



Western Resource Adequacy Program

RAPC Meeting

February 15th, 2024; 10am-12pm PPT

Participant	Name	Participant	Name
APS	Tyler Moore	PacifiCorp	Ben Faulkinberry
Avista	Kevin Holland	PGE	Tiffany Emerson
BPA	Suzanne Cooper	Powerex	Mike Goodenough
Calpine	Bill Goddard	PSE	Tricia Fischer
Chelan		PNM	Steve Maestas
Clatskanie		SRP	Agnes Lut
EWEB	John Crider	SCL	Mara Kontos
Grant	Rich Flannigan	Shell	Ian White
Idaho	Ben Brandt	Snohomish PUD	Jeff Kallstrom
NorthWestern	Joe Stimatz	Tacoma	Leah Marquez-Glynn
NV Energy	Lindsey Schlekeway	TEA	Ed Mount

Objectives

1. Provide the RAPC with updates on project progress
2. Seek RAPC input on progress and any administrative actions

Meeting Agenda

Call to Order	
10:00	<ol style="list-style-type: none"> 1. Attendance 2. Anti-trust Statement 3. Approve Agenda <i>Northwestern moves and Calpine seconds to approve the agenda. The agenda is approved unanimously at 10:05 AM.</i> 4. Approve Minutes from last meeting <i>Grant moves and TEA seconds to approve the minutes. The minutes are approved unanimously at 10:06 AM.</i>
PA/PO Report	
10:06	<ol style="list-style-type: none"> 5. PA/PO Update <i>Assessment of January 2024 Cold Weather Event posted to WPP website. Board meeting on March 7th at APS. Hosting a reception with the Board the night before. Submitted comments on Markets+ Tariff February 9th. Asking for clarity around transmission requirements. The cure period for Summer Showing ends on February 28th.</i>
Ongoing Business	
10:10	<ol style="list-style-type: none"> 6. Workgroup Updates – Forward Showing Workgroup – Rebecca S.



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	<p><i>Cure period ending February 28th. Turn in updated workbook with missing/updated information. Important for Operations. Next Tuesdays FS Workgroup is a kickoff meeting – next FS submittal due March 31st. Will discuss workbook updates and any other required information to complete those showings. Data for the Advance Assessment is due March 1st. Engineering Data Submission Tool in the works for October to replace workbooks.</i></p> <ul style="list-style-type: none"> – Operations Workgroup – <i>Ryan R.</i> <i>Working with FERC council on Tariff changes. Working on data to distribute to Participants for internal analytics related to the January cold snap. Coming to end of Winter 23-24 – thinking about how to approach summer (additional training, distribution of information). Working on settlements in the operations workgroup – going to stand up a workgroup to talk about what middle and back-office people need for settlement. Doodle poll for interested parties distributed. Hoping to provide shadow settlement price in near future.</i> – Storage Hydro User group – <i>Steve B.</i> <i>Meeting with EnergyGPS – discussion over hydro accreditation methodology. Discussed cold snap and what that means in operations considerations. Discussed upcoming showing – changes in the SH workbook to better account for impact of forced outages on QCC.</i> – Single Entity Subregion Connectivity – <i>Rebecca S.</i> <i>Document to approve under item number 8.</i> – MBR Workgroup - <i>Mike W.</i> – Market Impacts on Sub-Region Connectivity Workgroup – <i>Tyler M.</i>
	<p>7. Business Practice Manual Discussion <i>WPP provides an update on BPM scope, edits, and comments in slides (included). Added supplemental RAPC meeting on February 22nd for discussion, and supplemental PRC meeting on February 28th.</i></p> <ul style="list-style-type: none"> – BPM 102 <i>Describes how the PO runs the LOLE study, including description of scope. To avoid confusion with Uncertainty Factor – uses the term ‘variation’ for load and generation. Edits and changes not made are detailed in slides. No discussion.</i> – BPM 104 <i>BPM 104 talks about determining CCHs. Updated erroneous reference to RSG data to EIA data. Added reference to specific data used for market-clearing heat rate. Interchange maintained in CCH. Edits and changes not made are detailed in slides. In discussion – BPA expresses concern over precise language in 10-year periods that include data from 2017 and prior years. WPP will investigate this specificity – moving forward, the BPM has multiple pathways for revision as needed.</i> – BPM 107 Forward Showing Deficiency Charge – Discuss <i>BPM 107 discusses the calculation of FS Deficiencies. Updated the “Appeal” section to reference the Tariff dispute resolution procedures. Supplemental CONE</i>



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	<p><i>document will be posted to the website. Edits and changes not made are detailed in slides. No discussion.</i></p> <ul style="list-style-type: none"> – BPM 108 Submittal Process – Discuss <i>Describes FS Submittal process. Inclusion of Tariff required Catastrophic Failure Monthly Report. Multiple comments about planned outages – discussed further in section 16.2 of the Tariff. Language clarified to detail what the Tariff requires of the program. Edits and changes not made are detailed in slides. In discussion, NVE asks at what point is a resource set to zero in a month for a planned outage. WPP response – if still out after first 5 days, set to 0. Tariff leaves you two options in the case a resource is planned to be out but not currently out. First option, a Participant can tell WPP, and if extends more than 5 days the Participant must reduce the QCC to 0. Alternatively, a Participant can sign an attestation that any outages taken will be from surplus or the Participant will backfill. In the second case, the Participant is taking on risk. NVE inquires on the location of the described attestation – the planned outage attestation is in the Appendix and has been re-written for clarity.</i> – BPM 203 Sharing Calculation Inputs – Discuss <i>Describes the Uncertainty Factor used in the Sharing Calculation. Clarified that all Participants within a Subregion will have the same Uncertainty Factor Applied. Edits and changes not made are detailed in slides. WPP describes in greater detail why the 10% default was selected – concept to walk it down in small increments and reevaluate as good production quality data comes in. In discussion, NVE expresses concern with reducing 10% factor down to 3% when a region is deficient. Is it possible this would put a Participant in a sharing position and subject them to penalties? BPM 209 describes procedure when penalties incur from inaccurate uncertainty factors and forecasting methodology.</i> – BPM 209 Energy Delivery Failure Charge – Discuss <i>BPM 209 covers the Energy Delivery Failure Charges. Edits and changes not made are detailed in slides – many changes not made pertaining to Tariff prescribed items. Examples and waiver forms will be posted as supplementary materials.</i> – BPM 304 Changes to Schedule 1 and WRAPA – Discuss <i>Describes how changes to the WRAPA and Schedule 1 of the Tariff are processed by the RAPC. Clarified that if the RAPC rejected or did not act upon an Amendment, the Board could choose to review at their discretion. Edits and changes not made are detailed in slides.</i>
	<p>8. Single Entity Subregion Connectivity - Concept Paper <i>APS moves and Grant seconds to endorse the concept paper. No further discussion, no opposition. The motion passes unanimously at 11:46 AM.</i></p>
<p>New Business</p>	
<p>11:48</p>	<p>9. Settlements Workgroup <i>Fill out the Doodle Poll today to get meeting on the agenda.</i></p>



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External Affairs	
	[None]
Good of the Order	
11:49	10. Participant topics requests for next meeting <i>Request from Eddie Elizeh to discuss NERC Energy Assessment Standards (BAL-007) that will go for approval by the NERC Board in Dec. 2024 meeting. The deadline to submit comments is March 1st. Being tracked internally by WPP. To discuss further at the next RAPC meeting.</i>
Closed RAPC	
	[None]
Upcoming	
11:55	11. Next meeting: February 22 nd <i>Public review meeting for further discussion of BPMs.</i>
Meeting is adjourned at 11:55 AM.	

Current Participants: APS, Avista; BPA; Calpine; Chelan; Clatskanie; EWEB; Grant; Idaho Power; NorthWestern; NV Energy; PacifiCorp; PGE; Powerex; PNM; PSE; SRP; SCL; Shell; Snohomish PUD; Tacoma Power, The Energy Authority

WPP forums will not foster or allow communications or practices that violate antitrust laws. Please avoid discussion of topics that would result in anti-competitive behavior, including but not limited to: availability of or terms of services and sales, design of products, price setting, or any other activity that might unreasonably restrain competition.

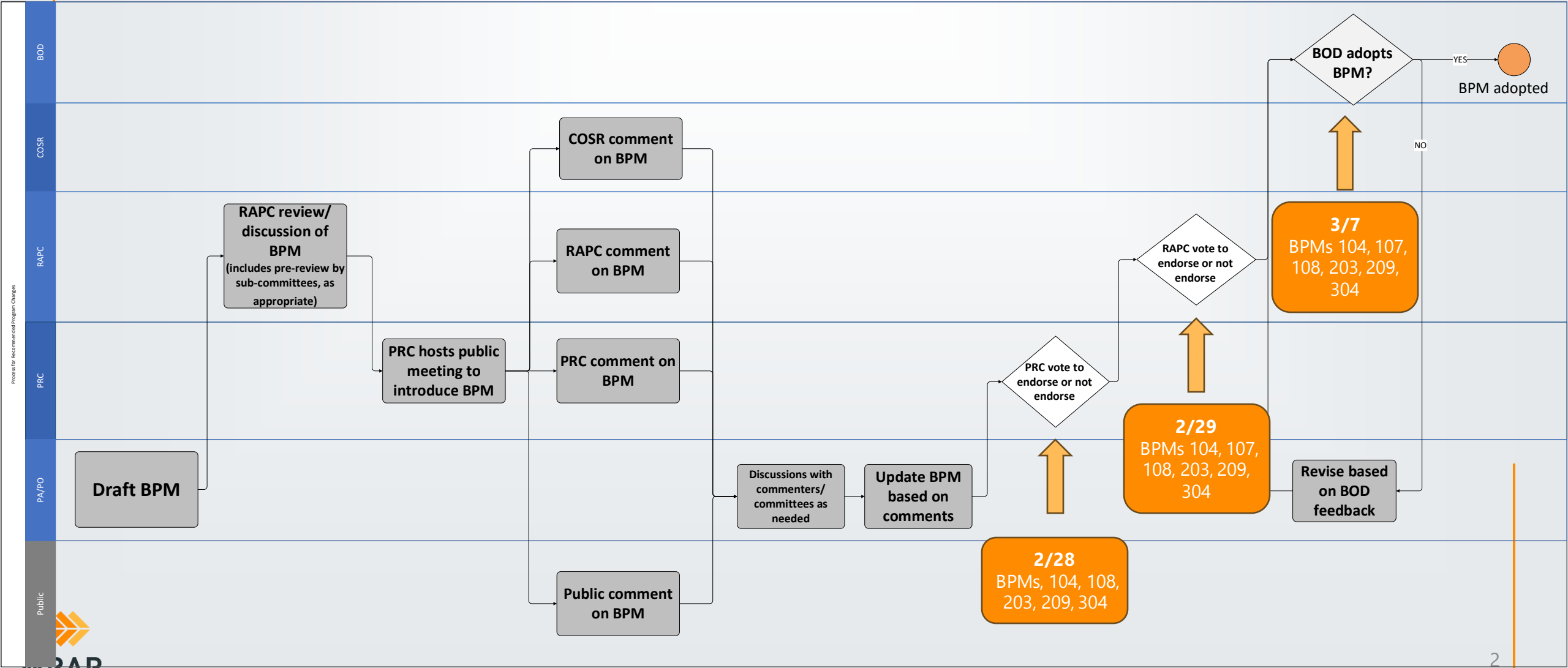


WESTERN RESOURCE ADEQUACY PROGRAM

February 22, 2024

BPM Public Review Slides

BPM PROCESS FLOWCHART



BPM 102 SUMMARY

FORWARD SHOWING – FS RELIABILITY METRICS

- » How the PO runs the Loss of Load Expectation (LOLE) study, including description of scope
 - Analyzes the ability of generation to reliability serve the WRAP region
- » Use of Load Resource Zones (LRZs) to distinguish weather when modeling resources
- » How Qualifying Resources will be modeled
- » How the PO sets the Monthly FS Planning Reserve Margins (FSPRMs)
 - LOLE for the applicable year does not exceed one event-day in 10 years for summer and winter seasons
 - Determined with probabilistic methods by altering capacity and forecast demand
- » **Note: A Tariff discrepancy was discovered that will delay this BPM**

BPM 102 COMMENTS & EDITS

FORWARD SHOWING – FS RELIABILITY METRICS

- » “Load Data” is “Historical Load Data” as with BPM 101
- » Reliability metric is “no more than” a single event-day loss of load in ten years “across a Binding Season”
- » Neither RAPC nor Board approves the LOLE Study Scope
- » LRZ enable consideration of weather variability across Subregions
- » Load and generation “uncertainty” instead referred to as “variation”
- » Example weather stations removed
- » Capability Test submitted as part of FS Submittal (BPM 108)
- » BTM aggregation requirements found in BPM 105

BPM 102

SUMMARY OF COMMENTS NOT INCORPORATED

Comment Summary or Theme	WRAP Response
Clarify how Board and RAPC comments considered in the LOLE Study scoping process and define “timely opportunity” to review LOLE Study Scope	Process is intended to be flexible
Allow new Participants to select their own Subregion which WPP can then approve/reject	Leaving it to the discretion of WPP (plan to discuss with new Participant)
More information on how the weather and load 40-year synthesized profiles are performed	SPP taken as action item to explain outside of BPM
Historical Load Data adjustment for DR and BTM	Will be in BPM 103
Thermal EFORd and EFOFcch methodologies should be consistent	In the initial stage of the LOLE study, thermal forced outages modeled with EFORd. To determine the FSPRMs, this is replaced by the thermal UCAP which is the QCC calculated using EFOFcch.

BPM 104 SUMMARY

FORWARD SHOWING – DETERMINATION OF CAPACITY CRITICAL HOURS

- » Describes the Capacity Critical Hours (CCHs) Methodology
 - *CCH are hours where net regional capacity need is expected to be above the 95th percentile*
 - Used in methodology to determine the QCC of storage hydro, thermal, RoR, non-dispatchable resources, and contracts
- » How Regional Interchange Assumptions are determined
 - Describes the effect of market conditions on imports and exports into the WRAP footprint

BPM 104 COMMENTS & EDITS

FORWARD SHOWING – DETERMINATION OF CAPACITY CRITICAL HOURS

- » Cleaned up and added clarifying language
- » Updated erroneous (outdated) reference to use of NWPP Reserve Sharing Group data to reflect use of publicly available U.S. Energy Information Administration data
- » Added reference to the specific data used for the market-clearing heat rate
- » Updated the carbon adjustment
- » Updated Regional Interchange section per discussion at last RAPC meeting - new redline has been posted

BPM 104

SUMMARY OF COMMENTS NOT INCORPORATED

Comment Summary or Theme	WRAP Response
Should CCH include interchange?	Consideration of interchange is required by the tariff
What is the relationship of the "Contracts" in the Advance Assessment and the Forward Showing to Interchange in the CCH?	The Contracts submitted in the Forward Showing will only capture the forward contracted, RA quality capacity, while the Interchange is intended to capture real-time need for capacity. Additionally, Contracts inform the LOLE modeling, while the CCHs also inform resource accreditation
There was no Interchange included in the LOLE modeling, why include it in the CCH?	While the intent was similar, the execution is quite different in CCH than it was in the LOLE. We were challenged to appropriately consider these variable exports when setting the reliability metric. The nature of the CCH methodology and its use for calculation of QCC values enables us to consider interchange when determining how resources contribute to meeting reliability needs without the issues seen in the LOLE.
10-year periods that include data from 2017 and prior years	We are documenting the methodology that has been discussion and approved by RAPC previously

BPM 107 SUMMARY

FORWARD SHOWING – FS DEFICIENCY CHARGE

- » Calculation of Forward Showing deficiencies
- » Calculation of Forward Showing Deficiency Charge
 - Determining certain components of the deficiency charge, including CONE
 - Outlines timing of deficiency charges
 - Describes Board appeal process
- » Describes the allocation of revenues received from collection of Deficiency Charges

BPM 107 COMMENTS & EDITS

FORWARD SHOWING – FS DEFICIENCY CHARGE

- » Cleaned up and added clarifying language
- » Clarified that the Summer and Winter % Deficits are the sum of the max deficiencies divided by the sum of the max Monthly P50 Forecast for the respective season
- » We will make an example document – added language to this effect
- » Clarified what would happen if the Summer or Winter % deficit were equal to 1, 2, or 3
- » Updated the “Appeal” section to reference the Tariff dispute resolution procedures
- » Added detail of 45 days following the Cure Period for any invoices to be sent out

BPM 107

SUMMARY OF COMMENTS NOT INCORPORATED

Comment Summary or Theme	WRAP Response
Charge structure is too punitive	The structure is defined in the tariff
How is the CONE updated?	Any proposed changes to the CONE will go through to stakeholder process as defined in the 300-series of BPMs (tariff section 17.2.6)
Suggestion to add more about the CONE	We will make a supplemental CONE document to post on the website that includes more information

BPM 108 SUMMARY

FORWARD SHOWING – FS SUBMITTAL PROCESS

- » When and how each Participant provides their projected load and resource portfolio data to meet FS Capacity and Transmission Requirements
- » Required FS Submittal materials
 - FS Demonstration
 - › Loads, QRs, contracts, Tx, and planned outages
 - FS supporting materials
 - › QR testing, thermals without GADs, hydro resource QCCs, later registered resources and transition exceptions
- » Describes the Cure Period
- » Contains associated Senior Official Attestations

BPM 108 COMMENTS & EDITS

FORWARD SHOWING – FS SUBMITTAL PROCESS

- » Participant with load in two Subregions may use a single FS Submittal if using higher FSPRMs (no additional tx connectivity showing required).
- » Clarified that deficiencies are cured by resubmitting with the missing or correct data
- » Pointed to *BPM 101 Advance Assessment - Data Request Instruction Manual* for hybrid resource limitations (typically based on the inverter limit)
- » Included language on Catastrophic Failure Monthly Report requirements between request and Binding Season (impacts of exception is in *BPM 107 FS Deficiency Charge*)
- » For non-TSPs without TSR information, attestation of transmission rights to load
- » Per Tariff, failure to submit a Monthly Transmission Check-in will result in a Deficiency Charge unless charge cured within seven days
- » Proposal to add language in §3.1.1 (FS Demonstration – Loads): **“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.**

BPM 108

SUMMARY OF COMMENTS NOT INCORPORATED

Comment Summary or Theme	WRAP Response
More details on load exclusion	Will be addressed in <i>BPM 103 FS Capacity Requirement</i>
Inclusion of forms (e.g. Transmission Exception request form)	It has not been the practice to insert hyperlinks or include forms in the BPM (as changes would require working through the <i>BPM 301-303</i> process)
For Enduring Constraints, multiple segment exceptions should be allowed.	Single segment is the requirement in Tariff Section 16.3.2.1
Storage Hydro does not require Operational Testing	Per <i>BPM 105</i> , "For Storage Hydro [...] the annual Operational Test will suffice as the Capability Test." Note: Resource Testing Form linked here
No JCAF exception should be available after the Transition Period, and should be permanent for legacy contracts (and contracts signed after Oct. 1, 2021)	Tariff Section 17.3.3 restricts exception to Transition. Tariff Section 16.2.6.3. defines a legacy contract as before Oct 1, 2021

BPM 108

SUMMARY OF COMMENTS ON PLANNED OUTAGES NOT INCORPORATED

Comment Summary or Theme	WRAP Response
Why do you care about Planned Outages ongoing at the time of FS Submittal that extend into the Binding Season?	Tariff Section 16.2.8 on Planned Outages: <ul style="list-style-type: none">• “Participants shall include in their Forward Showing Submittal [...] all Qualifying Resources that are currently out of service with a scheduled return date that falls during 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.”
Shouldn’t you care more about Planned Outages that are scheduled during the Binding Season?	Tariff Section 16.2.8 states that “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).” You can either tell us about your outages or attest they will come from surplus/be backfilled.
Reducing a resource’s QCC to zero if it’s planned outage extends more than the first five days into a month seems extreme.	Note that this is only applicable to units out at the time of the FS. The Tariff only allows for a qualified acceptance (resource <500 MW) if the planned return to service is within the first five days of a Binding Season (Section 16.2.8.1)

BPM 203 SUMMARY

OPERATIONS PROGRAM – PROGRAM SHARING CALCULATION INPUTS

- » Describes the Uncertainty Factor used in the Sharing Calculation of the Operations Program
 - Sharing Calculation input determined by the Program Operator
 - Represents a reasonable margin to account for near-term forecast error
- » Describes how the Program Operator may decrease the Uncertainty Factor by 0.5% in cases where a Subregion is deficient

BPM 203 COMMENTS & EDITS

OPERATIONS PROGRAM – PROGRAM SHARING CALCULATION INPUTS

- » Added language to make it clear that the Uncertainty Factor would be visible on the Ops Client for each interval
- » Clarified that all Participants within a Subregion will have the same Uncertainty Factor applied
- » Added a reference to BPM 204 Holdback Requirement that will detail what happens when a Subregion remains deficient even after the Uncertainty is reduced to 3%

BPM 203

SUMMARY OF COMMENTS NOT INCORPORATED

Comment Summary or Theme	WRAP Response
Will there be time to review the Uncertainty Factor before Voluntary Holdback offers are submitted?	Yes – the Uncertainty Factor is posted two hours ahead of the Sharing Calculation results.
Why does the Uncertainty Factor decrease when a Subregion is deficit	This allows more capacity into the Operations program from surplus participants.
Transmission	The current program rules do not account for this – any future changes will go through the stakeholder review process
Will the 10% default be reevaluated?	Yes – WPP and SPP will be collecting and reviewing this data once good, complete operational data is being sent in the Ops Program.
Why 10%?	During the WRAP development, we asked for day ahead load forecasts and actuals, and VER forecasts and actuals. Analysis of those led the Participants in the WG to settle on 10% as the starting point

BPM 209 SUMMARY

OPERATIONS PROGRAM – ENERGY DELIVERY FAILURE CHARGE

» Describes:

- Evaluation of Delivery Failures
- Calculation of the Delivery Failure Charge
- Limits on maximum amount of the charge
- The allocation of revenues received by WPP from payment of charges
- Consequence of repeated Energy Delivery Failures

» Describes the circumstances for obtaining a waiver of the charge and the process by which WPP evaluates and grants waivers

BPM 209 COMMENTS & EDITS

OPERATIONS PROGRAM – ENERGY DELIVERY FAILURE CHARGE

- » Definitional updates
- » Clarified that notifying of anticipated non-delivery is not in and of itself sufficient to receive a Waiver
- » Removed language for e-Tag adjustment requirement
- » Added clarifying language about partial delivery failures
- » Updated to using the most recent positive price in the unlikely scenario that RT and DA prices are both negative when non-delivery occurs
- » Clarified language related to Charge Rates for Non-Covered failures vs Covered failures

BPM 209 COMMENTS & EDITS

OPERATIONS PROGRAM – ENERGY DELIVERY FAILURE CHARGE

- » Added language allowing PO request of information to facilitate review of program-wide Sharing Requirement calculation results in hours where failure occurred
- » In Non-Exclusive list of Waiver Justifications:
 - Replaced language re: participant need to “maintain system reliability” with “prevent firm load shed and/or maintain minimum Contingency Reserves requirements” for additional clarity.
 - Added WECC unscheduled flow mitigation
 - Added load forecasts & VER performance deviations (preschedule vs operating day)
 - Insufficient Uncertainty Factor resulting in variances between Preschedule forecasts and actuals of Operating Day

BPM 209

SUMMARY OF COMMENTS NOT INCORPORATED

Comment Summary or Theme	WRAP Response
Requests to make cumulative Delivery Failure Period shorter	Tariff defines period as: "rolling 5 FS-year window"
Requests for different dollar limits to charges	Tariff defined (20.7.4.4) & BPM 107. \$ limit per year each year: \sum (Largest monthly failures) in a FS Year
Requests to change Charge Rates and Delivery Failure Factors (covered & non-covered)	Tariff defined: Multipliers set to x5, x10, x20, x25, x50
Requests to not use revenues from covered failures to offset admin costs	Tariff defined: Revenue from covered failures go towards reducing program admin cost (Schedule 1)
Waiver Forms, links, examples...	Will be made available on WPP website or presented

BPM 304 SUMMARY

STAKEHOLDER PROCESS – CHANGES TO SCHEDULE 1 & WRAPA

- » How changes to the WRAPA and Schedule 1 of the Tariff are processed by the RAPC
 - Describes the actions the RAPC may take when a proposed modification is brought forth (by the PA/PO, Board, or Participants)
 - How a proposed modification is reviewed by the RAPC and PA/PO
 - Describes the actions the Board may take on proposed modifications

BPM 304 COMMENTS & EDITS

STAKEHOLDER PROCESS – CHANGES TO SCHEDULE 1 & WRAPA

- » WPP will work with any party to a non-conforming WRAPA to seek adoption of any Amendments to the pro-forma WRAPA into said non-conforming WRAPA
- » Participants, RAPC, WPP, Board, or Board Members can be Amendment Sponsors
- » Impact assessment includes benefits of the Amendment and the importance of the issue
- » Board will review all RAPC endorsed Amendments and has sole discretion to consider (or not) any Amendment rejected or not acted upon by RAPC and/or any requests by a Participant, the Program Administrator, or a Board member to review the same
- » If Board votes for approval with changes, RAPC has four weeks to endorse or further update

BPM 304

SUMMARY OF COMMENTS NOT INCORPORATED

Comment Summary or Theme	WRAP Response
Include a minimum comment period for RAPC to review Amendments	Retain RAPC flexibility to decide appropriate comment period
Clarify how the Board will weigh RAPC endorsement and stakeholder (PA, Participant, Board member) comments	Do not want to bind Board decision making process in a BPM
Appeal process for Participants who do not endorse RAPC decisions	No appeal process for RAPC members who disagree with RAPC decisions, though nothing stops a Participant commenting to the Board in open sessions