

## *Technical Conference on Capacity Planning and Resource Adequacy*

Montana Public Service Commission  
1701 Prospect Ave.  
Helena, Montana

**Thursday, June 8, 2017**

9:00 a.m. – 5:00 p.m.

Video and Audio Access:

<http://psc.mt.gov>

### **Conference Goal**

Several current trends in the Pacific Northwest and Western Interconnection—including planned retirements of coal-fired baseload generating plants, rapid growth in intermittent renewable resources, deviations from traditional patterns of load growth, and an increasing emphasis by some utilities on the need to develop flexible resources and ensure adequate capacity—have elevated the importance of evaluating resource adequacy and capacity needs in the resource planning process. In Montana, these trends are underscored by NorthWestern Energy’s evolving resource portfolio following a period of supply deregulation and its potential participation in an organized regional market. The Montana Public Service Commission hosts this conference to foster a deeper understanding of resource adequacy and capacity analysis, to evaluate regional resource availability and interconnection dynamics, to learn of emerging technologies and practices in flexible resource management, and to allow participants to discuss the Commission’s comments on NorthWestern Energy’s 2015 Resource Procurement Plan as they relate to capacity planning. NorthWestern Energy’s plan, as well as the Commission’s full comments, released in February 2017, are available here:

[http://psc.mt.gov/Docs/ElectronicDocuments/getDocumentsInfo.asp?docketId=11712&d\\_o=false](http://psc.mt.gov/Docs/ElectronicDocuments/getDocumentsInfo.asp?docketId=11712&d_o=false)

**9:00—9:15 a.m.      Welcome and Introductions**

**Brad Johnson, Chairman, Montana PSC**

**9:15—10:15 a.m. Resource Adequacy and Planning Reserve Margins**

What are the traditional approaches to measuring and planning for resource adequacy? In what ways are those traditional approaches relevant today? How does the concept of “flexible capacity” relate to the traditional notion of peak load capacity planning? How are adequacy and reliability requirements evolving to address changing needs for capacity? What new methodologies are being developed to evaluate system performance relative to these adequacy and reliability requirements? How are planning reserve margins determined? How and why are those determinations changing?

**Arne Olson, Principal, E3**

*Questions and Discussion*

**10:15—10:30 a.m. Break**

**10:30 a.m.—12:30 p.m. Capacity Planning at Utility-Specific and Regional Levels**

How do the Northwest Power and Conservation Council (NPCC), NorthWestern Energy, and other utilities in the West plan for resource adequacy? What capacity resources are being identified as optimal in these exercises, and what attributes do the selected resources contribute toward ensuring reliability and resource adequacy? How have plans evolved to address the growing role of intermittent resources and the need for flexibility resources? To what degree can wholesale markets be depended upon to provide capacity? How is planning influenced by forecasts for decreasing load growth in parts of the region? Is it possible to plan regionally to address regional capacity deficits, in a way that can be depended upon, without an ISO? How does NorthWestern Energy’s approach differ from others who conduct capacity planning in the region?

**Moderator: Carl Linvill, Regulatory Assistance Program**

**Northwest Power and Conservation Council**

**- Ben Kujala, Power Division Director**

- 1) How does NPCC assess resource adequacy?
- 2) How does NPCC assess the need for specific resource attributes like flexible ramping capability?
- 3) How does capacity planning differ among Northwest utilities, and how do NPCC’s regional plans affect utility planning?
- 4) What technologies/practices with flexible capacity attributes are emerging in the Northwest?

**- John Fazio, Senior Power Systems Analyst**

- 1) How is the demand for energy changing in the Northwest? How do the state load forecasts in the Northwest differ from one another?
- 2) How has NPCC adapted the Effective Load Carrying Capacity (ELCC) approach in its LOLP methodology?

**NorthWestern Energy**

**- Gary Dorris, CEO, Ascend Analytics**

- 1) How does your modeling tool identify capacity and capacity attribute needs for an individual utility and for the region? How does it differ from how other modeling tools identify needs?
- 2) How does your modeling tool characterize the capabilities of resources to provide capacity and capacity attributes? How does it differ from other tools?
- 3) How does your modeling approach address the opportunity for regional resource sharing?

**- John Bushnell, Planner, NorthWestern Energy**

- 1) How has NWE's approach to planning to meet system needs changed?
- 2) How does NWE characterize its need for resources and how does it reflect these needs in its procurement solicitation?
- 3) How does NWE assess opportunities for meeting resource needs through organized markets and bilateral markets?
- 4) How does NWE evaluate the risk of long-term resource commitments in light of evolving regional relationships and evolving technologies on the supply and demand side?

**Respondents**

**- Arne Olson, Principal, E3**

**- Jaime Stamatson, Economist, Montana Consumer Counsel**

**- Mike Dalton, Staff Economist, Montana Public Service Commission**

*Questions and Discussion*

**12:30—2:00 p.m.      Lunch**

**2:00—3:00 p.m.      Capacity Contributions of Resources--Part 1**

These two panels address the capacity contributions of existing resources and potential new resources, exploring both conventional peaking resources as well as alternatives such as storage and retrofit of thermal resources.

**Moderator: Commissioner Travis Kavulla, Montana PSC**

**Existing and Conventional Resources**

Panelists will address whether and what types of capacity can be provided by existing resources that are deliverable to Montana. What are best practices for incorporating the capacity attributes of each panelist's resource into a least-cost portfolio strategy? What is the potential for growth—both in supply volume or end-use diversity—of each panelist's resource? Are there ways to package resources together in a way that provides additional capacity value?

- Optimization of Existing Resources: **NorthWestern Energy**
- SKQ Dam: **Travis Togo, Power Director, Energy Keepers**
- Independent power marketing: Morgan Stanley Commodities
  - [John Wilkinson, Executive Director, West Power](#)
  - **Murray Margolis, Managing Director, West Power**

*Questions and Discussion*

**3:00—3:15 p.m.      BREAK**

**3:15—4:15 p.m.      Capacity Contributions of Resources--Part 2**

**Emerging Resources**

In addition to speaking to the same questions as presented in Part 1, panelists will discuss the business case for new capacity resources and economic barriers to adoption of each resource and how are those barriers changing. How can these new resources interact with the existing portfolio? Can they supplement or improve the capacity contribution of intermittent resources such as wind and solar?

- [Pumped Storage: Rhett Hurless, COO, Absaroka Energy](#)
- [Battery Storage: John Fernandes, Regulatory Affairs Director, Invenergy](#)
- [Wind with Storage and Fossil Back-Up: Charlie Ricker, President, MADA Power](#)
- [Demand Response: Ken Schisler, VP of Regulatory Affairs, EnerNOC](#)

*Questions and Discussion*

**4:15—5:00 p.m.      Roundtable Discussion**

**5:00 p.m.**

**Adjourn**