NWPP RESOURCE ADEQUACY EVALUATION

PURPOSE & SCOPE

WECC Joint Guidance Committee
Resource Adequacy
SLC, Utah
June 26, 2019
The Northwest Power Pool Agreement

“Membership Agreement”

- Alberta Electric System Operator
- Avangrid
- Avista Corporation
- Balancing Authority of Northern California
- Bonneville Power Administration
- British Columbia Hydro & Power Authority
- Chelan County PUD
- Douglas County PUD
- Grant County PUD
- Idaho Power Company
- NaturEner
- Northwestern Energy
- NV Energy (Sierra Pacific)
- PacifiCorp (PacifiCorp East and PacifiCorp West)
- Portland General Electric
- Puget Sound Energy
- Public Service of Colorado
- Seattle City Light
- Tacoma Power
- Turlock Irrigation District
- Western Area Power Administration (Upper Great Plains)
- Western Area Power Administration (Rocky Mountain)
The Northwest Power Pool Agreement

“Membership Agreement”

Signatories – Other Organizations:

- ColumbiaGrid
- Cowlitz County PUD
- Energy Keepers*
- Eugene Water and Electric Board
- Fortis BC
- Pend Oreille PUD
- Powerex Corporation
- Snohomish County PUD
- U.S. Army Corps of Engineers
- U.S. Bureau of Reclamation

* (signatory to the Pacific Northwest Coordination Agreement, but not the Membership Agreement)
Reliability is the NWPP focus
KEY ACTIVITIES

- Contingency Reserve Sharing Program
- Pacific Northwest Coordination Agreement (PNCA)
- Underfrequency Load Shedding Program
- Frequency Response Sharing Program
- Regional Planning (System Import Limits (SIL) and other studies)

- Development and modification of Reliability Standards in Compliance with mandatory NERC and WECC reliability standards
- Coordinate & Sponsor Industry Forums and Seminars
- Online and In-Person training NERC accredited CEH classes
- https://vimeo.com/288260007/e396cf80a1
NWPP Member Executives

NWPP Corporation Facilitation

ORGANIZING TEAM
• NWPP
• 6-Member Exe. Advisory
• One Rep: IOU, PGP, & BPA

DESIGNATED MEMBERSHIP PARTICIPANTS
• 1-2 each from participating entities
• PNUCC
• NW Power and Conservation Council
• PGP
• PPC

WORK TEAMS
• Assessment of existing RA studies
• RA Standards Evaluation and utility IRP synthesis
• Symposium Preparation
• Development of RA standards/program
Why NWPP?

➢ Long-standing history of operations and sharing under the auspices of the NWPP among Northwest utilities

➢ Natural entity well positioned to facilitate the Resource Adequacy Standards discussion, development & possible role in enforcement

➢ An established and credible organization among utilities, state commissions, legislators, and customers
Key Deliverables:
Assess and Recommend Solutions and Secure Commitment to address Resource Adequacy within the current NWPP footprint.

Work Team Structure:
The NWPP Resource Adequacy evaluation effort will be guided by a small Executive Advisory Committee and Organizing Committee.

- Executive Advisory Committee:
  Elliot Mainzer (BPA), Frank Lawson (EWEB), Steve Wright (Chelan), David Mills (PSE), Jason Thackston (Avista), Larry Bekkedahl (PGE)

- Organizing Committee:
  Frank Afranji (NWPP), Therese Hampton (PGP), Eddie Elizeh (BPA), Scott Kinney (Avista)

The evaluation effort will involve four parallel work streams to ensure deliverables are provided in an efficient and timely manner. Each of the work streams will be led by co-chairs and populated with participating member organizations. The following table provides the key deliverables for each team as well as the co-chairs and team members.
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<th>Topic</th>
<th>Review of Resource Adequacy Studies</th>
<th>Review of Resource Adequacy Programs</th>
<th>IRP Compilations and Analysis</th>
<th>Communications Process and Elements</th>
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| **Deliverables**              | July 29: Review of existing System Studies defined under Phase 1, Track 1 of project scope. | July 29: Power point presentation and draft report that addresses:  
  • Summary of other established Resource Adequacy programs  
    — Investigate flexible capacity/ramping requirements.  
    — Clearly delineate between allocation and enforcement of the RA program vs. how is RA assessed?  
  • Recommend elements of other RA programs to test in the Northwest region. Provide a ranking based on applicability and ease of adoption. | July 29: Draft informational report and Power point presentation on compilation of the following:  
  • Existing IRP publicly filed modeling assumptions  
    — What are the adequacy metrics used (LOLPs, planning margins)?  
    — What are the resource capacity contribution assumptions?  
    — Are any of the utility IRP’s utilizing any of the RA program elements associated with actual implemented RA programs (Powerex paper)?  
    — What are the market purchases that are assumed by the various utilities in their IRPs? | All information releases come from NWPP after review by Organizing and Executive Advisory Committee  
• Mid-June (after NWPP full-team webinar): Release with timeline of projected activities.  
• Early August: Release progress report once reports are received from the various key work teams.  
• For fall release: Develop video that explains Resource Adequacy.  
• Other Progress Reports as needed. |
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<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
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<td><strong>June 10:</strong></td>
<td><strong>Week of July 29:</strong> NWPP Full Team Webinar&lt;br&gt;• Teams report out on their completed work</td>
<td><strong>Week of Aug 26:</strong> NWPP Full Team Webinar&lt;br&gt;• Teams report out on their final work&lt;br&gt;• Review Symposium Agenda and Materials</td>
<td><strong>September 6:</strong> Participants Executive Committee&lt;br&gt;• Work teams present results&lt;br&gt;• Review Symposium Agenda and Materials</td>
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<td><strong>NWPP Full Team Webinar</strong>&lt;br&gt;• Share workplan&lt;br&gt;• Presentation by John Fazio</td>
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<td><strong>Late September/Early October:</strong> NWPP RA Symposium&lt;br&gt;• Presentation by E3 and work teams based on their findings.&lt;br&gt;• Is there a new way to measure Resource Adequacy based on the new system?&lt;br&gt;• Define approach to ongoing Stake holders engagement</td>
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Questions