding Season, as specified in Section 15A of this Tariff.

15.1.1 No later than January 15, 2026, a Participant may elect the Binding Season beginning June 1, 2027, as the first Binding Season for which it will assume the obligations of demonstrating capacity and making surplus capacity available to other Participants and will receive the benefits of reliance upon other Participants' surplus capacity by providing written notice of its election.

15.2 Within two years prior to the start of the first Binding Season of the WRAP, a Participant who has elected to participate in the first Binding Season may request a vote of all Participants who have elected to participate in the first Binding Season to delay implementation of the first Binding Season for up to two Seasons. Delayed implementation of the first Binding Season shall be approved if 75% of the Participants who elected to participate in the first Binding Season vote in favor of such delay, with approval requiring a vote of 75% of both the House and Senate vote tallies (as described in Sections 4.1.6.2.1 and 4.1.6.2.2 of this Tariff) of all Participants who elected to participate in the first Binding Season.

15.2.1 The deferral vote may only occur for the first Binding Season of the WRAP. If the Participants who elected to participate in the first Binding Season of the WRAP vote to delay implementation of the first Binding Season, all compliance charges for the Forward Showing Program and Operations Program are automatically deferred; except that the Participants may vote to delay implementation only of the Operations Program portion of the first Binding Season and retain the binding Forward Showing Program portion of the first Binding Season.

15A. Non-Binding Seasons

15A.1 A Participant will participate as a Non-Binding Participant for certain Binding Seasons in the Transition Period, as detailed in Section 15.1 of this Tariff, and when Critical Mass is not achieved for a given Binding Season, as detailed in Section 15A.2 of this Tariff. As to a Non-Binding Season, the Participant:

15A.1.1 Shall not be subject to Deficiency Charges, Transmission Deficiency Charges, Holdback Requirements, Energy Deployment obligations, or Delivery Failure Charges;

15A.1.2 Shall submit Forward Showing Submittals but shall not be required to cure deficiencies;

15A.1.3 Shall not have a mandatory Holdback Requirement as a result of the Sharing Calculation;

15A.1.4 May only receive Holdback Capacity offered voluntarily by other Participants in accordance with Part III of this Tariff; and

15A.1.5 Shall have all rights and be subject to all obligations under Part I of this Tariff and the Participant's WRAPA, including, without limitation, voting rights, committee participation, and the obligation to pay the WRAP Administration Charge.

15A.2 Once WPP has given notice to Participants that their Subregion does not have Critical Mass for a given Binding Season, each such Participant will have 30 days to provide notice to WPP if it intends to participate as a Non-Binding Participant for that Binding Season. Such notice and election will be given similarly for each season without Critical Mass participation.

15A.3 In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations):

15A.3.1 If a Participant will participate in a Summer Season as a Non-Binding Participant, for the purposes of calculating the maximum Monthly Deficiency for Winter, the Max Summer Deficiency (MW) is considered to be 0 MW.

15A.3.2 If the Participant will participate in Winter Season as a Non-Binding Participant, the Max Summer Monthly Deficiency remains unchanged.

16. Components of the Forward Showing

16.1 FS Capacity Requirement. The FS Capacity Requirement shall be determined for each Participant on a monthly basis by applying the applicable Monthly FSPRM for a Month to such Participant's peak load forecast for that Month. The Participant's peak load forecast for a given Month of a Binding Season will be the P50 Peak Load Forecast for the Binding Season multiplied by a shaping factor based on the historical relationship, for such Participant, of the seasonal peak for the Winter Season or Summer Season, as applicable, and the monthly peaks for the Months in such season, as more fully described in the Business Practice Manuals.

16.1.1 P50 Peak Load Forecast. The P50 Peak Load Forecast is a peak load forecast prepared on a basis, such that the actual peak load is statistically expected to be as likely to be above the forecast as it is to be below the forecast. The Business Practice Manuals shall specify an approved load forecasting methodology for use by all Participants for their WRAP-required load forecasts which shall include (i) a base monthly peak derived from a recent historical period that recognizes additions and removals of load during the historical period, (ii) adjustments for known additions and removals of load during the forecast window; and (iii) a specified load growth factor.

16.1.2 FS Planning Reserve Margin

16.1.2.1 The FSPRM is an increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages, expressed as a percentage of the applicable peak load forecast. The FSPRM shall be determined based on probabilistic analysis, taking account of uncertainties in generation and load, as the margin above peak load that provides an expectation of no more than a single event-day of loss of load in ten years (sometimes referred to herein as the "1-in-10 LOLE") for each Binding Season. The FSPRM shall be determined in a manner that accounts for the governing principles of QCC value determinations set forth in Section 16.2.5 of this Tariff and shall employ the applicable peak load for the applicable Binding Season and Months. Additional details, assumptions, methodologies, and procedures for determination of the FSPRM shall be as set forth in the Business Practice Manuals.

16.1.2.2 WPP shall calculate in the Advance Assessment process the recommended Monthly FSPRM for each Month of each Binding Season, for approval by the Board of Directors as set forth in this Part II.

16.1.2.3 The FSPRM shall employ (i) a simulated resource stack using capacity accreditation principles consistent with those used for WRAP QCC determinations; (ii) an adjustment in the total WRAP-required QCC value as needed to meet a 1-in-10 LOLE for each Binding Season, and (iii) while maintaining the 1-in-10 LOLE for each Binding Season in (ii), include a monthly reduction of capacity to ensure that each Month has at least 0.01 annual LOLE. The FSPRM for a Month shall be the simulated QCC as adjusted to meet the 1-in-10 LOLE for each Binding Season minus the P50 Peak Load Forecast for the Month, divided by the P50 Peak Load Forecast for the Month.

16.1.2.4 The FSPRM shall include an approximation of Contingency Reserves as set forth in the Business Practice Manuals.

16.1.3 Contingency Reserves Adjustment. A Participant's FS Capacity Requirement will be adjusted as set forth in the Business Practice Manuals to account for changes in Contingency Reserve requirements resulting from energy contract purchases and contract sales.

16.1.4 A Participant responsible for loads located in a Subregion for which an FSPRM value has been determined that is higher than the FSPRM value determined for a different Subregion may, in lieu of demonstrating a MW increment of Portfolio QCC otherwise required to satisfy such Participant's FS Capacity Requirement for a given Month, demonstrate in its Forward Showing Submittal, in accordance with the procedures and requirements set forth in the Business Practice Manuals, WRAP Qualifying Transmission, in a quantity, in addition to that required by the FS Transmission Requirement, that is no greater than the difference in the two FSPRM values multiplied by the Participant's P50 Peak Load Forecast, with the point of delivery in the Subregion with the higher FSPRM value and the point of receipt in the Subregion with the lower FSPRM value. The MW quantity of the additional WRAP Qualifying Transmission so demonstrated shall reduce for such Month, by the same MW quantity, the Portfolio QCC the Participant would otherwise be required to demonstrate to satisfy its FS Capacity Requirement for such Month. Each such demonstration shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such transmission service rights, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission.

16.2 Qualified Capacity Contribution

16.2.1 For each Participant and each Binding Season, the Forward Showing shall show and support the Portfolio QCC, which shall be the sum of the QCC of the Participant's Qualifying Resources ("Resource QCC"), the QCC of its contracted capacity ("Net Contract QCC"), and any transfers of capacity

already accredited by another Participant ("Total RA Transfer," which could be positive or negative). The Portfolio QCC effective for a Binding Season shall be the value determined by WPP.

16.2.2 A resource will not be assigned a Resource QCC or counted toward Portfolio QCC unless it is a Qualifying Resource. Qualifying Resources are those that, before they are included in a Forward Showing Submittal, are first registered with WPP. A Participant seeking registration of a resource must submit a request for registration providing the resource information described in the Business Practice Manuals.

16.2.3 The minimum resource size for registration of a resource is 1 MW, provided, however, that Participants with responsibility for individual resources of less than 1 MW may aggregate them to meet the 1 MW minimum requirement, under the conditions and limitations specified in the Business Practice Manuals.

16.2.4 A Participant may include in its Forward Showing Submittal a request for an exception from its FS Capacity Requirement for an insufficiency of its Portfolio QCC solely due to (i) a catastrophic failure of one or more Qualifying Resources due to an event of Force Majeure as defined by Section 8.1 of this Tariff that (ii) the Participant is unable to replace on commercially reasonable terms prior to the FS Deadline as a result of the timing and magnitude of such catastrophic failure and its consequences. As more fully set forth in the Business Practice Manuals, such exception request shall be supported by a Senior Official Attestation. The exception request must include complete information on the nature, causes and consequences of the catastrophic failure, and must describe the Participant's specific, concrete efforts prior to the FS Deadline to secure replacement Qualifying Resources for the applicable Binding Season. WPP will consider the exception criteria established by this section, the information provided in the exception request, the completeness of the exception request, and other relevant data and information, in determining whether to grant or deny an FS Capacity Requirement exception request. WPP shall provide such determination no later than sixty days after submission of such Participant's FS Submittal containing such FS Capacity Requirement exception request. A Participant granted an exception hereunder must complete a monthly exception check report demonstrating that either the circumstances necessitating the exception have not changed; or that Qualifying Resources have become available, and the Participant has acquired them and no longer requires the exception. Failure to timely submit a required monthly report will result in assessment of a Deficiency Charge, unless the deficiency is cured within seven days of notice of non-compliance. A Participant denied an exception request hereunder may appeal such denial to the Board of Directors in accordance with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested exception shall be denied or permitted as, when

and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall give notice of any exception granted hereunder in the time and manner provided by the Business Practice Manuals.

16.2.5 QCC: WPP shall determine QCC values for the resource types specified below in accordance with the governing principles specified below for each resource type, and consistent with further details specified for each resource type in the Business Practice Manuals.

16.2.5.1 For resources that use conventional thermal fuels, including but not limited to, coal, natural gas, nuclear, and biofuel, WPP will determine QCC based on an Unforced Capacity methodology that employs resource-specific capability testing and capability requirements to determine an Installed Capacity value, and a forced outage calculation methodology based on historical performance during Capacity Critical Hours over a specified multi-year period (excluding outages properly reported as "outside management control"), or based on class-average forced outage data, as specified in the Business Practice Manuals, if there is insufficient data on historical performance.

16.2.5.2 For resources that are Variable Energy Resources, including, but not limited to, wind and solar resources, WPP will determine QCC based on an ELCC methodology, that accounts for synergistic portfolio effects within and among VER types at different resource penetration levels that influence the extent to which the WRAP Region can rely on those VER categories to meet overall capacity needs.

16.2.5.2.1 For such purpose, a separate ELCC value will be calculated in the aggregate for all VER resources of a given type in an identified VER Zone, to be delineated in the Business Practice Manuals based on factors such as geography, performance, meteorological considerations, and penetration.

16.2.5.2.2 As more fully described in the Business Practice Manuals, the zonal aggregate VER-resource-type value will be calculated by (i) conducting a benchmark LOLE study that includes all resource types except the VER resource type being studied, employing a model and assumptions consistent with those used to calculate FSPRM, and adding, or subtracting, the same MW quantity of Pure Capacity to every hour of the applicable Binding Season until, respectively, an initial LOLE value above 0.1 day per

Binding Season becomes 0.1 day per Binding Season, or an initial LOLE value below 0.1 day per Binding Season becomes 0.1 day per Binding Season; (ii) conducting an LOLE study that includes all resource types including the VER resource type being studied, employing a model and assumptions consistent with those used to calculate FSPRM, and adding, or subtracting, the same MW quantity of Pure Capacity to every hour of the applicable Binding Season until, respectively, an initial LOLE value above 0.1 day per Binding Season becomes 0.1 day per Binding Season, or an initial LOLE value below 0.1 day per Binding Season becomes 0.1 day per Binding Season; and (iii) subtracting the Pure Capacity value determined under subpart (ii) from the Pure Capacity value determined under subpart (i) (for which calculation a Pure Capacity value subtracted from each hour in either subpart (i) or subpart (ii) will be assigned a negative value; (iv) repeating steps (i) through (iii) for each Binding Season of the study period employing historical, or as necessary, synthesized, data; and (v) basing the aggregate value of the studied VER resource type for the studied VER Zone on the results of the calculation in step (iii) for the Binding Seasons studied, which may include differential weighting of the Binding Seasons studied as appropriate to improve the quality and predictive capacity of the final result.

16.2.5.2.3 The aggregate capacity calculated for each VER resource type in each VER Zone will then be allocated to VERs of that type in that VER Zone based on each such resource's average historical performance if at least three years of historical performance or three years of synthesized forecast data during the WRAP Region's CCH is available at the time of such allocation. If three years historical performance or synthesized forecast data is not then available, the average ELCC from the VER Zone will be assigned.

16.2.5.3 For resources that are Energy Storage Resources, WPP will determine QCC based on an ELCC methodology comparable to that used for VERs. The ELCC methodology will model Energy Storage Resources at the level of their usable capacity that can be sustained for a minimum duration of four hours. An Energy

Storage Resource need not have a nameplate rating that assumes a minimum of four hours in order to receive a QCC determination, but the QCC in that case will be scaled to reflect the capability that can be sustained for four hours, as more fully described in the Business Practice Manuals.

16.2.5.4 A Participant's Demand Response used as a Demand Response Capacity Resource must be controllable and dispatchable by the Participant or by the host utility, and must have met certain testing requirements consistent with Business Practice Manuals. WPP will determine Demand Response Load Modifier QCC by multiplying the load reduction in MWs by the number of hours the resource can demonstrate load reduction capability (for a period of up to five continuous hours) divided by five. The effects of Demand Response used as a Demand Response Capacity Resource must not be included in load provided for a Participant's Advance Assessment.

16.2.5.5 For Storage Hydro Qualifying Resources, the Participant will calculate a QCC based on a methodology detailed in the Business Practice Manuals that: (i) considers each resource's actual generation output, residual generating capability, water in storage, reservoir levels, and flow or project constraints over the previous ten-year historical period; (ii) determines the project's QCC by assessing the historical generation during CCHs on any given day and ability to increase generation during CCHs on the same day, subject to useable water in storage, inflows/outflows, and expected project operating parameters/constraints and limitations; (iii) incorporates forced outage rates; and (iv) determines QCC as average contribution to the CCH for each Winter Season and Summer Season over the previous ten years. If ten years of historical data is not available for the Storage Hydro Qualifying Resource, the Participant may alternatively employ data on the same metrics from a demonstrably comparable facility or apply another method that provides reasonable confidence in the reliability of the predicted values, as more fully set forth in the Business Practice Manuals. The Participant's QCC calculation shall be subject to review and validation by WPP. In connection with such review, the Participant shall provide WPP with the following information necessary to calculate a QCC for Storage Hydro Qualifying Resources: (i.a) historical reservoir elevation levels; (ii.a) historical plant generation; (iii.a) elevation versus capacity curves; (iv.a) any minimum or maximum reservoir level constraints; (v.a) forced outage rates; (vi.a) volume of water versus reservoir elevation storage tables; and (vii.a) turbine discharge versus generation efficiency curve.

16.2.5.6 For Run of River Qualifying Resources, WPP will determine QCC based on the monthly average performance of such resource during Capacity Critical Hours, as further specified in the Business Practice Manuals

16.2.5.7 For resources that (i) are not within the meaning of any of Sections 16.2.5.1 through 16.2.5.5, and that (ii) either (a) are not dispatchable; or (b) require the purchaser of energy from the resource to take energy as available from such resource, including but not limited to a qualifying facility as defined under the Public Utility Regulatory Policies Act of 1978, WPP will determine QCC based on the monthly average performance of such resource during Capacity Critical Hours, as further specified in the Business Practice Manuals.

16.2.6 Net Contract QCC: WPP shall determine Net Contract QCC for the agreement types specified below in accordance with the governing principles specified below for each agreement type, and consistent with further details specified for each agreement type in the Business Practice Manuals. Net Contract QCC may be either positive or negative, to take account of, for example, a Participant's agreements for the sale of capacity to any other party.

16.2.6.1 Absent one of the exceptions described and limited below, capacity supply agreements qualifying for a Net Contract QCC in the WRAP must be resource specific, and therefore must include, among other requirements, an identified source, an assurance that the capacity is not used for another entity's resource adequacy requirements, an assurance that the seller will not fail to deliver in order to meet other supply obligations, and affirmation of WRAP Qualifying Transmission from the identified resource to the point of delivery/load. The specific resources identified in a capacity supply agreement qualifying for Net Contract QCC shall meet the same Resource QCC accreditation requirements for the given resource type, as specified in Section 16.2.5.

16.2.6.2 A system sales contract can qualify for a Net Contract QCC value, provided that if the seller is not a Participant, the system capacity that is the subject of the agreement must be deemed surplus to the seller's estimated needs, there must be an assurance that the seller will not fail to deliver in order to meet other commercial obligations, and there must be an assurance that the seller will have WRAP Qualifying Transmission from the identified resource to the point of delivery/load. Surplus status may be demonstrated by a Senior Official Attestation with pertinent supporting details for such surplus status, including

written assent of the non-Participant Seller, secured by the purchasing Participant. Such attestation is not required if the seller is a Participant, because the information needed to verify surplus status is already available.

16.2.6.3 A supply agreement entered into prior to October 1, 2021 ("Legacy Agreement") can qualify for a Net Contract QCC value; provided that where a legacy agreement does not identify the source, it must be possible for WPP to presume a source or sources for the contract, including with the written assent of the supplier under such Legacy Agreement, conveyed in the form and manner set forth in the Business Practice Manuals. A Legacy Agreement for which such resource determination cannot be reasonably made will not be counted as adding to the Portfolio QCC.

16.2.7 Total RA Transfer: A Participant may agree with another Participant on a transfer of a portion of its Portfolio QCC to meet the other's FS Capacity Requirement ("RA Transfer"), provided that the details and duration of such transfer are reported to WPP for validation in accordance with procedures and information requirements specified in the Business Practice Manuals. Where such transfers have been duly reported and validated, an RA Transfer will be added to the purchasing Participant's Portfolio QCC and subtracted from the selling Participant's Portfolio QCC.

16.2.8 Planned Outages: Participants shall include in their Forward Showing Submittal for a Binding Season information on all Qualifying Resources that are currently out of service with a scheduled return date that falls during the Binding Season or after the Binding Season. Capacity associated with such resources must be deducted from Participants' Portfolio QCC as specified in the Business Practice Manuals to ensure no credit is granted for such resources during the planned outage. The aggregate of any additional outages that are planned to occur during the Binding Season but have not yet begun at the time of submission must be within the Participant's remaining surplus (or replaced with other supply). Participants may provide information on all Qualifying Resources that are planned to be out of service but if such data cannot be supplied with reasonable specificity, a Participant may provide a Senior Official Attestation at the time of the submission of its FS Submittal that it expects the sum of planned outages to be equal to or less than the surplus stated in its FS Submittal throughout the Binding Season.

16.2.8.1 If a Qualifying Resource is planned to return to service within the first five days of a Binding Season, WPP may approve a qualified acceptance of the FS Submittal, provided the deficiency is less than 500 MW.

16.2.8.2 A planned outage shall not justify a waiver of or exception to a Participant's holdback or energy delivery obligations under Part III of this Tariff. Participants will be expected to procure the necessary capacity or energy to meet the Operations Program requirements, regardless of planned outage schedules or FS Submittal acceptance.

16.3 FS Transmission Requirement

16.3.1 As part of its Forward Showing Submittal for a Binding Season, each Participant must demonstrate, as specified in the Business Practice Manuals, that it has secured transmission service rights, including under supply arrangements with a third party that holds or has committed transmission service rights, sufficient to deliver a MW quantity equal to at least 75% of the MW quantity of its FS Capacity Requirement. To the extent a Participant holds transmission service rights with a point of receipt at a Qualifying Resource, or in connection with an RA Transfer to such Participant, any such rights from such point in a MW quantity, respectively, in excess of the QCC of such Qualifying Resource, or in excess of the value of such RA Transfer, shall not contribute toward satisfaction of such Participant's FS Transmission Requirement. The FS Transmission Requirement must be met with WRAP Qualifying Transmission, from such Participant's Qualifying Resource(s) or from the delivery points for the resources identified for its Net Contract QCC or for its RA Transfer to such Participant's load. Notwithstanding the foregoing, authorized use of Capacity Benefit Margin, provided it is WRAP Qualifying Transmission, will satisfy the FS Transmission Requirement. Demonstration of the FS Transmission Requirement shall not, in and of itself, relieve any Participant of responsibility for a Delivery Failure Charge as determined under Section 20.7 if such Participant's failure to obtain or maintain WRAP Qualifying Transmission of the type and quantity expected by the Operations Program, as described in Section 20.6 of this Tariff, caused or contributed to an Energy Delivery Failure.

16.3.2 A Participant may include in its Forward Showing Submittal a request for an exception from a limited part of its FS Transmission Requirement, provided the exception request meets the terms, conditions, and limitations of one or more of the following four exception categories below. As more fully set forth in the Business Practice Manuals, such exceptions may be subject to overall WRAP limits, and shall be supported by a Senior Official Attestation. WPP will consider the exception category terms, conditions and limitations set forth below, and may consider the completeness of the exception request, information from transmission service providers, OASIS data, and data readily available to WPP from other reliable and validated sources concerning the duration, timing, firmness and quantity of available transmission service or equivalent options (including transmission construction), in determining whether to grant or deny a transmission

exception request. WPP shall provide such determination no later than sixty days after submission of such Participant's FS Submittal containing such transmission exception request. A Participant denied an exception request hereunder may appeal such denial to the Board of Directors in accordance with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested exception shall be denied or permitted as, when and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall give notice of any exception granted hereunder in the time and manner provided by the Business Practice Manuals. A Participant granted a transmission exception under either Section 16.3.2.1 or Section 16.3.2.2 must complete a monthly transmission exception check report demonstrating that either (i) the circumstances necessitating the exception have not changed; (ii) WRAP Qualifying Transmission has become available and the Participant has acquired it; or (iii) the Participant has acquired a different resource, and associated WRAP Qualifying Transmission, and no longer requires the exception. Failure to timely submit a required monthly report will result in assessment of a Deficiency Charge, unless the deficiency is cured within seven days of notice of non-compliance.

16.3.2.1 Enduring Constraints. Participant is unable to demonstrate sufficient WRAP Qualifying Transmission rights on any single segment of a source to sink path for a Qualifying Resource; and Participant demonstrates that no ATC for such transmission service rights is available (either from the transmission service provider or through a secondary market) at the FS Deadline on the applicable segment for the Month(s) needed (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less; and Participant submits a Senior Official Attestation that Participant has taken commercially reasonable efforts to procure WRAP Qualifying Transmission, and that Participant has posted Firm Transmission Requirements on a relevant bulletin board prior to the FS Deadline. In the event such WRAP Qualifying Transmission is only available for a duration of more than one year (whether from the transmission service provider or through a secondary market) at the FS Deadline on the applicable segment for the Month(s) needed at the applicable Open Access Transmission Tariff rate or less, a Participant is not required to obtain such service in order to qualify for the Enduring Constraints exception hereunder. Notwithstanding the foregoing, if such Participant declines to obtain such available WRAP Qualifying Transmission and is granted the exception hereunder, such Participant shall not qualify for an exception hereunder for the same path (or across the same constraint) for the same season of the subsequent year if the Participant again declines to obtain such WRAP Qualifying Transmission that is available for a duration of more than one year. In addition to the foregoing, Participant must

further demonstrate that there was remaining available transmission transfer capability (i.e., non-firm ATC after the fact) for all CCHs in the same season of the most recent year for which CCHs have been calculated; or, if the path was constrained in at least one CCH of the CCHs in the same season of the most recent year for which CCHs have been calculated, Participant in that case must demonstrate either that it is constructing or contracting for a new local resource for at least the amount of the exception requested, or that it is pursuing long-term WRAP Qualifying Transmission by entering the long-term queue and taking all appropriate steps to obtain at least the amount of the exception requested.

16.3.2.2 Future Firm ATC Expected. Participant demonstrates that ATC of WRAP Qualifying Transmission rights is not posted or available prior to the FS Deadline (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less, and that the transmission service provider has, after the FS Deadline, released additional ATC for such transmission service rights in every one of the CCHs of the most recent year for which CCHs have been calculated on the applicable path. In the event ATC for such WRAP Qualifying Transmission is only posted or available prior to the FS Deadline for a duration of more than one year (whether from the transmission service provider or through a secondary market) on the applicable segment for the Month(s) needed at the applicable Open Access Transmission Tariff rate or less, a Participant is not required to obtain such service in order to qualify for the Future Firm ATC Expected exception hereunder. Notwithstanding the foregoing, if such Participant declines to obtain such available WRAP Qualifying Transmission and is granted the exception hereunder, such Participant shall not qualify for an exception hereunder for the same path (or across the same constraint) for the same season of the subsequent year if the Participant again declines to obtain such WRAP Qualifying Transmission that is available for a duration of more than one year. The Participant must also demonstrate that the exception request meets volume and duration limitations specified in the Business Practice Manuals.

16.3.2.3 Transmission Outages and Derates. Participant demonstrates that an applicable segment of its existing transmission service rights from its source to sink path for its Qualifying Resource is expected to be derated or out-of-service and the ATC of WRAP Qualifying Transmission is not otherwise available, and that the exception request meets volume and duration limitations specified in the Business Practice Manuals.

16.3.2.4 Counterflow of a Qualifying Resource. Participant demonstrates that either: (i) Participant's use of WRAP Qualifying

Transmission in connection with the delivery of capacity from Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to Participant's load (or other qualifying delivery point permitted by the WRAP) or (ii) a second Participant's use of WRAP Qualifying Transmission in connection with the delivery of capacity from the second Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to the second Participant's load (or other qualifying delivery point permitted by the WRAP) provides a direct and proportional counterflow transmission that supports the first Participant's delivery of capacity from the first Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to the first Participant's load (or other qualifying delivery point permitted by the WRAP) Qualifying Resource to their load. If the exception is requested under subpart (ii) of this subsection, the Participant requesting the exception shall include a written acknowledgement from the second Participant that it is aware of such exception request.

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16.3.3 To the extent a Participant does not demonstrate satisfaction of its FS Transmission Requirement by the FS Deadline, the Participant may correct any such deficiency on or before the end of the cure period prescribed by Section 14.5 of this Tariff to avoid a Deficiency Charge.

16.3.4. Any deficiency of transmission service rights ultimately determined by WPP will be treated, for purposes of Deficiency Charge determinations, as in conjunction with, and not additive to, any deficiencies of QCC determined pursuant to Section 16.2.

17. Forward Showing Deficiency Charge

17.1 If a Participant fails during the cure period to demonstrate that it has resolved any identified deficiencies in either or both of its FS Capacity Requirement and its FS Transmission Requirement, the Participant will be assessed a Deficiency Charge for each Month for which a deficiency is identified in accordance with this section. In such case, the deficiency for which the Participant will be assessed a Deficiency Charge will be calculated in accordance with the following:

Participant's Monthly Capacity Deficiency = Maximum of (Monthly FS Capacity Requirement – Monthly Portfolio QCC, 0)

Participant's Monthly Transmission Deficiency (MW) = Maximum of ((75% × Monthly FS Capacity Requirement) – (Monthly Transmission Demonstrated + Approved Monthly Transmission Exemptions), 0)

Where Monthly Transmission Demonstrated is the amount of WRAP Qualifying Transmission submitted by a Participant per the requirements in Section 16.3 and validated by WPP for each month.

Monthly Deficiency (MW) = Maximum of (Monthly Capacity Deficiency, Monthly Transmission Deficiency)

17.2 A Participant's Deficiency Charges shall be calculated as set forth in this Section 17.2, subject to the Transition Period rules in Section 17.3, and shall take account of multiple Monthly Deficiencies within a Forward Showing for a single Binding Season, multiple Deficiencies across a Forward Showing Year, consisting of a Summer Season and the immediately succeeding Winter Season, and any Monthly Deficiencies in a previous Forward Showing Year, in accordance with the following:

17.2.1 The Monthly Deficiency with the highest MW value in a Forward Showing for a Summer Season shall be assessed a Deficiency Charge equal to:

Max Summer Deficiency (MW) × Annual CONE ($/kW-year) × 1000 × Summer Season Annual CONE Factor

17.2.2 Any other Monthly Deficiency in the Participant's Forward Showing for the same Summer Season shall be assessed a Deficiency Charge equal to:

Additional Summer Deficiency (MW) × (Annual CONE ($/kW-year)/12) × 1000 × 200%

17.2.3 Any Monthly Deficiency in the Forward Showing for the immediately succeeding Winter Season with a higher MW value than the highest MW value of the Monthly Deficiency in the Summer Season shall be assessed a Deficiency Charge on the incremental MW value above the Summer Season equal to:

Maximum of (Max Winter Deficiency – Max Summer Deficiency, 0) (MW) × Annual CONE ($/kW-year) × 1000 × Winter Season Annual CONE Factor

and in such case where there is a Monthly Deficiency in the Winter Season with a higher MW value than the highest MW value of any Monthly Deficiency in the Summer Season, the Monthly Deficiency with the highest MW value in the Summer Season shall be assessed an additional Deficiency Charge calculated in accordance with Section 17.2.2.

17.2.4 Any other Monthly Deficiency in the Participant's Forward Showing Submittal for the same Winter Season shall be assessed a Deficiency Charge equal to:

Additional Winter Capacity Deficiency × (Annual CONE/12) × 1000 × 200%

17.2.5 For purposes of the above, CONE is the estimated cost of new entry of a new peaking natural gas-fired generation facility. The CONE estimate shall be based on publicly available information relevant to the estimated annual capital and fixed operating costs of a hypothetical natural gas-fired peaking facility. The CONE estimate shall not consider the anticipated net revenue from the sale of capacity, energy, or ancillary services from the hypothetical facility, nor shall it consider variable operating costs necessary for generating energy.

17.2.6 WPP shall review the CONE estimate annually for a possible update. Any proposed changes in the CONE estimate shall be subject to review through the stakeholder process for program rule changes.

17.2.7 The Summer Season Annual CONE Factor shall vary based on the ratio ("Summer % Deficit") of the Aggregate Capacity Deficiency for the WRAP as a whole for that Summer Season, divided by the P50 Peak Load Forecast for the Summer Season, as follows:

If the Summer % Deficit is less than or equal to 1%, the Summer Season Annual CONE Factor = 125%

If the Summer % Deficit is greater than 1% but less than or equal to 2%, the Summer Season Annual CONE Factor = 150%

If the Summer % Deficit is greater than 2% but less than or equal to 3%, the Summer Season Annual CONE Factor = 175%

If the Summer % Deficit is greater than 3%, the Summer Season Annual CONE Factor = 200%

17.2.8 The Winter Season Annual CONE Factor shall vary based on the ratio ("Winter % Deficit") of the Aggregate Capacity Deficiency for the WRAP as a whole for that Winter Season, divided by the P50 Peak Load Forecast for the Winter Season, as follows:

If the Winter % Deficit is less than or equal to 1%, the Winter Season Annual CONE Factor = 125%

If the Winter % Deficit is greater than 1% but less than or equal to 2%, the Winter Season Annual CONE Factor = 150%

If the Winter % Deficit is greater than 2% but less than or equal to 3%, the Winter Season Annual CONE Factor = 175%

If the Winter % Deficit is greater than 3%, the Winter Season Annual CONE Factor = 200%

17.2.9 Notwithstanding Sections 17.2.7 and 17.2.8, if a *Participant incurred any FS Deficiency Charges* in a Forward Showing Year *after the Transition Period*, then for the immediately following Forward Showing Year, both the Summer Season Annual CONE Factor and the Winter Season Annual CONE Factor shall be 200% *for such Participant*.

17.2.10. Subject to the Transition Period rules in Section *15A.1*, revenues from the payment of Deficiency Charges as to a Binding Season shall be allocated among those Participants with no Deficiency Charges for that Binding Season, pro rata based on each Participant's share of all such Participants' Median Monthly P50 Peak Loads for such Binding Season.

17.3 During the Transition Period, Deficiency Charges otherwise calculated under Section 17.2 shall be reduced as, when, and to the extent, and subject to the conditions, provided in Section 17.3.2; and revenue allocations otherwise calculated under Section 17.2 shall be adjusted as, when, and to the extent, and subject to the conditions, provided in Section 17.3.4.

17.3.1. During the Transition Period, a Participant with a Monthly Capacity Deficiency can pay a *Discounted* Deficiency Charge for so much of such Monthly Capacity Deficiency as was due to an Excused Transition Deficit. To obtain an Excused Transition Deficit for a Binding Season, the Participant must provide a Senior Official Attestation attesting that the Participant *or a relevant third party servicing load for which the Participant is the LRE* has made commercially reasonable efforts to secure Qualifying Resources in the quantity needed to satisfy the Participant's FS Capacity Requirement for the Binding Season, but is unable to obtain Qualifying Resources in the quantity required for the Binding Season because the supply of such resources on a timely basis and on commercially reasonable

terms is at that time inadequate. *If the attestation relates to a third-party servicing load for which the Participant is the LRE, the Senior Official Attestation may be signed by a Senior Official of the third party load service provider, as further detailed in the Business Practices.* Excused Transition Deficits are not resource specific, relate to a MW quantity of the Participant's FS Capacity Requirement, and are limited for each Participant as to a Binding Season during the Transition Period to a maximum permissible MW quantity equal to a percentage value times the FSPRM applicable to such Participant for all Forward Showing Submittals submitted by such Participant for such Binding Season. For purposes of such calculation, the percentage value is*: 200*% for each of the *2027* Summer Season and *2027-2028* Winter Season*; and 100*% for each of the *2028* Summer Season and *2028-2029* Winter Season.

17.3.2 A Participant will pay a *Discounted* Deficiency Charge as to the portion of its Monthly Capacity Deficiency for which it obtained an Excused Transition Deficit. The *FS* Deficiency Charge otherwise applicable to such Participant under Section 17.2 shall be reduced by a percentage value equal to 75% for each of the *2027* Summer Season and *2027-2028* Winter Season*; and* 50% for each of the *2028* Summer Season and *2028-2029* Winter Season. The Participant will be assessed a*n FS* Deficiency Charge calculated under Section 17.2, without reduction or adjustment, for any of its Monthly Capacity Deficiency that is in excess of the amount of such deficiency for which it obtained an Excused Transition Deficit.

17.3.3 Whether or not a Participant obtains an Excused Transition Deficit as to a Binding Season, the Participant may reduce a Monthly Capacity Deficiency otherwise calculated under Section 17.1 for a Binding Season during the Transition Period to the extent such deficiency is due to the Participant's inability to obtain assent from the supplier under a Legacy Agreement to the accreditation required for such Legacy Agreement under Part II of this Tariff and the Business Practice Manuals. To obtain such relief, the Participant must provide a Senior Official Attestation attesting that the Participant made commercially reasonable efforts to execute the required accreditation form with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the accreditation form. The reduction in Monthly Capacity Deficiency permitted by this Section 17.3.3 as to any Participant for all Forward Showing Submittals submitted by such Participant for any Binding Season during the Transition Period shall not exceed a MW quantity equal to 25% times the FSPRM applicable for such Participant for such Binding Season. To the extent a Participant reduces a Monthly Capacity Deficiency under this subsection, the percentage of the Participant's FSPRM corresponding to the reduction hereunder shall reduce the maximum permissible percentage of FSPRM reduction allowed under Section 17.3.1 for Excused Transition Deficits for the same Binding Season.

17.3.4 A Participant that, as a result of application of this Section 17.3, pays no Deficiency Charge as to a Binding Season, shall not be deemed a "Participant[ ] with no Deficiency Charges" for purposes of Section 17.2.10, and shall not receive an allocation of revenues from the payment of Deficiency Charges as to such Binding Season.

17.4 In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations), FS Deficiencies shall be calculated per Section 15A.3.

PART III OPERATIONS PROGRAM

18. Operations Program Overview

18.1 The Operations Program facilitates access to collective capacity made available through regional load and resource diversity of all Participants under the terms of this Part III.

18.2 The Operations Program evaluates forecasted system conditions across the seven-day period ("Multi-Day-Ahead Assessment") preceding the Operating Day, commencing at the outset of the assessment period with an initial Sharing Calculation and initial identification of potential Sharing Events for the Operating Day. The assessment is refined as forecasted conditions for the Operating Day are revised and established on the Preschedule Day, a Holdback Requirement for any Sharing Events is then identified. To the extent a Sharing Event continues to be identified for the Operating Day, Holdback Requirements shall be converted into Energy Deployments on the Operating Day.

18.3 The Operations Program prescribes pricing designed to incent Participants to resolve any forecast Operating Day deficiencies before the Operating Day, including through transactions outside the Operations Program, and to fully compensate Participants that provide support through the Operations Program to Participants with Operating Day deficiencies.

19. Operations Program Timeline and Supporting Information

19.1 The Operations Program includes a Multi-Day Ahead Assessment that looks ahead at the next seven Operating Days by performing an indicative Sharing Calculation from Participant forecast data for each future Operating Day up until the Preschedule Day. The Sharing Calculation for the Preschedule Day is not indicative but is binding, subject to Sections 20.2.4 and 20.3. Participants shall provide WPP with forecasts for the next seven Operating Days of expected (i) load, (ii) output of VERs, (iii) output of RORs, (iv) Contingency Reserves, and (v) forced outages, including outages on transmission facilities the Participant utilized to meet its Forward Showing Capacity Requirement, as further described in the Business Practice Manuals. WPP shall utilize the forecast data obtained in the Multi-Day-Ahead Assessment to calculate or revise the indicative Sharing Calculations for each day thereafter, up until the Preschedule Day, and will use such forecast data to revise the indicative Sharing Calculation hourly during the Operating Day. Such forecast data will also be used to calculate the binding Sharing Calculation for the Preschedule Day.

19.2 The Operations Program, during any Binding Season, shall rely on and employ (among other data) the following information from the Forward Showings for such Binding Season: (i) the P50 Peak Load Forecast for each Participant; (ii) the Monthly FSPRMs for each Participant during such Binding Season; (iii) expected performance by Qualifying Resource type and any RA Transfers; (iv) expected forced outage rates by resource type; (v) expected Contingency Reserves; and (vi) WRAP Qualifying Transmission made available for purposes of regional diversity sharing under the WRAP, permitted under Part II of this Tariff, which shall be assumed to be available for all hours of each Month for which such WRAP Qualifying Transmission rights were made available.

19.3 To facilitate WPP's conduct of the Multi-Day-Ahead Assessment, each Participant shall provide the Program Operator information relevant to the Participant's expected demand and supply conditions on each Operating Day, of the type, in the manner, and with the frequency, specified in the Business Practice Manuals.

19.4 Each Participant in any Subregion identified in the Business Practice Manuals as not containing a central transmission hub permitting energy deliveries to that hub from any point within such Subregion, shall, in addition to providing the information required by Section 19.3, identify, on or before the deadline during the Preschedule Day specified in the Business Practice Manuals, for each Hour of the Operating Day each point to which it can deliver energy, each point at which it can take receipt of energy, the quantity it can deliver or receive at each such point, and a numeric factor intended to prioritize use of transmission made available by Participants with positive Sharing Calculations and needed by Participants with negative Sharing Calculations for each such hour. A Participant with a positive Sharing Calculation for an hour must provide a total quantity for all identified points at which it can deliver that is no less than the amount of its positive Sharing Calculation for such hour (adjusted as necessary for any RA Transfer in accordance

with Section 20.1.2). A Participant with a negative Sharing Calculation for an hour must provide a total quantity for all identified points at which it can take receipt that is no less than the amount of its negative Sharing Calculation for such hour (adjusted as necessary for any RA Transfer in accordance with Section 20.1.2). Participants shall provide this same information for each Operating Day on an expected or preliminary basis on each day of the Multi-Day-Ahead Assessment following, and based on, the expected Holdback Requirement estimates provided on each such day for the Operating Day.

19.5 Any Participant with excess supply that is not obligated to the WRAP through a positive Sharing Calculation result may, at its sole election, offer such supply to the WRAP as Voluntary Holdback. If the offering Participant has a positive Sharing Calculation result, the offered capacity shall be in addition to that Sharing Calculation result; if the offering Participant has a negative Sharing Calculation result, the offered capacity will only be included in the allocation of Holdback Requirement so long as the offering Participant did not confirm a need for Holdback Capacity for such hour. Such offers must be submitted within the time window identified in the Business Practice Manuals, must include the information identified in Sections 19.3 and 19.4, as applicable, and must conform to the format and content identified in the Business Practice Manuals. An offer of Voluntary Holdback may become part of the Participant's Holdback Requirement when it is included in the allocation on the Preschedule Day prescribed by Section 20.2.

20. Components of the Operations Program

20.1 Sharing Calculation

20.1.1 WPP shall implement, as more fully described in the Business Practice Manuals, with respect to each Forward Showing Submittal accepted by WPP for a Participant under Part II of this Tariff, or with respect to each Subregion in which the Participant is responsible for load regardless of whether the Participant submitted a single Forward Showing Submittal encompassing its loads in ~~both~~ multiple Subregions, the following Sharing Calculation to identify any hour in which any Participant is forecast to have a capacity deficit (known as a "Sharing Event"). This calculation takes into account changes in a Participant's resource availability, resource performance, forecast load, and Contingency Reserve relative to the Forward Showing, plus an Uncertainty Factor. The Sharing Calculation is equal to:

[(P50) * (1 + FSPRM) + Contingency Reserve Adjustment] – [Load Forecast – Demand Response Capacity Resources + Contingency Reserve Obligation + Uncertainty Factor] + [ΔForced Outages + ΔRoR Performance + ΔVER Performance]

Where:

P50 refers to the Participant's Monthly P50 Peak Load for that Binding Season's Month;

FSPRM, as described in Section 16.1.2, is an increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages and is expressed as a percentage of the applicable Participant P50 Peak Load Forecast for that Binding Season's month;

Contingency Reserve Adjustment accounts for changes in Contingency Reserve expectations (relative to the 6% Contingency Reserve assumed in the FSPRM) resulting from energy contract purchases and contract sales as set forth in the Business Practice Manuals;

Load Forecast refers to the forecast of expected load for the subject hour for the loads for which the Participant is the Load Responsible Entity and that have not been excluded from WRAP participation;

Demand Response Capacity Resource as described in Section 16.2.5.4.

Contingency Reserve Obligation refers to the amount of Contingency Reserve the Participant is carrying during the operating hour equal to (i) 3% of Load Forecast for which the Participant is the WRAP LRE and maintains

its Contingency Reserve, (ii) plus 3% of WRAP load for which the Participant is not the LRE but has assumed the Contingency Reserve through a contractual arrangement, (iii) plus 3% of generation used to meet any load for which the Participant is the LRE and maintains the Contingency Reserve, (iv) plus 3% of generation utilized to meet WRAP Load for which the Participant is not the LRE but has assumed the Contingency Reserve through a contractual arrangement;

Uncertainty Factor refers to a factor determined by WPP, as more fully set forth in the Business Practice Manuals, to account for the potential variance between forecasts of load, solar resources, wind resources, and run-of-river resources, and the Operating Day conditions of such load and resources;

Δ Forced Outages refers, for the subject hour, to the sum of:

(i) any change in forced outages of any of the thermal resources included in the Participant's Portfolio QCC, relative to the forced outages assumed in the Forward Showing Submittal by application of the Forced Outage Factor; plus

(ii) any change in forced outages of any of the Storage Hydro Qualifying Resources relative to the forced outages assumed in the calculation of the Participant's Resource QCC as more fully described in the Business Practice Manuals; plus

(iii) any reduction in output capability of any of the Energy Storage Resources due to equipment failure or protection

a. In the first four (4) hours the Forced Outages MWs that can be claimed are equal to [(charge MW x duration)/4]

b. For all hours beyond four (4) hours, the Forced Outages MW amount that can be claimed for an Energy Storage Resource shall not be greater than the monthly QCC; plus

(iv) any impacts of transmission conditions on previously acquired WRAP Qualifying Transmission that result in capacity reductions up to the level of the Resource QCC of the associated Qualifying Resource;

ΔRoR Performance refers to any change, for the subject hour, in expected performance of any of the run-of-river resources in the Participant's Portfolio QCC relative to the QCC of those Qualifying Resources; and

ΔVER Performance refers to any change, for the subject hour, in expected performance of the VER Resources in the Participant's Portfolio QCC relative to the QCC of those Qualifying Resources;

20.1.2 In addition to the foregoing, the Sharing Calculation for a Participant that is a purchaser of an RA Transfer shall be performed in two passes, with and without such purchase. If the result of assuming in the first pass that the Participant had not purchased the RA Transfer is that the Participant has a

negative Sharing Calculation, then the Participant that sold the RA Transfer must agree, for the time period addressed by the Sharing Calculation, to an energy delivery to the Participant that purchased the RA Transfer, in an amount equal to the lesser of: (i) the MW quantity needed to result in a net zero Sharing Calculation for the Participant that purchased the RA Transfer; and (ii) the MW amount of the RA Transfer. If the result of recognizing the Participant's purchase of the RA Transfer in the second pass is that the Participant has a positive Sharing Calculation, then the Participant that sold the RA Transfer must assume a share of the purchasing Participant's resulting obligation to the Operations Program in an amount equal to the MW quantity of the RA Transfer, minus the MW quantity of the delivery made by the seller of the RA Transfer to the purchaser of the RA Transfer as a result of the first pass.

20.1.3 The Sharing Calculation of any Participant that was found to have a Monthly Capacity Deficiency under Sections 16.1 and 16.2, for which such Participant paid a Deficiency Charge, including any Deficiency Charge reduced by application of Section 17.3 during the Transition Period, shall be reduced by the MW quantity of such Monthly Deficiency.

20.2 Holdback Requirement

To the extent that: (i) WPP's application of the Sharing Calculation identifies on the Preschedule Day a Sharing Event for any hour(s) of the Operating Day; and (ii) the Participant(s) found to be deficient for such hour(s) by the Sharing Calculation confirms to WPP on the Preschedule Day, in accordance with notification and confirmation procedures set forth in the Business Practice Manuals, such Participant's need for capacity for such hour(s), then WPP shall determine the Participants having a Holdback Requirement for such hour(s) and the quantity of the Holdback Requirement for each such Participant in accordance with this Section 20.2. The Operations Program will prioritize offers of Voluntary Holdback in the allocation and assignment of Holdback Requirements. Holdback Requirements shall be expressed as whole MWs for each hour for which they are estimated or established and shall not be specific to any Qualifying Resource.

20.2.1 Subregion with Central Hub

For any hour, as to any Subregion identified in the Business Practice Manuals as containing a central transmission hub permitting energy deliveries to that hub from any point within such Subregion ("Central Hub"), the aggregate of the holdback needed to meet the requirements of all Participants with negative Sharing calculation results that have confirmed their need for holdback will be allocated and assigned first among offers of Voluntary Holdback, and second, to the extent such needs remain unmet, among Participants with positive Sharing Calculation results.

20.2.1.1 Allocation of Voluntary Holdback: Voluntary Holdback will be allocated in one of three alternative ways, based on comparing the aggregate confirmed need for holdback among Participants with negative Sharing Calculation results against the aggregate of all offers for Voluntary Holdback.

20.2.1.1.1 If the total MW quantity of all Voluntary Holdback offered is equal to the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant that offered Voluntary Holdback is assigned its offered Voluntary Holdback as its Holdback Requirement.

20.2.1.1.2 If the total MW quantity of all Voluntary Holdback offered is more than the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant that offered Voluntary Holdback is assigned as its Holdback Requirement a percentage of the total confirmed need for holdback based on the ratio of the Participant's MWs of offered Voluntary Holdback to the sum of all Participants' MWs of offered Voluntary Holdback.

20.2.1.1.3 If the total MW quantity of all Voluntary Holdback offered is less than the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant's Holdback Requirement is determined as set forth in section 20.2.1.2.

20.2.1.2 Allocation of Remaining Holdback Requirement: Sharing Calculation Results

If the total MW quantity of all Voluntary Holdback offered is less than the total MW quantity of all deficient Participants' confirmed requests for holdback, then the maximum Voluntary Holdback offered is used as the first term in the Holdback Requirement. The remaining term of the Holdback Requirement is met by application of the Sharing Calculation, and the results of the two terms are summed for each Participant. The remaining need for holdback that is not met by Voluntary Holdback is allocated among all Participants with positive Sharing Calculation results pro rata based on the ratio for each Participant of the Participant's positive Sharing Calculation result to the sum of the positive Sharing Calculation results. The

sum of these two values for each applicable Participant is the Holdback Requirement for that Participant.

20.2.2 Subregion without Central Hub

For any hour, any Subregion not containing a Central Hub, the Program Operator shall conduct an optimization-based allocation to pair surplus and deficient Participants. The allocation methodology will utilize the points at which surplus Participants can deliver their Holdback Requirement, the points at which deficient Participants can take receipt of their allocation of the total Holdback Capacity, and the transfer capability that exists to the points at which surplus Participants can deliver and the points at which deficient Participants can take receipt.

The optimization will generally attempt to prioritize (i) Voluntary Holdback; (ii) Holdback Capacity matched pursuant to the information provided per Section 19.4 on a nearest neighbor and cluster basis, allocated pro rata among Participants within such cluster; (iii) Holdback Capacity matched pursuant to the information provided and allocated among Participants within the same Subregion to the extent not matched and allocated under category (ii); and finally (iv) Holdback Capacity from Participants in another Subregion, paired with any transmission service per Section 14.3.2.

20.2.3 Absent a Holdback Requirement Transfer as described below, a Participant's Holdback Requirement for any hour of an Operating Day shall not exceed the level first set by WPP on the Preschedule Day for that Participant for that hour.

20.2.4 Any Participant may agree with any other Participant for the first Participant to transfer to the second Participant some or all of the Holdback Requirement established for the first Participant for any hour on any Operating Day. Any such Holdback Requirement Transfer shall be a bilateral arrangement settled outside the Operations Program, provided, however, that both Participants must timely notify WPP, by the time and in the manner described in the Business Practice Manuals, of such Holdback Requirement Transfer. Any necessary transmission arrangements and any transaction settlements shall be the sole responsibility of the Participants that are the parties to such bilateral arrangement.

20.2.4.1 No Holdback Requirement transfer for any hour shall be permitted if notice of such bilateral transaction is not fully reported to WPP, in the form required by the Business Practice Manuals, by 120 minutes before the start of such hour.

20.3 Release of Surplus Capacity

20.3.1 As detailed in the Business Practice Manuals, WPP will review the indicative Sharing Calculation results from the Multi-Day Ahead Assessment and to the extent the WPP determines any indicative Sharing Calculations can be reduced, it may release all or a portion of Participants' future Holdback Requirements. WPP may permit a release of future Holdback Requirements to the extent WPP has not applied a Safety Margin for such hour and (i) WPP's continued Sharing Calculations determine that no Participant has a negative indicative Sharing Calculation result for such hour; and (ii) WPP determines there is a low probability of a Sharing Event for the hour; or (iii) WPP grants a Participant's request for extenuating circumstances of all or any portion of that Participant's future Holdback Requirement for the hour.

20.3.2 Upon release of all or any portion of a future Holdback Requirement, the quantity of future Holdback Requirement so released shall no longer be subject to an Energy Deployment requirement under the Operations Program for the subject hour.

20.4 Energy Deployment

20.4.1 Participants shall provide energy during an hour, in support of any Participants with a negative Sharing Calculation result and a confirmed need for energy under the Operations Program for such hour, in accordance with WPP's calculation of the Energy Deployment for such hour. The total Energy Deployment required of all Participants that are subject to Energy Deployment shall equal the sum, in MWh for that hour, of the energy confirmed as being needed in that hour by Participants in such Subregion with negative Sharing Calculation results in such hour, to the extent that can be supported by the Program. The Energy Deployment assigned to each Participant shall not exceed that Participant's Holdback Requirement calculated on the Preschedule Day, adjusted for any applicable transfer of Holdback Requirement as allocated and assigned for the Preschedule Day, and, as further adjusted to reflect the election, made after the Preschedule Day, of any Participant with a negative Sharing Calculation result on the Preschedule Day to decline all or any part of the Holdback Capacity to which it would have been entitled based on the Holdback Requirements determined on the Preschedule Day.

20.4.1.1 In Subregions with a Central Hub, Energy Deployments required hereunder shall be delivered to the Central Hub in such Subregion, or to an alternate delivery point mutually agreed by the parties to a specific Energy Deployment, provided both parties to the transaction report such alternative delivery arrangements to WPP in the form and manner described in the Business Practice Manuals.

20.4.1.2 In Subregions without a Central Hub, Energy Deployments required hereunder shall be delivered to the receipt point and delivery point as indicated by the optimization allocation, or to an alternate delivery point mutually agreed by the parties to a specific Energy Deployment, provided both parties to the transaction report such alternative delivery arrangements to WPP in the form and manner described in the Business Practice Manuals.

20.4.2 The Energy Deployment a Participant may receive for any hour shall be no greater than the negative Sharing Calculation result calculated for such Participant for such hour. Such Participant shall confirm, by no later than 85 minutes before the start of such hour, the quantity of Energy Deployment for which it requires delivery for such hour, through the procedures outlined in the Business Practice Manuals. Any Participant that does not confirm required Energy Deployment deliveries for such hour by such deadline will be deemed to waive all deliveries of Energy Deployment under the Operations Program for such hour.

20.4.3 The Energy Deployment a Participant can be required to supply for an hour shall not exceed the final Holdback Requirement calculated for such Participant on Preschedule Day, including any duly reported exchange of Holdback Requirement, as of 85 minutes before the start of such hour.

20.4.4 WPP shall advise each Participant with a required Energy Deployment for an hour of the required MWh quantity and delivery point of such Energy Deployment by no later than 80 minutes before the start of such hour.

20.5 Safety Margin

20.5.1 WPP may establish on the Preschedule Day a Safety Margin for the WRAP Region or any identified Subregion thereof for any hour of an Operating Day when warranted by such circumstances as potential large resource trips, heavy transmission outage conditions, significant environmental conditions, or other similar regional or subregional conditions, as more fully set forth in the Business Practice Manuals.

20.5.2 Any Safety Margin so determined for an hour shall be allocated pro rata among Participants with a positive Sharing Calculation result, based on their relative shares of the sum of all positive Sharing Calculation results for such hour, provided, however, that the Safety Margin allocated to a Participant may not result in a Holdback Requirement for such Participant greater than such Participant's Sharing Calculation result. A Participant allocated holdback for a Safety Margin hereunder does not receive compensation under this Tariff for such allocation of holdback.

20.5.3 WPP shall notify all Participants of application of a Safety Margin for any hour, including in such notice the total timeframe, the MW amount, and the rationale for such Safety Margin.

20.6 Operations Program Transmission Service Requirements

Participant shall have in place, prior to the Operating Day, WRAP Qualifying Transmission for each hour of such Operating Day for which a Sharing Event has been established, in a quantity sufficient for deliveries from the Qualifying Resources relied upon in such Participant's Forward Showing Submittal to demonstrate satisfaction of such Participant's FS Capacity Requirement (or from replacement Qualifying Resources) to serve such Participant's loads during such hours. In the event a Participant has an Energy Delivery Failure, the review associated with the possible assessment of a Delivery Failure Charge on such Participant shall, as further described in the Business Practice Manuals, include whether a failure to secure sufficient WRAP Qualifying Transmission caused or contributed to such Energy Delivery Failure. For such purpose, the Participant will have been expected to have complied with the transmission service requirement stated in this subsection.

20.7 Failure to Deliver Energy Deployments

20.7.1 A Participant assigned a required Energy Deployment pursuant to Section 20.4.4 of this Tariff for any hour that fails to deliver the specified energy during such hour, and that does not obtain a waiver of its Energy Deployment obligation, shall be assessed a Delivery Failure Charge.

20.7.2 A Participant shall be deemed to have an Energy Delivery Failure if Participant fails to deliver the Energy Deployment quantity established under Section 20.4.1, absent grant of a waiver pursuant to Section 20.7.3 of this Tariff.

20.7.3 A Participant anticipating an Energy Delivery Failure should provide WPP notice of such expected Energy Delivery Failure as soon as practicable after becoming aware of the anticipated failure. Whether anticipated or not, a Participant may request a waiver of an Energy Deployment obligation after an Energy Delivery Failure has occurred. The WPP shall review all such waiver requests and shall determine whether the Participant's justification for the Energy Delivery Failure is valid and warrants waiver of its Energy Deployment obligation. The WPP also shall consider whether the Participant knew in advance, or reasonably should have known in advance, of an Energy Delivery Failure, and what efforts the Participant took to notify the WPP in advance of such Energy Delivery Failure. The procedures for addressing such waiver requests, including a non-exclusive list of valid justifications for an Energy Delivery Failure shall be set forth in the Business Practice Manuals. A Participant denied a waiver request hereunder may appeal such denial to the Board of Directors in accordance

with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested waiver shall be denied or permitted as, when and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall report on the disposition of each waiver request received.

20.7.4 The Delivery Failure Charge for each hour shall be the Charge Rate applicable for such hour times the MWhs of energy that were required to be, but were not, delivered pursuant to an Energy Deployment during such hour. The Charge Rate shall be the higher of the Day-Ahead price or Real-Time price provided by the Day-Ahead Applicable Price Index and Real-Time Applicable Price Index as specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery, respectively, for the hour, times a Delivery Failure Factor, as follows:

20.7.4.1 If the deficit is fully covered by other Participants through the Operations Program, in each instance of failure, the Delivery Failure Factor shall be five for the first non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; ten for the second non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; and twenty for the third and subsequent non-waived Energy Delivery Failures in a Cumulative Delivery Failure Period. For purposes of applying the Delivery Failure Factors under this Section 20.7.4 or the review referenced in Section 20.7.5, multiple Energy Delivery Failures occurring in one day shall be treated as a single instance of failure.

20.7.4.2 If the deficit is not fully covered by other Participants through the Operations Program, the Delivery Failure Factor is twenty-five for the first non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; and fifty for the second and subsequent non-waived Energy Delivery Failures (regardless of whether the prior instance(s) of delivery failure were fully covered by other Participants) in a Cumulative Delivery Failure Period.

20.7.4.3 Revenues from Delivery Failure Charges assessed in cases where the deficit was fully satisfied by other Participants will be used to reduce WPP costs that are recovered under Schedule 1, WRAP Administration Charge. Revenues from Delivery Failure Charges assessed in cases where the deficit was not fully met by other Participants will be collected by the WPP and provided to the Participant that had an unserved deficit.

20.7.4.4 Notwithstanding anything to the contrary in this Section 20.7.4, the Delivery Failure Charges assessed on a Participant, regardless of application of the Delivery Failure Factor, shall not

exceed, over the course of a Summer Season and the immediately succeeding Winter Season, the dollar amount that, as more fully detailed in the Business Practice Manuals, would have been assessed cumulatively under Section 17 as Deficiency Charges if the Participant had one or more Forward Showing Capacity Deficiencies over the course of such Summer Season and Winter Season in the same MW amounts as the highest MW amount of Delivery Failure experienced by such Participant in each Month of such Summer Season and Winter Season. The maximum dollar amount described herein shall be calculated on an ongoing basis during such Summer Season and Winter Season, and increased or reduced accordingly, without awaiting the end of the combined period of such Summer Season and Winter Season.

20.7.5 In addition to assessment of the Delivery Failure Charge, a third or subsequent instance of non-waived delivery failure, when all such delivery failures are fully covered by other Participants, or a second or subsequent instance of non-waived delivery failure when such instance is not fully covered by other Participants, will subject the Participant to review for expulsion from the WRAP.

20.8 Voluntary Response to Increased Deficiencies Identified After Preschedule Day

20.8.1 A Participant that identifies an unmet need for energy for any hour of an Operating Day that is outside of assistance provided or to be provided by Holdback Requirements or Energy Deployments established hereunder may, in accordance with procedures specified in the Business Practice Manuals, notify WPP of the need for such assistance. WPP will establish a portal or other procedure, as specified in the Business Practice Manuals, to facilitate provision of assistance, on a voluntary, bilateral basis, by other Participants to the Participant that identified the unmet need. Compensation, terms, and conditions of any resulting bilateral transactions will be determined by the affected parties outside of this Tariff. While Participant response to any such notification is voluntary, Participants are encouraged to provide assistance to other Participants in the circumstances described in this subsection, in consideration of the mutual support each Participant has agreed to provide to each other Participant by its agreement to participate in the WRAP, including this Operations Program.

21. Operations Program Settlements

21.1 Nature of Operation Program Settlements

21.1.1 Operations Program settlements are bilateral transactions; they are not purchases from or sales to a central market.

21.1.2 Operations Program transactions use existing transaction systems and processes.

21.1.3 The WPP will calculate and post settlement quantities and prices based on the Energy Deployment and Holdback Requirement, in accordance with procedures specified in the Business Practice Manuals for provision of transaction information by and among Participants and WPP, but WPP has no role in the transaction itself. WPP is not a settlement entity.

21.1.4 Settlement Prices calculated under Section 21.2 shall recognize pricing differences among Subregions. Where the seller and buyer are located in the same Subregion, the Applicable Price Index shall be the price index specified for that Subregion in the Business Practice Manuals. Where the seller and buyer are located in different Subregions, the following components of the settlement price calculation in Section 21.2 will be calculated using the Applicable Price Index for the Subregion that provides the higher index price: (i) Possible Block Sale Revenue; (ii) Total Settlement Price; (iii) Energy Declined Settlement Price; and (iv) Realtime Value of Unheld Energy. If a third participant is involved by providing transmission service rights between Subregions, the Participant that provided holdback or Energy Deployment shall receive the settlement price of the Subregion from which the holdback or Energy Deployment was sourced, and the Participant that provided Subregion to Subregion transmission service rights pursuant to Section 19.4 shall receive the difference between each Subregion's Total Settlement Price, or zero, whichever is greater.

21.2 Settlement Price Calculation. Settlement prices shall be calculated in accordance with the following, as more fully set forth in the Business Practice Manuals.

21.2.1 A Participant assigned a Holdback Requirement on a Preschedule Day for any hour of an Operating Day shall be paid the Holdback Settlement Price times the MW quantity of the Holdback Requirement. A Participant that provides energy to another Participant pursuant to an Energy Deployment shall be paid the Energy Declined Settlement Price, defined in Section 21.2.4, times the MWhs of energy provided to such other Participant, and its total payments shall be reduced by the Energy Declined Settlement Price times the MWhs of energy that would have been provided under a Holdback Requirement but were declined by the other Participant. A Participant

assigned a Holdback Requirement also shall be paid, when applicable, a Make Whole Adjustment, as provided below in Section 21.2.5.

21.2.2 A Participant that had a negative Sharing Calculation result for any hour of an Operating Day, which was incorporated in the calculation of Holdback Requirements of any Participants for such hour, determined as of the Preschedule Day, shall pay the Holdback Settlement Price times the MW quantity of such negative Sharing Calculation result. In addition, any Participant that had a negative Sharing Calculation result that was incorporated in the calculation of a Holdback Requirement shall contribute to the payment of the Make Whole Adjustment based on its negative Sharing Calculation. A Participant that declines energy that would have been provided under a Holdback Requirement shall be credited the Energy Declined Settlement Price times the MWhs of energy declined by such Participant.

21.2.3 The Holdback Settlement Price shall equal the Total Settlement Price minus the Energy Declined Settlement Price.

21.2.4 The Energy Declined Settlement Price shall equal the Applicable Real-Time Index Price for the hour.

21.2.5 The Make Whole Adjustment is applied in the event that the settlement revenue and the estimated value of the non-dispatched energy is less than the estimated revenues the selling entity would have received had such entity not been subject to a Holdback Requirement and had sold a day-ahead block of energy with a MW value equal to the maximum amount of Holdback Requirement for the hours in the block. The Make Whole Adjustment has a minimum value of zero and is determined as follows:

Make Whole Adjustment (when applicable) =
Maximum of (Possible Block Sale Revenue
– Final Settlement Revenue
– Realtime Value of Declined Energy
– Realtime Value of Unheld Energy, 0)

Where:

Realtime Value of Declined Energy = Energy Declined × Energy Declined Settlement price

provided that Declined Energy is only applicable to those hours where there was a positive Holdback Requirement.

Realtime Value of Unheld Energy = (Maximum Holdback MW in Block – Holdback MW Requested) × Applicable Index Price

21.2.6 The Total Settlement Price used in the above calculations shall be determined in accordance with the following formula:

Total Settlement Price = Maximum of (Minimum of (Hourly Shaping Factor × Day Ahead Applicable Index Price × 110%, 2000 $/MWh), 0)

where:

Hourly Shaping Factor is based on the most recent High-Priced Day for the relevant season, defined as a day in which at least one hour has a system marginal energy cost ("SMEC") greater than $200/MWh, and shall be calculated as follows:

1 + {[CAISO Hourly Day Ahead SMEC - CAISO Average Day Ahead SMEC (on- or off-peak hours)] / [CAISO Average Day Ahead SMEC (on- or off-peak hours)]}

Day-Ahead Applicable Index Price is the day-ahead heavy load/light load ICE Index price or average Locational Marginal Price that is specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery. If transmission via Section 14.3.2 was used to facilitate holdback, the Applicable Index Price shall be the higher of the two subregional day-ahead index prices for that portion of the holdback.

Real-Time Applicable Index Price is the real-time index price that is specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery.

SCHEDULE 1

WESTERN RESOURCE ADEQUACY PROGRAM ADMINISTATIVE COST RECOVERY CHARGE

The Western Power Pool's Costs of administering and operating the Western Resource Adequacy Program including, without limitation, all costs incurred or obligated by WPP as Program Administrator, all costs paid or payable by WPP to the Program Operator or other service providers, all costs of the Board of Directors in directing, supervising, or overseeing the WRAP, and the costs of maintaining a reasonable reserve as provided in Section 1 of this Schedule 1, shall be recovered from Participants pursuant to the charges set forth in this Schedule 1.

Section 1. WRAP Costs

1. As used herein, Costs shall mean WPP's costs, expenses, disbursements and other amounts incurred (whether paid or accrued) or obligated of administering and operating the WRAP as described above, including, without limitation, operating expenses, general and administrative expenses, costs of outside services, taxes, fees, capital costs, depreciation expense, interest expense, working capital expense, any costs of funds or other financing costs, and the costs of a reasonable reserve as provided herein.

2. The Costs included in a WRAP Administration Charge assessed for a Month shall be the Costs determined as being incurred for that Month, including, without limitation, for each Month, one-twelfth of any annual charge(s).

3. The Costs included in the WRAP Administration Charge for a reasonable reserve shall be those designed to establish over the first twelve months that this WRAP Administration charge is in effect an amount equal to 6% of the expected Costs, exclusive of such reserve, for one year; and to maintain such reserve thereafter at an amount equal to 6% of the expected Costs, exclusive of such reserve for the then-current year. WPP shall record on its income statement deferred regulatory expense, and WPP's balance sheet will reflect as a cumulative deferred regulatory liability, revenues collected under this Schedule 1 that are in excess of the Costs exclusive of such reserve and taking account of and including any accrued tax expense effects of this regulatory liability. The deferred regulatory liability will be reduced when after-tax WPP revenues collected under this Schedule 1 during any Month are less than the Costs exclusive of such reserve. Within thirty days after the end of each Year, to the extent WPP determines that the deferred regulatory liability exceeds 6% of WPP's revenues that were collected under this Schedule 1 during such Year, such excess amounts in the deferred regulatory liability shall be refunded evenly over the applicable billing determinant volumes in the remainder of the subsequent Year through credits to charges to then-current customers under this Schedule 1.

Section 2. WRAP Administration Charge

Each Participant shall be assessed each Month a WRAP Administration Charge equal to the sum of the Base Charge and the Load Charge,

where:

The Base Charge for each Participant equals the Base Costs divided by the number of Participants being assessed the Base Charge for the Month for which the WRAP Administration Charge is being calculated;

The Load Charge for each Participant equals the Load Charge Rate of the Load Services Costs divided by the sum of the Median Monthly P50 Peak Loads of the Participants being assessed the Load Charge for the Month for which the WRAP Administration Charge is being calculated, times that Participant's Median Monthly P50 Peak Load;

And where:

Base Costs means the Costs for the Month of the Base Services Cost Centers shown in the WRAP Cost Assignment Matrix, plus the Base Services Percentage times the Costs for that Month of the Dual Benefit Cost Centers shown below in Section 4: WRAP Cost Assignment Matrix;

Load Services Costs means the Costs for the Month of the Load Services Cost Centers shown in the WRAP Cost Assignment Matrix, plus the Load Services Percentage times the Costs for that Month of the Dual Benefit Cost Centers shown in the WRAP Cost Assignment Matrix; and

Median Monthly P50 Peak Loads means, for each Participant, the median of the Monthly P50 Peak Loads used in the FS Capacity Requirement of such Participant for two Binding Seasons corresponding to the two FS Submittal most recently validated by WPP.

If before or during a Binding Season, a Participant has need to update their Monthly P50 Peak Load for allowable reasons, those updated Monthly P50 Peak Loads will be replaced and the Median Monthly P50 Peak Load value recalculated upon validation of the change in participating load.

A Participant joining the Program will supply data such that WPP can validate Monthly P50 Peak Loads for the first two Binding Seasons for which the Participant will submit an FS Submittal for use in calculating Load Services Costs until these FS Submittals are submitted and reviewed in the normal timeframe.

Section 3. Maximum Charge Rates

3.1 Notwithstanding anything to the contrary in this Schedule 1, the sum of the Base Charges for all Months in a Year shall not exceed the Annual Maximum Base Charge of $59,000/Year, and the sum of the Load Charge Rates for all Months in a Year shall not exceed the Annual Maximum Load Charge Rate of $199/MW. WPP shall, to the extent reasonably practicable, provide two-months' notice prior to WPP's filing at FERC of an application to change the Maximum Base Charge or the Maximum Load Charge Rate, provided that nothing herein shall limit the Board of Director's authority and discretion to seek at FERC a change in the maximum rates in the time and manner the Board determines in the best interests of the Western Resource Adequacy Program. For purposes of clarity, these specified maximum rates on the Base Charge and the Load Charge do not limit the level of the Cash Working Capital Support Charge established under Section 5 of this Schedule 1, nor do they limit the amount of the default Allocation assessment provided under Part I of this Tariff.

3.2 To facilitate Participant planning, the WPP shall prepare, and provide to the RAPC, good faith, non-binding estimates of: (i) reasonably anticipated WRAP budgets for three Years beyond the most recently approved WRAP budget, including sensitivity analyses for reasonably identified major contingencies; (ii) reasonably anticipated numbers of Participants and MWs of Winter and Summer P50 Loads for each such Year; and (iii) reasonably anticipated highest monthly Base Charges and Load Charge Rates for each such Year. All assumptions and estimates in such forecasts and analyses shall be in WPP's sole discretion, which may be informed by RAPC discussion of such topics.

Section 4. WRAP Cost Assignment Matrix

	BASE COSTS	LOAD COSTS	DUAL BENEFIT
Program Administration (non-participant)		100%	
Program Administration (Participant engagement, RAPC facilitation)	100%		
WRAP portion of WPP BOD costs			50%/50%
Program Operations Staffing and Overhead		100%	
Program Operations Technology		100%	
Legal Services		100%	
Independent Evaluator		100%	

Section 5. Cash Working Capital Support Charge

5.1 In addition to the WRAP Administration Charge, each Participant shall be assessed a Cash Working Capital Support Charge, to support WPP's maintenance of sufficient funds on hand to make payments required for the operation and administration of the WRAP on a timely basis. Cash Working Capital Support Charges shall be designed to maintain a Cash Working Capital Fund that, at its maximum level over a twelve-month cycle, equals approximately nine-twelfths of the expected annual payment due from the WPP to the Program Operator for its Program Operator services.

5.2 A Participant shall pay a Cash Working Capital Support Charge no later than thirty days after that Participant executes a WRAPA. The Cash Working Capital Support Charge due following WRAPA execution equals the Cash Working Capital Support Charge Rate, calculated as the Cash Working Capital Fund at its required maximum twelve-month cycle level divided by the sum of the Median Monthly P50 Peak Loads of all Participants, times that Participant's Median Monthly P50 Peak Load.

5.3 To the extent the Cash Working Capital Fund is adequately funded at the time a new Participant executes a WRAPA, the revenue from such Participant's payment of the Cash Working Capital Support Charge shall be distributed to all Participants that previously have paid a Cash Working Capital Support Charge, pro rata based on the Median Monthly P50 Peak Loads of all Participants that have previously paid such charge.

5.4 To the extent, and at such time, WPP determines that an incremental addition to the Cash Working Capital Fund is needed due to such causes as, for example, an expected increase in the annual payment to the Program Operator, each Participant shall be assessed an Incremental Cash Working Capital Support Charge equal to the desired incremental addition, divided by the sum of the Median Monthly P50 Peak Loads of all Participants being assessed the Incremental Cash Working Capital Support Charge for the Month for which the Incremental Cash Working Capital Support Charge is being calculated, times that Participant's Median Monthly P50 Peak Load.

ATTACHMENT A

Western Resource Adequacy Program Agreement

This Western Resource Adequacy Program Agreement ("Agreement") dated as of _____ ("Effective Date") is entered into by and between Western Power Pool Corporation ("WPP") and _____ ("Participant"). WPP and Participant are each sometimes referred to in the Agreement as a "Party" and collectively as the "Parties."

In consideration of the mutual promises contained herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, the Parties agree as follows:

1. The Parties agree that this agreement shall be governed by the rates, terms, and conditions of the Western Resource Adequacy Program Tariff ("Tariff") and all such rates, terms, and conditions contained therein are expressly incorporated by reference herein. All capitalized terms that are not otherwise defined herein shall have the meanings ascribed by the Tariff.

2. Participant wishes to participate in the Western Resource Adequacy Program ("WRAP") administered by WPP under the Tariff.

3. Participant certifies that it satisfies all of the following qualifications:

    3.1 Participant is a Load Responsible Entity as that term is defined in the Tariff.

    3.2 Participant commits to complying with all applicable terms and conditions of WRAP participation as set forth in the Tariff and Business Practice Manuals adopted thereunder, including all Forward Showing Program and Operations Program requirements.

4. Participant will register all resources and supply contracts and shall disclose any other obligations associated with those resources and supply contracts.

5. Participant represents and warrants that it is authorized by all relevant laws and regulations governing its business to enter into this Agreement and assume all rights and obligations thereunder.

6. It is understood that, in accordance with the Tariff, WPP, as authorized by its independent Board of Directors, may amend the terms and conditions of this Agreement or the Tariff by notifying the Participant in writing and making the appropriate filing with FERC, subject to any limitations on WPP's authority to amend the Tariff as set forth therein.

7. Participant agrees to pay its share of all costs associated with the WRAP, as calculated pursuant to Schedule 1 of the Tariff. The manner and timing of such payment shall be as specified in Schedule 1 of the Tariff.

8. WPP agrees to provide all services as set forth in the Tariff.

9. Term and termination. This Agreement shall commence upon the Effective Date and shall continue in effect until terminated either by WPP by vote of its Board of Directors or by Participant's withdrawal as set forth herein. WPP and Participant agree that participation in the WRAP is voluntary, subject to the terms and conditions of this Agreement and the Tariff. The date upon which a Participant's withdrawal is effective and its participation in the program terminates is referred to as the "Withdrawal Date."

9.1 Normal Withdrawal: In general, Participant may withdraw from this Agreement by providing written notice to WPP no less than twenty-four months prior to commencement of the next binding Forward Showing Program period. Once notice has been properly given, Participant remains in a "Withdrawal Period" until the Withdrawal Date.

9.1.1 During Participant's Withdrawal Period, Participant remains subject to all requirements and obligations imposed by the Tariff and this Agreement, including but not limited to all obligations imposed in the Forward Showing Program and Operations Program and obligation to pay Participant's share of all costs associated with the WRAP.

9.1.2 All financial obligations incurred prior to and during the Withdrawal Period are preserved until satisfied.

9.1.3 During the Withdrawal Period, Participant is not eligible to vote on any actions affecting the WRAP that extend beyond the Withdrawal Period.

9.2 Expedited Withdrawal: Participant may withdraw from this agreement with less than the required twenty-four month notice as set forth below. Participant shall negotiate with WPP regarding the timing of the Expedited Withdrawal.

9.2.1 Extenuating Circumstances: The following such events and circumstances shall constitute "extenuating circumstances" justifying a withdrawal on less than twenty-four months. Participant invoking an extenuating circumstance shall negotiate with WPP regarding potential ways to minimize the impact of the expedited withdrawal on all other Participants and WPP. Such extenuating circumstances and any mitigation plan to minimize the impact of the expedited withdrawal must be reviewed and approved by the Board of Directors prior to termination of Participant's WRAP obligations. Regardless of the extenuating circumstance, all financial obligations incurred prior to the Withdrawal Date remain in effect until satisfied.

9.2.1.1 A governmental authority takes an action that substantially impairs Participant's ability to continue to

participate in the WRAP to the same extent as previously; provided, however, that Participant shall be obligated to negotiate with WPP regarding potential ways to address the impact of the regulatory action without requiring a full withdrawal of Participant from the WRAP if possible.

9.2.1.2 Continued participation in the WRAP conflicts with applicable governing statutes or other applicable legal authorities or orders.

9.2.1.3 Participant voted against a RAPC determination and disagreed with a Board of Directors decision to release composite or aggregated data under Section 10.2.1 of the Tariff, provided that such right to expedited withdrawal is exercised promptly after the first time that the Board of Directors determines that the form and format of composite or aggregated data sufficiently protects against the release of confidential or commercially sensitive Participant data. Failure to exercise this right promptly upon the first occurrence of the Board of Directors voting on a specific form and format of composite or aggregated data shall constitute a waiver of the right to expedited withdrawal for any future disclosures of composite or aggregated data in the same or substantially similar form and format.

9.2.1.4 FERC or a court of competent jurisdiction requires the public disclosure of a Participant's confidential or commercially sensitive information, as further described in Section 10.5 of the Tariff; provided however that such right to expedited withdrawal shall be exercised promptly upon the exhaustion of all legal or administrative remedies aimed at preventing the release.

9.2.2 Exit Fee: If the impact of Participant's withdrawal on WRAP operations can calculated with a high degree of confidence and mitigated by the payment of an "exit fee" to be calculated by WPP, an expedited withdrawal will be permitted. Such exit fee shall include (but not be limited to): (i) any unpaid WRAP fees or charges; (ii) Participant's share of all WRAP administrative costs incurred up to the next Forward Showing Program period; (iii) any costs, expenses, or liabilities incurred by WPP and/or the Program Operator directly resulting from Participant's withdrawal; and (iv) any costs necessary to hold other participants harmless from the voluntary expedited withdrawal. The exit fee may be waived to the extent that it would violate any federal, state, or local statute, regulation, or ordnance or exceed the statutory authority of a federal

agency. The exit fee shall be paid in full prior to the Withdrawal Date.

9.2.3 Amendments to Section 3.4 of the Tariff: In the event that amendments to Section 3.4 of the Tariff are approved by the RAPC and Board of Directors, a Participant that voted against such a change may withdraw with less than the required twenty-four month notice, provided that the Participant satisfy all obligations in the Forward Showing Program and Operations Program and satisfy all other financial obligations incurred prior to the date that the amendments to Section 3.4 of the Tariff are made effective by FERC.

9.2.4 Expulsion: The Board of Directors, in its sole discretion, may terminate Participant's participation in the WRAP and may terminate this Agreement with Participant for cause, including but not limited to material violation of any WPP rules or governing documents or nonpayment of obligations. Prior to exercising such right to terminate, the Board of Directors shall provide notice to Participant of the reasons for such contemplated termination and a reasonable opportunity to cure any deficiencies. Such Board of Directors termination shall be after an affirmative vote consistent with the Board of Directors standard voting procedures. Such termination shall not relieve the Participant of any financial obligations incurred prior to the termination date, and WPP may take all legal actions available to recover any financial obligations from Participant.

10. No Waiver of Non-FERC-Jurisdictional Status. If Participant is not subject to the jurisdiction of FERC as a public utility under the Federal Power Act, Participant shall not be required to take any action or participate in any filing or appeal that would confer FERC jurisdiction over Participant that does not otherwise exist. Participant acknowledges that FERC has jurisdiction over the WRAP, including Participant's activities in the WRAP.

[SIGNATURE BLOCKS]

WESTERN POWERPOOL

Western Resource Adequacy Program

102 Forward Showing Reliability Metrics

100 – Forward Showing

Revision History

Manual Number	Version	Description	Revised By	Date
102	0.1	RAPC Glance Version	Michael O'Brien	1/18/2024
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102 Forward Showing Reliability Metrics

1. Introduction

The Forward Showing Reliability Metrics Business Practice Manual (BPM 102) provides an overview of how the Program Operator will conduct the Loss of Load Expectation (LOLE) Study and set the Monthly FS Planning Reserve Margins (FSPRM) to be approved by the Board. In addition to the guidance provided in this BPM, the Program Operator will provide scoping documents with additional technical details on the modeling approach prior to conducting the LOLE Study each year.

1.1 Intended Audience

BPM 102 is intended for WRAP Participants and other interested individuals or entities and will be particularly useful for individuals that are responsible for their Participant organization's Forward Showing Submittal or that need to ensure their organizations are submitting the required MW quantity of Qualifying Resources to meet the Forward Showing Capacity Requirement. BPM 102 will be most informative to individuals in Participant organizations that have an interest in the LOLE Study and the setting of FSPRMs. Qualifying Capacity Contribution (QCC) methodologies - such as Effective Load Carrying Capability (ELCC) for Variable Energy Resources (VER) and Unforced Capacity (UCAP) for thermal resources - can be found in *BPM 105 Qualifying Resources*.

1.2 What You Will Find in This Manual

BPM 102 provides details, assumptions, methodologies, and procedures for conducting the LOLE Study and determining Monthly FSPRMs. This BPM explains how the Program Operator models variations in load and variations in generation, how numerous scenarios of variations in weather and variations in resource performance and outages are simulated from historical data, the Load and Resource Zones used in the LOLE Study simulations, the Subregions for which potentially differing FSPRM values are studied, how Contingency Reserves (CR) are accounted for, how the LOLE threshold is identified, how the simulations are conducted, and how FSPRMs are calculated.

1.3 Purpose

BPM 102 details the components of the LOLE Study and how the Program Operator will determine the FSPRMs in the LOLE Study for the Binding Seasons.

1.4 Definitions

All capitalized terms that are not defined in BPM 102 have their meaning set forth in the Tariff or in another BPM.

Capability Test: As defined in *BPM 105 Qualifying Resources*.

Change Request Form: As defined in *BPM 301 Program Review Committee Workplan Development and Approval*.

Fuel Type: As defined in *BPM 105 Qualifying Resources*.

Historical Load Data: As defined in *BPM 101 Advance Assessment*.

LOLE Study: A probabilistic simulation of variations in load and variations in generation to determine the amount of capacity needed for each Month of a Binding Season to meet the no more than a single event-day of loss of load in ten years reliability metric across a Binding Season.

Net Generating Capability: As defined in *BPM 105 Qualifying Resources*.

Regional P50 Peak Load Forecast: Forecast based on total Participant load in the WRAP Region or total Participant Load in a Subregion depending on results being sought.

Study Scope Document: a document that defines the scope of an LOLE Study.

2. Background

The FSPRMs are the capacity margins above a Participant's monthly P50 Peak Load Forecast required to meet the reliability metric of no more than a single event-day of loss of load in ten years across a Binding Season (as calculated per Section 8). The total amount of monthly qualifying capacity needed to meet the reliability metric will be simulated in the LOLE Study using probabilistic analysis (see Section 7), taking into account variability in load (see Section 5) and variation in generation (see Section 6) while maintaining Contingency Reserves (see Section 6.10).

The Tariff provides that the FSPRM determination employs:

i. a simulated resource stack using capacity accreditation principles consistent with those used for WRAP QCC determinations (see Section 6);

ii. an adjustment in the total WRAP-required QCC value as needed to meet a one event-day in ten years LOLE across a Binding Season (see Section 8), and

iii. a standard that each Month will have at least 0.01 annual LOLE (i.e., one event-day in 100 years), while maintaining the overall one event-day in ten years LOLE across a Binding Season (see Section 8).

FSPRMs are determined for each Month of the Binding Season and for each Subregion (see Section 4.1) as well as the WRAP Region as a whole (see Section 4.1.1) in connection with the Advance Assessment. The timing and deadlines for data collection and study completion for the Advance Assessment can be found in *BPM 101 Advance Assessment Timeline*. The LOLE Study will be defined by a Study Scope Document (see Section 3).

3. Study Scoping Process

The LOLE Study for each Binding Season will be preceded by a Study Scope Document that will define the scope of work. The Study Scope Document will adhere to applicable Tariff requirements and the further guidance and implementing details described in BPM 102. The Study Scope Document may also specify additional technical details as necessary to complete the applicable LOLE Study for the subject Binding Season. The Program Operator will provide the Board and RAPC a timely opportunity to review and comment upon the Study Scope Document prior to the Program Operator's commencement of the applicable LOLE Study and will highlight any notable changes in scope or methodology compared to prior LOLE Studies. In addition to other key study methodologies and assumptions, the Study Scope Document will identify the planning software or system modeling software to be utilized for the subject LOLE Study.

4. Load and Resource Zones

The WRAP Region will be modeled in each LOLE Study as divided among the separate load and resource zones (LRZs) shown below in Figure 1, in order to consider weather variability across the WRAP Region and within Subregions. LRZs will be used primarily to distinguish weather modeling for loads and associated resources. To that end, the LOLE Study will not limit the import and export capabilities between LRZs when determining the FSPRMs for the WRAP Region or within Subregions. Changes to the LRZs shown in Figure 1 will be as noted in the Study Scope Document for the Binding Season to which such changes will apply.

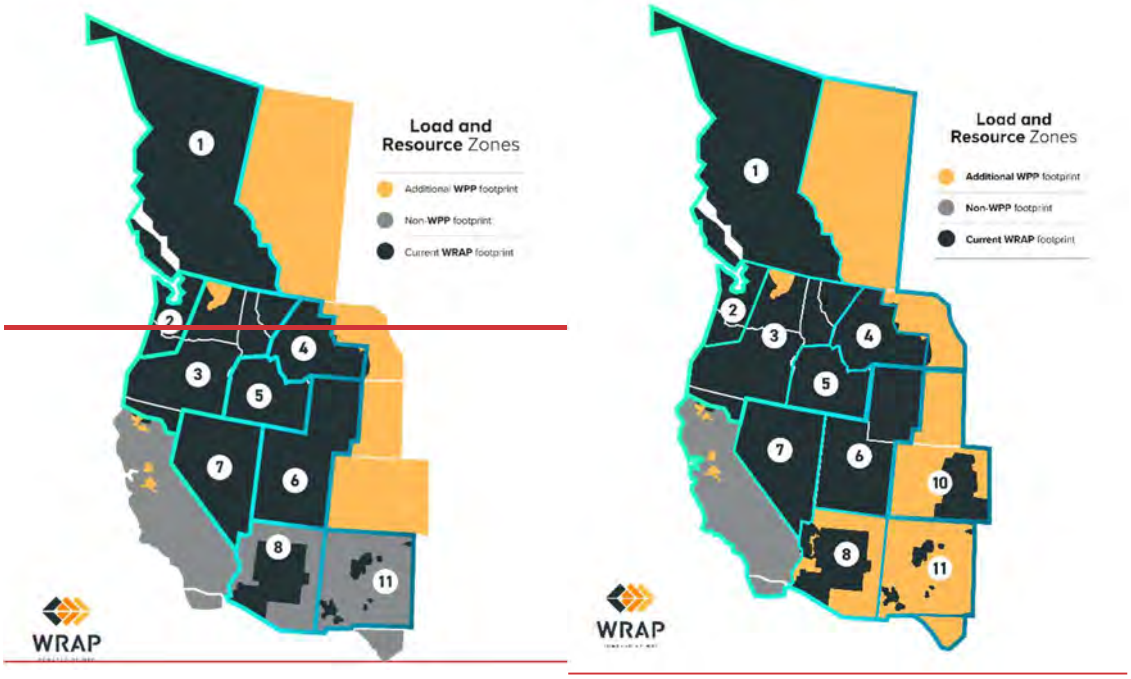

Figure 1 - WRAP Load and Resources Zones (LRZs)[1] as listed in Section 4.1

4.1 Subregions Used for Determination of Monthly FSPRMs

~~Two~~Three Subregions have been identified in the WRAP Region: the Northwest Subregion ~~and~~, the Southwest Subregion, and ~~East~~the Rockies Subregion. LOLE Study simulations are conducted separately for each of the Subregions. Each Subregion is comprised of load and generation from within certain Balancing Authority Areas, and the boundaries of each Subregion are defined by the boundaries of the combined area of the component Balancing Authority Areas. The component Balancing Authority Areas for each Subregion are as follows:

- Northwest Subregion (Zones 1, 2, 3, 4)
    - Avista Corporation
    - BC Hydro and Power Authority[1]
    - Bonneville Power Authority
    - Chelan County PUD #1
    - Douglas County PUD #1

[1] The WRAP Region is solely located within the United States of America, and any transactions required by the WRAP Operations Program associated with loads or resources located in Canada are effected inside the borders of the United States.

- Grant County PUD #2
- NorthWestern Energy
- PacifiCorp West
- Portland General Electric
- Puget Sound Energy
- Seattle City and Light
- Tacoma Power

- Southwest ~~and East~~ Subregion (Zones 5, 6, 7, 8, 11)
  - Arizona Public Service
  - ~~Basin Electric~~
  - ~~Black Hills~~
  - Idaho Power Company
  - NV Energy
  - PacifiCorp East
  - Public Service Company of New Mexico
  - Salt River Project
  -
- Rockies Subregion (Zone 10)
  - Black Hills
  - Public Service Company of Colorado

Beginning with the Winter 2027–2028 Binding Season, the LOLE Study to determine the FSPRM values will reflect the following, updated Balancing Authority Areas for the Northwest Subregion ~~and~~, Southwest Subregion, and ~~East~~Rockies Subregion, respectively:

- Northwest Subregion (Zones 1, 2, 3, 4, 5)
  - Avista Corporation
  - BC Hydro and Power Authority[1]
  - Bonneville Power Authority
  - Chelan County PUD #1
  - Douglas County PUD #1
  - Grant County PUD #2
  - Idaho Power Company
  - NorthWestern Energy
  - PacifiCorp West
  - Portland General Electric
  - Puget Sound Energy
  - Seattle City and Light
  - Tacoma Power

- Southwest ~~and East~~ Subregion (Zones ~~5,~~ 6, 7, 8, 11)

- Arizona Public Service
- ~~Basin Electric~~
- ~~Black Hills~~
- NV Energy
- PacifiCorp East
- Public Service Company of New Mexico
- Salt River Project
- Tucson Electric Power

- Rockies Subregion (Zone 10)
  - Black Hills
  - Public Service Company of Colorado

After Summer 2027, the Subregion description for Binding Seasons prior to Winter 2027-2028 will be removed from BPM 102.

Any load for which a Participant is responsible (that has not been excluded – see *BPM 103 Forward Showing Capacity Requirement*) that does not reside within one of the Balancing Authority Areas listed above will be added to one of the Subregions.

The Program Administrator will make use of the WRAP governance process if changes to participation necessitate reevaluation of the number of Subregions or their composition.

In the event a significant change to the transmission system is identified (e.g., new transmission capacity, changes in transmission rights ownership), the boundaries of the Subregions above may be reconsidered. A Participant may:

1. Request the Program Administrator conduct analysis of the potential impact of the change to the Subregion. The Program Administrator will take input from the requesting Participant and will determine the appropriate form and focus of such analysis. As possible, this analysis will be made public, in accordance with confidentiality guidelines set out in the Tariff.

2. File a Change Request Form (see *BPM 301 Program Review Committee Workplan Development and Approval)* requesting the Balancing Authority Area within which some portion of its load (for which it is the LRE) be reassigned to another Subregion.

    a. Following submission of the Change Request Form, other Participants with loads within the identified Balancing Authority Area will be given 30 days

to provide comment. Any comments received will be added to the Change Request Form as appendices.

b. Following the comment period in step 2a, the Change Request Form will be treated as a Non-Task Force Proposal (see *BPM 301*).

c. Such Change Request Forms must be submitted at least 9 months prior to the deadline for the Advance Assessment Data Request for the Binding Season such change is requested (see *BPM 101 Advance Assessment*). For example, if a change to Subregion boundaries is requested for Summer 2032, the Advance Assessment Data Request for Summer 2032 is due March 1, 2030, so such a request would need to be submitted by June 1, 2029.

A new Participant will be assigned by WPP to an appropriate Subregion (and thus modify the boundary thereof) subject to objection of the RAPC to such assignment, expressed by action of the RAPC. During the Transition Period, the Program Administrator may include in the Advance Assessment new participants committed to binding participation in the season being studied

4.1.1 WRAP Region Analysis

In addition to the Subregion analyses, WRAP Region FSPRMs will be determined by running LOLE Study simulations on the entire WRAP Region with unconstrained transmission (i.e., assuming no transmission constraints) between the Subregions.

5. Load Modeling in the LOLE Study

The FSPRMs are the capacity margins above a Participant's monthly P50 Peak Load Forecast required to meet the reliability metric of no more than a single event-day of loss of load in ten years across a Binding Season. The total amount of monthly qualifying capacity needed to meet the reliability metric will be simulated in the LOLE Study using probabilistic analysis (see the Study Scope Document for further details), taking into account variability in load (as well as variations in generation – see Section 6). For each Winter Season and each Summer Season, the Program Operator will model the effects of weather variability by developing a minimum of forty historical weather years that reflect the impact of weather on load. To model the effects of weather variability on load, a load shape provided by Participants for recent years (e.g., five most recent years of Historical Load Data) will be combined with historical weather data to synthesize at least forty years of synthetic historical weather data. Relationships between weather observations and load will be developed based on the historical weather and Historical Load Data (see *BPM 101 Advance Assessment* and *BPM 103*

Forward Showing Capacity Requirement) from recent data sets. The historical weather data will consist of hourly temperature data from a representative selection of weather stations in each Subregion. Weather data will be used from a back-up weather station if there are data quality issues for some periods in an initially selected station. The Study Scope document will identify when synthesized load shapes will be redetermined by the Program Operator; frequency of such updates will consider factors such as changes in load patterns, sharp increases in load due to large new customers, or changes in climate.

Other inputs into historical weather data will include an hour-of-week factor (in determining temperature-to-load comparisons for daylight hours versus darkness hours, as well as weekends versus Business Days) as well as temperature and average temperatures from the preceding eight, 24, and 48 hours. Different weather and load relationships will be built for the Winter Season and Summer Season. These weather and load relationships will be applied to the multiple years of weather data to develop synthetic load shapes for the study years. Equal probabilities will be given to each of the forty annual load shapes in the simulations.

6. Generator Modeling in the LOLE Study

The FSPRMs are the capacity margins above a Participant's monthly P50 Peak Load Forecast required to meet the reliability metric of no more than a single event-day of loss of load in ten years across a Binding Season. The LOLE Study will simulate the aggregated stack of Qualifying Resources provided to the Program Operator by Participants in the Advance Assessment data collection, using the methodologies described below. In summary, the LOLE Study will model:

- The qualifying capacity of thermal resources based on Net Generating Capability (interchangeable with ICAP for thermal resources) taking into account equivalent forced outage rate-demand (EFORd) (see Section 6.1); note that EFORd is different than the equivalent forced outage factor during Capacity Critical Hours (EFOFcch) used to determine thermal resource QCC (see Table 1).
- QCC values for Storage Hydro (see Section 6.2)
- Participants' wind Qualified Resources as a single wind resource per LRZ using historical and synthesized resource performance profiles (see Section 6.3)
- Participants' solar Qualified Resources as a single solar resource per LRZ based on solar profiles developed from weather data (see Section 6.4)

- Energy Storage Resources (ESRs) as dischargeable only when there is a lack of other Qualified Resources available to serve load (see Section 6.5)
- Participants' Run-of-River (ROR) Qualified Resources as a single ROR resource per LRZ, using historical and synthesized resource performance profiles (see Section 6.6)
- Demand Response (DR) with properties provided by Participants (see Section 6.7)
- Dispatchable and controllable behind-the-meter Qualified Resources as equivalent sized resources (see Section 6.8)
- Capacity transactions resulting in either a net import or net export from the WRAP Region as hourly generators in the applicable LRZ (see Section 6.9)
- Contingency Reserves to maintain the required amounts (see Section 6.10).

The total amount of monthly qualifying capacity needed to meet the reliability metric will be simulated as a resource stack in the LOLE Study using probabilistic analysis, taking into account variations in generation (as well as load – see Section 5). The monthly Qualifying Resource simulated capacities (in MWs) needed to meet the reliability metric each month will then be converted to unforced capacity (UCAP) values (see Section 8) to calculate the FSPRMs (as a percentage).

6.1 Thermal Generator Modeling

Thermal Resources and Long Duration Storage Resources will be modeled in the LOLE Study at their Net Generating Capability value (as indicated by the Capability Test – see *BPM 105 Qualifying Resources*) while forced outages for each resource will be modeled in accordance with their EFORd when determining the amount of monthly qualifying capacity to meet the reliability metric.[2] The Capability Test data will be provided by each Participant in its FS Submittal as discussed in *BPM 105 Qualifying Resources* and *BPM 108 Forward Showing Submittal Process*. All Thermal Resources and Long Duration Storage Resources will be modeled in the LOLE Study, unless information provided by the relevant Participant in the Advance Assessment Data Request indicates the resource

[2] Note: Resource EFORd is used in LOLE Study for determination of FSPRMs, and differs from the EFOF (Equivalent Forced Outage Factor) used for the determination of QCC for thermal resources during Capacity Critical Hours (CCHs) – see *BPM 105 Qualifying Resources*.

will not be available in the study period, such as a retirement date, future in-service date, or similar reason.

Forced outage modeling for Thermal Resources and Long Duration Storage Resources will use annual EFORd values (based on the EFORd equation as defined by NERC GADS[3]), forced outage durations, and outage events sourced from NERC GADS (or equivalent) data provided by Participants. For Thermal Resources and Long Duration Storage Resources that do not submit such data, an average forced outage rate will be applied based on size, technology type, Fuel Type and resource age. At a minimum, the most recent five years of historical NERC GADS (or equivalent) data will be considered in the LOLE Study. The models will be updated every Year to reflect the latest outage rates.

Planned outages for thermal resources will not be modeled in the LOLE study. All Thermal Resources and Long Duration Storage Resources will be modeled as available at any given hour if the Qualifying Resource is not on a forced outage.

6.2 Storage Hydro Qualifying Resources

The LOLE Study will model Storage Hydro Qualifying Resources utilizing the Monthly QCC values determined with the methodology described in *BPM 105 Qualifying Resources* for such resources. The methodology utilized to assess QCC values for Storage Hydro Qualifying Resources accounts for the availability of storage such that it is appropriate in the LOLE modeling to assume the facility can output the Monthly QCC value for each hour in the LOLE Study. No additional outage modeling will be applied to the Storage Hydro Qualifying Resources in the LOLE Study, since the QCC values consider historical outages.

6.3 Wind Resources

Wind resources provided by Participants will be modeled together as a single wind resource per LRZ in the LOLE Study. Operational wind data (preferred and used when available) and synthesized wind data will be utilized for the analysis: recent historic wind resource performance is correlated to the corresponding peak load profiles so that synthesized wind performance data can be developed from similar load profiles in earlier years for use in the resource variability simulations. For example, actual historical resource performance profiles from a recent period (e.g., 2014-2020) are taken, and the load profiles for those days are matched with daily load profiles (+/-25

[3] NERC, 2023 GADS Data Reporting Instructions, January 2023, Appendix F, p9, Section 25, available at; GADS_DRI_2023.pdf (nerc.com)

days) from older years (e.g., 1980-2014) that best align with the peak load profile of the day in question. Actual resource output will be used when available. The Program Operator will identify in the Study Scope Document whether synthesized wind shapes for years where historical data is insufficient or not available will be redetermined for the upcoming LOLE Study. Wind resources provided that have not gone through the above synthetization process will use wind operational and synthesized data that is similar (i.e. the same LRZ) as the resource being added.

6.4 Solar Resources

Solar resources provided by Participants will be modeled together as a single solar resource per LRZ in the LOLE Study. When operational solar data is unavailable, solar profiles for resources will be developed using irradiance and weather data that will be obtained for weather station sites for the years after 1998 from the National Renewable Energy Laboratory's (NREL) National Solar Radiation Database (NSRDB) Data Viewer. Data will be obtained from the NREL System Advisor Model (SAM) for each Year and site to generate 8,760 hourly profiles. Profiles from 1980-1998 will be selected by using daily profiles from the day that best matches the peak load out of all the days +/- 3 days of the source day of the 7-year period from 1998 to the most current year. The Program Operator will identify in the Study Scope whether synthesized solar shapes for years where historical data is insufficient or not available will be redetermined for the upcoming LOLE Study. Solar resources provided that have not gone through the above synthetization process will use previous solar operational and synthesized irradiance data that is similar (e.g. the same LRZ) as the resource being added.

6.5 Energy Storage Resources

ESRs will be modeled in the LOLE Study as energy limited devices that will charge and discharge in accordance with their equipment specifications. ESRs will be modeled to charge and discharge in a 'preserve reliability' mode, meaning that they will only be discharged when there is a lack of other resources available to serve load. ESRs will be discharged prior to Demand Response (DR) programs. ESRs will not be restricted to charging from co-located resources or in a hybrid configuration unless specified by the Participant.

6.6 Run of River Qualifying Resources

ROR Qualifying Resources provided by Participants will be modeled together as a single ROR per LRZ in the LOLE Study. Operational and synthesized ROR data will be utilized for the analysis. Recent historic ROR resource performance is correlated to the corresponding peak load profiles so that synthesized ROR resource performance data can be developed from similar load profiles in earlier years for use in the resource

variability simulations. For example, actual historical ROR resource performance profiles from a recent period (e.g., 2014-2020) are taken, and the load profiles for those days are matched with daily load profiles (+/-25 days) from older years (e.g., 1980-2014) that best align with the peak load profile of the day in question. The Program Operator will identify in the Study Scope whether synthesized ROR shapes for years where historical data is insufficient or not available will be redetermined for the upcoming LOLE Study. ROR resources provided that have not gone through the above synthetization process will use previous ROR operational and synthesized river flow data that is similar (e.g. on the same river system) as the resource being added.

6.7 Demand Response Programs

The LOLE Study will include properties and values of DR programs provided by Participants. DR programs will be modeled, such that these representative resources would be dispatched last in the LOLE Study to reflect DR operating scenarios. Forced outage rates will not be assigned to DR programs.

6.8 Behind-the-Meter Generation

Behind-the-meter generation reported by Participants as capacity resources that are controllable and dispatchable by the Participant will be modeled in the LOLE Study as generation (per the aggregation requirements in *BPM 105 Qualifying Resources*). These resources will be assigned parameters and forced outage information from equivalent-sized resources.

6.9 External Capacity Modeling

Any external capacity transactions that are supported by firm commitments in the Advance Assessment Data Request (see *BPM 101 Advance Assessment*) will be modeled as hourly generators in the applicable LRZ in the LOLE Study. External transactions include any firm capacity transactions from or obligations to non-participating entities external to the WRAP Region. If the transaction is a sale to a non-participating entity, it will be an export of capacity. If the transaction is a purchase from a non-participating entity, it will be modeled as an import of capacity; forced outage rates will not be assigned to these transactions.

6.10 Contingency Reserves Modeling

In accordance with standard BAL-002-WECC-3, Balancing Authorities (and Reserve Sharing Groups) and required to maintain a minimum CR amount that is equal to the greater of either:

i. the loss of the most severe single contingency or

ii. the sum of three percent (3%) of hourly integrated load and three percent (3%) of hourly integrated generation.

The LOLE Study will ensure all CR amounts are maintained during tallied loss of load events. To ensure this, the LOLE Study will assume an average six percent (6%) of the Regional P50 Peak Load Forecast CR requirement when determining the capacity requirements to maintain the one event-day in 10-year LOLE requirement.

7. LOLE Study

Once the capacity contributions of the components of the resource stack have been determined (see Section 6) the LOLE Study simulation will be performed for the Subregions and WRAP Region to determine the capacity needed each Month to meet the reliability metric.

The probabilistic LOLE Study will model load variability (i.e., one of the forty (or more) synthetic load shapes) for all hours of the Year and random forced outages for Qualifying Resources in the WRAP Region and Subregions during each hour of the study. The LOLE Study will count loss of load events (insufficient Qualified Resource capacity to meet load) during all hours of the Binding Season against the reliability metric of the no more than one event-day in ten-year LOLE across a Binding Season. Loss of load events that occur during hours outside of the Binding Season will not be considered.

If an LOLE Study simulation has excess capacity in a Binding Season, pure negative capacity (with no outage rate) will be added in all hours of the applicable Binding Season until the WRAP Region or any Subregion arrive at the no more than one event-day in ten years across a Binding Season reliability threshold. If an LOLE Study simulation has insufficient capacity in a Binding Season, pure positive capacity (with no outage rate) will be added in all hours of the applicable Binding Season until the WRAP Region or any Subregion reaches the no more than one event-day in ten years across a Binding Season reliability threshold. In addition, to ensure the amount of qualifying capacity is not leading to excessively low LOLEs, pure capacity will be adjusted to ensure that all Months of the applicable Binding Season have at least 0.01 day per Year LOLE in that given Month, while at the same time ensuring the LOLE for the entire Binding Season does not exceed 0.1 day per Year LOLE.

Once the reliability metric is achieved, the capacity requirement (as represented by the resource stack and pure capacity) for each Month of the Binding Season (by Subregions and WRAP Region) is converted to UCAP for calculation of the FSPRMs (see Section 8).

8. FSPRMs Calculations

The monthly capacity values of the resource stack that result from the LOLE Study simulation (see Section 7) will be replaced with UCAP values as indicated in Table 1. The intent of the UCAP approach is to represent Qualified Resources with respect to their availability.

Table 1 - Resource capacity value to calculate UCAP FSPRMs

Resource type	Conversion to UCAP Values
Thermal	The Net Generating Capability will be replaced by QCC values calculated by the Program Operator using the QCC methodology (see *BPM 105*)
Wind, Solar and ESR	Values for wind, solar, and ESR resources will be determined by using an ELCC analysis (see *BPM 105*). The capacity values attributed to wind and solar resources and ESRs will be consistent with the QCC values assigned to such resources in the QCC analysis (see *BPM 105*).
Storage Hydro	QCC values submitted by the Participants calculated using the Storage Hydro QCC methodology (see *BPM 105*).
Run-of-River Hydro	QCC values calculated by the Program Operator using the ROR QCC methodology (see *BPM 105*).
Demand Response	No conversion needed. Modeled maximum monthly capacity of all programs submitted by the Participants.
Pure Capacity adjustment to meet reliability metric	No conversion needed.

After the monthly capacity values of a resource stack are converted into UCAP values, the FSPRMs will be calculated separately for each Month of the Binding Seasons based on the Regional P50 Peak Load Forecast for each Month (Month also refers to a partial calendar month that is part of a Binding Season) as follows:

$$FSPRM\ (\%) = \frac{UCAP_{1-in-10} - Regional\ P50\ Load\ Forecast}{Regional\ P50\ Load\ Forecast} * 100$$

Where:

FSPRM(%) is the FSRPM for a specified Month in a Binding Season

$UCAP_{1\text{-}in\text{-}10}$ is the UCAP required to meet the reliability metric for a specified Month in a Binding Season

Regional P50 Peak Load Forecast is the P50 Peak Load Forecast for the specified Month

Requirements as described in *BPM 103 FS Capacity Requirement*. However, it should be noted that while Regional P50 Peak Load Forecasts are calculated using the same methodologies as Participant P50 Peak Load Forecasts the former use a Load Growth Factor specific to the LOLE Study (see *BPM 103 FS Capacity Requirement*).

WESTERN POWERPOOL

Western Resource Adequacy Program

103 Participant Forward Showing Capacity Requirements

100 – Forward Showing

Revision History

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103	0.1	RAPC Glance Version	Michael O'Brien	5/28/2024
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103	0.3	RAPC & PRC Discussion	Michael O'Brien	8/28/2024
103	0.4	RAPC Endorsement	Michael O'Brien	9/4/2024
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103	2.0	2024-NTFP-4 Redlines	Michael O'Brien	3/13/2025
103	3.0	Firm Tx TF Updates	Maya McNichol	3/17/2026
103	4.0	Annual BPM Review	Maya McNichol	3/19/2026
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103 Participant Forward Showing Capacity Requirements

1. Introduction

The Forward Showing (FS) Capacity Requirement is the minimum quantity of capacity a Participant is required to demonstrate for a Month of a Binding Season. Business Practice Manual (BPM) 103 describes the process for determining the components of the FS Capacity Requirement (the FS Planning Reserve Margin [FSPRM] calculations can be found in *BPM 102 Reliability Metrics*). BPM 103 also includes directions for a Participant seeking to exclude load from its FS Capacity Requirement, along with a discussion of the effect of using another Subregion's lower FSPRM on a Participant's FS Capacity Requirement, and considerations for load aggregation and disaggregation.

1.1. Intended Audience

BPM 103 is intended for WRAP Participants and other interested individuals or entities. BPM 103 will be particularly useful for those responsible for their Participant organization's FS Submittal as it pertains to meeting the FS Capacity Requirement, as this BPM provides an overview of the Monthly P50 Peak Load Forecast, load growth and load change considerations, and the Contingency Reserve Adjustment.

1.2. What You Will Find in This Manual

BPM 103 has the following sections: FS Capacity Requirement; P50 Peak Load Forecast; Load Growth Factor; Contingency Reserve Adjustment; Excluding Load; Submitting Loads from Multiple ; Load Aggregation/Disaggregation; and LOLE Study Load Forecast and Load Growth Rate. BPM 103 also includes Appendix A - P50 Peak Load Forecast Modifications and Appendix B - Load Exclusion.

1.3. Purpose

BPM 103 provides an overview of the components of the monthly FS Capacity Requirements calculations, including the Monthly P50 Peak Load Forecast methodology.

1.4. Definitions

All capitalized terms that are not defined in BPM 103 or another BPM have their meaning set forth in the Tariff.

Contingency Reserve Adjustment: An adjustment to the FS Capacity Requirement to account for changes in Contingency Reserve requirements resulting from a Participant's contractual purchases and sales that include the Contingency Reserve as a specific part of the contract. The Contingency Reserve Adjustment has two components: Contingency Reserve Adjustment - Generation and Contingency Reserve Adjustment - Load.

Contingency Reserve Adjustment - Generation: The component of the Contingency Reserve Adjustment that accounts for differences between the system average Contingency Reserve requirement assumed in the LOLE Study and a Participant's actual purchases and sales.

Contingency Reserve Adjustment - Load: The component of the Contingency Reserve Adjustment that accounts for a Participant's specific Contingency Reserve purchases and sales.

Forward Showing (FS) Capacity Requirement Unadjusted: The FS Capacity Requirement Unadjusted takes into account the monthly P50 Peak Load Forecast and the monthly FSPRM. The FS Capacity Requirement Unadjusted does not take into account the Contingency Reserve Adjustment.

Historical Load Data: As defined in *BPM 101 Advance Assessment*.

Load Forecast Ratio: The Load Forecast ratio for each Month of a Binding Season is the ratio of the monthly average of the peak loads of a Month for the last five years to the maximum of the monthly average of the peak loads of the months of a Binding Season for the last five years.

Load Growth Factor: A program-wide load growth factor applied to P50 Peak Load Forecasts that may take into account location, weather, Participant type, and Participant customer composition (balance between retail, commercial, and industrial) among other factors.

LOLE Study: As defined in *BPM 102 Forward Showing Reliability Metrics*.

Regional P50 Peak Load Forecast: As defined in *BPM 102 Forward Showing Reliability Metrics*.

Seasonal Peak Months: The Winter Season months of December, January, and February.

2. Demand Response Utilization

A Participant has two options when choosing how to use Demand Response to affect its Monthly FS Capacity Requirements in its FS Submittal (see *BPM 108 Forward Showing Submittal Process*).

- Option 1: A Participant may leave the effects of its historically deployed Demand Response included in its Historical Load Data (see *BPM 101 Advance*

Assessment). This will have the effect of reducing the amount of load in the LOLE Study (see *BPM 102 Forward Showing Reliability Metrics*), reducing maximum loads in the P50 Peak Load Forecast (see Section 4) ultimately leading to lower Monthly FS Capacity Requirements.

- Option 2: If a Participant removes the effects of historically deployed Demand Response from its Historical Load Data, the Participant may choose to utilize Demand Response as a Qualifying Resource (see attestation in *BPM 108 Forward Showing Submittal Process*). As described in *BPM 105 Qualifying Resources*, a Demand Response program registered as a Qualifying Resource will require a Capability Test to confirm the claimed capability and duration of load reduction, along with a more frequent Operational Test at a portion of the program's claimed capability and duration.

3. FS Capacity Requirement

The FS Capacity Requirement is the minimum quantity of capacity a Participant is required to demonstrate for each Month of a Binding Season in its FS Submittal (see *BPM 108 Forward Showing Submittal Process*). As shown in Equation 1, a Participant's FS Capacity Requirement begins with the Participant's monthly P50 Peak Load Forecast (see Section 4), which is multiplied by one plus the applicable Monthly FS Planning Reserve Margin (FSPRM - see *BPM 102 Forward Showing Reliability Metrics* for a Month (the net result is known as the FS Capacity Requirement Unadjusted). The Contingency Reserve Adjustment (see Section 6) is then added to the FS Capacity Requirement Unadjusted to arrive at a Participant's monthly FS Capacity Requirement.

Equation 1 – FS Capacity Requirement

$$\boldsymbol{FS\ Capacity\ Requirement} = \boldsymbol{FS\ Capacity\ Requirement\ Unadjusted} + \boldsymbol{Contingency\ Reserve\ Adjustment}$$

where

$$\boldsymbol{FS\ Capacity\ Requirement\ Unadjusted} = (P50\ Peak\ Load\ Forecast) * (1 + FSPRM)$$

and

$$\boldsymbol{Contingency\ Reserve}\ Adjustment = Contingency\ Reserve\ Adjustment_Generation + Contigency\ Reserve\ Adjustment_Load$$

4. P50 Peak Load Forecast

A Participant's monthly P50 Peak Load Forecast for the Binding Season is calculated to determine a Participant's FS Capacity Requirement Unadjusted. The monthly P50 Peak

Load Forecast will be calculated using the following methodologies for the Winter Seasons (Section 4.1) and Summer Seasons (Section 4.2).

4.1. Winter P50 Peak Load Forecast

Example monthly P50 Peak Load Forecasts for a Winter Season is shown in Table 1 and referred to in the methodological steps below.

	Month	Season	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2023/2024 Monthly P50 Peak Load Forecast - unadjusted	2023/2024 Monthly P50 Peak Load Forecast - adjusted for load growth
	November	Winter	2098	1998	1899	1958	2468	1998	2042
Seasonal	December	Winter	2060	2206	2241	2202	2273	2448	2502
Peak	January	Winter	2363	2381	2239	2521	2302	2448	2502
Months	February	Winter	2448	2072	2213	2476	2477	2448	2502
	March	Winter	2070	2253	2047	1959	1806	2047	2093
		Maximum	2448	2381	2241	2521	2477		

Table 1 - Example Winter Season P50 Peak Load Forecast

1. Determine the peak load for each Month of the Winter Season for the last available five Winter Seasons using the Historical Load Data submitted as part of the Advance Assessment (see *BPM 101 Advance Assessment*). These are the load values populating the light blue section of Table 1 (e.g., November peak load from 2019/2020 is 1899 MW).
2. Calculate the maximum peak load for each of the last available five Winter Seasons. For example, the maximum peak load for 2020/2021 is 2521 MW.
3. The Monthly P50 Peak Load Forecast for the Seasonal Peak Months is the median of step 2 which in Table 1 is 2448 MW.
4. The Monthly P50 Peak Load Forecasts for November and March are the median of the respective load values from step 1, which in Table 1 are respectively 1998 MW and 2047 MW.

An example spreadsheet showing steps 1 through 4 is posted on the WPP website.

5. Per the Tariff, a Participant can modify the results of Step 1 to capture load changes during the forecast window and ensure the results of Step 3 and Step 4 are correct. If historical load data is available the affected Participants are responsible for adjusting any monthly peak loads in Step 1 that do not capture the load change. If historical load data is unavailable (e.g., a new data center) the affected Participant is responsible for generating synthetic load data and adjusting any monthly peak loads in Step 1 that do not capture the load change. Amending the results of Step 1

will be necessary until the peak load for each Month of the Winter Season for the last available five Winter Seasons automatically fully capture the impacts of the load change through the Historical Load Data submitted as part of the Advance Assessment. A Participant will need to attest to the accuracy of any modification (see Appendix A - P50 Peak Load Forecast Modifications Senior Official Attestation). Additions and removals of load are separate and distinct from Load Growth Factors discussed in Section 5 and are intended to capture significant one-time changes such as the addition or loss of a large industrial customer.

6. Per the Tariff, a specified Load Growth Factor will then be applied to the results of step 5 (see Section 5) for each year following the last year in the Historical Load data. For example, the Monthly P50 Peak Load Forecast – unadjusted is multiplied by the Load Growth Factor once for 2022/2023 and again to arrive at the 2023/2024 Monthly P50 Peak Load Forecast – adjusted for load growth value in the last column in Table 2.

4.2. Summer P50 Peak Load Forecast

The monthly P50 Peak Load Forecast for the Summer Seasons utilizes a Load Forecast Ratio to reflect the potential for a Participant to experience peaks in different months of the Summer Season from year to year. An example monthly P50 Peak Load Forecast for a Summer Season is shown in Table 2 and referred to in the methodological steps below.

Month	Season	2018	2019	2020	2021	2022	Monthly Average of Peak Loads	Maximum Monthly Average of Peak Loads	Median of Maximum of Peak Loads for the last five Seasons	Load Forecast Ratio	2024 Monthly P50 Peak Load Forecast - unadjusted	2024 Monthly P50 Peak Load Forecast - adjusted for load growth
June	Summer	3071	3571	1903	2496	1957	2600	2960	3571	0.88	3136	3206
July	Summer	3672	1761	2434	3219	3715	2960			1.00	3571	3650
August	Summer	2049	2929	2661	2939	2347	2585			0.87	3119	3188
September	Summer	2308	1698	1880	1664	2443	1999			0.68	2411	2465
	Maximum	3672	3571	2661	3219	3715						

Table 2 - Example Summer Season P50 Peak Load Forecast

1. Determine the peak load for each Month of the Summer Season for the last available five seasons using the Historical Load Data submitted as part of the Advance Assessment (see BPM 101 Advance Assessment). These are the load values populating the light blue section of Table 2 (e.g. June peak load from 2020 is 1903 MW).
2. Calculate the maximum peak load for each of the last available five seasons. For example, the maximum peak load for 2021 in the yellow section of Table 2 is 3219 MW.
3. Calculate the median of step 2, which in Table 2 is 3571 MW.

4. Calculate the Load Forecast Ratio.
   4.1. For each of the last available five Summer Seasons calculate the average of the five peak loads for each Month. For example, in August in Table 2 the average of the peak loads is 2585 MW.
   4.2. Identify the maximum load value from step 4.1. In the example shown in Table 2 this is the July average of 2960 MW.
   4.3. The Load Forecast Ratio for each Month of the Summer Season is the result of step 4.1 divided by the MW value identified in step 4.2. In the example shown in Table 2, this is 1.00 for July (and will always by 1.00 for the maximum Summer month) and 0.68 for September.
5. Multiply the Load Forecast Ratios for each Month of the Summer Season from step 4.3 by the result of step 3. These are the Monthly P50 Peak Load Forecast values unadjusted for load growth or load additions/removals (seen in red in Table 2). In the example shown in Table 2 the Monthly P50 Peak Load Forecast - unadjusted value for September is 2411 MW (0.68 multiplied by 3571 MW).

An example spreadsheet showing steps 1 through 5 is posted on the WPP website.

6. Per the Tariff, a Participant can modify the results of Step 1 to capture load changes during the forecast window and ensure the results of Step 5 are correct. If historical load data is available the affected Participants are responsible for adjusting any monthly peak loads for in Step 1 that do not capture the load change. If historical load data is unavailable (e.g. a new data center) the affected Participant is responsible for generating synthetic load data and adjusting any monthly peak loads in Step 1 that do not capture the load change. Amending the results of Step 1 will be necessary until the peak load for each Month of the Summer Season for the last available five season automatically fully capture the impacts of the load change through the Historical Load Data submitted as part of the Advance Assessment. A Participant will need to attest to the accuracy of any modification (see Appendix A - P50 Peak Load Forecast Modifications Senior Official Attestation). Additions and removals of load are separate and distinct from Load Growth Factors discussed in Section 5 and are intended to capture significant one-time changes such as the addition or loss of a large industrial customer.
7. Per the Tariff, a specified Load Growth Factor will then be applied to the results of step 6 (see Section 5) for each year following the last year in the Historical Load Data. For example, the Monthly P50 Peak Load Forecast – unadjusted is multiplied by the Load Growth Factor once for 2023 and again to arrive at the 2024 Monthly P50 Peak Load Forecast – adjusted for load growth value in the last column in Table 2).

5. Load Growth Factor

A Participant will have the option of using either a WPP-established WRAP-wide growth rate(s) (Section 5.1) or developing its own alternative growth rate (Section 5.2). Load growth is separate and distinct from the additions and removals of load discussed in Section 4.1 step 5 and Section 4.2 step 6.

5.1. Established Growth Rate

A WRAP-wide established growth rate (or set of established growth rates) may account for location, weather, Participant type, Participant customer composition (balance between retail, commercial, and industrial). The established growth rate is currently set at 1.1%. Changes to the established growth rate for the P50 Peak Load Forecast in BPM 103 will be reviewed, endorsed, and approved as described in the *BPM 300's Stakeholder Engagement* series.

5.2. Participant Alternative Growth Rate

If a Participant believes the established growth rate discussed in Section 5.1 does not accurately represent its anticipated loads in the Binding Season, the Participant may request an alternative growth rate that will be validated by the Program Administrator and Program Operator (using the form found on WPP website). The Program Administrator will consider the data presented in support of the Participant's request for an alternative growth rate, which could potentially relate to weather, economic growth, or climate. As part of the request, the Participant will demonstrate that the alternative growth rate (applied to each year following the last year in the Historical Load Data) results in a P50 Peak Load Forecast that is (in total) 5% higher or lower than the P50 Peak Load Forecast calculated using the growth rate in Section 5.1 in the Month of the Binding Season with the highest P50 Peak Load Forecast. For example, the Participant with data from Table 1 would provide an alternative load growth factor that, when applied for two years of growth, results in a P50 Peak Load value of greater than 2,627MW or less than 2,377MW for December, January, or February, and would provide supporting information for said load growth factor.

6. Contingency Reserve Adjustment

As discussed in *BPM 102 Forward Showing Reliability Metrics*, the LOLE Study and resulting monthly FSPRMs ensure Contingency Reserve is maintained by assuming a proxy Contingency Reserve requirement of six percent (6%) of the Regional P50 Peak Load Forecast across the WRAP Region. However, as the BAL-002-WECC-3 standard requires a reserve equal to three percent (3%) of hourly integrated load and three percent (3%) of hourly integrated generation, the individual Participants' Contingency Reserve requirements (and therefore FS Capacity Requirements) will be different

depending on the load and generation profiles specific to them. For instance, some Participants may utilize contracted capacity to meet their FS Capacity Requirement where the seller, through a contractual arrangement, is responsible for carrying the Contingency Reserve obligation of contracted capacity, or some Participants may purchase Contingency Reserve to cover some or all of their Contingency Reserve requirements. These are categorized as Contingency Reserve adjustments and the intent is to ensure that the portion of the FSPRM attributable to Contingency Reserve is included in the FS Capacity Requirement of the LRE with the actual responsibility, whether that responsibility is driven by a BAL-002 WECC-3 compliance obligation or through a contractual arrangement. The FS Capacity Requirements Unadjusted are therefore adjusted for a Participant's Contingency Reserve requirements (plus or minus). A Participant's Contingency Reserve Adjustment has two components: Contingency Reserve Adjustment-Generation and Contingency Reserve Adjustment-Load.

6.1. Contingency Reserve Adjustment-Generation

A Participant's sale or purchase of capacity where there is an accompanying contractual transfer of obligation for Contingency Reserve may impact the amount of Contingency Reserve needed in the Participant's FS Submittal.

Participants selling capacity that is utilized to meet another Participant's FS Capacity Requirement will get a positive value for the Contingency Reserve Adjustment-Generation, meaning the Participant will demonstrate additional capacity to cover Contingency Reserve for the generating resources serving the export contracts. Participants meeting some or all of the FS Capacity Requirement with contracts where the seller carries the Contingency Reserve obligation will have a negative Contingency Reserve Adjustment-Generation, meaning the Participant demonstrated less capacity, as the seller is carrying the Contingency Reserve for the resources serving the contract(s).

Exceptions to the aforementioned are possible when contractual arrangements dictate alternative treatment as indicated in the workbook.

6.2. Contingency Reserve Adjustment-Load

For a Participant with Contingency Reserve contracts, the Participant's Contingency Reserve Adjustment-Load is the net of the Participant's sales of such contracts less purchases for each Month of a Binding Season.

If a Participant is a net seller of Contingency Reserve contracts to a Participant assumed to have a Contingency Reserve obligation on its WRAP load, it will carry additional Contingency Reserve to cover such contracts (with a positive Contingency Reserve

Adjustment-Load). If a Participant is a net purchaser of Contingency Reserve contracts, it will carry fewer Contingency Reserve (having contracted away the obligation), resulting in a negative Contingency Reserve Adjustment-Load.

7. Excluding Load

As described in *BPM 108 FS Submittal Process*, a Participant will include all loads in its FS Demonstration for which it is responsible: i.e. all loads within the Western Interconnect (that are not participating in another resource adequacy program or represented by another WRAP LRE) for which the Participant has an obligation to forward procure capacity to meet any portion of the load or for which the Participant is the exclusive wholesale electricity provider to a load serving entity.

A Participant may seek to exclude loads from WRAP participation. This is distinct from a Participant modifying its P50 Peak Load Forecast to account for additions and removal of load. This is distinct from a Participant modifying its P50 Peak Load Forecast to account for additions and removal of load. As part of its FS Demonstration, the Participant will attest that the Participant is not the exclusive wholesale provider for the load (see Appendix B - Load Exclusion). As part of its FS Demonstration, the Participant will also provide documentation of notice to the end-use customer of the Participant's intent to exclude the load from WRAP in the form provided on the WPP website and acknowledged via signature by a senior official of the end-use customer. Excluded load may not be included in the Operations Program. Excluded load must be separately metered, such that the excluded load may be removed from load forecasting information to be provided in the Operations Program, as further discussed in *BPM 202 Participant Sharing Calculation Inputs*, and from the Historical Load Data utilized in Section 4. Loads may not be partially excluded.

8. Submitting Loads from Multiple Subregions

As described in *BPM 108 Forward Showing Submittal Process*, a Participant responsible for loads in ~~two~~ more than one Subregion~~s~~ seeking to submit a single workbook using one monthly FSPRM may do so if the Participant can demonstrate WRAP Qualifying Transmission from the load in the Subregion with the utilized monthly FSPRM to the load in the Subregion with the higher monthly FSPRM (see *BPM 108* for additional information). When submitting a single FS Submittal for loads in multiple Subregions, the Participant will use historical load data including all loads when calculating the FS Capacity Requirement for that Month according to Sections 2 through 7 of this BPM. Subregion loads will be combined on a coincident peak basis to determine monthly P50 Peak Loads when submitting a single FS Submittal.

9. Load Aggregation/Disaggregation

As described in *BPM 108 Forward Showing Submittal Process*, all loads submitted by a Participant within a single FS Submittal must be able to be served interchangeably by all Qualifying Resources and Qualifying Contracts in that same FS Demonstration, without the expectation that additional transmission rights will be required to deliver resources to load. In accordance with this, a Participant may be required to submit separate FS Demonstrations, even as to loads residing in the same Subregion, if the Program Administrator determines it is not practicable to treat such loads as if they can share in load and resource diversity for reasons that may diminish the integrity of WRAP reliability metrics, including but not limited to, if loads and resources are not operated collectively.

10. LOLE Study Load Forecast and Load Growth Rate

A LOLE Study (see BPM 102 Forward Showing Reliability Metrics) is undertaken as part of the Advance Assessment (see BPM 101 Advance Assessment) to determine a Binding Season's monthly FSPRMs. The Regional P50 Peak Load Forecasts for the Binding Seasons in the LOLE Study are calculated using the same Participant P50 Peak Load Forecast methodologies outlined in Section 4. An LOLE Study-specific program-wide load growth rate is then applied to the results. The current Load Growth Factor for the LOLE Study is set to 1.1%. Changes to the established growth rate for the LOLE Study in BPM 103 will be reviewed, endorsed, and approved as described in the BPM 300's Stakeholder Engagement series.

Appendix A - P50 Peak Load Forecast Modifications Senior Official Attestation

I, the undersigned, who as [title], serves as a senior official of [Participant], hereby attest that the peak loads for each month of the Season for the last available five seasons have been modified accurately to the best of my knowledge and belief following due inquiry to account for discrete additions and removals of load planned to take place by the corresponding Months of the Binding Season, not to include speculative or estimated load growth, to ensure accurate Monthly P50 Load Forecast values included with this attestation. Also included with this attestation is a narrative description of the loads added and/or removed from the Monthly P50 Load Forecast, including their magnitude and applicable Months.

Appendix B - Load Exclusion Senior Official Attestation

I, the undersigned, who as [title], serves as a senior official of [Participant], hereby request that the [load identifier from FS Submittal] be excluded from [Participant's] P50 Load Forecast calculation. I attest that [Participant] is not the exclusive wholesale electricity provider for this load.

WESTERN POWERPOOL

Western Resource Adequacy Program

105 Qualifying Resources

100 – Forward Showing

Revision History

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105 Qualifying Resources

1. Introduction

The Qualifying Resources Business Practice Manual (BPM) consists of two sections. The Resource Registration section outlines the processes for Participants to register their Qualifying Resources with the Program Operator to be included in the Advance Assessment to receive a Qualifying Capacity Contribution (QCC). The Qualifying Capacity Contribution of Resources section outlines the processes that the Program Operator will undertake to calculate QCC values for all registered Qualifying Resources.

1.1 Intended Audience

BPM 105 is intended for Western Power Pool (WPP) Western Resource Adequacy Program (WRAP) Participants and other interested individuals or entities. BPM 105 is particularly useful for those individuals that are responsible for their Participant organization's Forward Showing (FS) Submittal and need to ensure that their organization's Qualifying Resources are properly registered, will be included in the Advance Assessment, and will receive QCC values.

1.2 What You Will Find in This Manual

BPM 105 includes two separate Business Practices: 1) Resource Registration and 2) Qualifying Capacity Contribution of Resources.

1.3 Purpose

To provide an overview of resource registration and qualification processes and the process for determining the QCC for Qualified Resources.

1.4 Definitions

All capitalized terms that are not otherwise defined in BPM 105 have their meaning set forth in the Tariff.

Advance Assessment Data Request: As defined in *BPM 101 Advance Assessment*.

ASHRAE Rated Ambient Temperature: The ambient temperature employed for Capability Testing of a resource for the Summer Season, as determined for the resource location on a dry-bulb basis in accordance with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Fundamentals Handbook,[1] Climatic Design Information, Cooling and Dehumidification Design Conditions Appendix using the – "Cooling DB/MCWB 0.4%" values. If the resource is located within 30 miles of the nearest weather station reported in the Handbook, then the temperatures employed for the Rated Ambient Temperature will be those reported for the nearest

[1] ASHRAE Fundamentals Handbook

station. For all other resource locations, the Rated Ambient Temperatures shall be determined by interpolating between those reported for appropriate weather stations using the resource location's latitude and longitude.

Capability Test: The demonstration of capability of certain Qualifying Resources by generating at their rated capability under specified test conditions and test duration.

Cascaded Dual Plant: Two Storage Hydro Qualifying Resources that are on the same river systems and operated in a coordinated manner.

Cure Period: As defined in *BPM 108 Forward Showing Submittal Process*.

Data Request Instruction Manual: As defined in *BPM 101 Advance Assessment*.

Fuel Type: A resource's primary fuel source, such as coal, natural gas, wind, or hydroelectric.

Hybrid Facility: A resource that is composed of two or more resources of different fuel or technology types where one of those resources is an Energy Storage Resource with the same interconnection point.

Hydro QCC Workbook: The workbook that determines the QCC of a Storage Hydro resource(s).

Long Duration Storage: A resource designed to capture energy produced at one time for use at a later time, and capable of sustained delivery for over eight hours (such as pumped Storage Hydro facilities or thermal energy storage devices).

Net Generating Capability: The gross maximum output of a Qualifying Resource reduced by any power used for auxiliary power requirements demonstrated through a Capability Test. May be used interchangeably with Installed Capacity when referencing Thermal Resources.

Operational Test: The annual demonstration of the functional ability of a Qualifying Resource.

2. Background

Participant owned and contracted Qualifying Resources capable of providing capacity may be used to meet a Participant's FS Capacity Requirement. In order to receive a QCC for these Qualifying Resources, a Participant must provide the necessary information and data to the Program Operator. The Program Operator will develop and maintain a registration and certification process for all Qualifying Resources identified

for the FS Program as outlined in BPM 105. BPM 105 does not cover timelines associated with Participants and the Program Operator completing the registration and QCC assessment process. Timelines for registration can be found in *BPM 101 Advance Assessment*.

3. Resource Registration

3.1 Resource Eligibility

A Participant will register all owned resources in its portfolio and all resources acquired in resource specific contracts in order for those resources to receive QCC values, subject to the exceptions described in BPM 105.

Resource registrations, including the appropriate modeling data required by the Program Operator, shall be submitted in accordance with deadlines stated in *BPM 101 Advance Assessment*, relating to the timeline for the Advance Assessment.

Participants shall employ the Advance Assessment Data Request, and the guidance and instructions in the Data Request Instruction Manual for providing resource registration information. The then-effective versions of the Advance Assessment Data Request and the Data Request Instruction Manual are available on the WPP website. The QCC calculations for all Qualified Resources will be updated during each Advance Assessment to be used for the applicable Binding Season.

Resources owned and operated by entities that are not Participants and contracted to Participants with resource specific contracts (i.e., not System Sales or block contracts) must be registered with the Program Operator and provide the necessary data in order for Participants to claim the full QCC from these resources toward their FS Capacity Requirements.

Qualified Resources must be 1 MW minimum to qualify for registration (see Section 3.3). The registration process for all Qualifying Resources, other than Storage Hydro Qualifying Resources, will require, but will not be limited to, provision of the information set forth in Table 1 and Table 2 to the Program Operator, by means of the Advance Assessment Data Request. Registration of Storage Hydro Qualifying Resources will require, but will not be limited to, the provisions of items set forth in Table 3 to the Program Operator, by means of the Advance Assessment Data Request.

3.2 Late Registration of Resources

Resources that are unable to register by the deadline of the Advance Assessment Data Request may still be able to register through the following processes. Such resources may include those owned by Participants or those contracted to Participants with resource specific contracts.

A Participant may register a resource after the Advance Assessment deadline and prior to the FS Submittal Deadline (the process and timeline for submitting the FS Submittal can be found in *BPM 108 Forward Showing Submittal Process* provided the Participant provides the necessary information in Table 1 and Table 2 (or Table 3 for Storage Hydro resources). The QCC that will be allowed for late registered resources will be either the class average of similar resources or will be a discounted QCC based on the circumstances of the data provided as further described in Generator Testing (Section 3.4) and Qualifying Capacity Contribution of Resources (Section 4).

Given that the program has very little information about late registered Qualified Resources, such resources may constitute no more than 10% of the total FS Capacity Requirement for an individual Participant, unless that Participant can demonstrate an increase in the load participating in the WRAP after the Advance Assessment data collection deadline. During the Transition Period, late registered resources may constitute as much as 20% of an individual Participant's total FS Capacity Requirement, unless that Participant can demonstrate an increase in the load participating in the WRAP after the Advance Assessment data collection deadline. In the case of increased load, the Participant may provide late registered resources to meet the FS Capacity Requirement for the additional load, as well as for the load anticipated to participate at the time of the Advance Assessment data collection deadline.

Table 1. Information Required for Resource Registration

Description / Instructions	
Facility Name	Plant name of the resources. If possible, utilize the Energy Information Administration (EIA)-860[2] plant name given for U.S. resources.
Unit ID	The unique generator identification commonly used by plant management. If possible, utilize the EIA-860 Generator ID given for U.S. resources.
Prime Mover	Utilize the predetermined dropdown list of EIA-860 Prime Mover identifiers. For combined cycle resources, a prime mover code must be entered for each generator.
Fuel Type	Utilize the predetermined dropdown list in the workbook of Fuel Types used as the primary energy source to power the generator.

[2] https://www.eia.gov/electricity/data/eia860/

Description / Instructions	
Host Balancing Authority	Provide the Balancing Authority Area (BAA) in which the resource is located.
Ownership or Contracted Percentage for Participant	Enter the percentage of resource capability owned or contracted by the Participant. This should also include the percentage of any power purchase agreement (PPA) where the Participant has fully contracted for the capacity from a facility but would not include a PPA with another Participant. For example, if the Participant has a PPA with a wind developer, solar developer, or city that has local generation for an extended period of time (i.e., 15 Years or life of the facility) then the percentage of the offtake of that facility should be listed here.
Summer Max Capacity or Nameplate (MW)	Provide the generator's Net Generating Capability for the primary energy source. This can be i) the net expected capacity, as determined from a summer Capability Test performed in accordance with the procedures on generator testing, Section 3.4 ii) the EIA-860 nameplate capacity for Wind, Solar, Run-of-River (ROR), and Energy Storage Resources (ESR) located in the U.S. and iii) the nameplate capacity for Wind, Solar, ROR and ESR located outside of the U.S.
Winter Max Capacity or Nameplate (MW)	Provide the generator's Net Generating Capability for the primary energy source. This can be i) the net expected capacity, as determined from a winter Capability Test performed in accordance with the procedures on generator testing, Section 3.4 ii) the EIA-860 nameplate capacity for Wind, Solar, ROR, and ESR located in the U.S. and iii) the nameplate capacity for Wind, Solar, ROR and ESR located outside of the U.S.
In-Service Date Month-Year	Provide the Month and Year of the original in-service date (or commercial operation date) that the resource became operational (if possible, the operating Year used in EIA-860

Description / Instructions	
	should be submitted for all resources within the U.S.). For details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.
Retirement Date Month-Year	Provide the Month and Year for resources that have been either formally announced or marked for retirement.
State or Province	Enter the state acronym where the resource is physically located. For resources in Canada, enter the province.
County	For resources in the U.S., enter the county (or county equivalent) where the resource is located.
Inverter Loading Ratio (Only for Solar and Wind)	For solar and wind resources only, enter the loading ratio of the inverter compared to the nameplate of the resource. As an example, if the nameplate of a solar resource is 150 MW and the inverter is limited to 125 MW (oversizing of solar panels), then the ratio would be 1.2 (150 / 125). If the nameplate of the resource is the same as the inverter, or the loading ratio is not known, the provided loading ratio would be 1.0.
ESR Duration (Only for ESRs)	For ESRs, enter the maximum continuous number of hours for which the ESR can be utilized at its maximum capacity.
Facility Limitation MW (Only for Hybrid Facilities)	For Hybrid Facilities, provide the maximum capability which the combined amount of the component resources can output to the system. This is typically based on the inverter limit before generation is output to the system.
Comments	Enter, if applicable, any additional comments about the submitted information.

Table 2. Additional Information Required for Resource Registration

Description / Instructions
Thermal Resources - North American Electric Reliability Corporation (NERC) Generating Availability Data System (GADS) or equivalent data is required for all Thermal Resources.

For further details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.
Wind, ROR, Solar Resources – hourly output profiles for the last 10 Years or as much as is available. For further details on the format of the submittal, refer to the Data Request Instruction Manual on the WPP website.

The registration process for all Storage Hydro Qualifying Resources will require, but will not be limited to, the items in Table 3, as follows:

Table 3. Storage Hydro Qualifying Resource Registration

Description / Instructions	
Facility Name	Plant name of the Storage Hydro Qualifying Resource. If possible, utilize the EIA-860 plant name given for U.S. Storage Hydro Qualifying Resources.
Unit ID	The unique generator identification commonly used by plant management. If possible, utilize the EIA-860 Generator ID given for U.S. Storage Hydro Qualifying Resources.
Prime Mover	Utilize the predetermined dropdown list of EIA-860 prime mover identifiers.
Host Balancing Authority	Provide the BAA location of the Storage Hydro Qualifying Resources.
Ownership or Contracted Percentage for Participant	Enter the percentage owned or contracted by the Participant. This should also include the percentage of any PPA where the Participant has fully contracted for the capacity from a facility but would not include a PPA with another Participant.
Individual Monthly QCC (MW)	QCC values by Month (all Months of the Year) for all Storage Hydro Qualifying Resources. The QCC of the Storage Hydro Qualifying Resources is determined by Section 4.
In-Service Date Month-Year	Provide the Month and Year of the original in-service or commercial operation date that the Storage Hydro Qualifying Resource became operational (if possible, the operating Year used in EIA-860 should be submitted for all Storage Hydro Qualifying Resources within the U.S.). For planned Storage Hydro resources, enter the Month and Year the Storage Hydro Qualifying Resource is projected to become operational.
Retirement Date Month-Year	Provide the Month and Year for resources that have been either formally announced or marked for retirement.

Description / Instructions	
State or Province	Enter the state abbreviation where the Storage Hydro Qualifying Resource is physically located. For Storage Hydro Qualifying Resources in Canada, enter the province.
County	For Storage Hydro Qualifying Resources in the U.S., enter the county (or county equivalent) where the Storage Hydro Qualifying Resource is located.
Comments	Enter, if applicable, any additional comments about the submitted information.

3.3 Qualifying Resource Aggregation (Resources <1 MW)

Qualifying Resources that are less than 1 MW in size may be aggregated to obtain the minimum 1 MW registration requirement.

Qualifying Resources that are aggregated will need to have a common injection point of capacity to the transmission system. Aggregations of generators at different distribution substations may be allowed provided the generators are in the same BAA, same zone (as applicable by resource type), and are the same resource type.

For Qualifying Resources that are requested to be aggregated, the following information should be provided to the Program Operator.

- For the aggregated facility:
  - Quantity of generators being aggregated.
  - Combined nameplate of generators being aggregated.
  - One-line diagram of the transmission/distribution system at which the generators are located.
- For each generator being aggregated:
  - Nameplate.
  - Location of power injection to the transmission system (substation).
  - Supporting information for QCC evaluation.

This information will be provided to the Program Operator during the Advance Assessment Data Request submission.

3.4 Generator Testing

3.4.1 Background

Qualifying Resources must have Capability Tests and Operational Tests performed and provided by the Participant, as applicable and in accordance with the guidelines contained in BPM 105. Capability Tests will be required for resources as detailed below.

3.4.2 Capability Testing

Capability Tests will be required for Thermal Resources, Long Duration Storage resources, and Demand Response resources (as defined in BPM 105) with exceptions as noted in this section.

For units that are required to perform Capability Tests, the Participant may choose whether to use Capability Tests on a unit-by-unit basis or on a plant-level basis; regardless of the approach, all units requiring a QCC must be tested (see bullet 3 below). Capability Test duration shall be a minimum of one hour. Once a qualifying Capability Test is submitted to the Program Operator by the FS Submittal Deadline, the five-Year submittal window will be reset. The Capability Test may be performed at the convenience of the Participant and can be completed more often than every five Years. The most recent testing data will be used to determine a generator's QCC if a Capabilty Test is performed between the Advance Assessment and the FS Submittal.

For Storage Hydro, ROR Hydro, Wind, Solar, and ESR, the annual Operational Test will suffice as the Capability Test.

3.4.2.1 Capability Test Requirements for Thermal Resources

Capability Tests conducted for Thermal Resources are used as the base accredited value to which Unforced Capacity (UCAP) calculations are applied (see Section 4.2) to determine final QCC values. A Thermal Resource that is not subject to generator testing requirements (i.e., are not subject to NERC MOD-025 requirements) may have its QCC values determined in accordance with Section 4.2, Option 1, in lieu of performing the Capability Test.

Capability Tests for Thermal Resources will be performed during the Summer Season and must meet the testing requirements specified in BPM 105. A resource may use its Summer Season Capability Test value for both the Summer Season and the Winter Season. If a unit has a greater Net Generating Capability for the Winter Season than for the Summer Season, a separate Capability Test will need to be performed during the Winter Season to claim the higher Net Generating Capability value.

The following requirements must be met for a Thermal Resource Capability Test, documentation of which will be provided to the Program Operator at the time of the FS Submittal Deadline:

1) Summer Capability Tests are to be conducted during a time when the ambient dry-bulb temperature is no more than 10 degrees Fahrenheit below the station ASHRAE Rated Ambient Temperature. At the time of testing, the most recent version of the ASHRAE Fundamentals Handbook shall be utilized. If the dry-bulb

temperature exceeds 10 degrees below the ASHRAE Rated Ambient Temperature, a penalty of 5% plus an additional 0.5% per degree for each additional degree below 10 degrees, up to 20 degrees, will be applied to the Capability Test result. A summer Capability Test shall not be performed below 20 degrees of the ASHRAE Rated Ambient Temperature. There is no ambient temperature requirement for Winter Capability Tests.

2) The unit shall be brought to the desired test load and allowed to stabilize. Once the test period has begun, only minor changes in unit controls shall be made as required to maintain the unit in normal, steady-state operation.
3) The unit capability shall be determined separately for each generating unit in a power plant where the input to the prime mover of the unit is independent of the others. Units that are aggregated into a single Resource Registration and prefer testing aligned with their registered resource and/or are dependent upon common systems (i.e., fuel, steam supply, auxiliary equipment, transmission, etc.) which restrict total output shall be tested simultaneously. Each unit shall be assigned an individual capability by apportioning the combined capability among the units.
4) The fuel used during testing shall be the type expected to be used during peak load conditions.
5) The capability of a unit or plant obtained through non-typical operation (i.e., bypassing feedwater heaters, varying steam conditions, alternate control mode, etc.) is acceptable.

3.4.2.2 Capability Testing of Long Duration Storage Resources

Capability Tests for Long Duration Storage resources are used as the base accredited value to which UCAP calculations are applied (See Section 4.2) to determine final QCC values. A Long Duration Storage resource that is not subject to generator testing requirements (i.e., are not subject to NERC MOD-025 requirements) may have its QCC values determined in accordance with Section 4.2, Option 1, in lieu of performing the Capability Test. There are no temperature or timing requirements on the Long Duration Storage Capability Test, other than the five-Year frequency.

1) The unit shall be brought to the desired test load and allowed to stabilize. Once the test period has begun, only minor changes in unit controls shall be made as required to maintain the unit in normal, steady-state operation.
2) The unit capability shall be determined separately for each generating unit in a plant where the input to the prime mover of the unit is independent of the others. Units that are aggregated into a single Resource Registration and prefer testing aligned with their registered resource and/or are dependent upon common systems (i.e., fuel, steam supply, auxiliary equipment, transmission,

etc.) which restrict total output shall be tested simultaneously. Each unit shall be assigned an individual capability by apportioning the combined capability among the units.

3) The fuel used during testing shall be the type expected to be used during peak load conditions.
4) The capability of a unit or plant obtained through non-typical operation (i.e., bypassing feedwater heaters, varying steam conditions, alternate control mode, etc.) is acceptable.

3.4.2.3 Capability Testing of Demand Response Programs

A Capability Test for a Demand Response (DR) program registered as a Qualifying Resource will be used to confirm the claimed maximum load reduction capability of the DR program. Capacity testing of the DR program will consist of a sustained reduction in load attributable to the deployment of the controllable and dispatchable program by the Participant for:

- the maximum number of hours per day for Demand Response Capacity Resources with a daily hourly dispatch limit; or
- one hour, for Demand Response Capacity Resources with a weekly or monthly hourly dispatch dispatch limit.

If a DR program fails to achieve the claimed load reduction capability and duration during the Capability Test, the DR program's QCC will be determined using the tested values instead. If the DR resource has a higher capacity value in one of the two Binding Seasons, the Capability Test must be conducted during the Binding Season with the higher capacity value; the DR resource does not need to be re-tested during the season with a lower capacity value. There are no temperature requirements for the DR Capability Test.

As noted in Section 4.6, new DR programs, or the newly expanded portion of a DR program, will be assigned a QCC of 50% of the expected capability. If the Participant desires a higher QCC than 50% of the expected capability, Participant may conduct a Capability Test outside of the expected peak season of the DR program. Testing outside of the peak season will only be considered a Capability Test during the first Year of operation or during the expansion of an existing DR program. An Operational Test shall then be performed during the upcoming Binding Season and reported to the Program Operator (see Section 3.4.3.6).

3.4.2.4 Forced Outages Affecting Capability Testing

If a unit is due for a Capability Test, but unable to perform the Capability Test due to a forced outage, a maintenance outage, or a forced de-rate, the most current Capability Test results may be used, provided it is used only for the immediately succeeding Summer Season and Winter Season. The unit will be required to perform an Operational Test per the Operational Testing procedures (Section 3.4.3) before the next Summer Season. For example, if a unit enters a forced outage while performing a Capability Test and the repair for the unit cannot be completed until after the Summer Season, then when the unit is repaired, an Operational Test must be completed. In that case, the previous Capability Test will be used to satisfy the generator testing requirements for the upcoming Summer Season FS submittal. A Capability Test must be performed in the next Summer Season for the next FS submittal. If the unit fails to complete the make-up Capability Test, the unit cannot be claimed on the FS Submittal.

3.4.3 Operational Testing

All Qualifying Resources must perform annual Operational Tests completed in the 12-Month period prior to the FS Submittal due date, or within the Cure Period, that may be conducted within or outside of a Binding Season (at Participant's discretion).

3.4.3.1 Thermal Resources and Long Duration Storage

An Operational Test serves as an annual demonstration of the functional capability of a Qualifying Resource to generate at a high-level of its Net Generating Capability in the upcoming Binding Season. Test data shall be compiled and submitted via the FS Submittal process, as outlined in *BPM 108 Forward Showing Submittal Process*. The Operational Test must be conducted at a minimum of 90% of the Summer Net Generating Capability. The Operational Test shall be conducted for a minimum of one hour, and for Thermal Resources there are no Rated Ambient Temperature requirements for Operational Tests. Any hour with the unit operating at or above 90% of the Net Generating Capability may be deemed a successful Operational Test. In case of failure to meet 90% of the Net Generating Capability, the resource can only claim what it can achieve on the Operational Test (to which the UCAP calculations are applied – see Section 4.2) for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.2 Storage Hydro Resources

An Operational Test serves as a verification that the resource can meet its QCC values on a plant-level basis as determined by the Storage Hydro QCC methodology. Test data shall be compiled and submitted via the FS Submittal process, as outlined in *BPM 108 Forward Showing Submittal Process*. The Operational Test must achieve a minimum of 90% of the plant's highest monthly QCC value from the FS Submittal being submitted. The Operational Test shall be conducted for a minimum of one hour and there are no Rated Ambient Temperature requirements for Operational Tests. Any hour with the

plant operating at or above 90% of the highest monthly QCC submitted for the current and previous Binding Season may be deemed a successful Operational Test. In case of failure to meet 90% of the highest monthly QCC, the resource can claim no more than what it achieved on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

Given that the Operational Test can be performed on any hour in a 12-Month period, the Operational Test should be scheduled (or re-scheduled) for a time when outages/de-rates are not occurring. If one or more units were on outage or de-rated at the time of the Operational Test, in order to claim the full QCC value provided by the Storage Hydro QCC methodology, the Participant shall:

1) Demonstrate that the unit(s) out/de-rated at the time of the Operational Test were offline/de-rated for more than 90 consecutive days of the 12 Months preceding the FS Submittal due date.
2) Demonstrate that the unit was out/de-rated for the entirety of one of the Months with the three highest monthly QCC values for the plant.
3) Provide operational data demonstrating the unit(s) performance on any hour within the 12 Months preceding the FS Submittal due date, or within the Cure Period.
4) Add the sustained hour-long operational value from the hour identified in (3) to the Operational Test values.

If 90% of the highest monthly QCC value cannot be achieved after this addition, the Participant can claim no more than the Operational Test (after the addition in (4) above) for any Month's QCC value.

3.4.3.3 ESRs

Operational Tests for ESRs should at least be conducted for the claimed duration of the device – i.e., two-hour, four-hour, etc. An ESR must be able to achieve its full QCC as determined in the QCC process for ESRs.

3.4.3.4 ROR Hydro

Operational Tests shall be conducted at a minimum of 90% of the QCC for either Binding Season. Any hour with the resource operating at or above 90% of the QCC may be deemed a successful Operational Test. In case of failure to meet 90% of the QCC, the resource can only claim what it can achieve on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.5 Wind and Solar Qualifying Resources

Operational Tests shall be conducted at a minimum of 100% of the seasonal QCC for either Binding Season. Any hour with the resource operating at or above 100% of the QCC may be deemed a successful Operational Test. In case of failure to meet 100% of the QCC, the resource can only claim what it can achieve on the Operational Test for purposes of determining its QCC for the upcoming FS Submittal.

3.4.3.6 Demand Response Resources

An Operational Test will be conducted yearly during the Participant's peak Binding Season and at a minimum of 50% of the DR program's claimed peak load reduction capability (to avoid unnecessary disruption to the Participant's customers). The duration of an Operational Test shall be for a minimum of one hour. In case of failure to meet 50% of the QCC, the resource can only claim what it can achieve on the Operational Test as a peak load reducition input for purposes of determining its QCC for the upcoming FS Submittal as described in Appendix B.

3.4.4 New or Upgraded Resource Capability and Operational Testing

For newly installed resources and resources undergoing a physical or operational modification which could impact the Net Generating Capability, design output may be used for the first FS Submittal of the appropriate Binding Season to allow sufficient time for Operational and Capability Tests to be conducted. For resources required to do so, a Capability/Operational Test shall be performed in the Binding Season addressed by such first FS Submittal (this may occur during the Cure Period for the second Binding Season), in order to establish the new Net Generating Capability for all succeeding Binding Seasons. If the resource type requires a Capability Test be performed in a Summer Season, the registering Participant will conduct a Capability test in the first Summer Season in which the new or upgraded resource is operational.

3.4.5 Operational Testing for Late Registered Resources

Late Registered resources will be required to submit applicable generator Operational Test reports as required by the resource Fuel Type. If a Participant demonstrates that it has contracted for a resource not previously registered with the WRAP after the Advance Assessment Data Request deadline for the Binding Season in which capacity is being claimed to meet FS Capacity Requirements, the resource will be treated as if it had tested at 95% of its Installed Capacity. A resource previously registered with the WRAP that does not have any form of generator test results provided will be assumed to have tested at 70% of its Installed Capacity. Resources not owned or operated by a Participant that have test reports provided in a form other than the WRAP format, will be evaluated by the Program Operator and assigned an appropriate testing value based on comparability to testing requirements established in BPM 105; testing reports

determined not comparable will be assumed to have tested at 70% of Installed Capacity. If the resource is newly installed or upgraded, the applicable section on new and upgraded resources will be followed.

3.4.6 Provision of Test Reports in the FS Submittal

Test reports will be provided to the Program Operator in the FS Submittal (see *BPM 108 Forward Showing Submittal Process* for more details). The QCC values for resources will be based on the Capability Tests and/or Operational Tests provided in the FS Submittal.

4. Qualifying Capacity Contribution of Resources

4.1 Background

A resource will not be assigned a Resource QCC or counted toward Portfolio QCC unless it is a Qualifying Resource. Qualifying Resources are those that, before they are included in an FS Submittal, are first registered in the WRAP. A Participant seeking registration of a resource must submit a request for registration providing the resource information described in Section 3.

This section describes the methodology used to assign Resource QCCs to Qualifying Resources when resources are registered through the Advance Assessment based on resource type, as well as when Qualifying Resources of each resource type are registered after the Advance Assessment Data Request deadline (as a late registered resource).

4.2 Thermal or Long Duration Storage Resources

For dispatchable resources that use conventional thermal fuels such as coal, gas, Equivalent Forced Outage Factors (EFOF) biofuel, and nuclear, or Long Duration Storage, the FS Program will use an EFOF methodology to determine the QCC. Accreditation of non-dispatchable Thermal Resources is covered in Section 4.8.2.

The seasonal QCC will be determined for each resource by applying the $EFOF_{CCH}$ to the Net Generating Capability (or Installed Capacity) as determined in Section 3. The Capacity Critical Hours (CCH)[3] will be used to determine the hours to be used in calculating the EFOF for each resource. The $EFOF_{CCH}$ calculation, as set forth in the formula in Section 4.2.2 below, will be performed for each Year of the most recent six-Year historical look-back period. The equivalent outage factor is calculated by removing the worst performing Year (for each Summer and Winter Season) and then taking an average of the remaining five Years of data. The final calculated $EFOF_{CCH}$ will be applied to the Net Generating Capability to calculate the QCC amount for the thermal generator for the entire Binding Season.

[3] CCH are calculated in accordance with *BPM 104 Capacity Critical Hours.*

Planned outages and any outage properly reported as "outside management control" are not included in $EFOF_{CCH}$ calculations[4].

For resources new to the FS Program that do not have sufficient data over the historical period used for determining a QCC, class average data for resources of similar size will be used.

4.2.1 New Long Duration Storage Resources that Do Not Fit into an Existing Class

For Long Duration Storage Resources new to the FS Program that do not have sufficient data over the historical period used for determining a QCC and do not fit into an existing class of resources in order to receive a class average QCC, synthesized data will be used to calculate the EFOF until actual historical data is generated through operations. Once actual historical data is available, that data will be weighted more heavily than the synthesized data in the EFOF calculation.

Table 4. Data used in EFOF for new Long Duration Storage Resources that do not fit into an existing class

Binding Season	Data used for EFOF Calculation
1st Binding Season	5 years of synthesized data
2nd Binding Season	5 years of synthesized data
3rd and 4th Binding Seasons	3 years of synthesized data 1 year of actual data: (year 1)x2
5th and 6th Binding Seasons	1 year of synthesized data 2 years of actual data: (years 1 and 2)x2
7th and 8th Binding Seasons	3 years of actual data: (year 1)x1 and (years 2 and 3)x2
9th and 10th Binding Seasons	4 years of actual data: (year 1, 2, and 3)x1 and (year 4)x2
11th and 12th Binding Seasons	5 years of actual data
13th and 14th Binding Seasons	6 years of actual data

Once the resource has a full Year of operational data, the synthesized data for Binding Seasons 3-6 will be evaluated for reasonableness. If the synthesized data significantly understated or overstated the forecasted output of the resource, the synthesized data will be adjusted by the Program Operator accordingly.

[4] https://www.nerc.com/pa/RAPA/gads/Pages/Data%20Reporting%20Instructions.aspx

4.2.2 $EFOF_{CCH}$ Equation

$$EFOF(CCH) = 1 - \frac{\sum FOH_{CCH} + EFDH_{CCH}}{total_{CCH}} * 100\%$$

Where:

FOH_{CCH} is Forced Outage Hours occurring on CCH,

$EFDH_{CCH}$ is Equivalent Forced Derating Hours occurring on CCH, and

$Total_{CCH}$ is total number of CCH for the timeframe of interest.

Definitions of FOH_{CCH} and $EFDH_{CCH}$ can be found in Table 5.

Table 5. Definitions of FOH and EFDH

Definitions	
FOH_{CCH}	Sum of all CCH experienced during Forced Outages (U1, U2, and U3) + Startup Failures[5].
$EFDH_{CCH}$	Each forced derating (D1, D2, and D3)[6] transformed into equivalent full outage hour(s). This is calculated by multiplying the actual duration of the derating (hours) by the size of the reduction (MW) and dividing by the net maximum capacity. These equivalent hour(s) are then summed by CCH. $\frac{Derating\ Hours * Size\ of\ Reduction}{Net\ Maximum\ Capacity}$

Additional Thermal QCC calculation considerations:

- Calculation is performed for each resource seasonally and for each historical Year. QCC will be assigned to each resource for the entire Binding Season.

[5] See NERC GADS reporting instructions at https://www.nerc.com/pa/RAPA/gads/DataReportingInstructions/GADS_DRI_2023.pdf

[6] Ibid.

- Six Years of data will be used for the calculation. The worst performing Winter Season and the worst performing Summer Season will be removed from the calculations, allowing for a five-Year average.
- Only forced outages or de-rates occurring during CCHs will be used to calculate QCC. Outages during hours that are not deemed to be capacity critical will not negatively impact QCC.
- All Years (of the five Years) will have equal weighting.
- Outside of Management Control outages as reported under NERC GADS Appendix K[7] (or equivalent) will be excluded from the calculation.
- For Participants relying on resource specific transactions external to the FS Program, those Qualified Resources will follow the same QCC calculation for Thermal Resources and the Participant will be responsible to make sure the information is provided to the Program Operator.
- The Program Operator will break out each event by hour. If the NERC GADS (or equivalent) data is reported in minutes, then the hour that contains the outage will be equalized to account for the minutes. For example: if an outage starts on June 1, 2020 at 4:25 PPT, then the hour duration for that hour will be less than one since the outage does not start at the top of the hour. The total hours for June 1, 2020 on hour beginning 4:00 PPT would be 0.583 *([60 Minutes – 25 minutes] / 60 minutes in an hour).*
- Diversity of time zones will be considered. Participants are required to list the time zone that is appropriate for their respective data.
- When comparing the event hours to the CCH hour identification should be consistent.

4.2.3 Late Registered Thermal Resources

If a Participant seeks to claim capacity from a Thermal Resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options (described generally in Section 3.2), choosing one of the following approaches:

[7] Appendix K of NERC GADS: https://www.nerc.com/globalassets/programs/rapa/gads/conventional/appendix_k_outside_management_control_2024_dri.pdf

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question, in which case the resource will be permitted to use the class average QCC for Thermal Resources in the program; or
2) Claim a decremented QCC of 70% of the class average for Thermal Resources in the program.

4.2.4 Thermal Resources That Are Not Required to Report GADS Data

Certain Thermal Resources are not required to report GADS data. GADS data applies to generator owners who are NERC registered with Qualified Resources that are 1) connected to the Bulk Electric System and 2) are synchronous machines of 20MVA or larger, or distributed generation facilities of 75MVA or larger. Smaller Qualified Resources interconnected to the power system as well as behind the meter resources may not be required to report GADS data. For these Qualified Resources, the Participant will have two options to pursue in order to have QCC determined.

Option 1 – Historical Output. The first option will determine QCC based on the monthly average performance of such resource during CCH. The Participant will provide 10 Years of historical hourly dispatch data. This data will be provided with the data submittal (see *BPM 101 Advance Assessment*). A workbook posted on the WPP website that contains the latest set of CCH will allow the Participant to calculate their QCC for the FS Submittal. The workbook will allow the Participant to calculate the QCC values taking the average of the facility output during the CCH. If less than 10 Years of historical data is available for use in determining the QCC, the Program Operator will utilize the methodology described in Section 4.8.2.

Option 2 – Historical Outage Evaluation – The second option will determine QCC based on the monthly outage records provided by the Participant for the resource in question. A workbook detailing what outage information is required for a QCC calculation can be found on the WPP website. The Participant will provide five Years of outage information as provided in the workbook. The Program Operator will determine the QCC of the resource in question using a methodology similar to the $EFOF_{CCH}$ methodology applied to all Thermal Resources.

For all Qualified Resources not providing GADS reporting data, the Participant will be required to provide an attestation (provided in *BPM 108 Forward Showing Submittal*

Process) attesting that the resource is not subject to GADS reporting and the workbooks submitted by the Participant are an accurate depiction of either the historical performance or historical outage data of the resource.

4.3 Variable Energy Resources

The QCC for Variable Energy Resources (VERs), including but not limited to wind and solar resources, will be determined for each Month of the Binding Season through the use of an Effective Load Carrying Capability (ELCC) analysis and a subsequent allocation process. Each Binding Season will have its own ELCC analysis performed during the Advance Assessment and each resource will be assigned a new QCC in advance of each Binding Season. Each Binding Season's ELCC analysis will have a scope document that will detail the study.

4.3.1 Source Data for Resources Under Study

In accordance with Section 3 and the Advance Assessment data submittal described in *BPM 101 Advance Assessement*, the Participant will submit historical output data for wind and solar resources that are requested to have QCC determined. A Participant must submit three and may submit up to 10 Years of historical output data for wind and solar resources.

For newer resources that do not have 10 Years of operational data and historical output, the Participant may provide engineering data from the wind or solar plant operator. The Program Operator will evaluate the data provided and determine its usefulness in the ELCC process. The engineering data will need to provide synthesized outputs for the facility for at least the most recent three Years of historical conditions. Otherwise, the Program Operator will use either synthesized data or average output data of other VER resources in the appropriate VER Zone.

4.3.2 Late Registered VERs

If a Participant seeks to claim capacity from a VER not registered at the time of the Advance Assessment Data Request, the Participant may use options for late registering a resource, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and claim the average ELCC of the VER Zone in which the resource is located, or
2) Claim a decremented QCC of 70% the average ELCC in the VER Zone in which the resource is located.

4.3.3 ELCC Study Process

The ELCC will be determined for the VERs in the WRAP Region. The ELCC study will consist of analyses utilizing Loss of Load Expectation (LOLE) metrics to determine the capacity provided by the VERs being analyzed. The LOLE benchmark metric to be used in the ELCC accreditation study will be a one event in 10-Year threshold.The ELCC of VERs will be calculated first on a seasonal basis then later prorated to a monthly QCC value. For the ELCC study, loss of load events will be tabulated during the Binding Season months for determination of the 1-in-10 LOLE. Loss of load events that occur outside of the Binding Season months will not go into the calculation of the capacity value of VERs. Pure Capacity will be applied to the simulation process to derive the 0.1 Day per Year reliability threshold. If the resulting LOLE is greater than the 0.1 Day per Year threshold, Pure Capacity will be added until the 0.1 threshold is achieved. If LOLE is less than the 0.1 Day per Year threshold, negative Pure Capacity will be added until the 0.1 threshold is achieved. The VER of interest will be excluded from the benchmark system. All other VER types will be included. For example, if the wind resource type is being analyzed, only wind will be excluded from the benchmark system.

The capacity calculated is designated in Figure 1 as Pure Capacity 1.

Figure 1. Diagram of system without renewable resources.

Next, a LOLE value for all wind generating resources will be determined, repeating the steps described previously. The Pure Capacity value calculated is designated in Figure 2 as Pure Capacity 2.

Figure 2. Diagram of system with renewable resources.

The difference between the results of these two steps is considered the ELCC QCC value of the resources being studied.

$$ELCC\ of\ VER\ (under\ study) = Pure\ Capacity\ 1 - Pure\ Capacity\ 2$$

These processes are repeated to determine QCC for all weather Years that are studied. This process is repeated for summer and winter separately.

Zonal shapes have been developed for the LOLE study based on facility locations in each VER Zone and correlated wind and solar activity with temperatures in those VER Zones dating back to 1980. The ELCC study will be performed using the synthetic shapes dating back to 1980, which are also used in the LOLE studies. The data provided by the Participants will be used in the establishment of the synthetic shapes and used in the allocation process for establishing the QCC of each VER resource as later outlined in Section 4.3.5.

The Program Operator will conduct the ELCC study by performing probabilistic simulations in a manner that resources in the WRAP Region will be randomly forced out of service during each hour of the study. Each simulation accounts for a different variation of forced outages and load uncertainty for all hours of the Year, similar to the LOLE study utilized to establish the FS Planning Reserve Margin.

4.3.4 Determination of ELCC Within VER Zones

The ELCC study will determine the amount of capacity provided by all VERs (of the specified type, e.g., wind) analyzed in the WRAP Region. The FS Program will employ the VER Zones for each VER type set forth inSection 4.3.6, as they may be revised from time to time. Each VER of a given type will be assigned to one of the VER Zones for that type. ELCC studies will be performed for each VER Zone (and VER type), calculating a total capacity value for the resource of interest in that zone. The capacity calculated for each VER Zone will be allocated to VERs of that type in that zone on a pro-rata basis.

4.3.5 Determination of System Wide ELCC and Allocation to Individual VER Zones

To avoid over-accreditation of VERs the Program Operator will conduct an ELCC study of the entire WRAP Region and calculate a total capacity value for all VERs in the WRAP Region. Additionally, all ESRs in a Subregion will be studied together. After all VER Zone capacity totals (for each VER type) and the capacity totals of ESRs in each Subregion have been determined, the sum of the VER Zone and ESR Subregion totals will be compared to the regional VER plus ESR total. If the sum of the VER Zones and ESR Subregion is greater than the regional total, all VER Zone and ESR Subregion totals will

be scaled down until the totals match the regional total. Table 6 provides an example of the calculations to determine total VER capacity.

Table 6. Example[8] ELCC Study of WRAP Region to Calculate Total Capacity.

A study of two wind zones and two solar zones reveals the following capacity values for each zone:				
Wind Zone 1	Wind Zone 2	Solar Zone 1	Solar Zone 2	**Total**
1,000 MW	800 MW	700 MW	1,000 MW	**3,500 MW**
A study of the region reveals the following capacity value for the region's wind and solar:				
Regional VERs				
The zones will be recalculated as follows:				
Wind Zone 1	Wind Zone 2	Solar Zone 1	Solar Zone 2	**Total**
1,000 * (3,200/3,500)	800 * (3,200/3,500)	700 * (3,200/3,500)	1,000 * (3,200/3,500)	
914 MW	732 MW	640 MW	914 MW	**3,200 MW**

ESRs, which are discussed in more detail below (Section 4.4), are also included in the system ELCC allocation and study.

4.3.6 VER Zones for Wind and Solar

WPP has established separate VER Zones for wind resources and solar resources, as shown, respectively, in Figure 3 and Figure 4.*Error! Reference source not found.*

[8] These examples are strictly illustrative, and do not set or limit any actual ELCC study results.

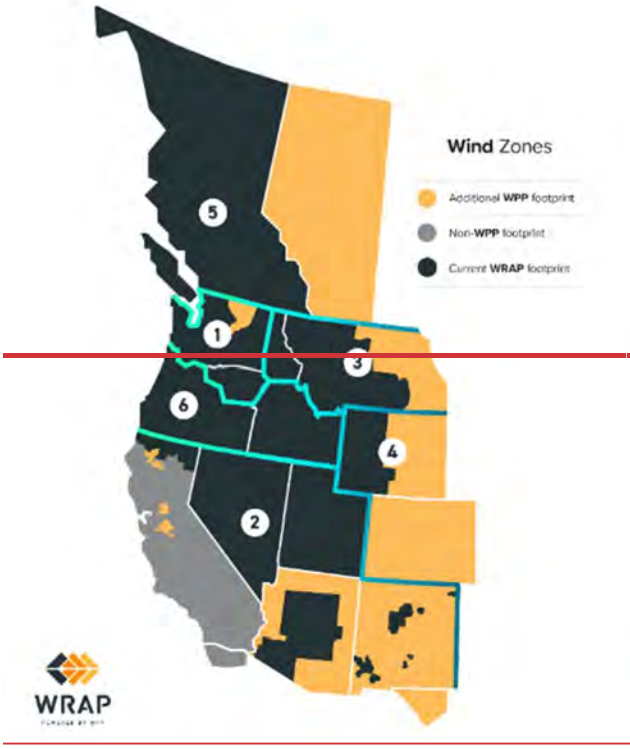
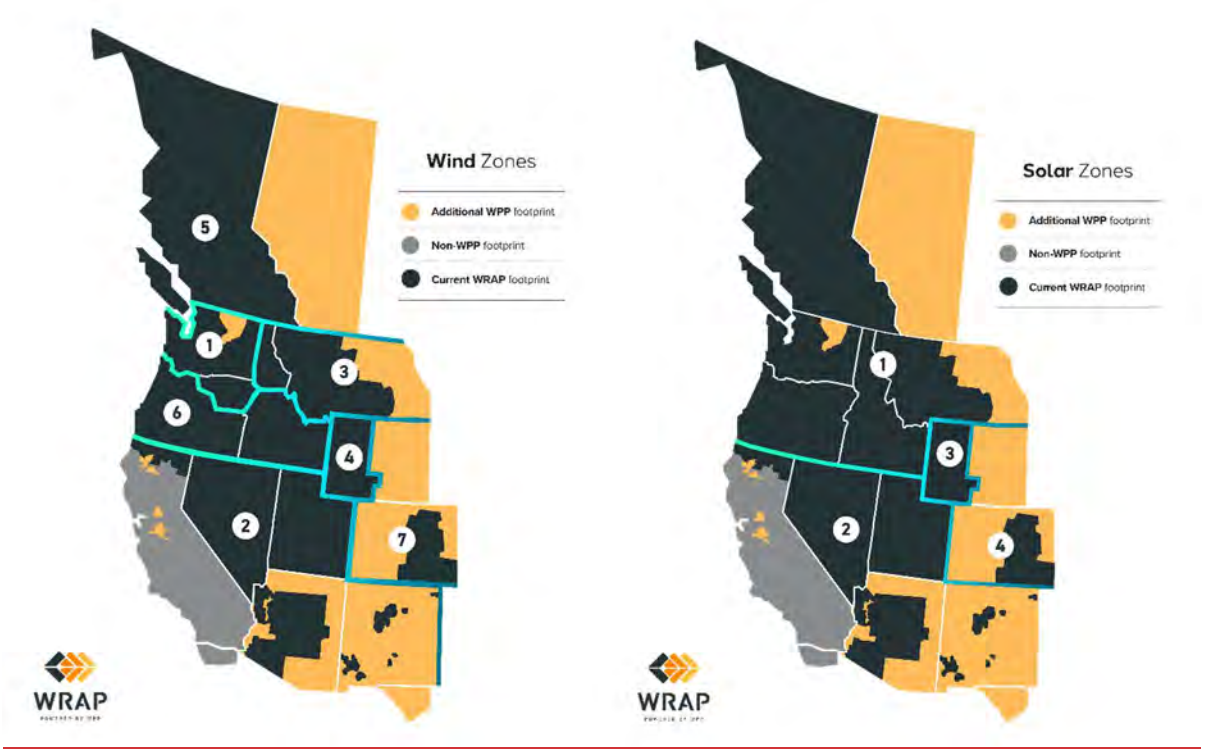


Figure 3. Wind VER Zones

Figure 4. Solar VER Zones



4.3.7 Allocation of VER ELCC

4.3.7.1 Allocation of System Wide ELCC On a Resource Basis

Once the ELCC has been determined for each VER Zone for each Binding Season, two additional calculations must occur. The first step, which will occur before the system ELCC adjustment, takes the ELCC seasonal values for each VER Zone and converts them to a monthly basis for monthly QCC. Monthly QCC values for each VER Zone will be calculated by shaping the seasonal ELCC value in accordance with aggregate performance of all resources in the VER Zone during the CCH. Months that have higher resource performance during the CCH will be allocated a higher portion of the ELCC across the Binding Season. The QCC of each Month will average to the seasonal ELCC value. An example is given below in Table 7.

Table 7. Example[9] Monthly QCC Calculation for Wind VER Zone

		Summer Season			
		June	**July**	**Aug**	**Sept**
Average Production on CCH per Month	Calculated from historical performance data from wind in this VER Zone on a monthly basis	120MW	95MW	90MW	130MW
Average Production on CCH Across Season	Calculated from historical performance data from wind in this VER Zone on a seasonal basis	108.75MW			
Monthly Multiplier	Divides each Month's production on CCH by the seasonal average	110%	87%	83%	120%
Seasonal ELCC	Value resulting from ELCC study	100MW			
Monthly QCC	Multiplies the monthly multiplier by the seasonal ELCC value	110MW	87MW	83MW	120MW

The monthly QCC values for each VER Zone are then used to determine the system ELCC value discussed in the section above.

The second step, which occurs after the system ELCC adjustment, will allocate the monthly QCC values to each resource based on the individual resource's performance during the CCH.

$$\textit{Resource ELCC} = \textit{Monthly ELCC MW} * \left(\frac{\textit{Resource average hourly net power output on top 5\% of net load hours (CCH)}}{\textit{Zone total average hourly net power output on top 5\% of net load hours (CCH)}}\right)$$

4.3.7.2 QCC Allocations for VERs with Three Years or More of Operational Data

To allocate the ELCC MW to each resource, the Program Operator will utilize the historical hourly data for each resource provided by the Participant. For resources that have at least three Years of actual historical data, or at least three Years of engineered data for newer resources, the Program Operator will utilize the most recent three Years

[9] These examples are strictly illustrative, and do not set or limit any actual ELCC study results.

(up to 10 Years) of data when determining the resource's average hourly net power output.

4.3.7.3 QCC Allocations for New VERs or VERs with less than Three Years of Operational Data

The Program Operator will utilize the following method for newer VERs when determining the historical average hourly net power output:

1) No less than three Years will be utilized; and
2) A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a) Manufacturer's engineering or performance data and actual weather (preferably from on-site, but not from outside of 50-mile radius); or
    b) Historical performance of similar resources within a 50-mile radius.
3) If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource will receive an ELCC value equal to the product of a calculated class average ELCC percentage times the nameplate capacity of the resource at issue. The Program Operator will use the synthesized wind output shape for the appropriate VER Zone to determine the class average ELCC percentage.

As actual data is accrued, it will replace synthesized data as it becomes available (e.g., one Year of actuals plus two Years of synthesized; two Years actuals plus one Year synthesized, then eventually three Years of actuals). Once a new or repowered facility has a full Year of operational data the synthesized data for Years two and three will be evaluated for reasonableness. If the synthesized data significantly understated or overstated the forecasted generation of the resource, the Year two and three synthesized data will be adjusted by the Program Operator accordingly.

4.3.7.4 Determination of ELCC for Future VERs

It is understood that as VERs are added to a system, the capacity value provided by all similar VERs as a function of the nameplate value of those resources will decrease. It therefore becomes important for Participants to have an understanding of how VER QCC values may change over time as the penetration of similar VERs increases.

After the QCC values of all existing and near-term planned VERs have been calculated and allocated, additional ELCC studies will be performed to account for future VERs of each type. These additional wind and solar resource amounts will be created by scaling up the number of wind turbines (nameplate capacity) or solar photovoltaic panels in each VER Zone. The Program Operator will provide an ELCC curve, useful for guidance purposes on a strictly non-binding basis, that can be used to estimate future capacity

values for new resources dependent upon the penetration of resources in that VER Zone.

4.4 Energy Storage

The QCC for ESRs will be determined using the same general ELCC methodology used for wind and solar resources (see Section 4.3) with any specific differences being highlighted in this section and will be limited to ESRs that have the capability to store energy equal to or greater than the energy output by the ESR over four continuous hours (or longer) of operation. The ELCC study for each Binding Season will have a scope document that details the analysis. ESRs with eight-hour or longer durations are considered Long Duration Storage (Section 4.2).

ESRs will be modeled as energy limited devices that will charge and discharge in accordance with their equipment specifications. ESRs will be modeled to charge and discharge in a preserve reliability mode, which means they will only be discharged to mitigate potential loss of load when there is a lack of other resources available to serve load.

4.4.1 ESR with Four- to Eight-Hour Rating

Based on the four-hour minimum continuous time duration requirement, four-hour ESR or ESRs with longer duration ratings will receive QCC values based on the four-hour curve for the ESR penetration level of all ESRs on the system at the time of the ELCC assessment.

4.4.2 ESR with Rating Less than Four Hours

Based on the four-hour minimum continuous time duration requirement, ESRs with ratings less than four hours will receive QCC values based on the four-hour curve for the ESR penetration level of all ESRs on the system at the time of the ELCC assessment. For example, two-hour rated ESRs would receive no more than 50% QCC value of a four-hour ESR with the same maximum output.

4.4.3 Allocation of ELCC for ESRs

All ESRs in a WRAP defined Subregion will be studied together. All ESRs within a Subregion will receive the average ELCC value of ESRs with a four-hour rating in that Subregion, subject to the limitations outlined in Section 4.4.2. To ensure that over-accreditation of ESRs does not occur, ESRs will be included in the ELCC study of all VERs of the WRAP Region and a total combined capacity value for all VERs and ESRs in the WRAP Region will be calculated. After all ESR Subregions and VER Zone capacity totals have been determined, the sum of the VER Zone and ESR Subregion totals will be compared to the WRAP Region VER total. If the sum of the VER Zones and ESR

Subregion is greater than the regional total, all VER Zone and ESR Subregion totals will be scaled down until the totals match the regional total.

4.4.4 Late Registered ESRs

If a Participant seeks to claim capacity from an ESR not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options (described generally in Section 3.2), choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question, in which case the resource will be permitted to use the class average QCC for the ESRs within the Subregion; or
2) Claim a decremented QCC of 70% of the class average for ESRs in the Subregion.

4.5 Hybrid Facilities

Hybrid Facilities are resources that have at least two different fuels or technologies at a common location where one of those resources is an ESR. The QCC for hybrid resources will be determined by applying the appropriate methodology to each component of the facility and summing them and capping the total at the interconnection limit. While hybrid resources are modeled as they would operate in the LOLE study, determining QCC for combined hybrid resource is not performed due to the inability to perform ELCC analysis for similar type resources.

4.6 Demand Response

DR can be utilized as a Qualifying Resource if it is greater than 1 MW in aggregate (see Section 3.3) and can be demonstrated to be controllable and dispatchable by the Participant or host utility. DR programs that register as Qualifying Resources will have monthly QCC value calculated by the Participant per the methodology in Appendix B – Qualifying Capacity Contribution of Demand Response Capacity Resources and will need to meet testing criteria and demonstrate load reduction as described in Section 3.4.2.3 DR prorgram QCC results will be provided to the Program Operator for review. The Program Operator may ask the Participant for information from the DR QCC methodology, subject to limitations described in the Tariff, as part of the verification and validation process. Participants registering a DR Qualifying Resource must either i) demonstrate that the DR program was not operated historically and has therefore not impacted the Historical Load Data provided by the Participant for determination of their P50 load value, or ii) provide historical information about the operations of the DR program such that the load reduction impacts of the DR program can be removed from the historical data prior to determination of the P50 load value.

A DR Qualifying Resource will be reflected in the FS Submittal as a Demand Response Capacity Resource by submitting it as a 'Resource' in the FS Submittal. As with all resources, the monthly QCC values of DR Qualifying Resource will count toward a Participant meeting its monthly FS Capacity Requirements.

If a DR program does not meet the criteria of a Qualifying Resource, its contribution to load reduction may be captured in the historical data used to calculate the P50 load in the FS.

4.6.1 New, Expanded, or Late Registered DR Resources

DR programs intended to be used as Qualifying Resources in the first Year of operation or expansion of an existing program or DR programs not registered at the time of the Advance Assessment will be reported at 50% of the expected capability, unless validated by testing the program to 100% of the claimed capability prior to the Binding Season. See the section related to DR testing requirements (within Section 3.4.2) for more information.

4.7 Hydro Resources

4.7.1 Storage Hydro (Also see Appendix A – Qualified Capacity Contribution for Storage Hydro Resources)

QCCs for Storage Hydro resources are calculated by the Participant owners and the results are provided to the Program Operator for review, through the provision of the 'results tab' of the workbook. The Program Operator may ask the Participant for information from the Storage Hydro QCC methodology, subject to limitations described in the Tariff, as part of the verification and validation process. The Storage Hydro QCC methodology is based on the ability of Storage Hydro to maximize output during the CCHs each Day of the historical record, subject to operational limitations and non-power constraints of each plant. Limitations include available water in storage and all constraints that restrict the use of the Net Generating Capability. These constraints include, but are not limited to, discharge limits, tailrace and forebay elevation limits, and rate of change limits.

The methodology considers each resource's actual generation output, residual generating capability, water in storage, reservoir levels (if applicable), upstream discharge from Cascaded Dual Plants and plant constraints over the most recent 10-Year historical period. The QCC of the Storage Hydro resource is determined using a calculation of how much historical actual generation could have been increased during CCHs by utilizing water in storage each Day to increase generation, while respecting all operating constraints. The QCC is the monthly average of this hypothetical increased generation during the CCHs, for the same Month of the historical record. The resulting

QCC is determined as the average contribution to the CCHs for each Winter Season and Summer Season over the previous 10 Years. The Storage Hydro QCC Workbook captures the aforementioned Storage Hydro QCC methodology and is available for use by WRAP Participants. If historical data is not available for 10 Years, a comparable facility may be utilized or some other reasonable approach that provides similar confidence in the computed QCC may be proposed by the Participant and adopted at the discretion of the WPP. The Participant will provide all required detailed data for the plant.

The detailed Storage Hydro QCC methodology can be found in Appendix A – Qualified Capacity Contribution for Storage Hydro Resources.

4.7.1.1 Late Registered Storage Hydro Resources

If a Participant seeks to claim capacity from a Storage Hydro resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and utilize the established Storage Hydro QCC methodology described above, or
2) Claim a decremented QCC of 70% of the average Storage Hydro QCCs in the program.

4.7.2 Run-of-River (ROR) Hydro

ROR Hydro resources will have their QCC determined on the historical performance of the resources during the CCH over the most recent 10-Year period. The data provided by the Participant in the Advance Assessment data submittal (see *BPM 101 Advance Assessment*) will be used for the determination of QCC.

If less than 10 Years of historical data is available for use in determining the QCC of a ROR Hydro plant, the Program Operator will utilize the following method when determining the historical average hourly net power output:

1. No less than three Years will be utilized.
2. A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a. Manufacturer's engineering or performance data;
    b. Actual water conditions (preferably from on-site, but not from a different river); or
    c. Historical performance of similar resources on the same river system.

3. If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource cannot receive a QCC value.

As actual data is accrued, it will replace synthesized data as it becomes available (e.g., one Year of actuals plus two Years of synthesized; two Years actuals plus one Year synthesized, then eventually three Years of actuals). Once a new or repowered facility has a full Year of operational data, the synthesized data for Years two and three will be evaluated for reasonableness. If the synthesized data significantly understated or overstated the forecasted generation of the resource, the Year two and three synthesized data will be adjusted by the Program Operator accordingly.

4.7.2.1 Late Registered ROR Hydro Resources

If a Participant seeks to claim capacity from a ROR Hydro resource not registered at the time of the Advance Assessment Data Request, the Participant may use the late registered resource options, choosing one of the following approaches:

1) Demonstrate that the resource was acquired following the Advance Assessment Data Request due date for the Binding Season in question and execute the methodology described above for ROR Hydro Resources (for validation by the Program Operator), or
2) Claim a decremented QCC of 70% of the average ROR Hydro QCCs in the program.

4.8 Other Resources

4.8.1 Customer Resources

Resources that are generally located on the customer-side of the meter can be included in the FS Program. To be eligible as a Qualifying Resource, the Customer Resource must 1) be controllable and dispatchable by the Participant or host transmission operator and 2) not have already been used to modify the Participant's Load Forecast (i.e., serving a portion or all of the load not included in Load Forecast). The resource shall meet testing criteria applicable for resource type and will be awarded a QCC value based on the appropriate methodolgy for the resource type. Customer Resources (behind the meter resources) can be aggregated to the 1 MW requirement to be considered a capacity resource, granted that they are in the same BAA, controllable and dispatchable, and visible to the Ops Program.

4.8.2 Non-Dispatchable, Must Take Resources

For resources that are either i) not dispatchable; or ii) require the purchaser of energy from the resource to take energy as available from such resource, including but not limited to a qualifying facility as defined under the Public Utility Regulatory Policies Act (PURPA), the QCC will be determined based on the monthly average performance of

such resource during CCH. The Participant will provide 10 Years of historical hourly dispatch data. This data may be provided within the Advance Assessment data submittal (see *BPM 101 Advance Assessement*) or a workbook found on the WPP website. The workbook will allow the Participant to calculate the QCC values taking the average of the facility output during the CCH.

If less than 10 Years of historical data is available for use in determining the QCC of a non-dispatchable, must take resource, the Program Operator will utilize the methodology described in BPM 105 for the specific resource type. If the resource type is not covered in Sections 4.2 through 4.7 the Program Operator will utilize the following method when determining the historical average hourly net power output:

1. No less than three Years will be utilized.
2. A Participant (or resource owner) can supply synthesized data if at least three Years of actual data is not available, using:
    a. Manufacturer's engineering or performance data;
    b. Known or historical information about fuel availability;
    c. Known or historical information about unit performance; or
    d. Historical performance characteristics of similar resources.
3. If three Years of data is not provided by the Participant, either through synthetic data or actual output, the resource cannot receive a QCC value.

4.8.2.1 Late Registered Non-Dispatchable, Must Take Resources

If a Participant seeks to claim capacity from a non-dispatachable, must take resource not registered at the time of the Advance Assessment Data Request, the Participant will be required to execute the methodology described above for such resource (for validation by the Program Operator).

Appendix A – Qualified Capacity Contribution for Storage Hydro Resources

A.1 Time Period Approach for Summer and Winter Season Requirements

Storage Hydro resources will use a "time period" approach to determine the QCC. A time period approach consists of a historical look-back of the generation output during CCH to determine how much capacity should be expected to be available during high load periods in the future. While this approach is limited to a daily window for determining available capacity, it does establish a common and transparent method for determining the QCC for Storage Hydro Resources.

The following methodology would be used to determine the QCC value using the time period approach described above, and Table A-1 summarizes the resource information required to apply the methodology:

- For each Day found to contain one or more CCHs, the Storage Hydro resource will be evaluated to determine the maximum available capacity for each CCH, based on the conditions of the storage associated with the hydro resource on that Day.
- For each Storage Hydro resource, for each CCH, determine:
    - Maximum generation output during the CCH.
    - Usable water in storage at the end of the CCH.
    - QCC for each hour, which would be the historical generation output plus additional generation for capacity, up to the maximum generation capability (adjusted for reservoir elevation head as applicable), taking into account plant or unit-specific limitations (e.g., units on a common penstock, transformer limitations, etc.) and the resource's Equivalent Demand Forced Outage Rate (EFORd).
    - For calendar days with multiple CCHs, the QCC will be limited to the actual historical generation, plus the usable energy in storage over that Day.Non-power operational constraints that limit the use of energy in storage.

Table A-1. Resource information required to apply the time period methodology for QCC.

Information Needed	Notes
Reservoir Elevation Range	Min and Max – this may be seasonally adjusted.
Reservoir Storage Curve	Indicating volume of water in storage based on the reservoir elevation.
Capacity as a Function of Elevation	Plant maximum capacity at a given forebay elevation.
CCH Adjusted $EFOF_{CCH}$ or Historical Outage Evaluation Equivalent	Historical Forced Outage Factor.
Power as a Function of Discharge	For the "discharge method".
H/K as a Function of Elevation	For the "elevation method".
Hourly Historical Data	– Actual generation – Starting reservoir elevation – Ending reservoir elevation

From the information in Table A-1, the hourly values in Table A-2 can be estimated for each CCH:

Table A-2. Hourly values that can be estimated for each CCH.

Estimated Values	Notes
Actual water in storage	Using the elevation and storage (kcfs or cms) tables.
Additional capacity available beyond the actual generation	Subject to forebay elevation restrictions.
Cumulative additional generation	The running total of the additional generation claimed in each CCH for the Day, used to deplete the elevation of the reservoir to validate the feasibility of using additional capacity in each CCH on each calendar Day.
Hourly QCC	The sum of the actual generation plus the additional capacity available.

The Storage Hydro capacity contribution towards the FS Capacity Requirement is calculated by the resource owner as the simple average of the hourly QCC values in each CCH over the 10 Years studied. These QCC values are averaged over each Month in each Binding Season to determine final monthly QCC values.

A.2 Treatment of Planned Outages

In addition to accounting for forced outages, the UCAP values used in the FS workbooks may (at the Participant's option), be reduced for planned outages. Planned outages that are not included in the UCAP values will need to be planned in a manner similar to Thermal Resources, meaning those planned outages will be taken from the Participant's surplus capacity in excess to the Participant's FS Capacity Requirement.

Table A-3 and Table A-4 below illustrate the QCC calculation over a four-hour consecutive period using the UCAP methodology and the UCAP + planned outages methodology.

Table A-3. Calculating QCC using UCAP = 125 MW.

Consecutive CCHs	Historical Generation	Historical Storage	UCAP (125 MW)	Draft to Maximize Capacity	Storage After Draft	QCC
	MW	MWh	MW	MWh	MWh	MW
1	50	250	125	75	175	125
2	50		125	75	100	125
3	50		125	75	25	125
4	50		125	25	0	75
Storage empty after 25 MW draft				4-hour average		113

Table A-4. Calculating QCC using UCAP + Planned Outages = 100 MW.

Consecutive CCHs	Historical Generation	Historical Storage	UCAP + Planned Outages (100 MW)	Draft to Maximize Capacity	Storage After Draft	QCC
	MW	MWh	MW	MWh	MWh	MW
1	50	250	100	50	200	100
2	50		100	50	150	100
3	50		100	50	100	100
4	50		100	50	50	100
A 25 MW planned outage decreased QCC by 13 MW				4-hour average		100

The four consecutive CCHs in Table A-3 illustrate how the QCC is limited due to insufficient storage. In Table A-4, the UCAP is reduced by a 25 MW planned outage. This reduced capacity requires less draft from storage in CCHs 1-3 to maximize the QCC in those hours. This reduction in draft provides sufficient storage in CCH 4 to maximize the QCC.

For FS purposes, planned outages may be included or excluded in the QCC calculation at the choice of the Participant pursuant to the requirements in Section 16.2.8 of the Tariff.

A.3 Treatment of Non-Power Constraints

Each Participant is asked to review the methodology and incorporate the specific non-power constraints that are applicable to the individual plants, thus reducing the QCC value of each plant to a level that is believed to reflect the plants operational capability for the upcoming Binding Season. This is done through creating additional constraint logic in the spreadsheet that adds current and future non-power constraints to all 10 Years' worth of evaluation.

It is expected that Participants will include such non-power constraints that accurately reflect their forecasted QCC capability, to facilitate reliance on Storage Hydro Resource QCC values in the Operations Program and for other purposes.

A.4 Treatment of Cascaded and Coordinated Hydro Systems

A Cascaded Dual Plant methodology was also developed specifically for cascaded and coordinated hydro systems. For cascaded hydro resources on the same river systems that are operated in a coordinated manner, when determining the QCC, the useable water in storage at the downstream resource could be enhanced by the operations at the upstream resource, thereby maximizing the contribution of the combined cascaded systems. The Cascaded Dual Plant methodology does not attempt to optimize use of the upstream storage to maximize the combined QCC, but it does allow the downstream plant to utilize the discharge from the upstream plant.

A.5 Form To Complete Storage Hydro Resource QCC

The Hydro QCC Workbook will be completed by the Participant. The workbook is located on the WPP website.

Appendix B – Qualified Capacity Contribution for Demand Response Capacity Resources

Demand Response Capacity Resource QCC will be determined based on the monthly average availability of such a resource during the appropriate ten-Year set of CCH subject to the DR program's constraints. The Participant will input the peak load reduction (as determined by a Capability Test) and the DR program's constraints into a workbook located on the WPP website.

The DR QCC workbook includes the following constraints:

- Peak load reduction (MW)
- Blackout functionality that prevents the DR program from contributing to QCC during any identified:
    - Hours of the day;
    - Days of the week;
    - Weeks of the Season; and, or
    - Months of the Season.
- Hourly dispatch limits (non-interactive, i.e. choose one):
    - Daily – maximum number of hours per day
    - Weekly – maximum number of hours per week
    - Monthly - maximum number of hours per month
- Hourly fatigue – if a DR program is called upon in consecutive CCH its peak load reduction can be reduced hour-on-hour, reflecting a customer's potential decreasing willingness to keep adjusting its load down hour after hour (for example, industrial loads).
- Daily fatigue – if a DR program is called upon in consecutive days its peak load reduction can be reduced day-on-day, reflecting customers' potential decreasing willingness to keep adjusting their loads down day after day (for example, aggregated residential DR programs).

The DR QCC workbook will allow the Participant to calculate monthly QCC values taking the average of the DR programs demand reduction availability during CCH subject to, at a minimum, the imposed program-specific constraints listed above. The monthly QCCs of a Participant's Demand Response Capacity Resources can then be used to meet its monthly FS Capacity Requirements along with the QCC of its other resources and contracts.

If a DR program has constraint permutations not captured by the workbook, its contribution to load reduction may be captured in the historical data used to calculate the P50 Peak Load Forecast in the FS.

WESTERN POWERPOOL

Western Resource Adequacy Program

108 Forward Showing Submittal Process

100 – Forward Showing

Revision History

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108 Forward Showing Submittal Process

1. Introduction

Forward Showing (FS) Submittal Process Business Practice Manual (BPM) 108 describes when and how each Participant provides its projected load and resource portfolio data to meet the Western Resource Adequacy Program (WRAP) FS Capacity Requirements and FS Transmission Requirements in the months of the Binding Seasons. The Western Power Pool's (WPP) FS Program is the forward-looking planning portion of the WRAP that aims to ensure the WRAP footprint has sufficient capacity to adequately serve projected peak load under a variety of possible scenarios. The FS Program includes the Advance Assessment (see *BPM 101 Advance Assessment*) that recommends FS Planning Reserve Margins (FSPRM) for Board approval and provides Qualifying Capacity Contribution (QCC) values for registered resources (see *BPM 105 Qualifying Resources*). The FSPRMs are applied to the P50 load forecasts of each Participant to set the FS Capacity Requirement for each month of a Binding Season. The FS Capacity Requirements shall be met by QCC from Qualified Resources and delivered consistent with the Tariff's FS Transmission Requirements, at a minimum.

1.1. Intended Audience

BPM 108 is intended for WRAP Participants and other interested individuals or entities. BPM 108 is particularly useful for those individuals responsible for the Participant Organization's FS Submittal, which includes the FS Demonstration of the FS Capacity Requirement and FS Transmission Requirement, along with FS supporting materials on Qualifying Resource Capability Testing, treatment of Thermal Resources without North American Electric Reliability Corporation (NERC) Generating Availability Data System (GADS) data, Hydro Resource QCC results, late registered resources, and Transition Period exceptions (Excused Transition Deficits and Joint Contract Accreditation Forms (JCAFs)).

1.2. What You Will Find in This Manual

This document describes: the FS Deadline, Deficiency Notices and FS Cure Deadline Dates; the required FS Submittal materials, including the FS Demonstration and FS supporting materials, along with associated Senior Official Attestations; and Program Operator and Program Administrator review of Participants' FS Submittals.

1.3. Purpose

BPM 108 is intended to assist Participants in completing their FS Submittals, including the FS Demonstration and the required supporting material, on or before the FS Deadline for the applicable Binding Season.

1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 108 have the meaning set forth in the Tariff or in another BPM.

Catastrophic Failure Monthly Report: A demonstration by a Participant with an approved catastrophic resource failure exemption that either the circumstances necessitating the exception have not changed or that Qualifying Resources have become available, and the Participant has acquired them and no longer requires the exception.

Cure Deadline: The date 120 Days after the FS Deadline after which any uncured deficiencies in a Participant's FS Submittal shall be assessed a FS Deficiency Charge.

Cure Period: The time period 120 Days after the FS Deadline during which a Participant shall submit revisions to its FS Submittal to fully cure all identified deficiencies.

FS Demonstration: A demonstration that a Participant has met satisfactorily its FS Capacity Requirement and FS Transmission Requirement.

FS Instruction Manual: A set of instructions available on the WPP website.

Monthly Transmission Exception Check-In: A demonstration by a Participant with an approved Monthly Transmission Exception for Enduring Constraints or Future Firm ATC Expected that its inability to meet the FS Transmission Requirement has not changed.

2. FS Deadline, Deficiency Notices and FS Cure Deadline Dates

The Forward Showing Program has two Binding Seasons: The Summer Season and the Winter Season. The FS Deadline, serving of Deficiency notices, and FS Cure Deadline for the Summer Season and Winter Season are 5:00 pm Pacific Prevailing Time (PPT) on the respective date indicated in Table 1. The Program Administrator shall serve a deficiency notice to each Participant where one or more deficiencies have been identified as part of the FS Submittal by 5:00 pm PPT on the respective date indicated in Table 1. Participants who served a deficiency notice may cure their deficiencies by resubmitting their FS Submittal with the missing or correct data by 5:00 pm PPT on the respective date indicated in Table 1. Deficiencies uncured by the FS Cure Deadline will be subject to the FS Deficiency Charge (see *BPM 107 Forward Showing Deficiency Charge*).

Table 1. FS Deadline, Deficiency Notices and FS Cure Deadline Dates

	Winter Season	Summer Season
FS Deadline	March 31 of each Year	October 31 of each Year
Program Administrator serve Deficiency notices	By May 30 of each Year	By December 30 of each Year
FS Cure Deadline	July 29 of each Year	February 28 of each Year

2.1. FS Deadline Extensions Due to Forward Showing Software System Failures

In the event that a failure of the Forward Showing software system occurs in the seven days preceding a FS Deadline and prevents a Participant from meeting the FS Deadline, the FS Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the FS Deadline. In the event that such Forward Showing software system failure triggers an extension of the FS Deadline, the deadline for WPP to respond to the Participant's FS Submittal shall be extended by a commensurate number of Days as the FS Deadline. For example, if during the final seven Days preceding a FS Deadline, the Forward Showing software system was unavailable for two Days, the FS Deadline would be extended by two Days and the deadline for WPP to respond to the Participant's FS Submittal would be extended by two Days.

In the event that a failure of the Forward Showing software system occurs within seven Days of the deadline for WPP to respond to FS Submittals, the deadline for WPP to respond shall be extended by one Day for each Day that the Forward Showing software system failure persists and prevents WPP from meeting the deadline.

In the event that a failure of the Forward Showing software system occurs in the seven days preceding the Cure Deadline and prevents a Participant from meeting the Cure Deadline, the Cure Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the Cure Deadline.

For example, if during the final seven Days preceding a Cure Deadline, the Forward Showing software system was unavailable for two Days, the Cure Deadline would be extended by two Days and the deadline for WPP to respond would be extended by two Days.

3. Forward Showing Submittal Materials

A Participant's FS Submittal shall include a FS Demonstration with the necessary information for each Binding Season to demonstrate the Participant has sufficient capacity and transmission service to satisfy the FS Capacity Requirement and FS Transmission Requirement. The FS Demonstration shall include the Participant's: load forecast for the upcoming Binding Season (see *BPM 103 Forward Showing Capacity Requirement*); demonstration of Qualifying Capacity Contribution (QCC) to meet its FS Capacity Requirement which can be from Qualifying Resources or contracts; demonstration of the FS Transmission Requirement needed for the reliable delivery of the QCC of the Participant's Qualifying Resources and Contracts to the Participant's load; applicable Monthly Transmission Exception requests and associated Senior Official Attestations; and a Senior Official Attestation for the FS Demonstration. In addition to the FS Demonstration, the FS Submittal shall include supporting FS materials including information on Qualifying Resource Capability Testing, Thermal Resources without GADS data, Hydro Resource QCCs and forced outages, late registered resources, and Transition Period exceptions.

3.1. FS Demonstration

As described in the FS Instruction Manual, a Participant must provide the Program Operator with the following information on loads, Qualifying Resources, contracts, and WRAP Qualifying Transmission to demonstrate it has satisfactorily met the FS Capacity Requirement and FS Transmission Requirement. A Participant's FS Demonstration shall be accompanied by the Senior Official Attestation found in Appendix A – FS Demonstration Attestation. The Program Operator determines whether a Participant has met its FS Capacity Requirement and FS Transmission Requirement using the method described in Appendix G – FS Summary.

3.1.1. Loads

Each Participant shall provide the following FS Demonstration load information as described in the FS Instruction Manual:

- Load name assigned for identification purposes and used for transmission mapping
- Balancing Authority Area (BAA) in which the load is located
- The load point of delivery (POD) on the transmission system
- Forecasted monthly peak demand (see methodology in *BPM 103 Forward Showing Capacity Requirement*)

A Participant shall include all loads in its FS Demonstration for which it is responsible as well as documenting all loads it seeks to exclude (see *BPM 103 Forward Showing*

Capacity Requirement): i.e. all loads within the western interconnection for which it is the LRE (or the exclusive wholesale electricity provider to the LRE) that are not covered by another resource adequacy program.

A Participant responsible for loads in ~~two~~ multiple Subregions seeking to use the lower Monthly FSPRM may submit a single FS Submittal if the Participant can demonstrate sufficient WRAP Qualifying Transmission from the load in the Subregion with the lower Monthly FSPRM to the load in the Subregion with the higher Monthly FSPRM. The Participant will demonstrate WRAP Qualifying Transmission in the quantity equal to the difference between the two FSPRMs multiplied by the amount of load in the Subregion with the higher FSPRM. For example, if Region A has a FSPRM of 20% in July and Region B has a FSPRM of 15% in July, and Participant has 1000 MW of load in Region A, the Participant will demonstrate (20% - 15%) * 1,000 MW or 50 MW of WRAP Qualifying Transmission from its load in Region B to its load in Region A. This WRAP Qualifying Transmission shall be distinct from any transmission demonstrated for delivering Qualifying Resources to participant load. See *BPM 103 Forward Showing Capacity Requirement* for information on calculating the FS Capacity Requirement in circumstances where loads from multiple ~~two~~ Subregions are included in a single FS Submittal. In addition, a Participant responsible for loads in multiple ~~two~~ Subregions seeking to use the higher monthly FSPRM may also submit a single FS Submission if the Participant can sign the FS Demonstration attestation in Appendix A.

All load submitted by a Participant within a single FS Demonstration must be able to be served interchangeably by all Qualifying Resources and Qualifying Contracts in that same FS Demonstration, without the expectation that additional transmission rights will be required to deliver resources to load. In accordance with this, a Participant may be required to submit separate FS demonstrations, even as to loads residing in the same Subregion, if the Program Administrator determines it is not practicable to treat such loads as if they can share in load and resource diversity for reasons that may diminish the integrity of WRAP reliability metrics, including but not limited to, if the Participant is responsible for (i) loads that are geographically distinct; (ii) loads that are separated by constrained transmission paths; or (iii) loads and resources that are not operated collectively (see *BPM 103 Forward Showing Capacity Requirement*).

Participant loads that cannot be served with a common set of Qualifying Resources and Qualifying Contracts shall therefore be submitted in separate FS Demonstrations. Each FS Demonstration will have a unique FS Capacity Requirement and a unique FS Transmission Requirement, and each of those two requirements shall be met individually and separately from any other FS Demonstrations submitted by a Participant.

3.1.2. Qualifying Resources

As part of the FS Demonstration, each Participant shall submit Qualifying Resources to satisfy the FS Capacity Requirement as described in the FS Instruction Manual. Qualifying Resources can be fully or partially owned by the Participant. The Participant shall use QCCs supplied by the Program Operator as part of the Advance Assessment (see *BPM 101 Advance* Assessment) unless the resource is being registered late (see *BPM 105 Qualifying Resources)*. The components of a hybrid resource should be described separately (for example, solar separately from a battery) and the overall limits of the facility considered when submitting the QCC for each component (see *BPM 101 Advance Assessment* -*Data Request Instruction Manual* for hybrid resource limitations). The Qualifying Resource information provided in the FS Demonstration should be consistent with the information provided by the Program Operator as a result of Resource Registration (see *BPM 105 Qualifying Resources*).

If a Participant experiences a catastrophic Qualifying Resource failure and is unable to replace the QCC on commercially reasonable terms prior to the FS Deadline, the Participant can seek an exception by submitting the attestation in Appendix B – Catastrophic Resource Failure Exception. For each month following the FS Deadline that a Participant sought a catastrophic resource failure exception, the Participant shall complete a Catastrophic Failure Monthly Report (available on the WPP website) demonstrating either:

- the circumstances necessitating the exception have not changed; or
- that Qualifying Resources (either the ones experiencing the catastrophic failure or other resources) have become available, and the Participant has acquired them and no longer requires the exception.

The Catastrophic Failure Monthly Report will be due on the last day of each Month and will cover any catastrophic Qualifying Resource exception requested for the upcoming (or ongoing) Binding Season, except the Month directly preceding the earliest Month that is the subject of catastrophic Qualifying Resource request. For example, if a Participant has requested a catastrophic Qualifying Resource exemption for July and August of 2035 at the FS Deadline (October 31, 2034), such Participant will submit a Catastrophic Failure Monthly Report for the July and August exception requests on or before the last days of November and December, 2034, and on or before the last days of January, February, March, April, and May, 2035, but need not submit such report for the July exception request on the last day of June 2035. The Participant will submit a Catastrophic Failure Monthly Report solely as to the August exception request on or before the last day of June 2035.

If at any time there is a change in the circumstances that necessitated the exception such that the reasons for the exception no longer exist, or the Participant acquires other Qualifying Resources, the Participant will describe and demonstrate such acquisition in the next Catastrophic Failure Monthly Report, and upon acceptance of the demonstration, need not continue to provide a Catastrophic Failure Monthly Report for the exception no longer needed. Failure to submit a required Catastrophic Failure Monthly Report will result in an assessment of a Deficiency Charge, unless the deficiency is cured with seven days of notice of non-compliance.

The Program Operator and Program Administrator will seek to inform the Participant whether its exception request has been accepted within 14 Days of receiving the request. The impact of a successful exception request is explained in *BPM 107 Forward Showing Deficiency Charge*. If a Participant submits a request for exception that WPP denies in whole or in part, the Participant may appeal such denial to the Board of Directors. To make such appeal, the Participant should submit an appeal, in the form outlined on the WPP website, including all information the Participant considers necessary to support its view that WPP erred in denying the requested exception. Any such appeal must be submitted no later than 14 Days after WPP's denial of the exception request. The Board may request that the Participant provide such additional information as the Board considers necessary for its action on the appeal. The timing of the Board's action on an appeal is in the Board's discretion.

3.1.3. Contracts

Each Participant shall also provide notification and representation of contractual purchases and sales as described in *BPM 106 Qualifying Contracts* and in the FS Instruction Manual.

3.1.4. Transmission

Each Participant shall demonstrate the FS Transmission Requirement. As described in the FS Instruction Manual, a Participant shall demonstrate it has secured transmission rights sufficient to deliver a MW quantity equal to at least 75% of the MW quantity of its FS Capacity Requirement. The FS Transmission Requirement must be met with WRAP Qualifying Transmission from the Participant's Qualifying Resource(s) or from the delivery points for the Qualifying Resources identified for its Net Contract QCC (or for its RA Transfer) to the Participant's load. The FS Demonstration shall include information on a Participant's transmission service reservations that it plans to utilize in the upcoming Binding Season to meet its FS Transmission Requirement. The FS Demonstration shall also map Qualifying Resources (see Section 3.1.2) and contracts (see Section 3.1.3) to a Participant's loads (see Section 3.1.1) using the transmission service reservation information provided, as described in the FS Instruction Manual. A

Participant that has Qualifying Resource in its balancing area, but is not a transmission service provider – and is therefore unable to provide transmission service reservation information – will attest that it has the transmission rights from the generation to the load on its system (see Appendix J – Transmission Rights Attestation).

3.1.4.1. Transmission Exceptions

If a Participant's FS Demonstration does not include the required transmission service reservations to satisfy the FS Transmission Requirement, the Participant may request Monthly Transmission Exceptions. As described in more detail below, there are four categories of Monthly Transmission Exception available to a Participant [terminology mirrors terms used in standard form Open Access Transmission Tariffs (OATTs) and on Open Access Same-time Information Systems (OASIS)]:

- Enduring Constraints;
- Future Firm Available Transmission Capability (ATC) Expected;
- Transmission Outages and Derates; and
- Counterflow of a Qualifying Resource.

All Participants requesting a Monthly Transmission Exception are responsible for submitting the completed Transmission Exception request form found on the WPP website, along with the Senior Official Attestation found in Appendix C – Monthly Transmission Exception General Attestation – as part of their FS Submittal along with their FS Demonstration.

The Program Operator will review a Participant's Monthly Transmission Exceptions and notify the Participant of the status of its Monthly Transmission Exceptions for each month requested by 5:00 pm PPT on the 60th day after the FS Deadline.

If a Monthly Transmission Exception is denied (either because it is invalid or because circumstances changed and transmission has become available during the Program Operator's review of the Monthly Transmission Exception), the Participant will have the opportunity to cure its Transmission Deficiency on or before the last day of the Cure Period established for the relevant FS Submittal. The Participant may also appeal the rejection to the Board.

The Program Operator and Program Administrator will seek to inform the Participant whether its exception request has been accepted within 14 Days of receiving the request. If a Participant submits a request for exception that WPP denies in whole or in part, the Participant may appeal such denial to the Board of Directors. To make such appeal, the Participant should submit an appeal, in the form outlined on the WPP website, including all information the Participant considers necessary to support its view

that WPP erred in denying the requested exception. Any such appeal must be submitted no later than 14 Days after WPP's denial of the exception request. The Board may request that the Participant provide such additional information as the Board considers necessary for its action on the appeal. The timing of the Board's action on an appeal is in the Board's discretion.

For each month following the FS Deadline that a Participant sought a Monthly Transmission Exception for Enduring Constraints or Future Firm ATC Expected, the Participant shall complete a Monthly Transmission Exceptions Check-in (available on the WPP website) demonstrating either:

- the circumstances necessitating the exception have not changed; or
- transmission has become available and the Participant has acquired it; or
- the Participant has acquired a different Qualifying Resource with the necessary firm transmission and no longer requires the Monthly Transmission Exception.

The Monthly Transmission Exception Check-Ins will be due on the last day of each Month and will cover any Monthly Transmission Exceptions requested for the upcoming (or ongoing) Binding Season, except the Month directly preceding the earliest Month that is the subject of the Monthly Transmission Exception request. For example, if a Participant has requested a Monthly Transmission Exception for July and August of 2035 at the FS Deadline (October 31, 2034), such Participant will submit a Monthly Transmission Exception Check-In for the July and August exception requests on or before the last days of November and December, 2034, and on or before the last days of January, February, March, April, and May, 2035, but need not submit such check-in or the July exception request on the last day of June 2035. The Participant will submit a Monthly Transmission Exception Check-In solely as to the August exception request on or before the last day of June 2035.

If at any time, the Participant either acquires the necessary transmission or acquires a different resource and associated transmission, the Participant will describe and demonstrate such acquisition on the next Monthly Transmission Exception Check-In, and upon acceptance of the demonstration, need not continue to provide Monthly Transmission Exception Check-Ins for the exception no longer needed. Failure to submit a required Monthly Transmission Exception Check-In or rejection of the Monthly Transmission Exception Check-In in part or in whole (e.g. if contrary information is available to the Program Administrator, indicating transmission has become available for the month in question) will result in an assessment of a Deficiency Charge unless the deficiency is cured within seven days of notice of non-compliance.

3.1.4.1.1. Enduring Constraints

The Enduring Constraints Monthly Transmission Exception may be granted if the Participant is unable to demonstrate the necessary and sufficient WRAP Qualifying Transmission on any single segment of a source-to-sink path for a resource (exceptions will not be granted for two segments of a source-to-sink path) and the Participant demonstrates:

- there was no sufficiently firm ATC posted by a transmission service provider at the FS Deadline on the applicable segment for the months required; and
- there was remaining available ATC (non-firm ATC after the fact) for all CCHs in the same season of the most recent year for which CCHs have been calculated; or
- if the path was constrained in at least one CCH in the most recent same season from the most recently available CCH data set, that the Participant is:
    - constructing or contracting for a new local resource for at least the amount of Monthly Transmission Exception requested; or
    - pursuing long-term firm rights by entering the long-term queue and taking all appropriate steps for at least the amount of Monthly Transmission Exception requested.

If the required transmission rights for the applicable segment are only available for a duration of more than one year at the FS Deadline, a Participant is not required to obtain that service to qualify for the Enduring Constraints exception. However, in that circumstance, the Participant shall not qualify for an Enduring Constraint exception for the same path (or across the same constraint) for the same month of the same season of the subsequent year if the Participant again declines the transmission rights that are available for a duration of more than one year.

In addition to the Monthly Transmission general exception discussed above in Section 3.1.4.1, a Participant requesting an Enduring Constraint Monthly Transmission Exception will need to include the Senior Official Attestation found in Appendix D – Enduring Constraint Additional Attestation as part of its FS Submittal.

3.1.4.1.2. Future Firm ATC Expected

The Future Firm ATC Expected exception may be granted when there is a reasonable expectation that sufficiently firm ATC will be made available following the FS Deadline and all the following criteria are met:

1. WRAP Qualifying Transmission is not posted or available prior to the FS Deadline; and
2. The Participant provides evidence that its transmission service provider has released additional WRAP Qualifying Transmission on the applicable path for all

CCHs in the same season of the most recent year for which CCHs have been calculated following the FS Deadline; and

3. The Participant demonstrates that the amount of FS Transmission Requirement being requested for the Future Firm ATC Expected exception is equal to or less than the minimum volume of WRAP Qualifying Transmission rights ATC released in the previous year's CCHs for the appropriate Binding Season.

If the required ATC on the applicable segment for the Month(s) needed is only posted or available prior to the FS Deadline for a duration of more than one year, a Participant is not required to obtain that service to qualify for the Future Firm ATC Expected exception. However, in that circumstance, the Participant shall not qualify for a Future Firm ATC Expected exception for the same path (or across the same constraint) for the same month of the same season of the subsequent year if the Participant again declines the ATC for transmission service rights that are available for a duration of more than one year.

The total amounts of Future Firm ATC Expected exceptions on specific paths is limited to the amount of transmission demonstrated to likely become available. If multiple Participants have requested a Future Firm ATC Expected exception on the same path, the available volume will be granted on a pro-rata basis to requesting Participants based on the size of their requests.

3.1.4.1.3. Transmission Outages and Derates

The Transmission Outages and Derates exception may be granted when a Participant that has not met its FS Transmission Requirement demonstrates that all of the following criteria are met:

1. That an applicable segment of its existing transmission service rights from its source to sink path for its Qualifying Resource is expected to be derated or out-of-service and that additional ATC of WRAP Qualifying Transmission is not otherwise available; and
2. The duration of the Transmission Outages and Derates exception request coincides with the months of the outage or derate; and
3. The volume of the Transmission Outages and Derates exception being requested is either:
    a. equal to or less than the reduction in the Participant's existing transmission service rights on that path for the applicable derate or outage period; or
    b. equal to or less than the WRAP Qualifying Transmission for the applicable derate or outage period that would otherwise be posted and available for reservation were it not for the transmission limitation.

If multiple Participants have requested a Transmission Outages and Derates exception on the same path, the available volume (per Section 3.1.4.1.3 (3) above) will be granted on a pro-rata basis to requesting Participants based on the size of their requests.

3.1.4.1.4. Counterflow of a Qualifying Resource

A Counterflow of a Qualifying Resource exception may be granted if a Participant demonstrates that either:

1. The Participant's use of WRAP Qualifying Transmission service in connection with the delivery of capacity from Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to Participant's load (or other qualifying delivery point permitted by the WRAP); or
2. A second Participant's use of WRAP Qualifying Transmission service in connection with the delivery of capacity from the second Participant's Qualifying Resource (or from the Qualifying Resource associated with its Net Contract QCC) to the second Participant's load (or other qualifying delivery point permitted by the WRAP)
   provides a direct and proportional counterflow transmission that supports the first Participant's delivery of capacity from the first Participant's Qualifying Resource (or from the Qualifying Resource associated with its Net Contract QCC) to the first Participant's load (or other qualifying delivery point permitted by the WRAP) Qualifying Resource to its load.

If the Counterflow of a Qualifying Resource exception is requested under subpart (2) of this Section, the Participant requesting the exception shall include a written acknowledgement from the second Participant that it is aware of such exception request. Counterflow of a Qualifying Resource must be directly between two BAAs. Counterflows that involve three or more BAAs will not qualify for the Counterflow of a Qualifying Resource exception.

3.1.5. Planned Outages

Per the requirements of Tariff Section 16.2.8, any planned outages during a Binding Season must be taken from a Participant's surplus (above its FS Capacity Requirement).

3.1.5.1. Planned Outages underway at the time of FS Submittal

Any Qualifying Resource that is out of service at the time of the FS Deadline and is planned to remain out of service for the first five or more days of a month in the Binding Season cannot have such Qualifying Resource's QCC counted toward meeting the Participant's FS Capacity Requirement for that month.

To ensure QCC from resources is not utilized to meet a monthly FS Capacity Requirement during the planned outage, the Capacity associated with such resources shall be deducted by identifying the planned outages in the FS Demonstration.

3.1.5.2. Planned Outages not underway at the time of the FS Submittal

Participants have the discretion to take planned outages at any time during the Binding Season but are required to take planned outages out of their surplus FS Demonstration capacity or to procure additional supply to replace such capacity on outage. This requirement ensures the participant's FS Capacity Requirement is available during the Operation Program timeframe.

Participants may provide information on Qualifying Resources that are planned to be out of service during the Binding Season as part of their FS Submittal to ensure QCC from those resources is not utilized to meet a monthly FS Capacity Requirement during the planned outage. Capacity associated with such resources shall be deducted from the FS Demonstration for such month(s).

Each Participant shall provide a Senior Official Attestation (found in Appendix E – Planned Outages Attestation) by the FS Deadline that:

- The sum of expected planned outages at any one time during the Binding Season will be equal to or less than the surplus stated in its FS Demonstration at the time of such planned outage, or
- The Participant is expected to procure the necessary capacity or energy to meet the Operations Program requirements regardless of planned outage schedules.

A planned outage shall not justify a waiver of, or exception to, a Participant's Holdback Requirement or Energy Deployment obligations.

3.2. Forward Showing Supporting Materials

In addition to the FS Demonstration (see Section 3.1), accompanying Monthly Transmission Exception Requests (see Appendix C – Monthly Transmission Exception General Attestation) and required Senior Official Attestations, a Participant's FS Submittal shall also include supporting information on Qualifying Resource testing, Thermal Resources without GADS data, Hydro Resource QCCs, late registered resources, and transition exceptions.

3.2.1. Testing

As described in *BPM 105 Qualifying Resources*, Participants shall perform annual Operational Tests on all Qualifying Resources. In addition, Capability Tests shall be

required for Thermal Resources, Long Duration Storage resources, and Demand Response Resources. Each Participant's FS Submittal must include a completed resource testing report, employing for such purpose the resource testing form that is made available on the WPP website.

3.2.2. Thermal Resources that are not Required to Report GADS Data

BPM 101 Advance Assessment describes the data request sent out by the Program Operator to gather the information required to calculate QCC values for Qualifying Resources. The Advance Assessment data request includes NERC GADS or equivalent outage data that can be used to calculate the outage rates and factors for existing Thermal Resources. However, as discussed in *BPM 105 Qualifying Resources*, certain Thermal Resources are not required to report GADS data. For all Qualifying Resources not providing GADS reporting data, the Participant will be required to provide a Senior Official Attestation (provided in Appendix F – Non-GADS QCC Calculation Attestation) as part of its FS Submittal that attests the resource is not subject to GADS reporting and the FS Demonstration submitted by the Participant is an accurate depiction of either the historical performance or historical outage data of the resource.

3.2.3. Hydro Resources

As discussed in *BPM 105 Qualifying Resources*, QCCs for Storage Hydro resources are calculated by the Participant owners. The result of those calculations shall be submitted as part of a Participant's FS Submittal in the format described in *BPM 105 Qualifying Resources* and the FS Instruction Manual. The Storage Hydro QCC Methodology utilizes an equivalent demand forced outage rate (EFORd) value as an input. Participants shall supply as part of their FS Submittal a NERC GADS report showing the EFORd value. For all Storage Hydro resources that do not report NERC GADS data, the Participant shall similarly calculate an EFORd value from historical performance data and the non-GADS outage calculation tool as posted on the WPP website. The Participant will provide the output of this tool and a Senior Official Attestation (provided in Appendix F – Non-GADS QCC Calculation Attestation) attesting that the resource is not subject to GADS reporting and that the Participant has utilized the non-GADS outage calculation tool with complete and correct information. Participants will also provide a Senior Official Attestation (in the form provided in *Appendix I*) that their calculation of the Storage Hydro QCC value is correct, accurate, and in compliance with the requirements of the Tariff.

3.2.4. Late Registered Resources

As discussed in *BPM 105 Qualifying Resources*, resources that are unable to register by the deadline of the Advance Assessment data request (see *BPM 101 Advance*

Assessment) may still be able to register prior to the FS Deadline so long as the necessary information is provided.

3.2.5. Transition Exceptions

BPM 109 Forward Showing Transition Period discusses how a new Participant application to the Program Administrator prior to March 31, 2027, shall be required to select an initial Binding Season during the Transition Period (Summer seasons for 2025, 2026, and 2027, and the Winter seasons for 2025-2026, 2026-2027, and 2027-2028). During its Transition Binding Seasons, a Participant may be able to request potential reductions in Deficiency Charges as described below.

3.2.5.1. Excused Transition Deficits

During a Participant's Transition Binding Seasons, Deficiency Charges otherwise applicable to the Participant under Section 17.1 of the Tariff, and calculated under Section 17.2, shall be reduced to the extent the Participant has an Excused Transition Deficit (ETD). To obtain an ETD for a Binding Season, the Participant must provide a Senior Official Attestation, as included in *BPM 109 Forward Showing Transition Period*.

3.2.5.2. Legacy Contract – No Joint Contract Accreditation Form (JCAF) Option

In addition to an ETD, during the Transition Period a Participant may be able to reduce its Monthly Capacity Deficiency to the extent the deficiency is due to the Participant's failure to obtain assent to a JCAF from the supplier under a Legacy Agreement (a power supply agreement entered into prior to October 1, 2021), as explained in *BPM 109 Forward Showing Transition Period* (the No-JCAF Option). To obtain that relief, the Participant must provide a Senior Official Attestation (in the form set forth in *BPM 109 Forward Showing Transition Period*) as part of its FS Submittal attesting that the Participant made commercially reasonable efforts to execute the required JCAF with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the JCAF.

4. Cure Period

The Program Operator and Program Administrator shall review Participants' FS Submittals and the Program Administrator shall serve deficiency notices in writing to any Participant that has not, by the FS Deadline shown in Table 1, submitted all required FS Submittal information and materials (see Section 3), or that has submitted information or materials that the Program Operator has found is or may be incorrect or deficient. Participants served a deficiency notice will have until the dates shown in Table 1 to cure their deficiencies. Deficiencies uncured by the time of the FS Cure Deadline shall be subject to the FS Deficiency Charge (*see BPM 107 Forward Showing Deficiency Charge*).

Appendix A – FS Demonstration Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that I have reviewed [Participant]'s FS Submittal provided this day by [Participant] to Western Power Pool, and that to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein, and that the statements therein are true, correct and complete per all of the requirements of Business Practice Manual 108.

Appendix B – Catastrophic Resource Failure Exception Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that, as set forth in the accompanying request for an exception from the FS Capacity Requirement for the [specify season] Binding Season, (i) [Participant] has experienced a catastrophic failure of its [identify] Qualifying Resource[s] due to an event of Force Majeure as defined by Section 8.1 of the WRAP Tariff; (ii) [Participant] is unable to replace the QCC quantity of such Qualifying Resource[s] on commercially reasonable terms prior to the FS Deadline of [specify date] as a result of the timing and magnitude of such catastrophic failure and its consequences; and (iii) the statements in the accompanying FS Capacity Requirement exception request, including the information provided therein on the nature, causes and consequences of the catastrophic failure[s], and [Participant]'s specific, concrete efforts prior to the referenced FS Deadline to secure replacement Qualifying Resources for the [specify season] Binding Season, are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix C – Monthly Transmission Exception General Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that, as set forth in the accompanying request for an exception from the FS Transmission Requirement for the [specify season] Binding Season, (i) [Participant] meets the stated WRAP requirements for the exception; and (ii) the statements in the accompanying FS Transmission Requirement exception request are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix D – Enduring Constraint Additional Attestation

I further attest, in support of [Participant]'s request for the Enduring Constraints Transmission Exception, that (i) no ATC for transmission service rights for which the exception is requested is available (either from the transmission service provider or through a secondary market) as of the FS Deadline, on the applicable segment for the Month(s) needed (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less; (ii) [Participant] has taken commercially reasonable efforts to procure firm transmission service rights, and (iii) [Participant] has posted a request for the necessary firm transmission rights on the relevant bulletin board, (i.e., OASIS) prior to the FS Deadline.

Appendix E – Planned Outages Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that: (i) as set forth in [Participant]'s FS Submittal provided this day by [Participant] to Western Power Pool, Participant has included information on all Qualifying Resources that are currently out of service with a scheduled return date that falls during the [specify season] Binding Season; (ii) Participant [has] [does not have] certain additional outages at Qualifying Resources that are planned to occur during the [specify season] Binding Season but have not yet begun at the time of submission of the FS Submittal; (iii) Participant has made reasonable efforts to obtain and provide information on any such additional outages, but such data cannot be supplied with reasonable specificity; (iv) the aggregate of any such additional outages is either expected to be equal to or less than [Participant]'s remaining surplus as defined by [Participant]'s Portfolio QCC in excess of [Participant]'s FS Capacity requirement or to the extent it is not excess it will be replaced with the necessary capacity or energy to meet the Operations Program requirements, consistent with Section 16.2.8.2 and Part III of the Tariff; and (v) that the foregoing statements are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein.

Appendix F – Non-GADS QCC Calculation Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that the resource that is the subject of this form is not subject to GADS data reporting; and that the resource's performance data (historical output or historical outage evaluation) for the Capacity Critical Hours of the [specify season] Binding Season is accurately accounted for in the accompanying FS Submittal.

Appendix G – FS Summary

A Participant's total Portfolio QCC is defined as the Participant's Resource QCC plus its Net Contract QCC plus its total RA transfer minus its planned outages for each month of the Binding Season.

$$Portfolio\ QCC = Resource\ QCC + Net\ Contract\ QCC + Total\ RA\ Transfer - Planned\ Outages$$

Where:

Resource QCC is the summation of all QCC values for the Participant's Qualified Resources calculated for each month of a Binding Season.

$$Resource\ QCC = \sum QCC\ of\ all\ Participant\ Qualifying\ Resources$$

The Net Contracted QCC is a monthly value equal to the sum of the Participant's Contract QCCs. Import contracts (purchases) are additive to the Participant's QCC value and exports (sales) are a negative QCC value. The Net Contract QCC formula is as follows:

$$Net\ Contract\ QCC = \sum QCC\ of\ all\ Participant\ Qualified\ Contracts$$

Resource adequacy transfers are added to the purchasing Participant's Portfolio QCC value and subtracted from the selling Participant's Portfolio QCC value. The contracts for these transfers will be provided to the Program Operator for validation.

$$Total\ RA\ Transfer = \sum Participant\ RA\ Transfer\ Contracts$$

The Participant's Total Portfolio QCC should be at least equal to the Participant's FS Capacity Requirement for each month of the Binding Season. If the Participant's Total Portfolio QCC meets or exceeds that threshold, then the Participant's FS Capacity Requirement has been satisfied.

$$Total\ Portfolio\ QCC \geq FS\ Capacity\ Requirement$$

Where:

The Participant's FS Capacity Requirement is its forecasted monthly demand multiplied by 100% plus the applicable Monthly FSPRM according to the following equation:

$$FS\ Capacity\ Requirement = Monthly\ P50 * (100\% + Monthly\ FSPRM)$$

The over and underperformance of VERs, forced outages, and Run-of-River hydro in the Participant's portfolio will be used to calculate performance changes in the Operations Program. The Participant's additional planned maintenance or short-term sales will be made from its excess Portfolio QCC.

The Participant's total demonstrated FS Transmission shall be at least equal to 75% of the Participant's FS Capacity Requirement at the FS Deadline. If the Participant's Total Portfolio QCC meets or exceeds that threshold, then the Participant's FS Transmission Requirement has been satisfied.

$$Demonstrated\ FS\ Transmission \geq FS\ Capacity\ Requirement * 75\%$$

Where:

Demonstrated FS Transmission is equal to the sum of all transmission demonstrated with completed paths and Approved Transmission Exceptions.

$$\begin{aligned} Demonstrated\ FS\ Transmission \\ &= \sum Trasnmission\ Demonstrated\ (completed\ paths) \\ &\mp Approved\ Transmission\ Exceptions \end{aligned}$$

Appendix H – Demand Response Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that for each Demand Response Qualifying Resource included in the accompanying FS Submittal, [Participant,] upon due investigation, has determined whether the demand response capability of such resource has been previously deployed to reduce load, and if such capability has been deployed to reduce load, Participant has, for purposes of developing the P50 Peak Load Forecast employed in such FS Submittal, added back to each historic hour when such capability was deployed the MWs of load reduction provided by such capability in such hour.

Appendix I – Storage Hydro Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that I have reviewed [Participant]'s Storage Hydro Qualifying Capacity Contribution (QCC) provided this day by [Participant] to Western Power Pool (i.e., Program Administrator) ; and, to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein, that such QCC has been calculated in accordance with the methodology set forth in *BPM 105 Qualifying Resources* and such calculation meets all requirements of Tariff Section 16.2.5.5; that [Participant] has provided the Program Administrator with all information necessary to review such QCC that is stated in Tariff, Section 16.2.5.5, to the extent requested by the Program Administrator, and that all statements and information included in the FS Submittal with respect to the calculation of such QCC are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix J – Transmission Rights Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that [Participant] has the transmission rights from [insert Qualifying Resources] Qualifying Resources to the load on [Participant's] system, but [Participant] is unable to provide transmission service reservation information.

WESTERN POWERPOOL

Western Resource Adequacy Program

206 Settlement Pricing

200 – Operations

Revision History

Manual Number	Version	Description	Revised By	Date
206	0.1	RAPC Glance Version	Ryan Roy	7/18/2023
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206	3.0	Annual BPM Review	Elise Mousseau	3/19/2026
206	3.1	2026-EP-04 Rockies Subregion	Maya McNichol	

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206 Settlement Pricing

1. Introduction

When a Participant has a negative Sharing Calculation result for an hour of an Operating Day, the Operation Program of the Western Resource Adequacy Program (WRAP) requires Participants with surplus to hold back capacity that could result in an Energy Delivery to the deficient Participant that would be supported by bilateral transactions at prices and quantities determined by the Program Administrator and Program Operator as prescribed by theTariff. The Settlement Pricing Business Practice Manual (BPM 206) provides implementing details and practices regarding the WRAP-required pricing for Energy Deployments and Holdback Requirements, the identification of a Subregion-specific Day-Ahead Applicable Index Price and a Real-Time Applicable Price Index used in such pricing, and the calculation and posting of settlement quantities and settlement prices.

1.1. Intended Audience

BPM 206 is intended for WRAP Participants and other interested individuals or entities. BPM 206 is particularly useful for those individuals that are responsible for their Participant organization's implementation of Holdback Requirement and Energy Deployment transactions, and ensuring that the pricing for those transactions complies with WRAP requirements.

1.2. What You Will Find in This Manual

BPM 206 consists of sections detailing the WRAP-required pricing for Energy Deployments and Holdback Requirements, the Applicable Price Indices used in such pricing, and the calculation of settlement prices. Related provisions are addressed in other BPMs. BPM 206 will be paired with *BPM 207 Settlement Process* which covers details such as how to access posted prices, the process for remedying disputed prices, and the process for handling changes in input data etc. In addition, *BPM 204 Holdback Requirement* and *BPM 205 Energy Deployment* provide implementing details on the Tariff rules for determining the seller (surplus Participant), the buyer (deficient Participant), and the transaction quantity for Holdback Requirements and for Energy Deployments.

1.3. Purpose

The purpose of BPM 206 is to provide implementation details of the settlement pricing for Holdback Requirement and Energy Deployment transactions in the WRAP.

1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 206 have their meaning set forth in the Tariff or in another BPM.

Declined Energy: The amount of Holdback Requirement not affirmatively requested by a deficient Participant.

Final Settlement Revenue: The revenue paid by the deficient Participant to the surplus Participant for any hour of a given Day where the deficient Participant was responsible for Holdback Requirement or claimed an Energy Deployment.

Heavy Load Hour (HLH): From hour ending 7 through hour ending 22, Monday through Saturday, excluding North American Electric Reliability Corporation (NERC) holidays.

Light Load Hour (LLH): From hour ending 1 through hour ending 6 and from hour ending 23 through hour ending 24, Monday through Saturday, and all hours of the Day on Sundays and NERC holidays.

Possible Block Sale Revenue: The revenue, calculated separately for HLH and LLH blocks, that would have been realized had the surplus Participant sold a standard block with a MW value equal to the MW value in the hour with the highest sum of such Participant's Holdback Requirements obligated to all deficient Participants.

Unheld Energy: A quantity of energy that was not part of a Holdback Requirement, but that was part of a block that could have been sold in a Day-Ahead market had the Participant not been subject to a Holdback Requirement.

2. Background

When a surplus Participant is assigned a Holdback Rrequirement for a deficient Participant, or provides Energy Deployment to a deficient Participant, the sale is a bilateral transaction between the two parties, but the pricing is dictated by the WRAP Tariff and calculated by the Program Administrator. Under the WRAP Tariff it is possible for a Participant to be allocated a Holdback Requirement for a deficient Participant that does not result in an Energy Deployment as described in *BPM 205 Energy Deployment*. The WRAP Tariff thus provides for calculation of separate prices to compensate for Holdback Requirements and Energy Deployment, along with separate calculations of i) the amounts to be paid and received as compensation for Holdback Requirements; and ii) the amounts to be paid and received as compensation for Energy Deployment. The WRAP Tariff-prescribed pricing also includes a Make Whole Adjustment component to compensate for a specific type of opportunity cost. BPM 206 also provides certain

implementing details that the Program Administrator or Program Operator will use to calculate the settlement prices and quantities.

BPM 207 Settlement Process describes in detail the various settlement processes including but not limited to the mechanics of posting settlement information, invoicing, the process for addressing changes to or errors in published prices, missing data, timing requirements of the bilateral settlement process and changing the Applicable Price Index .

3. Applicable Price Index

~~Two~~ Three Subregions have been established within the WRAP Region: 1) the Northwest Subregion, ~~and~~ 2) the Southwest ~~and East~~ Subregion, and 3) the Rockies Subregion, as defined and delineated in *BPM 102 Reliability Metric Setting*. Each Subregion will have a Day-Ahead Applicable Index Price and a Real-Time Applicable Price Index. The Applicable Prices Index are intended to be a fair representation of the price of energy in a given Subregion and were chosen based on a reasonable assumption that they could be utilized to facilitate an efficient and timely settlement process. If necessary the Applicable Price Index can be changed as described in *BPM 207 Settlement Process*.

Northwest Subregion

The Day-Ahead Applicable Price Index is the ICE Day-Ahead Mid-Columbia (Mid-C) Index.

The Real-Time Applicable Price Index is the Powerdex Real-Time Mid-C Index.

Southwest ~~and East~~ Subregion

The Day-Ahead Applicable Price Index is the ICE Day-Ahead Palo Verde (PV) Index.

The Real-Time Applicable Price Index is the average of the four 15-minute market (FMM) results for the PV intertie in the California Independent System Operator (CAISO) market (FMM Scheduling Point / Tie Combination Locational Marginal Price; Node: PALOVRDE_ASR-APND; Tie: PVWEST).

Rockies Subregion

The Day-Ahead Applicable Price Index is the average of the hourly Day-Ahead locational marginal prices at the PSCO Node in Southwest Power West (SWPW) BA for applicable LLH or HLH blocks.

The Real-Time Applicable Price Index is the hourly Real-Time locational marginal price at the PSCO Node in SWPW BA.

4. Settlement Pricing Overview and Components

The pricing for Holdback Requirements and Energy Deployments both start with calculation of the Total Settlement Price. The separate prices for Holdback Requirements and for Energy Deployments are then derived (at least in part) from the Total Settlement Price. The price for Holdback Requirements is known as the Holdback Settlement Price. The price for Energy Deployments is known as the Energy Declined Settlement Price. The following subsections show the calculation of the Total Settlement Price (Section 4.1), the Holdback Settlement Price (Section 4.2), and the Energy Declined Settlement Price (Section 4.3).

Section 4.4 shows how the pricing for Holdback Requirements is applied to the transaction quantities for Holdback Requirements, and how the pricing for Energy Deployments is applied to the transaction quantities for Energy Deployments.

Section 4.5 shows how to calculate a Make Whole Adjustment, which is applied if the settlement revenue and the estimated value of the Holdback Requirement not deployed (the sum of the Unheld Energy and Declined Energy) is less than the estimated revenues the surplus Participant would have received had it not been subject to a Holdback Requirement. In other words, the Make Whole Adjustment ensures a surplus Participant is compensated in an amount that is no less than the revenue that it could have made had it sold in a Day-Ahead market the full block that was bifurcated to meet the Holdback Requirement. The Make Whole Adjustment includes both pricing elements and quantity elements, since it is triggered by revenue levels, and results in a minimum revenue amount. As the Make Whole Adjustment compensates a surplus Participant for taking on a Holdback Requirement, it is applied to any surplus Participant that takes on a Holdback Requirement, whether or not it also provides an Energy Deployment.

Section 4.6 shows how to allocate the Make Whole Adjustment when there is a single surplus Participant with a Holdback Requirement that is being allocated to multiple deficient Participants. The surplus Participant with the Holdback Requirement should receive a Make Whole Adjustment equal to their maximum total Holdback Requirement. In such cases, the obligation for providing the Make Whole Adjustment will be shared among multiple Particpants.

If and when a Participant voluntarily takes on a Holdback Requirement or Energy Deployment (meaning that the WRAP Tariff does not require the Participant to take on the Holdback Requirement or Energy Deployment), the pricing will be the same as

described in BPM 206 for Holdback Requirements and Energy Deployments that are required by the WRAP Tariff.

A daily settlement reflecting Holdback Requirements and Energy Deployments between two Participants will be calculated any time a deficient Participant has requested holdback resulting in a Holdback Requirement for another Participant.

4.1. Total Settlement Price

The Total Settlement Price is based on a Subregion index price, shaped hourly to reflect changes in energy/capacity value from hour to hour, includes a 10% adder, and will not exceed $2,000/MWh or be lower than $0/MWh. The Total Settlement Price is determined in accordance with the following formula:

Total Settlement Price = Maximum of (Minimum of (Hourly Shaping Factor × Day-Ahead Applicable Price Index × 110%, 2000 $/MWh), 0)

where:

Day-Ahead Applicable Price Index is the Day-Ahead peak/off-peak ICE Index price specified above for the Subregion applicable to the location of the delivering entity, applicable to the Day and hour of the energy delivery (assuming that the surplus and deficient Participants are in the same Subregion; if not, see Section 4.8). If donated transmission was used to facilitate holdback, the Day-Ahead Applicable Price Index is the higher of the two subregional Day-Ahead index prices for that portion of the transaction.

And where:

Hourly Shaping Factor for the Operating Day being settled is derived using the System Marginal Energy Component of the Locational Marginal Price, as defined in the CAISO tariff, which price component is the same at all locations in the CAISO energy market as described generally below and more fully in the CAISO Business Practice Manual for Market Instruments, Section P.2 Maximum Import Bid Price Calculation, located here: https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Market%20Instruments. Specifically, the Hourly Shaping Factor uses the most recent High-Priced Day for the current season, defined as a Day in which at least one hour has a System Marginal Energy Cost ("SMEC") greater than $200/MWh, and is calculated as follows:

Hourly Shaping Factor = 1 + {[CAISO Hourly Day-Ahead SMEC – CAISO Average Day-Ahead SMEC (on- or off-peak hours)] / [CAISO Average Day-Ahead SMEC (on- or off-peak hours)]}

The Hourly Shaping Factor is published by the CAISO and can be found on their Open Access Same-Time Information System (OASIS) located here: http://oasis.caiso.com/mrioasis/logon.do using the following navigation: Prices -> Energy Prices -> Hourly Energy Price Shaping Factor.

4.2. Holdback Settlement Price

The Holdback Settlement Price is the Energy Declined Settlement Price subtracted from the Total Settlement Price.

Holdback Settlement Price =
Total Settlement Price - Energy Declined Settlement Price

4.3. Energy Declined Settlement Price

The Energy Declined Settlement Price is the Real-Time Applicable Price Index for the hour. This price is used both as the price paid by the deficient Participant for energy delivered and as the credit the deficient Participant receives towards the Make Whole Adjustment for any of the surplus Participant's Holdback Requirement that was not delivered. It is termed Energy Declined Settlement Price because the calculation of settlement prices is from the perspective of the surplus or selling Participant.

Energy Declined Settlement Price =
Real-Time Applicable Price Index

4.4. Application of Pricing and Quantities for Holdback Requirements and Energy Deployment Transactions

A surplus Participant assigned a Holdback Requirement on a Preschedule Day for any hour of an Operating Day shall be paid the Holdback Settlement Price multiplied by the MW quantity of the Holdback Requirement. A surplus Participant that provides energy to a deficient Participant pursuant to an Energy Deployment shall be paid the Energy Declined Settlement Price multiplied by the MWh of energy provided to the deficient Participant. A surplus Participant assigned a Holdback Requirement also shall be paid, when applicable, a Make Whole Adjustment (see Section 4.5).

A Participant that had a negative Sharing Calculation for any hour of an Operating Day (a deficient Participant) and confirmed to the PA its need for the Holdback Requirement, which was incorporated in the calculation of Holdback Requirements of any surplus Participants for such hour, determined as of the Preschedule Day, shall pay the Holdback Settlement Price multiplied by the MW quantity of such negative Sharing Calculation. Such a deficient Participant shall also pay the Energy Declined Settlement Price multiplied by the MW quantity deployed. In addition, any Participant that had a negative Sharing Calculation and confirmed to the PA its need for the Holdback

Requirement, that was incorporated in the calculation of a Holdback Requirement shall contribute to the payment of the Make Whole Adjustment based on its negative Sharing Calculation.

Final Settlement Revenue =
*(Holdback Settlement Price * MW of Holdback Requirement)*
*+ (Energy Declined Settlement Price * MW Energy Deployed)*

4.5. Make Whole Adjustment

The Make Whole Adjustment is a single value calculated, separately for HLH and LLH blocks, on a daily basis applied in the event that the settlement revenue and the estimated value of the Unheld Energy and Declined Energy for a given Day is less than the estimated revenues the surplus Participant would have received had the surplus Participant not been subject to a Holdback Requirement and had sold a Day-Ahead block of energy with a MW value equal to the maximum amount of Holdback Requirement for the hours in the block. If the Holdback Requirement occurs on a HLH the Possible Block Sale Revenue will be calculated using the peak Day-Ahead Applicable Index Price. If the Holdback Requirement occurs on a LLH the Possible Block Sale Revenue will be calculated using the off-peak Day-Ahead Applicable Price Index. The Make Whole Adjustment has a minimum value of 0 and is determined as follows:

Make Whole Adjustment (when applicable) =

Maximum of (Possible Block Sale Revenue
- Final Settlement Revenue
- Real-Time Value of Declined Energy
- Real-Time Value of Unheld Energy, 0)

Where:

Real-Time Value of Declined Energy = Declined Energy × Declined Energy Settlement Price

Provided that Declined Energy is only applicable to those hours where there was a positive Holdback Requirement.

And where:

Real-Time Value of Unheld Energy = (Maximum Holdback MW in Block of Energy – Holdback MW Requested) × Real-Time Applicable Price Index

Provided that the calculation of Unheld Energy is only applicable to those hours where there was not a Holdback Requirement and will be calculated for all remaining hours in

the heavy load period if the Holdback Requirement is in the HLHs or for all remaining hours in the light load period if the Holdback Requirement is in the LLHs.

For which purpose:

Real-Time Applicable Index Price is the real-time index price above for the Subregion applicable to the location of the surplus Participant, applicable to the Day and hour of the energy delivery (assuming the surplus and deficient Participants are in the same Subregion; if not, see Section 4.8);

And block of energy means a product having a set number of hours corresponding to either the LLH or HLH where the MW amount is the same in all hours and equal to the maximum amount of the Holdback Requirement.

The Make Whole Adjustment is the maximum of the result of the formula and zero. The Make Whole Adjustment is intended to ensure the surplus Participant is made whole for lost opportunity cost so in the event the result of the calculation is less than or equal to zero there will be no Make Whole Adjustment. The Make Whole Adjustment will be calculated for each Day on a regular cadence.

4.6. Allocation of Holdback Settlement to Multiple Participants

Any Participant having a Holdback Requirement that is allocated to multiple deficient Participants shall have their Possible Block Sale Revenue calculated based on the MW amount in the hour with their largest Holdback Requirement.

To determine how much of the holdback MW used to derive the Possible Block Sale Revenue is attributable to each deficient Participant receiving an allocation of the Holdback Requirement the following methodology will be utilized.

1. Each deficient Participant's maximum allocation of the Holdback Requirement will be organized into tranches where the portion of the total Make Whole Adjustment attributable to each tranche is separately calculated and allocated to the Participants claiming the Holdback Requirement MW in each tranche.

2. A deficient Participant's portion of the Make Whole Adjustment attributable to the MW in each tranche will be allocated based on the following:

    a. On hours where there is a Holdback Requirement those Participants receiving the allocation will be responsible for the settlement associated with that holdback MW amount.

b. On hours where there is no Holdback Requirement the settlement associated with the MW amount used to calculated the Possible Block Sale Revenue will be split equally amoung those Participants with Holdback Requirement MW in the tranche.

3. The total Make Whole Adjustment is derived by calculating the Make Whole Adjustment attributable to the Holdback Requirement MW in the first tranche, allocating the resulting adjustment value to Participants in the first tranche, increasing the Holdback Requirement MW for those Participants in the second tranche, recalculating the Make Whole Adjustment, and allocating the delta in the Make Whole Adjustment from the previous calculation to each Particpant in the second tranche equally. This continues until there are no more tranches to process.

The Real-Time Value of Declined Energy will be credited to the Participant that declined the energy delivery.

The Real-Time Value of Unheld Energy will be credited to each Participant receiving holdback based on the amount of MW they are obligated for in the calculation of Possible Block Sale Revenue.

The sum of the Make Whole Adjustment obligation allocated to each Participant shall always equal the Make Whole Adjustment that would have been calculated between a single surplus Participant and a single deficient Participant.

An example is provided in the Settlement Pricing Examples document which is posted on the Western Power Pool website.

4.7. Transmission Service

The WRAP Tariff does not separately address pricing for transmission service used in WRAP transactions in which the surplus Participant and deficient Participant are in the same Subregion. Participants are individually responsible for the cost of the transmission to deliver to a point (when such Participant is surplus) or take receipt at a point (when such Participant is deficient). These costs will not be included in the WRAP Tariff defined settlement.

4.8. Settlement Pricing for Subregions

Settlement prices recognize pricing differences among Subregions. Where the surplus Participant and deficient Participant are located in the same Subregion, the Applicable Price Index shall be the price index specified above for that Subregion. Where the surplus Participant and deficient Participant are located in different Subregions, the

following components of the settlement price calculation will be calculated using the Applicable Price Index for the Subregion that has the higher index price: (i) Possible Block Sale Revenue; (ii) Total Settlement Price; (iii) Energy Declined Settlement Price; and (iv) Real-Time Value of Unheld Energy. When there are only two Participants there is no explicit settlement for transmission as the surplus Participant receives the higher of the two Subregions' Applicable Index Price. If a third Participant is involved by providing transmission service rights between Subregions, the Participant that provided holdback or Energy Deployment shall receive the settlement price of the Subregion from which the Holdback Requirement or Energy Deployment was sourced, and the Participant that provided Subregion to Subregion transmission service rights pursuant to the WRAP Tariff shall receive the difference in the Total Settlement Price between the Subregion where the holdback was sourced and the Subregion where the energy was delivered, or zero, whichever is greater.

Western Resource Adequacy Program

Change Request Form

Lead Sponsor Information	
Name: Maya McNichol	Organization: Western Power Pool
Title: WRAP Policy and Stakeholder Engagement Manager	Phone Number: (503) 445-1074
Email: WRAP@westernpowerpool.org	Date of Submission: 9/4/2026

Co-Sponsors Information (optional)	
Name:	Organization:
Phone Number:	Email:
Name:	Organization:
Phone Number:	Email:
Name:	Organization:
Phone Number:	Email:

Exigent Circumstance

Check one:

- ☐ A FERC-mandated amendment to the Tariff or the Business Practice Manuals
- ☐ An amendment to the Tariff or the Business Practice Manuals to address an immediate reliability impact
- ■ An amendment to this Tariff or the Business Practice Manuals that the RAPC has determined has significant impacts to utility service

Date Exigent Circumstance determined by RAPC: 9/10/2026

Type of Change Requested

Check one*:

- ☐ Correction *(i.e., revising erroneous language or language that needs clean-up for grammatical errors or inconsistency across governing documents - no changes to intent or policy)*
- ☐ Clarification *(i.e., revising language to better represent existing intent, no changes to functionality or policy)*
- ☒ Enhancement *(i.e., revising language to expand upon existing intent or functionality)*
- ☐ New Protocol, Business Practice, Criteria, Tariff *(i.e., new language to accommodate new functionality or policy not existing today)*
- ☒ Change *(i.e., a change in the existing policy – will replace an existing language)*
- ☐ Other *(i.e., changes that do not fall into the categories listed above)*

Description of Change

Provide a description of the issue*:

The current Capacity Critical Hours (CCH) methodology identifies a single set of CCH applicable across the entire WRAP Region. This methodology was developed more than five years ago based on the anticipated WRAP footprint and an expectation of a relatively interconnected regional system.

As the WRAP footprint and associated modeling have developed, a single regional set of CCH has become less representative of the conditions under which capacity is needed and available within the Program. The WRAP footprint has meaningful transmission constraints between areas, and other WRAP reliability modeling generally recognizes these limitations through the use of Subregions. The Program therefore does not assume that capacity available in one part of the footprint will necessarily be available to address a capacity need in all other parts of the footprint.

The proposed change would determine CCH separately for each WRAP Subregion. Load and applicable resource output would be aggregated at the Subregional level, and each Subregion would have its own set of CCH reflecting the periods of highest capacity need within that Subregion. This would better align the CCH methodology with the geographic framework used in other WRAP reliability modeling and with the transfer capability assumed between areas of the footprint.

The proposal would also replace the existing prescriptive Regional Interchange adjustment with a more general Additional Adjustments component. Additional adjustments could include

regional interchange, impact of scarcity as determined by price, or other factors that materially affect the determination of CCH. This would allow the methodology to account for relevant system conditions without relying on an interchange methodology developed for an earlier configuration of the WRAP footprint. The BPM language provides for documenting the assumptions used in the Additional Adjustments section and publishing that with the CCH dataset.

Any WRAP metrics and qualifying capacity contributions calculated after the effective date of this proposal will use the methodology provided here.

Please provide the following information if known and/or available.

1. Provide the specific document and language you would like changed:

The following documents will be updated:

- WRAP Tariff
- BPM 104 – Capacity Critical Hours
- BPM 108 – FS Submittal Process

2. Provide a suggestion for how language could be updated to address issue:

See redlines to the above documents attached.

Impact of Change

Describe the benefits that will be realized from this change*:

The proposed change would better align CCH determination with the geographic structure and transmission limitations reflected in other WRAP reliability modeling. Determining CCH by Subregion would reduce the potential for conditions in one area of the footprint to drive the accreditation of resources in another area where those resources would not be assumed available to meet the underlying capacity need. As a result, resource accreditation would more accurately reflect the times when resources are needed within the area in which they can reasonably be relied upon.

Please provide the following information if known and/or available.

1. Any data/information available that would characterize the importance or magnitude of the issue (allows for file attachments):

WESTERN RESOURCE ADEQUACY PROGRAM

TARIFF

OF

NORTHWEST POWER POOL

D/B/A

WESTERN POWER POOL

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SCHEDULE 1
WESTERN RESOURCE ADEQUACY PROGRAM ADMINISTATIVE COST RECOVERY CHARGE

ATTACHMENT A
Western Resource Adequacy Program Agreement

PART I GENERAL PROVISIONS

1. Definitions

Unless the context otherwise specifies or requires, capitalized terms used in this Tariff shall have the respective meanings assigned herein for all purposes of this Tariff (such definitions to be equally applicable to both the singular and the plural forms of the terms defined). Unless otherwise specified, all references herein to Parts, Sections, Schedules, or Attachments, are to Parts, Sections, Schedules, or Attachments of this Tariff.

Applicable Price Index: A published index of wholesale electric prices, or Locational Marginal Prices duly calculated and posted by a FERC-regulated market operator, in either case as designated under Part III of this Tariff for use in connection with an identified Subregion.

Administration Charge or WRAP Administration Charge: The charge established under Schedule 1 of this Tariff for recovery of the costs of the WRAP.

Advance Assessment: Analyses and calculations of Participant load, resource, and other information performed in advance of each Binding Season as set forth in Part II of this Tariff.

Aggregate Capacity Deficiency: As to a Binding Season, the sum of the maximum Monthly Deficiencies of all Participants that submitted FS Submittals for such Binding Season, as determined following completion of the Cure Period for such Binding Season.

Available Transfer Capability ("ATC"): Transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses.

Balancing Authority: The responsible entity that integrates resource plans ahead of time, maintains demand and resource balance within a Balancing Authority Area, and supports interconnection frequency in real time.

Balancing Authority Area: The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

Base Charge: A component of the WRAP Administration Charge as established under Schedule 1 of this Tariff.

Base Costs: Base Costs shall have the meaning provided in Schedule 1 of this Tariff.

Base Services Cost Centers: The cost centers comprising the Base Charge as defined in Schedule 1 of this Tariff.

Base Services Percentage: Base Services Percentage shall have the meaning provided in Schedule 1 of this Tariff.

Binding Season: The Summer Season or the Winter Season.

Board of Directors or Board: The Board of Directors of the Northwest Power Pool d/b/a Western Power Pool.

Business Day: Any Day that is a Monday through Friday, excluding any holiday established by United States federal authorities.

Business Practice Manuals: The manuals compiling further details, guidance, and information that are appropriate or beneficial to the implementation of the rules, requirements, and procedures established by this Tariff. Business Practice Manuals do not include such internal rules or procedures as the Western Power Pool may adopt for its operation and administration, including but not limited to any corporate by-laws of the Western Power Pool, or for any services or functions provided by the Western Power Pool other than those established by this Tariff.

CAISO: The California Independent System Operator Corporation, a California nonprofit public benefit corporation.

Capacity Benefit Margin: An amount of transmission transfer capability permitted under open access transmission rules to be reserved by load serving entities to ensure access to generation from interconnected systems to meet generation reliability requirements.

Capacity Critical Hours ("CCH"): Those hours during which the net Subregional capacity need ~~for the WRAP Region~~ is expected to be above the 95th percentile, based on historical and synthesized data for the ~~WRAP Region~~Subregion's gross load, variable energy resource performance, and other adjustments~~interchange~~.

Capacity Deficiency: A shortfall in a Participant's Portfolio QCC relative to that Participant's FS Capacity Requirement, as further defined in Part II of this Tariff.

Cash Working Capital Fund: Cash Working Capital Fund shall have the meaning provided in Schedule 1 of this Tariff.

Cash Working Capital Support Charge: A charge assessed to Participants under Schedule 1 of this Tariff to fund the Cash Working Capital Fund.

Cash Working Capital Support Charge Rate: Cash Working Capital Support Charge Rate shall have the meaning provided in Schedule 1 of this Tariff.

Central Hub: A designated point or named group of points on the transmission system within a Subregion identified by the Program Administrator that permits energy deliveries from multiple points within such Subregion.

Cost of New Entry ("CONE"): The estimated cost of new entry of a new peaking natural gas-fired generation facility, as determined under, and used in, Part II of this Tariff.

CONE Factor: A factor employed in the calculation of Deficiency Charges under Part II of this Tariff, to reflect whether, and the extent to which, the WRAP Region as a whole is expected to have a capacity deficiency during the period for which the Deficiency Charge is being calculated or a factor employed when a Participant has had repeated deficiencies in sequential years.

Committee of State Representatives ("COSR"): Committee of State Representatives, as established in Part I of this Tariff.

Contingency Reserve: As more fully described in the NERC WECC reliability standards, a quantity of reserves, consisting of generation, load, interchange, or other resources, that are deployable within ten minutes, equal to the greater of (i) the MW quantity of the loss of the most severe contingency and (ii) the megawatt quantity equal to the sum of 3% of hourly integrated load plus 3% of hourly integrated generation.

Critical Mass: *The threshold level of participation in a Subregion, as established in the Business Practice Manuals, below which each Participant of such Subregion may elect to participate as a Non-Binding Participant.*

Cumulative Delivery Failure Period: Any period of five consecutive years, ending with and including the most recent Energy Delivery Failure as of the time of determination of a possible Delivery Failure Charge.

Day: A calendar day.

Day-Ahead Price: A price for wholesale electric transactions designated as a day-ahead price in an Applicable Price Index.

Default Allocation Assessment: A charge assessed on non-defaulting Participants to recover the costs associated with a default by a Participant, as set forth in Part I of this Tariff.

Deficiency Charge: A charge assessed for a Capacity Deficiency or Transmission Deficiency, as set forth in Part II of this Tariff.

Delivery Failure Charge: A charge assessed for a Participant's failure to deliver a required Energy Deployment, as set forth in Part III of this Tariff.

Delivery Failure Charge Rate: A rate employed in the determination of a Delivery Failure Charge as more fully set forth in Part III of this Tariff.

Delivery Failure Factor: A factor used in the determination of a Delivery Failure Charge to recognize the relative severity or impact of an Energy Delivery Failure, as set forth in Part III of this Tariff.

Demand Response: A quantifiable load reduction or otherwise controllable load for which a Participant has two mutually-exclusive options to use to affect its FS Capacity Requirements in a FS for a Binding Season: (1) leave the effects of historically deployed demand response as part of its load provided for the Advance Assessment; or (2) utilize as a Demand Response Capacity Resource.

Demand Response Capacity Resource: A Qualifying Resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with the requirements established under Part II of this Tariff utilized to meet a Participant's FS Capacity Requirement.

Demonstrated FS Transmission: A Participant's demonstration in its Forward Showing Submittal that it has secured WRAP Qualifying Transmission in a quantity sufficient to provide reasonable assurance, as of the time of the Forward Showing Submittal, of delivery of capacity

from the Qualifying Resources and the resources associated with the power purchase agreements in the Participant's Portfolio QCC.

Discounted Deficiency Change: *A reduced Deficiency Charge during the Transition Period that enables a deficient Participant that demonstrates commercially reasonable efforts but is unable to cure deficiencies to access Operations Program capacity.*

Dual Benefit Cost Centers: Dual Benefit Cost Centers shall have the meaning provided in Schedule 1 of this Tariff.

Effective Load Carrying Capability ("ELCC"): A methodology employed to determine the Qualified Capacity Contribution of certain types of Qualifying Resources, as more fully set forth in Part II of this Tariff.

Energy Declined Settlement Price: A pricing component used as part of the calculation of settlements for Holdback Requirements and Energy Deployments under Part III of this Tariff.

Energy Delivery Failure: A failure by a Participant to provide an Energy Deployment assigned to such Participant under Part III of this Tariff.

Energy Deployment: A delivery of energy that a Participant is required to provide during an Operating Day, as set forth in Part III of this Tariff.

Energy Storage Resource: A resource, not including a Storage Hydro Qualifying Resource, designed to capture energy produced at one time for use at a later time.

Excused Transition Deficit: A Participant's inability during the Transition Period to demonstrate full satisfaction of the Participant's FS Capacity Requirement, which, under certain conditions and limitations prescribed by Part II of this Tariff, permits *the Participant to pay a Discounted* Deficiency Charge.

Federal Power Marketing Administration: A United States federal agency that operates electric systems and sells the output of federally owned and operated hydroelectric dams located in the United States.

FERC: The Federal Energy Regulatory Commission.

Forced Outage Factor: The factor resulting from dividing the number of hours a generating unit or set of generating units is not synchronized to the grid system, not in reserve shutdown state and considered to be out of service for unplanned outages—or a startup failure, by the number of total hours in the period multiplied by 100% or a Program Administrator calculated equivalent forced outage factor that reflects the likelihood and extent to which a resource will be unavailable from time to time due to factors outside management control.

Forward Showing Program: The program and requirements as set forth in Part II of this Tariff.

Forward Showing Submittal ("FS Submittal"): The submissions a Participant is required to submit in advance of each Binding Season to demonstrate its satisfaction of the FS Capacity Requirement and FS Transmission Requirement, as set forth in Part II of this Tariff.

Forward Showing Year: A period consisting of a Summer Season and the immediately succeeding Winter Season.

FS Capacity Requirement: The minimum quantity of capacity a Participant is required to demonstrate for a Binding Season, as set forth in Part II of this Tariff.

FS Deadline: The deadline for Participants' submissions of their FS Submittals for a Binding Season, as established under Part II of this Tariff.

FS Planning Reserve Margin ("FSPRM"): An increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages, or lower availability of resources, expressed as a percentage of the applicable peak load forecast, as determined in accordance with Part II of this Tariff.

FS Transmission Requirement: The minimum quantity of WRAP Qualifying Transmission a Participant is required to demonstrate for a Binding Season, as set forth in Part II of this Tariff.

High-Priced Day: The most recent day in the CAISO in which prices in the day-ahead market were at least $200/MWh.

Holdback Capacity: Capacity that is voluntarily supplied or is the result of a positive Sharing Calculation result that is bindingly committed to the WRAP after it is claimed by one or more Participants with a negative Sharing Calculation result.

Holdback Requirement: A MW quantity, as determined on a Preschedule Day, that a Participant is required to be capable of converting into an Energy Deployment on a given hour of the succeeding Operating Day, as more fully set forth in Part III of this Tariff.

ICE Index: A wholesale electric price index prepared and published by the Intercontinental Exchange.

Incremental Cash Working Capital Support Charge: Incremental Cash Working Capital Support Charge shall have the meaning provided in Schedule 1 of this Tariff.

Independent Evaluator: An independent entity engaged to provide an independent assessment of the performance of the WRAP and any potential beneficial design modifications, as set forth in Part I of this Tariff.

Installed Capacity: Nameplate capacity adjusted for conditions at the site of installation.

International Power Marketing Entity: An entity that (i) owns, controls, purchases and/or sells resource adequacy supply and is responsible under the WRAP program for meeting LRE obligations associated with one or more loads physically located outside the United States.

Legacy Agreement: A power supply agreement entered into prior to October 1, 2021.

Load Charge: A component of the WRAP Administration Charge as established under Schedule 1 of this Tariff.

Load Charge Rate: Load Charge Rate shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Costs: Load Services Costs shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Cost Centers: Load Services Cost Centers shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Percentage: Load Services Percentage shall have the meaning provided in Schedule 1 of this Tariff.

Load Responsible Entity ("LRE"): An LRE is an entity that (i) owns, controls, purchases and/or sells resource adequacy supply, or is a Federal Power Marketing Administration or an International Power Marketing Entity, and (ii) has full authority and capability, either through statute, rule, contract, or otherwise, to:

(a) submit capacity and system load data to the WRAP Program Operator at all hours;

(b) submit Interchange Schedules within the WRAP Region that are prepared in accordance with all NERC and WECC requirements, including providing E-Tags for all applicable energy delivery transactions pursuant to WECC practices and as required by the rules of the WRAP Operations Program;

(c) procure and reserve transmission service rights in support of the requirements of the WRAP Forward Showing Program and Operations Program; and

(d) track and bilaterally settle holdback and delivery transactions.

Subject to the above-mentioned criteria, an LRE may be a load serving entity, may act as an agent of a load serving entity or multiple load serving entities, or may otherwise be responsible for meeting LRE obligations under the WRAP.

Locational Marginal Price: The cost of delivering an additional unit of energy to a given node, as calculated under a FERC-regulated wholesale electric tariff.

Loss of Load Expectation ("LOLE"): An expression of the frequency with which a single event of failure, due to resource inadequacy, to serve firm load would be expected (based on accepted reliability planning analysis methods) to result from a given FS Planning Reserve Margin.

Make Whole Adjustment: A component used as part of the calculation of settlements for Holdback Requirements and Energy Deployments under Part III of this Tariff.

Maximum Base Charge: The maximum amount prescribed in Schedule 1 of the Tariff that the Base Charge cannot exceed.

Maximum Load Charge Rate: The maximum rate prescribed in Schedule 1 of the Tariff that the Load Charge Rate cannot exceed.

Median Monthly P50 Peak Loads: Median Monthly P50 Peak Loads has the meaning prescribed by Schedule 1 of this Tariff.

Month: A calendar month.

Monthly Capacity Deficiency: A Participant's Capacity Deficiency for a given Month.

Monthly Deficiency: An identification under Part II of this Tariff whether, and the extent to which, a Participant's need for capacity or transmission for a given Month is greater than the capacity or transmission, respectively, the Participant can demonstrate for such Month.

Monthly FS Capacity Requirement: FS Capacity Requirement determined as to a Month.

Monthly FSPRM: The FS Planning Reserve Margin applicable to a given Month of a given Binding Season, as determined in accordance with Part II of this Tariff.

Monthly Transmission Deficiency: A Participant's Transmission Deficiency for a given Month.

Monthly Transmission Demonstrated: A Participant's Demonstrated FS Transmission for a given Month.

Monthly Transmission Exceptions: Exceptions from the FS Transmission Requirement approved under Part II of this Tariff for a Participant for a given Month.

Multi-Day-Ahead Assessment: A period of days preceding each Operating Day, and ending on the Preschedule Day, during which Sharing Calculations are successively performed based in each case on Operating Day conditions expected at the time of calculation.

North American Electric Reliability Corporation ("NERC"): A not-for-profit international regulatory authority that serves as the designated electric reliability organization for the continental United States, Canada, and a portion of Mexico.

Net Contract QCC: The QCC, which may be a positive or negative value, calculated, in sum and on net, for a Participant's power purchase agreements and power sale agreements, in accordance with Part II of this Tariff.

Non-Binding Season: As to a Participant, *any* Binding Season during which the *provisions of Section 15A.1* of this Tariff *apply*.

Non-Binding Participant: For any Binding Season, a Participant that has made an election by which such Binding Season is a Non-Binding Season for that Participant.

Open Access Transmission Tariff: A governing document on file with FERC establishing the rates, terms, and conditions of open access transmission service, or equivalent tariff of a transmission service provider that is not required to file its transmission service tariff with FERC.

Operating Day: A current Day of actual electric service from resources to load, for which Sharing Events are determined and Energy Deployments may be required, as set forth in Part III of this Tariff.

Operations Program: The program and requirements set forth in Part III of this Tariff.

P50 Peak Load Forecast: A peak load forecast prepared on a basis, such that the actual peak load is statistically expected to be as likely to be above the forecast as it is to be below the forecast.

Participant: A Load Responsible Entity that is a signatory to the WRAPA.

Portfolio QCC: As to a Participant, the sum of the Resource QCC provided by all of a Participant's Qualifying Resources plus the Net Contract QCC of such Participant, as adjusted to reflect RA Transfers as described in Section 16.2 7 and Planned Outages as described in Section 16.2.8.

Preschedule Day: The applicable scheduling Day for a given Operating Day as defined in scheduling calendar established by WECC.

Program Administrator: The Western Power Pool, in its role as the entity responsible for administering the WRAP.

Program Operator: A third party that has contracted with the Program Administrator to provide technical, analytical, and implementation support to the Program Administrator for the WRAP.

Program Review Committee ("PRC"): The stakeholder sector committee as established in Section 4.2 of this Tariff.

Pure Capacity: A MW quantity of capacity without any assigned forced outage rate employed in ELCC determinations under Part II of this Tariff.

Qualifying Capacity Contribution ("QCC"): The MW quantity of capacity provided by a resource, contract, or portfolio which qualifies to help satisfy a Participant's FS Capacity Requirement, as determined in accordance with Part II of this Tariff.

Qualifying Resource: A generation or load resource that meets the qualification and accreditation requirements established by and under Part II of this Tariff.

Real-Time Price: A price for wholesale electric transactions designated as a real-time price in an Applicable Price Index.

Resource Adequacy Participant Committee ("RAPC"): The committee comprised of representatives from each Participant as established in Part I of this Tariff.

Resource QCC: The QCC provided by a Qualifying Resource, as determined in accordance with Part II of this Tariff.

Run-of-River Qualifying Resource ("ROR"): A hydro-electric power project that does not have the capability to store a sufficient volume of water to support continuous generation at the project's stated maximum capacity for a period of one hour. Resource does not meet the definition of a Storage Hydro Qualifying Resource.

Safety Margin: An additional factor allocated among Participants with positive sharing calculations when warranted by certain conditions as prescribed by Part III of this Tariff.

Senior Official Attestation: A signed statement of a senior official of a Participant attesting that it has reviewed such Participant's information submission required under this Tariff, that the statements therein are true, correct and complete to the best of such official's knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein, and containing such further statements as required by this Tariff or the applicable Business Practice Manual for the information submission at issue.

Sharing Calculation: A calculation used in the Operations Program under Part III of this Tariff to identify any hour in which any Participant is forecast to have a capacity deficit.

Sharing Event: An hour or hours of an Operating Day for which one or more Participants has a negative Sharing Calculation result, as determined in accordance with Part III of this Tariff.

Storage Hydro Qualifying Resource: A hydro-electric power project with an impoundment or reservoir located immediately upstream of the powerhouse intake structures that can store a sufficient volume of water to support continuous generation at the project's stated maximum capacity for a period of one hour or longer.

Subregion: An area definition approved by the Board of Directors and identified in the Business Practice Manuals, that is wholly contained within the WRAP Region, which is separated from one or more other Subregions by transmission constraints on capacity imports or on capacity exports that result, or are expected to result, in differing FSPRM determinations for that Subregion relative to such other Subregion.

Summer Season: A period of time that commences on June 1 of a Year and terminates on September 15 of the same Year.

System Sale: A bilateral agreement that conveys generating capacity from a group of generating resources from one party to another.

Transition Period: The Binding Seasons within the time period from June 1, 2025, through March 15, *2029*, plus the time period required to implement the requirements and procedures of Part II of this Tariff applicable to such Binding Seasons.

Transmission Deficiency: A shortfall in a Participant's demonstration of secured WRAP Qualifying Transmission, after accounting for any approved transmission exceptions, relative to that Participant's FS Transmission Requirement, as further defined in Part II of this Tariff.

Unforced Capacity: The percentage of Installed Capacity available after a unit's forced outage rate is taken into account.

Variable Energy Resource ("VER"): An electric generation resource powered by a renewable energy source that cannot be stored by the facility owner or operator and that has variability that is beyond the control of the facility owner or operator, including but not limited to a solar or wind resource.

VER Zone: A geographic area delineated in accordance with Section 16.2.5.2 of this Tariff for a given type of VER, where each VER of that type located in such area is anticipated to be comparably affected by meteorological or other expected conditions in such area to a degree that warrants distinct calculation of ELCC allocations for such VERs of that type in such area.

Voluntary Holdback: Capacity that is offered to the Operations Program by a Participant with excess supply that is not obligated to the WRAP through a positive Sharing Calculation result, some or all of which can used as part of the offering Participant's Holdback Requirement. For a Participant in a Subregion without a Central Hub, Voluntary Holdback for an hour must additionally include a total quantity for all identified points from Section 19.4 at which it can deliver that is no less than the amount of the Voluntary Holdback capacity for such hour.

Western Electricity Coordinating Council ("WECC"): A non-profit corporation that has been approved by FERC as the regional entity for the western interconnection and that also has NERC delegated authority to create, monitor, and enforce reliability standards.

Western Resource Adequacy Program Agreement ("WRAPA"): The participation agreement for the Western Resource Adequacy Program, as set forth as Attachment A to this Tariff, or as set forth for an individual Participant in a non-conforming version of such participation agreement accepted by FERC.

Western Resource Adequacy Program ("WRAP"): The Western Resource Adequacy Program, as established under this Tariff.

Western Power Pool ("WPP"): Northwest Power Pool, d/b/a Western Power Pool, which serves as Program Administrator for the WRAP under this Tariff and holds exclusive rights under section 205 of the Federal Power Act to file amendments to this Tariff.

Winter Season: A period of time that commences on November 1 of a Year and terminates on March 15 of the immediately following Year.

WRAP Cost Assignment Matrix: The matrix set forth in Schedule 1 of this Tariff to identify which WRAP costs are assessed to the Base Charge and the Load Charge components of the WRAP Administration Charge.

WRAP Qualifying Transmission: Transmission service that is (i) NERC Priority 6 or NERC Priority 7 point-to-point transmission service, (ii) network integration transmission service, or (iii) any firm transmission product that constitutes the highest priority transmission service offered by a transmission service provider, is reserved in advance, cannot be curtailed for higher priority

transmission service, and is subject to curtailment only under reliability conditions necessary to maintain transmission system operations.

WRAP Region: The area comprising, collectively, (i) the duly recognized and established load service areas of all loads in the United States that all Participants are responsible for serving, (ii) the duly recognized and established load service areas of all loads in the United States that all load serving entities, on whose behalf a Participant acts in accordance with this Tariff, are responsible for serving, and (iii) the applicable location(s) on the United States side of the United States international border that form the basis for an International Power Marketing Entity's participation under the WRAP, in all cases excluding, for any Binding Season, any loads permitted by this Tariff to be excluded from Participants' Forward Showing Submittal for such Binding Season.

Year: A calendar year.

2. Role of Western Power Pool

2.1 WPP, acting under the direction of its Board of Directors, shall administer the WRAP as Program Administrator. Except as specified in Section 3 of this Tariff, WPP, as authorized by its Board of Directors, shall have the sole authority to submit to FERC amendments to the rates, terms, and conditions set forth in this Tariff under section 205 of the Federal Power Act, 16 U.S.C. § 824d. Nothing contained herein shall be construed as affecting in any way the right of any Participant or any other entity to apply to FERC for amendments to the rates, terms, and conditions contained herein under section 206 of the Federal Power Act, 16 U.S.C. § 824e, or any other applicable provision of that Act.

2.1.1 WPP president and staff shall support the Board of Directors in overseeing all aspects of the WRAP, including oversight and management of the Program Operator(s) in accordance with any Program Operator agreement(s) entered into by WPP under Section 2.2 of this Tariff.

2.1.2 WPP and its staff shall provide all legal, regulatory, and accounting support for the WRAP, including support for making filings with FERC as authorized by the Board of Directors.

2.1.3 WPP staff shall provide all logistical support necessary to facilitate implementation of the WRAP and specifically all logistical needs of the Board of Directors and reasonable logistical assistance to facilitate meetings and activities of the RAPC, PRC, and all subordinate organizational groups.

2.2 As Program Administrator, WPP shall undertake all actions as necessary to implement and administer the WRAP, including but not limited to engaging one or more Program Operator(s) to perform technical operations of the WRAP including both the Forward Showing Program and Operations Program. Except as otherwise provided herein, WPP may contract for certain activities required by this Tariff to be provided by one or more Program Operator(s) subject to oversight by the Board of Directors, provided, however, that the Program Operator shall operate solely as a contractor under the oversight of WPP, and WPP shall remain the sole point of compliance with this Tariff. WPP shall have the sole authority to enter into contracts for such engagements and is responsible for providing support and compensation for such Program Operator(s) pursuant to any contract(s).

2.2.1 WPP will contract with Program Operator(s) to assist WPP with providing reasonable technical support and expertise to all WRAP organizational groups as governed by the Program Operator's contract with WPP.

3. Role of the Board of Directors and Limitations on Board Authority

3.1 Authority: Ultimate authority over all aspects of the WRAP as established under this Tariff shall be vested in the independent Board of Directors. Each member of the Board of Directors shall at all times exhibit financial independence from all Participants and classes of Participants, as further provided in the WPP Bylaws and policies. As set forth in Section 2.1 of this Tariff, the Board of Directors shall have the exclusive authority to approve and direct WPP to file amendments to this Tariff with FERC under section 205 of the Federal Power Act, 16 U.S.C. § 824d, subject to the limitations and prohibitions imposed under Section 3.4 of this Tariff. The Board of Directors shall also have the exclusive authority to approve the Business Practice Manuals and any amendments to the Business Practice Manuals, subject to the terms, conditions, and limitations imposed under this Tariff.

3.2 The Board of Directors generally shall meet in open session for all matters related to the WRAP; however, the Board of Directors may meet in closed session as the chair deems necessary to safeguard the confidentiality of sensitive information, including but not limited to discussing matters related to personnel, litigation, or proprietary, confidential, or security sensitive information. The Board of Directors shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session. During open session, the chair of the Board of Directors will reasonably accommodate stakeholder requests to address the Board within the discretion of the chair.

3.3 The Board of Directors shall only consider amendments to this Tariff or the Business Practice Manuals after such amendments are first acted upon by the RAPC, subject to the following additional conditions:

3.3.1 In the event that the RAPC has voted to reject or has not voted to support a proposed amendment to this Tariff or the Business Practice Manuals, any stakeholder may appeal such decision to the Board of Directors, and the Board of Directors shall consider the appeal.

3.3.2 In the event that the RAPC has voted to reject or has not voted to support a proposed amendment to this Tariff or the Business Practice Manuals and a stakeholder has not appealed such decision, the Board of Directors may, on its own motion or motion of any member of the Board of Directors, consider the proposed amendment.

3.3.3 In the event that the COSR as a body opposes or appeals a RAPC decision to the Board of Directors regarding an amendment to this Tariff or the Business Practice Manuals, the process set forth in Section 4.3.3 of this Tariff shall apply prior to the Board of Directors' consideration of the RAPC decision.

3.3.4 In the event that the Board of Directors wishes to initiate an amendment to this Tariff or the Business Practice Manuals that has not undergone PRC

and RAPC review, the Board of Directors shall first submit such proposed amendment to the PRC for review under the processes set forth in Sections 4.1 and 4.2 of this Tariff.

3.3.5 Expedited Review Process: In the event that the RAPC determines that an expedited review process is necessitated by an exigent circumstance as set forth in Section 4.1.3.1.1 of this Tariff, the Board of Directors shall review the RAPC's recommended Tariff or Business Practice Manual amendment expeditiously and invite comment from the PRC, COSR, and stakeholders concurrently with its consideration of the RAPC proposal.

3.4 WPP is specifically prohibited from amending this Tariff to:

3.4.1 Alter, usurp, control, or otherwise materially modify the Participants' existing functional control and responsibility over their generation and transmission assets, including but not limited to planning and operation of such assets, Open Access Transmission Tariff administration, interfering with Balancing Authority duties and responsibilities, or imposing a must-offer requirement on any specific generation resources.

3.4.2 Administer Open Access Transmission Tariff service, engage in Balancing Authority operations, impose transmission planning requirements, or assume any transmission planning responsibilities with regard to any of the Participant's transmission assets.

3.4.3 Form any type of organized market, including but not limited to a capacity market, a regional transmission organization, a real-time market, or any other type of FERC-approved regional construct, unless such action is also approved by the RAPC under its voting procedures set forth in Section 4.1.6 of this Tariff.

3.4.4 Impose any requirements on Participants beyond the assessment of financial charges as specified in this Tariff or suspension or termination of participation for failure to meet any WRAP requirements.

3.4.5 Amend in any way this Section 3 of this Tariff without the approval of the RAPC under its voting procedures set forth in Section 4.1.6 of this Tariff.

3.4.6 Amend the RAPC voting thresholds set forth in Section 4.1.6 of this Tariff.

3.5 Subject to the limitations and prohibitions imposed under Section 3.4 of this Tariff, if the Board of Directors votes to file at FERC to expand the WRAP to include market optimization or transmission planning services, WPP will initiate a formal process with COSR and other stakeholders to conduct a full review of governance structures and procedures, including the role of states. If COSR does not support any revised governance structure that emerges from such WPP review process, the WPP will file, along with any WPP governance proposal to FERC, an alternative

governance structure on behalf of the COSR so long as such COSR alternative governance structure is supported by 75% of the COSR.

4. Organizational Groups for the WRAP

4.1 Resource Adequacy Participants Committee

4.1.1 Authority and Purpose: The RAPC shall be the highest level of authority for representation by Participants in the WRAP governance structure and shall represent the interests of Participants directly to the Board of Directors.

4.1.2 Composition: The RAPC shall be composed of one representative from each Participant. Such representative shall be a senior management official with binding decision-making authority on behalf of the Participant, or a designated representative of a Participant's senior management official. A designated representative shall be required to have binding decision-making authority on behalf of the Participant and shall have all voting rights delegated from the senior management official. Participant shall appoint a designated representative no less than one Business Day in advance of a meeting for that designated representative to be eligible to vote during the meeting.

4.1.3 Functions: The RAPC:

4.1.3.1 Shall consider and recommend that the Board of Directors approve or reject all proposed amendments to this Tariff or Business Practice Manuals prior to the Board of Directors considering such amendments, including any amendments reviewed and referred by the PRC.

4.1.3.1.1 Exigent Circumstances: When the RAPC determines that an amendment to the Tariff or the Business Practice Manuals requires expedited Board of Directors review due to exigent circumstances, it may propose such amendment directly to the Board of Directors without awaiting review by other committees and stakeholders. Exigent circumstances include: (i) a FERC-mandated amendment to this Tariff or the Business Practice Manuals; (ii) an amendment to this Tariff or the Business Practice Manuals to address an immediate reliability impact; or (iii) an amendment to this Tariff or the Business Practice Manuals that the RAPC has determined has significant impacts to utility service.

4.1.3.2 Shall consider and vote to recommend that the Board of Directors approve or reject any proposed amendments to this Tariff or the Business Practice Manuals.

4.1.3.3 May provide input to the Board of Directors on any proposed WPP rules that apply both to the WRAP and other WPP services.

4.1.3.4 May evaluate and provide input to the Board of Directors on the WRAP administration budget and budget allocation to Participants, including amendments to the WRAP Administration Charge as calculated in accordance with Schedule 1 of this Tariff.

4.1.3.5 Shall form and organize all of the organizational groups under its responsibilities.

4.1.3.6 May take other actions reasonably related to its role as the senior-level Participant advisory committee to the Board of Directors regarding WRAP matters.

4.1.4 Leadership: The RAPC shall select from among its members a chair and vice chair.

4.1.5 Meetings:

4.1.5.1 Meetings of the RAPC will generally be open to all stakeholders. WPP shall provide advanced written notice of the date, time, place, and purpose of each RAPC meeting. All RAPC decisional items shall be placed on the open meeting agenda and allotted adequate time for public comment and deliberation.

4.1.5.1.1 The RAPC may meet in closed session as the RAPC chair deems necessary; provided, however, that the RAPC shall allow the designated COSR support staff member as specified in Section 4.3 of this Tariff to attend any closed meeting. The RAPC shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session.

4.1.5.2 The quorum for a meeting of the RAPC or any organizational group organized under it shall be one-half of the representatives thereof, but not less than three representatives, provided that a lesser number may serve as a quorum for the sole purpose of voting to adjourn the meeting to a later time.

4.1.6 Voting:

4.1.6.1 Each RAPC representative shall have one vote.

4.1.6.2 Voting in the RAPC shall utilize a “House and Senate” model.

4.1.6.2.1 Each Participant’s “House” vote shall represent the proportion of the Participant’s Median Monthly P50 Peak Load, as described in Section 2 of Schedule 1 of this Tariff, compared to the sum of all Participants’ Median Monthly P50 Peak Loads. A Participant may choose to divide its

House vote but is responsible for announcing such at the time of voting.

4.1.6.2.2 Each Participant shall receive a single, non-weighted "Senate" vote.

4.1.6.2.3 For an action to be approved by the RAPC, it must pass both "House" and "Senate" votes as follows. For purposes of voting, the percentages identified below specify the percentage threshold of the entire RAPC (whether in attendance or not) that is needed for passage of an action.

4.1.6.2.3.1 Actions to amend any of the limitations on Board authority set forth in Section 3.4 of this Tariff require an 80% affirmative approval by both the House and the Senate vote tallies to be approved.

4.1.6.2.3.2 Actions brought before the RAPC that have been approved by the PRC require a 67% affirmative approval by both the House and Senate vote tallies to be approved.

4.1.6.2.3.3 All other actions not specified in this Section 4.1.6.2.3 require a 75% affirmative approval by both the House and Senate vote tallies to be approved.

4.1.6.2.4 If at any time a single Participant's P50 load for voting purposes would result in that Participant possessing a veto over any votes taken under Section 4.1.5.2.3, such Participant's House vote shall be capped at 1% below the amount that would convey such a veto, such that no single Participant will possess a veto over any action taken under Section 4.1.6.2.3.

4.2 Program Review Committee

4.2.1 Authority and Purpose: The PRC is a sector-representative group comprised in accordance with Section 4.2.2 of this Tariff. The PRC is responsible for receiving, considering, and proposing amendments to this Tariff and the Business Practice Manuals. The PRC shall serve as a clearinghouse of all recommended amendments to this Tariff or the Business Practice Manuals, except for those designated by the RAPC as involving an exigent circumstance under Section 4.1.3.1.1 of this Tariff, amendments to Schedule 1 of this Tariff and cost allocation for the WRAP, and amendments to the WRAPA set forth as Attachment A of this Tariff. The PRC shall serve in an advisory capacity to the RAPC and, when applicable, the Board of Directors.

4.2.1.1 The PRC shall present all proposals received to the RAPC, along with the PRC's recommendation and summaries of all comments and feedback received.

4.2.1.2 The PRC's decisions are advisory-only and are not binding on the RAPC, the Board of Directors, or WPP.

4.2.2 Composition: The PRC shall be composed of up to twenty representatives from the following ten sectors: four representatives of RAPC Participant investor-owned utilities; four representatives of RAPC Participant publicly-owned (consumer or municipal) utilities; two representatives of RAPC Participant retail competition load serving entities; two representatives from RAPC Participant Federal Power Marketing Administrations; two representatives of independent power producers; two representatives of public interest organizations; one representative of retail consumer advocacy groups; one representative of industrial customer advocacy groups; one representative of load serving entities with loads in the WRAP that are represented by other LREs and are not otherwise eligible for any other sector; a representative from the COSR. Expectations for sectors to consider regional, operational, geographic, demographic, and other forms of diversity in selecting their sector representatives are set forth in more detail in the PRC charter, which shall be posted and maintained on the WRAP website or other appropriate public location.

4.2.3 The PRC shall establish a process and criteria for receiving and reviewing proposed amendments to this Tariff and the Business Practice Manuals. Such review will include procedures for stakeholder comment.

4.2.4 Meetings: The PRC shall meet primarily in open session; provided that the PRC may schedule closed meetings if it determines that doing so would be beneficial to safeguard the confidentiality of sensitive information. The PRC shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session.

4.2.5 Voting: The PRC shall endeavor to operate by consensus. When voting is necessary, voting shall consist of one sector one vote, with an affirmative vote of six sectors (as specified in Section 4.2.2 of this Tariff) constituting approval of an action before the PRC.

4.2.5.1 For sectors with four seats, three sector representatives must agree with the action for the sector to be considered an affirmative vote for the action.

4.2.5.2 For sectors with two seats, both sector representatives must agree with the action for the sector to be considered an affirmative vote for the action.

4.2.6 Participants and other entities shall participate in no more than one PRC sector. If a Participant or other entity is eligible to participate in more than one sector, such Participant or other entity shall declare in which sector it will participate.

4.3 Committee of State Representatives

4.3.1. Composition: The COSR is a committee composed of one representative from each state or provincial jurisdiction (either public utility commission or state/provincial energy office) that regulates at least one Participant.

4.3.2 Leadership: The COSR shall determine its leadership, including a chair and vice chair. The chair or vice chair will be requested to attend all open sessions of the RAPC to provide input and advice.

4.3.2.1 The COSR shall designate a COSR support staff member to attend and audit closed meetings of the RAPC under a non-disclosure agreement.

4.3.3 Authority:

4.3.3.1 If the COSR determines that a proposal approved by the RAPC is substantially different from the proposal submitted to the RAPC by the PRC, the COSR may engage in additional public review and comment before the RAPC decision is presented to the Board of Directors; provided that this additional public review and comment does not unreasonably delay presentation to the Board of Directors.

4.3.3.2 If the COSR as a body opposes or appeals a RAPC decision to the Board of Directors, the Board of Directors will not consider the RAPC's decision until the RAPC engages with the COSR to discuss, in at least two public discussions, to attempt to reach a mutually agreeable solution.

4.3.3.2.1 If the appeal relates to an amendment that the RAPC designated as involving an exigent circumstance under Section 4.1.3.1.1 of this Tariff, COSR can require no more than one public discussion, provided that such additional discussion does not unreasonably hinder the timeline for Board of Directors consideration of the proposed amendment.

4.3.4 Voting, Meetings, and Quorum: The COSR may develop its own rules governing voting, meetings, and quorum for action. COSR shall be responsible for its own costs.

5. Independent Evaluator

5.1 WPP shall engage an Independent Evaluator to provide an independent assessment of the performance of the WRAP and any potential beneficial design modifications. The Independent Evaluator shall report directly to the Board of Directors.

5.2 The Independent Evaluator shall conduct an annual review of the WRAP, including but not limited to analyzing prior year program performance, accounting and settlement, and program design.

5.3 The Independent Evaluator shall prepare an annual report of its findings, and any recommended modifications to WRAP design, and present its findings to the WRAP committees and the Board of Directors, subject to any necessary confidentiality considerations. Any data included in the Independent Evaluator's report shall be reported on an aggregated basis as applicable to preserve confidentiality. The Independent Evaluator's annual reports shall be available to the public, except to the extent they contain information designated as confidential under this Tariff, or information designated as confidential by the Independent Evaluator.

5.4 The Independent Evaluator shall not:

5.4.1 Evaluate individual Participants.

5.4.2 Possess any decision-making authority regarding the WRAP or design modifications.

5.4.3 Evaluate WPP's day-to-day operations of the WRAP (except as part of review of prior year program performance).

6. WPP Invoicing and Settlement

6.1 WPP shall be responsible for issuing invoices to, and collecting from, Participants all charges under Schedule 1 of this Tariff for recovery of all WPP costs associated with administering the WRAP.

6.2 WPP shall be responsible for invoicing, collecting, and (as applicable) distributing revenues from Deficiency Charges under Part II of this Tariff and Delivery Failure Charges under Part III of this Tariff.

6.3 Participants are not required to provide credit assurances to WPP to cover charges under Schedule 1 of this Tariff, Deficiency Charges under Part II of this Tariff, or Delivery Failure Charge under Part III of this Tariff.

6.4 Participants shall make full payment of all invoices rendered by WPP for which payment is required to WPP within thirty calendar days following the receipt of the WPP invoice, notwithstanding any disputed amount, but any such payment shall not be deemed a waiver of any right with respect to such dispute. Any Participant that fails to make full and timely payment to WPP of amounts owed upon expiration of the cure period specified in Section 6.4.1 of this Tariff will be in default.

6.4.1 If a Participant fails to make timely payment as required by Section 6.4, WPP shall so notify such Participant. The notified Participant may remedy such asserted breach by paying all amounts due, along with interest on such amounts calculated in accordance with the methodology specified for interest on refunds in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii); provided, however, that any such payment may be subject to a reservation of rights, if any, to refer such matter to dispute resolution procedures under Section 9 of this Tariff. If the Participant has not remedied such asserted breach by 5:00 p.m. Pacific Prevailing Time on the second Business Day following WPP's issuance of a written notice of breach, then the Participant shall be in default.

6.4.2 In the event of a Participant's default under Section 6.4.1 of this Tariff, WPP in its discretion may pursue collection through such actions, legal or otherwise, as it reasonably deems appropriate, including but not limited to the prosecution of legal actions and assertion of claims in the state and federal courts as well as under the United States Bankruptcy Code. After deducting any costs associated with pursuing such claims, any amounts recovered by WPP with respect to defaults for which there was a Default Allocation Assessment shall be distributed to the Participants who have paid their Default Allocation Assessment in proportion to the Default Allocation Assessment paid by each Participant, as calculated pursuant to Section 6.4.3 of this Tariff. In addition to any amounts in default, the defaulting Participant shall be liable to WPP for all reasonable costs incurred in enforcing the defaulting Participant's obligations.

6.4.3 In the event of a Participant's default with respect to an invoice issued by WPP for charges under Schedule 1 of this Tariff, in order to ensure that WPP remains revenue neutral, the Board of Directors may assess against, and collect from, the Participants not in default a Default Allocation Assessment to recover the costs associated with the default. Such assessment shall in no way relieve the defaulting Participant of its obligations.

6.4.3.1 The Default Allocation Assessment shall be equal to:

(20% × (1/N) + (80% × (Participant Median Monthly P50 Peak Load / Sum Participants Median Monthly P50 Peak Load)

where:

N = the total number of Participants, calculated as of the date WPP declares a Participant in default.

Participant Median Monthly P50 Peak Load = for each Participant included in factor "N" above, the Participant's Median Monthly P50 Peak Load as determined in Section 2 of Schedule 1 of this Tariff, recalculated on the day the WPP declares a Participant in default.

All Participants Median Monthly P50 Peak Load = the sum of the Participant Median Monthly P50 Peak Load values for all Participants included in factor "N" above.

7. Credit Requirements and Settlement for Holdback and Delivered Energy

7.1 Credit and Settlement for Holdback and Delivered Energy: Settlement of holdback and delivered energy shall be completed bilaterally between Participants, subject to the following:

7.1.1 Neither WPP nor the Program Operator(s) shall take title to energy or be party to any settlement of holdback or delivered energy.

7.1.2 Participants shall establish credit with each other through one of the following mechanisms. Neither WPP nor the Program Operator(s) shall be involved in the calculation of credit or credit limits.

7.1.2.1 Establish credit directly with each Participant: Participants may establish credit directly with other Participants from whom they may receive delivered energy.

7.1.2.1.1 Such credit should be established in advance of the applicable season.

7.1.2.1.2 The amount of such credit and any credit limit shall be at the discretion of each Participant.

7.1.2.2 WPP shall conduct a competitive solicitation process to identify a third-party service provider to serve as central credit organization and clearing house for credit and settlement. Once such central credit organization is selected, Participants that have not already directly established credit with all other Participants under Section 7.2.2.1 of this Tariff shall establish credit with the central credit organization.

7.1.2.2.1 WPP will provide the central credit organization any Operations Program related information necessary for them to perform their obligations as set forth in the agreement between WPP and the central credit organization.

7.1.2.2.2 All costs associated with the central credit organization service shall be borne by Participants as established in the agreement between WPP and the central credit organization and either billed directly on a transactional basis or else recovered under Schedule 1 of this Tariff.

7.1.2.3 The obligation to arrange sufficient credit shall at all times be on the deficient Participant (i.e., a Participant with a negative sharing calculation in the Operations Program). If a deficient Participant has not made good faith and commercially reasonable efforts to

obtain sufficient credit with a delivering Participant, such delivering Participant shall so notify WPP and shall be excused from any obligation to deliver to such deficient Participant. Nothing in this Section 7 requires a Participant to violate its written risk or credit policy.

7.2 All settlement pricing calculated under this Tariff shall be final and no adjustments to settlement prices shall be allowed after the later of: (1) ninety Days after such settlement prices are posted by WPP; or (2) the final outcome of any dispute resolution process that is initiated by a Participant to dispute a settlement price pursuant to the Dispute Resolution Procedures set forth in Section 9 of this Tariff.

7.2.1 A Participant may invoke the Dispute Resolution Procedures set forth in Section 9 of this Tariff to address calculation errors in any settlement price, but may not invoke the Dispute Resolution Procedures to dispute data sources or to request the use of alternative data sources.

8. Force Majeure, Limitation of Liability, and Indemnification

8.1 Force Majeure: An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, pandemic, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation, or restriction imposed by governmental military or lawfully established civilian authorities, or any other cause beyond a party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither WPP nor the Participant will be considered in default as to any obligation under this Tariff if prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Tariff is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Tariff. Notwithstanding the foregoing, the physical inability to perform because of an event of Force Majeure shall not relieve the party of any financial obligations incurred under this Tariff or as a result of the Force Majeure event, unless, and to the extent, such financial obligation is waived or excused under provisions of Part II or Part III of this Tariff expressly providing for such waiver or excuse.

8.2 Limitation of Liability:

8.2.1 Neither WPP nor the Program Operator shall be liable, whether based on contract, indemnification, warranty, tort, strict liability or otherwise, to any Participant, other entity owning a Qualifying Resource, third party, or other person for any damages whatsoever, including, without limitation, direct, incidental, consequential, punitive, special, exemplary, or indirect damages arising or resulting from any act or omission in any way associated with service provided under this Tariff or any agreement hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, except to the extent that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of WPP or Program Operator, in which case WPP shall only be liable for direct damages.

8.2.2 Neither WPP nor the Program Operator shall be liable for damages arising out of services provided under this Tariff or any agreement entered into hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency, or imperfection of service, occurring as a result of conditions or circumstances beyond the control of WPP, or resulting from electric system design common to the domestic electric utility industry or electric system operation practices or conditions common to the domestic electric utility industry.

8.2.3 To the extent that a Participant or other person has a claim against WPP, the amount of any judgment or arbitration award on such claim entered in favor of such entity shall be limited to the value of WPP's assets. No party may seek to enforce any claims under this Tariff or any Agreements entered into

hereunder against the directors, managers, members, shareholders, officers, employees, or agents of WPP, or against the Program Operator, who shall have no personal liability for obligations of WPP by reason of their status as directors, managers, members, shareholders, officers, employees, or agents of WPP or by virtue of their status as Program Operator.

8.2.4 To the extent that WPP is required to pay any money damages or compensation or pay amounts due to its indemnification of any other party as it relates to any services provided, acts, or omissions under this Tariff or any agreement entered into hereunder, WPP shall be allowed to recover any such amounts under Schedule 1 of this Tariff as part of the WRAP Administration Charge. Notwithstanding the foregoing, WPP shall be prohibited from recovering under this Tariff any costs associated with any damages, compensation, or indemnification costs that arise: (i) with regard to any acts or omissions that occur outside of this Tariff and any agreements entered into hereunder, or (ii) if a court of competent jurisdiction determines that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of WPP or the Program Operator.

8.2.5 A Participant's liability to another Participant under this Tariff for failure to comply with obligations under this Tariff shall be limited to any charges or payments calculated pursuant to this Tariff; provided, however, that nothing in this Section 8.2.5 shall limit or is intended to foreclose any Participant's liability that may arise under any bilateral agreements between Participants.

8.3 Indemnification: The Participants shall at all times indemnify, defend, and save WPP (and any of its Program Operator(s), agents, consultants, directors, officers, or employees) harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties arising out of or resulting from the performance of activities under this Tariff by WPP, any Program Operator(s), or agents, consultants, directors, officers, or employees of WPP, except in cases of gross negligence or intentional wrongdoing by WPP or the Program Operator. WPP shall credit any proceeds from insurance or otherwise recovered from third parties to Participants who have paid to indemnify WPP under this Section 8.3.

8.4 Actions upon Unavailability of Program Operator(s): In the event that the Program Operator(s) become(s) unwilling, unable, or otherwise unavailable to perform contractual duties necessary for WPP to discharge its obligations under this Tariff and WPP's agreement(s) with the Program Operator(s), WPP shall engage with Participants as soon as practicable to determine what actions to take, including but not limited to filing with FERC a request to waive one or more provisions of this Tariff up to and including immediate suspension of all rights and obligations under this Tariff until a replacement Program Operator(s) can assume all relevant Program Operator functions.

9. Dispute Resolution Procedures

9.1 Internal Dispute Resolution Procedures: Subject to the limitations set forth in Section 7.2.1 of this Tariff, any dispute between a Participant and WPP under the Tariff (excluding amendments to the Tariff or to any agreement entered into under the Tariff, which shall be presented directly to the FERC for resolution) shall be referred to a designated senior representative of WPP and a senior representative of the Participant for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty days (or such other period as the parties may agree upon) by mutual agreement, such dispute shall then be referred to the chief executive officer or comparable executive of each party for resolution. In the event that the executives are unable to resolve the dispute within thirty days (or such other period as the parties may agree upon), such dispute may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.

9.2 External Arbitration Procedures: Any arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the parties to the dispute. If the parties fail to agree upon a single arbitrator within ten days of the referral of the dispute to arbitration, each party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association and any applicable FERC regulations.

9.3 Arbitration Decisions: Unless otherwise agreed by the parties, the arbitrator(s) shall render a decision within ninety days of appointment and shall notify the parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and/or any agreement entered into under the Tariff and shall have no power to modify or change any of the above in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act and/or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with the FERC if it affects jurisdictional rates, terms and conditions of service or facilities.

9.4 Costs: Each party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (i) the cost of the arbitrator chosen by the party to sit on the three-member panel and one half of the

cost of the third arbitrator chosen; or (ii) one half the cost of the single arbitrator jointly chosen by the Parties.

9.5 Rights Under the Federal Power Act: Nothing in this section shall restrict the rights of any person to file a complaint with the FERC under relevant provisions of the Federal Power Act or of WPP to file amendments to this Tariff under the relevant provisions of the Federal Power Act.

10. Treatment of Confidential and Commercially Sensitive Information of Participants

10.1 Terms: For purposes of this Section 10 only, the term "WPP" shall also include, as applicable, any directors, officers, employees, agents, or consultants of WPP, the Independent Evaluator established under Section 5 of this Tariff, and any central credit organization established under Section 7 of this Tariff. WPP shall be bound by the rights, obligations, and conditions set forth in this Section 10. For purposes of this Section 10, the term "Disclosing Entity" shall include any Participant that discloses information to WPP that the Disclosing Entity deems and identifies as confidential or commercially sensitive. WPP's collection and handling of non-Participant data shall be governed by separate non-disclosure agreements with such non-Participants.

10.2 Treatment of Confidential or Commercially Sensitive Information: WPP shall identify in the Business Practice Manuals categories of Participant-specific data and information received from Participants that shall be treated as confidential or commercially-sensitive, which WPP shall not disclose publicly or to any other Participant or other entity except as provided for in this Section 10. In addition, WPP shall maintain the confidentiality of all of the documents, data, and information provided to it by any Participant that such disclosing Participant deems and specifically identifies as confidential or commercially sensitive. Notwithstanding the foregoing, WPP need not keep confidential: (i) information that is publicly available or otherwise in the public domain; or (ii) information that is required to be disclosed under this Tariff or any applicable legal or regulatory requirement (subject to the procedures set forth in Section 10.4 of this Tariff).

10.2.1 WPP staff may develop and release publicly composite or aggregated data based upon Participant confidential or commercially sensitive information, provided that such composite or aggregated data cannot be used to identify or attribute a disclosing Participant's confidential or commercially sensitive data. Such release of composite or aggregated data shall be governed by the following process.

10.2.1.1 Prior to the initial release of such composite or aggregated data, WPP staff shall present the form and format of such data to each Participant whose confidential information or data will be used to create the composite or aggregated data. If any such Participant objects to the form and format as revealing or allowing for attribution of confidential or commercially sensitive Participant-specific data, WPP staff shall determine whether to modify the form and format or to retain the proposed form and format for release. If WPP staff elects to retain the proposed form and format, the Participant shall have the right to appeal to the RAPC and WPP staff shall be prohibited from releasing the composite or aggregated data in the proposed form and format until the Participant's appeal rights as specified in this Section 10.2.1

are exhausted.

10.2.1.2 If a Participant appeals a WPP staff decision regarding the form and format of composite or aggregated data to the RAPC, the RAPC shall consider whether the form and format reveals or allows for attribution of confidential or commercially sensitive Participant-specific data. If the RAPC determines that the proposed form and format is sufficient to protect against the release of confidential or commercially sensitive Participant-specific data, WPP staff is authorized to release the composite or aggregated data in the proposed form and format unless the Participant timely appeals the RAPC decision to the Board of Directors.

10.2.1.3 If a Participant appeals a RAPC decision regarding the form and format of composite or aggregated data to the Board of Directors, the Board of Directors shall consider whether the form and format is sufficient to protect against the release or attribution of confidential or commercially sensitive Participant-specific data. If the Board of Directors determines that the proposed form and format is sufficient to protect against the release of confidential or commercially sensitive Participant-specific data, WPP staff is authorized to release the composite or aggregated data in the proposed form and format.

10.2.1.4 Once a proposed form and format of composite or aggregated data is approved by the WPP staff and is not appealed or appeals are unsuccessful, such form and format may be used for all future disclosures of composite or aggregate information and no Participant may dispute such release. If WPP staff proposes to alter the form and format, including but not limited to changing the granularity of data, WPP staff shall be required to follow the process set forth in this Section 10.2.1 and Participants shall have the right to appeal such changes in form and format as set forth herein. Notwithstanding the foregoing, if the composition of Participants in the WRAP changes in such a way that the form and format of composite or aggregated data is no longer sufficient to protect against disclosure or attribution of confidential or commercially sensitive Participant-specific data, an aggrieved Participant shall have a one-time right to raise the issue promptly with WPP Staff for presentation to and review by the Board of Directors, and the Board of Directors in its sole discretion shall decide whether the change in composition results in the form and format of the composite or aggregated data becoming insufficient to

protect against the release or attribution of confidential or commercially sensitive Participant-specific data; provided, however, that if an aggrieved Participant does not raise its concerns with the Board of Directors promptly following the change in composition, such Participant shall have waived its right to contest the release of such composite or aggregated data.

10.2.2 Notwithstanding anything to the contrary in this Section 10.2, if the RAPC unanimously votes to disclose publicly any particular category of Participant-specific data, such data shall no longer be deemed confidential regardless of any such designation by a disclosing Participant, and this election shall be binding on any current and future Participants until such time as the RAPC votes unanimously to prohibit public release of such category of data. A list of the categories of Participant-specific data that the RAPC unanimously votes to make public shall be included in the Business Practice Manuals.

10.3 Access to Confidential or Commercially Sensitive Information: Except as otherwise provided in Section 10.2 of this Tariff, no Participant, entity owning a Qualifying Resource, or any third party shall have the right hereunder to receive from WPP or to otherwise obtain access to any documents, data or other information that has been identified as or deemed to be confidential or commercially sensitive under Section 10.2 of this Tariff by a disclosing Participant. The provisions of this Section 10.3 do not apply to WPP (including any Independent Evaluator, member of the Board of Directors, or any WPP officer, employee, agent, or consultant that requires access to confidential or commercially sensitive information); provided that access to Participant-specific confidential or commercially sensitive information shall be solely for the purpose of performing the duties or functions under this Tariff or otherwise advising or assisting WPP. WPP shall develop internal policies and controls governing the handling and protection of confidential or commercially sensitive Participant-specific data by members of the Board of Directors, officers, employees, agents, consultants, or any Independent Evaluator.

10.4 Exceptions: Notwithstanding anything in this Section 10 to the contrary:

10.4.1 If WPP is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence pursuant to this Section 10, WPP may disclose such information; provided, however, that as soon as practicable after WPP learns of the disclosure requirement and prior to making such disclosure, WPP shall notify any affected disclosing Participant of the requirement and the terms thereof. Any such disclosing Participant may, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement and WPP shall cooperate with such disclosing Participant to take all reasonable available steps to oppose

or otherwise minimize the disclosure of the information permitted by applicable legal and regulatory requirements. WPP shall further cooperate with such disclosing Participant to the extent reasonably practicable to obtain proprietary or confidential treatment of confidential or commercially sensitive information by the person to whom such information is disclosed prior to any such compelled disclosure.

10.4.2 WPP may disclose confidential or commercially sensitive information, without notice to any affected disclosing Participant(s), in the event that FERC, during the course of an investigation or otherwise, requests information that is confidential or commercially sensitive. In providing the information to FERC, WPP shall take action, consistent with 18 C.F.R. §§ 1b.20 and/or 388.112, to request that the information be treated by FERC as confidential and non-public and, if appropriate, as Critical Energy Infrastructure Information and that the information be withheld from public disclosure. WPP shall provide the requested information to FERC within the time provided for in the request for information. WPP shall notify any affected disclosing Participant(s) within a reasonable time after WPP is notified by FERC that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive information has been received, at which time WPP and any affected disclosing Participant may respond before such information would be made public.

10.5 Notwithstanding any efforts undertaken pursuant to Section 10.4 to prevent or limit the release of a Participant's confidential or commercially sensitive information, in the event that FERC or a court of competent jurisdiction orders or otherwise permits the public release of a Participant's confidential or commercially sensitive information, the affected Participant shall have a one-time right to elect to terminate its participation in the WRAP under the expedited termination provisions set out in Section 11.2 of the WRAPA.

10.6 WPP shall handle any information identified or deemed to be Controlled Unclassified Information/Critical Energy Infrastructure Information in accordance with FERC's regulations set forth at 18 C.F.R. § 388.113 and any applicable FERC policies or other regulations, including but not limited to restricting access to such information on a password-protected portion of WPP's website or similar precautions.

10.7 Nothing in this Section 10 is intended to limit a Participant's ability to disclose or release publicly its own confidential or commercially sensitive information or data, or to limit a Participant's ability to authorize WPP's disclosure of such material to a specified recipient.

11. Timing

11.1 In the event that any deadline specified in this Tariff shall fall on a day that is not a Business Day, the deadline shall be extended to the next Business Day.

12. Application and Registration

12.1 Any entity wishing to participate in the WRAP must submit an application and registration in accordance with the Business Practices Manuals and must execute the WRAPA as set forth in Attachment A of this Tariff, or a non-conforming version of such participation agreement that is approved by FERC for an individual Participant. Such application and registration must be submitted in accordance with the timelines set forth in the Business Practices Manuals in advance of the next Binding Season.

12.2 Each Participant must register all of its resources and loads, regardless of whether such resources will be used to satisfy the WRAP requirements and regardless of whether certain loads will be subject to the requirements of the WRAP. Participants may modify their registration of resources and loads in accordance with the timing procedures set forth in the Business Practices Manuals.

12.3 In the event that more than one Participant attempts to register the same resource or load, the following procedure will be used to assign the resource or load to a Participant:

12.3.1 If a Participant attempts to register a load or resource that has already been registered by a different Participant, the resource or load will remain registered by the original Participant registering the resource or load until such time as both Participants mutually inform WPP that a change to the registration is required.

12.3.2 If two or more Participants attempt to register the same resource or load during the same registration window, WPP shall request that the Participants determine among themselves the appropriate registration of the resource or load before that resource or load is included in the WRAP.

PART II FORWARD SHOWING PROGRAM

13. Overview

13.1 In the Forward Showing Program, as set forth in this Part II of the Tariff, and as further detailed in the Business Practice Manuals, each Participant shall, in advance of each Binding Season, show as to such Binding Season: (i) the total capacity, referred to and defined herein as the FS Capacity Requirement, required by the provisions of this Tariff for such Binding Season for reliable service to the loads for which such Participant is responsible; (ii) the demonstration of capacity, referred to and defined herein as the Qualifying Capacity Contribution, or QCC, provided by the Qualifying Resources the Participant provides or procures to meet its FS Capacity Requirement; and (iii) a quantity of WRAP Qualifying Transmission, referred to and defined herein as the FS Transmission Requirement, needed for reliable delivery of the QCC of the Participant's Qualifying Resources from such resources to the loads for which the Participant is responsible.

13.2 As also set forth in this Part II of the Tariff, and as further detailed in the Business Practice Manuals: (i) WPP shall, in advance of each Binding Season, review the Forward Showing Submittals of each Participant for such Binding Season; (ii) WPP shall identify to the Participant any deficiencies in the Participant's Portfolio QCC (whether as to contracts or directly owned or controlled resources) relative to the FS Capacity Requirement, and any deficiencies in the identified WRAP Qualifying Transmission relative to the FS Transmission Requirement, within sixty days of the Forward Showing Submittal deadline; (iii) the Participant shall have an opportunity to cure such deficiencies, within sixty days of notification of deficiency; and (iv) if the Participant fails to cure all such deficiencies on or before the deadlines prescribed herein, the Participant shall be assessed a Forward Showing Deficiency Charge.

14. Forward Showing Program Process and Timeline

14.1 The Forward Showing Program has two Binding Seasons, defined as the Summer Season and the Winter Season. The Summer Season is the period beginning on June 1 of each Year and ending on September 15 of that same Year. The Winter Season is the period beginning on November 1 of each Year and ending on March 15 of the succeeding Year. This Tariff does not establish resource or showing obligations outside the periods defined by the Summer Season and Winter Season.

14.2 Each Participant shall submit its Forward Showing Submittals for each Month of each Binding Season, with all required supporting materials and information as detailed in the Business Practice Manuals, on or before the FS Deadline for the Binding Season. The FS Deadline for each Binding Season shall be seven months before the start of such Binding Season.

14.2.1 Forward Showing Submittal:

14.2.1.1 Absent the exception in Section 14.2.1.2, each Participant shall submit a separate Forward Showing Submittal for loads for which it is responsible if transmission constraints between areas where its loads are located, including, without limitation, when Participant is responsible for loads in more than one Subregion, prevent application, in the manner more fully described in the Business Practice Manuals, of Resource QCC or Net Contract QCC from one load area to the FS Capacity Requirement of another load area.

14.2.1.2 Notwithstanding Section 14.2.1.1, a Participant responsible for loads in multiple Subregions may submit for a given Month a single Forward Showing Submittal for such loads, and may employ for determination of its FS Capacity Requirement for such Month the lower of the FSPRM values determined for the Subregions where its loads are located, if the Participant demonstrates in such Forward Showing Submittal, in accordance with the procedures and requirements set forth in the Business Practice Manuals, WRAP Qualifying Transmission in a quantity, in addition to that required by the FS Transmission Requirement, equal to the difference in the FSPRM values multiplied by the Participant's P50 Peak Load Forecast for such Month, with a point of delivery in the Subregion with the higher FSPRM value and the point of receipt in the Subregion with the lower FSPRM value. Each such showing shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such WRAP Qualifying Transmission, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission.

14.2.2 Each Participant's Forward Showing Submittal shall include a Senior Official Attestation.

14.3 The FSPRM values used in the Forward Showing Submittals for a Binding Season shall be those values approved by the Board of Directors as the culmination of an Advance Assessment process. No later than twelve months before the FS Deadline for each Binding Season, WPP will determine and post the recommended FSPRM for each Subregion for each Month of such Binding Season. Participants shall provide their load, resource and other information reasonably required to perform the analyses and calculations required for the Advance Assessment, in accordance with the Advance Assessment information submission details and schedule specified in the Business Practice Manuals. No later than nine months before the FS Deadline for such Binding Season, the Board of Directors shall take its final action regarding approval of the FSPRM values for each Month of such Binding Season.

14.3.1 In connection with an Advance Assessment process, or otherwise in connection with consideration of a change to the Business Practice Manuals, the Board of Directors may determine that designation of Subregions would encourage the relief, in whole or part, of transmission constraints on the transfer of capacity within the WRAP Region (whether through development or commitment of transmission, of Qualifying Resources, or by other means) to the benefit of the WRAP Region and the advancement of the objectives of the WRAP. Each such Subregion shall be identified in the Business Practice Manuals.

14.3.2 Any Participant may choose to offer in the Advance Assessment process WRAP Qualifying Transmission owned or controlled by such Participant for delivery of capacity from one Subregion to another Subregion, for use by other Participants under the terms of Part III of this Tariff during any or all identified Months of the applicable Binding Season. Each such offer shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such transmission service rights, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission. No Participant is obligated to offer any such transmission service rights in the Advance Assessment process, but any offer so made and not withdrawn before the deadline during the Advance Assessment process specified in the Business Practice Manuals shall be considered a binding offer of the identified transmission service rights which may not be withdrawn before the end of the last Day of the Month for which such transmission service is offered. WPP shall take account of such offered transmission service rights, along with other transmission deliverability reasonably anticipated to be available for use by Participants for WRAP purposes during the applicable Binding Season in its determination of the recommended FSPRM values for each Month of the applicable Binding Season for the WRAP Region and for each affected Subregion.

14.4 No later than sixty Days after the FS Deadline for a Binding Season, WPP will (i) provide the values of the Participant's FS Capacity Requirement and FS Transmission Requirement for each Month of the Binding Season; (ii) affirm that the Portfolio QCC of such Participant for each Month of the Binding Season equals or exceeds the FS Capacity Requirement of such Month for such Participant or notify such Participants of any deficiencies in the Forward Showing Submittal that result in a failure to demonstrate satisfaction of the FS Capacity Requirement; and (iii) affirm that the Demonstrated FS Transmission plus approved Monthly Transmission Exceptions of such Participant for each Month of the Binding Season equals or exceeds the FS Transmission Requirement of such Month for such Participant or notify such Participants of any deficiencies in the Forward Showing Submittal that result in a failure to demonstrate satisfaction of the FS Transmission Requirement.

14.5 Within 120 Days after the FS Deadline, the Participant shall (i) submit revisions to its Forward Showing Submittal, including, without limitation, additions or revisions to the Participant's Resource QCC, Net Contract QCC, or Demonstrated FS Transmission; (ii) in order to fully cure all identified deficiencies and demonstrate that such Participant's Portfolio QCC for each Month of the Binding Season equals or exceeds its FS Capacity Requirement; and (iii) fully provide Demonstrated FS Transmission for each Month of the Binding Season that equals or exceeds its FS Transmission Requirement for the same Month of the Binding Season where WPP identified deficiencies.

14.5.1 Any Participant that fails to cure identified deficiencies in its Forward Showing Submittal within the period prescribed above shall be assessed a Deficiency Charge.

14.6 In the event that a failure of the Forward Showing software system (i) occurs in the seven days preceding a FS Deadline and (ii) prevents a Participant from meeting the FS Deadline, the FS Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the FS Deadline. In the event that a failure of the Forward Showing software system triggers an extension of the FS Deadline pursuant to this Section, the deadline for WPP to respond to the Forward Showing Submittal set forth in Section 14.4 shall be extended by a commensurate number of days as the FS Deadline.

14.7 In the event that a failure of the Forward Showing software system occurs within seven days of the deadline for WPP to respond to Forward Showing Submittals pursuant to Section 14.4, the deadline for WPP to respond set forth in Section 14.4 shall be extended by one Day for each day that the Forward Showing software system failure persists and prevents WPP from meeting the deadline provided in Section 14.4.

14.8 In the event that a failure of the Forward Showing software system (i) occurs in the seven days preceding the deadline to cure deficiencies in the Forward Showing

Submittal set forth in Section 14.5 and (ii) prevents a Participant from meeting the deadline to cure deficiencies in the Forward Showing Submittal provided in Section 14.5, the deadline set forth in Section 14.5 shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the deadline set forth in Section 14.5.

15. Transition Period

15.1 Except as specified in Section 15.1.1, the Binding Season beginning November 1, 2027, will be the first Binding Season for which all Participants will assume the obligations of demonstrating capacity and making surplus capacity available to other Participants and will receive the benefits of reliance upon other Participants' surplus capacity. Any Binding Season during the Transition Period occurring before November 1, 2027, shall be a Non-Binding Season, as specified in Section 15A of this Tariff.

15.1.1 No later than January 15, 2026, a Participant may elect the Binding Season beginning June 1, 2027, as the first Binding Season for which it will assume the obligations of demonstrating capacity and making surplus capacity available to other Participants and will receive the benefits of reliance upon other Participants' surplus capacity by providing written notice of its election.

15.2 Within two years prior to the start of the first Binding Season of the WRAP, a Participant who has elected to participate in the first Binding Season may request a vote of all Participants who have elected to participate in the first Binding Season to delay implementation of the first Binding Season for up to two Seasons. Delayed implementation of the first Binding Season shall be approved if 75% of the Participants who elected to participate in the first Binding Season vote in favor of such delay, with approval requiring a vote of 75% of both the House and Senate vote tallies (as described in Sections 4.1.6.2.1 and 4.1.6.2.2 of this Tariff) of all Participants who elected to participate in the first Binding Season.

15.2.1 The deferral vote may only occur for the first Binding Season of the WRAP. If the Participants who elected to participate in the first Binding Season of the WRAP vote to delay implementation of the first Binding Season, all compliance charges for the Forward Showing Program and Operations Program are automatically deferred; except that the Participants may vote to delay implementation only of the Operations Program portion of the first Binding Season and retain the binding Forward Showing Program portion of the first Binding Season.

15A. Non-Binding Seasons

15A.1 A Participant will participate as a Non-Binding Participant for certain Binding Seasons in the Transition Period, as detailed in Section 15.1 of this Tariff, and when Critical Mass is not achieved for a given Binding Season, as detailed in Section 15A.2 of this Tariff. As to a Non-Binding Season, the Participant:

15A.1.1 Shall not be subject to Deficiency Charges, Transmission Deficiency Charges, Holdback Requirements, Energy Deployment obligations, or Delivery Failure Charges;

15A.1.2 Shall submit Forward Showing Submittals but shall not be required to cure deficiencies;

15A.1.3 Shall not have a mandatory Holdback Requirement as a result of the Sharing Calculation;

15A.1.4 May only receive Holdback Capacity offered voluntarily by other Participants in accordance with Part III of this Tariff; and

15A.1.5 Shall have all rights and be subject to all obligations under Part I of this Tariff and the Participant's WRAPA, including, without limitation, voting rights, committee participation, and the obligation to pay the WRAP Administration Charge.

15A.2 Once WPP has given notice to Participants that their Subregion does not have Critical Mass for a given Binding Season, each such Participant will have 30 days to provide notice to WPP if it intends to participate as a Non-Binding Participant for that Binding Season. Such notice and election will be given similarly for each season without Critical Mass participation.

15A.3 In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations):

15A.3.1 If a Participant will participate in a Summer Season as a Non-Binding Participant, for the purposes of calculating the maximum Monthly Deficiency for Winter, the Max Summer Deficiency (MW) is considered to be 0 MW.

15A.3.2 If the Participant will participate in Winter Season as a Non-Binding Participant, the Max Summer Monthly Deficiency remains unchanged.

16. Components of the Forward Showing

16.1 FS Capacity Requirement. The FS Capacity Requirement shall be determined for each Participant on a monthly basis by applying the applicable Monthly FSPRM for a Month to such Participant's peak load forecast for that Month. The Participant's peak load forecast for a given Month of a Binding Season will be the P50 Peak Load Forecast for the Binding Season multiplied by a shaping factor based on the historical relationship, for such Participant, of the seasonal peak for the Winter Season or Summer Season, as applicable, and the monthly peaks for the Months in such season, as more fully described in the Business Practice Manuals.

16.1.1 P50 Peak Load Forecast. The P50 Peak Load Forecast is a peak load forecast prepared on a basis, such that the actual peak load is statistically expected to be as likely to be above the forecast as it is to be below the forecast. The Business Practice Manuals shall specify an approved load forecasting methodology for use by all Participants for their WRAP-required load forecasts which shall include (i) a base monthly peak derived from a recent historical period that recognizes additions and removals of load during the historical period, (ii) adjustments for known additions and removals of load during the forecast window; and (iii) a specified load growth factor.

16.1.2 FS Planning Reserve Margin

16.1.2.1 The FSPRM is an increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages, expressed as a percentage of the applicable peak load forecast. The FSPRM shall be determined based on probabilistic analysis, taking account of uncertainties in generation and load, as the margin above peak load that provides an expectation of no more than a single event-day of loss of load in ten years (sometimes referred to herein as the "1-in-10 LOLE") for each Binding Season. The FSPRM shall be determined in a manner that accounts for the governing principles of QCC value determinations set forth in Section 16.2.5 of this Tariff and shall employ the applicable peak load for the applicable Binding Season and Months. Additional details, assumptions, methodologies, and procedures for determination of the FSPRM shall be as set forth in the Business Practice Manuals.

16.1.2.2 WPP shall calculate in the Advance Assessment process the recommended Monthly FSPRM for each Month of each Binding Season, for approval by the Board of Directors as set forth in this Part II.

16.1.2.3 The FSPRM shall employ (i) a simulated resource stack using capacity accreditation principles consistent with those used for WRAP QCC determinations; (ii) an adjustment in the total WRAP-required QCC value as needed to meet a 1-in-10 LOLE for each Binding Season, and (iii) while maintaining the 1-in-10 LOLE for each Binding Season in (ii), include a monthly reduction of capacity to ensure that each Month has at least 0.01 annual LOLE. The FSPRM for a Month shall be the simulated QCC as adjusted to meet the 1-in-10 LOLE for each Binding Season minus the P50 Peak Load Forecast for the Month, divided by the P50 Peak Load Forecast for the Month.

16.1.2.4 The FSPRM shall include an approximation of Contingency Reserves as set forth in the Business Practice Manuals.

16.1.3 Contingency Reserves Adjustment. A Participant's FS Capacity Requirement will be adjusted as set forth in the Business Practice Manuals to account for changes in Contingency Reserve requirements resulting from energy contract purchases and contract sales.

16.1.4 A Participant responsible for loads located in a Subregion for which an FSPRM value has been determined that is higher than the FSPRM value determined for a different Subregion may, in lieu of demonstrating a MW increment of Portfolio QCC otherwise required to satisfy such Participant's FS Capacity Requirement for a given Month, demonstrate in its Forward Showing Submittal, in accordance with the procedures and requirements set forth in the Business Practice Manuals, WRAP Qualifying Transmission, in a quantity, in addition to that required by the FS Transmission Requirement, that is no greater than the difference in the two FSPRM values multiplied by the Participant's P50 Peak Load Forecast, with the point of delivery in the Subregion with the higher FSPRM value and the point of receipt in the Subregion with the lower FSPRM value. The MW quantity of the additional WRAP Qualifying Transmission so demonstrated shall reduce for such Month, by the same MW quantity, the Portfolio QCC the Participant would otherwise be required to demonstrate to satisfy its FS Capacity Requirement for such Month. Each such demonstration shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such transmission service rights, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission.

16.2 Qualified Capacity Contribution

16.2.1 For each Participant and each Binding Season, the Forward Showing shall show and support the Portfolio QCC, which shall be the sum of the QCC of the Participant's Qualifying Resources ("Resource QCC"), the QCC of its contracted capacity ("Net Contract QCC"), and any transfers of capacity

already accredited by another Participant ("Total RA Transfer," which could be positive or negative). The Portfolio QCC effective for a Binding Season shall be the value determined by WPP.

16.2.2 A resource will not be assigned a Resource QCC or counted toward Portfolio QCC unless it is a Qualifying Resource. Qualifying Resources are those that, before they are included in a Forward Showing Submittal, are first registered with WPP. A Participant seeking registration of a resource must submit a request for registration providing the resource information described in the Business Practice Manuals.

16.2.3 The minimum resource size for registration of a resource is 1 MW, provided, however, that Participants with responsibility for individual resources of less than 1 MW may aggregate them to meet the 1 MW minimum requirement, under the conditions and limitations specified in the Business Practice Manuals.

16.2.4 A Participant may include in its Forward Showing Submittal a request for an exception from its FS Capacity Requirement for an insufficiency of its Portfolio QCC solely due to (i) a catastrophic failure of one or more Qualifying Resources due to an event of Force Majeure as defined by Section 8.1 of this Tariff that (ii) the Participant is unable to replace on commercially reasonable terms prior to the FS Deadline as a result of the timing and magnitude of such catastrophic failure and its consequences. As more fully set forth in the Business Practice Manuals, such exception request shall be supported by a Senior Official Attestation. The exception request must include complete information on the nature, causes and consequences of the catastrophic failure, and must describe the Participant's specific, concrete efforts prior to the FS Deadline to secure replacement Qualifying Resources for the applicable Binding Season. WPP will consider the exception criteria established by this section, the information provided in the exception request, the completeness of the exception request, and other relevant data and information, in determining whether to grant or deny an FS Capacity Requirement exception request. WPP shall provide such determination no later than sixty days after submission of such Participant's FS Submittal containing such FS Capacity Requirement exception request. A Participant granted an exception hereunder must complete a monthly exception check report demonstrating that either the circumstances necessitating the exception have not changed; or that Qualifying Resources have become available, and the Participant has acquired them and no longer requires the exception. Failure to timely submit a required monthly report will result in assessment of a Deficiency Charge, unless the deficiency is cured within seven days of notice of non-compliance. A Participant denied an exception request hereunder may appeal such denial to the Board of Directors in accordance with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested exception shall be denied or permitted as, when

and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall give notice of any exception granted hereunder in the time and manner provided by the Business Practice Manuals.

16.2.5 QCC: WPP shall determine QCC values for the resource types specified below in accordance with the governing principles specified below for each resource type, and consistent with further details specified for each resource type in the Business Practice Manuals.

16.2.5.1 For resources that use conventional thermal fuels, including but not limited to, coal, natural gas, nuclear, and biofuel, WPP will determine QCC based on an Unforced Capacity methodology that employs resource-specific capability testing and capability requirements to determine an Installed Capacity value, and a forced outage calculation methodology based on historical performance during Capacity Critical Hours over a specified multi-year period (excluding outages properly reported as "outside management control"), or based on class-average forced outage data, as specified in the Business Practice Manuals, if there is insufficient data on historical performance.

16.2.5.2 For resources that are Variable Energy Resources, including, but not limited to, wind and solar resources, WPP will determine QCC based on an ELCC methodology, that accounts for synergistic portfolio effects within and among VER types at different resource penetration levels that influence the extent to which the WRAP Region can rely on those VER categories to meet overall capacity needs.

16.2.5.2.1 For such purpose, a separate ELCC value will be calculated in the aggregate for all VER resources of a given type in an identified VER Zone, to be delineated in the Business Practice Manuals based on factors such as geography, performance, meteorological considerations, and penetration.

16.2.5.2.2 As more fully described in the Business Practice Manuals, the zonal aggregate VER-resource-type value will be calculated by (i) conducting a benchmark LOLE study that includes all resource types except the VER resource type being studied, employing a model and assumptions consistent with those used to calculate FSPRM, and adding, or subtracting, the same MW quantity of Pure Capacity to every hour of the applicable Binding Season until, respectively, an initial LOLE value above 0.1 day per

Binding Season becomes 0.1 day per Binding Season, or an initial LOLE value below 0.1 day per Binding Season becomes 0.1 day per Binding Season; (ii) conducting an LOLE study that includes all resource types including the VER resource type being studied, employing a model and assumptions consistent with those used to calculate FSPRM, and adding, or subtracting, the same MW quantity of Pure Capacity to every hour of the applicable Binding Season until, respectively, an initial LOLE value above 0.1 day per Binding Season becomes 0.1 day per Binding Season, or an initial LOLE value below 0.1 day per Binding Season becomes 0.1 day per Binding Season; and (iii) subtracting the Pure Capacity value determined under subpart (ii) from the Pure Capacity value determined under subpart (i) (for which calculation a Pure Capacity value subtracted from each hour in either subpart (i) or subpart (ii) will be assigned a negative value; (iv) repeating steps (i) through (iii) for each Binding Season of the study period employing historical, or as necessary, synthesized, data; and (v) basing the aggregate value of the studied VER resource type for the studied VER Zone on the results of the calculation in step (iii) for the Binding Seasons studied, which may include differential weighting of the Binding Seasons studied as appropriate to improve the quality and predictive capacity of the final result.

16.2.5.2.3 The aggregate capacity calculated for each VER resource type in each VER Zone will then be allocated to VERs of that type in that VER Zone based on each such resource's average historical performance if at least three years of historical performance or three years of synthesized forecast data during the ~~WRAP Region's~~ CCH of the Subregion in which the VER Zone is located is available at the time of such allocation. If three years historical performance or synthesized forecast data is not then available, the average ELCC from the VER Zone will be assigned.

16.2.5.3 For resources that are Energy Storage Resources, WPP will determine QCC based on an ELCC methodology comparable to that used for VERs. The ELCC methodology will model Energy Storage Resources at the level of their usable capacity that can

be sustained for a minimum duration of four hours. An Energy Storage Resource need not have a nameplate rating that assumes a minimum of four hours in order to receive a QCC determination, but the QCC in that case will be scaled to reflect the capability that can be sustained for four hours, as more fully described in the Business Practice Manuals.

16.2.5.4 A Participant's Demand Response used as a Demand Response Capacity Resource must be controllable and dispatchable by the Participant or by the host utility, and must have met certain testing requirements consistent with Business Practice Manuals. WPP will determine Demand Response Load Modifier QCC by multiplying the load reduction in MWs by the number of hours the resource can demonstrate load reduction capability (for a period of up to five continuous hours) divided by five. The effects of Demand Response used as a Demand Response Capacity Resource must not be included in load provided for a Participant's Advance Assessment.

16.2.5.5 For Storage Hydro Qualifying Resources, the Participant will calculate a QCC based on a methodology detailed in the Business Practice Manuals that: (i) considers each resource's actual generation output, residual generating capability, water in storage, reservoir levels, and flow or project constraints over the previous ten-year historical period; (ii) determines the project's QCC by assessing the historical generation during CCHs on any given day and ability to increase generation during CCHs on the same day, subject to useable water in storage, inflows/outflows, and expected project operating parameters/constraints and limitations; (iii) incorporates forced outage rates; and (iv) determines QCC as average contribution to the CCH for each Winter Season and Summer Season over the previous ten years. If ten years of historical data is not available for the Storage Hydro Qualifying Resource, the Participant may alternatively employ data on the same metrics from a demonstrably comparable facility or apply another method that provides reasonable confidence in the reliability of the predicted values, as more fully set forth in the Business Practice Manuals. The Participant's QCC calculation shall be subject to review and validation by WPP. In connection with such review, the Participant shall provide WPP with the following information necessary to calculate a QCC for Storage Hydro Qualifying Resources: (i.a) historical reservoir elevation levels; (ii.a) historical plant generation; (iii.a) elevation versus capacity curves; (iv.a) any minimum or maximum reservoir level constraints; (v.a) forced outage rates; (vi.a) volume of water

versus reservoir elevation storage tables; and (vii.a) turbine discharge versus generation efficiency curve.

16.2.5.6 For Run of River Qualifying Resources, WPP will determine QCC based on the monthly average performance of such resource during Capacity Critical Hours, as further specified in the Business Practice Manuals

16.2.5.7 For resources that (i) are not within the meaning of any of Sections 16.2.5.1 through 16.2.5.5, and that (ii) either (a) are not dispatchable; or (b) require the purchaser of energy from the resource to take energy as available from such resource, including but not limited to a qualifying facility as defined under the Public Utility Regulatory Policies Act of 1978, WPP will determine QCC based on the monthly average performance of such resource during Capacity Critical Hours, as further specified in the Business Practice Manuals.

16.2.6 Net Contract QCC: WPP shall determine Net Contract QCC for the agreement types specified below in accordance with the governing principles specified below for each agreement type, and consistent with further details specified for each agreement type in the Business Practice Manuals. Net Contract QCC may be either positive or negative, to take account of, for example, a Participant's agreements for the sale of capacity to any other party.

16.2.6.1 Absent one of the exceptions described and limited below, capacity supply agreements qualifying for a Net Contract QCC in the WRAP must be resource specific, and therefore must include, among other requirements, an identified source, an assurance that the capacity is not used for another entity's resource adequacy requirements, an assurance that the seller will not fail to deliver in order to meet other supply obligations, and affirmation of WRAP Qualifying Transmission from the identified resource to the point of delivery/load. The specific resources identified in a capacity supply agreement qualifying for Net Contract QCC shall meet the same Resource QCC accreditation requirements for the given resource type, as specified in Section 16.2.5.

16.2.6.2 A system sales contract can qualify for a Net Contract QCC value, provided that if the seller is not a Participant, the system capacity that is the subject of the agreement must be deemed surplus to the seller's estimated needs, there must be an assurance that the seller will not fail to deliver in order to meet other commercial obligations, and there must be an assurance that the seller will have WRAP Qualifying Transmission from

the identified resource to the point of delivery/load. Surplus status may be demonstrated by a Senior Official Attestation with pertinent supporting details for such surplus status, including written assent of the non-Participant Seller, secured by the purchasing Participant. Such attestation is not required if the seller is a Participant, because the information needed to verify surplus status is already available.

16.2.6.3 A supply agreement entered into prior to October 1, 2021 ("Legacy Agreement") can qualify for a Net Contract QCC value; provided that where a legacy agreement does not identify the source, it must be possible for WPP to presume a source or sources for the contract, including with the written assent of the supplier under such Legacy Agreement, conveyed in the form and manner set forth in the Business Practice Manuals. A Legacy Agreement for which such resource determination cannot be reasonably made will not be counted as adding to the Portfolio QCC.

16.2.7 Total RA Transfer: A Participant may agree with another Participant on a transfer of a portion of its Portfolio QCC to meet the other's FS Capacity Requirement ("RA Transfer"), provided that the details and duration of such transfer are reported to WPP for validation in accordance with procedures and information requirements specified in the Business Practice Manuals. Where such transfers have been duly reported and validated, an RA Transfer will be added to the purchasing Participant's Portfolio QCC and subtracted from the selling Participant's Portfolio QCC.

16.2.8 Planned Outages: Participants shall include in their Forward Showing Submittal for a Binding Season information on all Qualifying Resources that are currently out of service with a scheduled return date that falls during the Binding Season or after the Binding Season. Capacity associated with such resources must be deducted from Participants' Portfolio QCC as specified in the Business Practice Manuals to ensure no credit is granted for such resources during the planned outage. The aggregate of any additional outages that are planned to occur during the Binding Season but have not yet begun at the time of submission must be within the Participant's remaining surplus (or replaced with other supply). Participants may provide information on all Qualifying Resources that are planned to be out of service but if such data cannot be supplied with reasonable specificity, a Participant may provide a Senior Official Attestation at the time of the submission of its FS Submittal that it expects the sum of planned outages to be equal to or less than the surplus stated in its FS Submittal throughout the Binding Season.

16.2.8.1 If a Qualifying Resource is planned to return to service within the first five days of a Binding Season, WPP may approve a

qualified acceptance of the FS Submittal, provided the deficiency is less than 500 MW.

16.2.8.2 A planned outage shall not justify a waiver of or exception to a Participant's holdback or energy delivery obligations under Part III of this Tariff. Participants will be expected to procure the necessary capacity or energy to meet the Operations Program requirements, regardless of planned outage schedules or FS Submittal acceptance.

16.3 FS Transmission Requirement

16.3.1 As part of its Forward Showing Submittal for a Binding Season, each Participant must demonstrate, as specified in the Business Practice Manuals, that it has secured transmission service rights, including under supply arrangements with a third party that holds or has committed transmission service rights, sufficient to deliver a MW quantity equal to at least 75% of the MW quantity of its FS Capacity Requirement. To the extent a Participant holds transmission service rights with a point of receipt at a Qualifying Resource, or in connection with an RA Transfer to such Participant, any such rights from such point in a MW quantity, respectively, in excess of the QCC of such Qualifying Resource, or in excess of the value of such RA Transfer, shall not contribute toward satisfaction of such Participant's FS Transmission Requirement. The FS Transmission Requirement must be met with WRAP Qualifying Transmission, from such Participant's Qualifying Resource(s) or from the delivery points for the resources identified for its Net Contract QCC or for its RA Transfer to such Participant's load. Notwithstanding the foregoing, authorized use of Capacity Benefit Margin, provided it is WRAP Qualifying Transmission, will satisfy the FS Transmission Requirement. Demonstration of the FS Transmission Requirement shall not, in and of itself, relieve any Participant of responsibility for a Delivery Failure Charge as determined under Section 20.7 if such Participant's failure to obtain or maintain WRAP Qualifying Transmission of the type and quantity expected by the Operations Program, as described in Section 20.6 of this Tariff, caused or contributed to an Energy Delivery Failure.

16.3.2 A Participant may include in its Forward Showing Submittal a request for an exception from a limited part of its FS Transmission Requirement, provided the exception request meets the terms, conditions, and limitations of one or more of the following four exception categories below. As more fully set forth in the Business Practice Manuals, such exceptions may be subject to overall WRAP limits, and shall be supported by a Senior Official Attestation. WPP will consider the exception category terms, conditions and limitations set forth below, and may consider the completeness of the exception request, information from transmission service providers, OASIS data, and data readily available to WPP from other reliable and validated

sources concerning the duration, timing, firmness and quantity of available transmission service or equivalent options (including transmission construction), in determining whether to grant or deny a transmission exception request. WPP shall provide such determination no later than sixty days after submission of such Participant's FS Submittal containing such transmission exception request. A Participant denied an exception request hereunder may appeal such denial to the Board of Directors in accordance with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested exception shall be denied or permitted as, when and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall give notice of any exception granted hereunder in the time and manner provided by the Business Practice Manuals. A Participant granted a transmission exception under either Section 16.3.2.1 or Section 16.3.2.2 must complete a monthly transmission exception check report demonstrating that either (i) the circumstances necessitating the exception have not changed; (ii) WRAP Qualifying Transmission has become available and the Participant has acquired it; or (iii) the Participant has acquired a different resource, and associated WRAP Qualifying Transmission, and no longer requires the exception. Failure to timely submit a required monthly report will result in assessment of a Deficiency Charge, unless the deficiency is cured within seven days of notice of non-compliance.

16.3.2.1 Enduring Constraints. Participant is unable to demonstrate sufficient WRAP Qualifying Transmission rights on any single segment of a source to sink path for a Qualifying Resource; and Participant demonstrates that no ATC for such transmission service rights is available (either from the transmission service provider or through a secondary market) at the FS Deadline on the applicable segment for the Month(s) needed (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less; and Participant submits a Senior Official Attestation that Participant has taken commercially reasonable efforts to procure WRAP Qualifying Transmission, and that Participant has posted Firm Transmission Requirements on a relevant bulletin board prior to the FS Deadline. In the event such WRAP Qualifying Transmission is only available for a duration of more than one year (whether from the transmission service provider or through a secondary market) at the FS Deadline on the applicable segment for the Month(s) needed at the applicable Open Access Transmission Tariff rate or less, a Participant is not required to obtain such service in order to qualify for the Enduring Constraints exception hereunder. Notwithstanding the foregoing, if such Participant declines to obtain such available WRAP Qualifying Transmission and is granted the exception hereunder, such Participant shall not qualify for an exception hereunder for the same path (or across the same constraint) for the same season of the

subsequent year if the Participant again declines to obtain such WRAP Qualifying Transmission that is available for a duration of more than one year. In addition to the foregoing, Participant must further demonstrate that there was remaining available transmission transfer capability (i.e., non-firm ATC after the fact) for all CCHs in the same season of the most recent year for which CCHs have been calculated in any Subregion in which the transmission segment exists; or, if the path was constrained in at least one CCH of the CCHs in the same season of the most recent year for which CCHs have been calculated in any Subregion in which the transmission segment exists, Participant in that case must demonstrate either that it is constructing or contracting for a new local resource for at least the amount of the exception requested, or that it is pursuing long-term WRAP Qualifying Transmission by entering the long-term queue and taking all appropriate steps to obtain at least the amount of the exception requested.

16.3.2.2 Future Firm ATC Expected. Participant demonstrates that ATC of WRAP Qualifying Transmission rights is not posted or available prior to the FS Deadline (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less, and that the transmission service provider has, after the FS Deadline, released additional ATC for such transmission service rights along the applicable path in every one of the CCHs that have been calculated in any Subregion in which the applicable transmission segment exists for ~~of~~ the most recent year for which CCHs have been calculated for the Subregion~~on the applicable path~~. In the event ATC for such WRAP Qualifying Transmission is only posted or available prior to the FS Deadline for a duration of more than one year (whether from the transmission service provider or through a secondary market) on the applicable segment for the Month(s) needed at the applicable Open Access Transmission Tariff rate or less, a Participant is not required to obtain such service in order to qualify for the Future Firm ATC Expected exception hereunder. Notwithstanding the foregoing, if such Participant declines to obtain such available WRAP Qualifying Transmission and is granted the exception hereunder, such Participant shall not qualify for an exception hereunder for the same path (or across the same constraint) for the same season of the subsequent year if the Participant again declines to obtain such WRAP Qualifying Transmission that is available for a duration of more than one year. The Participant must also demonstrate that the exception request meets volume and duration limitations specified in the Business Practice Manuals.

16.3.2.3 Transmission Outages and Derates. Participant demonstrates that an applicable segment of its existing transmission

service rights from its source to sink path for its Qualifying Resource is expected to be derated or out-of-service and the ATC of WRAP Qualifying Transmission is not otherwise available, and that the exception request meets volume and duration limitations specified in the Business Practice Manuals.

16.3.2.4 Counterflow of a Qualifying Resource. Participant demonstrates that either: (i) Participant's use of WRAP Qualifying Transmission in connection with the delivery of capacity from Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to Participant's load (or other qualifying delivery point permitted by the WRAP) or (ii) a second Participant's use of WRAP Qualifying Transmission in connection with the delivery of capacity from the second Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to the second Participant's load (or other qualifying delivery point permitted by the WRAP) provides a direct and proportional counterflow transmission that supports the first Participant's delivery of capacity from the first Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to the first Participant's load (or other qualifying delivery point permitted by the WRAP) Qualifying Resource to their load. If the exception is requested under subpart (ii) of this subsection, the Participant requesting the exception shall include a written acknowledgement from the second Participant that it is aware of such exception request.

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16.3.3 To the extent a Participant does not demonstrate satisfaction of its FS Transmission Requirement by the FS Deadline, the Participant may correct any such deficiency on or before the end of the cure period prescribed by Section 14.5 of this Tariff to avoid a Deficiency Charge.

16.3.4. Any deficiency of transmission service rights ultimately determined by WPP will be treated, for purposes of Deficiency Charge determinations, as in conjunction with, and not additive to, any deficiencies of QCC determined pursuant to Section 16.2.

17. Forward Showing Deficiency Charge

17.1 If a Participant fails during the cure period to demonstrate that it has resolved any identified deficiencies in either or both of its FS Capacity Requirement and its FS Transmission Requirement, the Participant will be assessed a Deficiency Charge for each Month for which a deficiency is identified in accordance with this section. In such case, the deficiency for which the Participant will be assessed a Deficiency Charge will be calculated in accordance with the following:

Participant's Monthly Capacity Deficiency = Maximum of (Monthly FS Capacity Requirement – Monthly Portfolio QCC, 0)

Participant's Monthly Transmission Deficiency (MW) = Maximum of ((75% × Monthly FS Capacity Requirement) – (Monthly Transmission Demonstrated + Approved Monthly Transmission Exemptions), 0)

Where Monthly Transmission Demonstrated is the amount of WRAP Qualifying Transmission submitted by a Participant per the requirements in Section 16.3 and validated by WPP for each month.

Monthly Deficiency (MW) = Maximum of (Monthly Capacity Deficiency, Monthly Transmission Deficiency)

17.2 A Participant's Deficiency Charges shall be calculated as set forth in this Section 17.2, subject to the Transition Period rules in Section 17.3, and shall take account of multiple Monthly Deficiencies within a Forward Showing for a single Binding Season, multiple Deficiencies across a Forward Showing Year, consisting of a Summer Season and the immediately succeeding Winter Season, and any Monthly Deficiencies in a previous Forward Showing Year, in accordance with the following:

17.2.1 The Monthly Deficiency with the highest MW value in a Forward Showing for a Summer Season shall be assessed a Deficiency Charge equal to:

Max Summer Deficiency (MW) × Annual CONE ($/kW-year) × 1000 × Summer Season Annual CONE Factor

17.2.2 Any other Monthly Deficiency in the Participant's Forward Showing for the same Summer Season shall be assessed a Deficiency Charge equal to:

Additional Summer Deficiency (MW) × (Annual CONE ($/kW-year)/12) × 1000 × 200%

17.2.3 Any Monthly Deficiency in the Forward Showing for the immediately succeeding Winter Season with a higher MW value than the highest MW value of the Monthly Deficiency in the Summer Season shall be assessed a Deficiency Charge on the incremental MW value above the Summer Season equal to:

Maximum of (Max Winter Deficiency – Max Summer Deficiency, 0) (MW) × Annual CONE ($/kW-year) × 1000 × Winter Season Annual CONE Factor

and in such case where there is a Monthly Deficiency in the Winter Season with a higher MW value than the highest MW value of any Monthly Deficiency in the Summer Season, the Monthly Deficiency with the highest MW value in the Summer Season shall be assessed an additional Deficiency Charge calculated in accordance with Section 17.2.2.

17.2.4 Any other Monthly Deficiency in the Participant's Forward Showing Submittal for the same Winter Season shall be assessed a Deficiency Charge equal to:

Additional Winter Capacity Deficiency × (Annual CONE/12) × 1000 × 200%

17.2.5 For purposes of the above, CONE is the estimated cost of new entry of a new peaking natural gas-fired generation facility. The CONE estimate shall be based on publicly available information relevant to the estimated annual capital and fixed operating costs of a hypothetical natural gas-fired peaking facility. The CONE estimate shall not consider the anticipated net revenue from the sale of capacity, energy, or ancillary services from the hypothetical facility, nor shall it consider variable operating costs necessary for generating energy.

17.2.6 WPP shall review the CONE estimate annually for a possible update. Any proposed changes in the CONE estimate shall be subject to review through the stakeholder process for program rule changes.

17.2.7 The Summer Season Annual CONE Factor shall vary based on the ratio ("Summer % Deficit") of the Aggregate Capacity Deficiency for the WRAP as a whole for that Summer Season, divided by the P50 Peak Load Forecast for the Summer Season, as follows:

If the Summer % Deficit is less than or equal to 1%, the Summer Season Annual CONE Factor = 125%

If the Summer % Deficit is greater than 1% but less than or equal to 2%, the Summer Season Annual CONE Factor = 150%

If the Summer % Deficit is greater than 2% but less than or equal to 3%, the Summer Season Annual CONE Factor = 175%

If the Summer % Deficit is greater than 3%, the Summer Season Annual CONE Factor = 200%

17.2.8 The Winter Season Annual CONE Factor shall vary based on the ratio ("Winter % Deficit") of the Aggregate Capacity Deficiency for the WRAP as a whole for that Winter Season, divided by the P50 Peak Load Forecast for the Winter Season, as follows:

If the Winter % Deficit is less than or equal to 1%, the Winter Season Annual CONE Factor = 125%

If the Winter % Deficit is greater than 1% but less than or equal to 2%, the Winter Season Annual CONE Factor = 150%

If the Winter % Deficit is greater than 2% but less than or equal to 3%, the Winter Season Annual CONE Factor = 175%

If the Winter % Deficit is greater than 3%, the Winter Season Annual CONE Factor = 200%

17.2.9 Notwithstanding Sections 17.2.7 and 17.2.8, if a *Participant incurred any FS Deficiency Charges* in a Forward Showing Year *after the Transition Period*, then for the immediately following Forward Showing Year, both the Summer Season Annual CONE Factor and the Winter Season Annual CONE Factor shall be 200% *for such Participant*.

17.2.10. Subject to the Transition Period rules in Section *15A.1*, revenues from the payment of Deficiency Charges as to a Binding Season shall be allocated among those Participants with no Deficiency Charges for that Binding Season, pro rata based on each Participant's share of all such Participants' Median Monthly P50 Peak Loads for such Binding Season.

17.3 During the Transition Period, Deficiency Charges otherwise calculated under Section 17.2 shall be reduced as, when, and to the extent, and subject to the conditions, provided in Section 17.3.2; and revenue allocations otherwise calculated under Section 17.2 shall be adjusted as, when, and to the extent, and subject to the conditions, provided in Section 17.3.4.

17.3.1. During the Transition Period, a Participant with a Monthly Capacity Deficiency can pay a *Discounted* Deficiency Charge for so much of such Monthly Capacity Deficiency as was due to an Excused Transition Deficit. To obtain an Excused Transition Deficit for a Binding Season, the Participant must provide a Senior Official Attestation attesting that the Participant *or a relevant third party servicing load for which the Participant is the LRE* has made commercially reasonable efforts to secure Qualifying Resources in the quantity needed to satisfy the Participant's FS Capacity Requirement for the Binding Season, but is unable to obtain Qualifying Resources in the quantity required for the Binding Season because the supply of such resources on a timely basis and on commercially reasonable

terms is at that time inadequate. *If the attestation relates to a third-party servicing load for which the Participant is the LRE, the Senior Official Attestation may be signed by a Senior Official of the third party load service provider, as further detailed in the Business Practices.* Excused Transition Deficits are not resource specific, relate to a MW quantity of the Participant's FS Capacity Requirement, and are limited for each Participant as to a Binding Season during the Transition Period to a maximum permissible MW quantity equal to a percentage value times the FSPRM applicable to such Participant for all Forward Showing Submittals submitted by such Participant for such Binding Season. For purposes of such calculation, the percentage value is*: 200*% for each of the *2027* Summer Season and *2027-2028* Winter Season*; and 100*% for each of the *2028* Summer Season and *2028-2029* Winter Season.

17.3.2 A Participant will pay a *Discounted* Deficiency Charge as to the portion of its Monthly Capacity Deficiency for which it obtained an Excused Transition Deficit. The *FS* Deficiency Charge otherwise applicable to such Participant under Section 17.2 shall be reduced by a percentage value equal to 75% for each of the *2027* Summer Season and *2027-2028* Winter Season*; and* 50% for each of the *2028* Summer Season and *2028-2029* Winter Season. The Participant will be assessed a*n FS* Deficiency Charge calculated under Section 17.2, without reduction or adjustment, for any of its Monthly Capacity Deficiency that is in excess of the amount of such deficiency for which it obtained an Excused Transition Deficit.

17.3.3 Whether or not a Participant obtains an Excused Transition Deficit as to a Binding Season, the Participant may reduce a Monthly Capacity Deficiency otherwise calculated under Section 17.1 for a Binding Season during the Transition Period to the extent such deficiency is due to the Participant's inability to obtain assent from the supplier under a Legacy Agreement to the accreditation required for such Legacy Agreement under Part II of this Tariff and the Business Practice Manuals. To obtain such relief, the Participant must provide a Senior Official Attestation attesting that the Participant made commercially reasonable efforts to execute the required accreditation form with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the accreditation form. The reduction in Monthly Capacity Deficiency permitted by this Section 17.3.3 as to any Participant for all Forward Showing Submittals submitted by such Participant for any Binding Season during the Transition Period shall not exceed a MW quantity equal to 25% times the FSPRM applicable for such Participant for such Binding Season. To the extent a Participant reduces a Monthly Capacity Deficiency under this subsection, the percentage of the Participant's FSPRM corresponding to the reduction hereunder shall reduce the maximum permissible percentage of FSPRM reduction allowed under Section 17.3.1 for Excused Transition Deficits for the same Binding Season.

17.3.4 A Participant that, as a result of application of this Section 17.3, pays no Deficiency Charge as to a Binding Season, shall not be deemed a "Participant[ ] with no Deficiency Charges" for purposes of Section 17.2.10, and shall not receive an allocation of revenues from the payment of Deficiency Charges as to such Binding Season.

17.4 In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations), FS Deficiencies shall be calculated per Section 15A.3.

PART III OPERATIONS PROGRAM

18. Operations Program Overview

18.1 The Operations Program facilitates access to collective capacity made available through regional load and resource diversity of all Participants under the terms of this Part III.

18.2 The Operations Program evaluates forecasted system conditions across the seven-day period ("Multi-Day-Ahead Assessment") preceding the Operating Day, commencing at the outset of the assessment period with an initial Sharing Calculation and initial identification of potential Sharing Events for the Operating Day. The assessment is refined as forecasted conditions for the Operating Day are revised and established on the Preschedule Day, a Holdback Requirement for any Sharing Events is then identified. To the extent a Sharing Event continues to be identified for the Operating Day, Holdback Requirements shall be converted into Energy Deployments on the Operating Day.

18.3 The Operations Program prescribes pricing designed to incent Participants to resolve any forecast Operating Day deficiencies before the Operating Day, including through transactions outside the Operations Program, and to fully compensate Participants that provide support through the Operations Program to Participants with Operating Day deficiencies.

19. Operations Program Timeline and Supporting Information

19.1 The Operations Program includes a Multi-Day Ahead Assessment that looks ahead at the next seven Operating Days by performing an indicative Sharing Calculation from Participant forecast data for each future Operating Day up until the Preschedule Day. The Sharing Calculation for the Preschedule Day is not indicative but is binding, subject to Sections 20.2.4 and 20.3. Participants shall provide WPP with forecasts for the next seven Operating Days of expected (i) load, (ii) output of VERs, (iii) output of RORs, (iv) Contingency Reserves, and (v) forced outages, including outages on transmission facilities the Participant utilized to meet its Forward Showing Capacity Requirement, as further described in the Business Practice Manuals. WPP shall utilize the forecast data obtained in the Multi-Day-Ahead Assessment to calculate or revise the indicative Sharing Calculations for each day thereafter, up until the Preschedule Day, and will use such forecast data to revise the indicative Sharing Calculation hourly during the Operating Day. Such forecast data will also be used to calculate the binding Sharing Calculation for the Preschedule Day.

19.2 The Operations Program, during any Binding Season, shall rely on and employ (among other data) the following information from the Forward Showings for such Binding Season: (i) the P50 Peak Load Forecast for each Participant; (ii) the Monthly FSPRMs for each Participant during such Binding Season; (iii) expected performance by Qualifying Resource type and any RA Transfers; (iv) expected forced outage rates by resource type; (v) expected Contingency Reserves; and (vi) WRAP Qualifying Transmission made available for purposes of regional diversity sharing under the WRAP, permitted under Part II of this Tariff, which shall be assumed to be available for all hours of each Month for which such WRAP Qualifying Transmission rights were made available.

19.3 To facilitate WPP's conduct of the Multi-Day-Ahead Assessment, each Participant shall provide the Program Operator information relevant to the Participant's expected demand and supply conditions on each Operating Day, of the type, in the manner, and with the frequency, specified in the Business Practice Manuals.

19.4 Each Participant in any Subregion identified in the Business Practice Manuals as not containing a central transmission hub permitting energy deliveries to that hub from any point within such Subregion, shall, in addition to providing the information required by Section 19.3, identify, on or before the deadline during the Preschedule Day specified in the Business Practice Manuals, for each Hour of the Operating Day each point to which it can deliver energy, each point at which it can take receipt of energy, the quantity it can deliver or receive at each such point, and a numeric factor intended to prioritize use of transmission made available by Participants with positive Sharing Calculations and needed by Participants with negative Sharing Calculations for each such hour. A Participant with a positive Sharing Calculation for an hour must provide a total quantity for all identified points at which it can deliver that is no less than the amount of its positive Sharing Calculation for such hour (adjusted as necessary for any RA Transfer in accordance

with Section 20.1.2). A Participant with a negative Sharing Calculation for an hour must provide a total quantity for all identified points at which it can take receipt that is no less than the amount of its negative Sharing Calculation for such hour (adjusted as necessary for any RA Transfer in accordance with Section 20.1.2). Participants shall provide this same information for each Operating Day on an expected or preliminary basis on each day of the Multi-Day-Ahead Assessment following, and based on, the expected Holdback Requirement estimates provided on each such day for the Operating Day.

19.5 Any Participant with excess supply that is not obligated to the WRAP through a positive Sharing Calculation result may, at its sole election, offer such supply to the WRAP as Voluntary Holdback. If the offering Participant has a positive Sharing Calculation result, the offered capacity shall be in addition to that Sharing Calculation result; if the offering Participant has a negative Sharing Calculation result, the offered capacity will only be included in the allocation of Holdback Requirement so long as the offering Participant did not confirm a need for Holdback Capacity for such hour. Such offers must be submitted within the time window identified in the Business Practice Manuals, must include the information identified in Sections 19.3 and 19.4, as applicable, and must conform to the format and content identified in the Business Practice Manuals. An offer of Voluntary Holdback may become part of the Participant's Holdback Requirement when it is included in the allocation on the Preschedule Day prescribed by Section 20.2.

20. Components of the Operations Program

20.1 Sharing Calculation

20.1.1 WPP shall implement, as more fully described in the Business Practice Manuals, with respect to each Forward Showing Submittal accepted by WPP for a Participant under Part II of this Tariff, or with respect to each Subregion in which the Participant is responsible for load regardless of whether the Participant submitted a single Forward Showing Submittal encompassing its loads in multiple Subregions, the following Sharing Calculation to identify any hour in which any Participant is forecast to have a capacity deficit (known as a "Sharing Event"). This calculation takes into account changes in a Participant's resource availability, resource performance, forecast load, and Contingency Reserve relative to the Forward Showing, plus an Uncertainty Factor. The Sharing Calculation is equal to:

[(P50) * (1 + FSPRM) + Contingency Reserve Adjustment] – [Load Forecast – Demand Response Capacity Resources + Contingency Reserve Obligation + Uncertainty Factor] + [ΔForced Outages + ΔRoR Performance + ΔVER Performance]

Where:

P50 refers to the Participant's Monthly P50 Peak Load for that Binding Season's Month;

FSPRM, as described in Section 16.1.2, is an increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages and is expressed as a percentage of the applicable Participant P50 Peak Load Forecast for that Binding Season's month;

Contingency Reserve Adjustment accounts for changes in Contingency Reserve expectations (relative to the 6% Contingency Reserve assumed in the FSPRM) resulting from energy contract purchases and contract sales as set forth in the Business Practice Manuals;

Load Forecast refers to the forecast of expected load for the subject hour for the loads for which the Participant is the Load Responsible Entity and that have not been excluded from WRAP participation;

Demand Response Capacity Resource as described in Section 16.2.5.4.

Contingency Reserve Obligation refers to the amount of Contingency Reserve the Participant is carrying during the operating hour equal to (i) 3% of Load Forecast for which the Participant is the WRAP LRE and maintains

its Contingency Reserve, (ii) plus 3% of WRAP load for which the Participant is not the LRE but has assumed the Contingency Reserve through a contractual arrangement, (iii) plus 3% of generation used to meet any load for which the Participant is the LRE and maintains the Contingency Reserve, (iv) plus 3% of generation utilized to meet WRAP Load for which the Participant is not the LRE but has assumed the Contingency Reserve through a contractual arrangement;

Uncertainty Factor refers to a factor determined by WPP, as more fully set forth in the Business Practice Manuals, to account for the potential variance between forecasts of load, solar resources, wind resources, and run-of-river resources, and the Operating Day conditions of such load and resources;

Δ Forced Outages refers, for the subject hour, to the sum of:

(i) any change in forced outages of any of the thermal resources included in the Participant's Portfolio QCC, relative to the forced outages assumed in the Forward Showing Submittal by application of the Forced Outage Factor; plus

(ii) any change in forced outages of any of the Storage Hydro Qualifying Resources relative to the forced outages assumed in the calculation of the Participant's Resource QCC as more fully described in the Business Practice Manuals; plus

(iii) any reduction in output capability of any of the Energy Storage Resources due to equipment failure or protection

a. In the first four (4) hours the Forced Outages MWs that can be claimed are equal to [(charge MW x duration)/4]

b. For all hours beyond four (4) hours, the Forced Outages MW amount that can be claimed for an Energy Storage Resource shall not be greater than the monthly QCC; plus

(iv) any impacts of transmission conditions on previously acquired WRAP Qualifying Transmission that result in capacity reductions up to the level of the Resource QCC of the associated Qualifying Resource;

ΔRoR Performance refers to any change, for the subject hour, in expected performance of any of the run-of-river resources in the Participant's Portfolio QCC relative to the QCC of those Qualifying Resources; and

ΔVER Performance refers to any change, for the subject hour, in expected performance of the VER Resources in the Participant's Portfolio QCC relative to the QCC of those Qualifying Resources;

20.1.2 In addition to the foregoing, the Sharing Calculation for a Participant that is a purchaser of an RA Transfer shall be performed in two passes, with and without such purchase. If the result of assuming in the first pass that the Participant had not purchased the RA Transfer is that the Participant has a

negative Sharing Calculation, then the Participant that sold the RA Transfer must agree, for the time period addressed by the Sharing Calculation, to an energy delivery to the Participant that purchased the RA Transfer, in an amount equal to the lesser of: (i) the MW quantity needed to result in a net zero Sharing Calculation for the Participant that purchased the RA Transfer; and (ii) the MW amount of the RA Transfer. If the result of recognizing the Participant's purchase of the RA Transfer in the second pass is that the Participant has a positive Sharing Calculation, then the Participant that sold the RA Transfer must assume a share of the purchasing Participant's resulting obligation to the Operations Program in an amount equal to the MW quantity of the RA Transfer, minus the MW quantity of the delivery made by the seller of the RA Transfer to the purchaser of the RA Transfer as a result of the first pass.

20.1.3 The Sharing Calculation of any Participant that was found to have a Monthly Capacity Deficiency under Sections 16.1 and 16.2, for which such Participant paid a Deficiency Charge, including any Deficiency Charge reduced by application of Section 17.3 during the Transition Period, shall be reduced by the MW quantity of such Monthly Deficiency.

20.2 Holdback Requirement

To the extent that: (i) WPP's application of the Sharing Calculation identifies on the Preschedule Day a Sharing Event for any hour(s) of the Operating Day; and (ii) the Participant(s) found to be deficient for such hour(s) by the Sharing Calculation confirms to WPP on the Preschedule Day, in accordance with notification and confirmation procedures set forth in the Business Practice Manuals, such Participant's need for capacity for such hour(s), then WPP shall determine the Participants having a Holdback Requirement for such hour(s) and the quantity of the Holdback Requirement for each such Participant in accordance with this Section 20.2. The Operations Program will prioritize offers of Voluntary Holdback in the allocation and assignment of Holdback Requirements. Holdback Requirements shall be expressed as whole MWs for each hour for which they are estimated or established and shall not be specific to any Qualifying Resource.

20.2.1 Subregion with Central Hub

For any hour, as to any Subregion identified in the Business Practice Manuals as containing a central transmission hub permitting energy deliveries to that hub from any point within such Subregion ("Central Hub"), the aggregate of the holdback needed to meet the requirements of all Participants with negative Sharing calculation results that have confirmed their need for holdback will be allocated and assigned first among offers of Voluntary Holdback, and second, to the extent such needs remain unmet, among Participants with positive Sharing Calculation results.

20.2.1.1 Allocation of Voluntary Holdback: Voluntary Holdback will be allocated in one of three alternative ways, based on comparing the aggregate confirmed need for holdback among Participants with negative Sharing Calculation results against the aggregate of all offers for Voluntary Holdback.

20.2.1.1.1 If the total MW quantity of all Voluntary Holdback offered is equal to the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant that offered Voluntary Holdback is assigned its offered Voluntary Holdback as its Holdback Requirement.

20.2.1.1.2 If the total MW quantity of all Voluntary Holdback offered is more than the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant that offered Voluntary Holdback is assigned as its Holdback Requirement a percentage of the total confirmed need for holdback based on the ratio of the Participant's MWs of offered Voluntary Holdback to the sum of all Participants' MWs of offered Voluntary Holdback.

20.2.1.1.3 If the total MW quantity of all Voluntary Holdback offered is less than the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant's Holdback Requirement is determined as set forth in section 20.2.1.2.

20.2.1.2 Allocation of Remaining Holdback Requirement: Sharing Calculation Results

If the total MW quantity of all Voluntary Holdback offered is less than the total MW quantity of all deficient Participants' confirmed requests for holdback, then the maximum Voluntary Holdback offered is used as the first term in the Holdback Requirement. The remaining term of the Holdback Requirement is met by application of the Sharing Calculation, and the results of the two terms are summed for each Participant. The remaining need for holdback that is not met by Voluntary Holdback is allocated among all Participants with positive Sharing Calculation results pro rata based on the ratio for each Participant of the Participant's positive Sharing Calculation result to the sum of the positive Sharing Calculation results. The

sum of these two values for each applicable Participant is the Holdback Requirement for that Participant.

20.2.2 Subregion without Central Hub

For any hour, any Subregion not containing a Central Hub, the Program Operator shall conduct an optimization-based allocation to pair surplus and deficient Participants. The allocation methodology will utilize the points at which surplus Participants can deliver their Holdback Requirement, the points at which deficient Participants can take receipt of their allocation of the total Holdback Capacity, and the transfer capability that exists to the points at which surplus Participants can deliver and the points at which deficient Participants can take receipt.

The optimization will generally attempt to prioritize (i) Voluntary Holdback; (ii) Holdback Capacity matched pursuant to the information provided per Section 19.4 on a nearest neighbor and cluster basis, allocated pro rata among Participants within such cluster; (iii) Holdback Capacity matched pursuant to the information provided and allocated among Participants within the same Subregion to the extent not matched and allocated under category (ii); and finally (iv) Holdback Capacity from Participants in another Subregion, paired with any transmission service per Section 14.3.2.

20.2.3 Absent a Holdback Requirement Transfer as described below, a Participant's Holdback Requirement for any hour of an Operating Day shall not exceed the level first set by WPP on the Preschedule Day for that Participant for that hour.

20.2.4 Any Participant may agree with any other Participant for the first Participant to transfer to the second Participant some or all of the Holdback Requirement established for the first Participant for any hour on any Operating Day. Any such Holdback Requirement Transfer shall be a bilateral arrangement settled outside the Operations Program, provided, however, that both Participants must timely notify WPP, by the time and in the manner described in the Business Practice Manuals, of such Holdback Requirement Transfer. Any necessary transmission arrangements and any transaction settlements shall be the sole responsibility of the Participants that are the parties to such bilateral arrangement.

20.2.4.1 No Holdback Requirement transfer for any hour shall be permitted if notice of such bilateral transaction is not fully reported to WPP, in the form required by the Business Practice Manuals, by 120 minutes before the start of such hour.

20.3 Release of Surplus Capacity

20.3.1 As detailed in the Business Practice Manuals, WPP will review the indicative Sharing Calculation results from the Multi-Day Ahead Assessment and to the extent the WPP determines any indicative Sharing Calculations can be reduced, it may release all or a portion of Participants' future Holdback Requirements. WPP may permit a release of future Holdback Requirements to the extent WPP has not applied a Safety Margin for such hour and (i) WPP's continued Sharing Calculations determine that no Participant has a negative indicative Sharing Calculation result for such hour; and (ii) WPP determines there is a low probability of a Sharing Event for the hour; or (iii) WPP grants a Participant's request for extenuating circumstances of all or any portion of that Participant's future Holdback Requirement for the hour.

20.3.2 Upon release of all or any portion of a future Holdback Requirement, the quantity of future Holdback Requirement so released shall no longer be subject to an Energy Deployment requirement under the Operations Program for the subject hour.

20.4 Energy Deployment

20.4.1 Participants shall provide energy during an hour, in support of any Participants with a negative Sharing Calculation result and a confirmed need for energy under the Operations Program for such hour, in accordance with WPP's calculation of the Energy Deployment for such hour. The total Energy Deployment required of all Participants that are subject to Energy Deployment shall equal the sum, in MWh for that hour, of the energy confirmed as being needed in that hour by Participants in such Subregion with negative Sharing Calculation results in such hour, to the extent that can be supported by the Program. The Energy Deployment assigned to each Participant shall not exceed that Participant's Holdback Requirement calculated on the Preschedule Day, adjusted for any applicable transfer of Holdback Requirement as allocated and assigned for the Preschedule Day, and, as further adjusted to reflect the election, made after the Preschedule Day, of any Participant with a negative Sharing Calculation result on the Preschedule Day to decline all or any part of the Holdback Capacity to which it would have been entitled based on the Holdback Requirements determined on the Preschedule Day.

20.4.1.1 In Subregions with a Central Hub, Energy Deployments required hereunder shall be delivered to the Central Hub in such Subregion, or to an alternate delivery point mutually agreed by the parties to a specific Energy Deployment, provided both parties to the transaction report such alternative delivery arrangements to WPP in the form and manner described in the Business Practice Manuals.

20.4.1.2 In Subregions without a Central Hub, Energy Deployments required hereunder shall be delivered to the receipt point and delivery point as indicated by the optimization allocation, or to an alternate delivery point mutually agreed by the parties to a specific Energy Deployment, provided both parties to the transaction report such alternative delivery arrangements to WPP in the form and manner described in the Business Practice Manuals.

20.4.2 The Energy Deployment a Participant may receive for any hour shall be no greater than the negative Sharing Calculation result calculated for such Participant for such hour. Such Participant shall confirm, by no later than 85 minutes before the start of such hour, the quantity of Energy Deployment for which it requires delivery for such hour, through the procedures outlined in the Business Practice Manuals. Any Participant that does not confirm required Energy Deployment deliveries for such hour by such deadline will be deemed to waive all deliveries of Energy Deployment under the Operations Program for such hour.

20.4.3 The Energy Deployment a Participant can be required to supply for an hour shall not exceed the final Holdback Requirement calculated for such Participant on Preschedule Day, including any duly reported exchange of Holdback Requirement, as of 85 minutes before the start of such hour.

20.4.4 WPP shall advise each Participant with a required Energy Deployment for an hour of the required MWh quantity and delivery point of such Energy Deployment by no later than 80 minutes before the start of such hour.

20.5 Safety Margin

20.5.1 WPP may establish on the Preschedule Day a Safety Margin for the WRAP Region or any identified Subregion thereof for any hour of an Operating Day when warranted by such circumstances as potential large resource trips, heavy transmission outage conditions, significant environmental conditions, or other similar regional or subregional conditions, as more fully set forth in the Business Practice Manuals.

20.5.2 Any Safety Margin so determined for an hour shall be allocated pro rata among Participants with a positive Sharing Calculation result, based on their relative shares of the sum of all positive Sharing Calculation results for such hour, provided, however, that the Safety Margin allocated to a Participant may not result in a Holdback Requirement for such Participant greater than such Participant's Sharing Calculation result. A Participant allocated holdback for a Safety Margin hereunder does not receive compensation under this Tariff for such allocation of holdback.

20.5.3 WPP shall notify all Participants of application of a Safety Margin for any hour, including in such notice the total timeframe, the MW amount, and the rationale for such Safety Margin.

20.6 Operations Program Transmission Service Requirements

Participant shall have in place, prior to the Operating Day, WRAP Qualifying Transmission for each hour of such Operating Day for which a Sharing Event has been established, in a quantity sufficient for deliveries from the Qualifying Resources relied upon in such Participant's Forward Showing Submittal to demonstrate satisfaction of such Participant's FS Capacity Requirement (or from replacement Qualifying Resources) to serve such Participant's loads during such hours. In the event a Participant has an Energy Delivery Failure, the review associated with the possible assessment of a Delivery Failure Charge on such Participant shall, as further described in the Business Practice Manuals, include whether a failure to secure sufficient WRAP Qualifying Transmission caused or contributed to such Energy Delivery Failure. For such purpose, the Participant will have been expected to have complied with the transmission service requirement stated in this subsection.

20.7 Failure to Deliver Energy Deployments

20.7.1 A Participant assigned a required Energy Deployment pursuant to Section 20.4.4 of this Tariff for any hour that fails to deliver the specified energy during such hour, and that does not obtain a waiver of its Energy Deployment obligation, shall be assessed a Delivery Failure Charge.

20.7.2 A Participant shall be deemed to have an Energy Delivery Failure if Participant fails to deliver the Energy Deployment quantity established under Section 20.4.1, absent grant of a waiver pursuant to Section 20.7.3 of this Tariff.

20.7.3 A Participant anticipating an Energy Delivery Failure should provide WPP notice of such expected Energy Delivery Failure as soon as practicable after becoming aware of the anticipated failure. Whether anticipated or not, a Participant may request a waiver of an Energy Deployment obligation after an Energy Delivery Failure has occurred. The WPP shall review all such waiver requests and shall determine whether the Participant's justification for the Energy Delivery Failure is valid and warrants waiver of its Energy Deployment obligation. The WPP also shall consider whether the Participant knew in advance, or reasonably should have known in advance, of an Energy Delivery Failure, and what efforts the Participant took to notify the WPP in advance of such Energy Delivery Failure. The procedures for addressing such waiver requests, including a non-exclusive list of valid justifications for an Energy Delivery Failure shall be set forth in the Business Practice Manuals. A Participant denied a waiver request hereunder may appeal such denial to the Board of Directors in accordance

with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested waiver shall be denied or permitted as, when and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall report on the disposition of each waiver request received.

20.7.4 The Delivery Failure Charge for each hour shall be the Charge Rate applicable for such hour times the MWhs of energy that were required to be, but were not, delivered pursuant to an Energy Deployment during such hour. The Charge Rate shall be the higher of the Day-Ahead price or Real-Time price provided by the Day-Ahead Applicable Price Index and Real-Time Applicable Price Index as specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery, respectively, for the hour, times a Delivery Failure Factor, as follows:

20.7.4.1 If the deficit is fully covered by other Participants through the Operations Program, in each instance of failure, the Delivery Failure Factor shall be five for the first non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; ten for the second non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; and twenty for the third and subsequent non-waived Energy Delivery Failures in a Cumulative Delivery Failure Period. For purposes of applying the Delivery Failure Factors under this Section 20.7.4 or the review referenced in Section 20.7.5, multiple Energy Delivery Failures occurring in one day shall be treated as a single instance of failure.

20.7.4.2 If the deficit is not fully covered by other Participants through the Operations Program, the Delivery Failure Factor is twenty-five for the first non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; and fifty for the second and subsequent non-waived Energy Delivery Failures (regardless of whether the prior instance(s) of delivery failure were fully covered by other Participants) in a Cumulative Delivery Failure Period.

20.7.4.3 Revenues from Delivery Failure Charges assessed in cases where the deficit was fully satisfied by other Participants will be used to reduce WPP costs that are recovered under Schedule 1, WRAP Administration Charge. Revenues from Delivery Failure Charges assessed in cases where the deficit was not fully met by other Participants will be collected by the WPP and provided to the Participant that had an unserved deficit.

20.7.4.4 Notwithstanding anything to the contrary in this Section 20.7.4, the Delivery Failure Charges assessed on a Participant, regardless of application of the Delivery Failure Factor, shall not

exceed, over the course of a Summer Season and the immediately succeeding Winter Season, the dollar amount that, as more fully detailed in the Business Practice Manuals, would have been assessed cumulatively under Section 17 as Deficiency Charges if the Participant had one or more Forward Showing Capacity Deficiencies over the course of such Summer Season and Winter Season in the same MW amounts as the highest MW amount of Delivery Failure experienced by such Participant in each Month of such Summer Season and Winter Season. The maximum dollar amount described herein shall be calculated on an ongoing basis during such Summer Season and Winter Season, and increased or reduced accordingly, without awaiting the end of the combined period of such Summer Season and Winter Season.

20.7.5 In addition to assessment of the Delivery Failure Charge, a third or subsequent instance of non-waived delivery failure, when all such delivery failures are fully covered by other Participants, or a second or subsequent instance of non-waived delivery failure when such instance is not fully covered by other Participants, will subject the Participant to review for expulsion from the WRAP.

20.8 Voluntary Response to Increased Deficiencies Identified After Preschedule Day

20.8.1 A Participant that identifies an unmet need for energy for any hour of an Operating Day that is outside of assistance provided or to be provided by Holdback Requirements or Energy Deployments established hereunder may, in accordance with procedures specified in the Business Practice Manuals, notify WPP of the need for such assistance. WPP will establish a portal or other procedure, as specified in the Business Practice Manuals, to facilitate provision of assistance, on a voluntary, bilateral basis, by other Participants to the Participant that identified the unmet need. Compensation, terms, and conditions of any resulting bilateral transactions will be determined by the affected parties outside of this Tariff. While Participant response to any such notification is voluntary, Participants are encouraged to provide assistance to other Participants in the circumstances described in this subsection, in consideration of the mutual support each Participant has agreed to provide to each other Participant by its agreement to participate in the WRAP, including this Operations Program.

21. Operations Program Settlements

21.1 Nature of Operation Program Settlements

21.1.1 Operations Program settlements are bilateral transactions; they are not purchases from or sales to a central market.

21.1.2 Operations Program transactions use existing transaction systems and processes.

21.1.3 The WPP will calculate and post settlement quantities and prices based on the Energy Deployment and Holdback Requirement, in accordance with procedures specified in the Business Practice Manuals for provision of transaction information by and among Participants and WPP, but WPP has no role in the transaction itself. WPP is not a settlement entity.

21.1.4 Settlement Prices calculated under Section 21.2 shall recognize pricing differences among Subregions. Where the seller and buyer are located in the same Subregion, the Applicable Price Index shall be the price index specified for that Subregion in the Business Practice Manuals. Where the seller and buyer are located in different Subregions, the following components of the settlement price calculation in Section 21.2 will be calculated using the Applicable Price Index for the Subregion that provides the higher index price: (i) Possible Block Sale Revenue; (ii) Total Settlement Price; (iii) Energy Declined Settlement Price; and (iv) Realtime Value of Unheld Energy. If a third participant is involved by providing transmission service rights between Subregions, the Participant that provided holdback or Energy Deployment shall receive the settlement price of the Subregion from which the holdback or Energy Deployment was sourced, and the Participant that provided Subregion to Subregion transmission service rights pursuant to Section 19.4 shall receive the difference between each Subregion's Total Settlement Price, or zero, whichever is greater.

21.2 Settlement Price Calculation. Settlement prices shall be calculated in accordance with the following, as more fully set forth in the Business Practice Manuals.

21.2.1 A Participant assigned a Holdback Requirement on a Preschedule Day for any hour of an Operating Day shall be paid the Holdback Settlement Price times the MW quantity of the Holdback Requirement. A Participant that provides energy to another Participant pursuant to an Energy Deployment shall be paid the Energy Declined Settlement Price, defined in Section 21.2.4, times the MWhs of energy provided to such other Participant, and its total payments shall be reduced by the Energy Declined Settlement Price times the MWhs of energy that would have been provided under a Holdback Requirement but were declined by the other Participant. A Participant

assigned a Holdback Requirement also shall be paid, when applicable, a Make Whole Adjustment, as provided below in Section 21.2.5.

21.2.2 A Participant that had a negative Sharing Calculation result for any hour of an Operating Day, which was incorporated in the calculation of Holdback Requirements of any Participants for such hour, determined as of the Preschedule Day, shall pay the Holdback Settlement Price times the MW quantity of such negative Sharing Calculation result. In addition, any Participant that had a negative Sharing Calculation result that was incorporated in the calculation of a Holdback Requirement shall contribute to the payment of the Make Whole Adjustment based on its negative Sharing Calculation. A Participant that declines energy that would have been provided under a Holdback Requirement shall be credited the Energy Declined Settlement Price times the MWhs of energy declined by such Participant.

21.2.3 The Holdback Settlement Price shall equal the Total Settlement Price minus the Energy Declined Settlement Price.

21.2.4 The Energy Declined Settlement Price shall equal the Applicable Real-Time Index Price for the hour.

21.2.5 The Make Whole Adjustment is applied in the event that the settlement revenue and the estimated value of the non-dispatched energy is less than the estimated revenues the selling entity would have received had such entity not been subject to a Holdback Requirement and had sold a day-ahead block of energy with a MW value equal to the maximum amount of Holdback Requirement for the hours in the block. The Make Whole Adjustment has a minimum value of zero and is determined as follows:

Make Whole Adjustment (when applicable) =
Maximum of (Possible Block Sale Revenue
– Final Settlement Revenue
– Realtime Value of Declined Energy
– Realtime Value of Unheld Energy, 0)

Where:

Realtime Value of Declined Energy = Energy Declined × Energy Declined Settlement price

provided that Declined Energy is only applicable to those hours where there was a positive Holdback Requirement.

Realtime Value of Unheld Energy = (Maximum Holdback MW in Block – Holdback MW Requested) × Applicable Index Price

21.2.6 The Total Settlement Price used in the above calculations shall be determined in accordance with the following formula:

Total Settlement Price = Maximum of (Minimum of (Hourly Shaping Factor × Day Ahead Applicable Index Price × 110%, 2000 $/MWh), 0)

where:

Hourly Shaping Factor is based on the most recent High-Priced Day for the relevant season, defined as a day in which at least one hour has a system marginal energy cost ("SMEC") greater than $200/MWh, and shall be calculated as follows:

1 + {[CAISO Hourly Day Ahead SMEC - CAISO Average Day Ahead SMEC (on- or off-peak hours)] / [CAISO Average Day Ahead SMEC (on- or off-peak hours)]}

Day-Ahead Applicable Index Price is the day-ahead heavy load/light load ICE Index price or average Locational Marginal Price that is specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery. If transmission via Section 14.3.2 was used to facilitate holdback, the Applicable Index Price shall be the higher of the two subregional day-ahead index prices for that portion of the holdback.

Real-Time Applicable Index Price is the real-time index price that is specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery.

SCHEDULE 1

WESTERN RESOURCE ADEQUACY PROGRAM ADMINISTATIVE COST RECOVERY CHARGE

The Western Power Pool's Costs of administering and operating the Western Resource Adequacy Program including, without limitation, all costs incurred or obligated by WPP as Program Administrator, all costs paid or payable by WPP to the Program Operator or other service providers, all costs of the Board of Directors in directing, supervising, or overseeing the WRAP, and the costs of maintaining a reasonable reserve as provided in Section 1 of this Schedule 1, shall be recovered from Participants pursuant to the charges set forth in this Schedule 1.

Section 1. WRAP Costs

1. As used herein, Costs shall mean WPP's costs, expenses, disbursements and other amounts incurred (whether paid or accrued) or obligated of administering and operating the WRAP as described above, including, without limitation, operating expenses, general and administrative expenses, costs of outside services, taxes, fees, capital costs, depreciation expense, interest expense, working capital expense, any costs of funds or other financing costs, and the costs of a reasonable reserve as provided herein.

2. The Costs included in a WRAP Administration Charge assessed for a Month shall be the Costs determined as being incurred for that Month, including, without limitation, for each Month, one-twelfth of any annual charge(s).

3. The Costs included in the WRAP Administration Charge for a reasonable reserve shall be those designed to establish over the first twelve months that this WRAP Administration charge is in effect an amount equal to 6% of the expected Costs, exclusive of such reserve, for one year; and to maintain such reserve thereafter at an amount equal to 6% of the expected Costs, exclusive of such reserve for the then-current year. WPP shall record on its income statement deferred regulatory expense, and WPP's balance sheet will reflect as a cumulative deferred regulatory liability, revenues collected under this Schedule 1 that are in excess of the Costs exclusive of such reserve and taking account of and including any accrued tax expense effects of this regulatory liability. The deferred regulatory liability will be reduced when after-tax WPP revenues collected under this Schedule 1 during any Month are less than the Costs exclusive of such reserve. Within thirty days after the end of each Year, to the extent WPP determines that the deferred regulatory liability exceeds 6% of WPP's revenues that were collected under this Schedule 1 during such Year, such excess amounts in the deferred regulatory liability shall be refunded evenly over the applicable billing determinant volumes in the remainder of the subsequent Year through credits to charges to then-current customers under this Schedule 1.

Section 2. WRAP Administration Charge

Each Participant shall be assessed each Month a WRAP Administration Charge equal to the sum of the Base Charge and the Load Charge,

where:

The Base Charge for each Participant equals the Base Costs divided by the number of Participants being assessed the Base Charge for the Month for which the WRAP Administration Charge is being calculated;

The Load Charge for each Participant equals the Load Charge Rate of the Load Services Costs divided by the sum of the Median Monthly P50 Peak Loads of the Participants being assessed the Load Charge for the Month for which the WRAP Administration Charge is being calculated, times that Participant's Median Monthly P50 Peak Load;

And where:

Base Costs means the Costs for the Month of the Base Services Cost Centers shown in the WRAP Cost Assignment Matrix, plus the Base Services Percentage times the Costs for that Month of the Dual Benefit Cost Centers shown below in Section 4: WRAP Cost Assignment Matrix;

Load Services Costs means the Costs for the Month of the Load Services Cost Centers shown in the WRAP Cost Assignment Matrix, plus the Load Services Percentage times the Costs for that Month of the Dual Benefit Cost Centers shown in the WRAP Cost Assignment Matrix; and

Median Monthly P50 Peak Loads means, for each Participant, the median of the Monthly P50 Peak Loads used in the FS Capacity Requirement of such Participant for two Binding Seasons corresponding to the two FS Submittal most recently validated by WPP.

If before or during a Binding Season, a Participant has need to update their Monthly P50 Peak Load for allowable reasons, those updated Monthly P50 Peak Loads will be replaced and the Median Monthly P50 Peak Load value recalculated upon validation of the change in participating load.

A Participant joining the Program will supply data such that WPP can validate Monthly P50 Peak Loads for the first two Binding Seasons for which the Participant will submit an FS Submittal for use in calculating Load Services Costs until these FS Submittals are submitted and reviewed in the normal timeframe.

Section 3. Maximum Charge Rates

3.1 Notwithstanding anything to the contrary in this Schedule 1, the sum of the Base Charges for all Months in a Year shall not exceed the Annual Maximum Base Charge of $59,000/Year, and the sum of the Load Charge Rates for all Months in a Year shall not exceed the Annual Maximum Load Charge Rate of $199/MW. WPP shall, to the extent reasonably practicable, provide two-months' notice prior to WPP's filing at FERC of an application to change the Maximum Base Charge or the Maximum Load Charge Rate, provided that nothing herein shall limit the Board of Director's authority and discretion to seek at FERC a change in the maximum rates in the time and manner the Board determines in the best interests of the Western Resource Adequacy Program. For purposes of clarity, these specified maximum rates on the Base Charge and the Load Charge do not limit the level of the Cash Working Capital Support Charge established under Section 5 of this Schedule 1, nor do they limit the amount of the default Allocation assessment provided under Part I of this Tariff.

3.2 To facilitate Participant planning, the WPP shall prepare, and provide to the RAPC, good faith, non-binding estimates of: (i) reasonably anticipated WRAP budgets for three Years beyond the most recently approved WRAP budget, including sensitivity analyses for reasonably identified major contingencies; (ii) reasonably anticipated numbers of Participants and MWs of Winter and Summer P50 Loads for each such Year; and (iii) reasonably anticipated highest monthly Base Charges and Load Charge Rates for each such Year. All assumptions and estimates in such forecasts and analyses shall be in WPP's sole discretion, which may be informed by RAPC discussion of such topics.

Section 4. WRAP Cost Assignment Matrix

	BASE COSTS	LOAD COSTS	DUAL BENEFIT
Program Administration (non-participant)		100%	
Program Administration (Participant engagement, RAPC facilitation)	100%		
WRAP portion of WPP BOD costs			50%/50%
Program Operations Staffing and Overhead		100%	
Program Operations Technology		100%	
Legal Services		100%	
Independent Evaluator		100%	

Section 5. Cash Working Capital Support Charge

5.1 In addition to the WRAP Administration Charge, each Participant shall be assessed a Cash Working Capital Support Charge, to support WPP's maintenance of sufficient funds on hand to make payments required for the operation and administration of the WRAP on a timely basis. Cash Working Capital Support Charges shall be designed to maintain a Cash Working Capital Fund that, at its maximum level over a twelve-month cycle, equals approximately nine-twelfths of the expected annual payment due from the WPP to the Program Operator for its Program Operator services.

5.2 A Participant shall pay a Cash Working Capital Support Charge no later than thirty days after that Participant executes a WRAPA. The Cash Working Capital Support Charge due following WRAPA execution equals the Cash Working Capital Support Charge Rate, calculated as the Cash Working Capital Fund at its required maximum twelve-month cycle level divided by the sum of the Median Monthly P50 Peak Loads of all Participants, times that Participant's Median Monthly P50 Peak Load.

5.3 To the extent the Cash Working Capital Fund is adequately funded at the time a new Participant executes a WRAPA, the revenue from such Participant's payment of the Cash Working Capital Support Charge shall be distributed to all Participants that previously have paid a Cash Working Capital Support Charge, pro rata based on the Median Monthly P50 Peak Loads of all Participants that have previously paid such charge.

5.4 To the extent, and at such time, WPP determines that an incremental addition to the Cash Working Capital Fund is needed due to such causes as, for example, an expected increase in the annual payment to the Program Operator, each Participant shall be assessed an Incremental Cash Working Capital Support Charge equal to the desired incremental addition, divided by the sum of the Median Monthly P50 Peak Loads of all Participants being assessed the Incremental Cash Working Capital Support Charge for the Month for which the Incremental Cash Working Capital Support Charge is being calculated, times that Participant's Median Monthly P50 Peak Load.

ATTACHMENT A

Western Resource Adequacy Program Agreement

This Western Resource Adequacy Program Agreement ("Agreement") dated as of _____ ("Effective Date") is entered into by and between Western Power Pool Corporation ("WPP") and _____ ("Participant"). WPP and Participant are each sometimes referred to in the Agreement as a "Party" and collectively as the "Parties."

In consideration of the mutual promises contained herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, the Parties agree as follows:

1. The Parties agree that this agreement shall be governed by the rates, terms, and conditions of the Western Resource Adequacy Program Tariff ("Tariff") and all such rates, terms, and conditions contained therein are expressly incorporated by reference herein. All capitalized terms that are not otherwise defined herein shall have the meanings ascribed by the Tariff.

2. Participant wishes to participate in the Western Resource Adequacy Program ("WRAP") administered by WPP under the Tariff.

3. Participant certifies that it satisfies all of the following qualifications:

    3.1 Participant is a Load Responsible Entity as that term is defined in the Tariff.

    3.2 Participant commits to complying with all applicable terms and conditions of WRAP participation as set forth in the Tariff and Business Practice Manuals adopted thereunder, including all Forward Showing Program and Operations Program requirements.

4. Participant will register all resources and supply contracts and shall disclose any other obligations associated with those resources and supply contracts.

5. Participant represents and warrants that it is authorized by all relevant laws and regulations governing its business to enter into this Agreement and assume all rights and obligations thereunder.

6. It is understood that, in accordance with the Tariff, WPP, as authorized by its independent Board of Directors, may amend the terms and conditions of this Agreement or the Tariff by notifying the Participant in writing and making the appropriate filing with FERC, subject to any limitations on WPP's authority to amend the Tariff as set forth therein.

7. Participant agrees to pay its share of all costs associated with the WRAP, as calculated pursuant to Schedule 1 of the Tariff. The manner and timing of such payment shall be as specified in Schedule 1 of the Tariff.

8. WPP agrees to provide all services as set forth in the Tariff.

9. Term and termination. This Agreement shall commence upon the Effective Date and shall continue in effect until terminated either by WPP by vote of its Board of Directors or by Participant's withdrawal as set forth herein. WPP and Participant agree that participation in the WRAP is voluntary, subject to the terms and conditions of this Agreement and the Tariff. The date upon which a Participant's withdrawal is effective and its participation in the program terminates is referred to as the "Withdrawal Date."

9.1 Normal Withdrawal: In general, Participant may withdraw from this Agreement by providing written notice to WPP no less than twenty-four months prior to commencement of the next binding Forward Showing Program period. Once notice has been properly given, Participant remains in a "Withdrawal Period" until the Withdrawal Date.

9.1.1 During Participant's Withdrawal Period, Participant remains subject to all requirements and obligations imposed by the Tariff and this Agreement, including but not limited to all obligations imposed in the Forward Showing Program and Operations Program and obligation to pay Participant's share of all costs associated with the WRAP.

9.1.2 All financial obligations incurred prior to and during the Withdrawal Period are preserved until satisfied.

9.1.3 During the Withdrawal Period, Participant is not eligible to vote on any actions affecting the WRAP that extend beyond the Withdrawal Period.

9.2 Expedited Withdrawal: Participant may withdraw from this agreement with less than the required twenty-four month notice as set forth below. Participant shall negotiate with WPP regarding the timing of the Expedited Withdrawal.

9.2.1 Extenuating Circumstances: The following such events and circumstances shall constitute "extenuating circumstances" justifying a withdrawal on less than twenty-four months. Participant invoking an extenuating circumstance shall negotiate with WPP regarding potential ways to minimize the impact of the expedited withdrawal on all other Participants and WPP. Such extenuating circumstances and any mitigation plan to minimize the impact of the expedited withdrawal must be reviewed and approved by the Board of Directors prior to termination of Participant's WRAP obligations. Regardless of the extenuating circumstance, all financial obligations incurred prior to the Withdrawal Date remain in effect until satisfied.

9.2.1.1 A governmental authority takes an action that substantially impairs Participant's ability to continue to

participate in the WRAP to the same extent as previously; provided, however, that Participant shall be obligated to negotiate with WPP regarding potential ways to address the impact of the regulatory action without requiring a full withdrawal of Participant from the WRAP if possible.

9.2.1.2 Continued participation in the WRAP conflicts with applicable governing statutes or other applicable legal authorities or orders.

9.2.1.3 Participant voted against a RAPC determination and disagreed with a Board of Directors decision to release composite or aggregated data under Section 10.2.1 of the Tariff, provided that such right to expedited withdrawal is exercised promptly after the first time that the Board of Directors determines that the form and format of composite or aggregated data sufficiently protects against the release of confidential or commercially sensitive Participant data. Failure to exercise this right promptly upon the first occurrence of the Board of Directors voting on a specific form and format of composite or aggregated data shall constitute a waiver of the right to expedited withdrawal for any future disclosures of composite or aggregated data in the same or substantially similar form and format.

9.2.1.4 FERC or a court of competent jurisdiction requires the public disclosure of a Participant's confidential or commercially sensitive information, as further described in Section 10.5 of the Tariff; provided however that such right to expedited withdrawal shall be exercised promptly upon the exhaustion of all legal or administrative remedies aimed at preventing the release.

9.2.2 Exit Fee: If the impact of Participant's withdrawal on WRAP operations can calculated with a high degree of confidence and mitigated by the payment of an "exit fee" to be calculated by WPP, an expedited withdrawal will be permitted. Such exit fee shall include (but not be limited to): (i) any unpaid WRAP fees or charges; (ii) Participant's share of all WRAP administrative costs incurred up to the next Forward Showing Program period; (iii) any costs, expenses, or liabilities incurred by WPP and/or the Program Operator directly resulting from Participant's withdrawal; and (iv) any costs necessary to hold other participants harmless from the voluntary expedited withdrawal. The exit fee may be waived to the extent that it would violate any federal, state, or local statute, regulation, or ordnance or exceed the statutory authority of a federal

agency. The exit fee shall be paid in full prior to the Withdrawal Date.

9.2.3 Amendments to Section 3.4 of the Tariff: In the event that amendments to Section 3.4 of the Tariff are approved by the RAPC and Board of Directors, a Participant that voted against such a change may withdraw with less than the required twenty-four month notice, provided that the Participant satisfy all obligations in the Forward Showing Program and Operations Program and satisfy all other financial obligations incurred prior to the date that the amendments to Section 3.4 of the Tariff are made effective by FERC.

9.2.4 Expulsion: The Board of Directors, in its sole discretion, may terminate Participant's participation in the WRAP and may terminate this Agreement with Participant for cause, including but not limited to material violation of any WPP rules or governing documents or nonpayment of obligations. Prior to exercising such right to terminate, the Board of Directors shall provide notice to Participant of the reasons for such contemplated termination and a reasonable opportunity to cure any deficiencies. Such Board of Directors termination shall be after an affirmative vote consistent with the Board of Directors standard voting procedures. Such termination shall not relieve the Participant of any financial obligations incurred prior to the termination date, and WPP may take all legal actions available to recover any financial obligations from Participant.

10. No Waiver of Non-FERC-Jurisdictional Status. If Participant is not subject to the jurisdiction of FERC as a public utility under the Federal Power Act, Participant shall not be required to take any action or participate in any filing or appeal that would confer FERC jurisdiction over Participant that does not otherwise exist. Participant acknowledges that FERC has jurisdiction over the WRAP, including Participant's activities in the WRAP.

[SIGNATURE BLOCKS]

WESTERN POWERPOOL

Western Resource Adequacy Program

104 Determination of Capacity Critical Hours

100 – Forward Showing

Revision History

Manual Number	Version	Description	Revised By	Date
104	0.1	RAPC Glance Version	Maya McNichol	1/17/2024
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104	2.0	Annual BPM Review	Maya McNichol	3/19/2026
104	2.1	2026-EP-05 CCH By Subregion	Maya McNichol	9/4/2026

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104 Determination of Capacity Critical Hours

1. Introduction

The Capacity Critical Hours Business Practice Manual (BPM 104) describes the methodology for identifying the Capacity Critical Hours (CCH) for a given period (the "Capacity Critical Hours Methodology"). CCH are those hours when the Net ~~Regional~~ Subregional Capacity Need for each Subregion in the WRAP Region is expected to be above the 95th percentile, based on historical and synthesized data for ~~the~~ each ~~WRAP R~~Subregion's ~~gross~~ net load (load ~~-~~, variable energy resource performance~~,~~) and ~~interchange~~other adjustments. CCH are used to help determine the capability of certain resource types during periods of highest system capacity need, in order to calculate the Qualifying Capacity Contribution (QCC) of such resources. CCH determination results in a ~~single~~ set of hours for each Subregion ~~the WRAP Region~~ for the relevant period. Resources may vary in terms of whether they operate during the determined CCH, but all resources in a Subregion that use CCH in the QCC determination are assessed against the same common set of CCH for that ~~the~~ Subregion for the same relevant period.

1.1. Intended Audience

BPM 104 is intended for WRAP Participants and other interested individuals or entities. BPM 104 is particularly useful for those individuals that are responsible for determining CCH used in the development of QCC for resources.

1.2. What You Will Find in This Manual

BPM 104 describes the methodology for determining CCH.

1.3. Purpose

To provide an overview of CCH and the processes for determining the CCH for the WRAP Region.

1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 104 or another BPM have their meaning set forth in the Tariff.

Capacity Critical Hours Methodology: The methodology used to determine the hours where the net regional capacity need is above the 95th percentile (highest capacity need hours).

Historical Load Data: As defined in *BPM 101 Advance Assessment*.

Net ~~Regional~~ Subregional Capacity Need: The ~~WRAP R~~Subregion's net need for capacity during a given hour, as calculated in accordance with the procedure described in BPM 104.

~~**Regional Interchange**: The net aggregate interchange between all Balancing Authority Areas in the WRAP Region and all Balancing Authority Areas outside the WRAP Region over a given ten-Year period, as calculated in accordance with the procedure described in BPM 104.~~

Resource-Specific Capacity Agreement: as defined in *BPM 106 Qualifying Contracts*.

2. Background

CCH are those hours where the Net ~~Regional~~ Subregional Capacity Need of the ~~WRAP R~~Subregion is above the 95th percentile. CCH are used in the methodology to determine the QCC of storage hydro, thermal, run-of-river (RoR), non-dispatchable resources, and contracts (based on individual resource accreditation). CCH may differ from the peak load hours of the Subregion, because CCH determination considers not only load~~ of the WRAP Region~~, but also the performance of Variable Energy Resources (VERs), ~~as well as~~and may include other adjustments such as the interchange across the footprint to arrive at a Net Subr~~R~~egional Capacity Need:

Definition: Net Subr~~R~~egional Capacity Need
$\boldsymbol{Net\ Subr\cancel{R}egional\ Capacity\ Need\ = Load - Wind - Solar - RoR + \cancel{Regional\ Interchange}other\ adjustments}$
where *Load* is the aggregate Historical Load Data of all Participants in the ~~WRAP R~~Subregion in MW from the most recent ten-Year period, *Wind* is the output of proposed and installed wind resources in the Subregion in MW for the most recent ten-Year period, including synthesized output for such period for resources that have fewer than ten years of output data; *Solar* is the output of proposed and installed solar resources in the Subregion in MW for the most recent ten-Year period, including synthesized output for such period for resources that have fewer than ten years of output data; *Run-of-river* (RoR) is the output of proposed and installed RoR resource in the Subregion in MW for the most recent ten-Year period, including synthesized

output for such period for resources that have fewer than ten years of output data;

and

other adjustments that may include regional interchange, impact of scarcity as determined by price, or other factors that may materially impact the determination of CCH. ~~*Regional Interchange* is the modified interchange in MW for the most recent ten-Year period as calculated in accordance with the procedure described in Section 3.5.~~

Peak load hours, standing alone, are not the best indication of regional capacity need because hours of significant changes in resource performance or ~~Regional Interchange~~ other factors can significantly affect the region's need for capacity. For example, while there may be instances of high loads during the month of June, there is also usually an abundance of RoR generation. Since the output from RoR resources must be used at the time of such output, higher RoR output could result in periods of excess capacity even while loads are generally high. Higher wind or solar output can have similar effects, particularly as wind and solar resources increase their share of the resource portfolio in the WRAP Region.

The following FS Program methodologies rely on the CCH methodology (see *BPM 105 Qualifying Resources*):

- Storage Hydro QCC methodology determination
- Thermal Resource QCC determination
- Run of River QCC determination
- QCC determination of contracts (see the resource accreditation of each contract)
- QCC determination of VERs
- QCC determination of non-dispatchable, must-take resources

3. Derivation of the Net SubrRegional Capacity Need components

3.1. Load (Demand)

Each Participant is responsible for providing ten Years of Historical Load Data for their respective system in accordance with *BPM 101 Advance Assessment*. This data from each Participant will be compiled by the Program Operator to form the WRAP coincident peak load shape for the ten-Year period.

3.2. Wind Resource Output

Each Participant is responsible for providing the hourly generation profiles for the last ten Years from wind resources per *BPM 101 Advance Assessment* for their wind Qualified Resources and for wind resources in their Resource-Specific Capacity

Agreements. Participants will also provide their prospective wind resources that are expected to be in service for the Year that is studied two Years ahead in the applicable Advance Assessment (see *BPM 101 Advance Assessment Timeline* for more information). The data from all Participant wind resources will be compiled by the Program Operator into an aggregate ~~WRAP R~~subregional wind resource output for the ten-Year period.

For wind resources that have less than ten Years of output data, the Program Operator will complete the ten-Year period by using the synthesized wind output data that was developed for the same VER Zone in which the resource is located in the Loss of Load Expectation (LOLE) study (see *BPM 102 Forward Showing Reliability Metrics*) for the Binding Season at issue.

3.3. Solar Resource Output

Each Participant is responsible for providing the hourly generation profiles for the last ten Years from solar resources per *BPM 101 Advance Assessment* for their solar Qualified Resources and for solar resources in their Resource-Specific Capacity Agreements. Participants will also provide their prospective solar resources that are expected to be in service for the Year that is studied two years ahead in the applicable Advance Assessment. The data from all Participant solar resources will be compiled by the Program Operator into an aggregate ~~WRAP R~~subregional solar resource output for the ten-Year period.

For solar resources that have less than ten Years of output data, the Program Operator will complete the ten-Year period by using the synthesized solar output data that was developed for the same VER Zone in which the resource is located in the LOLE study (see *BPM 102 Forward Showing Reliability Metrics*) for the Binding Season at issue.

3.4. Run of River Output

Each Participant is responsible for providing the hourly generation profiles for the last ten Years from RoR resources per *BPM 101 Advance Assessment* for their RoR Qualified Resources and for RoR resources in their Resource-Specific Capacity Agreements. Participants will also provide their prospective RoR resources that are expected to be in service for the Year that is studied two years ahead in the applicable Advance Assessment. The data from all Participant RoR resources will be compiled by the Program Operator into an aggregate sub~~WRAP R~~regional RoR resource output for the ten-Year period.

For RoR resources that have less than ten Years of output data, the Program Operator will complete the ten-Year period by using the synthesized RoR output data that was

developed for the same Subregion in which the resource is located in the LOLE study for the Binding Season at issue.

3.5. Additional Adjustments ~~Regional Interchange~~

In determining Net Subregional Capacity Need, the Program Operator may apply additional adjustments when necessary to account for factors not otherwise reflected in the load and resource output components described in Sections 3.1 through 3.4 that may materially impact the determination of the CCH.

Additional adjustments may include regional interchange, impact of scarcity as determined by price, or other factors that affect the availability or need for capacity within a Subregion. The applicability and methodology for any such adjustment will be determined based on the circumstances and available data for the applicable Subregion and study period.

Any additional adjustment incorporated into the Net Subregional Capacity Need calculation will be applied on an hourly basis and in a manner intended to produce a representative measure of capacity need for the applicable Subregion. The Program Operator will document the data and methodology used for any additional material adjustment as part of the applicable CCH determination.

~~For the final component of Net Regional Capacity Need, i.e., Regional Interchange, the Program Operator aggregates and nets interchange data between Balancing Authority Areas in the WRAP Region and Balancing Authority Areas outside the WRAP Region. In this term of the formula, a positive value indicates a net export position, and a negative value indicates a net import position. For the ten-Year analysis required for CCH determination, the Program Operator uses the previous ten Years of regional interchange data from publicly available U.S. Energy Information Administration data. If the historical record reveals a consequential change in the WRAP Region's interchange with other Balancing Authority Areas (potentially driven by increased demand, emerging markets, and other factors), the Program Operator will identify such a change and adjust the historical record of the Years before a consequential change, such that a ten-Year data set representative of current conditions (after the consequential change) of Regional Interchange data can be used in the analysis. Such a consequential change has been observed in 2018 and an example of adjustments is included in Appendix A.~~

~~*3.5.1. Further Modifications to Interchange*~~

~~Further modifications to the interchange shape will be made to account for market conditions that result in high export periods where the capacity that was exported may have otherwise been able to have been used for the benefit of the WRAP Region (had~~

~~the program existed at the time). For example, if exports occurred during periods of excess capacity (e.g., high RoR output) within the WRAP Region, and the energy price outside of the WRAP Region was at typical market (or below market) prices, the capacity may not have been exported if the WRAP Region were to have a need for the capacity, as future conditions anticipate.~~

~~The following categories were created to evaluate these exports:~~

> ~~*Economic sales:* made possible by excess generation in the WRAP Region; the Regional Interchange calculation assumes this capacity would have been available for the WRAP Region, had it been needed.~~
>
> ~~*Scarcity sales*: in times of high market prices in areas outside of the WRAP Region, it was assumed that historical exports made during those time periods would not have been available, even if required by Participants.~~

~~In order to separate exports into the above two categories, energy market conditions were analyzed, and criteria were developed to determine whether exports may be economic sales or scarcity sales. The criteria are as follows:~~

- ~~The market-clearing heat rate (price of power from Locational Marginal Price for the Day-Ahead Market at the TH_SP15_GEN-APND node divided by price of natural gas from SoCal daily gas price) for California was used as a proxy for external demand:~~
  - ~~For conditions when the heat rate is less than 10mmBTU/MWh, exports from the WRAP Region were determined available to the WRAP Region; export interchange was reduced to zero (imports were unchanged). This low level of heat rate indicates that market prices were not reflecting scarcity events and the exports were economic.~~
  - ~~For conditions when the heat rate is greater than 15mmBTU/MWh, exports from the WRAP Region were considered to be scarcity sales; accordingly, these values remained in interchange and were not used as a load modifier (imports were also unchanged). This higher heat rate is reflective of traditional peaking units, which are commonly operated and exported under scarcity conditions.~~
  - ~~For conditions when the heat rate was greater than 10 but less than 15, exports were linearly reduced from their values at 15 to zero based on the observed heat rate relative to 10 and 15.~~

~~In addition, starting in 2013, a carbon adjustment of the actual California Carbon Allowance cost for the applicable vintage year (dollars per MTCO2e), multiplied by the~~

~~prevailing California Air Resources Board unspecified emissions rate for that year is applied to California market price before determining the market clearing heat rate.~~

~~For import transactions, it was assumed that these imports would continue to be brought into the WRAP Region regardless of market conditions.~~

4. Determining the CCHs

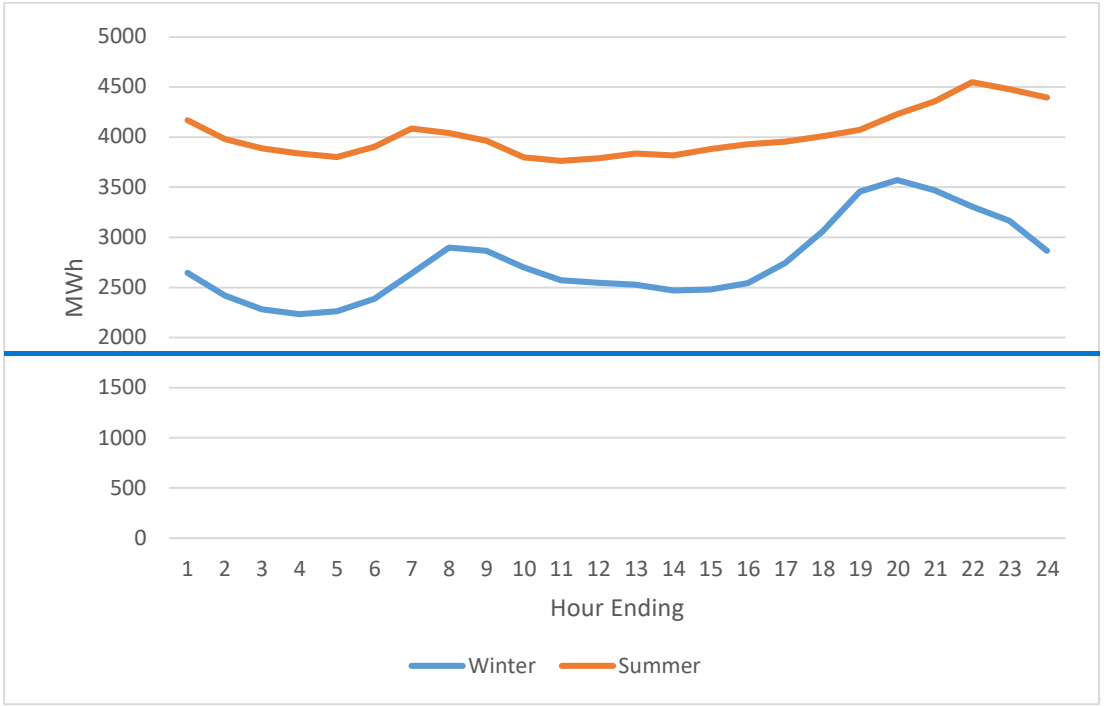
Once the data from Section 3 is collected and aggregated by the Program Operator, the Net SubrRegional Capacity Need is calculated for each hour in the ten-Year period. Then the 95th percentile of the Net ~~Regional~~ Subregional Capacity Need for the ten-Year period is determined and each hour with a Net ~~Regional~~ Subregional Capacity Need greater than that 95th percentile value is designated as a CCH, and each hour with a Net ~~R~~ Subregional Capacity Need less than or equal to that 95th percentile value is not designated as a CCH.

CCH will be re-determined on an annual cycle (or more frequently, if the Program Administrator deems necessary due to signification changes in participation or calculation inputs) in conjunction with the Advanced Assessment, as detailed in *BPM 101 Advanced Assessment*. The CCH will be posted on the Western Power Pool website.

~~Appendix A~~

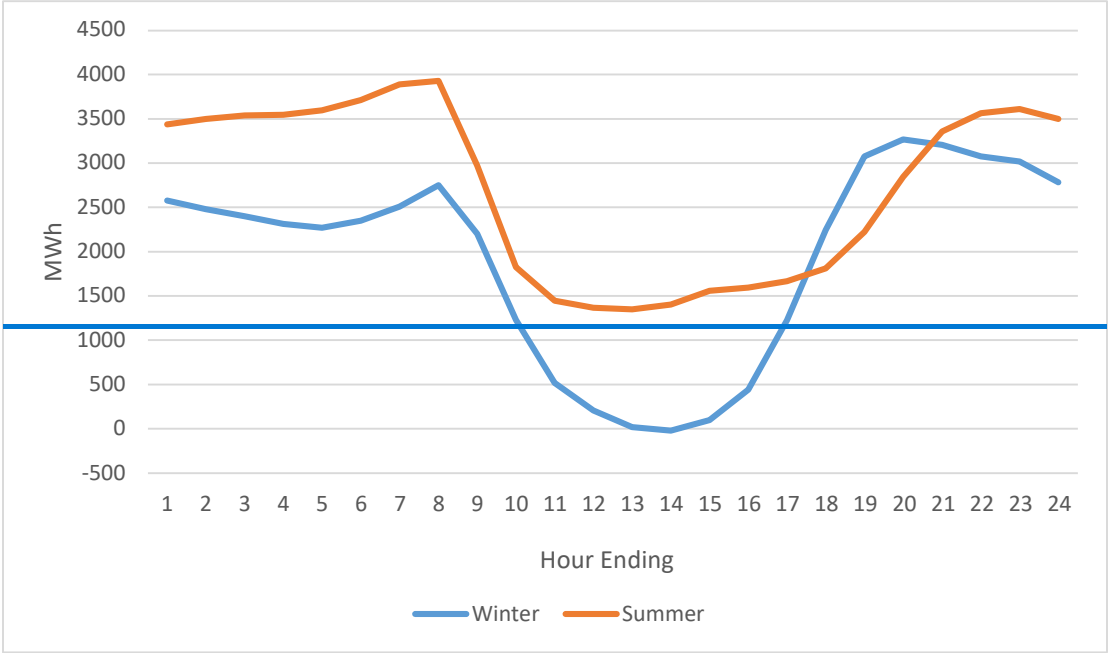
~~An illustrative example for ten-Year periods that include Years prior to 2018 is included here for reference. The method for determining future regional interchange assumes that i) recent interchange shape from 2018 and after is most representative of future patterns and ii) interchange during the hour ending 19:00 (meaning 07:00pm PPT) has changed the least from the pre-2018 period, given the lack of solar resource output during that hour, such that hour ending 19:00 can serve as a benchmark for adjusting the interchange observed in ten-Year periods that include Years before 2018. Ten-Year periods that include Years before 2018 require an adjustment methodology, as illustrated in this section. For example, in 2021 the Program Operator developed Regional Interchange from interchange data for the Years 2010-2020, where 2018-2020 was the last three Years and 2010-2017 was the previous seven Years.~~

- ~~Step 1 - The interchange for all hours prior to 2018 is averaged on an hourly basis. See regional interchange data below in Figure 1.~~



~~*Figure 1. Raw regional interchange 2010-2017 – a relatively flat/consistent interchange profile for both seasons.*~~

- ~~Step 2 - The interchange for all hours including and after 2018 is averaged on an hourly basis. See regional interchange data below in Figure 2.~~

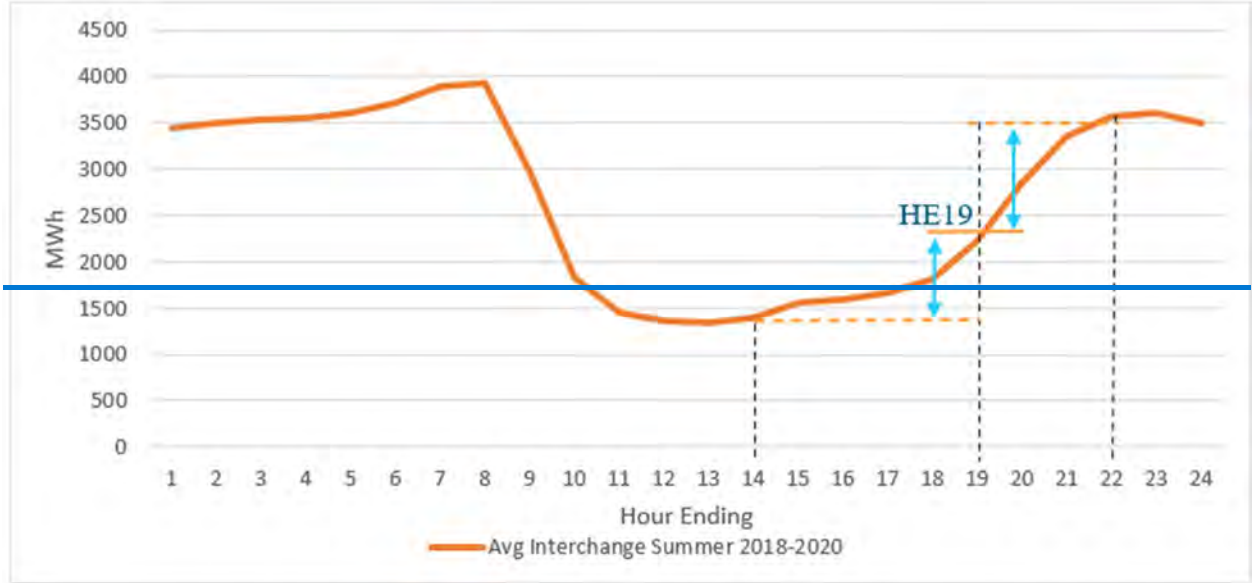


~~*Figure 2. Raw regional Interchange 2018-2020 - declining daytime exports and peaks in morning and evenings. Roughly follows California solar production.*~~

- ~~Step 3 - The average interchange in hour ending 19 of 2018 and after is compared to all other hours of the hourly average interchange shape that was created using the hours before 2018. The difference of the averages is applied to the hourly average interchange for all ten Years.~~

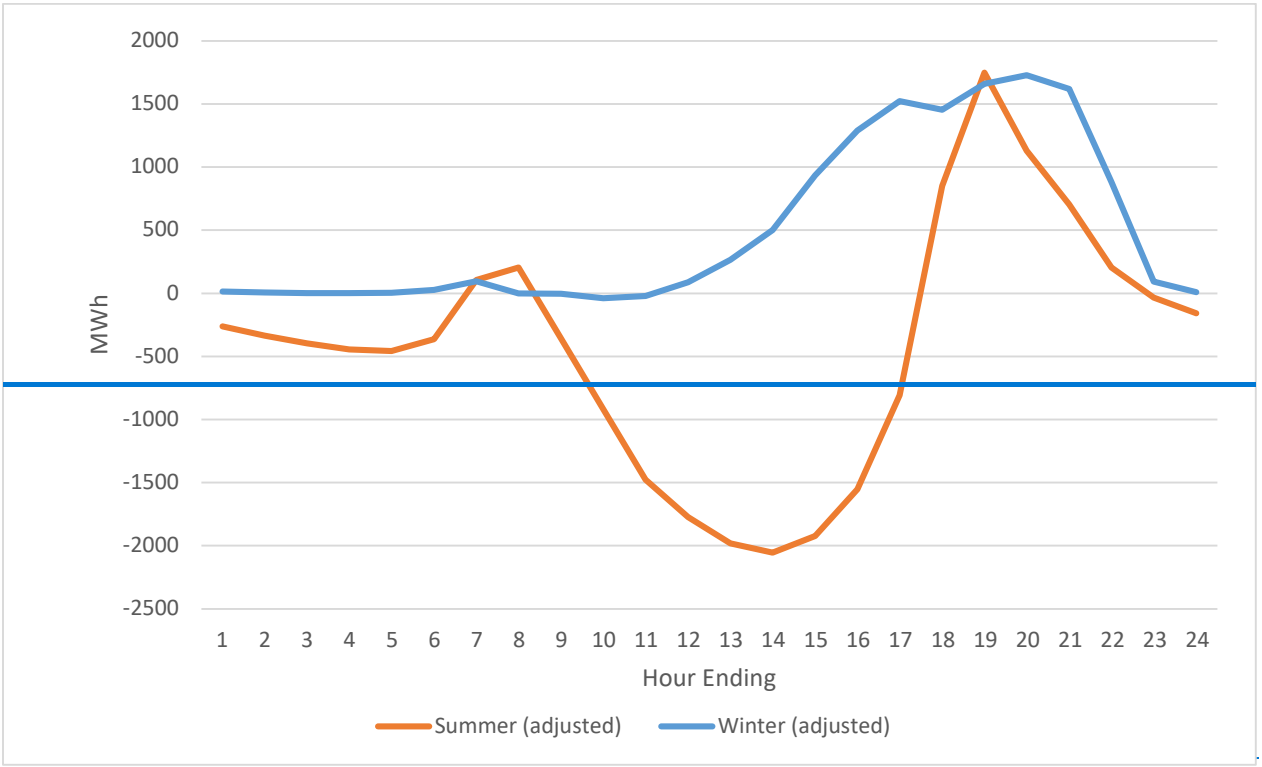
  ~~In the example here, hour ending 19 compared to each individual hour (see arrows on Figure 3 of these interchange values from the 2018-2020) was then applied to the hourly interchange of all Years in the ten-Year period (2010-2020).~~

  ~~This results in a new hourly interchange shape for the entire ten-Year period.~~



~~*Figure 3. 2018-2020 hourly average loads were analyzed to determine appropriate offsets to apply to 2010-2017 load shapes.*~~

~~Continuing the example, the results of the further modifications of the load shape described in this subsection resulted in the load shapes in Figure 4.~~



~~*Figure 4. 2010-2020 interchange adjusted by CA heat rate analysis.*~~

WESTERN POWERPOOL

Western Resource Adequacy Program

108 Forward Showing Submittal Process

100 – Forward Showing

Revision History

Manual Number	Version	Description	Revised By	Date
108	0.1	RAPC Glance Version	Michael O'Brien	12/5/2024
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108	3.0	Firm Tx TF Updates	Maya McNichol	3/17/2026
108	4.0	Annual BPM Review	Danie Williams	3/19/2026
108	4.1	2026-NTFP-05	Maya McNichol	6/10/2026
108	4.2	2026-EP-04 Rockies Subregion	Maya McNichol	9/15/2026
108	4.3	2026-EP-05 CCH By Subregion	Maya McNichol	9/4/2026

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108 Forward Showing Submittal Process

1. Introduction

Forward Showing (FS) Submittal Process Business Practice Manual (BPM) 108 describes when and how each Participant provides its projected load and resource portfolio data to meet the Western Resource Adequacy Program (WRAP) FS Capacity Requirements and FS Transmission Requirements in the months of the Binding Seasons. The Western Power Pool's (WPP) FS Program is the forward-looking planning portion of the WRAP that aims to ensure the WRAP footprint has sufficient capacity to adequately serve projected peak load under a variety of possible scenarios. The FS Program includes the Advance Assessment (see *BPM 101 Advance Assessment*) that recommends FS Planning Reserve Margins (FSPRM) for Board approval and provides Qualifying Capacity Contribution (QCC) values for registered resources (see *BPM 105 Qualifying Resources*). The FSPRMs are applied to the P50 load forecasts of each Participant to set the FS Capacity Requirement for each month of a Binding Season. The FS Capacity Requirements shall be met by QCC from Qualified Resources and delivered consistent with the Tariff's FS Transmission Requirements, at a minimum.

1.1. Intended Audience

BPM 108 is intended for WRAP Participants and other interested individuals or entities. BPM 108 is particularly useful for those individuals responsible for the Participant Organization's FS Submittal, which includes the FS Demonstration of the FS Capacity Requirement and FS Transmission Requirement, along with FS supporting materials on Qualifying Resource Capability Testing, treatment of Thermal Resources without North American Electric Reliability Corporation (NERC) Generating Availability Data System (GADS) data, Hydro Resource QCC results, late registered resources, and Transition Period exceptions (Excused Transition Deficits and Joint Contract Accreditation Forms (JCAFs)).

1.2. What You Will Find in This Manual

This document describes: the FS Deadline, Deficiency Notices and FS Cure Deadline Dates; the required FS Submittal materials, including the FS Demonstration and FS supporting materials, along with associated Senior Official Attestations; and Program Operator and Program Administrator review of Participants' FS Submittals.

1.3. Purpose

BPM 108 is intended to assist Participants in completing their FS Submittals, including the FS Demonstration and the required supporting material, on or before the FS Deadline for the applicable Binding Season.

1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 108 have the meaning set forth in the Tariff or in another BPM.

Catastrophic Failure Monthly Report: A demonstration by a Participant with an approved catastrophic resource failure exemption that either the circumstances necessitating the exception have not changed or that Qualifying Resources have become available, and the Participant has acquired them and no longer requires the exception.

Cure Deadline: The date 120 Days after the FS Deadline after which any uncured deficiencies in a Participant's FS Submittal shall be assessed a FS Deficiency Charge.

Cure Period: The time period 120 Days after the FS Deadline during which a Participant shall submit revisions to its FS Submittal to fully cure all identified deficiencies.

FS Demonstration: A demonstration that a Participant has met satisfactorily its FS Capacity Requirement and FS Transmission Requirement.

FS Instruction Manual: A set of instructions available on the WPP website.

Monthly Transmission Exception Check-In: A demonstration by a Participant with an approved Monthly Transmission Exception for Enduring Constraints or Future Firm ATC Expected that its inability to meet the FS Transmission Requirement has not changed.

2. FS Deadline, Deficiency Notices and FS Cure Deadline Dates

The Forward Showing Program has two Binding Seasons: The Summer Season and the Winter Season. The FS Deadline, serving of Deficiency notices, and FS Cure Deadline for the Summer Season and Winter Season are 5:00 pm Pacific Prevailing Time (PPT) on the respective date indicated in Table 1. The Program Administrator shall serve a deficiency notice to each Participant where one or more deficiencies have been identified as part of the FS Submittal by 5:00 pm PPT on the respective date indicated in Table 1. Participants who served a deficiency notice may cure their deficiencies by resubmitting their FS Submittal with the missing or correct data by 5:00 pm PPT on the respective date indicated in Table 1. Deficiencies uncured by the FS Cure Deadline will be subject to the FS Deficiency Charge (see *BPM 107 Forward Showing Deficiency Charge*).

Table 1. FS Deadline, Deficiency Notices and FS Cure Deadline Dates

	Winter Season	Summer Season
FS Deadline	March 31 of each Year	October 31 of each Year
Program Administrator serve Deficiency notices	By May 30 of each Year	By December 30 of each Year
FS Cure Deadline	July 29 of each Year	February 28 of each Year

2.1. FS Deadline Extensions Due to Forward Showing Software System Failures

In the event that a failure of the Forward Showing software system occurs in the seven days preceding a FS Deadline and prevents a Participant from meeting the FS Deadline, the FS Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the FS Deadline. In the event that such Forward Showing software system failure triggers an extension of the FS Deadline, the deadline for WPP to respond to the Participant's FS Submittal shall be extended by a commensurate number of Days as the FS Deadline. For example, if during the final seven Days preceding a FS Deadline, the Forward Showing software system was unavailable for two Days, the FS Deadline would be extended by two Days and the deadline for WPP to respond to the Participant's FS Submittal would be extended by two Days.

In the event that a failure of the Forward Showing software system occurs within seven Days of the deadline for WPP to respond to FS Submittals, the deadline for WPP to respond shall be extended by one Day for each Day that the Forward Showing software system failure persists and prevents WPP from meeting the deadline.

In the event that a failure of the Forward Showing software system occurs in the seven days preceding the Cure Deadline and prevents a Participant from meeting the Cure Deadline, the Cure Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the Cure Deadline.

For example, if during the final seven Days preceding a Cure Deadline, the Forward Showing software system was unavailable for two Days, the Cure Deadline would be extended by two Days and the deadline for WPP to respond would be extended by two Days.

3. Forward Showing Submittal Materials

A Participant's FS Submittal shall include a FS Demonstration with the necessary information for each Binding Season to demonstrate the Participant has sufficient capacity and transmission service to satisfy the FS Capacity Requirement and FS Transmission Requirement. The FS Demonstration shall include the Participant's: load forecast for the upcoming Binding Season (see *BPM 103 Forward Showing Capacity Requirement*); demonstration of Qualifying Capacity Contribution (QCC) to meet its FS Capacity Requirement which can be from Qualifying Resources or contracts; demonstration of the FS Transmission Requirement needed for the reliable delivery of the QCC of the Participant's Qualifying Resources and Contracts to the Participant's load; applicable Monthly Transmission Exception requests and associated Senior Official Attestations; and a Senior Official Attestation for the FS Demonstration. In addition to the FS Demonstration, the FS Submittal shall include supporting FS materials including information on Qualifying Resource Capability Testing, Thermal Resources without GADS data, Hydro Resource QCCs and forced outages, late registered resources, and Transition Period exceptions.

3.1. FS Demonstration

As described in the FS Instruction Manual, a Participant must provide the Program Operator with the following information on loads, Qualifying Resources, contracts, and WRAP Qualifying Transmission to demonstrate it has satisfactorily met the FS Capacity Requirement and FS Transmission Requirement. A Participant's FS Demonstration shall be accompanied by the Senior Official Attestation found in Appendix A – FS Demonstration Attestation. The Program Operator determines whether a Participant has met its FS Capacity Requirement and FS Transmission Requirement using the method described in Appendix G – FS Summary.

3.1.1. Loads

Each Participant shall provide the following FS Demonstration load information as described in the FS Instruction Manual:

- Load name assigned for identification purposes and used for transmission mapping
- Balancing Authority Area (BAA) in which the load is located
- The load point of delivery (POD) on the transmission system
- Forecasted monthly peak demand (see methodology in *BPM 103 Forward Showing Capacity Requirement*)

A Participant shall include all loads in its FS Demonstration for which it is responsible as well as documenting all loads it seeks to exclude (see *BPM 103 Forward Showing*

Capacity Requirement): i.e. all loads within the western interconnection for which it is the LRE (or the exclusive wholesale electricity provider to the LRE) that are not covered by another resource adequacy program.

A Participant responsible for loads in multiple Subregions seeking to use the lower Monthly FSPRM may submit a single FS Submittal if the Participant can demonstrate sufficient WRAP Qualifying Transmission from the load in the Subregion with the lower Monthly FSPRM to the load in the Subregion with the higher Monthly FSPRM. The Participant will demonstrate WRAP Qualifying Transmission in the quantity equal to the difference between the two FSPRMs multiplied by the amount of load in the Subregion with the higher FSPRM. For example, if Region A has a FSPRM of 20% in July and Region B has a FSPRM of 15% in July, and Participant has 1000 MW of load in Region A, the Participant will demonstrate (20% - 15%) * 1,000 MW or 50 MW of WRAP Qualifying Transmission from its load in Region B to its load in Region A. This WRAP Qualifying Transmission shall be distinct from any transmission demonstrated for delivering Qualifying Resources to participant load. See *BPM 103 Forward Showing Capacity Requirement* for information on calculating the FS Capacity Requirement in circumstances where loads from multiple Subregions are included in a single FS Submittal. In addition, a Participant responsible for loads in multiple Subregions seeking to use the higher monthly FSPRM may also submit a single FS Submission if the Participant can sign the FS Demonstration attestation in Appendix A.

All load submitted by a Participant within a single FS Demonstration must be able to be served interchangeably by all Qualifying Resources and Qualifying Contracts in that same FS Demonstration, without the expectation that additional transmission rights will be required to deliver resources to load. In accordance with this, a Participant may be required to submit separate FS demonstrations, even as to loads residing in the same Subregion, if the Program Administrator determines it is not practicable to treat such loads as if they can share in load and resource diversity for reasons that may diminish the integrity of WRAP reliability metrics, including but not limited to, if the Participant is responsible for (i) loads that are geographically distinct; (ii) loads that are separated by constrained transmission paths; or (iii) loads and resources that are not operated collectively (see *BPM 103 Forward Showing Capacity Requirement*).

Participant loads that cannot be served with a common set of Qualifying Resources and Qualifying Contracts shall therefore be submitted in separate FS Demonstrations. Each FS Demonstration will have a unique FS Capacity Requirement and a unique FS Transmission Requirement, and each of those two requirements shall be met individually and separately from any other FS Demonstrations submitted by a Participant.

3.1.2. Qualifying Resources

As part of the FS Demonstration, each Participant shall submit Qualifying Resources to satisfy the FS Capacity Requirement as described in the FS Instruction Manual. Qualifying Resources can be fully or partially owned by the Participant. The Participant shall use QCCs supplied by the Program Operator as part of the Advance Assessment (see *BPM 101 Advance* Assessment) unless the resource is being registered late (see *BPM 105 Qualifying Resources)*. The components of a hybrid resource should be described separately (for example, solar separately from a battery) and the overall limits of the facility considered when submitting the QCC for each component (see *BPM 101 Advance Assessment* -*Data Request Instruction Manual* for hybrid resource limitations). The Qualifying Resource information provided in the FS Demonstration should be consistent with the information provided by the Program Operator as a result of Resource Registration (see *BPM 105 Qualifying Resources*).

If a Participant experiences a catastrophic Qualifying Resource failure and is unable to replace the QCC on commercially reasonable terms prior to the FS Deadline, the Participant can seek an exception by submitting the attestation in Appendix B – Catastrophic Resource Failure Exception. For each month following the FS Deadline that a Participant sought a catastrophic resource failure exception, the Participant shall complete a Catastrophic Failure Monthly Report (available on the WPP website) demonstrating either:

- the circumstances necessitating the exception have not changed; or
- that Qualifying Resources (either the ones experiencing the catastrophic failure or other resources) have become available, and the Participant has acquired them and no longer requires the exception.

The Catastrophic Failure Monthly Report will be due on the last day of each Month and will cover any catastrophic Qualifying Resource exception requested for the upcoming (or ongoing) Binding Season, except the Month directly preceding the earliest Month that is the subject of catastrophic Qualifying Resource request. For example, if a Participant has requested a catastrophic Qualifying Resource exemption for July and August of 2035 at the FS Deadline (October 31, 2034), such Participant will submit a Catastrophic Failure Monthly Report for the July and August exception requests on or before the last days of November and December, 2034, and on or before the last days of January, February, March, April, and May, 2035, but need not submit such report for the July exception request on the last day of June 2035. The Participant will submit a Catastrophic Failure Monthly Report solely as to the August exception request on or before the last day of June 2035.

If at any time there is a change in the circumstances that necessitated the exception such that the reasons for the exception no longer exist, or the Participant acquires other Qualifying Resources, the Participant will describe and demonstrate such acquisition in the next Catastrophic Failure Monthly Report, and upon acceptance of the demonstration, need not continue to provide a Catastrophic Failure Monthly Report for the exception no longer needed. Failure to submit a required Catastrophic Failure Monthly Report will result in an assessment of a Deficiency Charge, unless the deficiency is cured with seven days of notice of non-compliance.

The Program Operator and Program Administrator will seek to inform the Participant whether its exception request has been accepted within 14 Days of receiving the request. The impact of a successful exception request is explained in *BPM 107 Forward Showing Deficiency Charge*. If a Participant submits a request for exception that WPP denies in whole or in part, the Participant may appeal such denial to the Board of Directors. To make such appeal, the Participant should submit an appeal, in the form outlined on the WPP website, including all information the Participant considers necessary to support its view that WPP erred in denying the requested exception. Any such appeal must be submitted no later than 14 Days after WPP's denial of the exception request. The Board may request that the Participant provide such additional information as the Board considers necessary for its action on the appeal. The timing of the Board's action on an appeal is in the Board's discretion.

3.1.3. Contracts

Each Participant shall also provide notification and representation of contractual purchases and sales as described in *BPM 106 Qualifying Contracts* and in the FS Instruction Manual.

3.1.4. Transmission

Each Participant shall demonstrate the FS Transmission Requirement. As described in the FS Instruction Manual, a Participant shall demonstrate it has secured transmission rights sufficient to deliver a MW quantity equal to at least 75% of the MW quantity of its FS Capacity Requirement. The FS Transmission Requirement must be met with WRAP Qualifying Transmission from the Participant's Qualifying Resource(s) or from the delivery points for the Qualifying Resources identified for its Net Contract QCC (or for its RA Transfer) to the Participant's load. The FS Demonstration shall include information on a Participant's transmission service reservations that it plans to utilize in the upcoming Binding Season to meet its FS Transmission Requirement. The FS Demonstration shall also map Qualifying Resources (see Section 3.1.2) and contracts (see Section 3.1.3) to a Participant's loads (see Section 3.1.1) using the transmission service reservation information provided, as described in the FS Instruction Manual. A

Participant that has Qualifying Resource in its balancing area, but is not a transmission service provider – and is therefore unable to provide transmission service reservation information – will attest that it has the transmission rights from the generation to the load on its system (see Appendix J – Transmission Rights Attestation).

3.1.4.1. Transmission Exceptions

If a Participant's FS Demonstration does not include the required transmission service reservations to satisfy the FS Transmission Requirement, the Participant may request Monthly Transmission Exceptions. As described in more detail below, there are four categories of Monthly Transmission Exception available to a Participant [terminology mirrors terms used in standard form Open Access Transmission Tariffs (OATTs) and on Open Access Same-time Information Systems (OASIS)]:

- Enduring Constraints;
- Future Firm Available Transmission Capability (ATC) Expected;
- Transmission Outages and Derates; and
- Counterflow of a Qualifying Resource.

All Participants requesting a Monthly Transmission Exception are responsible for submitting the completed Transmission Exception request form found on the WPP website, along with the Senior Official Attestation found in Appendix C – Monthly Transmission Exception General Attestation – as part of their FS Submittal along with their FS Demonstration.

The Program Operator will review a Participant's Monthly Transmission Exceptions and notify the Participant of the status of its Monthly Transmission Exceptions for each month requested by 5:00 pm PPT on the 60th day after the FS Deadline.

If a Monthly Transmission Exception is denied (either because it is invalid or because circumstances changed and transmission has become available during the Program Operator's review of the Monthly Transmission Exception), the Participant will have the opportunity to cure its Transmission Deficiency on or before the last day of the Cure Period established for the relevant FS Submittal. The Participant may also appeal the rejection to the Board.

The Program Operator and Program Administrator will seek to inform the Participant whether its exception request has been accepted within 14 Days of receiving the request. If a Participant submits a request for exception that WPP denies in whole or in part, the Participant may appeal such denial to the Board of Directors. To make such appeal, the Participant should submit an appeal, in the form outlined on the WPP website, including all information the Participant considers necessary to support its view

that WPP erred in denying the requested exception. Any such appeal must be submitted no later than 14 Days after WPP's denial of the exception request. The Board may request that the Participant provide such additional information as the Board considers necessary for its action on the appeal. The timing of the Board's action on an appeal is in the Board's discretion.

For each month following the FS Deadline that a Participant sought a Monthly Transmission Exception for Enduring Constraints or Future Firm ATC Expected, the Participant shall complete a Monthly Transmission Exceptions Check-in (available on the WPP website) demonstrating either:

- the circumstances necessitating the exception have not changed; or
- transmission has become available and the Participant has acquired it; or
- the Participant has acquired a different Qualifying Resource with the necessary firm transmission and no longer requires the Monthly Transmission Exception.

The Monthly Transmission Exception Check-Ins will be due on the last day of each Month and will cover any Monthly Transmission Exceptions requested for the upcoming (or ongoing) Binding Season, except the Month directly preceding the earliest Month that is the subject of the Monthly Transmission Exception request. For example, if a Participant has requested a Monthly Transmission Exception for July and August of 2035 at the FS Deadline (October 31, 2034), such Participant will submit a Monthly Transmission Exception Check-In for the July and August exception requests on or before the last days of November and December, 2034, and on or before the last days of January, February, March, April, and May, 2035, but need not submit such check-in or the July exception request on the last day of June 2035. The Participant will submit a Monthly Transmission Exception Check-In solely as to the August exception request on or before the last day of June 2035.

If at any time, the Participant either acquires the necessary transmission or acquires a different resource and associated transmission, the Participant will describe and demonstrate such acquisition on the next Monthly Transmission Exception Check-In, and upon acceptance of the demonstration, need not continue to provide Monthly Transmission Exception Check-Ins for the exception no longer needed. Failure to submit a required Monthly Transmission Exception Check-In or rejection of the Monthly Transmission Exception Check-In in part or in whole (e.g. if contrary information is available to the Program Administrator, indicating transmission has become available for the month in question) will result in an assessment of a Deficiency Charge unless the deficiency is cured within seven days of notice of non-compliance.

3.1.4.1.1. Enduring Constraints

The Enduring Constraints Monthly Transmission Exception may be granted if the Participant is unable to demonstrate the necessary and sufficient WRAP Qualifying Transmission on any single segment of a source-to-sink path for a resource (exceptions will not be granted for two segments of a source-to-sink path) and the Participant demonstrates:

- there was no sufficiently firm ATC posted by a transmission service provider at the FS Deadline on the applicable segment for the months required; and
- there was remaining available ATC (non-firm ATC after the fact) for all CCHs in the same season of the most recent year for which CCHs have been calculated in any Subregion in which the segment exists; or
- if the path was constrained in at least one CCH in the most recent same season from the most recently available CCH data set in any Subregion in which the segment exists, that the Participant is:
    - constructing or contracting for a new local resource for at least the amount of Monthly Transmission Exception requested; or
    - pursuing long-term firm rights by entering the long-term queue and taking all appropriate steps for at least the amount of Monthly Transmission Exception requested.

If the required transmission rights for the applicable segment are only available for a duration of more than one year at the FS Deadline, a Participant is not required to obtain that service to qualify for the Enduring Constraints exception. However, in that circumstance, the Participant shall not qualify for an Enduring Constraint exception for the same path (or across the same constraint) for the same month of the same season of the subsequent year if the Participant again declines the transmission rights that are available for a duration of more than one year.

In addition to the Monthly Transmission general exception discussed above in Section 3.1.4.1, a Participant requesting an Enduring Constraint Monthly Transmission Exception will need to include the Senior Official Attestation found in Appendix D – Enduring Constraint Additional Attestation as part of its FS Submittal.

3.1.4.1.2. Future Firm ATC Expected

The Future Firm ATC Expected exception may be granted when there is a reasonable expectation that sufficiently firm ATC will be made available following the FS Deadline and all the following criteria are met:

1. WRAP Qualifying Transmission is not posted or available prior to the FS Deadline; and

2. The Participant provides evidence that its transmission service provider has released additional WRAP Qualifying Transmission on the applicable path for all CCHs that have been calculated in any Subregion in which the applicable transmission segment exists for ~~in~~ the same season of the most recent year for which CCHs have been calculated for the Subregion following the FS Deadline; and
3. The Participant demonstrates that the amount of FS Transmission Requirement being requested for the Future Firm ATC Expected exception is equal to or less than the minimum volume of WRAP Qualifying Transmission rights ATC released in the previous year's CCHs that have been calculated in any Subregion in which the applicable transmission segment exists for the appropriate Binding Season.

If the required ATC on the applicable segment for the Month(s) needed is only posted or available prior to the FS Deadline for a duration of more than one year, a Participant is not required to obtain that service to qualify for the Future Firm ATC Expected exception. However, in that circumstance, the Participant shall not qualify for a Future Firm ATC Expected exception for the same path (or across the same constraint) for the same month of the same season of the subsequent year if the Participant again declines the ATC for transmission service rights that are available for a duration of more than one year.

The total amounts of Future Firm ATC Expected exceptions on specific paths is limited to the amount of transmission demonstrated to likely become available. If multiple Participants have requested a Future Firm ATC Expected exception on the same path, the available volume will be granted on a pro-rata basis to requesting Participants based on the size of their requests.

3.1.4.1.3. Transmission Outages and Derates

The Transmission Outages and Derates exception may be granted when a Participant that has not met its FS Transmission Requirement demonstrates that all of the following criteria are met:

1. That an applicable segment of its existing transmission service rights from its source to sink path for its Qualifying Resource is expected to be derated or out-of-service and that additional ATC of WRAP Qualifying Transmission is not otherwise available; and
2. The duration of the Transmission Outages and Derates exception request coincides with the months of the outage or derate; and
3. The volume of the Transmission Outages and Derates exception being requested is either:

a. equal to or less than the reduction in the Participant's existing transmission service rights on that path for the applicable derate or outage period; or
b. equal to or less than the WRAP Qualifying Transmission for the applicable derate or outage period that would otherwise be posted and available for reservation were it not for the transmission limitation.

If multiple Participants have requested a Transmission Outages and Derates exception on the same path, the available volume (per Section 3.1.4.1.3 (3) above) will be granted on a pro-rata basis to requesting Participants based on the size of their requests.

3.1.4.1.4. Counterflow of a Qualifying Resource

A Counterflow of a Qualifying Resource exception may be granted if a Participant demonstrates that either:

1. The Participant's use of WRAP Qualifying Transmission service in connection with the delivery of capacity from Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to Participant's load (or other qualifying delivery point permitted by the WRAP); or
2. A second Participant's use of WRAP Qualifying Transmission service in connection with the delivery of capacity from the second Participant's Qualifying Resource (or from the Qualifying Resource associated with its Net Contract QCC) to the second Participant's load (or other qualifying delivery point permitted by the WRAP)
   provides a direct and proportional counterflow transmission that supports the first Participant's delivery of capacity from the first Participant's Qualifying Resource (or from the Qualifying Resource associated with its Net Contract QCC) to the first Participant's load (or other qualifying delivery point permitted by the WRAP) Qualifying Resource to its load.

If the Counterflow of a Qualifying Resource exception is requested under subpart (2) of this Section, the Participant requesting the exception shall include a written acknowledgement from the second Participant that it is aware of such exception request. Counterflow of a Qualifying Resource must be directly between two BAAs. Counterflows that involve three or more BAAs will not qualify for the Counterflow of a Qualifying Resource exception.

3.1.5. Planned Outages

Per the requirements of Tariff Section 16.2.8, any planned outages during a Binding Season must be taken from a Participant's surplus (above its FS Capacity Requirement).

3.1.5.1. Planned Outages underway at the time of FS Submittal

Any Qualifying Resource that is out of service at the time of the FS Deadline and is planned to remain out of service for the first five or more days of a month in the Binding Season cannot have such Qualifying Resource's QCC counted toward meeting the Participant's FS Capacity Requirement for that month.

To ensure QCC from resources is not utilized to meet a monthly FS Capacity Requirement during the planned outage, the Capacity associated with such resources shall be deducted by identifying the planned outages in the FS Demonstration.

3.1.5.2. Planned Outages not underway at the time of the FS Submittal

Participants have the discretion to take planned outages at any time during the Binding Season but are required to take planned outages out of their surplus FS Demonstration capacity or to procure additional supply to replace such capacity on outage. This requirement ensures the participant's FS Capacity Requirement is available during the Operation Program timeframe.

Participants may provide information on Qualifying Resources that are planned to be out of service during the Binding Season as part of their FS Submittal to ensure QCC from those resources is not utilized to meet a monthly FS Capacity Requirement during the planned outage. Capacity associated with such resources shall be deducted from the FS Demonstration for such month(s).

Each Participant shall provide a Senior Official Attestation (found in Appendix E – Planned Outages Attestation) by the FS Deadline that:

- The sum of expected planned outages at any one time during the Binding Season will be equal to or less than the surplus stated in its FS Demonstration at the time of such planned outage, or
- The Participant is expected to procure the necessary capacity or energy to meet the Operations Program requirements regardless of planned outage schedules.

A planned outage shall not justify a waiver of, or exception to, a Participant's Holdback Requirement or Energy Deployment obligations.

3.2. Forward Showing Supporting Materials

In addition to the FS Demonstration (see Section 3.1), accompanying Monthly Transmission Exception Requests (see Appendix C – Monthly Transmission Exception General Attestation) and required Senior Official Attestations, a Participant's FS Submittal shall also include supporting information on Qualifying Resource testing,

Thermal Resources without GADS data, Hydro Resource QCCs, late registered resources, and transition exceptions.

3.2.1. Testing

As described in *BPM 105 Qualifying Resources*, Participants shall perform annual Operational Tests on all Qualifying Resources. In addition, Capability Tests shall be required for Thermal Resources, Long Duration Storage resources, and Demand Response Resources. Each Participant's FS Submittal must include a completed resource testing report, employing for such purpose the resource testing form that is made available on the WPP website.

3.2.2. Thermal Resources that are not Required to Report GADS Data

BPM 101 Advance Assessment describes the data request sent out by the Program Operator to gather the information required to calculate QCC values for Qualifying Resources. The Advance Assessment data request includes NERC GADS or equivalent outage data that can be used to calculate the outage rates and factors for existing Thermal Resources. However, as discussed in *BPM 105 Qualifying Resources*, certain Thermal Resources are not required to report GADS data. For all Qualifying Resources not providing GADS reporting data, the Participant will be required to provide a Senior Official Attestation (provided in Appendix F – Non-GADS QCC Calculation Attestation) as part of its FS Submittal that attests the resource is not subject to GADS reporting and the FS Demonstration submitted by the Participant is an accurate depiction of either the historical performance or historical outage data of the resource.

3.2.3. Hydro Resources

As discussed in *BPM 105 Qualifying Resources*, QCCs for Storage Hydro resources are calculated by the Participant owners. The result of those calculations shall be submitted as part of a Participant's FS Submittal in the format described in *BPM 105 Qualifying Resources* and the FS Instruction Manual. The Storage Hydro QCC Methodology utilizes an equivalent demand forced outage rate (EFORd) value as an input. Participants shall supply as part of their FS Submittal a NERC GADS report showing the EFORd value. For all Storage Hydro resources that do not report NERC GADS data, the Participant shall similarly calculate an EFORd value from historical performance data and the non-GADS outage calculation tool as posted on the WPP website. The Participant will provide the output of this tool and a Senior Official Attestation (provided in Appendix F – Non-GADS QCC Calculation Attestation) attesting that the resource is not subject to GADS reporting and that the Participant has utilized the non-GADS outage calculation tool with complete and correct information. Participants will also provide a Senior Official Attestation (in the form provided in *Appendix I*) that their calculation of the Storage

Hydro QCC value is correct, accurate, and in compliance with the requirements of the Tariff.

3.2.4. Late Registered Resources

As discussed in *BPM 105 Qualifying Resources*, resources that are unable to register by the deadline of the Advance Assessment data request (see *BPM 101 Advance Assessment*) may still be able to register prior to the FS Deadline so long as the necessary information is provided.

3.2.5. Transition Exceptions

BPM 109 Forward Showing Transition Period discusses how a new Participant application to the Program Administrator prior to March 31, 2027, shall be required to select an initial Binding Season during the Transition Period (Summer seasons for 2025, 2026, and 2027, and the Winter seasons for 2025-2026, 2026-2027, and 2027-2028). During its Transition Binding Seasons, a Participant may be able to request potential reductions in Deficiency Charges as described below.

3.2.5.1. Excused Transition Deficits

During a Participant's Transition Binding Seasons, Deficiency Charges otherwise applicable to the Participant under Section 17.1 of the Tariff, and calculated under Section 17.2, shall be reduced to the extent the Participant has an Excused Transition Deficit (ETD). To obtain an ETD for a Binding Season, the Participant must provide a Senior Official Attestation, as included in *BPM 109 Forward Showing Transition Period*.

3.2.5.2. Legacy Contract – No Joint Contract Accreditation Form (JCAF) Option

In addition to an ETD, during the Transition Period a Participant may be able to reduce its Monthly Capacity Deficiency to the extent the deficiency is due to the Participant's failure to obtain assent to a JCAF from the supplier under a Legacy Agreement (a power supply agreement entered into prior to October 1, 2021), as explained in *BPM 109 Forward Showing Transition Period* (the No-JCAF Option). To obtain that relief, the Participant must provide a Senior Official Attestation (in the form set forth in *BPM 109 Forward Showing Transition Period*) as part of its FS Submittal attesting that the Participant made commercially reasonable efforts to execute the required JCAF with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the JCAF.

4. Cure Period

The Program Operator and Program Administrator shall review Participants' FS Submittals and the Program Administrator shall serve deficiency notices in writing to any Participant that has not, by the FS Deadline shown in Table 1, submitted all

required FS Submittal information and materials (see Section 3), or that has submitted information or materials that the Program Operator has found is or may be incorrect or deficient. Participants served a deficiency notice will have until the dates shown in Table 1 to cure their deficiencies. Deficiencies uncured by the time of the FS Cure Deadline shall be subject to the FS Deficiency Charge (*see BPM 107 Forward Showing Deficiency Charge*).

Appendix A – FS Demonstration Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that I have reviewed [Participant]'s FS Submittal provided this day by [Participant] to Western Power Pool, and that to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein, and that the statements therein are true, correct and complete per all of the requirements of Business Practice Manual 108.

Appendix B – Catastrophic Resource Failure Exception Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that, as set forth in the accompanying request for an exception from the FS Capacity Requirement for the [specify season] Binding Season, (i) [Participant] has experienced a catastrophic failure of its [identify] Qualifying Resource[s] due to an event of Force Majeure as defined by Section 8.1 of the WRAP Tariff; (ii) [Participant] is unable to replace the QCC quantity of such Qualifying Resource[s] on commercially reasonable terms prior to the FS Deadline of [specify date] as a result of the timing and magnitude of such catastrophic failure and its consequences; and (iii) the statements in the accompanying FS Capacity Requirement exception request, including the information provided therein on the nature, causes and consequences of the catastrophic failure[s], and [Participant]'s specific, concrete efforts prior to the referenced FS Deadline to secure replacement Qualifying Resources for the [specify season] Binding Season, are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix C – Monthly Transmission Exception General Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that, as set forth in the accompanying request for an exception from the FS Transmission Requirement for the [specify season] Binding Season, (i) [Participant] meets the stated WRAP requirements for the exception; and (ii) the statements in the accompanying FS Transmission Requirement exception request are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix D – Enduring Constraint Additional Attestation

I further attest, in support of [Participant]'s request for the Enduring Constraints Transmission Exception, that (i) no ATC for transmission service rights for which the exception is requested is available (either from the transmission service provider or through a secondary market) as of the FS Deadline, on the applicable segment for the Month(s) needed (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less; (ii) [Participant] has taken commercially reasonable efforts to procure firm transmission service rights, and (iii) [Participant] has posted a request for the necessary firm transmission rights on the relevant bulletin board, (i.e., OASIS) prior to the FS Deadline.

Appendix E – Planned Outages Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that: (i) as set forth in [Participant]'s FS Submittal provided this day by [Participant] to Western Power Pool, Participant has included information on all Qualifying Resources that are currently out of service with a scheduled return date that falls during the [specify season] Binding Season; (ii) Participant [has] [does not have] certain additional outages at Qualifying Resources that are planned to occur during the [specify season] Binding Season but have not yet begun at the time of submission of the FS Submittal; (iii) Participant has made reasonable efforts to obtain and provide information on any such additional outages, but such data cannot be supplied with reasonable specificity; (iv) the aggregate of any such additional outages is either expected to be equal to or less than [Participant]'s remaining surplus as defined by [Participant]'s Portfolio QCC in excess of [Participant]'s FS Capacity requirement or to the extent it is not excess it will be replaced with the necessary capacity or energy to meet the Operations Program requirements, consistent with Section 16.2.8.2 and Part III of the Tariff; and (v) that the foregoing statements are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein.

Appendix F – Non-GADS QCC Calculation Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that the resource that is the subject of this form is not subject to GADS data reporting; and that the resource's performance data (historical output or historical outage evaluation) for the Capacity Critical Hours of the [specify season] Binding Season is accurately accounted for in the accompanying FS Submittal.

Appendix G – FS Summary

A Participant's total Portfolio QCC is defined as the Participant's Resource QCC plus its Net Contract QCC plus its total RA transfer minus its planned outages for each month of the Binding Season.

$$Portfolio\ QCC = Resource\ QCC + Net\ Contract\ QCC + Total\ RA\ Transfer - Planned\ Outages$$

Where:

Resource QCC is the summation of all QCC values for the Participant's Qualified Resources calculated for each month of a Binding Season.

$$Resource\ QCC = \sum QCC\ of\ all\ Participant\ Qualifying\ Resources$$

The Net Contracted QCC is a monthly value equal to the sum of the Participant's Contract QCCs. Import contracts (purchases) are additive to the Participant's QCC value and exports (sales) are a negative QCC value. The Net Contract QCC formula is as follows:

$$Net\ Contract\ QCC = \sum QCC\ of\ all\ Participant\ Qualified\ Contracts$$

Resource adequacy transfers are added to the purchasing Participant's Portfolio QCC value and subtracted from the selling Participant's Portfolio QCC value. The contracts for these transfers will be provided to the Program Operator for validation.

$$Total\ RA\ Transfer = \sum Participant\ RA\ Transfer\ Contracts$$

The Participant's Total Portfolio QCC should be at least equal to the Participant's FS Capacity Requirement for each month of the Binding Season. If the Participant's Total Portfolio QCC meets or exceeds that threshold, then the Participant's FS Capacity Requirement has been satisfied.

$$Total\ Portfolio\ QCC \geq FS\ Capacity\ Requirement$$

Where:

The Participant's FS Capacity Requirement is its forecasted monthly demand multiplied by 100% plus the applicable Monthly FSPRM according to the following equation:

$$FS\ Capacity\ Requirement = Monthly\ P50 * (100\% + Monthly\ FSPRM)$$

The over and underperformance of VERs, forced outages, and Run-of-River hydro in the Participant's portfolio will be used to calculate performance changes in the Operations Program. The Participant's additional planned maintenance or short-term sales will be made from its excess Portfolio QCC.

The Participant's total demonstrated FS Transmission shall be at least equal to 75% of the Participant's FS Capacity Requirement at the FS Deadline. If the Participant's Total Portfolio QCC meets or exceeds that threshold, then the Participant's FS Transmission Requirement has been satisfied.

$$Demonstrated\ FS\ Transmission \geq FS\ Capacity\ Requirement * 75\%$$

Where:

Demonstrated FS Transmission is equal to the sum of all transmission demonstrated with completed paths and Approved Transmission Exceptions.

$$\begin{aligned} Demonstrated\ FS\ Transmission \\ &= \sum Trasnmission\ Demonstrated\ (completed\ paths) \\ &\mp Approved\ Transmission\ Exceptions \end{aligned}$$

Appendix H – Demand Response Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that for each Demand Response Qualifying Resource included in the accompanying FS Submittal, [Participant,] upon due investigation, has determined whether the demand response capability of such resource has been previously deployed to reduce load, and if such capability has been deployed to reduce load, Participant has, for purposes of developing the P50 Peak Load Forecast employed in such FS Submittal, added back to each historic hour when such capability was deployed the MWs of load reduction provided by such capability in such hour.

Appendix I – Storage Hydro Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that I have reviewed [Participant]'s Storage Hydro Qualifying Capacity Contribution (QCC) provided this day by [Participant] to Western Power Pool (i.e., Program Administrator) ; and, to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein, that such QCC has been calculated in accordance with the methodology set forth in *BPM 105 Qualifying Resources* and such calculation meets all requirements of Tariff Section 16.2.5.5; that [Participant] has provided the Program Administrator with all information necessary to review such QCC that is stated in Tariff, Section 16.2.5.5, to the extent requested by the Program Administrator, and that all statements and information included in the FS Submittal with respect to the calculation of such QCC are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein.

Appendix J – Transmission Rights Attestation

I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest that [Participant] has the transmission rights from [insert Qualifying Resources] Qualifying Resources to the load on [Participant's] system, but [Participant] is unable to provide transmission service reservation information.

Western Resource Adequacy Program

Expedited Proposal

Requester	
Name: Ben Brandt (Idaho Power Company) & WRAP Staff	Organization: ■ Participant - Idaho Power Company ☐ Program Operator ■ Program Administrator
Title: Director, Load Serving Operations	Phone Number: 208.388.2709
Email: BBrandt@Idahopower.com, wrap@westernpowerpool.org	Date of Request to Resource Adequacy Participant Committee (RAPC): 9/4/2026

Exigent Circumstance

Check one:

- ☐ A FERC-mandated amendment to the Tariff or the Business Practice Manuals
- ☐ An amendment to the Tariff or the Business Practice Manuals to address an immediate reliability impact
- ■ An amendment to this Tariff or the Business Practice Manuals that the RAPC has determined has significant impacts to utility service (see Appendix A)

Date Exigent Circumstance determined by RAPC: 9/10/2026

Type of Change Requested

Check one:

- ☐ Correction *(i.e., revising erroneous language or language that needs clean-up for grammatical errors or inconsistency across governing documents - no changes to intent or policy)*
- ☐ Clarification *(i.e., revising language to better represent existing intent, no changes to functionality or policy)*
- ☐ Enhancement *(i.e., revising language to expand upon existing intent or functionality)*
- ☐ New Protocol, Business Practice, Criteria, Tariff *(i.e., new language to accommodate new functionality or policy not existing today)*
- ■ Change *(i.e., a change in the existing policy – will replace an existing language)*
- ☐ Other *(i.e., changes that do not fall into the categories listed above)*

Description of Change

Provide a description of the issue:

Background

As WRAP has progressed toward binding implementation, Participants have continued to evaluate the practical application of the Program's Transition Period provisions.

Following discussion in 2024 and adoption of the Revised Transition Plan in 2025, Participants continued exploring the treatment of Forward Showing Deficiency Charges during the Transition Period (Summer 2025 – Winter 2028/2029). Those discussions resulted in adoption of the October 2025 RAPC Resolution directing development of an Expedited Proposal establishing a temporary Forward Showing Deficiency Charge Deferral mechanism.

Since adoption of the Resolution, WPP and WRAP Participants have continued to refine the policy framework through stakeholder discussions. This proposal fulfills the direction provided by the RAPC and reflects the outcome of those discussions.

The Resolution recognized that this initial, Expedited Proposal should be *limited to the Transition Period* and further directed that an enduring approach to Deficiency Charge treatment be considered separately through the standard stakeholder process. **This Transition Period proposal in no way establishes the baseline, preferred approach, or presumptive framework for any longer-term Deficiency Charge deferral policy.** Any enduring approach may adopt, modify, reject, or replace the concepts reflected in this temporary proposal through the standard stakeholder process.

Note that the Transition Period is inclusive of the Interim Seasons (Winter 2027-2028 and Summer 2028) before WRAP responsibilities for the Forward Showing transfer fully to WPP and Operations Program responsibilities transfer fully to Southwest Power Pool (SPP).

Issue Statement

Forward Showing Deficiency Charges are intended to encourage timely procurement and development of sufficient qualifying capacity. Their purpose is to create an economic incentive to procure or develop resources rather than remain capacity deficient.

During the initial binding seasons, Participants may incur Forward Showing Deficiency Charges while they are still adapting procurement, planning, and resource adequacy practices to WRAP's binding implementation. Immediate collection of the full Deficiency Charge may not be the most effective Transition Period mechanism if the Participant subsequently demonstrates compliance for the same Season Type (i.e., deficiency incurred in Winter but subsequently demonstrates compliance the succeeding Winter).

This proposal establishes a temporary Deficiency Charge Deferral mechanism that preserves the incentive to resolve deficiencies while recognizing the unique circumstances of WRAP's transition to binding operations. The mechanism does not eliminate accountability. A Participant must satisfy specified eligibility requirements, make required commercially reasonable efforts, pay any required initial amount, and ultimately pay an increasing portion of the applicable Forward Showing Deficiency Charge depending on whether and when it passes a later Forward Showing of the same Season Type.

The proposal maintains each Forward Showing as a separate compliance obligation and does not establish precedent for any enduring treatment of Deficiency Charges.

Please provide the following information if known and/or available.

1. Provide a proposed solution to the issue described:

This proposal would establish a temporary Forward Showing Deficiency Charge Deferral mechanism applicable to Forward Showing Deficiency Charges assessed during the Transition Period.

Eligibility for Deferral Treatment for Forward Showing Deficiency Charges in Transition Period

Under this proposal, a Participant that incurs a Forward Showing Deficiency Charge during the Transition Period would receive Deferral treatment if the applicable eligibility requirements are satisfied.

Deferral treatment would not require the Participant to identify a specific future resource or contract. Instead, Deferral treatment would be available when a deficient Participant attests that it made commercially reasonable efforts to meet the WRAP Monthly Forward Showing Capacity Requirements for the applicable Season and otherwise satisfies the requirements described below.

The Business Practice Manuals would be updated to identify the minimum actions a Participant must have taken before signing an attestation that it made commercially reasonable efforts. At a minimum, those actions would include:

- soliciting the market for capacity, such as through an all-source RFP, at a volume the Participant reasonably believes would provide sufficient Qualifying Capacity Contribution (QCC) value to enable the Participant to meet its Forward Showing Capacity Requirements; and
- demonstrating outreach to WRAP Participants, facilitated with support from WPP.

Use of the term “commercially reasonable efforts” is intended to recognize that a Participant is expected to pursue available capacity at prices commensurate with prevailing market prices for capacity. The standard is not intended to prohibit or protect Participants from paying high prices for capacity when prevailing capacity prices are high. Rather, the standard is intended to mitigate market power concerns while continuing to incentivize procurement of available capacity at reasonable, though not necessarily low, prices.

Deferral treatment would ***not*** be available to a Participant that fails to submit Attestation A under BPM 108, which confirms the truthfulness and completeness of the Participant’s Forward Showing Submittal. Execution of BPM 108 Attestation A is required of all Participants for each Forward Showing. For purposes of Deferral treatment, this requirement ensures that a deficient Participant has provided complete and truthful information in its Forward Showing Submittal, including information regarding all participating loads and resources. Complete and truthful submittal information is necessary so that WPP and stakeholders can understand the expected reliability condition of the region, including any shortfall relative to the one-day-in-ten-years loss of load expectation.

Deferred Forward Showing Deficiency Charges Calculations

For each Forward Showing Deficiency Charge receiving deferral treatment, WPP would calculate the otherwise-applicable Forward Showing Deficiency Charge, including any applicable Transition Period discount. The

Participant would pay an initial portion of that charge upon failure to cure the associated deficiency and the remaining balance would be recorded as a Deferred Deficiency Charge for that deficient Season.

Each deficient Season would have its own deferral period. A Deferred Deficiency Charge would be resolved when the Participant passes a later Forward Showing of the same Season Type after completion of the applicable Forward Showing review and cure process, or when the deferral period expires without the Participant passing a later Forward Showing of the same Season Type (a Winter deficiency could be resolved only by passing a later Winter Forward Showing and a Summer deficiency could be resolved only by passing a later Summer Forward Showing).

This proposal offers the following payment structure:

Timing / Outcome	Total Percentage of Original Forward Showing Deficiency Charge Owed	Winter 2027/28 Deferral Timeline	Summer 2028 Deferral Timeline	Winter 2028/29 Deferral Timeline
Initial payment upon deficient Forward Showing	15%	Winter 27/28	Summer 28	Winter 28/29
Participant passes next Forward Showing of same Season Type	-	Winter 28/29	Summer 29	Winter 29/30
Participant passes second Forward Showing of same Season Type	40%*	Winter 29/30	Summer 30	Winter 30/31
Participant passes third Forward Showing of same Season Type	70%*	Winter 30/31	Summer 31	Winter 31/32
Participant does not pass within deferral period	100%*	Passes Winter 31/32 or later	Passes Summer 32 or later	Passes Winter 32/33 or later
Participant exits WRAP before resolution	100%	Departs before W31/32 without passing	Departs before Summer 32 without passing	Departs before Winter 2031-2032 without passing

*Amounts previously paid would be credited against the total percentage owed. For example, if the Participant pays 15% upon the deficient Forward Showing, does not pass the following Forward Showing of the same Season Type, and later passes the next (third) Forward Showing of the same Season Type, the Participant would owe an additional 25 percentage points, for a total payment of 40%.

As noted above, each season proceeds on its own deferral timeline and is tracked as a separate charge. For example, if a participant failed Winter 27/28, Winter 28/29, and Winter 29/30 before passing Winter 30/31 the ultimate treatment of these three failures would be: pay 70% of the calculated charges for Winter 27/28 failure (15% paid immediately upon failure; 55% paid upon passing Winter 30/31 and resolving the deferral); pay 40% of the calculated charges for Winter 28/29 (15% paid immediately upon failure; 25% paid upon passing Winter 30/31 and resolving the deferral); pay 100% of the calculated charges for failing Winter 29/30 upon failure (pending a further, additional deferral proposal, this proposal covers only transition period, which ends prior to Winter 29/30). For the

Transition Seasons, the deferral percentages apply to the already discounted charges and is additive to the discounts currently in place.

If the Participant does not pass a Forward Showing of the same Season Type before the deferral period expires, the Participant would owe 100% of the original Forward Showing Deficiency Charge, less any amounts previously paid. If the Participant exits WRAP before resolving any outstanding Deferred Deficiency Charge, all Deferral treatment would terminate and the Participant would owe 100% of all outstanding Deferred Deficiency Charges. No interest would apply.

Amounts collected under the Deferral mechanism would be distributed using the existing Tariff mechanism for the original deficient Season. The initial payment, if adopted, would be distributed when collected. Any additional amounts later collected upon resolution, expiration of the deferral period, or Participant exit would also be distributed by reference to the original deficient Season. This proposal assumes that distributions would be made only to entities that passed the original deficient Forward Showing Season and remain WRAP Participants at the time the amounts are collected and distributed.

This mechanism preserves the incentive to resolve deficiencies during the Transition Period, maintains each Forward Showing as a separate compliance obligation, and avoids the administrative complexity of tracking specific future resources, contracts, resource substitutions, commercial operation dates, or resource-specific QCC values.

Rockies Subregion Deferral Treatment

The Transition Period is intended to provide Participants time to adapt existing planning, procurement, transmission, and business practices to the requirements of a binding regional resource adequacy program. While all Participants are navigating this transition, Participants in the Rockies Subregion have had comparatively less time to develop and implement the arrangements necessary to participate fully in the regional framework contemplated by WRAP, given their more recent entry into the Program.

To provide additional transition flexibility, all Deficiency Charges would be calculated as laid out in the proposal (WPP would first calculate the otherwise-applicable Forward Showing Deficiency Charge, then apply the applicable Transition Period discount) and then apply Rockies Subregion-specific deferral treatment. While structurally and logistically the same as the mechanism described above, the % owed for each time period is as described in the table below.

This proposal offers the following payment structure for the Rockies Subregion:

Timing / Outcome	Total Percentage of Original Forward Showing Deficiency Charge Owed
Initial payment upon deficient Forward Showing	5%
Participant passes next Forward Showing of same Season Type	-

Winter 2027/28 Deferral Timeline	Summer 2028 Deferral Timeline	Winter 2028/29 Deferral Timeline
Winter 27/28	Summer 28	Winter 28/29
Winter 28/29	Summer 29	Winter 29/30

Participant passes second Forward Showing of same Season Type	20%*	Winter 29/30	Summer 30	Winter 30/31
Participant passes third Forward Showing of same Season Type	50%*	Winter 30/31	Summer 31	Winter 31/32
Participant does not pass within deferral period	100%*	Passes Winter 31/32 or later	Passes Summer 32 or later	Passes Winter 32/33 or later
Participant exits WRAP before resolution	100%	Departs before W31/32 without passing	Departs before Summer 32 without passing	Departs before Winter 2032-2033 without passing

*Amounts previously paid would be credited against the total percentage owed. For example, if the Participant pays 5% upon the deficient Forward Showing, does not pass the following Forward Showing of the same Season Type, and later passes the next (third) Forward Showing of the same Season Type, the Participant would owe an additional 15 percentage points, for a total payment of 20%.

Operations Program Treatment of Deferred Deficiencies

Deferred deficiency MW would be treated in the Operations Program the same way as MW associated with a paid Forward Showing Deficiency Charge. For each hour of the applicable Operations Season, the MW quantity associated with the deferred deficiency would be subtracted from the Participant's Operations Program sharing calculation.

This treatment reflects the underlying purpose of the Operations Program: to share the capacity that is actually available to the WRAP region. If a Participant did not demonstrate capacity in the Forward Showing and, despite commercially reasonable efforts, was unable to procure that capacity, the Operations Program should not assume that the Participant will somehow have that capacity available in the Operations Season.

This approach also underscores the importance of the commercially reasonable efforts requirement. By reducing the Participant's sharing calculation for deferred deficiency MW, the Program recognizes that the Participant has less capacity available to offer and may need help more readily in the operations horizon. That treatment is appropriate only where the Participant has demonstrated that it made commercially reasonable efforts to obtain capacity before receiving Deferral treatment.

Critical Mass

The Critical Mass provisions were originally developed as a transitional mechanism to provide flexibility for Participants as they moved into the initial Binding Seasons, including by protecting Participants from binding Program obligations where insufficient participation within a Subregion could make binding participation infeasible or insufficiently beneficial. As WRAP has progressed toward binding implementation, the Program has developed additional tools to address transition-related challenges while allowing Participants to remain binding. In particular, the Deficiency Charge Deferral mechanism established through this proposal provides additional transition flexibility while preserving binding participation, maintaining the investment and procurement signals created by the Forward Showing requirements, and continuing to advance the benefits of regional resource adequacy. Given the availability of this more targeted transition mechanism, the Critical Mass provisions are no longer necessary.

2. Provide the specific document and language you would like changed:

The Lead Sponsor requests revisions to the WRAP Tariff and applicable Business Practice Manuals necessary to implement the Forward Showing Deficiency Charge Deferral mechanism described in this proposal during the Transition Period.

The requested revisions should address, at minimum:

1. calculation and recording of Deferred Deficiency Charges;
2. Participant attestation requirements;
3. seasonal application of deferral treatment;
4. resolution of deferral treatment;
5. treatment of Participant exit before resolution;
6. applicable percentages owed upon successful resolution;
7. accumulation of Forward Showing Deficiency Charges; and
8. sunset of the mechanism at the end of the Transition Period.

3. Provide a suggestion for how language could be updated to address issue:

Draft Tariff and BPM revisions will be included as attachments to the final proposal.

• Impact of Change

Please provide the following information if known and/or available.

1. Any data/information available that would characterize the importance or magnitude of the issue (allows for file attachments):

2. Describe the benefits that will be realized from this change:

- <u>Supports Transition Period Implementation</u>
  - The proposal better aligns Transition Period Deficiency Charge treatment with WRAP's objective of encouraging Participants to resolve deficiencies during WRAP's initial binding seasons. The mechanism provides a temporary opportunity for Participants to address early Forward Showing deficiencies by demonstrating compliance in a later Forward Showing of the same Season Type, while maintaining financial accountability for the original deficiency.
- <u>Preserve Participant Accountability</u>
  - The proposal does not forgive deficiencies unconditionally. A Participant must satisfy the applicable eligibility requirements, including required attestations and commercially reasonable efforts requirements, to receive Deferral treatment. If the Participant does not

pass a later Forward Showing of the same Season Type within the deferral period, or exits WRAP before resolution, the Participant owes 100% of the original Forward Showing Deficiency Charge, less any amounts previously paid.

- Incents a Deficient Participant to Stay in the Program and Resolve Deficiencies
  - The deferral period and potential for a reduced charge provide an incentive for a deficient Participant to remain in WRAP and resolve its deficiency through later demonstrated compliance, rather than exiting the Program or failing to address the deficiency. If the Participant exits before resolving outstanding Deferred Deficiency Charges, all outstanding amounts become due.
- Maintains Incentives to Cure Deficiencies Promptly
  - The percentage of the original Forward Showing Deficiency Charge owed increases the longer the Participant remains deficient for the same Season Type. This preserves a financial incentive for the Participant to pass the next applicable Forward Showing as soon as practicable.
- Maintains Each Forward Showing as a Separate Compliance Obligation
  - The proposal does not allow Participants to rely on future compliance alone. Each Forward Showing remains a separate compliance obligation. A Participant must satisfy the applicable Forward Showing requirements for each Season and must meet the eligibility requirements for Deferral treatment for each deficient Season.
- Limits Administrative Complexity
  - The proposal avoids the need to track specific Deferral Resources, Deferral QCC values, commercial operation dates, contract effective dates, resource substitutions, or any eligibility criteria associated with a deferral mechanism based on a specific resource (or set of resources). Instead, WPP tracks deficient Seasons, later same-season Forward Showing outcomes, and Deferred Deficiency Charges. This approach is intended to be more administrable than a resource-specific deferral mechanism.
- Provides Recognition of Reliability Risk
  - If the initial payment concept is adopted, the proposal would require a Participant receiving Deferral treatment to pay a portion of the Forward Showing Deficiency Charge at the time of the original deficiency. This provides some immediate recognition that Participants passing the original Forward Showing are assuming reliability risk associated with the deficiency, while still deferring the majority of the charge to preserve the Participant's opportunity to resolve the deficiency.
- Preserves the Temporary Nature of the Transition Solution
  - The proposal is expressly limited to Forward Showing Deficiency Charges assessed during the Transition Period and does not establish precedent for any enduring Deficiency Charge policy. This limitation preserves flexibility for Participants to consider a potential long-term solution through the standard stakeholder process.

Appendix A - Exigent Circumstance

The RAPC determined that development of a temporary Forward Showing Deficiency Charge Deferral mechanism needs to be addressed by an Expedited Proposal due to an Exigent Circumstance under BPM 303 ("significant impacts to utility service").

The WRAP is approaching binding implementation during the Transition Period. Participants require certainty regarding the treatment of Forward Showing Deficiency Charges sufficiently in advance of binding Forward Showing obligations to support resource procurement, development, financing, and compliance planning.

The October 2025 RAPC Resolution directed development of an Expedited Proposal addressing Forward Showing Deficiency Charge deferral for the Transition Period and recognized that any enduring policy should instead be developed through the standard stakeholder process.

Consistent with that direction, this proposal is limited to a temporary Transition Period mechanism intended to address an immediate implementation need. It does not establish precedents for any potential long-term Deficiency Charge policy.

WESTERN RESOURCE ADEQUACY PROGRAM

TARIFF

OF

NORTHWEST POWER POOL

D/B/A

WESTERN POWER POOL

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SCHEDULE 1
WESTERN RESOURCE ADEQUACY PROGRAM ADMINISTATIVE COST RECOVERY CHARGE

ATTACHMENT A
Western Resource Adequacy Program Agreement

PART I GENERAL PROVISIONS

1. Definitions

Unless the context otherwise specifies or requires, capitalized terms used in this Tariff shall have the respective meanings assigned herein for all purposes of this Tariff (such definitions to be equally applicable to both the singular and the plural forms of the terms defined). Unless otherwise specified, all references herein to Parts, Sections, Schedules, or Attachments, are to Parts, Sections, Schedules, or Attachments of this Tariff.

Applicable Price Index: A published index of wholesale electric prices, or Locational Marginal Prices duly calculated and posted by a FERC-regulated market operator, in either case as designated under Part III of this Tariff for use in connection with an identified Subregion.

Administration Charge or WRAP Administration Charge: The charge established under Schedule 1 of this Tariff for recovery of the costs of the WRAP.

Advance Assessment: Analyses and calculations of Participant load, resource, and other information performed in advance of each Binding Season as set forth in Part II of this Tariff.

Aggregate Capacity Deficiency: As to a Binding Season, the sum of the maximum Monthly Deficiencies of all Participants that submitted FS Submittals for such Binding Season, as determined following completion of the Cure Period for such Binding Season.

Available Transfer Capability ("ATC"): Transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses.

Balancing Authority: The responsible entity that integrates resource plans ahead of time, maintains demand and resource balance within a Balancing Authority Area, and supports interconnection frequency in real time.

Balancing Authority Area: The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

Base Charge: A component of the WRAP Administration Charge as established under Schedule 1 of this Tariff.

Base Costs: Base Costs shall have the meaning provided in Schedule 1 of this Tariff.

Base Services Cost Centers: The cost centers comprising the Base Charge as defined in Schedule 1 of this Tariff.

Base Services Percentage: Base Services Percentage shall have the meaning provided in Schedule 1 of this Tariff.

Binding Season: The Summer Season or the Winter Season.

Board of Directors or Board: The Board of Directors of the Northwest Power Pool d/b/a Western Power Pool.

Business Day: Any Day that is a Monday through Friday, excluding any holiday established by United States federal authorities.

Business Practice Manuals: The manuals compiling further details, guidance, and information that are appropriate or beneficial to the implementation of the rules, requirements, and procedures established by this Tariff. Business Practice Manuals do not include such internal rules or procedures as the Western Power Pool may adopt for its operation and administration, including but not limited to any corporate by-laws of the Western Power Pool, or for any services or functions provided by the Western Power Pool other than those established by this Tariff.

CAISO: The California Independent System Operator Corporation, a California nonprofit public benefit corporation.

Capacity Benefit Margin: An amount of transmission transfer capability permitted under open access transmission rules to be reserved by load serving entities to ensure access to generation from interconnected systems to meet generation reliability requirements.

Capacity Critical Hours ("CCH"): Those hours during which the net Subregional capacity need is expected to be above the 95th percentile, based on historical and synthesized data for the Subregion's gross load, variable energy resource performance, and other adjustments.

Capacity Deficiency: A shortfall in a Participant's Portfolio QCC relative to that Participant's FS Capacity Requirement, as further defined in Part II of this Tariff.

Cash Working Capital Fund: Cash Working Capital Fund shall have the meaning provided in Schedule 1 of this Tariff.

Cash Working Capital Support Charge: A charge assessed to Participants under Schedule 1 of this Tariff to fund the Cash Working Capital Fund.

Cash Working Capital Support Charge Rate: Cash Working Capital Support Charge Rate shall have the meaning provided in Schedule 1 of this Tariff.

Central Hub: A designated point or named group of points on the transmission system within a Subregion identified by the Program Administrator that permits energy deliveries from multiple points within such Subregion.

Cost of New Entry ("CONE"): The estimated cost of new entry of a new peaking natural gas-fired generation facility, as determined under, and used in, Part II of this Tariff.

CONE Factor: A factor employed in the calculation of Deficiency Charges under Part II of this Tariff, to reflect whether, and the extent to which, the WRAP Region as a whole is expected to have a capacity deficiency during the period for which the Deficiency Charge is being calculated or a factor employed when a Participant has had repeated deficiencies in sequential years.

Committee of State Representatives ("COSR"): Committee of State Representatives, as established in Part I of this Tariff.

Contingency Reserve: As more fully described in the NERC WECC reliability standards, a quantity of reserves, consisting of generation, load, interchange, or other resources, that are deployable within ten minutes, equal to the greater of (i) the MW quantity of the loss of the most severe contingency and (ii) the megawatt quantity equal to the sum of 3% of hourly integrated load plus 3% of hourly integrated generation.

~~***Critical Mass:*** *The threshold level of participation in a Subregion, as established in the Business Practice Manuals, below which each Participant of such Subregion may elect to participate as a Non-Binding Participant.*~~

Cumulative Delivery Failure Period: Any period of five consecutive years, ending with and including the most recent Energy Delivery Failure as of the time of determination of a possible Delivery Failure Charge.

Day: A calendar day.

Day-Ahead Price: A price for wholesale electric transactions designated as a day-ahead price in an Applicable Price Index.

Default Allocation Assessment: A charge assessed on non-defaulting Participants to recover the costs associated with a default by a Participant, as set forth in Part I of this Tariff.

Deficiency Charge: A charge assessed for a Capacity Deficiency or Transmission Deficiency, as set forth in Part II of this Tariff.

Delivery Failure Charge: A charge assessed for a Participant's failure to deliver a required Energy Deployment, as set forth in Part III of this Tariff.

Delivery Failure Charge Rate: A rate employed in the determination of a Delivery Failure Charge as more fully set forth in Part III of this Tariff.

Delivery Failure Factor: A factor used in the determination of a Delivery Failure Charge to recognize the relative severity or impact of an Energy Delivery Failure, as set forth in Part III of this Tariff.

Demand Response: A quantifiable load reduction or otherwise controllable load for which a Participant has two mutually-exclusive options to use to affect its FS Capacity Requirements in a FS for a Binding Season: (1) leave the effects of historically deployed demand response as part of its load provided for the Advance Assessment; or (2) utilize as a Demand Response Capacity Resource.

Demand Response Capacity Resource: A Qualifying Resource with a demonstrated capability to provide a reduction in demand or otherwise control load in accordance with the requirements established under Part II of this Tariff utilized to meet a Participant's FS Capacity Requirement.

Demonstrated FS Transmission: A Participant's demonstration in its Forward Showing Submittal that it has secured WRAP Qualifying Transmission in a quantity sufficient to provide reasonable assurance, as of the time of the Forward Showing Submittal, of delivery of capacity

from the Qualifying Resources and the resources associated with the power purchase agreements in the Participant's Portfolio QCC.

Discounted Deficiency Change: *A reduced Deficiency Charge during the Transition Period that enables a deficient Participant that demonstrates commercially reasonable efforts but is unable to cure deficiencies to access Operations Program capacity.*

Dual Benefit Cost Centers: Dual Benefit Cost Centers shall have the meaning provided in Schedule 1 of this Tariff.

Effective Load Carrying Capability ("ELCC"): A methodology employed to determine the Qualified Capacity Contribution of certain types of Qualifying Resources, as more fully set forth in Part II of this Tariff.

Energy Declined Settlement Price: A pricing component used as part of the calculation of settlements for Holdback Requirements and Energy Deployments under Part III of this Tariff.

Energy Delivery Failure: A failure by a Participant to provide an Energy Deployment assigned to such Participant under Part III of this Tariff.

Energy Deployment: A delivery of energy that a Participant is required to provide during an Operating Day, as set forth in Part III of this Tariff.

Energy Storage Resource: A resource, not including a Storage Hydro Qualifying Resource, designed to capture energy produced at one time for use at a later time.

Excused Transition Deficit: A Participant's inability during the Transition Period to demonstrate full satisfaction of the Participant's FS Capacity Requirement, which, under certain conditions and limitations prescribed by Part II of this Tariff, permits *the Participant to pay a Discounted* Deficiency Charge.

Federal Power Marketing Administration: A United States federal agency that operates electric systems and sells the output of federally owned and operated hydroelectric dams located in the United States.

FERC: The Federal Energy Regulatory Commission.

Forced Outage Factor: The factor resulting from dividing the number of hours a generating unit or set of generating units is not synchronized to the grid system, not in reserve shutdown state and considered to be out of service for unplanned outages—or a startup failure, by the number of total hours in the period multiplied by 100% or a Program Administrator calculated equivalent forced outage factor that reflects the likelihood and extent to which a resource will be unavailable from time to time due to factors outside management control.

Forward Showing Program: The program and requirements as set forth in Part II of this Tariff.

Forward Showing Submittal ("FS Submittal"): The submissions a Participant is required to submit in advance of each Binding Season to demonstrate its satisfaction of the FS Capacity Requirement and FS Transmission Requirement, as set forth in Part II of this Tariff.

Forward Showing Year: A period consisting of a Summer Season and the immediately succeeding Winter Season.

FS Capacity Requirement: The minimum quantity of capacity a Participant is required to demonstrate for a Binding Season, as set forth in Part II of this Tariff.

FS Deadline: The deadline for Participants' submissions of their FS Submittals for a Binding Season, as established under Part II of this Tariff.

FS Planning Reserve Margin ("FSPRM"): An increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages, or lower availability of resources, expressed as a percentage of the applicable peak load forecast, as determined in accordance with Part II of this Tariff.

FS Transmission Requirement: The minimum quantity of WRAP Qualifying Transmission a Participant is required to demonstrate for a Binding Season, as set forth in Part II of this Tariff.

High-Priced Day: The most recent day in the CAISO in which prices in the day-ahead market were at least $200/MWh.

Holdback Capacity: Capacity that is voluntarily supplied or is the result of a positive Sharing Calculation result that is bindingly committed to the WRAP after it is claimed by one or more Participants with a negative Sharing Calculation result.

Holdback Requirement: A MW quantity, as determined on a Preschedule Day, that a Participant is required to be capable of converting into an Energy Deployment on a given hour of the succeeding Operating Day, as more fully set forth in Part III of this Tariff.

ICE Index: A wholesale electric price index prepared and published by the Intercontinental Exchange.

Incremental Cash Working Capital Support Charge: Incremental Cash Working Capital Support Charge shall have the meaning provided in Schedule 1 of this Tariff.

Independent Evaluator: An independent entity engaged to provide an independent assessment of the performance of the WRAP and any potential beneficial design modifications, as set forth in Part I of this Tariff.

Installed Capacity: Nameplate capacity adjusted for conditions at the site of installation.

International Power Marketing Entity: An entity that (i) owns, controls, purchases and/or sells resource adequacy supply and is responsible under the WRAP program for meeting LRE obligations associated with one or more loads physically located outside the United States.

Legacy Agreement: A power supply agreement entered into prior to October 1, 2021.

Load Charge: A component of the WRAP Administration Charge as established under Schedule 1 of this Tariff.

Load Charge Rate: Load Charge Rate shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Costs: Load Services Costs shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Cost Centers: Load Services Cost Centers shall have the meaning provided in Schedule 1 of this Tariff.

Load Services Percentage: Load Services Percentage shall have the meaning provided in Schedule 1 of this Tariff.

Load Responsible Entity ("LRE"): An LRE is an entity that (i) owns, controls, purchases and/or sells resource adequacy supply, or is a Federal Power Marketing Administration or an International Power Marketing Entity, and (ii) has full authority and capability, either through statute, rule, contract, or otherwise, to:

(a) submit capacity and system load data to the WRAP Program Operator at all hours;

(b) submit Interchange Schedules within the WRAP Region that are prepared in accordance with all NERC and WECC requirements, including providing E-Tags for all applicable energy delivery transactions pursuant to WECC practices and as required by the rules of the WRAP Operations Program;

(c) procure and reserve transmission service rights in support of the requirements of the WRAP Forward Showing Program and Operations Program; and

(d) track and bilaterally settle holdback and delivery transactions.

Subject to the above-mentioned criteria, an LRE may be a load serving entity, may act as an agent of a load serving entity or multiple load serving entities, or may otherwise be responsible for meeting LRE obligations under the WRAP.

Locational Marginal Price: The cost of delivering an additional unit of energy to a given node, as calculated under a FERC-regulated wholesale electric tariff.

Loss of Load Expectation ("LOLE"): An expression of the frequency with which a single event of failure, due to resource inadequacy, to serve firm load would be expected (based on accepted reliability planning analysis methods) to result from a given FS Planning Reserve Margin.

Make Whole Adjustment: A component used as part of the calculation of settlements for Holdback Requirements and Energy Deployments under Part III of this Tariff.

Maximum Base Charge: The maximum amount prescribed in Schedule 1 of the Tariff that the Base Charge cannot exceed.

Maximum Load Charge Rate: The maximum rate prescribed in Schedule 1 of the Tariff that the Load Charge Rate cannot exceed.

Median Monthly P50 Peak Loads: Median Monthly P50 Peak Loads has the meaning prescribed by Schedule 1 of this Tariff.

Month: A calendar month.

Monthly Capacity Deficiency: A Participant's Capacity Deficiency for a given Month.

Monthly Deficiency: An identification under Part II of this Tariff whether, and the extent to which, a Participant's need for capacity or transmission for a given Month is greater than the capacity or transmission, respectively, the Participant can demonstrate for such Month.

Monthly FS Capacity Requirement: FS Capacity Requirement determined as to a Month.

Monthly FSPRM: The FS Planning Reserve Margin applicable to a given Month of a given Binding Season, as determined in accordance with Part II of this Tariff.

Monthly Transmission Deficiency: A Participant's Transmission Deficiency for a given Month.

Monthly Transmission Demonstrated: A Participant's Demonstrated FS Transmission for a given Month.

Monthly Transmission Exceptions: Exceptions from the FS Transmission Requirement approved under Part II of this Tariff for a Participant for a given Month.

Multi-Day-Ahead Assessment: A period of days preceding each Operating Day, and ending on the Preschedule Day, during which Sharing Calculations are successively performed based in each case on Operating Day conditions expected at the time of calculation.

North American Electric Reliability Corporation ("NERC"): A not-for-profit international regulatory authority that serves as the designated electric reliability organization for the continental United States, Canada, and a portion of Mexico.

Net Contract QCC: The QCC, which may be a positive or negative value, calculated, in sum and on net, for a Participant's power purchase agreements and power sale agreements, in accordance with Part II of this Tariff.

Non-Binding Season: As to a Participant, *any* Binding Season during which the *provisions of Section 15A.1* of this Tariff *apply*.

Non-Binding Participant: For any Binding Season, a Participant that has made an election by which such Binding Season is a Non-Binding Season for that Participant.

Open Access Transmission Tariff: A governing document on file with FERC establishing the rates, terms, and conditions of open access transmission service, or equivalent tariff of a transmission service provider that is not required to file its transmission service tariff with FERC.

Operating Day: A current Day of actual electric service from resources to load, for which Sharing Events are determined and Energy Deployments may be required, as set forth in Part III of this Tariff.

Operations Program: The program and requirements set forth in Part III of this Tariff.

P50 Peak Load Forecast: A peak load forecast prepared on a basis, such that the actual peak load is statistically expected to be as likely to be above the forecast as it is to be below the forecast.

Participant: A Load Responsible Entity that is a signatory to the WRAPA.

Portfolio QCC: As to a Participant, the sum of the Resource QCC provided by all of a Participant's Qualifying Resources plus the Net Contract QCC of such Participant, as adjusted to reflect RA Transfers as described in Section 16.2 7 and Planned Outages as described in Section 16.2.8.

Preschedule Day: The applicable scheduling Day for a given Operating Day as defined in scheduling calendar established by WECC.

Program Administrator: The Western Power Pool, in its role as the entity responsible for administering the WRAP.

Program Operator: A third party that has contracted with the Program Administrator to provide technical, analytical, and implementation support to the Program Administrator for the WRAP.

Program Review Committee ("PRC"): The stakeholder sector committee as established in Section 4.2 of this Tariff.

Pure Capacity: A MW quantity of capacity without any assigned forced outage rate employed in ELCC determinations under Part II of this Tariff.

Qualifying Capacity Contribution ("QCC"): The MW quantity of capacity provided by a resource, contract, or portfolio which qualifies to help satisfy a Participant's FS Capacity Requirement, as determined in accordance with Part II of this Tariff.

Qualifying Resource: A generation or load resource that meets the qualification and accreditation requirements established by and under Part II of this Tariff.

Real-Time Price: A price for wholesale electric transactions designated as a real-time price in an Applicable Price Index.

Resource Adequacy Participant Committee ("RAPC"): The committee comprised of representatives from each Participant as established in Part I of this Tariff.

Resource QCC: The QCC provided by a Qualifying Resource, as determined in accordance with Part II of this Tariff.

Run-of-River Qualifying Resource ("ROR"): A hydro-electric power project that does not have the capability to store a sufficient volume of water to support continuous generation at the project's stated maximum capacity for a period of one hour. Resource does not meet the definition of a Storage Hydro Qualifying Resource.

Safety Margin: An additional factor allocated among Participants with positive sharing calculations when warranted by certain conditions as prescribed by Part III of this Tariff.

Senior Official Attestation: A signed statement of a senior official of a Participant attesting that it has reviewed such Participant's information submission required under this Tariff, that the statements therein are true, correct and complete to the best of such official's knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed therein, and containing such further statements as required by this Tariff or the applicable Business Practice Manual for the information submission at issue.

Sharing Calculation: A calculation used in the Operations Program under Part III of this Tariff to identify any hour in which any Participant is forecast to have a capacity deficit.

Sharing Event: An hour or hours of an Operating Day for which one or more Participants has a negative Sharing Calculation result, as determined in accordance with Part III of this Tariff.

Storage Hydro Qualifying Resource: A hydro-electric power project with an impoundment or reservoir located immediately upstream of the powerhouse intake structures that can store a sufficient volume of water to support continuous generation at the project's stated maximum capacity for a period of one hour or longer.

Subregion: An area definition approved by the Board of Directors and identified in the Business Practice Manuals, that is wholly contained within the WRAP Region, which is separated from one or more other Subregions by transmission constraints on capacity imports or on capacity exports that result, or are expected to result, in differing FSPRM determinations for that Subregion relative to such other Subregion.

Summer Season: A period of time that commences on June 1 of a Year and terminates on September 15 of the same Year.

System Sale: A bilateral agreement that conveys generating capacity from a group of generating resources from one party to another.

Transition Period: The Binding Seasons within the time period from June 1, 2025, through March 15, *2029*, plus the time period required to implement the requirements and procedures of Part II of this Tariff applicable to such Binding Seasons.

Transmission Deficiency: A shortfall in a Participant's demonstration of secured WRAP Qualifying Transmission, after accounting for any approved transmission exceptions, relative to that Participant's FS Transmission Requirement, as further defined in Part II of this Tariff.

Unforced Capacity: The percentage of Installed Capacity available after a unit's forced outage rate is taken into account.

Variable Energy Resource ("VER"): An electric generation resource powered by a renewable energy source that cannot be stored by the facility owner or operator and that has variability that is beyond the control of the facility owner or operator, including but not limited to a solar or wind resource.

VER Zone: A geographic area delineated in accordance with Section 16.2.5.2 of this Tariff for a given type of VER, where each VER of that type located in such area is anticipated to be comparably affected by meteorological or other expected conditions in such area to a degree that warrants distinct calculation of ELCC allocations for such VERs of that type in such area.

Voluntary Holdback: Capacity that is offered to the Operations Program by a Participant with excess supply that is not obligated to the WRAP through a positive Sharing Calculation result, some or all of which can used as part of the offering Participant's Holdback Requirement. For a Participant in a Subregion without a Central Hub, Voluntary Holdback for an hour must additionally include a total quantity for all identified points from Section 19.4 at which it can deliver that is no less than the amount of the Voluntary Holdback capacity for such hour.

Western Electricity Coordinating Council ("WECC"): A non-profit corporation that has been approved by FERC as the regional entity for the western interconnection and that also has NERC delegated authority to create, monitor, and enforce reliability standards.

Western Resource Adequacy Program Agreement ("WRAPA"): The participation agreement for the Western Resource Adequacy Program, as set forth as Attachment A to this Tariff, or as set forth for an individual Participant in a non-conforming version of such participation agreement accepted by FERC.

Western Resource Adequacy Program ("WRAP"): The Western Resource Adequacy Program, as established under this Tariff.

Western Power Pool ("WPP"): Northwest Power Pool, d/b/a Western Power Pool, which serves as Program Administrator for the WRAP under this Tariff and holds exclusive rights under section 205 of the Federal Power Act to file amendments to this Tariff.

Winter Season: A period of time that commences on November 1 of a Year and terminates on March 15 of the immediately following Year.

WRAP Cost Assignment Matrix: The matrix set forth in Schedule 1 of this Tariff to identify which WRAP costs are assessed to the Base Charge and the Load Charge components of the WRAP Administration Charge.

WRAP Qualifying Transmission: Transmission service that is (i) NERC Priority 6 or NERC Priority 7 point-to-point transmission service, (ii) network integration transmission service, or (iii) any firm transmission product that constitutes the highest priority transmission service offered by a transmission service provider, is reserved in advance, cannot be curtailed for higher priority

transmission service, and is subject to curtailment only under reliability conditions necessary to maintain transmission system operations.

WRAP Region: The area comprising, collectively, (i) the duly recognized and established load service areas of all loads in the United States that all Participants are responsible for serving, (ii) the duly recognized and established load service areas of all loads in the United States that all load serving entities, on whose behalf a Participant acts in accordance with this Tariff, are responsible for serving, and (iii) the applicable location(s) on the United States side of the United States international border that form the basis for an International Power Marketing Entity's participation under the WRAP, in all cases excluding, for any Binding Season, any loads permitted by this Tariff to be excluded from Participants' Forward Showing Submittal for such Binding Season.

Year: A calendar year.

2. Role of Western Power Pool

2.1 WPP, acting under the direction of its Board of Directors, shall administer the WRAP as Program Administrator. Except as specified in Section 3 of this Tariff, WPP, as authorized by its Board of Directors, shall have the sole authority to submit to FERC amendments to the rates, terms, and conditions set forth in this Tariff under section 205 of the Federal Power Act, 16 U.S.C. § 824d. Nothing contained herein shall be construed as affecting in any way the right of any Participant or any other entity to apply to FERC for amendments to the rates, terms, and conditions contained herein under section 206 of the Federal Power Act, 16 U.S.C. § 824e, or any other applicable provision of that Act.

2.1.1 WPP president and staff shall support the Board of Directors in overseeing all aspects of the WRAP, including oversight and management of the Program Operator(s) in accordance with any Program Operator agreement(s) entered into by WPP under Section 2.2 of this Tariff.

2.1.2 WPP and its staff shall provide all legal, regulatory, and accounting support for the WRAP, including support for making filings with FERC as authorized by the Board of Directors.

2.1.3 WPP staff shall provide all logistical support necessary to facilitate implementation of the WRAP and specifically all logistical needs of the Board of Directors and reasonable logistical assistance to facilitate meetings and activities of the RAPC, PRC, and all subordinate organizational groups.

2.2 As Program Administrator, WPP shall undertake all actions as necessary to implement and administer the WRAP, including but not limited to engaging one or more Program Operator(s) to perform technical operations of the WRAP including both the Forward Showing Program and Operations Program. Except as otherwise provided herein, WPP may contract for certain activities required by this Tariff to be provided by one or more Program Operator(s) subject to oversight by the Board of Directors, provided, however, that the Program Operator shall operate solely as a contractor under the oversight of WPP, and WPP shall remain the sole point of compliance with this Tariff. WPP shall have the sole authority to enter into contracts for such engagements and is responsible for providing support and compensation for such Program Operator(s) pursuant to any contract(s).

2.2.1 WPP will contract with Program Operator(s) to assist WPP with providing reasonable technical support and expertise to all WRAP organizational groups as governed by the Program Operator's contract with WPP.

3. Role of the Board of Directors and Limitations on Board Authority

3.1 Authority: Ultimate authority over all aspects of the WRAP as established under this Tariff shall be vested in the independent Board of Directors. Each member of the Board of Directors shall at all times exhibit financial independence from all Participants and classes of Participants, as further provided in the WPP Bylaws and policies. As set forth in Section 2.1 of this Tariff, the Board of Directors shall have the exclusive authority to approve and direct WPP to file amendments to this Tariff with FERC under section 205 of the Federal Power Act, 16 U.S.C. § 824d, subject to the limitations and prohibitions imposed under Section 3.4 of this Tariff. The Board of Directors shall also have the exclusive authority to approve the Business Practice Manuals and any amendments to the Business Practice Manuals, subject to the terms, conditions, and limitations imposed under this Tariff.

3.2 The Board of Directors generally shall meet in open session for all matters related to the WRAP; however, the Board of Directors may meet in closed session as the chair deems necessary to safeguard the confidentiality of sensitive information, including but not limited to discussing matters related to personnel, litigation, or proprietary, confidential, or security sensitive information. The Board of Directors shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session. During open session, the chair of the Board of Directors will reasonably accommodate stakeholder requests to address the Board within the discretion of the chair.

3.3 The Board of Directors shall only consider amendments to this Tariff or the Business Practice Manuals after such amendments are first acted upon by the RAPC, subject to the following additional conditions:

3.3.1 In the event that the RAPC has voted to reject or has not voted to support a proposed amendment to this Tariff or the Business Practice Manuals, any stakeholder may appeal such decision to the Board of Directors, and the Board of Directors shall consider the appeal.

3.3.2 In the event that the RAPC has voted to reject or has not voted to support a proposed amendment to this Tariff or the Business Practice Manuals and a stakeholder has not appealed such decision, the Board of Directors may, on its own motion or motion of any member of the Board of Directors, consider the proposed amendment.

3.3.3 In the event that the COSR as a body opposes or appeals a RAPC decision to the Board of Directors regarding an amendment to this Tariff or the Business Practice Manuals, the process set forth in Section 4.3.3 of this Tariff shall apply prior to the Board of Directors' consideration of the RAPC decision.

3.3.4 In the event that the Board of Directors wishes to initiate an amendment to this Tariff or the Business Practice Manuals that has not undergone PRC

and RAPC review, the Board of Directors shall first submit such proposed amendment to the PRC for review under the processes set forth in Sections 4.1 and 4.2 of this Tariff.

3.3.5 Expedited Review Process: In the event that the RAPC determines that an expedited review process is necessitated by an exigent circumstance as set forth in Section 4.1.3.1.1 of this Tariff, the Board of Directors shall review the RAPC's recommended Tariff or Business Practice Manual amendment expeditiously and invite comment from the PRC, COSR, and stakeholders concurrently with its consideration of the RAPC proposal.

3.4 WPP is specifically prohibited from amending this Tariff to:

3.4.1 Alter, usurp, control, or otherwise materially modify the Participants' existing functional control and responsibility over their generation and transmission assets, including but not limited to planning and operation of such assets, Open Access Transmission Tariff administration, interfering with Balancing Authority duties and responsibilities, or imposing a must-offer requirement on any specific generation resources.

3.4.2 Administer Open Access Transmission Tariff service, engage in Balancing Authority operations, impose transmission planning requirements, or assume any transmission planning responsibilities with regard to any of the Participant's transmission assets.

3.4.3 Form any type of organized market, including but not limited to a capacity market, a regional transmission organization, a real-time market, or any other type of FERC-approved regional construct, unless such action is also approved by the RAPC under its voting procedures set forth in Section 4.1.6 of this Tariff.

3.4.4 Impose any requirements on Participants beyond the assessment of financial charges as specified in this Tariff or suspension or termination of participation for failure to meet any WRAP requirements.

3.4.5 Amend in any way this Section 3 of this Tariff without the approval of the RAPC under its voting procedures set forth in Section 4.1.6 of this Tariff.

3.4.6 Amend the RAPC voting thresholds set forth in Section 4.1.6 of this Tariff.

3.5 Subject to the limitations and prohibitions imposed under Section 3.4 of this Tariff, if the Board of Directors votes to file at FERC to expand the WRAP to include market optimization or transmission planning services, WPP will initiate a formal process with COSR and other stakeholders to conduct a full review of governance structures and procedures, including the role of states. If COSR does not support any revised governance structure that emerges from such WPP review process, the WPP will file, along with any WPP governance proposal to FERC, an alternative

governance structure on behalf of the COSR so long as such COSR alternative governance structure is supported by 75% of the COSR.

4. Organizational Groups for the WRAP

4.1 Resource Adequacy Participants Committee

4.1.1 Authority and Purpose: The RAPC shall be the highest level of authority for representation by Participants in the WRAP governance structure and shall represent the interests of Participants directly to the Board of Directors.

4.1.2 Composition: The RAPC shall be composed of one representative from each Participant. Such representative shall be a senior management official with binding decision-making authority on behalf of the Participant, or a designated representative of a Participant's senior management official. A designated representative shall be required to have binding decision-making authority on behalf of the Participant and shall have all voting rights delegated from the senior management official. Participant shall appoint a designated representative no less than one Business Day in advance of a meeting for that designated representative to be eligible to vote during the meeting.

4.1.3 Functions: The RAPC:

4.1.3.1 Shall consider and recommend that the Board of Directors approve or reject all proposed amendments to this Tariff or Business Practice Manuals prior to the Board of Directors considering such amendments, including any amendments reviewed and referred by the PRC.

4.1.3.1.1 Exigent Circumstances: When the RAPC determines that an amendment to the Tariff or the Business Practice Manuals requires expedited Board of Directors review due to exigent circumstances, it may propose such amendment directly to the Board of Directors without awaiting review by other committees and stakeholders. Exigent circumstances include: (i) a FERC-mandated amendment to this Tariff or the Business Practice Manuals; (ii) an amendment to this Tariff or the Business Practice Manuals to address an immediate reliability impact; or (iii) an amendment to this Tariff or the Business Practice Manuals that the RAPC has determined has significant impacts to utility service.

4.1.3.2 Shall consider and vote to recommend that the Board of Directors approve or reject any proposed amendments to this Tariff or the Business Practice Manuals.

4.1.3.3 May provide input to the Board of Directors on any proposed WPP rules that apply both to the WRAP and other WPP services.

4.1.3.4 May evaluate and provide input to the Board of Directors on the WRAP administration budget and budget allocation to Participants, including amendments to the WRAP Administration Charge as calculated in accordance with Schedule 1 of this Tariff.

4.1.3.5 Shall form and organize all of the organizational groups under its responsibilities.

4.1.3.6 May take other actions reasonably related to its role as the senior-level Participant advisory committee to the Board of Directors regarding WRAP matters.

4.1.4 Leadership: The RAPC shall select from among its members a chair and vice chair.

4.1.5 Meetings:

4.1.5.1 Meetings of the RAPC will generally be open to all stakeholders. WPP shall provide advanced written notice of the date, time, place, and purpose of each RAPC meeting. All RAPC decisional items shall be placed on the open meeting agenda and allotted adequate time for public comment and deliberation.

4.1.5.1.1 The RAPC may meet in closed session as the RAPC chair deems necessary; provided, however, that the RAPC shall allow the designated COSR support staff member as specified in Section 4.3 of this Tariff to attend any closed meeting. The RAPC shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session.

4.1.5.2 The quorum for a meeting of the RAPC or any organizational group organized under it shall be one-half of the representatives thereof, but not less than three representatives, provided that a lesser number may serve as a quorum for the sole purpose of voting to adjourn the meeting to a later time.

4.1.6 Voting:

4.1.6.1 Each RAPC representative shall have one vote.

4.1.6.2 Voting in the RAPC shall utilize a “House and Senate” model.

4.1.6.2.1 Each Participant’s “House” vote shall represent the proportion of the Participant’s Median Monthly P50 Peak Load, as described in Section 2 of Schedule 1 of this Tariff, compared to the sum of all Participants’ Median Monthly P50 Peak Loads. A Participant may choose to divide its

House vote but is responsible for announcing such at the time of voting.

4.1.6.2.2 Each Participant shall receive a single, non-weighted "Senate" vote.

4.1.6.2.3 For an action to be approved by the RAPC, it must pass both "House" and "Senate" votes as follows. For purposes of voting, the percentages identified below specify the percentage threshold of the entire RAPC (whether in attendance or not) that is needed for passage of an action.

4.1.6.2.3.1 Actions to amend any of the limitations on Board authority set forth in Section 3.4 of this Tariff require an 80% affirmative approval by both the House and the Senate vote tallies to be approved.

4.1.6.2.3.2 Actions brought before the RAPC that have been approved by the PRC require a 67% affirmative approval by both the House and Senate vote tallies to be approved.

4.1.6.2.3.3 All other actions not specified in this Section 4.1.6.2.3 require a 75% affirmative approval by both the House and Senate vote tallies to be approved.

4.1.6.2.4 If at any time a single Participant's P50 load for voting purposes would result in that Participant possessing a veto over any votes taken under Section 4.1.5.2.3, such Participant's House vote shall be capped at 1% below the amount that would convey such a veto, such that no single Participant will possess a veto over any action taken under Section 4.1.6.2.3.

4.2 Program Review Committee

4.2.1 Authority and Purpose: The PRC is a sector-representative group comprised in accordance with Section 4.2.2 of this Tariff. The PRC is responsible for receiving, considering, and proposing amendments to this Tariff and the Business Practice Manuals. The PRC shall serve as a clearinghouse of all recommended amendments to this Tariff or the Business Practice Manuals, except for those designated by the RAPC as involving an exigent circumstance under Section 4.1.3.1.1 of this Tariff, amendments to Schedule 1 of this Tariff and cost allocation for the WRAP, and amendments to the WRAPA set forth as Attachment A of this Tariff. The PRC shall serve in an advisory capacity to the RAPC and, when applicable, the Board of Directors.

4.2.1.1 The PRC shall present all proposals received to the RAPC, along with the PRC's recommendation and summaries of all comments and feedback received.

4.2.1.2 The PRC's decisions are advisory-only and are not binding on the RAPC, the Board of Directors, or WPP.

4.2.2 Composition: The PRC shall be composed of up to twenty representatives from the following ten sectors: four representatives of RAPC Participant investor-owned utilities; four representatives of RAPC Participant publicly-owned (consumer or municipal) utilities; two representatives of RAPC Participant retail competition load serving entities; two representatives from RAPC Participant Federal Power Marketing Administrations; two representatives of independent power producers; two representatives of public interest organizations; one representative of retail consumer advocacy groups; one representative of industrial customer advocacy groups; one representative of load serving entities with loads in the WRAP that are represented by other LREs and are not otherwise eligible for any other sector; a representative from the COSR. Expectations for sectors to consider regional, operational, geographic, demographic, and other forms of diversity in selecting their sector representatives are set forth in more detail in the PRC charter, which shall be posted and maintained on the WRAP website or other appropriate public location.

4.2.3 The PRC shall establish a process and criteria for receiving and reviewing proposed amendments to this Tariff and the Business Practice Manuals. Such review will include procedures for stakeholder comment.

4.2.4 Meetings: The PRC shall meet primarily in open session; provided that the PRC may schedule closed meetings if it determines that doing so would be beneficial to safeguard the confidentiality of sensitive information. The PRC shall not take action on any proposed amendment to this Tariff or the Business Practice Manuals in closed session.

4.2.5 Voting: The PRC shall endeavor to operate by consensus. When voting is necessary, voting shall consist of one sector one vote, with an affirmative vote of six sectors (as specified in Section 4.2.2 of this Tariff) constituting approval of an action before the PRC.

4.2.5.1 For sectors with four seats, three sector representatives must agree with the action for the sector to be considered an affirmative vote for the action.

4.2.5.2 For sectors with two seats, both sector representatives must agree with the action for the sector to be considered an affirmative vote for the action.

4.2.6 Participants and other entities shall participate in no more than one PRC sector. If a Participant or other entity is eligible to participate in more than one sector, such Participant or other entity shall declare in which sector it will participate.

4.3 Committee of State Representatives

4.3.1. Composition: The COSR is a committee composed of one representative from each state or provincial jurisdiction (either public utility commission or state/provincial energy office) that regulates at least one Participant.

4.3.2 Leadership: The COSR shall determine its leadership, including a chair and vice chair. The chair or vice chair will be requested to attend all open sessions of the RAPC to provide input and advice.

4.3.2.1 The COSR shall designate a COSR support staff member to attend and audit closed meetings of the RAPC under a non-disclosure agreement.

4.3.3 Authority:

4.3.3.1 If the COSR determines that a proposal approved by the RAPC is substantially different from the proposal submitted to the RAPC by the PRC, the COSR may engage in additional public review and comment before the RAPC decision is presented to the Board of Directors; provided that this additional public review and comment does not unreasonably delay presentation to the Board of Directors.

4.3.3.2 If the COSR as a body opposes or appeals a RAPC decision to the Board of Directors, the Board of Directors will not consider the RAPC's decision until the RAPC engages with the COSR to discuss, in at least two public discussions, to attempt to reach a mutually agreeable solution.

4.3.3.2.1 If the appeal relates to an amendment that the RAPC designated as involving an exigent circumstance under Section 4.1.3.1.1 of this Tariff, COSR can require no more than one public discussion, provided that such additional discussion does not unreasonably hinder the timeline for Board of Directors consideration of the proposed amendment.

4.3.4 Voting, Meetings, and Quorum: The COSR may develop its own rules governing voting, meetings, and quorum for action. COSR shall be responsible for its own costs.

5. Independent Evaluator

5.1 WPP shall engage an Independent Evaluator to provide an independent assessment of the performance of the WRAP and any potential beneficial design modifications. The Independent Evaluator shall report directly to the Board of Directors.

5.2 The Independent Evaluator shall conduct an annual review of the WRAP, including but not limited to analyzing prior year program performance, accounting and settlement, and program design.

5.3 The Independent Evaluator shall prepare an annual report of its findings, and any recommended modifications to WRAP design, and present its findings to the WRAP committees and the Board of Directors, subject to any necessary confidentiality considerations. Any data included in the Independent Evaluator's report shall be reported on an aggregated basis as applicable to preserve confidentiality. The Independent Evaluator's annual reports shall be available to the public, except to the extent they contain information designated as confidential under this Tariff, or information designated as confidential by the Independent Evaluator.

5.4 The Independent Evaluator shall not:

5.4.1 Evaluate individual Participants.

5.4.2 Possess any decision-making authority regarding the WRAP or design modifications.

5.4.3 Evaluate WPP's day-to-day operations of the WRAP (except as part of review of prior year program performance).

6. WPP Invoicing and Settlement

6.1 WPP shall be responsible for issuing invoices to, and collecting from, Participants all charges under Schedule 1 of this Tariff for recovery of all WPP costs associated with administering the WRAP.

6.2 WPP shall be responsible for invoicing, collecting, and (as applicable) distributing revenues from Deficiency Charges under Part II of this Tariff and Delivery Failure Charges under Part III of this Tariff.

6.3 Participants are not required to provide credit assurances to WPP to cover charges under Schedule 1 of this Tariff, Deficiency Charges under Part II of this Tariff, or Delivery Failure Charge under Part III of this Tariff.

6.4 Participants shall make full payment of all invoices rendered by WPP for which payment is required to WPP within thirty calendar days following the receipt of the WPP invoice, notwithstanding any disputed amount, but any such payment shall not be deemed a waiver of any right with respect to such dispute. Any Participant that fails to make full and timely payment to WPP of amounts owed upon expiration of the cure period specified in Section 6.4.1 of this Tariff will be in default.

6.4.1 If a Participant fails to make timely payment as required by Section 6.4, WPP shall so notify such Participant. The notified Participant may remedy such asserted breach by paying all amounts due, along with interest on such amounts calculated in accordance with the methodology specified for interest on refunds in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii); provided, however, that any such payment may be subject to a reservation of rights, if any, to refer such matter to dispute resolution procedures under Section 9 of this Tariff. If the Participant has not remedied such asserted breach by 5:00 p.m. Pacific Prevailing Time on the second Business Day following WPP's issuance of a written notice of breach, then the Participant shall be in default.

6.4.2 In the event of a Participant's default under Section 6.4.1 of this Tariff, WPP in its discretion may pursue collection through such actions, legal or otherwise, as it reasonably deems appropriate, including but not limited to the prosecution of legal actions and assertion of claims in the state and federal courts as well as under the United States Bankruptcy Code. After deducting any costs associated with pursuing such claims, any amounts recovered by WPP with respect to defaults for which there was a Default Allocation Assessment shall be distributed to the Participants who have paid their Default Allocation Assessment in proportion to the Default Allocation Assessment paid by each Participant, as calculated pursuant to Section 6.4.3 of this Tariff. In addition to any amounts in default, the defaulting Participant shall be liable to WPP for all reasonable costs incurred in enforcing the defaulting Participant's obligations.

6.4.3 In the event of a Participant's default with respect to an invoice issued by WPP for charges under Schedule 1 of this Tariff, in order to ensure that WPP remains revenue neutral, the Board of Directors may assess against, and collect from, the Participants not in default a Default Allocation Assessment to recover the costs associated with the default. Such assessment shall in no way relieve the defaulting Participant of its obligations.

6.4.3.1 The Default Allocation Assessment shall be equal to:

(20% × (1/N) + (80% × (Participant Median Monthly P50 Peak Load / Sum Participants Median Monthly P50 Peak Load)

where:

N = the total number of Participants, calculated as of the date WPP declares a Participant in default.

Participant Median Monthly P50 Peak Load = for each Participant included in factor "N" above, the Participant's Median Monthly P50 Peak Load as determined in Section 2 of Schedule 1 of this Tariff, recalculated on the day the WPP declares a Participant in default.

All Participants Median Monthly P50 Peak Load = the sum of the Participant Median Monthly P50 Peak Load values for all Participants included in factor "N" above.

7. Credit Requirements and Settlement for Holdback and Delivered Energy

7.1 Credit and Settlement for Holdback and Delivered Energy: Settlement of holdback and delivered energy shall be completed bilaterally between Participants, subject to the following:

7.1.1 Neither WPP nor the Program Operator(s) shall take title to energy or be party to any settlement of holdback or delivered energy.

7.1.2 Participants shall establish credit with each other through one of the following mechanisms. Neither WPP nor the Program Operator(s) shall be involved in the calculation of credit or credit limits.

7.1.2.1 Establish credit directly with each Participant: Participants may establish credit directly with other Participants from whom they may receive delivered energy.

7.1.2.1.1 Such credit should be established in advance of the applicable season.

7.1.2.1.2 The amount of such credit and any credit limit shall be at the discretion of each Participant.

7.1.2.2 WPP shall conduct a competitive solicitation process to identify a third-party service provider to serve as central credit organization and clearing house for credit and settlement. Once such central credit organization is selected, Participants that have not already directly established credit with all other Participants under Section 7.2.2.1 of this Tariff shall establish credit with the central credit organization.

7.1.2.2.1 WPP will provide the central credit organization any Operations Program related information necessary for them to perform their obligations as set forth in the agreement between WPP and the central credit organization.

7.1.2.2.2 All costs associated with the central credit organization service shall be borne by Participants as established in the agreement between WPP and the central credit organization and either billed directly on a transactional basis or else recovered under Schedule 1 of this Tariff.

7.1.2.3 The obligation to arrange sufficient credit shall at all times be on the deficient Participant (i.e., a Participant with a negative sharing calculation in the Operations Program). If a deficient Participant has not made good faith and commercially reasonable efforts to

obtain sufficient credit with a delivering Participant, such delivering Participant shall so notify WPP and shall be excused from any obligation to deliver to such deficient Participant. Nothing in this Section 7 requires a Participant to violate its written risk or credit policy.

7.2 All settlement pricing calculated under this Tariff shall be final and no adjustments to settlement prices shall be allowed after the later of: (1) ninety Days after such settlement prices are posted by WPP; or (2) the final outcome of any dispute resolution process that is initiated by a Participant to dispute a settlement price pursuant to the Dispute Resolution Procedures set forth in Section 9 of this Tariff.

7.2.1 A Participant may invoke the Dispute Resolution Procedures set forth in Section 9 of this Tariff to address calculation errors in any settlement price, but may not invoke the Dispute Resolution Procedures to dispute data sources or to request the use of alternative data sources.

8. Force Majeure, Limitation of Liability, and Indemnification

8.1 Force Majeure: An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, pandemic, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation, or restriction imposed by governmental military or lawfully established civilian authorities, or any other cause beyond a party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither WPP nor the Participant will be considered in default as to any obligation under this Tariff if prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Tariff is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Tariff. Notwithstanding the foregoing, the physical inability to perform because of an event of Force Majeure shall not relieve the party of any financial obligations incurred under this Tariff or as a result of the Force Majeure event, unless, and to the extent, such financial obligation is waived or excused under provisions of Part II or Part III of this Tariff expressly providing for such waiver or excuse.

8.2 Limitation of Liability:

8.2.1 Neither WPP nor the Program Operator shall be liable, whether based on contract, indemnification, warranty, tort, strict liability or otherwise, to any Participant, other entity owning a Qualifying Resource, third party, or other person for any damages whatsoever, including, without limitation, direct, incidental, consequential, punitive, special, exemplary, or indirect damages arising or resulting from any act or omission in any way associated with service provided under this Tariff or any agreement hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, except to the extent that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of WPP or Program Operator, in which case WPP shall only be liable for direct damages.

8.2.2 Neither WPP nor the Program Operator shall be liable for damages arising out of services provided under this Tariff or any agreement entered into hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency, or imperfection of service, occurring as a result of conditions or circumstances beyond the control of WPP, or resulting from electric system design common to the domestic electric utility industry or electric system operation practices or conditions common to the domestic electric utility industry.

8.2.3 To the extent that a Participant or other person has a claim against WPP, the amount of any judgment or arbitration award on such claim entered in favor of such entity shall be limited to the value of WPP's assets. No party may seek to enforce any claims under this Tariff or any Agreements entered into

hereunder against the directors, managers, members, shareholders, officers, employees, or agents of WPP, or against the Program Operator, who shall have no personal liability for obligations of WPP by reason of their status as directors, managers, members, shareholders, officers, employees, or agents of WPP or by virtue of their status as Program Operator.

8.2.4 To the extent that WPP is required to pay any money damages or compensation or pay amounts due to its indemnification of any other party as it relates to any services provided, acts, or omissions under this Tariff or any agreement entered into hereunder, WPP shall be allowed to recover any such amounts under Schedule 1 of this Tariff as part of the WRAP Administration Charge. Notwithstanding the foregoing, WPP shall be prohibited from recovering under this Tariff any costs associated with any damages, compensation, or indemnification costs that arise: (i) with regard to any acts or omissions that occur outside of this Tariff and any agreements entered into hereunder, or (ii) if a court of competent jurisdiction determines that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of WPP or the Program Operator.

8.2.5 A Participant's liability to another Participant under this Tariff for failure to comply with obligations under this Tariff shall be limited to any charges or payments calculated pursuant to this Tariff; provided, however, that nothing in this Section 8.2.5 shall limit or is intended to foreclose any Participant's liability that may arise under any bilateral agreements between Participants.

8.3 Indemnification: The Participants shall at all times indemnify, defend, and save WPP (and any of its Program Operator(s), agents, consultants, directors, officers, or employees) harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties arising out of or resulting from the performance of activities under this Tariff by WPP, any Program Operator(s), or agents, consultants, directors, officers, or employees of WPP, except in cases of gross negligence or intentional wrongdoing by WPP or the Program Operator. WPP shall credit any proceeds from insurance or otherwise recovered from third parties to Participants who have paid to indemnify WPP under this Section 8.3.

8.4 Actions upon Unavailability of Program Operator(s): In the event that the Program Operator(s) become(s) unwilling, unable, or otherwise unavailable to perform contractual duties necessary for WPP to discharge its obligations under this Tariff and WPP's agreement(s) with the Program Operator(s), WPP shall engage with Participants as soon as practicable to determine what actions to take, including but not limited to filing with FERC a request to waive one or more provisions of this Tariff up to and including immediate suspension of all rights and obligations under this Tariff until a replacement Program Operator(s) can assume all relevant Program Operator functions.

9. Dispute Resolution Procedures

9.1 Internal Dispute Resolution Procedures: Subject to the limitations set forth in Section 7.2.1 of this Tariff, any dispute between a Participant and WPP under the Tariff (excluding amendments to the Tariff or to any agreement entered into under the Tariff, which shall be presented directly to the FERC for resolution) shall be referred to a designated senior representative of WPP and a senior representative of the Participant for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty days (or such other period as the parties may agree upon) by mutual agreement, such dispute shall then be referred to the chief executive officer or comparable executive of each party for resolution. In the event that the executives are unable to resolve the dispute within thirty days (or such other period as the parties may agree upon), such dispute may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.

9.2 External Arbitration Procedures: Any arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the parties to the dispute. If the parties fail to agree upon a single arbitrator within ten days of the referral of the dispute to arbitration, each party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association and any applicable FERC regulations.

9.3 Arbitration Decisions: Unless otherwise agreed by the parties, the arbitrator(s) shall render a decision within ninety days of appointment and shall notify the parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and/or any agreement entered into under the Tariff and shall have no power to modify or change any of the above in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act and/or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with the FERC if it affects jurisdictional rates, terms and conditions of service or facilities.

9.4 Costs: Each party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (i) the cost of the arbitrator chosen by the party to sit on the three-member panel and one half of the

cost of the third arbitrator chosen; or (ii) one half the cost of the single arbitrator jointly chosen by the Parties.

9.5 Rights Under the Federal Power Act: Nothing in this section shall restrict the rights of any person to file a complaint with the FERC under relevant provisions of the Federal Power Act or of WPP to file amendments to this Tariff under the relevant provisions of the Federal Power Act.

10. Treatment of Confidential and Commercially Sensitive Information of Participants

10.1 Terms: For purposes of this Section 10 only, the term "WPP" shall also include, as applicable, any directors, officers, employees, agents, or consultants of WPP, the Independent Evaluator established under Section 5 of this Tariff, and any central credit organization established under Section 7 of this Tariff. WPP shall be bound by the rights, obligations, and conditions set forth in this Section 10. For purposes of this Section 10, the term "Disclosing Entity" shall include any Participant that discloses information to WPP that the Disclosing Entity deems and identifies as confidential or commercially sensitive. WPP's collection and handling of non-Participant data shall be governed by separate non-disclosure agreements with such non-Participants.

10.2 Treatment of Confidential or Commercially Sensitive Information: WPP shall identify in the Business Practice Manuals categories of Participant-specific data and information received from Participants that shall be treated as confidential or commercially-sensitive, which WPP shall not disclose publicly or to any other Participant or other entity except as provided for in this Section 10. In addition, WPP shall maintain the confidentiality of all of the documents, data, and information provided to it by any Participant that such disclosing Participant deems and specifically identifies as confidential or commercially sensitive. Notwithstanding the foregoing, WPP need not keep confidential: (i) information that is publicly available or otherwise in the public domain; or (ii) information that is required to be disclosed under this Tariff or any applicable legal or regulatory requirement (subject to the procedures set forth in Section 10.4 of this Tariff).

10.2.1 WPP staff may develop and release publicly composite or aggregated data based upon Participant confidential or commercially sensitive information, provided that such composite or aggregated data cannot be used to identify or attribute a disclosing Participant's confidential or commercially sensitive data. Such release of composite or aggregated data shall be governed by the following process.

10.2.1.1 Prior to the initial release of such composite or aggregated data, WPP staff shall present the form and format of such data to each Participant whose confidential information or data will be used to create the composite or aggregated data. If any such Participant objects to the form and format as revealing or allowing for attribution of confidential or commercially sensitive Participant-specific data, WPP staff shall determine whether to modify the form and format or to retain the proposed form and format for release. If WPP staff elects to retain the proposed form and format, the Participant shall have the right to appeal to the RAPC and WPP staff shall be prohibited from releasing the composite or aggregated data in the proposed form and format until the Participant's appeal rights as specified in this Section 10.2.1

are exhausted.

10.2.1.2 If a Participant appeals a WPP staff decision regarding the form and format of composite or aggregated data to the RAPC, the RAPC shall consider whether the form and format reveals or allows for attribution of confidential or commercially sensitive Participant-specific data. If the RAPC determines that the proposed form and format is sufficient to protect against the release of confidential or commercially sensitive Participant-specific data, WPP staff is authorized to release the composite or aggregated data in the proposed form and format unless the Participant timely appeals the RAPC decision to the Board of Directors.

10.2.1.3 If a Participant appeals a RAPC decision regarding the form and format of composite or aggregated data to the Board of Directors, the Board of Directors shall consider whether the form and format is sufficient to protect against the release or attribution of confidential or commercially sensitive Participant-specific data. If the Board of Directors determines that the proposed form and format is sufficient to protect against the release of confidential or commercially sensitive Participant-specific data, WPP staff is authorized to release the composite or aggregated data in the proposed form and format.

10.2.1.4 Once a proposed form and format of composite or aggregated data is approved by the WPP staff and is not appealed or appeals are unsuccessful, such form and format may be used for all future disclosures of composite or aggregate information and no Participant may dispute such release. If WPP staff proposes to alter the form and format, including but not limited to changing the granularity of data, WPP staff shall be required to follow the process set forth in this Section 10.2.1 and Participants shall have the right to appeal such changes in form and format as set forth herein. Notwithstanding the foregoing, if the composition of Participants in the WRAP changes in such a way that the form and format of composite or aggregated data is no longer sufficient to protect against disclosure or attribution of confidential or commercially sensitive Participant-specific data, an aggrieved Participant shall have a one-time right to raise the issue promptly with WPP Staff for presentation to and review by the Board of Directors, and the Board of Directors in its sole discretion shall decide whether the change in composition results in the form and format of the composite or aggregated data becoming insufficient to

protect against the release or attribution of confidential or commercially sensitive Participant-specific data; provided, however, that if an aggrieved Participant does not raise its concerns with the Board of Directors promptly following the change in composition, such Participant shall have waived its right to contest the release of such composite or aggregated data.

10.2.2 Notwithstanding anything to the contrary in this Section 10.2, if the RAPC unanimously votes to disclose publicly any particular category of Participant-specific data, such data shall no longer be deemed confidential regardless of any such designation by a disclosing Participant, and this election shall be binding on any current and future Participants until such time as the RAPC votes unanimously to prohibit public release of such category of data. A list of the categories of Participant-specific data that the RAPC unanimously votes to make public shall be included in the Business Practice Manuals.

10.3 Access to Confidential or Commercially Sensitive Information: Except as otherwise provided in Section 10.2 of this Tariff, no Participant, entity owning a Qualifying Resource, or any third party shall have the right hereunder to receive from WPP or to otherwise obtain access to any documents, data or other information that has been identified as or deemed to be confidential or commercially sensitive under Section 10.2 of this Tariff by a disclosing Participant. The provisions of this Section 10.3 do not apply to WPP (including any Independent Evaluator, member of the Board of Directors, or any WPP officer, employee, agent, or consultant that requires access to confidential or commercially sensitive information); provided that access to Participant-specific confidential or commercially sensitive information shall be solely for the purpose of performing the duties or functions under this Tariff or otherwise advising or assisting WPP. WPP shall develop internal policies and controls governing the handling and protection of confidential or commercially sensitive Participant-specific data by members of the Board of Directors, officers, employees, agents, consultants, or any Independent Evaluator.

10.4 Exceptions: Notwithstanding anything in this Section 10 to the contrary:

10.4.1 If WPP is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence pursuant to this Section 10, WPP may disclose such information; provided, however, that as soon as practicable after WPP learns of the disclosure requirement and prior to making such disclosure, WPP shall notify any affected disclosing Participant of the requirement and the terms thereof. Any such disclosing Participant may, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement and WPP shall cooperate with such disclosing Participant to take all reasonable available steps to oppose

or otherwise minimize the disclosure of the information permitted by applicable legal and regulatory requirements. WPP shall further cooperate with such disclosing Participant to the extent reasonably practicable to obtain proprietary or confidential treatment of confidential or commercially sensitive information by the person to whom such information is disclosed prior to any such compelled disclosure.

10.4.2 WPP may disclose confidential or commercially sensitive information, without notice to any affected disclosing Participant(s), in the event that FERC, during the course of an investigation or otherwise, requests information that is confidential or commercially sensitive. In providing the information to FERC, WPP shall take action, consistent with 18 C.F.R. §§ 1b.20 and/or 388.112, to request that the information be treated by FERC as confidential and non-public and, if appropriate, as Critical Energy Infrastructure Information and that the information be withheld from public disclosure. WPP shall provide the requested information to FERC within the time provided for in the request for information. WPP shall notify any affected disclosing Participant(s) within a reasonable time after WPP is notified by FERC that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive information has been received, at which time WPP and any affected disclosing Participant may respond before such information would be made public.

10.5 Notwithstanding any efforts undertaken pursuant to Section 10.4 to prevent or limit the release of a Participant's confidential or commercially sensitive information, in the event that FERC or a court of competent jurisdiction orders or otherwise permits the public release of a Participant's confidential or commercially sensitive information, the affected Participant shall have a one-time right to elect to terminate its participation in the WRAP under the expedited termination provisions set out in Section 11.2 of the WRAPA.

10.6 WPP shall handle any information identified or deemed to be Controlled Unclassified Information/Critical Energy Infrastructure Information in accordance with FERC's regulations set forth at 18 C.F.R. § 388.113 and any applicable FERC policies or other regulations, including but not limited to restricting access to such information on a password-protected portion of WPP's website or similar precautions.

10.7 Nothing in this Section 10 is intended to limit a Participant's ability to disclose or release publicly its own confidential or commercially sensitive information or data, or to limit a Participant's ability to authorize WPP's disclosure of such material to a specified recipient.

11. Timing

11.1 In the event that any deadline specified in this Tariff shall fall on a day that is not a Business Day, the deadline shall be extended to the next Business Day.

12. Application and Registration

12.1 Any entity wishing to participate in the WRAP must submit an application and registration in accordance with the Business Practices Manuals and must execute the WRAPA as set forth in Attachment A of this Tariff, or a non-conforming version of such participation agreement that is approved by FERC for an individual Participant. Such application and registration must be submitted in accordance with the timelines set forth in the Business Practices Manuals in advance of the next Binding Season.

12.2 Each Participant must register all of its resources and loads, regardless of whether such resources will be used to satisfy the WRAP requirements and regardless of whether certain loads will be subject to the requirements of the WRAP. Participants may modify their registration of resources and loads in accordance with the timing procedures set forth in the Business Practices Manuals.

12.3 In the event that more than one Participant attempts to register the same resource or load, the following procedure will be used to assign the resource or load to a Participant:

12.3.1 If a Participant attempts to register a load or resource that has already been registered by a different Participant, the resource or load will remain registered by the original Participant registering the resource or load until such time as both Participants mutually inform WPP that a change to the registration is required.

12.3.2 If two or more Participants attempt to register the same resource or load during the same registration window, WPP shall request that the Participants determine among themselves the appropriate registration of the resource or load before that resource or load is included in the WRAP.

PART II FORWARD SHOWING PROGRAM

13. Overview

13.1 In the Forward Showing Program, as set forth in this Part II of the Tariff, and as further detailed in the Business Practice Manuals, each Participant shall, in advance of each Binding Season, show as to such Binding Season: (i) the total capacity, referred to and defined herein as the FS Capacity Requirement, required by the provisions of this Tariff for such Binding Season for reliable service to the loads for which such Participant is responsible; (ii) the demonstration of capacity, referred to and defined herein as the Qualifying Capacity Contribution, or QCC, provided by the Qualifying Resources the Participant provides or procures to meet its FS Capacity Requirement; and (iii) a quantity of WRAP Qualifying Transmission, referred to and defined herein as the FS Transmission Requirement, needed for reliable delivery of the QCC of the Participant's Qualifying Resources from such resources to the loads for which the Participant is responsible.

13.2 As also set forth in this Part II of the Tariff, and as further detailed in the Business Practice Manuals: (i) WPP shall, in advance of each Binding Season, review the Forward Showing Submittals of each Participant for such Binding Season; (ii) WPP shall identify to the Participant any deficiencies in the Participant's Portfolio QCC (whether as to contracts or directly owned or controlled resources) relative to the FS Capacity Requirement, and any deficiencies in the identified WRAP Qualifying Transmission relative to the FS Transmission Requirement, within sixty days of the Forward Showing Submittal deadline; (iii) the Participant shall have an opportunity to cure such deficiencies, within sixty days of notification of deficiency; and (iv) if the Participant fails to cure all such deficiencies on or before the deadlines prescribed herein, the Participant shall be assessed a Forward Showing Deficiency Charge.

14. Forward Showing Program Process and Timeline

14.1 The Forward Showing Program has two Binding Seasons, defined as the Summer Season and the Winter Season. The Summer Season is the period beginning on June 1 of each Year and ending on September 15 of that same Year. The Winter Season is the period beginning on November 1 of each Year and ending on March 15 of the succeeding Year. This Tariff does not establish resource or showing obligations outside the periods defined by the Summer Season and Winter Season.

14.2 Each Participant shall submit its Forward Showing Submittals for each Month of each Binding Season, with all required supporting materials and information as detailed in the Business Practice Manuals, on or before the FS Deadline for the Binding Season. The FS Deadline for each Binding Season shall be seven months before the start of such Binding Season.

14.2.1 Forward Showing Submittal:

14.2.1.1 Absent the exception in Section 14.2.1.2, each Participant shall submit a separate Forward Showing Submittal for loads for which it is responsible if transmission constraints between areas where its loads are located, including, without limitation, when Participant is responsible for loads in more than one Subregion, prevent application, in the manner more fully described in the Business Practice Manuals, of Resource QCC or Net Contract QCC from one load area to the FS Capacity Requirement of another load area.

14.2.1.2 Notwithstanding Section 14.2.1.1, a Participant responsible for loads in multiple Subregions may submit for a given Month a single Forward Showing Submittal for such loads, and may employ for determination of its FS Capacity Requirement for such Month the lower of the FSPRM values determined for the Subregions where its loads are located, if the Participant demonstrates in such Forward Showing Submittal, in accordance with the procedures and requirements set forth in the Business Practice Manuals, WRAP Qualifying Transmission in a quantity, in addition to that required by the FS Transmission Requirement, equal to the difference in the FSPRM values multiplied by the Participant's P50 Peak Load Forecast for such Month, with a point of delivery in the Subregion with the higher FSPRM value and the point of receipt in the Subregion with the lower FSPRM value. Each such showing shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such WRAP Qualifying Transmission, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission.

14.2.2 Each Participant's Forward Showing Submittal shall include a Senior Official Attestation.

14.3 The FSPRM values used in the Forward Showing Submittals for a Binding Season shall be those values approved by the Board of Directors as the culmination of an Advance Assessment process. No later than twelve months before the FS Deadline for each Binding Season, WPP will determine and post the recommended FSPRM for each Subregion for each Month of such Binding Season. Participants shall provide their load, resource and other information reasonably required to perform the analyses and calculations required for the Advance Assessment, in accordance with the Advance Assessment information submission details and schedule specified in the Business Practice Manuals. No later than nine months before the FS Deadline for such Binding Season, the Board of Directors shall take its final action regarding approval of the FSPRM values for each Month of such Binding Season.

14.3.1 In connection with an Advance Assessment process, or otherwise in connection with consideration of a change to the Business Practice Manuals, the Board of Directors may determine that designation of Subregions would encourage the relief, in whole or part, of transmission constraints on the transfer of capacity within the WRAP Region (whether through development or commitment of transmission, of Qualifying Resources, or by other means) to the benefit of the WRAP Region and the advancement of the objectives of the WRAP. Each such Subregion shall be identified in the Business Practice Manuals.

14.3.2 Any Participant may choose to offer in the Advance Assessment process WRAP Qualifying Transmission owned or controlled by such Participant for delivery of capacity from one Subregion to another Subregion, for use by other Participants under the terms of Part III of this Tariff during any or all identified Months of the applicable Binding Season. Each such offer shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such transmission service rights, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission. No Participant is obligated to offer any such transmission service rights in the Advance Assessment process, but any offer so made and not withdrawn before the deadline during the Advance Assessment process specified in the Business Practice Manuals shall be considered a binding offer of the identified transmission service rights which may not be withdrawn before the end of the last Day of the Month for which such transmission service is offered. WPP shall take account of such offered transmission service rights, along with other transmission deliverability reasonably anticipated to be available for use by Participants for WRAP purposes during the applicable Binding Season in its determination of the recommended FSPRM values for each Month of the applicable Binding Season for the WRAP Region and for each affected Subregion.

14.4 No later than sixty Days after the FS Deadline for a Binding Season, WPP will (i) provide the values of the Participant's FS Capacity Requirement and FS Transmission Requirement for each Month of the Binding Season; (ii) affirm that the Portfolio QCC of such Participant for each Month of the Binding Season equals or exceeds the FS Capacity Requirement of such Month for such Participant or notify such Participants of any deficiencies in the Forward Showing Submittal that result in a failure to demonstrate satisfaction of the FS Capacity Requirement; and (iii) affirm that the Demonstrated FS Transmission plus approved Monthly Transmission Exceptions of such Participant for each Month of the Binding Season equals or exceeds the FS Transmission Requirement of such Month for such Participant or notify such Participants of any deficiencies in the Forward Showing Submittal that result in a failure to demonstrate satisfaction of the FS Transmission Requirement.

14.5 Within 120 Days after the FS Deadline, the Participant shall (i) submit revisions to its Forward Showing Submittal, including, without limitation, additions or revisions to the Participant's Resource QCC, Net Contract QCC, or Demonstrated FS Transmission; (ii) in order to fully cure all identified deficiencies and demonstrate that such Participant's Portfolio QCC for each Month of the Binding Season equals or exceeds its FS Capacity Requirement; and (iii) fully provide Demonstrated FS Transmission for each Month of the Binding Season that equals or exceeds its FS Transmission Requirement for the same Month of the Binding Season where WPP identified deficiencies.

14.5.1 Any Participant that fails to cure identified deficiencies in its Forward Showing Submittal within the period prescribed above shall be assessed a Deficiency Charge.

14.6 In the event that a failure of the Forward Showing software system (i) occurs in the seven days preceding a FS Deadline and (ii) prevents a Participant from meeting the FS Deadline, the FS Deadline shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the FS Deadline. In the event that a failure of the Forward Showing software system triggers an extension of the FS Deadline pursuant to this Section, the deadline for WPP to respond to the Forward Showing Submittal set forth in Section 14.4 shall be extended by a commensurate number of days as the FS Deadline.

14.7 In the event that a failure of the Forward Showing software system occurs within seven days of the deadline for WPP to respond to Forward Showing Submittals pursuant to Section 14.4, the deadline for WPP to respond set forth in Section 14.4 shall be extended by one Day for each day that the Forward Showing software system failure persists and prevents WPP from meeting the deadline provided in Section 14.4.

14.8 In the event that a failure of the Forward Showing software system (i) occurs in the seven days preceding the deadline to cure deficiencies in the Forward Showing

Submittal set forth in Section 14.5 and (ii) prevents a Participant from meeting the deadline to cure deficiencies in the Forward Showing Submittal provided in Section 14.5, the deadline set forth in Section 14.5 shall be extended by one Day for each Day the Forward Showing software system failure persists and prevents the Participant from meeting the deadline set forth in Section 14.5.

15. Transition Period

15.1 Except as specified in Section 15.1.1, the Binding Season beginning November 1, 2027, will be the first Binding Season for which all Participants will assume the obligations of demonstrating capacity and making surplus capacity available to other Participants and will receive the benefits of reliance upon other Participants' surplus capacity. Any Binding Season during the Transition Period occurring before November 1, 2027, shall be a Non-Binding Season, as specified in Section 15A of this Tariff.

15.1.1 No later than January 15, 2026, a Participant may elect the Binding Season beginning June 1, 2027, as the first Binding Season for which it will assume the obligations of demonstrating capacity and making surplus capacity available to other Participants and will receive the benefits of reliance upon other Participants' surplus capacity by providing written notice of its election.

15.2 Within two years prior to the start of the first Binding Season of the WRAP, a Participant who has elected to participate in the first Binding Season may request a vote of all Participants who have elected to participate in the first Binding Season to delay implementation of the first Binding Season for up to two Seasons. Delayed implementation of the first Binding Season shall be approved if 75% of the Participants who elected to participate in the first Binding Season vote in favor of such delay, with approval requiring a vote of 75% of both the House and Senate vote tallies (as described in Sections 4.1.6.2.1 and 4.1.6.2.2 of this Tariff) of all Participants who elected to participate in the first Binding Season.

15.2.1 The deferral vote may only occur for the first Binding Season of the WRAP. If the Participants who elected to participate in the first Binding Season of the WRAP vote to delay implementation of the first Binding Season, all compliance charges for the Forward Showing Program and Operations Program are automatically deferred; except that the Participants may vote to delay implementation only of the Operations Program portion of the first Binding Season and retain the binding Forward Showing Program portion of the first Binding Season.

15A. Non-Binding Seasons

15A.1 A Participant will participate as a Non-Binding Participant for certain Binding Seasons in the Transition Period, as detailed in Section 15.1 of this Tariff~~, and when Critical Mass is not achieved for a given Binding Season, as detailed in Section 15A.2 of this Tariff.~~ As to a Non-Binding Season, the Participant:

15A.1.1 Shall not be subject to Deficiency Charges, Transmission Deficiency Charges, Holdback Requirements, Energy Deployment obligations, or Delivery Failure Charges;

15A.1.2 Shall submit Forward Showing Submittals but shall not be required to cure deficiencies;

15A.1.3 Shall not have a mandatory Holdback Requirement as a result of the Sharing Calculation;

15A.1.4 May only receive Holdback Capacity offered voluntarily by other Participants in accordance with Part III of this Tariff; and

15A.1.5 Shall have all rights and be subject to all obligations under Part I of this Tariff and the Participant's WRAPA, including, without limitation, voting rights, committee participation, and the obligation to pay the WRAP Administration Charge.

~~15A.2 Once WPP has given notice to Participants that their Subregion does not have Critical Mass for a given Binding Season, each such Participant will have 30 days to provide notice to WPP if it intends to participate as a Non-Binding Participant for that Binding Season. Such notice and election will be given similarly for each season without Critical Mass participation.~~

15A.~~3~~2 In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations):

15A.2~~3~~.1 If a Participant will participate in a Summer Season as a Non-Binding Participant, for the purposes of calculating the maximum Monthly Deficiency for Winter, the Max Summer Deficiency (MW) is considered to be 0 MW.

15A.2~~3~~.2 If the Participant will participate in Winter Season as a Non-Binding Participant, the Max Summer Monthly Deficiency remains unchanged.

16. Components of the Forward Showing

16.1 FS Capacity Requirement. The FS Capacity Requirement shall be determined for each Participant on a monthly basis by applying the applicable Monthly FSPRM for a Month to such Participant's peak load forecast for that Month. The Participant's peak load forecast for a given Month of a Binding Season will be the P50 Peak Load Forecast for the Binding Season multiplied by a shaping factor based on the historical relationship, for such Participant, of the seasonal peak for the Winter Season or Summer Season, as applicable, and the monthly peaks for the Months in such season, as more fully described in the Business Practice Manuals.

16.1.1 P50 Peak Load Forecast. The P50 Peak Load Forecast is a peak load forecast prepared on a basis, such that the actual peak load is statistically expected to be as likely to be above the forecast as it is to be below the forecast. The Business Practice Manuals shall specify an approved load forecasting methodology for use by all Participants for their WRAP-required load forecasts which shall include (i) a base monthly peak derived from a recent historical period that recognizes additions and removals of load during the historical period, (ii) adjustments for known additions and removals of load during the forecast window; and (iii) a specified load growth factor.

16.1.2 FS Planning Reserve Margin

16.1.2.1 The FSPRM is an increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages, expressed as a percentage of the applicable peak load forecast. The FSPRM shall be determined based on probabilistic analysis, taking account of uncertainties in generation and load, as the margin above peak load that provides an expectation of no more than a single event-day of loss of load in ten years (sometimes referred to herein as the "1-in-10 LOLE") for each Binding Season. The FSPRM shall be determined in a manner that accounts for the governing principles of QCC value determinations set forth in Section 16.2.5 of this Tariff and shall employ the applicable peak load for the applicable Binding Season and Months. Additional details, assumptions, methodologies, and procedures for determination of the FSPRM shall be as set forth in the Business Practice Manuals.

16.1.2.2 WPP shall calculate in the Advance Assessment process the recommended Monthly FSPRM for each Month of each Binding Season, for approval by the Board of Directors as set forth in this Part II.

16.1.2.3 The FSPRM shall employ (i) a simulated resource stack using capacity accreditation principles consistent with those used for WRAP QCC determinations; (ii) an adjustment in the total WRAP-required QCC value as needed to meet a 1-in-10 LOLE for each Binding Season, and (iii) while maintaining the 1-in-10 LOLE for each Binding Season in (ii), include a monthly reduction of capacity to ensure that each Month has at least 0.01 annual LOLE. The FSPRM for a Month shall be the simulated QCC as adjusted to meet the 1-in-10 LOLE for each Binding Season minus the P50 Peak Load Forecast for the Month, divided by the P50 Peak Load Forecast for the Month.

16.1.2.4 The FSPRM shall include an approximation of Contingency Reserves as set forth in the Business Practice Manuals.

16.1.3 Contingency Reserves Adjustment. A Participant's FS Capacity Requirement will be adjusted as set forth in the Business Practice Manuals to account for changes in Contingency Reserve requirements resulting from energy contract purchases and contract sales.

16.1.4 A Participant responsible for loads located in a Subregion for which an FSPRM value has been determined that is higher than the FSPRM value determined for a different Subregion may, in lieu of demonstrating a MW increment of Portfolio QCC otherwise required to satisfy such Participant's FS Capacity Requirement for a given Month, demonstrate in its Forward Showing Submittal, in accordance with the procedures and requirements set forth in the Business Practice Manuals, WRAP Qualifying Transmission, in a quantity, in addition to that required by the FS Transmission Requirement, that is no greater than the difference in the two FSPRM values multiplied by the Participant's P50 Peak Load Forecast, with the point of delivery in the Subregion with the higher FSPRM value and the point of receipt in the Subregion with the lower FSPRM value. The MW quantity of the additional WRAP Qualifying Transmission so demonstrated shall reduce for such Month, by the same MW quantity, the Portfolio QCC the Participant would otherwise be required to demonstrate to satisfy its FS Capacity Requirement for such Month. Each such demonstration shall identify the MW quantity, Month of service, point of receipt, and point of delivery of such transmission service rights, and such other information as specified in the Business Practice Manuals, and shall verify that the offered rights are WRAP Qualifying Transmission.

16.2 Qualified Capacity Contribution

16.2.1 For each Participant and each Binding Season, the Forward Showing shall show and support the Portfolio QCC, which shall be the sum of the QCC of the Participant's Qualifying Resources ("Resource QCC"), the QCC of its contracted capacity ("Net Contract QCC"), and any transfers of capacity

already accredited by another Participant ("Total RA Transfer," which could be positive or negative). The Portfolio QCC effective for a Binding Season shall be the value determined by WPP.

16.2.2 A resource will not be assigned a Resource QCC or counted toward Portfolio QCC unless it is a Qualifying Resource. Qualifying Resources are those that, before they are included in a Forward Showing Submittal, are first registered with WPP. A Participant seeking registration of a resource must submit a request for registration providing the resource information described in the Business Practice Manuals.

16.2.3 The minimum resource size for registration of a resource is 1 MW, provided, however, that Participants with responsibility for individual resources of less than 1 MW may aggregate them to meet the 1 MW minimum requirement, under the conditions and limitations specified in the Business Practice Manuals.

16.2.4 A Participant may include in its Forward Showing Submittal a request for an exception from its FS Capacity Requirement for an insufficiency of its Portfolio QCC solely due to (i) a catastrophic failure of one or more Qualifying Resources due to an event of Force Majeure as defined by Section 8.1 of this Tariff that (ii) the Participant is unable to replace on commercially reasonable terms prior to the FS Deadline as a result of the timing and magnitude of such catastrophic failure and its consequences. As more fully set forth in the Business Practice Manuals, such exception request shall be supported by a Senior Official Attestation. The exception request must include complete information on the nature, causes and consequences of the catastrophic failure, and must describe the Participant's specific, concrete efforts prior to the FS Deadline to secure replacement Qualifying Resources for the applicable Binding Season. WPP will consider the exception criteria established by this section, the information provided in the exception request, the completeness of the exception request, and other relevant data and information, in determining whether to grant or deny an FS Capacity Requirement exception request. WPP shall provide such determination no later than sixty days after submission of such Participant's FS Submittal containing such FS Capacity Requirement exception request. A Participant granted an exception hereunder must complete a monthly exception check report demonstrating that either the circumstances necessitating the exception have not changed; or that Qualifying Resources have become available, and the Participant has acquired them and no longer requires the exception. Failure to timely submit a required monthly report will result in assessment of a Deficiency Charge, unless the deficiency is cured within seven days of notice of non-compliance. A Participant denied an exception request hereunder may appeal such denial to the Board of Directors in accordance with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested exception shall be denied or permitted as, when

and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall give notice of any exception granted hereunder in the time and manner provided by the Business Practice Manuals.

16.2.5 QCC: WPP shall determine QCC values for the resource types specified below in accordance with the governing principles specified below for each resource type, and consistent with further details specified for each resource type in the Business Practice Manuals.

16.2.5.1 For resources that use conventional thermal fuels, including but not limited to, coal, natural gas, nuclear, and biofuel, WPP will determine QCC based on an Unforced Capacity methodology that employs resource-specific capability testing and capability requirements to determine an Installed Capacity value, and a forced outage calculation methodology based on historical performance during Capacity Critical Hours over a specified multi-year period (excluding outages properly reported as "outside management control"), or based on class-average forced outage data, as specified in the Business Practice Manuals, if there is insufficient data on historical performance.

16.2.5.2 For resources that are Variable Energy Resources, including, but not limited to, wind and solar resources, WPP will determine QCC based on an ELCC methodology, that accounts for synergistic portfolio effects within and among VER types at different resource penetration levels that influence the extent to which the WRAP Region can rely on those VER categories to meet overall capacity needs.

16.2.5.2.1 For such purpose, a separate ELCC value will be calculated in the aggregate for all VER resources of a given type in an identified VER Zone, to be delineated in the Business Practice Manuals based on factors such as geography, performance, meteorological considerations, and penetration.

16.2.5.2.2 As more fully described in the Business Practice Manuals, the zonal aggregate VER-resource-type value will be calculated by (i) conducting a benchmark LOLE study that includes all resource types except the VER resource type being studied, employing a model and assumptions consistent with those used to calculate FSPRM, and adding, or subtracting, the same MW quantity of Pure Capacity to every hour of the applicable Binding Season until, respectively, an initial LOLE value above 0.1 day per

Binding Season becomes 0.1 day per Binding Season, or an initial LOLE value below 0.1 day per Binding Season becomes 0.1 day per Binding Season; (ii) conducting an LOLE study that includes all resource types including the VER resource type being studied, employing a model and assumptions consistent with those used to calculate FSPRM, and adding, or subtracting, the same MW quantity of Pure Capacity to every hour of the applicable Binding Season until, respectively, an initial LOLE value above 0.1 day per Binding Season becomes 0.1 day per Binding Season, or an initial LOLE value below 0.1 day per Binding Season becomes 0.1 day per Binding Season; and (iii) subtracting the Pure Capacity value determined under subpart (ii) from the Pure Capacity value determined under subpart (i) (for which calculation a Pure Capacity value subtracted from each hour in either subpart (i) or subpart (ii) will be assigned a negative value; (iv) repeating steps (i) through (iii) for each Binding Season of the study period employing historical, or as necessary, synthesized, data; and (v) basing the aggregate value of the studied VER resource type for the studied VER Zone on the results of the calculation in step (iii) for the Binding Seasons studied, which may include differential weighting of the Binding Seasons studied as appropriate to improve the quality and predictive capacity of the final result.

16.2.5.2.3 The aggregate capacity calculated for each VER resource type in each VER Zone will then be allocated to VERs of that type in that VER Zone based on each such resource's average historical performance if at least three years of historical performance or three years of synthesized forecast data during the CCH of the Subregion in which the VER Zone is located is available at the time of such allocation. If three years historical performance or synthesized forecast data is not then available, the average ELCC from the VER Zone will be assigned.

16.2.5.3 For resources that are Energy Storage Resources, WPP will determine QCC based on an ELCC methodology comparable to that used for VERs. The ELCC methodology will model Energy Storage Resources at the level of their usable capacity that can be sustained for a minimum duration of four hours. An Energy

Storage Resource need not have a nameplate rating that assumes a minimum of four hours in order to receive a QCC determination, but the QCC in that case will be scaled to reflect the capability that can be sustained for four hours, as more fully described in the Business Practice Manuals.

16.2.5.4 A Participant's Demand Response used as a Demand Response Capacity Resource must be controllable and dispatchable by the Participant or by the host utility, and must have met certain testing requirements consistent with Business Practice Manuals. WPP will determine Demand Response Load Modifier QCC by multiplying the load reduction in MWs by the number of hours the resource can demonstrate load reduction capability (for a period of up to five continuous hours) divided by five. The effects of Demand Response used as a Demand Response Capacity Resource must not be included in load provided for a Participant's Advance Assessment.

16.2.5.5 For Storage Hydro Qualifying Resources, the Participant will calculate a QCC based on a methodology detailed in the Business Practice Manuals that: (i) considers each resource's actual generation output, residual generating capability, water in storage, reservoir levels, and flow or project constraints over the previous ten-year historical period; (ii) determines the project's QCC by assessing the historical generation during CCHs on any given day and ability to increase generation during CCHs on the same day, subject to useable water in storage, inflows/outflows, and expected project operating parameters/constraints and limitations; (iii) incorporates forced outage rates; and (iv) determines QCC as average contribution to the CCH for each Winter Season and Summer Season over the previous ten years. If ten years of historical data is not available for the Storage Hydro Qualifying Resource, the Participant may alternatively employ data on the same metrics from a demonstrably comparable facility or apply another method that provides reasonable confidence in the reliability of the predicted values, as more fully set forth in the Business Practice Manuals. The Participant's QCC calculation shall be subject to review and validation by WPP. In connection with such review, the Participant shall provide WPP with the following information necessary to calculate a QCC for Storage Hydro Qualifying Resources: (i.a) historical reservoir elevation levels; (ii.a) historical plant generation; (iii.a) elevation versus capacity curves; (iv.a) any minimum or maximum reservoir level constraints; (v.a) forced outage rates; (vi.a) volume of water versus reservoir elevation storage tables; and (vii.a) turbine discharge versus generation efficiency curve.

16.2.5.6 For Run of River Qualifying Resources, WPP will determine QCC based on the monthly average performance of such resource during Capacity Critical Hours, as further specified in the Business Practice Manuals

16.2.5.7 For resources that (i) are not within the meaning of any of Sections 16.2.5.1 through 16.2.5.5, and that (ii) either (a) are not dispatchable; or (b) require the purchaser of energy from the resource to take energy as available from such resource, including but not limited to a qualifying facility as defined under the Public Utility Regulatory Policies Act of 1978, WPP will determine QCC based on the monthly average performance of such resource during Capacity Critical Hours, as further specified in the Business Practice Manuals.

16.2.6 Net Contract QCC: WPP shall determine Net Contract QCC for the agreement types specified below in accordance with the governing principles specified below for each agreement type, and consistent with further details specified for each agreement type in the Business Practice Manuals. Net Contract QCC may be either positive or negative, to take account of, for example, a Participant's agreements for the sale of capacity to any other party.

16.2.6.1 Absent one of the exceptions described and limited below, capacity supply agreements qualifying for a Net Contract QCC in the WRAP must be resource specific, and therefore must include, among other requirements, an identified source, an assurance that the capacity is not used for another entity's resource adequacy requirements, an assurance that the seller will not fail to deliver in order to meet other supply obligations, and affirmation of WRAP Qualifying Transmission from the identified resource to the point of delivery/load. The specific resources identified in a capacity supply agreement qualifying for Net Contract QCC shall meet the same Resource QCC accreditation requirements for the given resource type, as specified in Section 16.2.5.

16.2.6.2 A system sales contract can qualify for a Net Contract QCC value, provided that if the seller is not a Participant, the system capacity that is the subject of the agreement must be deemed surplus to the seller's estimated needs, there must be an assurance that the seller will not fail to deliver in order to meet other commercial obligations, and there must be an assurance that the seller will have WRAP Qualifying Transmission from the identified resource to the point of delivery/load. Surplus status may be demonstrated by a Senior Official Attestation with pertinent supporting details for such surplus status, including

written assent of the non-Participant Seller, secured by the purchasing Participant. Such attestation is not required if the seller is a Participant, because the information needed to verify surplus status is already available.

16.2.6.3 A supply agreement entered into prior to October 1, 2021 ("Legacy Agreement") can qualify for a Net Contract QCC value; provided that where a legacy agreement does not identify the source, it must be possible for WPP to presume a source or sources for the contract, including with the written assent of the supplier under such Legacy Agreement, conveyed in the form and manner set forth in the Business Practice Manuals. A Legacy Agreement for which such resource determination cannot be reasonably made will not be counted as adding to the Portfolio QCC.

16.2.7 Total RA Transfer: A Participant may agree with another Participant on a transfer of a portion of its Portfolio QCC to meet the other's FS Capacity Requirement ("RA Transfer"), provided that the details and duration of such transfer are reported to WPP for validation in accordance with procedures and information requirements specified in the Business Practice Manuals. Where such transfers have been duly reported and validated, an RA Transfer will be added to the purchasing Participant's Portfolio QCC and subtracted from the selling Participant's Portfolio QCC.

16.2.8 Planned Outages: Participants shall include in their Forward Showing Submittal for a Binding Season information on all Qualifying Resources that are currently out of service with a scheduled return date that falls during the Binding Season or after the Binding Season. Capacity associated with such resources must be deducted from Participants' Portfolio QCC as specified in the Business Practice Manuals to ensure no credit is granted for such resources during the planned outage. The aggregate of any additional outages that are planned to occur during the Binding Season but have not yet begun at the time of submission must be within the Participant's remaining surplus (or replaced with other supply). Participants may provide information on all Qualifying Resources that are planned to be out of service but if such data cannot be supplied with reasonable specificity, a Participant may provide a Senior Official Attestation at the time of the submission of its FS Submittal that it expects the sum of planned outages to be equal to or less than the surplus stated in its FS Submittal throughout the Binding Season.

16.2.8.1 If a Qualifying Resource is planned to return to service within the first five days of a Binding Season, WPP may approve a qualified acceptance of the FS Submittal, provided the deficiency is less than 500 MW.

16.2.8.2 A planned outage shall not justify a waiver of or exception to a Participant's holdback or energy delivery obligations under Part III of this Tariff. Participants will be expected to procure the necessary capacity or energy to meet the Operations Program requirements, regardless of planned outage schedules or FS Submittal acceptance.

16.3 FS Transmission Requirement

16.3.1 As part of its Forward Showing Submittal for a Binding Season, each Participant must demonstrate, as specified in the Business Practice Manuals, that it has secured transmission service rights, including under supply arrangements with a third party that holds or has committed transmission service rights, sufficient to deliver a MW quantity equal to at least 75% of the MW quantity of its FS Capacity Requirement. To the extent a Participant holds transmission service rights with a point of receipt at a Qualifying Resource, or in connection with an RA Transfer to such Participant, any such rights from such point in a MW quantity, respectively, in excess of the QCC of such Qualifying Resource, or in excess of the value of such RA Transfer, shall not contribute toward satisfaction of such Participant's FS Transmission Requirement. The FS Transmission Requirement must be met with WRAP Qualifying Transmission, from such Participant's Qualifying Resource(s) or from the delivery points for the resources identified for its Net Contract QCC or for its RA Transfer to such Participant's load. Notwithstanding the foregoing, authorized use of Capacity Benefit Margin, provided it is WRAP Qualifying Transmission, will satisfy the FS Transmission Requirement. Demonstration of the FS Transmission Requirement shall not, in and of itself, relieve any Participant of responsibility for a Delivery Failure Charge as determined under Section 20.7 if such Participant's failure to obtain or maintain WRAP Qualifying Transmission of the type and quantity expected by the Operations Program, as described in Section 20.6 of this Tariff, caused or contributed to an Energy Delivery Failure.

16.3.2 A Participant may include in its Forward Showing Submittal a request for an exception from a limited part of its FS Transmission Requirement, provided the exception request meets the terms, conditions, and limitations of one or more of the following four exception categories below. As more fully set forth in the Business Practice Manuals, such exceptions may be subject to overall WRAP limits, and shall be supported by a Senior Official Attestation. WPP will consider the exception category terms, conditions and limitations set forth below, and may consider the completeness of the exception request, information from transmission service providers, OASIS data, and data readily available to WPP from other reliable and validated sources concerning the duration, timing, firmness and quantity of available transmission service or equivalent options (including transmission construction), in determining whether to grant or deny a transmission

exception request. WPP shall provide such determination no later than sixty days after submission of such Participant's FS Submittal containing such transmission exception request. A Participant denied an exception request hereunder may appeal such denial to the Board of Directors in accordance with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested exception shall be denied or permitted as, when and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall give notice of any exception granted hereunder in the time and manner provided by the Business Practice Manuals. A Participant granted a transmission exception under either Section 16.3.2.1 or Section 16.3.2.2 must complete a monthly transmission exception check report demonstrating that either (i) the circumstances necessitating the exception have not changed; (ii) WRAP Qualifying Transmission has become available and the Participant has acquired it; or (iii) the Participant has acquired a different resource, and associated WRAP Qualifying Transmission, and no longer requires the exception. Failure to timely submit a required monthly report will result in assessment of a Deficiency Charge, unless the deficiency is cured within seven days of notice of non-compliance.

16.3.2.1 Enduring Constraints. Participant is unable to demonstrate sufficient WRAP Qualifying Transmission rights on any single segment of a source to sink path for a Qualifying Resource; and Participant demonstrates that no ATC for such transmission service rights is available (either from the transmission service provider or through a secondary market) at the FS Deadline on the applicable segment for the Month(s) needed (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less; and Participant submits a Senior Official Attestation that Participant has taken commercially reasonable efforts to procure WRAP Qualifying Transmission, and that Participant has posted Firm Transmission Requirements on a relevant bulletin board prior to the FS Deadline. In the event such WRAP Qualifying Transmission is only available for a duration of more than one year (whether from the transmission service provider or through a secondary market) at the FS Deadline on the applicable segment for the Month(s) needed at the applicable Open Access Transmission Tariff rate or less, a Participant is not required to obtain such service in order to qualify for the Enduring Constraints exception hereunder. Notwithstanding the foregoing, if such Participant declines to obtain such available WRAP Qualifying Transmission and is granted the exception hereunder, such Participant shall not qualify for an exception hereunder for the same path (or across the same constraint) for the same season of the subsequent year if the Participant again declines to obtain such WRAP Qualifying Transmission that is available for a duration of more than one year. In addition to the foregoing, Participant must

further demonstrate that there was remaining available transmission transfer capability (i.e., non-firm ATC after the fact) for all CCHs in the same season of the most recent year for which CCHs have been calculated in any Subregion in which the transmission segment exists; or, if the path was constrained in at least one CCH of the CCHs in the same season of the most recent year for which CCHs have been calculated in any Subregion in which the transmission segment exists, Participant in that case must demonstrate either that it is constructing or contracting for a new local resource for at least the amount of the exception requested, or that it is pursuing long-term WRAP Qualifying Transmission by entering the long-term queue and taking all appropriate steps to obtain at least the amount of the exception requested.

16.3.2.2 Future Firm ATC Expected. Participant demonstrates that ATC of WRAP Qualifying Transmission rights is not posted or available prior to the FS Deadline (for a duration of one year or less) at the applicable Open Access Transmission Tariff rate or less, and that the transmission service provider has, after the FS Deadline, released additional ATC for such transmission service rights along the applicable path in every one of the CCHs that have been calculated in any Subregion in which the applicable transmission segment exists for the most recent year for which CCHs have been calculated for the Subregion. In the event ATC for such WRAP Qualifying Transmission is only posted or available prior to the FS Deadline for a duration of more than one year (whether from the transmission service provider or through a secondary market) on the applicable segment for the Month(s) needed at the applicable Open Access Transmission Tariff rate or less, a Participant is not required to obtain such service in order to qualify for the Future Firm ATC Expected exception hereunder. Notwithstanding the foregoing, if such Participant declines to obtain such available WRAP Qualifying Transmission and is granted the exception hereunder, such Participant shall not qualify for an exception hereunder for the same path (or across the same constraint) for the same season of the subsequent year if the Participant again declines to obtain such WRAP Qualifying Transmission that is available for a duration of more than one year. The Participant must also demonstrate that the exception request meets volume and duration limitations specified in the Business Practice Manuals.

16.3.2.3 Transmission Outages and Derates. Participant demonstrates that an applicable segment of its existing transmission service rights from its source to sink path for its Qualifying Resource is expected to be derated or out-of-service and the ATC of WRAP Qualifying Transmission is not otherwise available, and that

the exception request meets volume and duration limitations specified in the Business Practice Manuals.

16.3.2.4 Counterflow of a Qualifying Resource. Participant demonstrates that either: (i) Participant's use of WRAP Qualifying Transmission in connection with the delivery of capacity from Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to Participant's load (or other qualifying delivery point permitted by the WRAP) or (ii) a second Participant's use of WRAP Qualifying Transmission in connection with the delivery of capacity from the second Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to the second Participant's load (or other qualifying delivery point permitted by the WRAP) provides a direct and proportional counterflow transmission that supports the first Participant's delivery of capacity from the first Participant's Qualifying Resource (or from the resource associated with its Net Contract QCC) to the first Participant's load (or other qualifying delivery point permitted by the WRAP) Qualifying Resource to their load. If the exception is requested under subpart (ii) of this subsection, the Participant requesting the exception shall include a written acknowledgement from the second Participant that it is aware of such exception request.

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16.3.3 To the extent a Participant does not demonstrate satisfaction of its FS Transmission Requirement by the FS Deadline, the Participant may correct any such deficiency on or before the end of the cure period prescribed by Section 14.5 of this Tariff to avoid a Deficiency Charge.

16.3.4. Any deficiency of transmission service rights ultimately determined by WPP will be treated, for purposes of Deficiency Charge determinations, as in conjunction with, and not additive to, any deficiencies of QCC determined pursuant to Section 16.2.

17. Forward Showing Deficiency Charge

17.1 If a Participant fails during the cure period to demonstrate that it has resolved any identified deficiencies in either or both of its FS Capacity Requirement and its FS Transmission Requirement, the Participant will be assessed a Deficiency Charge for each Month for which a deficiency is identified in accordance with this section. In such case, the deficiency for which the Participant will be assessed a Deficiency Charge will be calculated in accordance with the following:

Participant's Monthly Capacity Deficiency = Maximum of (Monthly FS Capacity Requirement – Monthly Portfolio QCC, 0)

Participant's Monthly Transmission Deficiency (MW) = Maximum of ((75% × Monthly FS Capacity Requirement) – (Monthly Transmission Demonstrated + Approved Monthly Transmission Exemptions), 0)

Where Monthly Transmission Demonstrated is the amount of WRAP Qualifying Transmission submitted by a Participant per the requirements in Section 16.3 and validated by WPP for each month.

Monthly Deficiency (MW) = Maximum of (Monthly Capacity Deficiency, Monthly Transmission Deficiency)

17.2 A Participant's Deficiency Charges shall be calculated as set forth in this Section 17.2, subject to the Transition Period rules in Section 17.3 and Section 17A of this Tariff, and shall take account of multiple Monthly Deficiencies within a Forward Showing for a single Binding Season, multiple Deficiencies across a Forward Showing Year, consisting of a Summer Season and the immediately succeeding Winter Season, and any Monthly Deficiencies in a previous Forward Showing Year, in accordance with the following:

17.2.1 The Monthly Deficiency with the highest MW value in a Forward Showing for a Summer Season shall be assessed a Deficiency Charge equal to:

Max Summer Deficiency (MW) × Annual CONE ($/kW-year) × 1000 × Summer Season Annual CONE Factor

17.2.2 Any other Monthly Deficiency in the Participant's Forward Showing for the same Summer Season shall be assessed a Deficiency Charge equal to:

Additional Summer Deficiency (MW) × (Annual CONE ($/kW-year)/12) × 1000 × 200%

17.2.3 Any Monthly Deficiency in the Forward Showing for the immediately succeeding Winter Season with a higher MW value than the highest MW value of the Monthly Deficiency in the Summer Season shall be assessed a Deficiency Charge on the incremental MW value above the Summer Season equal to:

Maximum of (Max Winter Deficiency – Max Summer Deficiency, 0) (MW) × Annual CONE ($/kW-year) × 1000 × Winter Season Annual CONE Factor

and in such case where there is a Monthly Deficiency in the Winter Season with a higher MW value than the highest MW value of any Monthly Deficiency in the Summer Season, the Monthly Deficiency with the highest MW value in the Summer Season shall be assessed an additional Deficiency Charge calculated in accordance with Section 17.2.2.

17.2.4 Any other Monthly Deficiency in the Participant's Forward Showing Submittal for the same Winter Season shall be assessed a Deficiency Charge equal to:

Additional Winter Capacity Deficiency × (Annual CONE/12) × 1000 × 200%

17.2.5 For purposes of the above, CONE is the estimated cost of new entry of a new peaking natural gas-fired generation facility. The CONE estimate shall be based on publicly available information relevant to the estimated annual capital and fixed operating costs of a hypothetical natural gas-fired peaking facility. The CONE estimate shall not consider the anticipated net revenue from the sale of capacity, energy, or ancillary services from the hypothetical facility, nor shall it consider variable operating costs necessary for generating energy.

17.2.6 WPP shall review the CONE estimate annually for a possible update. Any proposed changes in the CONE estimate shall be subject to review through the stakeholder process for program rule changes.

17.2.7 The Summer Season Annual CONE Factor shall vary based on the ratio ("Summer % Deficit") of the Aggregate Capacity Deficiency for the WRAP as a whole for that Summer Season, divided by the P50 Peak Load Forecast for the Summer Season, as follows:

If the Summer % Deficit is less than or equal to 1%, the Summer Season Annual CONE Factor = 125%

If the Summer % Deficit is greater than 1% but less than or equal to 2%, the Summer Season Annual CONE Factor = 150%

If the Summer % Deficit is greater than 2% but less than or equal to 3%, the Summer Season Annual CONE Factor = 175%

If the Summer % Deficit is greater than 3%, the Summer Season Annual CONE Factor = 200%

17.2.8 The Winter Season Annual CONE Factor shall vary based on the ratio ("Winter % Deficit") of the Aggregate Capacity Deficiency for the WRAP as a whole for that Winter Season, divided by the P50 Peak Load Forecast for the Winter Season, as follows:

If the Winter % Deficit is less than or equal to 1%, the Winter Season Annual CONE Factor = 125%

If the Winter % Deficit is greater than 1% but less than or equal to 2%, the Winter Season Annual CONE Factor = 150%

If the Winter % Deficit is greater than 2% but less than or equal to 3%, the Winter Season Annual CONE Factor = 175%

If the Winter % Deficit is greater than 3%, the Winter Season Annual CONE Factor = 200%

17.2.9 Notwithstanding Sections 17.2.7 and 17.2.8, if a *Participant incurred any FS Deficiency Charges* in a Forward Showing Year *after the Transition Period*, then for the immediately following Forward Showing Year, both the Summer Season Annual CONE Factor and the Winter Season Annual CONE Factor shall be 200% *for such Participant*.

17.2.10. Subject to the Transition Period rules in Section *15A.1*, revenues from the payment of Deficiency Charges as to a Binding Season shall be allocated among those Participants with no Deficiency Charges for that Binding Season, pro rata based on each Participant's share of all such Participants' Median Monthly P50 Peak Loads for such Binding Season.

17.3 During the Transition Period, Deficiency Charges otherwise calculated under Section 17.2 shall be reduced as, when, and to the extent, and subject to the conditions, provided in Section 17.3.2; and revenue allocations otherwise calculated under Section 17.2 shall be adjusted as, when, and to the extent, and subject to the conditions, provided in Section 17.3.4.

17.3.1. During the Transition Period, a Participant with a Monthly Capacity Deficiency can pay a *Discounted* Deficiency Charge for so much of such Monthly Capacity Deficiency as was due to an Excused Transition Deficit. To obtain an Excused Transition Deficit for a Binding Season, the Participant must provide a Senior Official Attestation attesting that the Participant *or a relevant third party servicing load for which the Participant is the LRE* has made commercially reasonable efforts to secure Qualifying Resources in the quantity needed to satisfy the Participant's FS Capacity Requirement for the Binding Season, but is unable to obtain Qualifying Resources in the quantity required for the Binding Season because the supply of such resources on a timely basis and on commercially reasonable

terms is at that time inadequate. *If the attestation relates to a third-party servicing load for which the Participant is the LRE, the Senior Official Attestation may be signed by a Senior Official of the third party load service provider, as further detailed in the Business Practices.* Excused Transition Deficits are not resource specific, relate to a MW quantity of the Participant's FS Capacity Requirement, and are limited for each Participant as to a Binding Season during the Transition Period to a maximum permissible MW quantity equal to a percentage value times the FSPRM applicable to such Participant for all Forward Showing Submittals submitted by such Participant for such Binding Season. For purposes of such calculation, the percentage value is*: 200*% for each of the *2027* Summer Season and *2027-2028* Winter Season*; and 100*% for each of the *2028* Summer Season and *2028-2029* Winter Season.

17.3.2 A Participant will pay a *Discounted* Deficiency Charge as to the portion of its Monthly Capacity Deficiency for which it obtained an Excused Transition Deficit. The *FS* Deficiency Charge otherwise applicable to such Participant under Section 17.2 shall be reduced by a percentage value equal to 75% for each of the *2027* Summer Season and *2027-2028* Winter Season*; and* 50% for each of the *2028* Summer Season and *2028-2029* Winter Season. The Participant will be assessed a*n FS* Deficiency Charge calculated under Section 17.2, without reduction or adjustment, for any of its Monthly Capacity Deficiency that is in excess of the amount of such deficiency for which it obtained an Excused Transition Deficit.

17.3.3 Whether or not a Participant obtains an Excused Transition Deficit as to a Binding Season, the Participant may reduce a Monthly Capacity Deficiency otherwise calculated under Section 17.1 for a Binding Season during the Transition Period to the extent such deficiency is due to the Participant's inability to obtain assent from the supplier under a Legacy Agreement to the accreditation required for such Legacy Agreement under Part II of this Tariff and the Business Practice Manuals. To obtain such relief, the Participant must provide a Senior Official Attestation attesting that the Participant made commercially reasonable efforts to execute the required accreditation form with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the accreditation form. The reduction in Monthly Capacity Deficiency permitted by this Section 17.3.3 as to any Participant for all Forward Showing Submittals submitted by such Participant for any Binding Season during the Transition Period shall not exceed a MW quantity equal to 25% times the FSPRM applicable for such Participant for such Binding Season. To the extent a Participant reduces a Monthly Capacity Deficiency under this subsection, the percentage of the Participant's FSPRM corresponding to the reduction hereunder shall reduce the maximum permissible percentage of FSPRM reduction allowed under Section 17.3.1 for Excused Transition Deficits for the same Binding Season.

17.3.4 A Participant that, as a result of application of this Section 17.3, pays no Deficiency Charge as to a Binding Season, shall not be deemed a "Participant[ ] with no Deficiency Charges" for purposes of Section 17.2.10, and shall not receive an allocation of revenues from the payment of Deficiency Charges as to such Binding Season.

17.3.5 In addition to the foregoing, a Participant's Deficiency Charge for a Binding Season during the Transition Period may be deferred and further reduced as provided in Section 17A of this Tariff.

17.4 In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations), FS Deficiencies shall be calculated per Section 15A.~~3~~2.

17A Transition Period Deficiency Charge Deferral Mechanism

17A.1 During the Transition Period, a Participant may obtain a deferral and possible reduction of its Deficiency Charge for a specific Binding Season if it satisfies the requirements set forth in this Section 17A. Any Excused Transition Deficit arising under Section 17.3 of this Tariff would continue to apply, such that any deferral and reduction in a Deficiency Charge under this Section 17A would be applied to the Discounted Deficiency Charge granted to such Participant.

17A.2 A Participant that incurs a Deficiency Charge during the Transition Period may obtain a deferral and possible reduction in its Deficiency Charge if it satisfies the following requirements:

17A.2.1 The Participant has otherwise satisfied the submission requirements for the Forward Showing Submittal, including submitting all attestations required by the Tariff and Business Practice Manuals; and

17A.2.2 The Participant submits a Senior Official Attestation stating that it has made commercially reasonable efforts, as defined in the Business Practice Manuals, to satisfy the WRAP Monthly FS Capacity Requirement or FS Transmission Requirement for each month of the Binding Season for which it seeks to defer its Deficiency Charges but has been unable to do so despite such commercially reasonable efforts.

17A.3 For a Participant that seeks a deferral and possible reduction in its Deficiency Charge under this Section 17A.3 for any FS Capacity Requirement or FS Transmission Requirement shortfall that it is unable to cure for a specific Binding Season, the Program Administrator will continue to calculate the applicable Deficiency Charge, including any Discounted Deficiency Charge if applicable. A Participant receiving a deferral shall pay a percentage, as specified in Section 17A.4, of its total Deficiency Charge calculated by the Program Administrator at the end of the cure period, and the remainder will be recorded as a deferral to be paid later, possibly at a reduced amount.

17A.4 If a Participant that received a deferral of its Deficiency Charge for a Binding Season is able to satisfy its FS Capacity Requirement and FS Transmission Requirement for a subsequent Binding Season of the same season type (e.g., a subsequent Summer Season if it received a deferral for a prior Summer Season), the Participant will pay a reduced Deficiency Charge for the Binding Season for which it obtained a deferral as set forth in this Section 17A.4.

17A.4.1 Except for Participants located in a Subregion as described in Section 17A.4.2, a Participant that received a deferral of its Deficiency Charge for a Binding Season shall pay 15% of its total calculated Deficiency Charge for the Binding Season upon failure

to cure for that Binding Season upon receipt of the Deficiency Charge invoice. The following provisions of this Section 17A.4.1 address how the remainder of the Participant's Deficiency Charge will be handled.

17A.4.1.1 If the Participant that received a deferral of its Deficiency Charge for a Binding Season is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the next Binding Season for the same season type, the Participant shall owe no further Deficiency Charge for the Binding Season for which it obtained the deferral beyond the 15% paid under Section 17A.3.

17A.4.1.2 If the Participant that received a deferral of its Deficiency Charge for a Binding Season remains unable to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the next Binding Season of the same season type, but is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for second Binding Season of the same type after the Binding Season for which the Participant received a deferral, its total Deficiency Charge shall be reduced to 40%, with the remaining 25% (after accounting for the 15% paid under Section 17A.3) to be paid upon receipt of the Deficiency Charge invoice.

17A.4.1.3 If the Participant that received a deferral of its Deficiency Charge for a Binding Season remains unable to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the next two Binding Seasons of the same season type, but is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for third Binding Season of the same type after the Binding Season for which the Participant received a deferral, its total Deficiency Charge shall be reduced to 70%, with the remaining 55% (after accounting for the 15% paid under Section 17A.3) to be paid upon receipt of the Deficiency Charge invoice.

17A.4.1.4 If a Participant is unable to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the fourth Binding Season of the same type after the Binding Season for which it received a deferral, the Participant's deferred

Deficiency Charge shall not be reduced and any outstanding balance of its total calculated Deficiency Charge that was deferred shall be due upon receipt of the Deficiency Charge invoice upon the Participant's failure to satisfy the FS Capacity Requirement and FS Transmission Requirement for the fourth Binding Season following the Binding Season for which the Deficiency Charge was deferred.

17.A.4.1.5 If, at any time while a Participant's Deficiency Charge is deferred under this Section 17A, the Participant provides notice of its intent to withdraw from the WRAP pursuant to Section 9 of its Western Resource Adequacy Program Agreement set forth in Attachment A of this Tariff (or the equivalent provision under a Participant's non-conforming agreement on file at FERC), any deferral and reduction of the Participant's Deficiency Charge will be voided and the full Deficiency Charge calculated by the Program Administrator for any applicable Binding Season shall be due upon receipt of the Deficiency Charge invoice.

17A.4.2 For Participants located in a Subregion composed entirely of Participants that executed a WRAPA effective September 15, 2026 or later, a Participant that received a deferral of its Deficiency Charge for a Binding Season shall pay 5% of its total calculated Deficiency Charge for the Binding Season upon failure to cure for that Binding Season upon receipt of the Deficiency Charge invoice. The following provisions of this Section 17A.4.2 address how the remainder of the Participant's Deficiency Charge will be handled:

17A.4.2.1 If the Participant that received a deferral of its Deficiency Charge for a Binding Season is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the next Binding Season for the same season type, the Participant shall owe no further Deficiency Charge for the Binding Season for which it obtained the deferral beyond the 5% paid under Section 17A.3.

17A.4.2.2 If the Participant that received a deferral of its Deficiency Charge for a Binding Season remains unable to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the next Binding Season of the same season type, but is able to satisfy its entire FS Capacity Requirement and FS

Transmission Requirement for second Binding Season of the same type after the Binding Season for which the Participant received a deferral, its total Deficiency Charge shall be reduced to 20%, with the remaining 15% (after accounting for the 5% paid under Section 17A.3) to be paid upon receipt of the Deficiency Charge invoice.

17A.4.2.3 If the Participant that received a deferral of its Deficiency Charge for a Binding Season remains unable to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the next two Binding Seasons of the same season type, but is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for third Binding Season of the same type after the Binding Season for which the Participant received a deferral, its total Deficiency Charge shall be reduced to 50%, with the remaining 45% (after accounting for the 5% paid under Section 17A.3) to be paid upon receipt of the Deficiency Charge invoice.

17A.4.2.4 If the Participant is unable to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the fourth Binding Season of the same type after the Binding Season for which it received a deferral, the Participant's deferred Deficiency Charge shall not be reduced and any outstanding balance of its total calculated Deficiency Charge that was deferred shall be due upon receipt of the Deficiency Charge invoice upon the Participant's failure to satisfy the FS Capacity Requirement and FS Transmission Requirement for the fourth Binding Season following the Binding Season for which the Deficiency Charge was deferred.

17.A.4.2.5 If, at any time while the Participant's Deficiency Charge is deferred under this Section 17A, Participant provides notice of its intent to withdraw from the WRAP pursuant to Section 9 of its Western Resource Adequacy Program Agreement set forth in Attachment A of this Tariff (or the equivalent provision under a Participant's non-conforming agreement on file at FERC), any deferral and reduction of the Participant's Deficiency Charge will be voided and the full Deficiency Charge calculated by the Program Administrator for any applicable

Binding Season shall be due upon receipt of the Deficiency Charge invoice.

17A.5 A Participant may obtain a Deficiency Charge deferral and/or reduction for any or all Binding Seasons during the Transition Period if it satisfies the requirements of this Section 17A. A deferral granted for a particular Binding Season shall not affect the Participant's eligibility to obtain a deferral for a subsequent Binding Season, nor shall a Participant's payment of a reduced Deficiency Charge for a Binding Season impact any deferred and/or reduced Deficiency Charges for the Participant for any other Binding Season.

17A.6 A Participant shall not receive any deferral or reduction of Deficiency Charges for a Binding Season that occurs outside of the Transition Period; however, Binding Seasons that occur outside of the Transition Period are included in the deferral period for Deficiency Charges set forth in Section 17A.4.

17A.7 Deficiency Charges collected under this Section 17A shall be distributed using existing provisions of Section 17.2.10 of this Tariff for the original Binding Season for which the deferral was granted, such that Participants with no Deficiency Charges for the original Binding Season for which the deferral was granted will receive a pro rata share of such deferred Deficiency Charges collected; provided, however, that such entities that are otherwise eligible to receive a pro rata share remain active Participants at the time the deferred Deficiency Charge revenues are distributed.

17A.8 A Participant's FS Capacity Requirement deficiency associated with a deferred Deficiency Charge shall be treated in the Operations Program the same way as deficiencies associated with a paid Deficiency Charge.

PART III OPERATIONS PROGRAM

18. Operations Program Overview

18.1 The Operations Program facilitates access to collective capacity made available through regional load and resource diversity of all Participants under the terms of this Part III.

18.2 The Operations Program evaluates forecasted system conditions across the seven-day period ("Multi-Day-Ahead Assessment") preceding the Operating Day, commencing at the outset of the assessment period with an initial Sharing Calculation and initial identification of potential Sharing Events for the Operating Day. The assessment is refined as forecasted conditions for the Operating Day are revised and established on the Preschedule Day, a Holdback Requirement for any Sharing Events is then identified. To the extent a Sharing Event continues to be identified for the Operating Day, Holdback Requirements shall be converted into Energy Deployments on the Operating Day.

18.3 The Operations Program prescribes pricing designed to incent Participants to resolve any forecast Operating Day deficiencies before the Operating Day, including through transactions outside the Operations Program, and to fully compensate Participants that provide support through the Operations Program to Participants with Operating Day deficiencies.

19. Operations Program Timeline and Supporting Information

19.1 The Operations Program includes a Multi-Day Ahead Assessment that looks ahead at the next seven Operating Days by performing an indicative Sharing Calculation from Participant forecast data for each future Operating Day up until the Preschedule Day. The Sharing Calculation for the Preschedule Day is not indicative but is binding, subject to Sections 20.2.4 and 20.3. Participants shall provide WPP with forecasts for the next seven Operating Days of expected (i) load, (ii) output of VERs, (iii) output of RORs, (iv) Contingency Reserves, and (v) forced outages, including outages on transmission facilities the Participant utilized to meet its Forward Showing Capacity Requirement, as further described in the Business Practice Manuals. WPP shall utilize the forecast data obtained in the Multi-Day-Ahead Assessment to calculate or revise the indicative Sharing Calculations for each day thereafter, up until the Preschedule Day, and will use such forecast data to revise the indicative Sharing Calculation hourly during the Operating Day. Such forecast data will also be used to calculate the binding Sharing Calculation for the Preschedule Day.

19.2 The Operations Program, during any Binding Season, shall rely on and employ (among other data) the following information from the Forward Showings for such Binding Season: (i) the P50 Peak Load Forecast for each Participant; (ii) the Monthly FSPRMs for each Participant during such Binding Season; (iii) expected performance by Qualifying Resource type and any RA Transfers; (iv) expected forced outage rates by resource type; (v) expected Contingency Reserves; and (vi) WRAP Qualifying Transmission made available for purposes of regional diversity sharing under the WRAP, permitted under Part II of this Tariff, which shall be assumed to be available for all hours of each Month for which such WRAP Qualifying Transmission rights were made available.

19.3 To facilitate WPP's conduct of the Multi-Day-Ahead Assessment, each Participant shall provide the Program Operator information relevant to the Participant's expected demand and supply conditions on each Operating Day, of the type, in the manner, and with the frequency, specified in the Business Practice Manuals.

19.4 Each Participant in any Subregion identified in the Business Practice Manuals as not containing a central transmission hub permitting energy deliveries to that hub from any point within such Subregion, shall, in addition to providing the information required by Section 19.3, identify, on or before the deadline during the Preschedule Day specified in the Business Practice Manuals, for each Hour of the Operating Day each point to which it can deliver energy, each point at which it can take receipt of energy, the quantity it can deliver or receive at each such point, and a numeric factor intended to prioritize use of transmission made available by Participants with positive Sharing Calculations and needed by Participants with negative Sharing Calculations for each such hour. A Participant with a positive Sharing Calculation for an hour must provide a total quantity for all identified points at which it can deliver that is no less than the amount of its positive Sharing Calculation for such hour (adjusted as necessary for any RA Transfer in accordance

with Section 20.1.2). A Participant with a negative Sharing Calculation for an hour must provide a total quantity for all identified points at which it can take receipt that is no less than the amount of its negative Sharing Calculation for such hour (adjusted as necessary for any RA Transfer in accordance with Section 20.1.2). Participants shall provide this same information for each Operating Day on an expected or preliminary basis on each day of the Multi-Day-Ahead Assessment following, and based on, the expected Holdback Requirement estimates provided on each such day for the Operating Day.

19.5 Any Participant with excess supply that is not obligated to the WRAP through a positive Sharing Calculation result may, at its sole election, offer such supply to the WRAP as Voluntary Holdback. If the offering Participant has a positive Sharing Calculation result, the offered capacity shall be in addition to that Sharing Calculation result; if the offering Participant has a negative Sharing Calculation result, the offered capacity will only be included in the allocation of Holdback Requirement so long as the offering Participant did not confirm a need for Holdback Capacity for such hour. Such offers must be submitted within the time window identified in the Business Practice Manuals, must include the information identified in Sections 19.3 and 19.4, as applicable, and must conform to the format and content identified in the Business Practice Manuals. An offer of Voluntary Holdback may become part of the Participant's Holdback Requirement when it is included in the allocation on the Preschedule Day prescribed by Section 20.2.

20. Components of the Operations Program

20.1 Sharing Calculation

20.1.1 WPP shall implement, as more fully described in the Business Practice Manuals, with respect to each Forward Showing Submittal accepted by WPP for a Participant under Part II of this Tariff, or with respect to each Subregion in which the Participant is responsible for load regardless of whether the Participant submitted a single Forward Showing Submittal encompassing its loads in multiple Subregions, the following Sharing Calculation to identify any hour in which any Participant is forecast to have a capacity deficit (known as a "Sharing Event"). This calculation takes into account changes in a Participant's resource availability, resource performance, forecast load, and Contingency Reserve relative to the Forward Showing, plus an Uncertainty Factor. The Sharing Calculation is equal to:

[(P50) * (1 + FSPRM) + Contingency Reserve Adjustment] – [Load Forecast – Demand Response Capacity Resources + Contingency Reserve Obligation + Uncertainty Factor] + [ΔForced Outages + ΔRoR Performance + ΔVER Performance]

Where:

P50 refers to the Participant's Monthly P50 Peak Load for that Binding Season's Month;

FSPRM, as described in Section 16.1.2, is an increment of resource adequacy supply needed to meet conditions of high demand in excess of the applicable peak load forecast and other conditions such as higher resource outages and is expressed as a percentage of the applicable Participant P50 Peak Load Forecast for that Binding Season's month;

Contingency Reserve Adjustment accounts for changes in Contingency Reserve expectations (relative to the 6% Contingency Reserve assumed in the FSPRM) resulting from energy contract purchases and contract sales as set forth in the Business Practice Manuals;

Load Forecast refers to the forecast of expected load for the subject hour for the loads for which the Participant is the Load Responsible Entity and that have not been excluded from WRAP participation;

Demand Response Capacity Resource as described in Section 16.2.5.4.

Contingency Reserve Obligation refers to the amount of Contingency Reserve the Participant is carrying during the operating hour equal to (i) 3% of Load Forecast for which the Participant is the WRAP LRE and maintains

its Contingency Reserve, (ii) plus 3% of WRAP load for which the Participant is not the LRE but has assumed the Contingency Reserve through a contractual arrangement, (iii) plus 3% of generation used to meet any load for which the Participant is the LRE and maintains the Contingency Reserve, (iv) plus 3% of generation utilized to meet WRAP Load for which the Participant is not the LRE but has assumed the Contingency Reserve through a contractual arrangement;

Uncertainty Factor refers to a factor determined by WPP, as more fully set forth in the Business Practice Manuals, to account for the potential variance between forecasts of load, solar resources, wind resources, and run-of-river resources, and the Operating Day conditions of such load and resources;

Δ Forced Outages refers, for the subject hour, to the sum of:

(i) any change in forced outages of any of the thermal resources included in the Participant's Portfolio QCC, relative to the forced outages assumed in the Forward Showing Submittal by application of the Forced Outage Factor; plus

(ii) any change in forced outages of any of the Storage Hydro Qualifying Resources relative to the forced outages assumed in the calculation of the Participant's Resource QCC as more fully described in the Business Practice Manuals; plus

(iii) any reduction in output capability of any of the Energy Storage Resources due to equipment failure or protection

a. In the first four (4) hours the Forced Outages MWs that can be claimed are equal to [(charge MW x duration)/4]

b. For all hours beyond four (4) hours, the Forced Outages MW amount that can be claimed for an Energy Storage Resource shall not be greater than the monthly QCC; plus

(iv) any impacts of transmission conditions on previously acquired WRAP Qualifying Transmission that result in capacity reductions up to the level of the Resource QCC of the associated Qualifying Resource;

ΔRoR Performance refers to any change, for the subject hour, in expected performance of any of the run-of-river resources in the Participant's Portfolio QCC relative to the QCC of those Qualifying Resources; and

ΔVER Performance refers to any change, for the subject hour, in expected performance of the VER Resources in the Participant's Portfolio QCC relative to the QCC of those Qualifying Resources;

20.1.2 In addition to the foregoing, the Sharing Calculation for a Participant that is a purchaser of an RA Transfer shall be performed in two passes, with and without such purchase. If the result of assuming in the first pass that the Participant had not purchased the RA Transfer is that the Participant has a

negative Sharing Calculation, then the Participant that sold the RA Transfer must agree, for the time period addressed by the Sharing Calculation, to an energy delivery to the Participant that purchased the RA Transfer, in an amount equal to the lesser of: (i) the MW quantity needed to result in a net zero Sharing Calculation for the Participant that purchased the RA Transfer; and (ii) the MW amount of the RA Transfer. If the result of recognizing the Participant's purchase of the RA Transfer in the second pass is that the Participant has a positive Sharing Calculation, then the Participant that sold the RA Transfer must assume a share of the purchasing Participant's resulting obligation to the Operations Program in an amount equal to the MW quantity of the RA Transfer, minus the MW quantity of the delivery made by the seller of the RA Transfer to the purchaser of the RA Transfer as a result of the first pass.

20.1.3 The Sharing Calculation of any Participant that was found to have a Monthly Capacity Deficiency under Sections 16.1 and 16.2, for which such Participant paid a Deficiency Charge, including any Deficiency Charge reduced by application of Section 17.3 and/or Section 17A during the Transition Period, shall be reduced by the MW quantity of such Monthly Deficiency.

20.2 Holdback Requirement

To the extent that: (i) WPP's application of the Sharing Calculation identifies on the Preschedule Day a Sharing Event for any hour(s) of the Operating Day; and (ii) the Participant(s) found to be deficient for such hour(s) by the Sharing Calculation confirms to WPP on the Preschedule Day, in accordance with notification and confirmation procedures set forth in the Business Practice Manuals, such Participant's need for capacity for such hour(s), then WPP shall determine the Participants having a Holdback Requirement for such hour(s) and the quantity of the Holdback Requirement for each such Participant in accordance with this Section 20.2. The Operations Program will prioritize offers of Voluntary Holdback in the allocation and assignment of Holdback Requirements. Holdback Requirements shall be expressed as whole MWs for each hour for which they are estimated or established and shall not be specific to any Qualifying Resource.

20.2.1 Subregion with Central Hub

For any hour, as to any Subregion identified in the Business Practice Manuals as containing a central transmission hub permitting energy deliveries to that hub from any point within such Subregion ("Central Hub"), the aggregate of the holdback needed to meet the requirements of all Participants with negative Sharing calculation results that have confirmed their need for holdback will be allocated and assigned first among offers of Voluntary Holdback, and second, to the extent such needs remain unmet, among Participants with positive Sharing Calculation results.

20.2.1.1 Allocation of Voluntary Holdback: Voluntary Holdback will be allocated in one of three alternative ways, based on comparing the aggregate confirmed need for holdback among Participants with negative Sharing Calculation results against the aggregate of all offers for Voluntary Holdback.

20.2.1.1.1 If the total MW quantity of all Voluntary Holdback offered is equal to the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant that offered Voluntary Holdback is assigned its offered Voluntary Holdback as its Holdback Requirement.

20.2.1.1.2 If the total MW quantity of all Voluntary Holdback offered is more than the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant that offered Voluntary Holdback is assigned as its Holdback Requirement a percentage of the total confirmed need for holdback based on the ratio of the Participant's MWs of offered Voluntary Holdback to the sum of all Participants' MWs of offered Voluntary Holdback.

20.2.1.1.3 If the total MW quantity of all Voluntary Holdback offered is less than the total MW quantity of all deficient Participants' confirmed requests for holdback, then each Participant's Holdback Requirement is determined as set forth in section 20.2.1.2.

20.2.1.2 Allocation of Remaining Holdback Requirement: Sharing Calculation Results

If the total MW quantity of all Voluntary Holdback offered is less than the total MW quantity of all deficient Participants' confirmed requests for holdback, then the maximum Voluntary Holdback offered is used as the first term in the Holdback Requirement. The remaining term of the Holdback Requirement is met by application of the Sharing Calculation, and the results of the two terms are summed for each Participant. The remaining need for holdback that is not met by Voluntary Holdback is allocated among all Participants with positive Sharing Calculation results pro rata based on the ratio for each Participant of the Participant's positive Sharing Calculation result to the sum of the positive Sharing Calculation results. The

sum of these two values for each applicable Participant is the Holdback Requirement for that Participant.

20.2.2 Subregion without Central Hub

For any hour, any Subregion not containing a Central Hub, the Program Operator shall conduct an optimization-based allocation to pair surplus and deficient Participants. The allocation methodology will utilize the points at which surplus Participants can deliver their Holdback Requirement, the points at which deficient Participants can take receipt of their allocation of the total Holdback Capacity, and the transfer capability that exists to the points at which surplus Participants can deliver and the points at which deficient Participants can take receipt.

The optimization will generally attempt to prioritize (i) Voluntary Holdback; (ii) Holdback Capacity matched pursuant to the information provided per Section 19.4 on a nearest neighbor and cluster basis, allocated pro rata among Participants within such cluster; (iii) Holdback Capacity matched pursuant to the information provided and allocated among Participants within the same Subregion to the extent not matched and allocated under category (ii); and finally (iv) Holdback Capacity from Participants in another Subregion, paired with any transmission service per Section 14.3.2.

20.2.3 Absent a Holdback Requirement Transfer as described below, a Participant's Holdback Requirement for any hour of an Operating Day shall not exceed the level first set by WPP on the Preschedule Day for that Participant for that hour.

20.2.4 Any Participant may agree with any other Participant for the first Participant to transfer to the second Participant some or all of the Holdback Requirement established for the first Participant for any hour on any Operating Day. Any such Holdback Requirement Transfer shall be a bilateral arrangement settled outside the Operations Program, provided, however, that both Participants must timely notify WPP, by the time and in the manner described in the Business Practice Manuals, of such Holdback Requirement Transfer. Any necessary transmission arrangements and any transaction settlements shall be the sole responsibility of the Participants that are the parties to such bilateral arrangement.

20.2.4.1 No Holdback Requirement transfer for any hour shall be permitted if notice of such bilateral transaction is not fully reported to WPP, in the form required by the Business Practice Manuals, by 120 minutes before the start of such hour.

20.3 Release of Surplus Capacity

20.3.1 As detailed in the Business Practice Manuals, WPP will review the indicative Sharing Calculation results from the Multi-Day Ahead Assessment and to the extent the WPP determines any indicative Sharing Calculations can be reduced, it may release all or a portion of Participants' future Holdback Requirements. WPP may permit a release of future Holdback Requirements to the extent WPP has not applied a Safety Margin for such hour and (i) WPP's continued Sharing Calculations determine that no Participant has a negative indicative Sharing Calculation result for such hour; and (ii) WPP determines there is a low probability of a Sharing Event for the hour; or (iii) WPP grants a Participant's request for extenuating circumstances of all or any portion of that Participant's future Holdback Requirement for the hour.

20.3.2 Upon release of all or any portion of a future Holdback Requirement, the quantity of future Holdback Requirement so released shall no longer be subject to an Energy Deployment requirement under the Operations Program for the subject hour.

20.4 Energy Deployment

20.4.1 Participants shall provide energy during an hour, in support of any Participants with a negative Sharing Calculation result and a confirmed need for energy under the Operations Program for such hour, in accordance with WPP's calculation of the Energy Deployment for such hour. The total Energy Deployment required of all Participants that are subject to Energy Deployment shall equal the sum, in MWh for that hour, of the energy confirmed as being needed in that hour by Participants in such Subregion with negative Sharing Calculation results in such hour, to the extent that can be supported by the Program. The Energy Deployment assigned to each Participant shall not exceed that Participant's Holdback Requirement calculated on the Preschedule Day, adjusted for any applicable transfer of Holdback Requirement as allocated and assigned for the Preschedule Day, and, as further adjusted to reflect the election, made after the Preschedule Day, of any Participant with a negative Sharing Calculation result on the Preschedule Day to decline all or any part of the Holdback Capacity to which it would have been entitled based on the Holdback Requirements determined on the Preschedule Day.

20.4.1.1 In Subregions with a Central Hub, Energy Deployments required hereunder shall be delivered to the Central Hub in such Subregion, or to an alternate delivery point mutually agreed by the parties to a specific Energy Deployment, provided both parties to the transaction report such alternative delivery arrangements to WPP in the form and manner described in the Business Practice Manuals.

20.4.1.2 In Subregions without a Central Hub, Energy Deployments required hereunder shall be delivered to the receipt point and delivery point as indicated by the optimization allocation, or to an alternate delivery point mutually agreed by the parties to a specific Energy Deployment, provided both parties to the transaction report such alternative delivery arrangements to WPP in the form and manner described in the Business Practice Manuals.

20.4.2 The Energy Deployment a Participant may receive for any hour shall be no greater than the negative Sharing Calculation result calculated for such Participant for such hour. Such Participant shall confirm, by no later than 85 minutes before the start of such hour, the quantity of Energy Deployment for which it requires delivery for such hour, through the procedures outlined in the Business Practice Manuals. Any Participant that does not confirm required Energy Deployment deliveries for such hour by such deadline will be deemed to waive all deliveries of Energy Deployment under the Operations Program for such hour.

20.4.3 The Energy Deployment a Participant can be required to supply for an hour shall not exceed the final Holdback Requirement calculated for such Participant on Preschedule Day, including any duly reported exchange of Holdback Requirement, as of 85 minutes before the start of such hour.

20.4.4 WPP shall advise each Participant with a required Energy Deployment for an hour of the required MWh quantity and delivery point of such Energy Deployment by no later than 80 minutes before the start of such hour.

20.5 Safety Margin

20.5.1 WPP may establish on the Preschedule Day a Safety Margin for the WRAP Region or any identified Subregion thereof for any hour of an Operating Day when warranted by such circumstances as potential large resource trips, heavy transmission outage conditions, significant environmental conditions, or other similar regional or subregional conditions, as more fully set forth in the Business Practice Manuals.

20.5.2 Any Safety Margin so determined for an hour shall be allocated pro rata among Participants with a positive Sharing Calculation result, based on their relative shares of the sum of all positive Sharing Calculation results for such hour, provided, however, that the Safety Margin allocated to a Participant may not result in a Holdback Requirement for such Participant greater than such Participant's Sharing Calculation result. A Participant allocated holdback for a Safety Margin hereunder does not receive compensation under this Tariff for such allocation of holdback.

20.5.3 WPP shall notify all Participants of application of a Safety Margin for any hour, including in such notice the total timeframe, the MW amount, and the rationale for such Safety Margin.

20.6 Operations Program Transmission Service Requirements

Participant shall have in place, prior to the Operating Day, WRAP Qualifying Transmission for each hour of such Operating Day for which a Sharing Event has been established, in a quantity sufficient for deliveries from the Qualifying Resources relied upon in such Participant's Forward Showing Submittal to demonstrate satisfaction of such Participant's FS Capacity Requirement (or from replacement Qualifying Resources) to serve such Participant's loads during such hours. In the event a Participant has an Energy Delivery Failure, the review associated with the possible assessment of a Delivery Failure Charge on such Participant shall, as further described in the Business Practice Manuals, include whether a failure to secure sufficient WRAP Qualifying Transmission caused or contributed to such Energy Delivery Failure. For such purpose, the Participant will have been expected to have complied with the transmission service requirement stated in this subsection.

20.7 Failure to Deliver Energy Deployments

20.7.1 A Participant assigned a required Energy Deployment pursuant to Section 20.4.4 of this Tariff for any hour that fails to deliver the specified energy during such hour, and that does not obtain a waiver of its Energy Deployment obligation, shall be assessed a Delivery Failure Charge.

20.7.2 A Participant shall be deemed to have an Energy Delivery Failure if Participant fails to deliver the Energy Deployment quantity established under Section 20.4.1, absent grant of a waiver pursuant to Section 20.7.3 of this Tariff.

20.7.3 A Participant anticipating an Energy Delivery Failure should provide WPP notice of such expected Energy Delivery Failure as soon as practicable after becoming aware of the anticipated failure. Whether anticipated or not, a Participant may request a waiver of an Energy Deployment obligation after an Energy Delivery Failure has occurred. The WPP shall review all such waiver requests and shall determine whether the Participant's justification for the Energy Delivery Failure is valid and warrants waiver of its Energy Deployment obligation. The WPP also shall consider whether the Participant knew in advance, or reasonably should have known in advance, of an Energy Delivery Failure, and what efforts the Participant took to notify the WPP in advance of such Energy Delivery Failure. The procedures for addressing such waiver requests, including a non-exclusive list of valid justifications for an Energy Delivery Failure shall be set forth in the Business Practice Manuals. A Participant denied a waiver request hereunder may appeal such denial to the Board of Directors in accordance

with the procedures and deadlines set forth in the Business Practice Manuals. In such event, the requested waiver shall be denied or permitted as, when and to the extent permitted by the Board, in accordance with the procedures and timing set forth in the Business Practice Manuals. WPP shall report on the disposition of each waiver request received.

20.7.4 The Delivery Failure Charge for each hour shall be the Charge Rate applicable for such hour times the MWhs of energy that were required to be, but were not, delivered pursuant to an Energy Deployment during such hour. The Charge Rate shall be the higher of the Day-Ahead price or Real-Time price provided by the Day-Ahead Applicable Price Index and Real-Time Applicable Price Index as specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery, respectively, for the hour, times a Delivery Failure Factor, as follows:

20.7.4.1 If the deficit is fully covered by other Participants through the Operations Program, in each instance of failure, the Delivery Failure Factor shall be five for the first non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; ten for the second non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; and twenty for the third and subsequent non-waived Energy Delivery Failures in a Cumulative Delivery Failure Period. For purposes of applying the Delivery Failure Factors under this Section 20.7.4 or the review referenced in Section 20.7.5, multiple Energy Delivery Failures occurring in one day shall be treated as a single instance of failure.

20.7.4.2 If the deficit is not fully covered by other Participants through the Operations Program, the Delivery Failure Factor is twenty-five for the first non-waived Energy Delivery Failure in a Cumulative Delivery Failure Period; and fifty for the second and subsequent non-waived Energy Delivery Failures (regardless of whether the prior instance(s) of delivery failure were fully covered by other Participants) in a Cumulative Delivery Failure Period.

20.7.4.3 Revenues from Delivery Failure Charges assessed in cases where the deficit was fully satisfied by other Participants will be used to reduce WPP costs that are recovered under Schedule 1, WRAP Administration Charge. Revenues from Delivery Failure Charges assessed in cases where the deficit was not fully met by other Participants will be collected by the WPP and provided to the Participant that had an unserved deficit.

20.7.4.4 Notwithstanding anything to the contrary in this Section 20.7.4, the Delivery Failure Charges assessed on a Participant, regardless of application of the Delivery Failure Factor, shall not

exceed, over the course of a Summer Season and the immediately succeeding Winter Season, the dollar amount that, as more fully detailed in the Business Practice Manuals, would have been assessed cumulatively under Section 17 as Deficiency Charges if the Participant had one or more Forward Showing Capacity Deficiencies over the course of such Summer Season and Winter Season in the same MW amounts as the highest MW amount of Delivery Failure experienced by such Participant in each Month of such Summer Season and Winter Season. The maximum dollar amount described herein shall be calculated on an ongoing basis during such Summer Season and Winter Season, and increased or reduced accordingly, without awaiting the end of the combined period of such Summer Season and Winter Season.

20.7.5 In addition to assessment of the Delivery Failure Charge, a third or subsequent instance of non-waived delivery failure, when all such delivery failures are fully covered by other Participants, or a second or subsequent instance of non-waived delivery failure when such instance is not fully covered by other Participants, will subject the Participant to review for expulsion from the WRAP.

20.8 Voluntary Response to Increased Deficiencies Identified After Preschedule Day

20.8.1 A Participant that identifies an unmet need for energy for any hour of an Operating Day that is outside of assistance provided or to be provided by Holdback Requirements or Energy Deployments established hereunder may, in accordance with procedures specified in the Business Practice Manuals, notify WPP of the need for such assistance. WPP will establish a portal or other procedure, as specified in the Business Practice Manuals, to facilitate provision of assistance, on a voluntary, bilateral basis, by other Participants to the Participant that identified the unmet need. Compensation, terms, and conditions of any resulting bilateral transactions will be determined by the affected parties outside of this Tariff. While Participant response to any such notification is voluntary, Participants are encouraged to provide assistance to other Participants in the circumstances described in this subsection, in consideration of the mutual support each Participant has agreed to provide to each other Participant by its agreement to participate in the WRAP, including this Operations Program.

21. Operations Program Settlements

21.1 Nature of Operation Program Settlements

21.1.1 Operations Program settlements are bilateral transactions; they are not purchases from or sales to a central market.

21.1.2 Operations Program transactions use existing transaction systems and processes.

21.1.3 The WPP will calculate and post settlement quantities and prices based on the Energy Deployment and Holdback Requirement, in accordance with procedures specified in the Business Practice Manuals for provision of transaction information by and among Participants and WPP, but WPP has no role in the transaction itself. WPP is not a settlement entity.

21.1.4 Settlement Prices calculated under Section 21.2 shall recognize pricing differences among Subregions. Where the seller and buyer are located in the same Subregion, the Applicable Price Index shall be the price index specified for that Subregion in the Business Practice Manuals. Where the seller and buyer are located in different Subregions, the following components of the settlement price calculation in Section 21.2 will be calculated using the Applicable Price Index for the Subregion that provides the higher index price: (i) Possible Block Sale Revenue; (ii) Total Settlement Price; (iii) Energy Declined Settlement Price; and (iv) Realtime Value of Unheld Energy. If a third participant is involved by providing transmission service rights between Subregions, the Participant that provided holdback or Energy Deployment shall receive the settlement price of the Subregion from which the holdback or Energy Deployment was sourced, and the Participant that provided Subregion to Subregion transmission service rights pursuant to Section 19.4 shall receive the difference between each Subregion's Total Settlement Price, or zero, whichever is greater.

21.2 Settlement Price Calculation. Settlement prices shall be calculated in accordance with the following, as more fully set forth in the Business Practice Manuals.

21.2.1 A Participant assigned a Holdback Requirement on a Preschedule Day for any hour of an Operating Day shall be paid the Holdback Settlement Price times the MW quantity of the Holdback Requirement. A Participant that provides energy to another Participant pursuant to an Energy Deployment shall be paid the Energy Declined Settlement Price, defined in Section 21.2.4, times the MWhs of energy provided to such other Participant, and its total payments shall be reduced by the Energy Declined Settlement Price times the MWhs of energy that would have been provided under a Holdback Requirement but were declined by the other Participant. A Participant

assigned a Holdback Requirement also shall be paid, when applicable, a Make Whole Adjustment, as provided below in Section 21.2.5.

21.2.2 A Participant that had a negative Sharing Calculation result for any hour of an Operating Day, which was incorporated in the calculation of Holdback Requirements of any Participants for such hour, determined as of the Preschedule Day, shall pay the Holdback Settlement Price times the MW quantity of such negative Sharing Calculation result. In addition, any Participant that had a negative Sharing Calculation result that was incorporated in the calculation of a Holdback Requirement shall contribute to the payment of the Make Whole Adjustment based on its negative Sharing Calculation. A Participant that declines energy that would have been provided under a Holdback Requirement shall be credited the Energy Declined Settlement Price times the MWhs of energy declined by such Participant.

21.2.3 The Holdback Settlement Price shall equal the Total Settlement Price minus the Energy Declined Settlement Price.

21.2.4 The Energy Declined Settlement Price shall equal the Applicable Real-Time Index Price for the hour.

21.2.5 The Make Whole Adjustment is applied in the event that the settlement revenue and the estimated value of the non-dispatched energy is less than the estimated revenues the selling entity would have received had such entity not been subject to a Holdback Requirement and had sold a day-ahead block of energy with a MW value equal to the maximum amount of Holdback Requirement for the hours in the block. The Make Whole Adjustment has a minimum value of zero and is determined as follows:

Make Whole Adjustment (when applicable) =
Maximum of (Possible Block Sale Revenue
– Final Settlement Revenue
– Realtime Value of Declined Energy
– Realtime Value of Unheld Energy, 0)

Where:

Realtime Value of Declined Energy = Energy Declined × Energy Declined Settlement price

provided that Declined Energy is only applicable to those hours where there was a positive Holdback Requirement.

Realtime Value of Unheld Energy = (Maximum Holdback MW in Block – Holdback MW Requested) × Applicable Index Price

21.2.6 The Total Settlement Price used in the above calculations shall be determined in accordance with the following formula:

Total Settlement Price = Maximum of (Minimum of (Hourly Shaping Factor × Day Ahead Applicable Index Price × 110%, 2000 $/MWh), 0)

where:

Hourly Shaping Factor is based on the most recent High-Priced Day for the relevant season, defined as a day in which at least one hour has a system marginal energy cost ("SMEC") greater than $200/MWh, and shall be calculated as follows:

1 + {[CAISO Hourly Day Ahead SMEC - CAISO Average Day Ahead SMEC (on- or off-peak hours)] / [CAISO Average Day Ahead SMEC (on- or off-peak hours)]}

Day-Ahead Applicable Index Price is the day-ahead heavy load/light load ICE Index price or average Locational Marginal Price that is specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery. If transmission via Section 14.3.2 was used to facilitate holdback, the Applicable Index Price shall be the higher of the two subregional day-ahead index prices for that portion of the holdback.

Real-Time Applicable Index Price is the real-time index price that is specified in the Business Practice Manuals for the Subregion applicable to the location of the delivering entity, applicable to the day and hour of the energy delivery.

SCHEDULE 1

WESTERN RESOURCE ADEQUACY PROGRAM ADMINISTATIVE COST RECOVERY CHARGE

The Western Power Pool's Costs of administering and operating the Western Resource Adequacy Program including, without limitation, all costs incurred or obligated by WPP as Program Administrator, all costs paid or payable by WPP to the Program Operator or other service providers, all costs of the Board of Directors in directing, supervising, or overseeing the WRAP, and the costs of maintaining a reasonable reserve as provided in Section 1 of this Schedule 1, shall be recovered from Participants pursuant to the charges set forth in this Schedule 1.

Section 1. WRAP Costs

1. As used herein, Costs shall mean WPP's costs, expenses, disbursements and other amounts incurred (whether paid or accrued) or obligated of administering and operating the WRAP as described above, including, without limitation, operating expenses, general and administrative expenses, costs of outside services, taxes, fees, capital costs, depreciation expense, interest expense, working capital expense, any costs of funds or other financing costs, and the costs of a reasonable reserve as provided herein.

2. The Costs included in a WRAP Administration Charge assessed for a Month shall be the Costs determined as being incurred for that Month, including, without limitation, for each Month, one-twelfth of any annual charge(s).

3. The Costs included in the WRAP Administration Charge for a reasonable reserve shall be those designed to establish over the first twelve months that this WRAP Administration charge is in effect an amount equal to 6% of the expected Costs, exclusive of such reserve, for one year; and to maintain such reserve thereafter at an amount equal to 6% of the expected Costs, exclusive of such reserve for the then-current year. WPP shall record on its income statement deferred regulatory expense, and WPP's balance sheet will reflect as a cumulative deferred regulatory liability, revenues collected under this Schedule 1 that are in excess of the Costs exclusive of such reserve and taking account of and including any accrued tax expense effects of this regulatory liability. The deferred regulatory liability will be reduced when after-tax WPP revenues collected under this Schedule 1 during any Month are less than the Costs exclusive of such reserve. Within thirty days after the end of each Year, to the extent WPP determines that the deferred regulatory liability exceeds 6% of WPP's revenues that were collected under this Schedule 1 during such Year, such excess amounts in the deferred regulatory liability shall be refunded evenly over the applicable billing determinant volumes in the remainder of the subsequent Year through credits to charges to then-current customers under this Schedule 1.

Section 2. WRAP Administration Charge

Each Participant shall be assessed each Month a WRAP Administration Charge equal to the sum of the Base Charge and the Load Charge,

where:

The Base Charge for each Participant equals the Base Costs divided by the number of Participants being assessed the Base Charge for the Month for which the WRAP Administration Charge is being calculated;

The Load Charge for each Participant equals the Load Charge Rate of the Load Services Costs divided by the sum of the Median Monthly P50 Peak Loads of the Participants being assessed the Load Charge for the Month for which the WRAP Administration Charge is being calculated, times that Participant's Median Monthly P50 Peak Load;

And where:

Base Costs means the Costs for the Month of the Base Services Cost Centers shown in the WRAP Cost Assignment Matrix, plus the Base Services Percentage times the Costs for that Month of the Dual Benefit Cost Centers shown below in Section 4: WRAP Cost Assignment Matrix;

Load Services Costs means the Costs for the Month of the Load Services Cost Centers shown in the WRAP Cost Assignment Matrix, plus the Load Services Percentage times the Costs for that Month of the Dual Benefit Cost Centers shown in the WRAP Cost Assignment Matrix; and

Median Monthly P50 Peak Loads means, for each Participant, the median of the Monthly P50 Peak Loads used in the FS Capacity Requirement of such Participant for two Binding Seasons corresponding to the two FS Submittal most recently validated by WPP.

If before or during a Binding Season, a Participant has need to update their Monthly P50 Peak Load for allowable reasons, those updated Monthly P50 Peak Loads will be replaced and the Median Monthly P50 Peak Load value recalculated upon validation of the change in participating load.

A Participant joining the Program will supply data such that WPP can validate Monthly P50 Peak Loads for the first two Binding Seasons for which the Participant will submit an FS Submittal for use in calculating Load Services Costs until these FS Submittals are submitted and reviewed in the normal timeframe.

Section 3. Maximum Charge Rates

3.1 Notwithstanding anything to the contrary in this Schedule 1, the sum of the Base Charges for all Months in a Year shall not exceed the Annual Maximum Base Charge of $59,000/Year, and the sum of the Load Charge Rates for all Months in a Year shall not exceed the Annual Maximum Load Charge Rate of $199/MW. WPP shall, to the extent reasonably practicable, provide two-months' notice prior to WPP's filing at FERC of an application to change the Maximum Base Charge or the Maximum Load Charge Rate, provided that nothing herein shall limit the Board of Director's authority and discretion to seek at FERC a change in the maximum rates in the time and manner the Board determines in the best interests of the Western Resource Adequacy Program. For purposes of clarity, these specified maximum rates on the Base Charge and the Load Charge do not limit the level of the Cash Working Capital Support Charge established under Section 5 of this Schedule 1, nor do they limit the amount of the default Allocation assessment provided under Part I of this Tariff.

3.2 To facilitate Participant planning, the WPP shall prepare, and provide to the RAPC, good faith, non-binding estimates of: (i) reasonably anticipated WRAP budgets for three Years beyond the most recently approved WRAP budget, including sensitivity analyses for reasonably identified major contingencies; (ii) reasonably anticipated numbers of Participants and MWs of Winter and Summer P50 Loads for each such Year; and (iii) reasonably anticipated highest monthly Base Charges and Load Charge Rates for each such Year. All assumptions and estimates in such forecasts and analyses shall be in WPP's sole discretion, which may be informed by RAPC discussion of such topics.

Section 4. WRAP Cost Assignment Matrix

	BASE COSTS	LOAD COSTS	DUAL BENEFIT
Program Administration (non-participant)		100%	
Program Administration (Participant engagement, RAPC facilitation)	100%		
WRAP portion of WPP BOD costs			50%/50%
Program Operations Staffing and Overhead		100%	
Program Operations Technology		100%	
Legal Services		100%	
Independent Evaluator		100%	

Section 5. Cash Working Capital Support Charge

5.1 In addition to the WRAP Administration Charge, each Participant shall be assessed a Cash Working Capital Support Charge, to support WPP's maintenance of sufficient funds on hand to make payments required for the operation and administration of the WRAP on a timely basis. Cash Working Capital Support Charges shall be designed to maintain a Cash Working Capital Fund that, at its maximum level over a twelve-month cycle, equals approximately nine-twelfths of the expected annual payment due from the WPP to the Program Operator for its Program Operator services.

5.2 A Participant shall pay a Cash Working Capital Support Charge no later than thirty days after that Participant executes a WRAPA. The Cash Working Capital Support Charge due following WRAPA execution equals the Cash Working Capital Support Charge Rate, calculated as the Cash Working Capital Fund at its required maximum twelve-month cycle level divided by the sum of the Median Monthly P50 Peak Loads of all Participants, times that Participant's Median Monthly P50 Peak Load.

5.3 To the extent the Cash Working Capital Fund is adequately funded at the time a new Participant executes a WRAPA, the revenue from such Participant's payment of the Cash Working Capital Support Charge shall be distributed to all Participants that previously have paid a Cash Working Capital Support Charge, pro rata based on the Median Monthly P50 Peak Loads of all Participants that have previously paid such charge.

5.4 To the extent, and at such time, WPP determines that an incremental addition to the Cash Working Capital Fund is needed due to such causes as, for example, an expected increase in the annual payment to the Program Operator, each Participant shall be assessed an Incremental Cash Working Capital Support Charge equal to the desired incremental addition, divided by the sum of the Median Monthly P50 Peak Loads of all Participants being assessed the Incremental Cash Working Capital Support Charge for the Month for which the Incremental Cash Working Capital Support Charge is being calculated, times that Participant's Median Monthly P50 Peak Load.

ATTACHMENT A

Western Resource Adequacy Program Agreement

This Western Resource Adequacy Program Agreement ("Agreement") dated as of _____ ("Effective Date") is entered into by and between Western Power Pool Corporation ("WPP") and _____ ("Participant"). WPP and Participant are each sometimes referred to in the Agreement as a "Party" and collectively as the "Parties."

In consideration of the mutual promises contained herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, the Parties agree as follows:

1. The Parties agree that this agreement shall be governed by the rates, terms, and conditions of the Western Resource Adequacy Program Tariff ("Tariff") and all such rates, terms, and conditions contained therein are expressly incorporated by reference herein. All capitalized terms that are not otherwise defined herein shall have the meanings ascribed by the Tariff.

2. Participant wishes to participate in the Western Resource Adequacy Program ("WRAP") administered by WPP under the Tariff.

3. Participant certifies that it satisfies all of the following qualifications:

    3.1 Participant is a Load Responsible Entity as that term is defined in the Tariff.

    3.2 Participant commits to complying with all applicable terms and conditions of WRAP participation as set forth in the Tariff and Business Practice Manuals adopted thereunder, including all Forward Showing Program and Operations Program requirements.

4. Participant will register all resources and supply contracts and shall disclose any other obligations associated with those resources and supply contracts.

5. Participant represents and warrants that it is authorized by all relevant laws and regulations governing its business to enter into this Agreement and assume all rights and obligations thereunder.

6. It is understood that, in accordance with the Tariff, WPP, as authorized by its independent Board of Directors, may amend the terms and conditions of this Agreement or the Tariff by notifying the Participant in writing and making the appropriate filing with FERC, subject to any limitations on WPP's authority to amend the Tariff as set forth therein.

7. Participant agrees to pay its share of all costs associated with the WRAP, as calculated pursuant to Schedule 1 of the Tariff. The manner and timing of such payment shall be as specified in Schedule 1 of the Tariff.

8. WPP agrees to provide all services as set forth in the Tariff.

9. Term and termination. This Agreement shall commence upon the Effective Date and shall continue in effect until terminated either by WPP by vote of its Board of Directors or by Participant's withdrawal as set forth herein. WPP and Participant agree that participation in the WRAP is voluntary, subject to the terms and conditions of this Agreement and the Tariff. The date upon which a Participant's withdrawal is effective and its participation in the program terminates is referred to as the "Withdrawal Date."

9.1 Normal Withdrawal: In general, Participant may withdraw from this Agreement by providing written notice to WPP no less than twenty-four months prior to commencement of the next binding Forward Showing Program period. Once notice has been properly given, Participant remains in a "Withdrawal Period" until the Withdrawal Date.

9.1.1 During Participant's Withdrawal Period, Participant remains subject to all requirements and obligations imposed by the Tariff and this Agreement, including but not limited to all obligations imposed in the Forward Showing Program and Operations Program and obligation to pay Participant's share of all costs associated with the WRAP.

9.1.2 All financial obligations incurred prior to and during the Withdrawal Period are preserved until satisfied.

9.1.3 During the Withdrawal Period, Participant is not eligible to vote on any actions affecting the WRAP that extend beyond the Withdrawal Period.

9.2 Expedited Withdrawal: Participant may withdraw from this agreement with less than the required twenty-four month notice as set forth below. Participant shall negotiate with WPP regarding the timing of the Expedited Withdrawal.

9.2.1 Extenuating Circumstances: The following such events and circumstances shall constitute "extenuating circumstances" justifying a withdrawal on less than twenty-four months. Participant invoking an extenuating circumstance shall negotiate with WPP regarding potential ways to minimize the impact of the expedited withdrawal on all other Participants and WPP. Such extenuating circumstances and any mitigation plan to minimize the impact of the expedited withdrawal must be reviewed and approved by the Board of Directors prior to termination of Participant's WRAP obligations. Regardless of the extenuating circumstance, all financial obligations incurred prior to the Withdrawal Date remain in effect until satisfied.

9.2.1.1 A governmental authority takes an action that substantially impairs Participant's ability to continue to

participate in the WRAP to the same extent as previously; provided, however, that Participant shall be obligated to negotiate with WPP regarding potential ways to address the impact of the regulatory action without requiring a full withdrawal of Participant from the WRAP if possible.

9.2.1.2 Continued participation in the WRAP conflicts with applicable governing statutes or other applicable legal authorities or orders.

9.2.1.3 Participant voted against a RAPC determination and disagreed with a Board of Directors decision to release composite or aggregated data under Section 10.2.1 of the Tariff, provided that such right to expedited withdrawal is exercised promptly after the first time that the Board of Directors determines that the form and format of composite or aggregated data sufficiently protects against the release of confidential or commercially sensitive Participant data. Failure to exercise this right promptly upon the first occurrence of the Board of Directors voting on a specific form and format of composite or aggregated data shall constitute a waiver of the right to expedited withdrawal for any future disclosures of composite or aggregated data in the same or substantially similar form and format.

9.2.1.4 FERC or a court of competent jurisdiction requires the public disclosure of a Participant's confidential or commercially sensitive information, as further described in Section 10.5 of the Tariff; provided however that such right to expedited withdrawal shall be exercised promptly upon the exhaustion of all legal or administrative remedies aimed at preventing the release.

9.2.2 Exit Fee: If the impact of Participant's withdrawal on WRAP operations can calculated with a high degree of confidence and mitigated by the payment of an "exit fee" to be calculated by WPP, an expedited withdrawal will be permitted. Such exit fee shall include (but not be limited to): (i) any unpaid WRAP fees or charges; (ii) Participant's share of all WRAP administrative costs incurred up to the next Forward Showing Program period; (iii) any costs, expenses, or liabilities incurred by WPP and/or the Program Operator directly resulting from Participant's withdrawal; and (iv) any costs necessary to hold other participants harmless from the voluntary expedited withdrawal. The exit fee may be waived to the extent that it would violate any federal, state, or local statute, regulation, or ordnance or exceed the statutory authority of a federal

agency. The exit fee shall be paid in full prior to the Withdrawal Date.

9.2.3 Amendments to Section 3.4 of the Tariff: In the event that amendments to Section 3.4 of the Tariff are approved by the RAPC and Board of Directors, a Participant that voted against such a change may withdraw with less than the required twenty-four month notice, provided that the Participant satisfy all obligations in the Forward Showing Program and Operations Program and satisfy all other financial obligations incurred prior to the date that the amendments to Section 3.4 of the Tariff are made effective by FERC.

9.2.4 Expulsion: The Board of Directors, in its sole discretion, may terminate Participant's participation in the WRAP and may terminate this Agreement with Participant for cause, including but not limited to material violation of any WPP rules or governing documents or nonpayment of obligations. Prior to exercising such right to terminate, the Board of Directors shall provide notice to Participant of the reasons for such contemplated termination and a reasonable opportunity to cure any deficiencies. Such Board of Directors termination shall be after an affirmative vote consistent with the Board of Directors standard voting procedures. Such termination shall not relieve the Participant of any financial obligations incurred prior to the termination date, and WPP may take all legal actions available to recover any financial obligations from Participant.

10. No Waiver of Non-FERC-Jurisdictional Status. If Participant is not subject to the jurisdiction of FERC as a public utility under the Federal Power Act, Participant shall not be required to take any action or participate in any filing or appeal that would confer FERC jurisdiction over Participant that does not otherwise exist. Participant acknowledges that FERC has jurisdiction over the WRAP, including Participant's activities in the WRAP.

[SIGNATURE BLOCKS]

WESTERN POWERPOOL

Western Resource Adequacy Program

107 Forward Showing Deficiency Charge

100 – Forward Showing

Revision History

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107 Forward Showing Deficiency Charge

1. Introduction

A Participant that submits a Forward Showing Demonstration that the Program Operator or Program Administrator finds to be deficient, and that does not cure that deficiency prior to the end of the prescribed Cure Period, is assessed a Deficiency Charge. BPM 107 provides implementing details and practices relevant to the calculation of the Deficiency Charge, and allocation of the revenues received from collection of Deficiency Charges.

1.1 Intended Audience

BPM 107 is intended for the Western Power Pool (WPP) Western Resource Adequacy Program (WRAP) Participants and other interested individuals or entities. BPM 107 is particularly useful for those individuals that are responsible for, and support, participation in the Forward Showing Program.

1.2 What You Will Find in This Manual

BPM 107 contains information regarding the calculation of the Deficiency Charge, including calculation of Capacity Deficiencies, Transmission Deficiencies, and Deficiency Charges, and allocation of revenues received from the collection of Deficiency Charges. Certain adjustments to the Deficiency Charge that are available during the Transition Period are addressed in *BPM 109 Forward Showing Transition Period*.

1.3 Purpose

To provide implementing details and practices relevant to the calculation of the WRAP Deficiency Charge.

Nothing in BPM 107 changes in any way the exclusive authority of the independent Board of Directors, under Section 3.1 of the Tariff, to approve and direct WPP to file Tariff amendments and the independent Board's ultimate authority over all aspects of the WRAP.

1.4 Definitions

All capitalized terms that are not otherwise defined in BPM 107 have the meaning set forth in the Tariff or in another BPM.

Catastrophic Failure Monthly Report: As defined in *BPM 108 Forward Showing Submittal Process*.

Cure Period: As defined in *BPM 108 Forward Showing Submittal Process*.

Monthly P50 Peak Load Forecast: The P50 Peak Load Forecast for each month in a given Binding Season.

Monthly Transmission Exception Check-In: As defined in *BPM 108 Forward Showing Submittal Process*.

Summer % Deficit: A value greater than zero that is the Aggregate Capacity Deficiency for the WRAP as a whole for a Summer Season divided by the sum of the maximum Monthly P50 Peak Load Forecasts for each Participant for that Summer Season.

Winter % Deficit: A value greater than zero that is the Aggregate Capacity Deficiency for the WRAP as a whole for a Winter Season divided by the sum of the maximum Monthly P50 Peak Load Forecasts for each Participant for that Winter Season.

2. Background

The WRAP is a regional resource adequacy program in which Participants demonstrate, in advance of a defined season when resources may need to be deployed, that they have sufficient resources to meet their expected peak loads and a reserve margin. The WRAP imposes standards and requirements related to such matters as the resources that qualify to meet resource adequacy objectives, the calculation of peak loads, and the required minimum reserve margin. Each Participant is required to submit a Forward Showing Submittal in advance of each Binding Season to demonstrate a minimum required quantity of capacity, known as the FS Capacity Requirement, and a minimum required quantity of transmission service rights, known as the FS Transmission Requirement. The WRAP provides for imposition of significant charges on Participants that do not show in advance sufficient resources to meet their loads. Any Participant that fails to cure identified deficiencies in its Forward Showing Submittal is assessed a Deficiency Charge. Specifically, if a Participant fails during the Cure Period to demonstrate that it has resolved any identified deficiencies in either or both of its FS Capacity Requirement and/or its FS Transmission Requirement, the Participant will be assessed a Deficiency Charge for each Month for which a deficiency is identified.

3. Calculating the Deficiency Charge

3.1 Calculating the Deficiency

Deficiencies are calculated for each Month of a Binding Season, in accordance with the following:

Definition: Monthly Deficiency
$$\textit{Participant's Monthly Capacity Deficiency} = \textit{Maximum}(\textit{Monthly FS Capacity Requirement} - \textit{Monthly Portfolio QCC}, 0)$$ $$\textit{Participant's Monthly Transmission Deficiency} = \textit{Maximum}((75\% \times \textit{Monthly FS Capacity Requirement}) - (\textit{Monthly Transmission Demonstrated} + \textit{Approved Monthly Transmission Exemptions}), 0)$$
Where: **Monthly FS Capacity Requirement** is reduced to account for approved catastrophic resource failure exemption requests submitted at the time of Forward Showing Submittal (see *BPM 108 Forward Showing Submittal Process*) and **Monthly Transmission Demonstrated** is the amount of transmission service rights submitted by a Participant per the requirements in Tariff Section 16.3 and validated by the Program Administrator as per *BPM 108* *Forward Showing Submittal* for each month. Then: $$\textit{Monthly Deficiency} = \textit{Maximum of } (\textit{Monthly Capacity Deficiency}, \textit{Monthly Transmission Deficiency})$$

The Transition Period rules, as discussed in *BPM 109 Forward Showing Transition Period* may, depending on a Participant's circumstances, change or adjust calculation of Deficiencies during the Transition Period.

3.2 Calculating the Deficiency Charge

Deficiency Charge calculations take account of multiple Monthly Deficiencies within a Forward Showing for a single Binding Season, and multiple Deficiencies across a Forward Showing Year, consisting of a Summer Season and the immediately succeeding Winter Season, in accordance with the following formulas and principles. The formulas are drafted to apply to an individual Participant as to its Forward Showings for a Forward Showing Year.

The Monthly Deficiency with the highest MW value in a Forward Showing for a Summer Season shall be assessed a Deficiency Charge as calculated per Formula 1.

Formula 1: Maximum Summer Month
$\boldsymbol{Max\ Monthly\ Summer\ Deficiency} \times \boldsymbol{Annual\ CONE} \times \mathbf{1000} \times \boldsymbol{Summer\ Season\ Annual\ CONE\ Factor}$
where the Annual CONE is expressed as a dollars per kW-year calculated in accordance with Section 3.3.1, and where Summer Season Annual CONE Factor is determined in accordance with Section 3.3.2.

Any other Monthly Deficiency in the Participant's Forward Showing for the same Summer Season shall be assessed a Deficiency Charge as calculated per Formula 2.

Formula 2: Other Summer Months
$\boldsymbol{Additional\ Summer\ Deficiency} \times (\boldsymbol{Annual\ CONE}\ /\mathbf{12}) \times \mathbf{1000} \times \mathbf{200\%}$
where the Annual CONE is expressed as a dollars per kW-year calculated in accordance with Section 3.3.1.

Any Monthly Deficiency in the Forward Showing for the immediately succeeding Winter Season with a higher MW value than the highest MW value of the Monthly Deficiency in the Summer Season shall be assessed a Deficiency Charge on the incremental MW value above the Summer Season as calculated per Formula 3.

Formula 3: Maximum Winter Month
$\boldsymbol{Maximum\ of}\ (\boldsymbol{Max\ Winter\ Deficiency} - \boldsymbol{Max\ Summer\ Deficiency}, \mathbf{0}) \times \boldsymbol{Annual\ CONE} \times \mathbf{1000} \times \boldsymbol{Winter\ Season\ Annual\ CONE\ Factor}$
where the Annual CONE is expressed as a dollars per kW-year calculated in accordance with Section 3.3.1, and where Winter Season Annual CONE Factor is determined in accordance with Section 3.3.2.

If there is a Monthly Deficiency in the Winter Season with a higher MW value than the highest MW value of any Monthly Deficiency in the Summer Season, the Monthly Deficiency with the highest MW value in the Summer Season shall be assessed an additional Deficiency Charge calculated per Formula 2.

Any other Monthly Deficiency in the Participant's Forward Showing Submittal for the same Winter Season shall be assessed a Deficiency Charge as calculated per Formula 4.

Formula 4: Other Winter Months
$\boldsymbol{Additional\ Winter\ Capacity\ Deficiency} \times (\boldsymbol{Annual\ CONE}/\mathbf{12}) \times \mathbf{1000} \times \mathbf{200\%}$
where the Annual CONE is expressed as a dollars per kW-year calculated in accordance with Section 3.3.1.

The Transition Period rules, as discussed in *BPM 109 Forward Showing Transition Period* may, depending on a Participant's circumstances, change or adjust calculation of Deficiency Charges during the Transition Period.

~~Should a Subregion fail to achieve Critical Mass in a Binding Season, Participants electing to participate as Non-Binding Participants will not be subject to Deficiency Charges under the FS Program as described in Section 7.~~

3.3 Determining Certain Components of the Deficiency Charge Calculation

3.3.1 Cost of New Entry

The Cost of New Entry, also known as CONE, is used in the Deficiency Charge calculation as an indication of the type of cost a deficient Participant avoids by not having sufficient capacity to serve its peak loads. It is not intended to reflect any Participant's actual avoided capacity costs or to establish any precedent as to the types of resources any Participant can or should obtain to meet their marginal capacity needs, or that any type of resource is the expected marginal capacity resource in the WRAP Region or any Subregion.

In accordance with the Tariff, CONE is the estimated cost of a hypothetical new peaking natural gas-fired generation facility. The CONE estimate is based on publicly available information relevant to the estimated annual capital and fixed operating costs of a hypothetical natural gas-fired peaking facility. The estimate of CONE does not consider net revenue from the sale of capacity, energy, or ancillary services from the hypothetical facility, nor does it consider variable operating costs necessary for generating energy.

The Program Administrator posts on its website the current value of CONE, along with key supporting calculations and information that materially affects the estimate. The Program Administrator may initiate a change to CONE at any time. The Program Administrator reviews the CONE estimate annually, but is not required to change the

CONE annually, and can initiate a change to CONE more frequently than annually. Any proposed changes in the CONE are subject to review through the stakeholder process for program rule changes as outlined in *BPM 301 Program Review Committee Workplan Development and Approval*, *BPM 302 Program Review Committee Proposal Development and Consideration*, and *BPM 303 Expedited Review Process*.

3.3.2 Summer Season and Winter Season Annual CONE Factors

The Deficiency Charge calculation uses a CONE Factor to reflect that individual Participant deficiencies are of even greater concern when the Region as a whole is expected to be short of targeted capacity needs. Per the Tariff, there are separate CONE Factors for each Winter Season and each Summer Season, depending on the total deficiency of the WRAP Region.

The Summer Season Annual CONE Factor varies based on the ratio ("Summer % Deficit") of the Aggregate Capacity Deficiency for the WRAP Region (all Participants) that Summer Season, divided by the aggregated maximum Monthly P50 Peak Load Forecast of all Participants for the Summer Season, as follows:

1) If the Summer % Deficit is less than or equal to 1%, the Summer Season Annual CONE Factor = 125%

2) If the Summer % Deficit is greater than 1% but less than or equal to 2%, the Summer Season Annual CONE Factor = 150%

3) If the Summer % Deficit is greater than 2% but less than or equal to 3%, the Summer Season Annual CONE Factor = 175%

4) If the Summer % Deficit is greater than 3%, the Summer Season Annual CONE Factor = 200%

The Winter Season Annual CONE Factor varies based on the ratio ("Winter % Deficit") of the Aggregate Capacity Deficiency for the WRAP Region (all Participants) that Winter Season, divided by the aggregated maximum Monthly P50 Peak Load Forecast of all Participants for the Winter Season, as follows:

1) If the Winter % Deficit is less than or equal to 1%, the Winter Season Annual CONE Factor = 125%

2) If the Winter % Deficit is greater than 1% but less than or equal to 2%, the Winter Season Annual CONE Factor = 150%

3) If the Winter % Deficit is greater than 2% but less than or equal to 3%, the Winter Season Annual CONE Factor = 175%

4) If the Winter % Deficit is greater than 3%, the Winter Season Annual CONE Factor = 200%

If there is no deficiency in the Summer or Winter Binding Season, there is no Summer % Deficit or Winter % Deficit.

If a Participant incurred any FS Deficiency Charges in a Forward Showing Year, then for the immediately following Forward Showing Year, both the Summer Season Annual CONE Factor and the Winter Season Annual CONE Factor shall be 200% for such Participant.

A detailed example is provided in the FS Deficiency Charge Examples document, which is posted on the WPP website.

4. Dispute Resolution Process

Nothing in this BPM limits the ability of a Participant that believes it has been assessed a Deficiency Charge in error from raising such concerns with the Program Administrator staff or invoking the Tariff dispute resolution process.

5. Timing of Deficiency Charge Revenue Collection

Any Deficiency Charges will be calculated and invoiced to deficient Participants within 45 Days following the end of the Cure Period for each season, or seven Days following a Participant's failure to timely submit a required Catastrophic Failure Monthly Report or Monthly Transmission Exception Check-In (see *BPM 108 Forward Showing Submittal Process*).

6. Allocation of Revenues from Deficiency Charges

To the extent WPP collects payment of Deficiency Charges for a Binding Season, revenues from those collected Deficiency Charges will be allocated among those Participants with no Deficiency Charges for that Binding Season, pro rata based on each non-deficient Participant's share of all such Participants' Median Monthly P50 Peak Loads consistent with Schedule 1 of the Tariff. WPP will distribute this revenue only after the deadline for Internal Dispute Resolution request for a Deficiency Charge has passed and no Internal Dispute Resolution request has been requested; or, alternatively, after a timely request for dispute resolution has been made and all proceedings related to that dispute resolution have been exhausted. Participants have

no entitlement to receive revenues from Deficiency Charges except to the extent such charges are assessed, invoiced, and collected by WPP.

The Transition Period rules, as discussed in *BPM 109 Transition Period* may, depending on a Participant's circumstances, change, or adjust the allocation of Deficiency Charge revenues during the Transition Period.

~~7. Critical Mass and Non-Binding Participation~~

~~After the Transition Period as described in *BPM 109 Transition Period*, in the scenario that a Subregion fails to meet a sufficient amount of load or number of Participants for a Participant's selected Transition Binding Season or any future Binding Seasons, Participants within the affected Subregion may elect to be Non-Binding for the season where Critical Mass is not achieved. Table 5 below shows the minimum values for the amount of load and number of Participants needed to meet Critical Mass by Subregion.~~

~~***Table 5. Threshold load and number of Participants for Critical Mass***~~

~~Threshold Values~~	~~Northwest Subregion~~	~~Southwest and East Subregion~~
~~Load Volume~~	~~20 GW~~	~~15 GW~~
~~Participant Count~~	~~3~~	~~3~~

~~The Program Administrator will contact the Participant by emailing its Resource Adequacy Participant Committee (RAPC) representative alerting the Participant if Critical Mass in one or more of the Subregions that Participant operates in is not reached. Once the Program Administrator has notified a Subregion that Critical Mass has not been achieved, Participants within that Subregion have 30 days to provide notice from the Participant RAPC representative to WPP by email at wrap@westernpowerpool.org indicating whether they intend to participate as Non-Binding Participants in the Subregion(s) for that Binding Season.~~

~~A Participant electing to participate in a Non-Binding manner for a Binding Season outside of the Transition Period will operate under the guidelines described here:~~

1. ~~The Participant will not be subject to Deficiency Charges under the FS Program, or to mandatory Holdback Requirements as a result of a positive Sharing Calculation Result, mandatory Energy Deployments, or Delivery Failure Charges under the Operations Program.~~

2. ~~The Participant will be subject to all other FS Program requirements, including the requirement to timely provide data in connection with the Advance Assessment, the requirement to timely provide FS Submittals, and Operations~~

~~Program requirements as appropriate and detailed in *BPM 210 Binding and Non-Binding Participation in Operations Program*.~~

~~3. The Participant may participate in the Operations Program as outlined in *BPM 210 Binding and Non-Binding Participation in Operations Program*.~~

~~7.1 Binding and Non-Binding Seasons in a Forward Showing Year~~

~~In a Forward Showing Year in which a Participant participates as both a Non-Binding Participant and a Participant (with all binding WRAP obligations):~~

- ~~If a Participant will participate in a Summer Season as a Non-Binding Participant, for the purposes of calculating the maximum Monthly Deficiency for Winter, the Max Summer Deficiency (MW) is considered to be 0 MW.~~
- ~~If the Participant will participate in a Winter Season as a Non-Binding Participant, the Max Summer Monthly Deficiency remains unchanged.~~

WESTERN POWERPOOL

Western Resource Adequacy Program

109 Forward Showing Transition Period

100 – Forward Showing

Revision History

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109	0.1	RAPC Glance Version	Rebecca Sexton	8/22/2023
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109	2.0	2024-NTFP-2 Edits	Katie Gregor	1/27/25
109	3.0	Annual BPM Review	Danie Williams	3/19/2026
109	3.1	2026-EP-03 Deficiency Charge Deferral	Maya McNichol	9/4/2026

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109 Transition Period

1. Introduction

The Forward Showing (FS) Program of the Western Resource Adequacy Program (WRAP) provides for a four-year Transition Period, commencing in Summer 2025 Binding Season and ending after Winter 2028-2029 Binding Season. All Participants will participate in the Summer 2025 and Winter 2026-2027 Binding Seasons and all Binding Seasons in between as Non-Binding Participants. From Winter 2027-2028 all Participants will be Binding (excepting any Critical Mass provisions) and subject to certain charges for failure to meet or cure compliance obligations associated with Binding participation in the WRAP; however, during the Transition Period such charges may be deferred and/or reduced in certain limited circumstances. The Transition Period also provides Participants the option of Binding participation one season earlier in Summer 2027, so this season may have a mixture of Binding and Non-Binding Participants. This FS Transition Period Business Practice Manual (BPM) provides implementing details and practices relevant to the FS Program during the Transition Period. Implementing details and practices relevant to the Operations Program during the Transition Period are described separately in *BPM 210 Binding and Non-Binding Participation in Operations Program*.

1.1. Intended Audience

BPM 109 is intended for WRAP Participants and other interested individuals or entities and will be particularly useful for those responsible for their Participant organization's submission of FS Submittal and ensuring that their organization complies with WRAP FS Program requirements, whether Non-Binding or Binding, during the Transition Period.

1.2. What Will You Find in This Manual?

BPM 109 includes sections outlining practices and implementation details relevant to the Transition Period, Binding and Non-Binding participation, Excused Transition Deficits (ETDs), and the reduction in Monthly Capacity Deficiency Charges available under certain conditions for Legacy Agreements. Additionally, BPM 109 provides a mechanism for deferring and potentially reducing Deficiency Charges incurred in the Transition Period even further if the Participant meets specific eligibility criteria described in detail below.

1.3. Purpose

To provide an overview of the WRAP Transition Period activities for the FS Program that might impact business processes of current or potential Participants.

1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 109 have the meaning set forth in the Tariff or in another BPM.

Cure Period: As defined in *BPM 108 Forward Showing Submittal Process.*

Joint Contract Accreditation Form, or JCAF: As defined in *BPM 106 Qualifying Contracts*.

No-JCAF Option: Transition provision allowing a Participant to utilize Legacy Agreements without demonstration of a JCAF on a limited basis, as described in Section 6.

Transition Binding Season: For all Participants the Binding Seasons during the Transition Period from Winter 2027-2028 onwards for which the Participant is subject to the mandatory requirements of Parts II and III of the Tariff, and including Summer 2027 for Participants that opted for Binding participation one season earlier.

2. Background

The WRAP is a regional resource adequacy program in which Participants demonstrate, in advance of a defined season when resources may need to be deployed, that they have sufficient resources to meet their expected peak loads and FS Planning Reserve Margins (FSPRMs). The WRAP imposes standards and requirements related to such matters as the resources that qualify to meet resource adequacy objectives, the calculation of peak loads, and the required minimum FSPRMs. The WRAP provides for imposition of significant charges on Participants that do not show in advance sufficient resources to meet their loads. In addition, under the WRAP, Participants with surplus resources are subject to requirements in certain circumstances during the subject season to assist Participants that are resource deficient, and if a surplus Participant fails to make required energy deliveries to a deficient Participant, the surplus Participant is subject to significant charges for such delivery failure. Recognizing that not all Participants may have made all necessary arrangements and implemented all necessary business processes at the program's outset to secure WRAP-Qualifying Resources, meet the various WRAP obligations, and avoid imposition of these significant charges, the WRAP includes a four-year Transition Period. The Transition Period rules provide the possibility of reduced charges in certain specific circumstances designed to recognize that some Participants may still be in the process of securing all resources needed to ensure compliance with WRAP requirements. All Participants will be subject to Binding participation obligations starting November 1, 2027 (for the Winter 2027-2028 Binding Season), but the Transition Period rules allow each Participant the option to elect to also participate one season earlier as a Binding Participant in Summer 2027.

3. Transition from Non-Binding to Binding Seasons

The Transition Period consists of the Summer Seasons for 2025, 2026, 2027, and 2028, and the Winter Seasons for 2025-2026, 2026-2027, 2027-2028, and 2028-2029. The Winter 2027-2028 Binding Season beginning November 1, 2027, will be the first Binding Season for all Participants whose Western Resource Adequacy Program Agreement (WRAPA) is effective on September 15, 2026, unless a Participant selects Summer 2027 as its first Binding Season. Transition Period provisions will continue to apply until March 15, 2029, as noted in Table 1 below.

Table 1. Transition Period Provisions and Non-Binding/Binding Participation

Period	Participation and Provisions	
Summer 2025 through **Winter 2026-2027**	Non-Binding participation only	Transition Period provisions apply
Summer 2027	Both Binding and Non-Binding participation	
Winter 2027-2028 through **Winter 2028-2029**	Binding participation only	
Summer 2029 onwards	Binding participation only Subject to all standard WRAP requirements and obligations	

3.1. Option of Summer 2027 as First Binding Season

A Participant that executes a WRAPA on or before January 15, 2026, may notify WPP on or before January 15, 2026, of its intent to participate in the Summer 2027 Binding Season as a Binding Participant. A Participant that executes a WRAPA after January 15, 2026 and on or before September 15, 2026 may elect to participate in the Summer 2027 Binding Season as a Binding Participant by notifying WPP of such intent on or before the effective date of its WRAPA. Notification of intent to participate in Summer 2027 as a Binding Participant must be provided in email to WPP. The decision to participate as a Binding Participant in the Summer 2027 Binding Season is optional, thus Summer 2027 participation may be mixed, with some Participants participating in a Non-Binding manner, while others participate in a Binding manner.

4. Transition Period Binding Season Participation

During Transition Period Binding Seasons, a Participant will be subject to the same obligations and requirements, and have the same rights, that the WRAP Tariff establishes for the period beginning after the end of the Transition Period, except for

the WRAP Tariff provisions, as also elaborated below concerning ETDs and lack of JCAF assent for Legacy Agreements.

4.1. Non-Binding Season Participation

During Non-Binding Seasons, a Participant will not be subject to Deficiency Charges under the FS Program, or to mandatory Holdback Requirements as a result of a positive Sharing Calculation result, mandatory Energy Deployments, or Delivery Failure Charges under the Operations Program. Participants will be subject to all other FS Program requirements, including the requirement to timely provide data in connection with the Advance Assessment, the requirement to timely provide FS Submittals, and Operations Program requirements as appropriate and detailed in *BPM 210 Binding and Non-Binding Participation in Operations Program*. A Participant in a Non-Binding Season may participate in the Operations Program as outlined in *BPM 210 Binding and Non-Binding Participation in Operations Program*.

4.2. Option to Defer First Binding Season for All Participants

Within two years prior to the start of Participants' first Binding Season (Summer 2027 if any Participants opted for Binding participation one season early or Winter 2027-2028 if no Participants avail themselves of that option), a Binding Participant in that first Binding Season may request a vote of all Binding Participants in that first Binding Season to delay implementation of the first Binding Season for up to two seasons. The deferral vote may only occur for the first Binding Season of the WRAP.

Delayed implementation of the first Binding Season will only be approved if 75% of the Participants who in the first Binding Season vote in favor of the delay. Approval requires a vote of 75% of both the House and Senate vote tallies (as described in Sections 4.1.6.2.1 and 4.1.6.2.2 of the WRAP Tariff) of all Binding Participants in the first Binding Season.

This deferral option encompasses an option for the relevant Participants to vote to delay implementation only of the Operations Program portion of the first Binding Season and retain the binding FS Program portion of the first Binding Season.

If the Participants who in the first Binding Season of the WRAP vote to delay implementation of the first Binding Season, all compliance charges for the FS Program and Operations Program are automatically waived; provided that, if the Participants vote to delay implementation only of the Operations Program portion of the first Binding Season and retain the binding FS Program portion of the first Binding Season, only the effectiveness of Operations Program compliance charges is deferred.

5. Excused Transition Deficits

During a Participant's Transition Binding Seasons, FS Deficiency Charges otherwise applicable to the Participant under Section 17.1 of the WRAP Tariff, and calculated under Section 17.2, shall be reduced to a Discounted Deficiency Charge to the extent the Participant has an ETD. ETDs are not resource specific and relate to a MW quantity of the Participant's FS Capacity Requirement.

5.1. How to Obtain an ETD

To obtain an ETD during a Binding Season, the Participant must provide a Senior Official Attestation (in the form set forth in Appendix A below) attesting that the Participant or a relevant third party servicing load for which the Participant is the LRE has made commercially reasonable efforts to secure Qualifying Resources in the quantity needed to satisfy the Participant's FS Capacity Requirement for the Binding Season, but is unable to obtain Qualifying Resources in the quantity required for the Binding Season because the supply of such resources on a timely basis and on commercially reasonable terms is at that time inadequate. If the attestation relates to a third-party servicing load for which the Participant is the LRE, the Senior Official Attestation may be signed by a Senior Official of the third-party load service provider. If an ETD is requested the required attestation shall be included as part of the Participant's relevant FS Submittal (*see BPM 108 Forward Showing Submittal*). Participants may apply for ETDs in multiple Months of a Binding Season.

5.2. Limits on Megawatts to Which ETDs can be Applied

For each Month of a Binding Season during the Transition Period, ETDs are limited to a maximum permissible MW quantity per Participant per Month.

The MW limit is equal to the FSPRM applicable to a Participant for its FS Submittals for each Month in the Binding Season, multiplied by a percentage value. This percentage value decreases for each year that Transition Period provisions apply.

The percentage value is 200% for each Month of the 2027 Summer Season and 2027-2028 Winter Season, and 100% for each Month of the 2028 Summer Season and 2028-2029 Winter Season.

Table 2. Percentage Value to be Multiplied by FSPRM

Season	Percentage Value to be Multiplied by Participant FSPRM
Summer 2027	200%
Winter 2027-2028	200%
Summer 2028	100%

Winter 2028-2029	100%

For example, if the applicable FSPRM is 20% and a Participant's P50 Peak Load for June 2028 is 1000 MW, the Participant could seek an ETD for 200 MW (i.e., 20% * 1000 MW * 100% = 200 MW).

As can be seen, the MW limitation of a Participant's aggregate ETDs for each Month of a Binding Season is calculated from only the increment of the Participant's FS Capacity Requirement defined by the FSPRM, i.e., by a percentage of the Participant's P50 Peak Load. It is not defined by the sum of the Participant's P50 Peak Load plus the MW needed for the FSPRM. The reduction in the percentage factor every 12 Months, as shown in Table 2 reflects the program's expectation that Participants will use the four-year Transition Period provisions to address any gaps in their portfolio of Qualifying Resources needed to meet their FS Capacity Requirement.

5.3. Discounted Deficiency Charge once ETD is Applied

A Participant can apply ETDs to its Monthly Capacity Deficiency to reduce its Deficiency Charge. For the MW portion of its Monthly Capacity Deficiency for which it obtained ETDs, a Participant will pay a Discounted Deficiency Charge reduced by a percentage value. That percentage value will be equal to 75% for each of the 2027 Summer Season and 2027-2028 Winter Season, and 50% for each of the 2028 Summer Season and 2028-2029 Winter Season.

Table 3. Reduction of Deficiency Charge Based on ETDs

Season	Percentage Value Reduction for Portion of Monthly Capacity Deficiency to Which ETDs Have Been Applied
Summer 2027	75%
Winter 2027-2028	75%
Summer 2028	50%
Winter 2028-2029	50%

For the MW portion of its Monthly Capacity Deficiency for which it did not obtain ETDs, the Participant will be assessed a FS Deficiency Charge calculated under WRAP Tariff Section 17.2, without reduction or adjustment.

A detailed example is provided in the FS Transition Period Deficiency Charge Examples document posted on the WPP website.

As can be seen in Table 3, the percentage reduction in a Participant's Deficiency Charge becomes smaller every 12 Months, and thus its Discounted Deficiency Charge after providing an accommodation for ETDs becomes larger every 12 Months. This again reflects an expectation that Participants will use the four-year Transition Period provisions to address any gaps in their portfolio of Qualifying Resources needed to meet their FS Capacity Requirement.

6. Reduction of Monthly Capacity Deficiency Applicable to Legacy Agreements

In addition to the possible reduction in a Participant's Capacity Deficiency Charges for an ETD, a Participant may be able during the Transition Period to reduce its Monthly Capacity Deficiency to the extent the deficiency is due to the Participant's failure to obtain assent from the supplier under a Legacy Agreement to a JCAF. WRAP's general rule is that supply contracts must be resource specific. Legacy Agreements (including, for example agreements without an identified or inferred source entered under Schedule C of the Western Systems Power Pool), entered before prospective Participants in WRAP reached a consensus on the resource specific rule (October 1, 2021), are allowed an exception to that rule, but only if the Participant relying on a Legacy Agreement in its FS Submittal obtains the written assent of the supplier under the Legacy Agreement to a form which enables the Program Operator to presume a source or sources for the agreement. The Transition Period rules permit a limited further exception to that requirement (thus allowing Participants some additional time to convert or replace pre-existing Schedule C-type agreements). To obtain that relief, the Participant must provide, as part of their FS Submittal (see *BPM 108 Forward Showing Submittal*, a Senior Official Attestation (in the form set forth in Appendix B below) attesting that the Participant made commercially reasonable efforts to execute the required JCAF with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the JCAF. This transition provision is termed the No-JCAF Option.

Even with that showing, this Transition Period exception is strictly limited. A Participant using this exception, whether for one or multiple Legacy Agreements, may not reduce its Monthly Capacity Deficiency in the subject Month by a MW quantity greater than 25% times the FSPRM applicable for that Participant for the relevant Binding Season.

For example, assuming an FSPRM value of 20% for a given Month during the Transition Period, a Participant with a 1000MW P50 Peak Load in such Month may seek this exception for as much as 50 MW (20% * 1000MW * 25% = 50MW).

In addition, a Participant employing the No-JCAF Option must reduce, MW for MW, its maximum permitted use of ETDs for the same Transition Binding Season. For example,

if a Participant exercises the No-JCAF Option exception for a MW quantity equal to 20% of the Participant's FSPRM for the Summer 2028 Binding Season (which has a maximum ETD amount of 50% of the FSPRM), then the Participant may apply ETDs in an aggregate MW quantity no greater than 30% of their FSPRM for Summer 2028 (50% - 20% = 30%).

7. Adjustment of Revenue Allocations

Any Participant that exercises the No-JCAF Option or successfully applies an ETD shall not receive an allocation of revenues from the payment of Deficiency Charges as to such Binding Season.

Revenues from ETDs will be distributed to Participants, for which the Season is a Binding Transition Season, and that did not use ETDs and did not exercise the No-JCAF Option to meet their FS Capacity Requirement. A Participant that receives revenues from ETDs will not have an increase in its FS Capacity Requirement solely as a result of receipt of such revenue.

8. Forward Showing Deficiency Charge Deferral Mechanism

In addition to the Transition Period discounts and reductions described above, during the Transition Period, a Participant may obtain a deferral and possible reduction of its Forward Showing Deficiency Charge for a specific Binding Season if it satisfies the requirements set forth below and in the Tariff. Any Excused Transition Deficit as describe above would continue to apply, such that any deferral and reduction in a Deficiency Charge under this section would be applied to the Discounted Deficiency Charge allowed for a Participant.

8.1. Eligibility

In order to obtain a deferral or possible reduction to the Deficiency Charge, the Participant must if satisfy the following requirements:

- The Participant has otherwise satisfied the submission requirements for the Forward Showing Submittal, including submitting all attestations required by the Tariff and Business Practice Manuals; and
- The Participant submits a Senior Official Attestation stating that it has made commercially reasonable efforts to satisfy the WRAP Monthly FS Capacity Requirement or FS Transmission Requirement for each month of the Binding Season for which it seeks to defer its Forward Showing Deficiency Charges but has been unable to do so despite such commercially reasonable efforts.

The commercially reasonable effort must include, but is not limited to:

- Soliciting the market for capacity, such as through bilateral negotiations or an all-source request for proposal (RFP), at a volume the Participant reasonably believes would provide sufficient Qualifying Capacity Contribution value to enable the Participant to meet its Forward Showing Capacity Requirements,
- Attempting to procure WRAP Qualifying Transmission from a transmission service provider(s) or other counterparties in an amount that would satisfy the Participant's FS Transmission Requirement, and
- demonstrating outreach to WRAP Participants, facilitated with support from WPP.

A Participant may obtain a Deficiency Charge deferral and possible reduction for any or all Binding Seasons during the Transition Period if it satisfies the requirements of BPM 109 and the Tariff. A deferral granted for a particular Binding Season shall not affect the Participant's eligibility to obtain a deferral for a subsequent Binding Season, nor shall a Participant's payment of a reduced Deficiency Charge for a Binding Season impact any deferred and/or reduced Deficiency Charges for the Participant for any other Binding Season. A Participant shall not receive any deferral or reduction of Deficiency Charges for a Binding Season that occurs outside of the Transition Period; however, Binding Seasons that occur outside of the Transition Period are included in the deferral period for Deficiency Charges as shown in Table 4 and Table 5.

8.2. Calculation

For a Participant seeking a deferral and possible reduction in its Deficiency Charge for any FS Capacity Requirement or FS Transmission Requirement shortfall that it is unable to cure for a specific Binding Season, the Program Administrator will continue to calculate the applicable Deficiency Charge, including any Discounted Deficiency Charge, if applicable. A Participant receiving a deferral shall pay a percentage of its total Deficiency Charge calculated by the Program Administrator at the end of the Cure Period, and the remainder will be recorded as a deferral to be paid later, possibly at a reduced amount.

If a Participant that received a deferral of its Deficiency Charge for a Binding Season is able to satisfy its FS Capacity Requirement and FS Transmission Requirement for a subsequent Binding Season of the same season type (e.g., a subsequent Summer Season if it received a deferral for a prior Summer Season), the Participant will pay a reduced Deficiency Charge for the Binding Season for which it obtained a deferral as set forth below.

8.2.1. Calculation for Northwest and Southwest Subregions

A Participant in the Northwest or Southwest Subregion as described in BPM 102 Forward Showing Reliability Metrics that received a deferral of its Deficiency Charge for a Binding Season shall pay 15% of its total calculated Deficiency Charge for the Binding Season upon failure to cure for that Binding Season upon receipt of the Deficiency Charge invoice.

If the Participant that received a deferral of its Deficiency Charge for a Binding Season is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the next Binding Season for the same season type, the Participant shall owe no further Deficiency Charge for the Binding Season for which it obtained the deferral beyond the 15% already paid.

If the Participant that received a deferral of its Deficiency Charge for a Binding Season remains unable to satisfy its entire FS Capacity Requirement or FS Transmission Requirement for the next Binding Season of the same season type, but is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for second Binding Season of the same type after the Binding Season for which the Participant received a deferral, its total Deficiency Charge shall be reduced to 40%, with the remaining 25% (after accounting for the 15% already paid) to be paid upon receipt of the Deficiency Charge invoice.

If the Participant that received a deferral of its Deficiency Charge for a Binding Season remains unable to satisfy its entire FS Capacity Requirement or FS Transmission Requirement for the next two Binding Seasons of the same season type, but is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for third Binding Season of the same type after the Binding Season for which the Participant received a deferral, its total Deficiency Charge shall be reduced to 70%, with the remaining 55% (after accounting for the 15% already paid) to be paid upon receipt of the Deficiency Charge invoice.

If a Participant is unable to satisfy its entire FS Capacity Requirement or FS Transmission Requirement for the fourth Binding Season of the same type after the Binding Season for which it received a deferral, the Participant's deferred Deficiency Charge shall not be reduced and any outstanding balance of its total calculated 100% of the Deficiency Charge that was deferred shall be due upon receipt of the Deficiency Charge invoice upon the Participant's failure to satisfy the FS Capacity Requirement and FS Transmission Requirement for the fourth Binding Season following the Binding Season for which the Deficiency Charge was deferred.

If, at any time while a Participant's Deficiency Charge is deferred under the provisions in this section on BPM 109 and the Tariff, the Participant provides notice of its intent to withdraw from the WRAP pursuant to Section 9 of its Western Resource Adequacy Program Agreement set forth in Attachment A of the Tariff (or the equivalent provision under a Participant's non-conforming agreement on file at FERC), any deferral and reduction of the Participant's Deficiency Charge will be voided and the full Deficiency Charge calculated by the Program Administrator for any applicable Binding Season shall be due upon receipt of the Deficiency Charge invoice.

Table 4 provides the specific Binding Season in the Transition Period that a Participant may be eligible to receive a deferral and possible discount depending on when and if the Participant was able to pass a future Binding Season of the same season type.

Table 4. Deferral Schedule for Northwest and Southwest Subregions

Timing / Outcome	Total Percentage of Original Forward Showing Deficiency Charge Owed	Winter 2027-2028 Deferral Timeline	Summer 2028 Deferral Timeline	Winter 2028-2029 Deferral Timeline
Initial payment upon deficient Forward Showing	15%	Winter 2027-2028	Summer 2028	Winter 2028-2029
Participant passes next Forward Showing of same Season Type	-	Winter 2028-2029	Summer 2029	Winter 2029-2030
Participant passes second Forward Showing of same Season Type	40%*	Winter 2029-2030	Summer 2030	Winter 2030-2031
Participant passes third Forward Showing of same Season Type	70%*	Winter 2030-2031	Summer 2031	Winter 2031-2032
Participant does not pass within deferral period	100%*	Passes Winter 2031-2032 or later	Passes Summer 2032 or later	Passes Winter 2032-2033 or later
Participant exits WRAP before resolution	100%	Provides withdrawal notice before Winter 2031-2032 without passing	Provides withdrawal notice before Summer 2032 without passing	Provides withdrawal notice before Winter 2032-2033 without passing

*Amounts previously paid would be credited against the total percentage owed. For example, if the Participant pays 15% upon the deficient Forward Showing for Winter 2027-2028, does not pass the Winter 2028-2029 Forward Showing, and later passes the Winter 2029-2030 Forward Showing, the Participant must pay an additional 25%, for a total payment of 40% of the Winter 2027-2028 Deficiency Charge.

8.2.2. Calculation for Rockies Subregion

A Participant in the Rockies Subregion as described in BPM 102 Forward Showing Reliability Metrics that received a deferral of its Deficiency Charge for a Binding Season shall pay 5% of its total calculated Deficiency Charge for the Binding Season upon failure to cure for that Binding Season upon receipt of the Deficiency Charge invoice.

If the Participant that received a deferral of its Deficiency Charge for a Binding Season is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for the next Binding Season for the same season type, the Participant shall owe no

further Deficiency Charge for the Binding Season for which it obtained the deferral beyond the 5% already paid.

If the Participant that received a deferral of its Deficiency Charge for a Binding Season remains unable to satisfy its entire FS Capacity Requirement or FS Transmission Requirement for the next Binding Season of the same season type, but is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for second Binding Season of the same type after the Binding Season for which the Participant received a deferral, its total Deficiency Charge shall be reduced to 20%, with the remaining 15% (after accounting for the 5% already paid) to be paid upon receipt of the Deficiency Charge invoice.

If the Participant that received a deferral of its Deficiency Charge for a Binding Season remains unable to satisfy its entire FS Capacity Requirement or FS Transmission Requirement for the next two Binding Seasons of the same season type, but is able to satisfy its entire FS Capacity Requirement and FS Transmission Requirement for third Binding Season of the same type after the Binding Season for which the Participant received a deferral, its total Deficiency Charge shall be reduced to 50%, with the remaining 45% (after accounting for the 5% already paid) to be paid upon receipt of the Deficiency Charge invoice.

If a Participant is unable to satisfy its entire FS Capacity Requirement or FS Transmission Requirement for the fourth Binding Season of the same type after the Binding Season for which it received a deferral, the Participant's deferred Deficiency Charge shall not be reduced and any outstanding balance of its total calculated 100% of the Deficiency Charge that was deferred shall be due upon receipt of the Deficiency Charge invoice upon the Participant's failure to satisfy the FS Capacity Requirement and FS Transmission Requirement for the fourth Binding Season following the Binding Season for which the Deficiency Charge was deferred.

If, at any time while a Participant's Deficiency Charge is deferred under the provisions in this section on BPM 109 and the Tariff, the Participant provides notice of its intent to withdraw from the WRAP pursuant to Section 9 of its Western Resource Adequacy Program Agreement set forth in Attachment A of the Tariff (or the equivalent provision under a Participant's non-conforming agreement on file at FERC), any deferral and reduction of the Participant's Deficiency Charge will be voided and the full Deficiency Charge calculated by the Program Administrator for any applicable Binding Season shall be due upon receipt of the Deficiency Charge invoice.

Table 5 provides the specific Binding Season in the Transition Period that a Participant may be eligible to receive a deferral and possible discount depending on when and if the Participant was able to pass a future Binding Season of the same season type.

Table 5. Deferral Schedule for Rockies Subregion

Timing / Outcome	Total Percentage of Original Forward Showing Deficiency Charge Owed	Winter 2027-2028 Deferral Timeline	Summer 2028 Deferral Timeline	Winter 2028-2029 Deferral Timeline
Initial payment upon deficient Forward Showing	5%	Winter 2027-2028	Summer 2028	Winter 2028-2029
Participant passes next Forward Showing of same Season Type	-	Winter 2028-2029	Summer 2029	Winter 2029-2030
Participant passes second Forward Showing of same Season Type	20%*	Winter 2029-2030	Summer 2030	Winter 2030-2031
Participant passes third Forward Showing of same Season Type	50%*	Winter 2030-2031	Summer 2031	Winter 2031-2032
Participant does not pass within deferral period	100%*	Passes Winter 2031-2032 or later	Passes Summer 2032 or later	Passes Winter 2032-2033 or later
Participant exits WRAP before resolution	100%	Provides withdrawal notice before Winter 2031-2032 without passing	Provides withdrawal notice before Summer 2032 without passing	Provides withdrawal notice before Winter 2032-2033 without passing

*Amounts previously paid would be credited against the total percentage owed. For example, if the Participant pays 5% upon the deficient Forward Showing for Winter 2027-2028, does not pass the Winter 2028-2029 Forward Showing, and later passes the Winter 2029-2030 Forward Showing, the Participant must pay an additional 15%, for a total payment of 20% of the Winter 2027-2028 Deficiency Charge.

~~8.~~9. Adjustment of Revenue Allocations

Any Participant that exercises the No-JCAF Option or successfully applies an ETD shall not receive an allocation of revenues from the payment of Deficiency Charges as to such Binding Season.

Revenues from ETDs will be distributed to Participants, for which the Season is a Binding Transition Season, and that did not use ETDs and did not exercise the No-JCAF Option to meet their FS Capacity Requirement. A Participant that receives revenues

from ETDs will not have an increase in its FS Capacity Requirement solely as a result of receipt of such revenue.

Deficiency Charges collected under Section 8 shall be distributed using existing provisions of Section 17.2.10 of the Tariff and BPM 107 Forward Showing Deficiency Charge for the original Binding Season for which the deferral was granted, such that Participants with no Deficiency Charges for the original Binding Season for which the deferral was granted will receive a pro rata share of such deferred Deficiency Charges collected; provided, however, that such Participants that are otherwise eligible to receive a pro rata share remain active Participants at the time the deferred Deficiency Charge revenues are distributed.

Appendix A – Senior Official Attestation – ETD

The following Senior Official Attestation will be required for any Participant seeking an ETD:

> I, the undersigned, who, as [title], serves as a senior official of [Participant/third-party load service provider], hereby attest that (i) [Participant] meets the stated WRAP requirements for an Excused Transition Deficit; (ii) [Participant] has made commercially reasonable efforts to secure Qualifying Resources in the quantity needed to satisfy [Participant]'s FS Capacity Requirement for the [identify season] Binding Season, but is unable to obtain Qualifying Resources in the quantity required for the Binding Season because the supply of such resources on a timely basis and on commercially reasonable terms is at the present time inadequate; and (iii) the foregoing statements are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein.

Appendix B – Senior Official Attestation – No-JCAF Option

The following Senior Official Attestation will be required for any Participant seeking to utilize the No-JCAF Option with a Legacy Contract:

> I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest, in support of [Participant]'s request for a reduction in the Monthly Capacity Deficiency otherwise calculated under the Tariff, because ___ MW of such deficiency is due to [Participant]'s inability to obtain assent from the supplier under a Legacy Agreement to the accreditation required for such Legacy Agreement under the Tariff and Business Practice Manuals; (ii) [Participant] made commercially reasonable efforts to execute the required accreditation form with the supplier under the Legacy Agreement, but the supplier was unable or unwilling to counter sign the accreditation form; and (iii) the foregoing statements are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein.

Appendix C – Senior Official Attestation – Deficiency Charge Deferral

The following Senior Official Attestation will be required for any Participant seeking to request a deferral and possible reduction to the Deficiency Charge per Section 8 of BPM 109:

> I, the undersigned, who, as [title], serves as a senior official of [Participant], hereby attest, in support of [Participant]'s request for a deferral and possible reduction to the Deficiency Charge otherwise calculated under the Tariff, that (i) [Participant] has made commercially reasonable efforts consistent with the requirements set forth in Section 8.1 of *BPM 109 FS Transition Period* to satisfy its WRAP Monthly FS Capacity Requirement and FS Transmission Requirement, as applicable, for each month of the [identify season] Binding Season for which [Participant] seeks to defer its Forward Showing Deficiency Charges, but has been unable to do so despite such commercially reasonable efforts and (ii) the foregoing statements are true, correct and complete to the best of my knowledge and belief following due inquiry appropriate to the reliability and resource adequacy matters addressed herein.

WESTERN POWERPOOL

Western Resource Adequacy Program

210 Binding and Non-Binding Participation in Operations Program

200 – Operations

Revision History

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210 Binding and Non-Binding Participation in Operations Program

1. Introduction

The Operations Program of the Western Resource Adequacy Program (WRAP) provides for a four-year Transition Period, commencing in Summer 2025 and ending in Winter 2028-2029. The seasons between and inclusive of Summer 2025 and Winter 2026-2027 will be Non-Binding for all Participants. From Winter 2027-2028 all Participants will be Binding ~~(excepting any Critical Mass provisions)~~ and subject to certain charges for failure to meet or cure compliance obligations associated with Binding participation in the WRAP; however, during the Transition Period such charges may be reduced in certain limited circumstances. The Transition Period also provides Participants the option of Binding participation one season earlier in Summer 2027, so this season may have a mixture of Binding and Non-Binding Participants. This Binding and Non-Binding Participation in Operations Program Business Practice Manual (BPM 210) provides implementing details and practices relevant to the Operatons Program during the Transition Period and for Non-Binding Participants. Implementing details and practices relevant to the Forward Showing Program during the Transition Period are detailed separately in *BPM 109 Forward Showing Transition Period*. ~~Both during and after the Transition Period, if a sugregion fails to meet a Critical Mass of participation, the Participants of such Subregion may elect to participate as Non-Binding Participants. In such circumstances, the following~~ BPM 210 also describes details and practices relevant to the Operatons Program when some Participants are Binding Participants and some Participants are Non-Binding Participants.

1.1. Intended Audience

BPM 210 is intended for WRAP Participants and other interested individuals or entities. BPM 210 is particularly useful for those individuals that are responsible for, and support, participation in the Operations Program on a day-to-day basis or are interested in understanding the Operations Program impacts of the Forward Showing transition provisions provided for in *BPM 109 Forward Showing Transition Period*.

1.2. What Will You Find in This Manual?

This document includes sections outlining practices and implementing details relevant to the Operations Program when some Participants are Binding Participants and some Participants are Non-Binding Participants, such as during the Summer 2027 ~~or when a Subregion fails to meet Critical Mass~~, including the operational impacts of utilizing transition provisions in the Forward Showing Program.

1.3. Purpose

To provide an overview of the relevant activities for the Operations Program that may impact business processes of current or potential Participants.

1.4. Definitions

All capitalized terms that are not otherwise defined in BPM 210 have their meaning set forth in the Tariff or in another BPM.

Joint Contract Accreditation Form, or JCAF: As defined in *BPM 106 Qualifying Contracts*

No-JCAF Option: As defined in *BPM 109 Forward Showing Transition Period*.

Priority Tier: Comparative rankings used to determine access to limited available aggregated Holdback Requirements and limited available voluntarily offered holdback, in relation to Sharing Events during the Transition Period.

Tier One: The first Priority Tier, as described in BPM 210 Section 4

Tier Two: The second Priority Tier, as described in BPM 210 Section 4Table 1.

Table 1**Transition Binding Season:** As defined in *BPM 109 Forward Showing Transition Period*.

Uncertainty Factor: As defined in *BPM 203 Program Sharing Calculation Inputs*.

2. Background

The WRAP is a regional resource adequacy program in which Participants demonstrate, in advance of a defined season, that they have sufficient resources to meet their expected peak loads and a reserve margin. The WRAP imposes standards and requirements related to such matters as the resources that qualify to meet resource adequacy objectives, the calculation of peak loads, and the required minimum reserve margin. The WRAP provides for imposition of significant charges on Participants that do not show in advance sufficient resources to meet their FS Capacity Requirement. In addition, under the WRAP, Participants with resources surplus to their needs in the operating time horizon- may be subject to requirements in certain circumstances during the Binding Season to assist Participants that are resource-deficient in the operating time horizon, and if a surplus Participant fails to make required energy deliveries to a deficient Participant, the surplus Participant is subject to significant charges for such delivery failure. Recognizing that not all Participants may have made all necessary arrangements and implemented all necessary business processes at the program's outset to secure WRAP-Qualifying Resources, meet the various WRAP obligations, and avoid imposition of these significant charges, the WRAP includes a four-year Transition Period. The Transition Period rules also provide the possibility of Discounted Deficiency Charges and deferral of Deficiency Charges in certain

specific circumstances designed to recognize that some Participants may still be in the process of securing all resources needed to ensure compliance with WRAP requirements.

~~Additionally, after the Transition Period, if a Subregion fails to meet a Critical Mass of participation, the Participants of such Subregion may elect to participate as Non-Binding Participants. In such circumstances, the following BPM 210 also describes details and practices relevant to the Operations Program when some Participants are Binding Participants and some Participants are Non-Binding Participants. More information on Critical Mass can be found in Section 7 of *BPM 107 Forward Showing Deficiency Charge*.~~

3. Reduction in Sharing Calculation

Under the Operations Program, the Program Administrator implements a Sharing Calculation to identify any hour in which any Participant is forecasted to have a capacity deficiency relative to the Participant's Forward Showing Capacity Requirement (known as a "Sharing Event"). The Sharing Calculation also identifies each Participant that is forecasted to have surplus capacity relative to the Participant's Forward Showing Capacity Requirement during any Sharing Event, and the amount of such surplus capacity. This calculation takes into account changes in a Participant's resource availability, resource performance, forecasted load, and Contingency Reserves relative to the Forward Showing Capacity Requirement, plus an Uncertainty Factor.

The amount of capacity shown to be available in the Sharing Calculation of any Participant that was found under the Forward Showing~~-~~ to have a Monthly ~~Capacity~~ Deficiency shall be reduced by the MW quantity of such Monthly ~~Capacity~~ Deficiency, but only if the Participant paid (or partially paid based on a deferral as described in *BPM 109 Transition Period*) a FS Deficiency Charge for such Monthly ~~Capacity~~ Deficiency (see *BPM 107 Forward Showing Deficiency Charge*). This reduction in Sharing Calculation effectively reduces the quantity of capacity the Participant is expected to have during a Sharing Event, given that the Participant has already paid a FS Deficiency Charge for this increment of capacity or transmission for a given month. For example, if a Participant had a FS Capacity Requirement of 100 MW in a month but only showed 90 MW in their FS Submittal for that month and paid the FS Deficiency Charge on the remaining 10 MW, then the Participant's P50 × (1 + FSPRM) term in their Sharing Calculation would be 90 MW in that month.

A Participant that pays a FS Deficiency Charge (or a portion of a deferred Deficiency Charge) or avoids a FS Deficiency Charge by exercising a No-JCAF Option receives the same reduction in its Sharing Calculation equal to the MW quantity of its Monthly ~~Capacity~~ Deficiency even if that Participant's FS Deficiency Charge was reduced during the Transition Period due to ~~either or both~~any ~~of an~~ Excused Transition Deficit (ETD), deferral

mechanism, or exercising of the No-JCAF Option, as more fully described in *BPM 109 Forward Showing Transition Period*.

4. Priority Tier Access When Available Capacity is Limited

For any Sharing Event during a Season with both Binding and Non-Binding participation, available Holdback Capacity from the Sharing Calculation results will be allocated to Binding Participants in the relevant season (see BPM 204 Holdback Requirement). Non-Binding Participants will not receive Holdback Capacity from Sharing Calculation results.

A Participant may voluntarily offer additional capacity into the WRAP Operations Program for allocation to Participants with negative Sharing Calculation results. This is called Voluntary Holdback, and is described more fully in *BPM 204 Holdback Requirement*. To the extent that any Voluntary Holdback has been offered, Participants with negative Sharing Calculation results will be provided access to Voluntary Holdback based on the Priority Tiers of the Participants needing assistance in any case where the needed assistance is less than the available Voluntary Holdback offered.

The first Priority Tier ("Tier One") will be given to any Binding Participant in the relevant Binding Season. The second priority ("Tier Two") will be given to Non-Binding Participants in the relevant Binding Season.

Non-Binding Participants electing to offer Voluntary Holdback will not be subject to Delivery Failure Charges for failure to deliver energy to the Participant with a negative Sharing Calculation result but are strongly encouraged to fulfill those commitments, and to consider their ability to fulfill those commitments before making the voluntary offer.

The Participants in each Priority Tier, their rights, and their responsibilities, are summarized in Table 1 below. Table 1 shows, for clarity, a third Priority Tier, which simply recognizes that entities that are not Participants have no rights to WRAP Holdback Requirements or Voluntary Holdback. Participants may offer capacity or energy to non-Participants outside the WRAP, consistent with satisfying their obligations under the Tariff. More information on Holdback Requirement and Voluntary Holdback can be found in *BPM 204 Holdback Requirement*.

Table 1. Priority of Access to Holdback Requirements and Voluntary Holdback

Tier	Who is in it?	What do they get?	Obligations to WRAP
Tier One	Binding Participants	Holdback Requirements from other Participants, as assigned per the Tariff.	Subject to binding WRAP obligations for FS and Operations (including receiving Holdback

		Access to Voluntary Holdback offered by other Participants, as allocated among Participants with negative Sharing Calculation Results who confirmed a need for assistance for the given hour.	Requirements as a result of a positive Sharing Calculation result or an offer of Voluntary Holdback). May provide Voluntary Holdback.
Tier Two	Non-Binding Participants	Access to Voluntary Holdback offered by other Participants, as allocated among Participants with negative Sharing Calculation Results who confirmed a need for assistance for the given hour and not otherwise allocated to Tier One Participants.	Not subject to binding WRAP obligations for Operations, including the Holdback Requirement as a result of the Sharing Calculation. May receive a Holdback Requirement as a result of an offer of Voluntary Holdback.
Tier Three	Non-WRAP-Participants	Any Participant capacity offered outside the program (not otherwise committed to WRAP obligations).	No obligations to the WRAP.

In Tiers One and Two, all transactions will be settled under the WRAP Settlement Pricing as detailed in *BPM 206 Settlement Pricing*.