NWPP Resource Adequacy Stakeholder Advisory Committee Meeting

April 8, 2020 1:00-4:30 p.m.

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Objectives

- Provide an update on recent NWPP RA program work and accomplishments
- Provide an overview of structural/governance considerations, preliminary information and solicit advisory committee feedback
- Share draft concepts on forward showing program and solicit advisory committee feedback
- Discuss stakeholder advisory committee feedback from last meeting/homework and discuss questions posed

Agenda

1:00 – 1:30 **Introduction, Tour of NWPP Webpage and Status Report**
Frank Afranji and David Pennington NWPP

1:30 – 2:15 **Organizing an RA Program: Forward Showing Program and Operational Program**
Mark Holman, Powerex

2:15 – 2:30 **Break**

2:30 – 3:00 **Structural and Governance Considerations**
Sarah Edmonds, Portland General Electric and Andrew McLain, Northwestern

3:00– 3:45 **Forward Showing Program Proposal**
Gregg Carrington, Chelan PUD and Cathy Kim, Portland General Electric

3:45-4:30 **Advisory Committee Feedback and Questions**
Gregg Carrington, Chelan PUD, Cathy Kim and Sarah Edmonds Portland General Electric

NWPP RA Webpage and Video Update

www.nwpp.org/adequacy

Status Report

- Four two-day Steering Committee work sessions; CAISO/SPP attended February work session
- Developing draft design elements-draft proposal on forward showing program
- Started RA modeling for the region with the help of E3
- Evaluating regulatory pathways with legal assistance
- Conducted first advisory committee meeting and public webinar
- Considering staging/sequencing of program functionality and scope: non-binding forward showing program>binding forward showing program>binding showing program with operational program

Overview of Project Timeline

Phase 1: Information Gathering (concluded Oct. 2019)

Phase 2A: Preliminary Design Phase (Early 2020)

Phase 2B: Detailed Design (Late 2020)

Phase 3: Begin Work to Implement Program (2021)

Organizing An RA Program

Mark Holman, Powerex

Organizing an RA Program: Two Time Horizons

Two Time Horizons:

- Forward Showing
  - *Regional metrics*
  - *Entities prove they meet regional metrics months in advance of a season*
  - *Ensures reliability benefits*
- Operational
  - *Access to pooled regional resources*
  - *Enables lowering/right-sizing of regional metrics to account for regional diversity*
  - *Function usually provided by an ISO/RTO*
  - *Unlocks investment cost savings through diversity benefits*

Common Characteristics Of A Forward showing Program

- Obligation/cost is allocated to responsible entities
- Forward procurement "showing" of defined level of capacity
  - *Quantity set to <u>expected</u> peak load forecast +defined planning reserve margin*
  - *Load forecast determined/validated by independent program administrator*
  - *Defined consequences for entities that fail to "show" required capacity*

Common Characteristics Of A Forward showing Program

- Generators sell a pre-defined quantity of resource adequacy capacity:
  - *Receive compensation in exchange for energy must-offer obligation to "footprint"*
  - *Available quantity of RA capacity for each resource determined/validated by independent administrator*
  - *Defined consequences for resources that fail to "deliver" energy*

Common Characteristics Of A Forward showing Program

- Reliability of service is generally ensured through:
  - *Establishing robust procurement quantity and lead time*
  - *Limiting qualifying capacity of individual supply resources*
  - *Rules that establish qualification of imports (credit), identification of firm export commitments (debit)*
  - *Curtailment of short-term discretionary exports, if/when needed*

Challenges Unique to the Northwest

- Other RA programs have a market (with must-offer requirements for RA resources) to facilitate the operational time horizon
- Need regional entity (or entities) suited to administer these two programs/modules
- Size and role of BPA may present semi-unique challenges

Loads and Resources

DEMAND SIDE

Calculate: "PURE" CAPACITY NEEDED BASED ON:

- **P50 LOAD FORECAST +**
- **Contingency Reserves +**
- **PRM needed to meet The RA metric (1 in 10 LOLE)**

"PURE" CAPACITY NEEDED

SUPPLY SIDE

Calculate: "PURE" CAPACITY AVAILABLE BASED ON:

› **Total Supply, de-rated and qualified as follows:**

Wind – ELCC

Solar – ELCC

Thermals – UCAP

Run of River Hydro – ELCC

Storage Hydro – UCAP + NWPP developed hydro methodology

"PURE" SUPPLY AVAILABLE

Loads and Resources

DEMAND SIDE

Calculate: "PURE" CAPACITY NEEDED BASED ON:

- **P50 LOAD FORECAST +**
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- **PRM needed to meet The RA metric (1 in 10 LOLE)**

"PURE" CAPACITY NEEDED

NWPP Peak Load?

WECC Peak *net* Load?

Import/Export Assumptions?

PRM does NOT need to cover supply issues, since they are covered on the supply side of the equation

Loads and Resources

Removes supply issues from the PRM, which ensures:

Fair and equitable treatment:

› Each entity's ability to meet their RA requirement is based on the performance of their own fleet

Proper Incentives:

› Resource specific qualification of supply incents performance with respect to VERS planning, outage management, water management, etc.

SUPPLY SIDE

Calculate: "PURE" CAPACITY AVAILABLE BASED ON:

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Wind – ELCC

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"PURE" SUPPLY AVAILABLE

Stakeholder Advisory Committee Structural and Governance considerations

Sarah Edmonds, PGE
Andrew McLain, NWE

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Process: Researching and Surveying

- The NWPP RA effort includes a work group that has been researching and surveying several topics related to program structure and governance
- Still in early stages; today's presentation includes preliminary information about regulatory landscape
- Advisory committee input and feedback is critical

Considerations Around Potential FERC and State Jurisdiction

- Jurisdiction will depend on **scope**, **functions**, and **timing** of functions of program
- Federal Power Act, "FPA": *"an agreement affecting the rates, terms, and conditions of sales of electric energy for resale in interstate commerce and/or transmission of electric energy in interstate commerce"*

The Role of States in a Regional RA Program

- States have exclusive jurisdiction over the facilities used for the generation of electric energy
- States traditionally have comprehensively regulated electric generation resource planning and adequacy
- The interplay between FERC regulation and the states' longstanding regulation of RA is thus an example of the "cooperative federalism" where both play a role

Special Considerations for Non-Jurisdictional Entities

- How do we protect as much as possible the jurisdictional status of non-jurisdictional entities?
  - *The RA Program could include provisions to limit FERC's authority over non-jurisdictional entities only to those activities performed under the agreement over which FERC possesses authority*

Other Important Considerations

- The NWPP RA program is unique: currently all RA programs operate under RTO's/ISO's and must meet FERC's independence requirements
- What are the requirements for the Program Administrator (PA)? Will the PA be subject to FERC requirements?
- Where should the RA program point of compliance be? At the load-serving entity level?
- Timing of potential FERC jurisdiction: may depend on how program components are staged/rolled-out

Preliminary Conclusions

- A program without binding commitments or financial penalties may not be FERC-jurisdictional; but this would likely result in program with information sharing only
- FERC likely will have jurisdiction over certain components of the program
- Under a FERC jurisdictional program, the program administrator and governance structure will likely need to meet FERC's independence criteria

Future Work

- Work group is completing its research on jurisdictional, structural and governance considerations and plans to present more information at the next advisory committee meeting

Forward Showing

Program Proposal

Gregg Carrington, Chelan PUD

Cathy Kim, Portland General Electric

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High-level Overview of Key Proposal Elements

- Seasons / Timeline
- Program Administrator
- Capacity Contributions

*initial proposal, nothing has been decided

Two Binding Seasons

- ***Winter*** *(BINDING): Nov-March*
- ***Summer*** *(BINDING): June-Sept*
- *Spring (advisory): April -May*
- *Fall (advisory): October*

Administrator will provide 3-5 years of advisory data/metrics for planning purposes

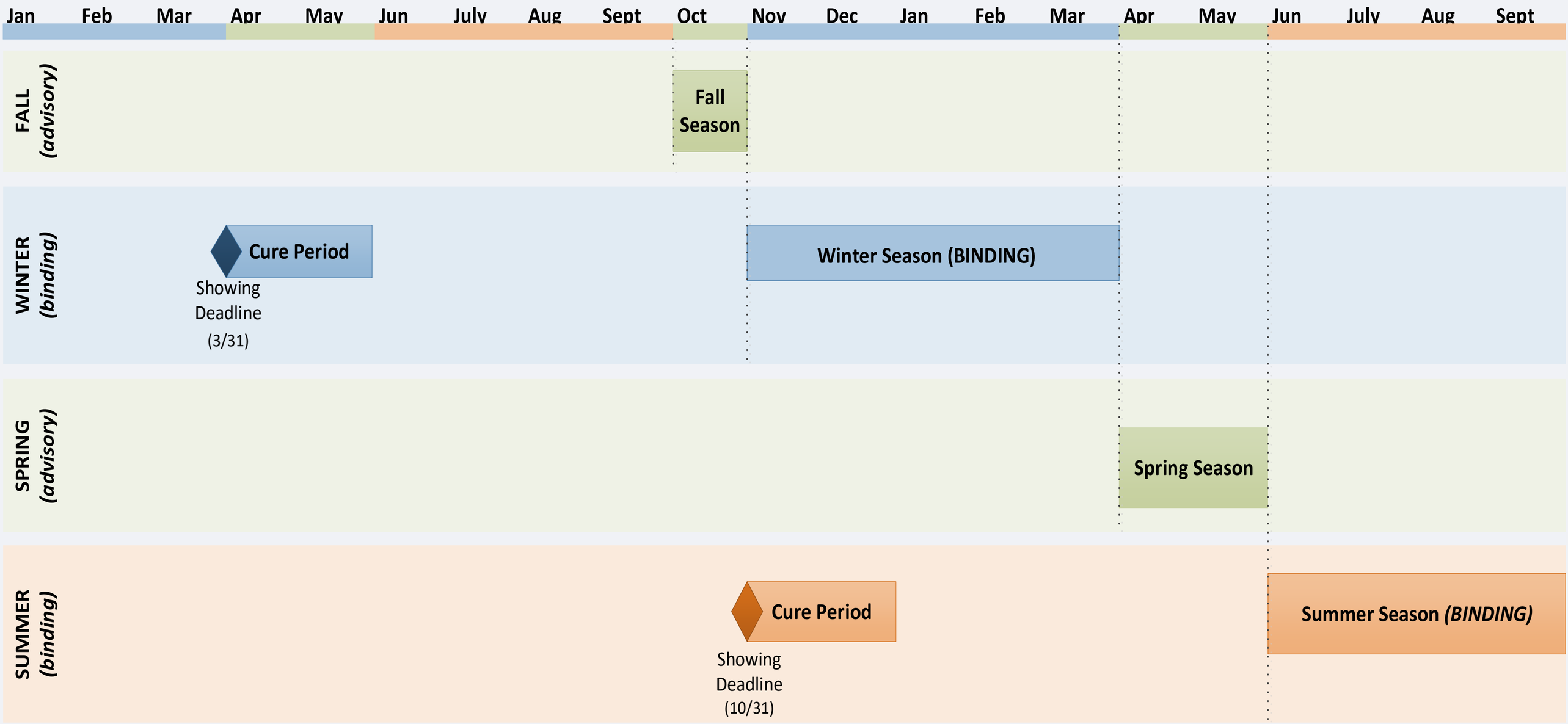
Two Binding Seasons

- ***Compliance showing deadline*** *7 months in advance of binding seasons*

  Entities must demonstrate to Program Administrator that they have sufficient resources to meet required metrics

- ***Cure period*** *for 2 months following compliance showing date*

  Complete contracts or acquire resources to true up any discrepancies between required metrics and portfolio shown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Fall Season
WINTER (binding)
Cure Period
Showing Deadline (3/31)
Winter Season (BINDING)
SPRING (advisory)
Spring Season
SUMMER (binding)
Cure Period
Showing Deadline (10/31)
Summer Season (BINDING)

Role of the Program Administrator

- Calculate metrics and set expectations
- Define process for the showing
- Work with entities to determine compliance

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Capacity Contributions

- Thermal resources
- Variable Energy Resources (VERs)
- Hydroelectric resources
- Other emerging resources (e.g. demand response, batteries, pump storage)

Thermal Capacity Contribution

Use UCAP Methodology

- Improves upon ICAP methodology (discounting for ambient temperature) by accounting for resource-specific outage metrics
- Enables more realistic reflection of unit reliability (vs socializing outage averages across the region)
- SPP and CAISO are both considering shifting from ICAP to UCAP

Hydro Capacity Contribution

*Methodology is in development – no other region has tackled this issue. Intent is that hydro capacity calculations should be as consistent as possible with the way we calculate capacity contributions for VERS.

- Using a time-period approach (historical look-back over 10 years)
- Assess generation output during historical high load periods
- Account for available storage during historical high load periods (assess what generation could have been available)

VER Capacity Contributions

- Use ELCC calculations
  - Considering sub-regional basis to account for varying fuel characteristics
  - ELCC calculations have modeling/technical considerations; being considered/informed by current modeling efforts
- CAISO and SPP approaches to VER capacity contributions have been approximate/rough

Stakeholder Advisory Committee Feedback and Questions

Gregg Carrington, Chelan PUD
Cathy Kim, Portland General Electric
Sarah Edmonds, Portland General Electric

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Stakeholder Advisory Committee Input On Design elements of Interest: Key themes

- Overall a lot of interest/questions on everything, but especially on governance, the forward showing program and transmission deliverability

Stakeholder Advisory Committee Input On Design elements of Interest: Structural/Governance

- How does this program interact with state requirements and neighboring programs?
- What is the interplay between regional market expansion and the RA program and how do we ensure there are no barriers to market expansion from the RA program?
- What is the point of compliance—what types of entities will participarte and how will LSE's/ESP's participate?
- What, if anything, is FERC jurisdictional?
- What is the role of the program evaluator and who will the report to?
- How do you ensure fairness in cost allocation?

Stakeholder Advisory Committee Input On Design elements of Interest: Forward Showing Program

- Regional metrics of the forward showing program: planning reserve margin, adequacy objective, demand forecast objective
- Capacity Contribution
    - *Define in relation to system needs and not a reference resource*
- Resource Eligibility and Qualification
- Imports and Exports
- Fuel Supply
- Penalty For Non-Compliance
    - *Assess penalties in a non-discriminatory fashion*
- Clarify what delisting and forced outage design elements refer to and what circumstances they address.

Stakeholder Advisory Committee Input On Design elements of Interest: Operational Program

- Deliverability: transmission availability is key, what ATC is available across all transmission resources during peak times?
- Preserve non-discriminatory access; cost and risk for new and existing resources should be assessed fairly and transparently.

Stakeholder Advisory Committee Input On Proposed Work groups

- Resource eligibility and capacity contributions
- Imports/exports and deliverability
- Technical RA analysis group: scope, input and data assumptions, model logic of the RA analysis, detailed discussion on regional metrics, resource specific metric and compliance. Could assist with ensuring regulated utilities meet transparency obligations.
- Governance work group to cover the design elements under legal/reg structure
- RA and emerging technology
- No work groups yet-keep everyone together at this phase

Stakeholder Advisory Committee Input On Other topics of Interest, Feedback and Questions

- Reconcile studies that show a less urgent need for RA with those that show a dire need
- Transparency of review and access to methodology, data and assumptions and documentation of decisions
- How do carbon regulation and RA programs co-exist and meet their objectives while minimizing cost burdens?
- What is the role of regulators and interaction with IRP process?
- Would a future west-wide RTO take over the function of the NWPP? How does the RA program relate to or influence future market expansion efforts?
- Address interplay between RA program and transmission planning and operations
- Clarify participation of nontraditional customer-owned resources or direct access providers

Questions and Next Steps

- Questions??
- Next advisory committee meeting scheduled for June