May 9, 2023

MEMORANDUM

TO: Council Members

FROM: Jennifer Light, Director of Power Planning

SUBJECT: Comments from Steve Wright on Resource Adequacy

BACKGROUND:

Presenter: Steve Wright

Summary: Steve Wright is the former Bonneville Administrator (2000-2013) and Chelan County PUD General Manager (2013-2021). Steve will be sharing his perspectives on the importance of regional resource. As Administrator of Bonneville, Steve experienced first hand the importance of resource adequacy. He has taken time with staff to understand the 2021 Power Plan and the recently released 2027 Adequacy Assessment. Based on those discussions, he plans to share his perspectives on what the Council is doing well and where there may be opportunity for the Council to do more.

Relevance: An important part of the Council’s planning obligation is to ensure an adequate, efficient, economical, and reliable power supply. The 2021 Power Plan provides a resource strategy to meet these goals. The 2027 Adequacy Assessment shows that implementing the strategy will help to ensure resource adequacy. It also recognizes that risk areas exist, particularly around the pace and size of load growth and resource builds across the west. Tracking track loads and resources is an important piece of implementing the 2021 Power Plan and preparing for the Council’s ninth plan. Engagement with regional experts, such as Steve, provides additional valuable insight to inform the Council’s planning efforts.
Northwest Power and Conservation Council

STEVE WRIGHT
MAY 17, 2023
WHEREAS, Stephen J. Wright served honorably and notably as Administrator of the Bonneville Power Administration from November 2006 through January 2013 and;


WHEREAS, The Power Act authorizes the Council to review, from time to time, the actions of the Administrator to determine whether such actions are consistent with the Council's Oregon Power Plan (hereinafter the Plan) and Columbia River Basins Fish and Wildlife Program (hereinafter the Program) [Power Act, §403, 94 Stat. 2711] and;

WHEREAS, The Council examined the actions of Stephen J. Wright during his tenure as Administrator and determined he had a direct role in (1) implementation of the largest regional fish and wildlife recovery program in the United States and (2) acquisition by the Northwest region of more than 3,000 average megawatts of energy efficiency between 2007 and 2012 and;

WHEREAS, The Council finds these actions are consistent with the purposes of the Power Act and with the Plan and Program, now in it;

RESOLVED, that the Council bestows on Stephen J. Wright the title of Honorary Council Member with all the Rights and Privileges pertaining thereto, including;

THE RIGHT, through the unique perspective of his crystal ball to evaluate, prognosticate, predict, forecast, or simply guess about future Northwest energy issues and concerns and evaluations, prognostications, predictions, forecasts, and guesses to the Council and;

THE RIGHT, to write, complain, criticize, question, decide, openly broadcast or even to time to time communicate matters to the Council and to those Council members of the Council regarding their decisions and comments and whispers, complaints, criticisms, decisions, humiliations or even compliances to the Council and;

THE PRIVILEGE, as an Honorary Peer, to never again seek the advice of the Council.

IN WITNESS WHEREOF, I have hereunto set my hand this 15th day of January 2012.

Bill Bradbury, Council Chair
Four Points for Today

Resource Adequacy is the most important issue to consumers

Council plan is easily misinterpreted

Council is on to a big, important idea

Potential future Council roles
Opinion & Perspectives

Bearing Down

[11] RA in the NW—Seems Like the Challenge Keeps Getting Bigger

SUMMARY: In this first of a two-part guest column, Steve Wright, former BPA administrator (2000-2013) and Chelan County PUD GM (2013-2021), examines resource adequacy in the Northwest, through conversations with regional experts and reviewing several RA assessments. He notes regional progress in addressing RA, notably including development and near-implementation of the Western Resource Adequacy Program. But he sees an increasingly challenging landscape for regional RA, including forecasts for growing load-resource imbalances, difficulties in building new power supply and transmission in support of reliability, and the lack of a currently commercially viable “Holy Grail” clean, flexible, cost-effective resource.

Continued on page 5

Bearing Down


SUMMARY: After discussing an increasingly challenging landscape for regional resource adequacy in the first part of his guest column, former BPA Administrator (2000-2013) and Chelan County PUD GM (2013-2021) Steve Wright in the second part asks the question: If resource adequacy looks worse today than it did a few years ago, how does that square with the Northwest Power and Conservation Council’s latest power plan?

Continued on page 6
Mystery Loads
Transmission and Renewable Resource Development

*The Seattle Times*

A proposed $1.7 billion wind and solar project generates hopes and fears in South Central Washington state

May 4, 2021 at 6:00 am | Updated May 4, 2021 at 7:32 pm

Conflicts escalate amid surge in WA solar farm proposals

June 13, 2022 at 6:00 am | Updated June 13, 2022 at 11:47 am

Coalition Challenges Boardman to Hemingway Transmission Line

by Maura Fahey | Nov 15, 2019 | Features, Public Lands News,
Where are the Reserves?
Forward Price Curve Comparison

Annual Average Price Forecast

- 2020 Forecast
- 2022 Forecast
- 2023 Forecast
Key Questions

Can the region quickly come up with financial/ regulatory systems to produce the level of new reserves assumed in the Council plan, and if so, who will pay?

Would operators agree there is actually flexibility in the Northwest hydro system to accommodate the large amount of surplus variable energy imports assumed in the plan? If the flexibility is available, how would the firm-power benefits be shared between hydropower owner-operators and those needing the flexibility?

Are the modeling assumptions about import capability consistent with transmission operational practices necessary for reliability?

How much should this region rely upon other Western regions building and assuming the costs of providing generation that the Northwest will be able to use to maintain reliability? If so, at what cost will those resources be available?

Will the Northwest be able to rely on new generation capacity elsewhere in the West under stress conditions, particularly as temperature excursions that drive high loads are becoming more widespread across Western subregions?

Is it politically sustainable to have much larger resource additions and cost increases in other parts of the West than in the Pacific Northwest that would be benefiting from those additions?
Council is on to a Big, Important Idea
Revisiting Energy Efficiency
Expected Unserved Energy

Not all curtailed MWhs are created equal
Future Potential Council Roles
Managing for Success

Planners → Implementers = Accountability

Planners ← Implementers = Adaptive Management
Integrating Short- and Long-Term Resource Adequacy
## Management Dashboard

### Management Dashboard

<table>
<thead>
<tr>
<th>Technology Type</th>
<th>By 2025</th>
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<tr>
<td>Transmission MW</td>
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</tr>
<tr>
<td>Technology Development</td>
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### Action Plan

- **Capital Allocation**
- **Price Formation**
- **Technology R&D**
- **Permitting Process**
- **Workforce Capability**
Advance Markets that Support RA
Technology Roadmap for the West

What Is the Recipe?
Gas-Electric Coordination
Scenario Analysis

- Reserves
- Inability to build transmission and generation
- Electric load growth
- Weather stress conditions
- Impact of generation retirements
- Technology options for dispatchable non-carbon-emitting generation
- Value of Grand Coulee/Chief Joseph Resource accreditation
- Gas storage and pipeline capacity impact on reliability

Using scenario analysis to inform key legislative / regulatory decisions
“What counts in life is not the mere fact that we have lived. It is what difference we have made to the lives of others that will determine the significance of the life we lead.”

Nelson Mandela