

WESTERN RESOURCE ADEQUACY PROGRAM

July 28th, 2026

**Data Center & Large Load (DC-LL)
Task Force 14-19 Meeting 1**

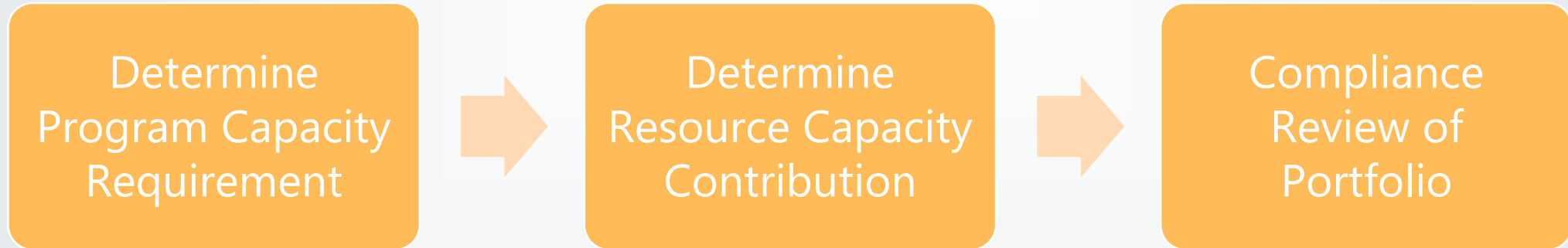
AGENDA

1. Introductions (to each other and WRAP)
2. Task Force Governance
3. Task Force Schedule
4. Proposal Scoping
5. Relevant WRAP Policies
6. Next Meeting: August 11th, 2026

WRAP OVERVIEW

WRAP DESIGN OVERVIEW

FORWARD SHOWING

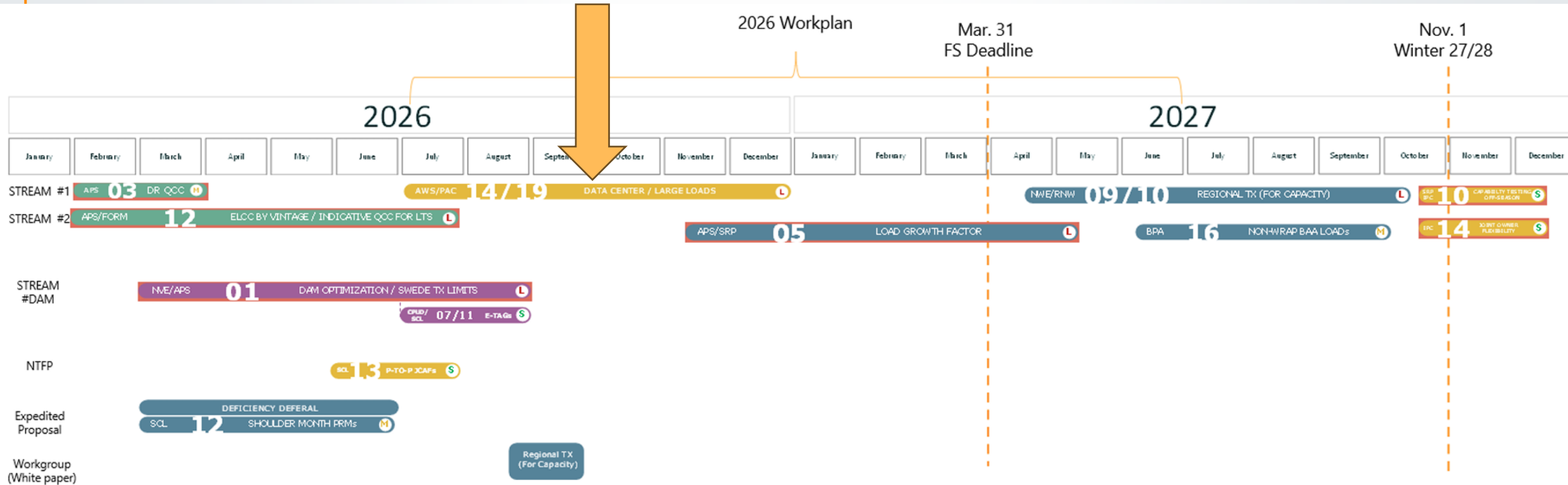


OPERATIONS PROGRAM



GOVERNANCE

BACKGROUND



TASK FORCE GOVERNANCE - CHARTER

- Task Force Procedures
 - Principles of Engagement
 - Proposal Drafting Process
 - Feasibility Review
 - Development of Questions for Public Comment
 - Ready Proposal for Comment
 - Public Comment
 - COSR Comment
 - PRC Endorsement
 - RAPC Review
 - Board Consideration of Proposal
- Task Force can modify Proposal based on stakeholder feedback

PRINCIPLES OF ENGAGEMENT

“Task Force members will strive to represent their respective organizations (if part of one) while working in the best interests of the region. A spirit of collaboration will govern discussions, and the Task Force will strive to navigate cordially through conflicts and differences of opinion. Consistent member attendance and engagement at Task Force meetings are critical.”

TASK FORCE GOVERNANCE - LEADERSHIP

"The first act of this Task Force will be to elect Task Force leadership from its membership that shall include a [Chair//Deputy Chair]."



Nominate self or other, either now, or by email

TASK FORCE GOVERNANCE – QUORUM FOR DECISION MAKING

“The quorum for decision making shall require be presence of **eight of the fourteen members**. A lesser number may adjourn the meeting to a later time.”

TASK FORCE GOVERNANCE - VOTING

"This Task Force will strive for and act on the consensus of its members. In the event consensus cannot be reached a decision will be made by [simple] majority vote."



Note this Task Force has 14 members (organizations)

TASK FORCE MEETINGS

“This Task Force’s meetings shall be [two] hours long and held [biweekly] through [December]. As needed, meetings will be extended with at least one week’s notice. Additional or replacement meetings may also be required by Task Force leadership and scheduled with advance notice. Task Force membership will be notified of meeting dates at least 5 days in advance. Task Force leadership may also call special meetings that will be noticed in advance as soon as practicable.”

SCOPING

DC-LL - PROPOSAL SCOPING

- Original consolidated Concepts:
 - 2025-CRF-014 / Amazon / Large Load Exclusion
 - 2025-CRF-019 / PacifiCorp / Data Center Loads
- In addition, the Demand Response Task Force requests you discuss including two issues within the scope of your Task Force:
 - Behind-the-meter generation tied to load (e.g., if a data center has behind-the-meter generation sized greater than its current load, how should WRAP account for its ability to reduce demand as it builds out and its load increases); and
 - Inter-Participant Load Shifting (e.g., if a data center in WRAP Participant A's territory reduces its load to demonstrate its demand reduction capability but simultaneously increases its load at a data center in WRAP Participant B's territory to compensate for compute).

2025-CRF-014 / AMAZON / LARGE LOAD EXCLUSION

2025-CRF-019 / PAC / DATA CENTER LOADS

AWS/PAC

14/19

DATA CENTER /LARGE LOADS

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2025-CRF-014 / AMAZON / Large Load Exclusion

WRAP Area: FS Demonstration	Tarriff Change: Yes	Time Score: Long
Lead Sponsor: Paul Garrett pdg@amazon.com		Co-Sponsor:
Summary: Clarification of Load Exclusion for Independently Adequate Large Loads		
Description of the issue: (This comment submitted on behalf of Brandon Oyer, Director, AMER Energy & Water, Infra. Perf Services) Amazon Data Services, Inc. (ADS) appreciates the opportunity to submit this Change Request form for the Western Power Pool's (WPP) Western Resource Adequacy Program (WRAP). Most of ADS' load in Oregon is included in WRAP through Bonneville Power Administration as the transmission provider and Load Responsible Entity. ADS requests WPP to amend WRAP BPM 103 – "Participate Forward Showing Capacity Requirements" to clarify that loads with sufficient backup generation can elect to exclude their load from the Load Responsible Entity's load forecast.		

2025-CRF-019 / PAC / Data Center Loads

WRAP Area: FS Capacity Requirement	Tarriff Change: Yes	Time Score: Long
Lead Sponsor: Benjamin Faulkinberry benjamin.faulkinberry@@pacificorp.com		Co-Sponsor:
Summary: Program Consideration of Data Center Additions and Other Large Non-Conforming Loads		
Description of the issue: A substantial portion of projected utility load growth is driven by large, non-conforming, high-load-factor resources such as data centers. As these loads represent an increasing share of the WRAP footprint, existing modeling practices and policy frameworks may require adjustment. WRAP should explicitly incorporate this trend when establishing Forward Showing capacity obligations for Participants. Furthermore, WRAP must ensure that Participants introducing these loads earlier, or maintaining portfolios with higher concentrations of such resources, are not disproportionately burdened with capacity requirements necessary to achieve the regional 1-in-10 LOLE reliability standard.		

INTER-PARTICIPANT LOAD SHIFTING (DEMAND RESPONSE TASK FORCE)

Certain DR configurations may shift load across participants during Capacity Critical Hours rather than reducing net system load.

Example: Data Center 1 in Participant A reduces load while Data Center 2 in Participant B increases load.

This may overstate regional capacity and create inconsistencies in accounting.

Recommendations:

- Require demonstration of net load reduction at a regional or subregional level.
- Consider limiting or adjusting QCC for cross-participant load shifting programs.
- Require disclosure or attestation regarding such practices.

Behind-the-Meter Generation Tied to Load

(DEMAND RESPONSE TASK FORCE)

The Task Force should consider how to appropriately accredit demand response resource testing that is directly tied to a specific load, particularly where behind-the-meter generation is used to offset that load (e.g., a data center with co-located generation). In these cases, the demand response capability is effectively dependent on the size of the underlying load, which may be in the process of **being built out over time**.

During the initial testing period, the full load may not yet be realized, creating a situation where the resource cannot demonstrate its full potential load reduction capability under the existing testing framework. The full demand response may not be realized because the load may continue to be ramping online at the time of testing (i.e. continued ramping to and through the WRAP season.) A large load under development may only be partially energized at the time of testing, but the behind-the-meter generation is capable of fully offsetting the ultimate build-out load.

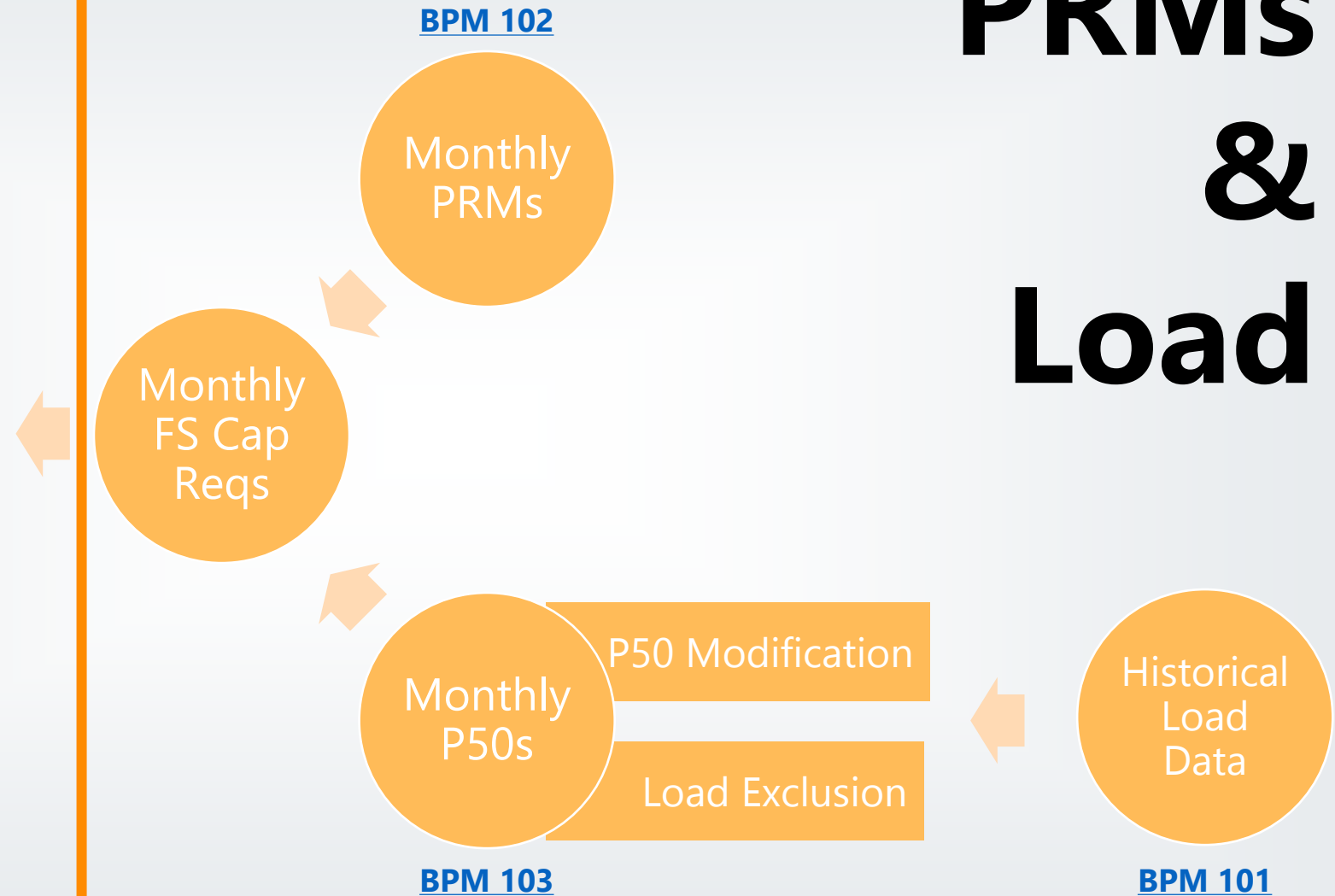
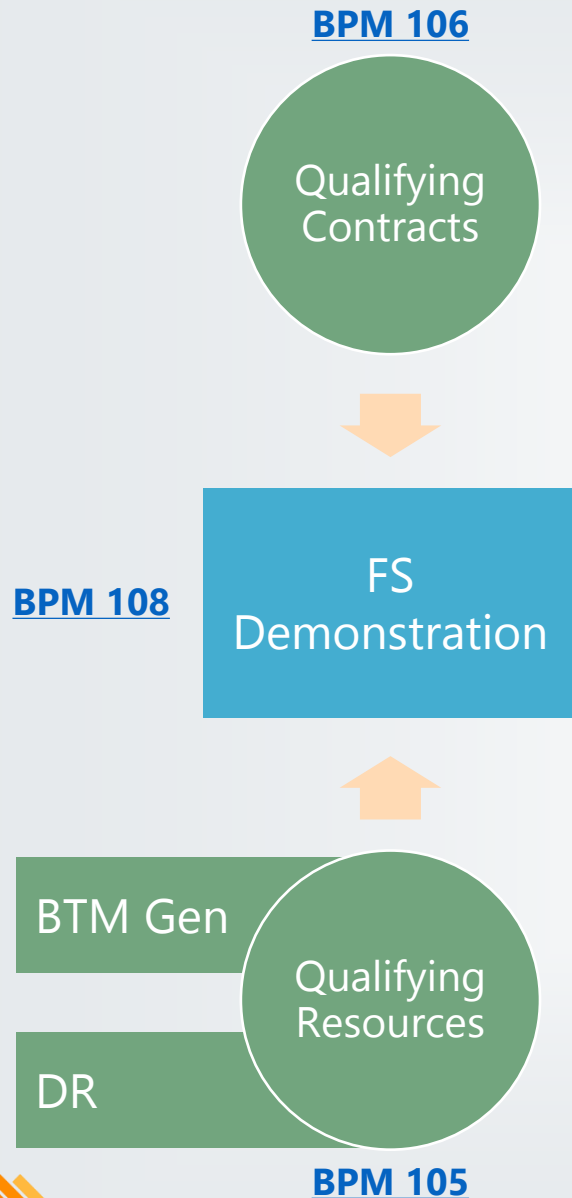
If the demand response resource is able to demonstrate that it can fully offset the existing load at the time of testing, it should be eligible to receive accreditation up to the full expected load at build-out for the applicable month/season.

This approach would better reflect the forward-looking reliability contribution of the resource while avoiding unnecessary under-accreditation due to timing mismatches between load growth and testing requirements. This approach is only enabled where load and DR resource ramp together - thus a shortage in DR also translates to a reduced amount of load and the load/resources are known with an ability to test a portion of the resource within the appropriate testing window.

The Task Force may consider allowing this through documented load forecasts, staged validation requirements, or conditional accreditation subject to future verification.

CURRENT PRM & LOAD POLICY

PRMs & Load



WRAP TARIFF – FS COMPONENTS

- **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.

BPM 101 – ADVANCE ASSESSMENT

Historical Load Data: Load data from one or more Years prior to the current Year, such as the previous 10 Years. Historical Load Data is expected to consist of 8,760 hours (or 8784 hours for a leap Year) of data for a Year.

BPM 102 – FS RELIABILITY METRICS

- **§5 Load Modelling 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** [...] 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 [...]

- **§7 LOLE Study**

- [...] 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.

- **§8 FSPRMs**

- [...] the **FSPRMs will be calculated separately for each Month** of the Binding Seasons based on the Regional P50 Peak Load Forecast for each Month

BPM 103 – FS CAPACITY REQUIREMENTS

Equation 1 – FS Capacity Requirement

$$\text{FS Capacity Requirement} = \text{FS Capacity Requirement Unadjusted} + \text{Contingency Reserve Adjustment}$$

where

$$\begin{aligned} \text{FS Capacity Requirement Unadjusted} \\ = (\text{P50 Peak Load Forecast}) * (1 + \text{FSPRM}) \end{aligned}$$

and

$$\begin{aligned} \text{Contingency Reserve Adjustment} \\ = \text{Contingency Reserve Adjustment_Generation} \\ + \text{Contingency Reserve Adjustment_Load} \end{aligned}$$

BPM 103 – FS CAPACITY REQUIREMENTS

- **§4 P50 Peak Load Forecast** - (§4.1 Winter & §4.1 Summer)
 - [Step] 1. Determine the **peak load for each Month** of the Winter/Summer 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).
 - [...] a Participant can modify the results of **Step 1** to capture **load changes** during the forecast window [...] A Participant will need to attest to the accuracy of any modification [...] 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**.
- **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.

BPM 103 – FS CAPACITY REQUIREMENTS

- **§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. 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 [...] Loads may not be partially excluded.

- **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.**

BTM Generation & Demand Response

BPM 106

Qualifying
Contracts

BPM 102

Monthly
PRMs

BPM 103

Monthly
P50s

P50 Modification

Load Exclusion

BPM 101

Historical
Load
Data

BPM 108

FS
Demonstration

BPM 105

Qualifying
Resources

BTM Gen

DR



WRAP
POWERED BY WPP

DISTRIBUTED ENERGY RESOURCES (BPM 105)

- **Resource Eligibility:** 1 MW **minimum**
- **Aggregation:** Resources <1 MW may be **aggregated to minimum**
 - Common injection point on transmission system
 - Generation at different distribution stations allowed if same resource type in same resource zone and same BAA
- **Customer Resources:** generally, behind the meter
 - Must be **controllable and dispatchable** by the Participant
 - Not already used to modify Participant's load forecast

WRAP TARIFF – DR DEFINITIONS

- **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.

DISCUSSION / NEXT STEPS/ Qs

- Data Centers / Large Loads with BTM generation:
 - BTM generation used as a resource to meet FS requirements
 - BTM generation used to offset load
 - Demand response embedded in Historical Load Data
 - Extracted from load data and used as a DR Capacity Resource in FS
- If Data Center Load with BTM generation is excluded:
 - The BTM generation and Demand Response could no longer be used in the FS?
 - How do we make sure the load does not lean on the program during a Sharing Event?
 - If the load is curtailed, what are the impacts on the system (frequency disturbances)?
 - How does the data center benefit from this treatment?

NEXT MEETING: AUGUST 11TH, 2026

- Determine Governance
- Solidify Scope
- Identify educational needs and expertise