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Northwest **Power** and **Conservation** Council

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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.

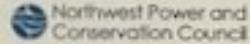


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P U B L I C S E R V I C E

Northwest Power and Conservation Council

STEVE WRIGHT

MAY 17, 2023



WHEREAS, Stephen J. Wright served honorably and creditably as Administrator of the Bonneville Power Administration from November 2000 through January 2012 and;

WHEREAS, The Pacific Northwest Electric Power Planning and Conservation Act [Act of Dec. 5, 1980, 94 Stat. 2697, Public Law No. 96-503, hereinafter the Power Act] authorized the states of Idaho, Montana, Oregon, and Washington to create the Northwest Power and Conservation Council [hereinafter the Council] 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 Northwest Power Plan [hereinafter the Plan] and Columbia River Basin Fish and Wildlife Program [hereinafter the Program] [Power Act, 94 Stat. 2711] and;

WHEREAS, The Council endorsed 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 2001 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 be it:

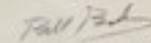
RESOLVED, that the Council bestows on Stephen J. Wright the title of Honorary Council Member with all of the rights and privileges pertaining thereto, including:

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

THE RIGHT, To advise, complain, criticize, question, debate, openly berate or even from time to time compliment members of the Council regarding their decisions and commitments and advice, complaints, criticisms, debates, berations or even compliments to the Council and;

THE PRIVILEGE, As an honorary peer, to confer again with the advice of the Council.

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


Bill Beardsley, Council Chair

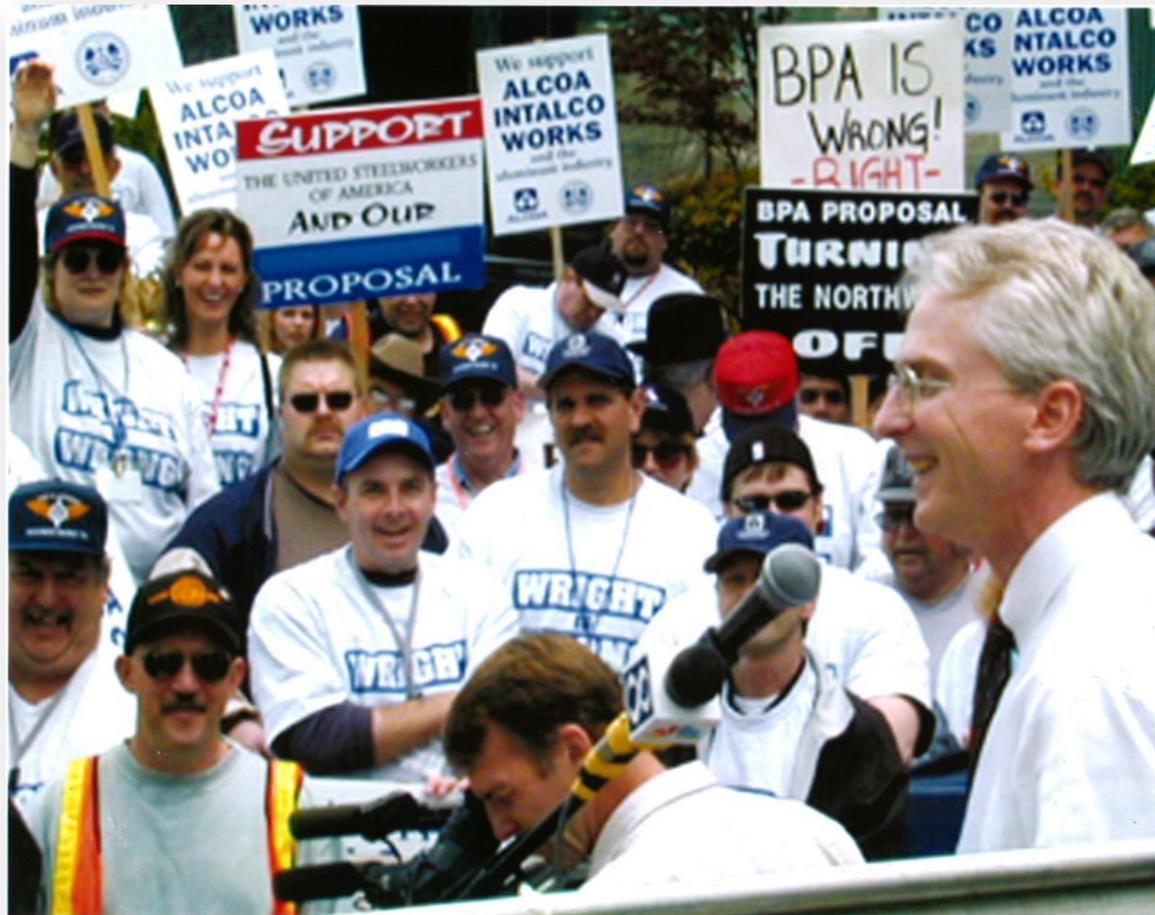
Four Points for Today

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



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CLEARING UP



Energy and Utility News
for the Pacific
Northwest and
Western Canada

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.

Preparing to speak at a recent conference provided me a chance to check in with some regional experts regarding electricity supply and demand electricity planning in the Northwest, including Arne Olson from Energy and Environmental Economics, Mary Wiencke from Public Generating Pool, Sarah Edmonds from Western Power Pool, Melanie Frye from Western Electricity Coordinating Council and Shauna McReynolds from Pacific Northwest Utilities Conference Committee.

I will try to capture what I learned. Any errors in interpretation are mine alone.

The bottom line: Resource adequacy in the Pacific Northwest looks even more challenging than it did three years ago when what has become the Western Resource Adequacy Program was initiated. It’s a darn good thing WRAP continues to move forward because it will provide a perspective on the regional state of affairs for resource adequacy, something we have never had with

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Opinion & Perspectives



Bearing Down

[7]Aligning Regional RA and NW Power Plan Calls for Collaboration

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?

In the first part of my guest column published July 15, I examined resource adequacy in the Northwest through conversations with regional experts and reviews of several RA assessments.

The bottom line: Despite some progress in recent years, I see 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 viable “Holy Grail” clean, flexible, cost-effective resource.

Picking up from where we left off in the [July 15 column](#), if resource adequacy looks worse today than

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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 7:22 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,

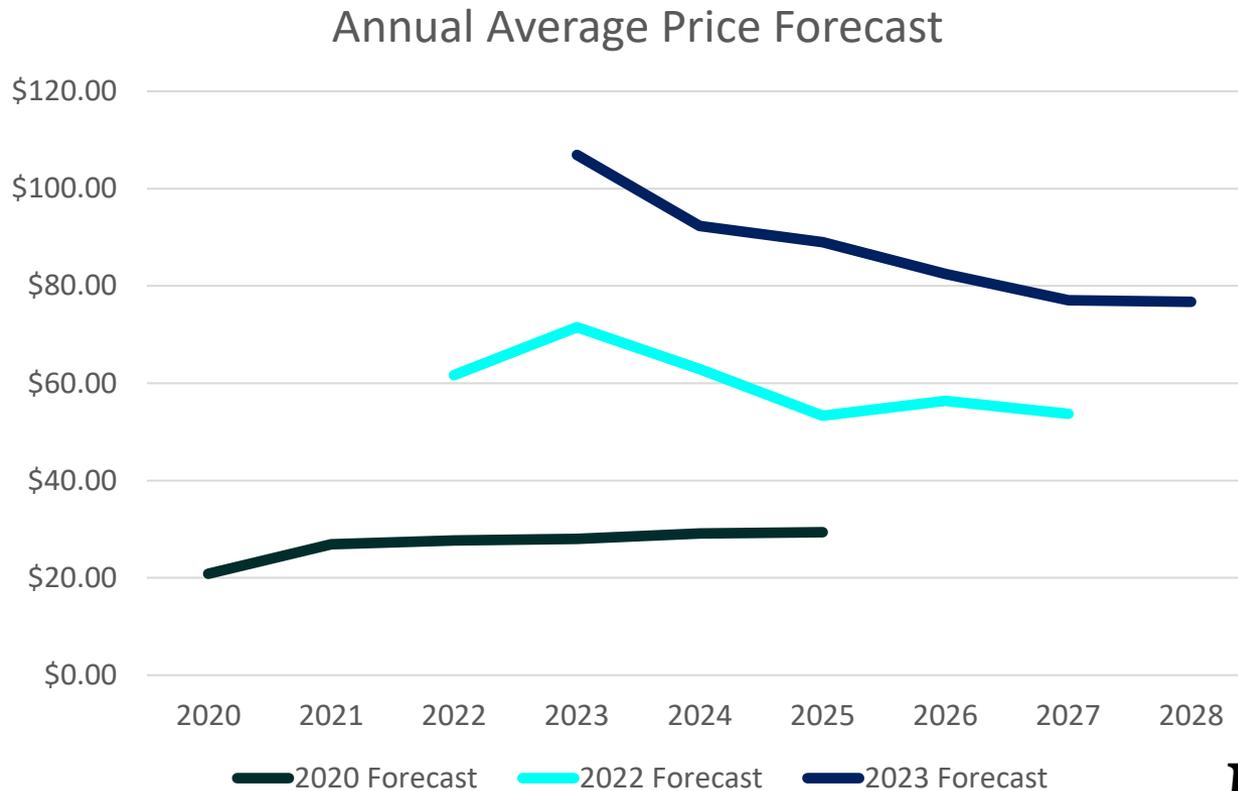


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Where are the Reserves?

Forward Price Curve Comparison



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?



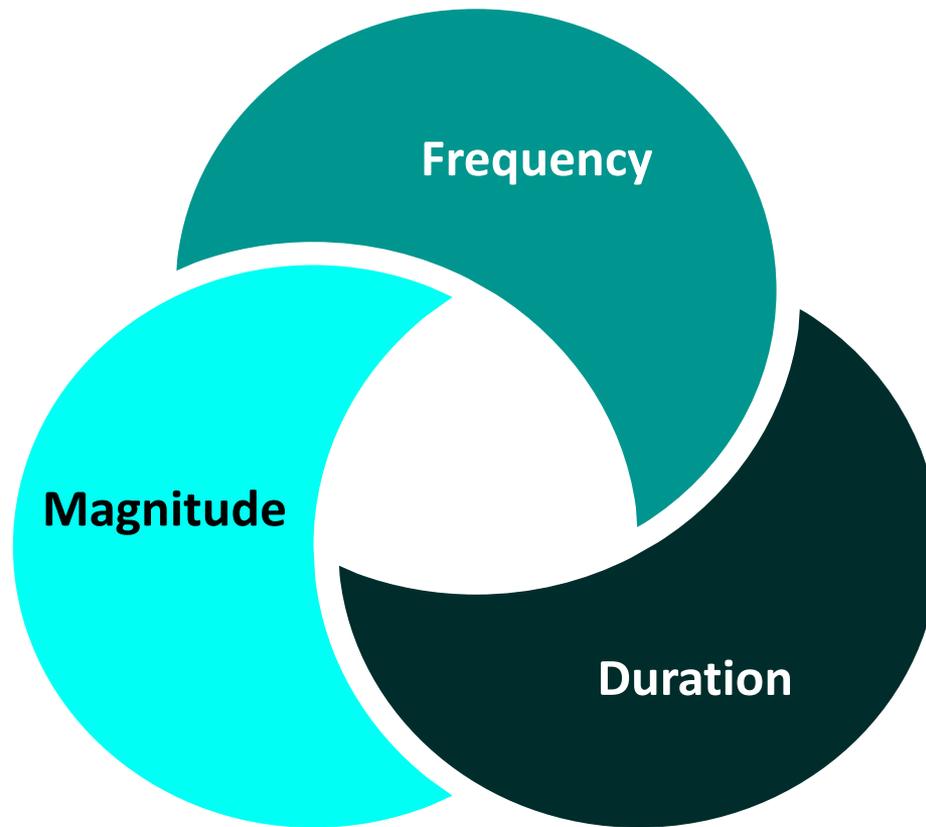
Council is on to a Big, Important Idea

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Revisiting Energy Efficiency



Expected Unserved Energy



Not all curtailed MWhs are created equal

Future Potential Council Roles

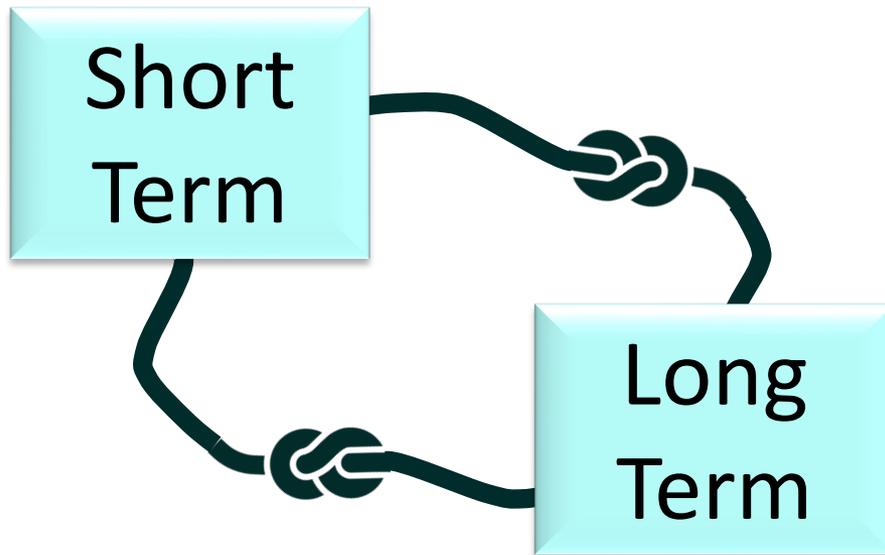


Managing for Success

Planners  Implementers = ~~Accountability~~

Planners  Implementers = Adaptive Management 

Integrating Short- and Long-Term Resource Adequacy



Management Dashboard

Management Dashboard

	By 2025
Transmission MW	
Solar MW	
Wind MW	
Batteries MW	
Technology Development	

Action Plan



Capital Allocation



Price Formation



Technology R&D



Permitting Process



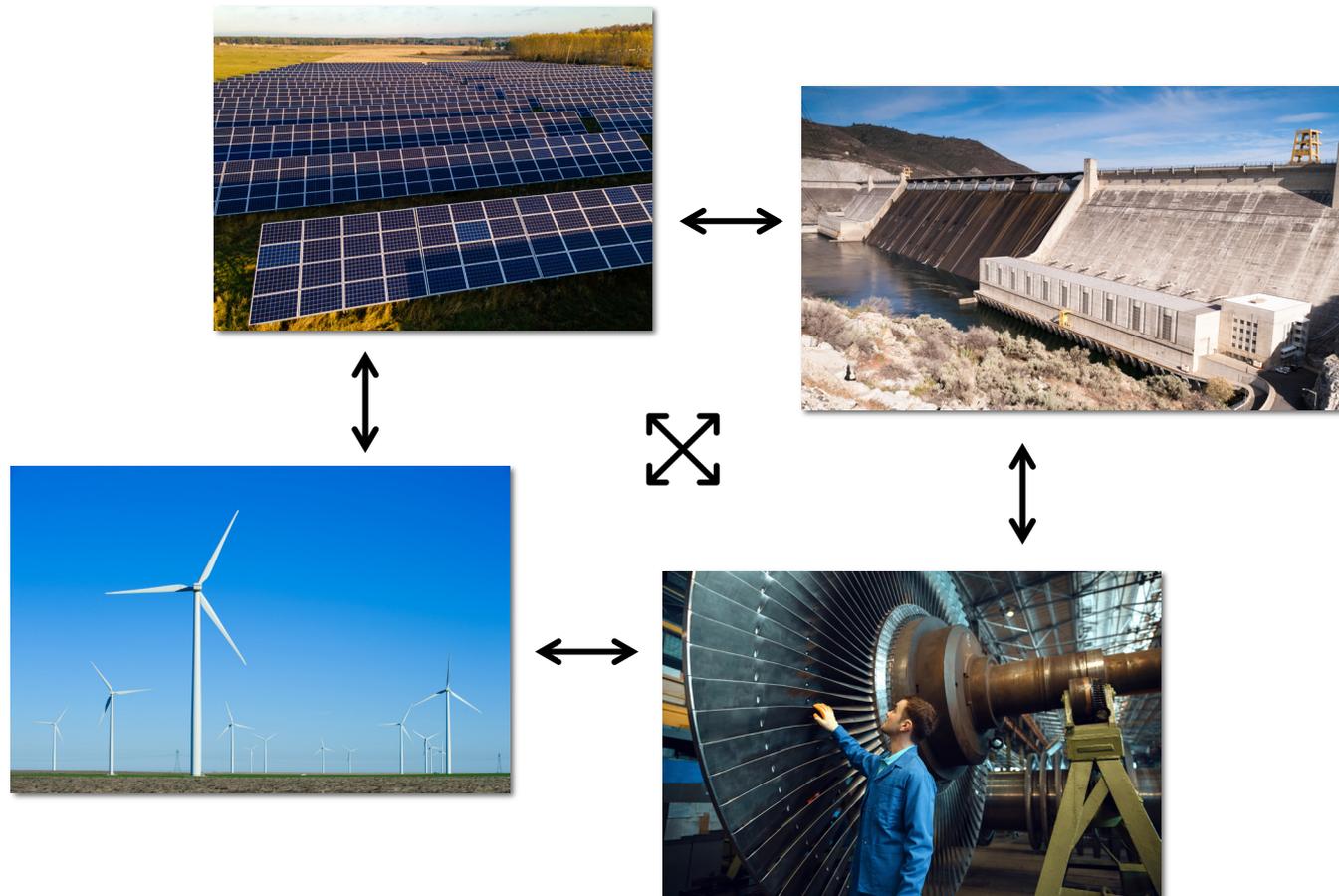
Workforce Capability

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Advance Markets that Support RA

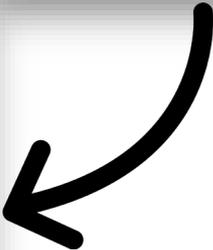


Technology Roadmap for the West



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



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