Western Resource Adequacy Program

September 12, 2024

BPMs 102, 103, 106, 202 Endorsement Consideration

9/12 Motions

- Motion to **endorse BPM 102** – Forward Showing Reliability Metrics*
- Motion to **endorse BPM 103** – Forward Showing Capacity Requirement*
- Motion to **endorse BPM 106** – Qualifying Contracts*
- Motion to **endorse BPM 202** – Participant Sharing Calculation Inputs*

** BPM Endorsements are contingent upon FERC approval of changes to the Tariff reflected in the NTFP*

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BPM 102 Summary – For Discussion

Forward Showing – Reliability Metric Setting

- 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

REQUIRED TARIFF CHANGE
(NTF Proposal)

- **Tariff sections 16.1.2.1 and 16.1.2.3:**
  - **Change "0.1 annual LOLE" to "0.1 seasonal LOLE"**

OTHER MAJOR CHANGES

- **Clarified Regional P50 Peak Load Forecast (BPM 102, LOLE) as distinct from Participant P50 Peak Load Forecast (BPM 103, FSPRMs)**
- **Process for changing Subregions**

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MOTION:

Vote to endorse BPM 102 – FS Reliability Metrics*

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** BPM Endorsements are contingent upon FERC approval of changes to the Tariff reflected in the NTFP*

BPM 103 Summary – For Discussion

Forward Showing – FS Capacity Requirement

- Amounts of capacity (Portfolio QCC) a Participant is required to demonstrate for the months of a Binding Season
- Monthly P50 Peak Load Forecast for a Binding Season (using five years of historical load data from Advance Assessment)
  - Attest to significant loads added or removed
  - Apply load growth factor: WRAP-wide growth rate (currently 1.1%) or Participant alternative
- Contingency Reserve Adjustment: FSPRM assumes average 6% peak load. FS Capacity Requirement adjustment considers each Participant's actual imports/exports and any Contingency Reserve contracts to ensure correct amount of capacity required
- Load Exclusion attestation
- Annual Load Growth Factor and LOLE Study Load Growth both currently set at 1.1%

REQUIRED TARIFF CHANGE
(NTF Proposal)

- **Updates to properly reflect Contingency Reserves Adjustments**

OTHER MAJOR CHANGES

- **Removed P50 Peak Load Modifier as a Demand Response Option**
- **Added process for changing Subregions**
- **Clarified Load Exclusion policy**

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MOTION:

Vote to endorse BPM 103 – FS Capacity Requirement*

** BPM Endorsements are contingent upon FERC approval of changes to the Tariff reflected in the NTFP*

BPM 106 Summary – For Discussion

Forward Showing – Qualifying Contracts

- FS Capacity Requirements can be met with Net Contract QCC
- Delivery requirements to Contract Capacity Firm Delivery Point
- Resource-Specific Capacity Agreements
  - QCC based on identified resource(s)
- System Sales
  - QCC a function of Participant/Non-Participant Buyer/Seller permutations
  - Resources associated with qualified System Sales from sellers that are not Participants do not have to be registered (Tariff change)

REQUIRED TARIFF CHANGE
(NTF Proposal)

- **Change System Sales definition to avoid resource registration**
- **Tariff section 16.2.7: Edited to clarify that RA transfers are transfers of QCC**

OTHER MAJOR CHANGES

- **Reduced administrative burden for Non-Participant resource-specific sales**
- **Aligned Transmission Attestation with Tariff regarding transmission rights**

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MOTION:

Vote to endorse BPM 106 – Qualifying Contracts*

** BPM Endorsements are contingent upon FERC approval of changes to the Tariff reflected in the NTFP*

BPM 202 Summary – For Discussion

Operations Program – Participant inputs to Sharing Calc

- **Describes the data inputs used for the Sharing Calculation in the Operations Program**
  - Inputs from FS Submittal
  - Inputs from Participant in Operations Program
  - Input data file types
- **Describes the Sharing Calculation equation and Sharing Results**
  - Compares Participant's FS Capacity Requirement to capacity need for each hour
- **Describes forecasting methodology requirements for Participant data submitted in the Ops Program**
  - Types of forecasting tools
  - Narrative description required from Participants

REQUIRED TARIFF CHANGE
(NTF Proposal)

- **Tariff §19.4**
  - **Remove language suggesting WPP and stakeholders would determine prioritization of Tx files**
- **Tariff §20.1.1:**
  - **Update Sharing Calculation with clarifying details – includes correction to how CRs are calculated**

OTHER CHANGES

- **Removed references to P50 Peak Load Modifier as a Demand Response option in the Sharing Calculation**

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BPM 202 Comments & Edits

Operations Program – Participant inputs to Sharing Calc

- **Since last PRC…**
  - References to Demand Response Load Modifier in sections 3 & 4 were removed to align with BPM 103 and NTFP

$$\textbf{Sharing Calculation}$$
$$=$$
$$[(\textbf{P50 Peak Load Forecast} \sout{- \textbf{Demand Response Load Modifier}}) * (1 + \textbf{FSPRM}) + \textbf{CR Adjustments}]$$
$$-$$
$$[\textbf{Load Forecast} - \textbf{Demand Response Capacity Resource} + \textbf{Contingency Reserve Obligation} + \textbf{Uncertainty Factor}]$$
$$+$$
$$[\Delta\textbf{Forced Outages} + \Delta\textbf{RoR Performance} + \Delta\textbf{VER Performance}]$$

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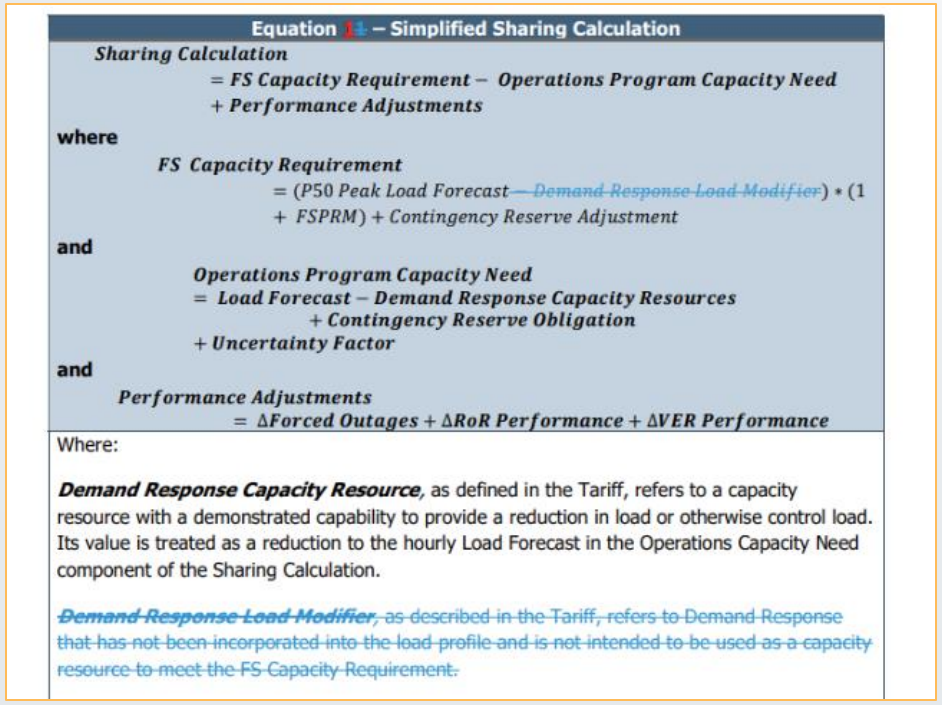
BPM 202 Comments & Edits

Operations Program – Participant inputs to Sharing Calc

- **Since last PRC…**
  - References to Demand Response Load Modifier in sections 3 & 4 were removed to align with BPM 103 and NTFP



Equation 1 – Simplified Sharing Calculation

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

where

$$\text{FS Capacity Requirement} = (\text{P50 Peak Load Forecast} - \sout{\text{Demand Response Load Modifier}}) * (1 + \text{FSPRM}) + \text{Contingency Reserve Adjustment}$$

and

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

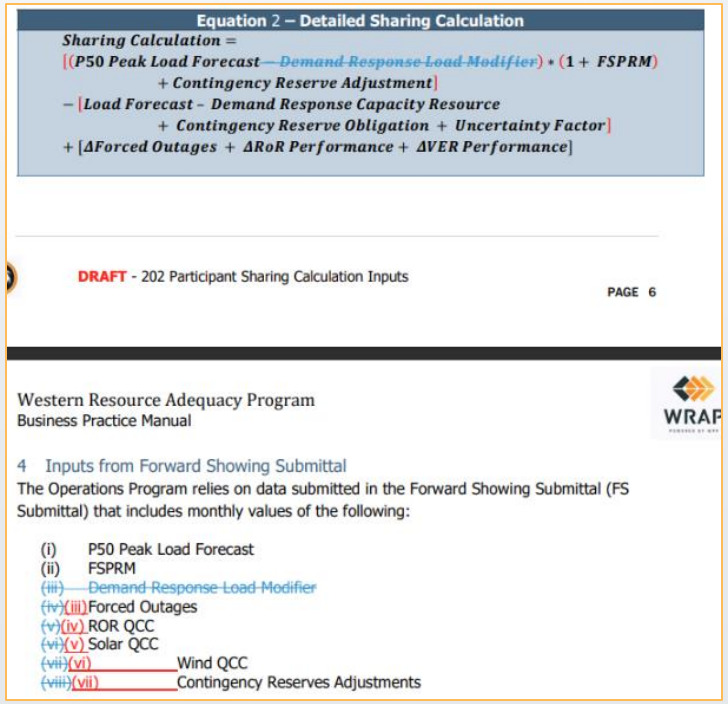
and

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

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.

~~***Demand Response Load Modifier***, as described in the Tariff, refers to Demand Response that has not been incorporated into the load profile and is not intended to be used as a capacity resource to meet the FS Capacity Requirement.~~



Equation 2 – Detailed Sharing Calculation

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

Western Resource Adequacy Program
Business Practice Manual

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) Demand Response Load Modifier~~
~~(iv)~~(iii) Forced Outages
~~(v)~~(iv) ROR QCC
~~(vi)~~(v) Solar QCC
~~(vii)~~(vi) Wind QCC
~~(viii)~~(vii) Contingency Reserves Adjustments

Motion:

Vote to endorse BPM 202 – Participant Sharing Calculation Inputs*

** BPM Endorsements are contingent upon FERC approval of changes to the Tariff reflected in the NTFP*

APPENDICES

July 29, 2024

BPM 102 – FS Reliability Metrics

Comments & Edits from Discussion

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

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BPM 102

EDITS NOT MADE

Comment Theme	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.

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BPM 103 – FS Capacity Requirement

Comments & Edits from Discussion

BPM 103 Comments & Edits

Forward Showing – FS Capacity Requirement

- "Super Peak Months" changed to "Seasonal Peak Months"
- "P50 Peak Load Modifier" removed as Demand Response option
  - Also removed from 2024-NTFP-1
- Load Exclusion
  - Rewrote load exclusion policy to address questions and edge cases in comments
  - Load excluded from FS is excluded from Ops, per *BPM 202 Participation Sharing Calculation Inputs*
- Submitting Load from Multiple Subregions
  - Process described in *BPM 108 FS Submittal*
  - Historical Load Data for loads in two subregions submitted on a single FS are combined on a coincident peak basis

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BPM 103

EDITS NOT MADE

Comment Theme	Response
Participants that do not hold Contingency Reserves (CR) should not require CR Adjustments	An adjustment is required as the FSPRM assumes a 6% requirement for all Participants (and must be adjusted down for those without the obligation)
The Participant Monthly P50 Peak Load Methodology should be the same for Summer and Winter	Winter storms drove peaks in December and February, but a dip in January. New method ensures capacity brought in all three months. Summer does not currently have regular outliers
The Participant Monthly P50 Peak Load Methodology should take into account more than five years of single point data	Major changes to the Load Forecast methodology can be submitted via a Change Request Form and explored with all Participants
Incorporate significant load additions/removals into Historical Load Data instead of after the fact	At this stage in the process the Historical Load Data has already been used as part of the Advance Assessment to calculate PRMs
There is no penalty mechanism to ensure new loads are added, encouraging leaning	Attesting to having included known load additions is as far as the policy currently goes.
Justify the 1.1% load growth rate and the 5% change threshold to allow use of alternative load growth factor	1.1% was set by the Load Growth Task Force via a survey of Participants and NWPCC data - the 5% requirement was outlined in the Task Force and set in the Final Design in an attempt to dissuade every LRE from wanting to validate a different load growth factor
Load covered by Oregon's RA Program should be excluded from the WRAP	Load exclusion policy should make this choice possible; participation in OR's RA program would happen for excluded or not participating load.

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BPM 106 – Qualifying Contracts

JCAF Context, Comments & Edits from Discussion

JCAF Context

FERC PRECENDENT

» 160 FERC ¶ 61,033 on RA Requirement for SPP footprint (August 29, 2017)

– Discussed MISO Resource Adequacy Compliance Order 125 FERC ¶ 61,062

› "[...] the Commission stated that it did not consider statements by a market participant to be sufficient to constitute verification, and therefore required that MISO be given a copy of the power purchase agreement to allow it to verify the capacity backing the agreement."

– Commission Determination on SPP

› "Here, SPP's proposal lacks a requirement that power purchase agreements be backed by verifiable capacity in order to serve as capacity resources. SPP's proposal also lacks a process that would allow SPP to verify whether contracts meet such a requirement. As such, SPP's proposal fails to ensure that LREs that rely on power purchase agreements are providing sufficient capacity to meet their net peak demand plus planning reserve margin on the same basis as LREs that self-supply their own capacity, and therefore could result in unjust, unreasonable and unduly discriminatory determinations of deficiencies and assessments of deficiency payments."

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JCAF IN THE WRAP TARIFF

NET CONTRACT QCC - 16.2.6.1 (RESOURCE-SPECIFIC)

» 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 NERC priority 6 or 7 firm point-to-point transmission service rights or network integration transmission service rights 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.

(Draft) JCAF included:

- Resource name
- Transmission attestation for both Participants and non-Participants
- **Non-Participant seller** attestation that (capacity is surplus and) will not fail to deliver to meet other obligations

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JCAF IN THE WRAP TARIFF

NET CONTRACT QCC - 16.2.6.2 (SYSTEM SALES)

- 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 NERC priority 6 or 7 firm point-to-point transmission service rights or network integration transmission service rights 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.

(Draft) JCAF included:

- Transmission attestation for both Participants and non-Participants
- **Non-Participant seller attestation** that capacity is surplus and will not fail to deliver to meet other obligations

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BPM 106 Comments & Edits

Forward Showing – Qualifying Contracts

- Overview
  - Over/under performance risk flagged in JCAF, but impacts Operations Program so explained in BPM 202.
- Resource-Specific Capacity Agreements
  - Clarified applicable to jointly-owned units (percentage contracted)
  - Clarified transmission requirement language: “NERC Priority 6 or NERC Priority 7 point-to-point transmission service or network integration transmission service (NITS) rights“
- System Sales
  - We will include a sample completed JCAF or detailed walkthrough of form filing process
- Calculating Net Contract QCC
  - Working with SPP to provide a detailed example calculation showing the step-by-step process
- Appendix A – JCAF: Seller’s Transmission Attestation (Participant and Non-Participant)
  - NITS is not transmission that can be used for off-system sales, removed
  - Removed need for attestation if delivered to busbar
- Appendix C – Attestation in Lieu of an Annual JCAF
  - Clarified administrative burden is only on Participants

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BPM 106

Summary of Comments not incorporated

Comment Summary or Theme	WRAP Response
JCAFs too broadly applied: should focus on system sales, not resource-specific contracts Tariff precludes attestations for Participant-to-Participant sales, and the JCAF constitutes an attestation JCAFs are unnecessary for sales to non-Participants Forward showing and attestations should be sufficient without JCAF Significant administrative burden potentially undermining purpose of WRAP	FERC has set precedent that it does not consider statements by participants to be sufficient to constitute capacity verification **Tariff Section 16.2.6.1** Net Contract QCC (Resource-Specific) 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 NERC priority 6 or 7 firm point-to-point transmission service rights or network integration transmission service rights **Tariff Section 16.2.6.12** Net Contract QCC (System Sales) In addition to Section 16.2.6.1: • Surplus status may be demonstrated by a Senior Official Attestation with pertinent supporting details for such surplus status, <u>including written assent of the non-Participant Seller</u>, secured by the purchasing Participant.

OLD DRAFT JCAF REQUIREMENTS

BPM 106 QUALIFYING CONTRACTS - RESOURCE-SPECIFIC

		Buyer		
		Participant		Non-Participant
Seller	Participant	• Avoid PA/PO/Board contract arbitration • Meet FERC expectations • Initial one-off JCAF, both sign • Then **annual attestation nothing changed** • QCC will match JCAF: seller ⇩ / buyer ⇧		• Track QCC leaving footprint • Initial one-off JCAF, participant sign • Then **annual attestation is same** • QCC will match JCAF: seller ⇩
	Non-Participant (track QCC entering)	100% off take and must-take/PURPA	• No JCAF • Attest to type	
		100% off take	• As Participant seller • Both sign	
		Less than 100% off take	• JCAF with FS • Updated annually	

NEW DRAFT JCAF REQUIREMENTS

BPM 106 QUALIFYING CONTRACTS - RESOURCE-SPECIFIC

		Buyer		
		Participant		Non-Participant
Seller	Participant	• Avoid PA/PO/Board contract arbitration • Meet FERC expectations • Initial one-off JCAF, both sign • Then **annual attestation nothing changed** • QCC will match JCAF: seller ⇩ / buyer ⇧		• Track QCC leaving footprint • Initial one-off JCAF, participant sign • Then **annual attestation is same** • QCC will match JCAF: seller ⇩
	Non-Participant (track QCC entering)	100% off take and must-take	• No JCAF – Buyer Attest to type	
		100% off take	• Initial one-off JCAF (buyer signs) + annotated (redacted) contract, then annual attestation nothing changed or • Initial one-off JCAF (both sign) + seller Attestation, then annual attestation nothing changed	
		Less than 100% off take	• Initial one-off JCAF (both sign) + seller Attestation, then annual attestation nothing changed	

Draft JCAF Requirements

BPM 106 Qualifying Contracts - System Sales

		Buyer	
		Participant	Non-Participant
Seller	Participant	• Avoid PA/PO/Board contract arbitration • Meet FERC expectations • Initial one-off JCAF, both sign • Annual **attestation nothing changed** • QCC will match JCAF: seller ⇩ / buyer ⇧	• Track QCC leaving footprint • Initial one-off JCAF, participant sign • Then **annual attestation is same** • QCC will match JCAF: seller ⇩

	Non-Participant	• Track QCC entering footprint
		• JCAF with each FS Submittal
		• Updated at least annually
		• Tariff requires
		  • Seller **attests surplus status**
		  • Not fail to deliver	

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BPM 202 – Participant Sharing Calculation Inputs

Comments & Edits from Discussion

BPM 202 Edits

Operations Program – Participant inputs to Sharing Calc

» **Forced Outages**

- Clarified definition by included Storage Hydro and Energy Storage Resources.
- Removed reference to GADS event types. Added clarification about what constitutes reduction in generating capability

» **Sharing calculation**

- Added bullet in Forced Outages to account for any reduction in output capability for Energy Storage Resources

» **Inputs from FS**

- added paragraph to account for adjustments driven by resource specific contracts such as “slice” contracts (calculated using the Shared Resource Form (SRF))

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BPM 202 Edits

Operations Program – Participant inputs to Sharing Calc

- **Forecasting Methodology and Data Evaluation**
  - Added new section 6 describing Forecasting Methodology and elaborating on requirements
  - Clarified language for PA/PO monitoring and evaluation of data – Ensuring feedback is provided to help identify inaccurate data
  - Removed Appendix A – Data Attestation
- **Input files**
  - Removed 7 day reference from submission of AC files (retained 168 hours)
- **Planned Outages**
  - If a planned outage included in the FS Submittal ends earlier in the month than expected and the resource becomes available, no Forced Outages MWs for that resource in Operations until the end of the original planned outage date

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BPM 202

EDITS NOT MADE

Comment/Theme	Response
Is it possible for a thermal or SH resource to be considered to have more availability than the QCC in FS like VERs?	If a Participant has additional capacity available, they can offer VH. If there is additional Thermal capacity, this would be reflected in the FO forecast. SH resources are treated as perfect QCC and changes in capacity availability is also reflected in the FO forecasts
Request to include relevant information regarding uncertainty factor from BPM 203 to avoid discrepancy	Reference to BPM 203 designed to avoid repeating information/creating more barriers to changes to 203
Request for more information in Point Limits File & Point to Point Limits File sections to detail submission requirements for Participants with connectivity in both subregions of the Operations Program	Would require Task Force and potential Program/Tariff changes
Is a Participant with a negative sharing calculation disqualified from offering Voluntary Holdback into Operations?	Currently only surplus Participants may provide VH. A change would require further consideration and likely another NTFP
BPM does not include information on construction delays related to resources expected to be available and shown in FS but then delayed in Ops	Construction delays are not considered Forced Outages.

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