

OPALCO Review of BPA Provider of Choice Concept Paper

The National Academy of Sciences estimates one-third of all animal and plant species could be extinct in the next 50 years due to the climate change. As the US accelerates climate action, BPA has an opportunity to show how the Federal hydro system can super-charge a rapid transition to a net-zero energy system that will serve as a model of cooperation and innovation for the rest of the nation.

OPALCO appreciates the work BPA is doing and offers a few suggestions for taking the BPA Concept Paper and BPA's business model to the highest levels of 1) service for preference customers and 2) support for the region's push for decarbonization.

Overview

Washington state is leading decarbonization efforts in the region with the Clean Energy Transformation Act (CETA). We expect Oregon will soon follow Washington's example of decommissioning fossil-fueled power plants and decarbonizing transportation and heating.

Decommissioning of carbon resources (coal, natural gas) is rapidly reducing Northwest regional capacity, while decarbonization is projected to double the load in the region by 2050. Taken together, the region will require massive development of new wind, solar, storage and other clean energy capacity. But it will take decades to develop that capacity and the infrastructure to deliver it to customers. In the near term, resource adequacy shortfalls will threaten the Northwest power system. BPA can truly be THE provider of choice by bringing a new level of thinking to these 21st century challenges.

BPA: A True Provider of Choice at an Unprecedented Moment in History

There is no better place to innovate climate solutions than in the Northwest, where can-do regional leadership is building a new economy based on decarbonization. Here are six ways BPA can be the provider that regional energy companies choose:

1. **Seek out the innovative preference customers and cultivate a spirit of innovative collaboration**, beginning with deep listening for the burning needs that customers struggle with. By cultivating a synergistic partnership, the collective ability to optimize exiting capacity, while developing a new diverse regional capacity, will balance and amplify the service of both BPA and its preference customers.
2. **Work with preference customers to reshape conventional BPA legacy products and services** to unleash the power of Northwest clean energy to tackle the climate emergency in ways that will inspire the nation and get the job done. It's a big job – don't leave any available local resources or opportunities on the table.
3. **Flip the script on self-generation and consumer-owned generation**. With CETA and decarbonization ramping up, now is the time to encourage as much generation as possible, wherever it can be developed. Remove the self-generation cap. The more produced locally, the further hydro resources can be stretched to meet contract needs for preference customers.
4. **Use local resources** to offset *load growth* first; then *Tier 2 purchases*; and, finally, *Tier 1 amounts*, if any offset remains. Don't penalize preference customers with Tier 1 reductions for consumer or utility-scale generation. Contract terms that penalize local resource development are in direct conflict with what we're cooperatively trying to accomplish as a region. Support for renewable generation is consistent with and required by the 1980 Northwest Power Act.

5. **Be a model of transparency.** To meet CETA reporting requirements, provide reporting for all generation sources acquired (including Tier 2). Otherwise, utilities will be penalized under CETA for "unspecified" resources. This will help BPA meet the contract needs for preference customers. Going further, and as PNGC noted in their review:

Carbon Free Portfolio and Renewable Energy Development in the Region – In the BPA Concept Paper, there is an exploration of various ways BPA can enhance the carbon-free nature of its Tier 1 portfolio, including a reinterpretation of its single source requirement under the Northwest Power Act. However, the paper also indicates that BPA may not be able to achieve 100% carbon-free power as Washington state's CETA regulation will require in the future. While it is encouraging to see BPA consider options to help its Washington customers meet their regulatory obligations, we think there should be a stronger commitment to finding solutions. BPA, in coordination with its preference customers, WA state regulators, and other stakeholders, can surely find a path forward that will help its customers meet the 100% carbon-free requirement laid out in CETA by 2045. Even if the date lies outside the next BPA contract, we will still need to find solutions during the contract period.

For fairness, we also think that it will be important (absent similar regulation emerging in other states) that BPA find a way to direct the marginal costs of a 100% carbon-free portfolio to the customers that either need or elect a 100% carbon-free portfolio. Lastly, we would like to point out that the policies BPA enacts to discourage the self-development of renewable energy over the next contract, such as: 1) opportunity cost pricing for integration, 2) forced designation to load of new resources (or a cap to what a customer can develop, as indicated in the 5 MW limit proposed), or 3) direct assigning the full cost of transfer service to customers with non-federal resources, will serve as disincentives for the region to meet these carbon goals.

Significant challenges to meeting the region's growing demand for power have been identified by key studies (see footnote)¹ and concerns about resource adequacy are exacerbated by the forecast for electric load to double by 2050 - on the same timeframe that CETA mandates for decarbonization mature. PNGC supports the recent E3 study, which shows that new generation is needed to augment current generation if our region is to avoid future power outages.

Because of these real and documented challenges for resource adequacy in the region, the lack of commitment in BPA's Concept Paper to finding solutions are serious concerns. We do not think BPA wants to be seen as creating roadblocks or forcing its preference customers to leave BPA due to conflicting regulatory directives. It is far too early to state that something cannot be done in this space.

¹ 1. WA Energy Strategy (2021) :<https://www.commerce.wa.gov/growing-the-economy/energy/2021-state-energy-strategy/>

2. E3 Power Replacement Study (2022): <https://www.whitehouse.gov/wp-content/uploads/2022/07/E3-BPA-LSR-Dams-Report.pdf>

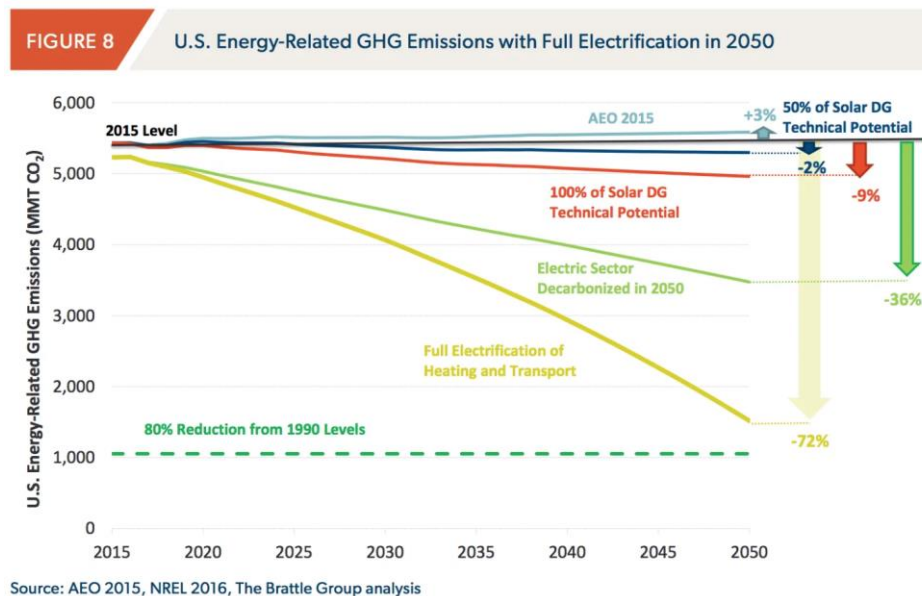
6. **Show BPA customers you understand and are preparing for the capacity shortfalls and load growth the region is planning for.** Dedicate a portion of the concept paper to CETA and Washington State 2021 Energy Strategy implications. Reference and highlight the recent [E3 study](#), cited by the Whitehouse, on Northwest regional energy development needs.

Taken together, these six actions will show your customers you understand their world and have crafted solutions that solve their most challenging problems. In a free market economy, that is how BPA can be a true provider of customer choice.

Thank you for the opportunity to comment on BPA’s Concept Paper. We look forward to working together in a spirit of collaboration. Below, we include a variety of background material on Northwest resource adequacy related to the discussion above.

Background

- ▶ **Northwest regional load is [projected](#) to double by 2050** due to the electrification of transportation and heating, which account for most greenhouse gas (GHG) emissions in the region. This has the potential to reduce GHGs by 72%.



- ▶ This doubling of load will likely initially present significant problems, due to the combination of [NIMByism](#) (Sierra Club is opposing 317 wind power projects, while half the population want to streamline renewable energy projects, and the other half want to shut them down), and very long lead times to develop new generation resources (public support, financing, solar, wind, land, permits, transmission). An [estimated](#) 3 million to 14 million acres of land would be required to host required and solar and wind projects. Global investment of \$131 trillion is [estimated](#) to get the job done by 2050.
- ▶ Until new capacity is brought online, we **will likely not be able to keep up with demand**, especially during extreme weather events, leading to Texas/California style rolling blackouts.
- ▶ To prepare for that, and to ensure reliable affordable electric service the region needs to front-load investment to rapidly prepare for potential rolling blackouts.
- ▶ **Hydro is a key low carbon energy source to firm solar and wind and for baseload.**

- ▶ **We strongly support the reduction of carbon intense energy such as coal and natural gas. BPA has been clear that there will be no more hydro.** We are rapidly losing our ability to firm intermittent solar and wind power, which may lead to regional power outages, until firming capabilities are implemented.
- ▶ **A key near-term strategic action should establish a Northwest Regional Transmission Organization (RTO).** The Northwest is the only region of the US with no RTO. While most of the demand will be west of the Cascades, most of the generation will be east of the Cascades. **The RTO should be mandated to solve the Pacific Northwest capacity problems first**, as we weave together the various stakeholders across WA, OR, ID, MT and WY to ensure reliable supplies of power, adequate transmission infrastructure and competitive wholesale electricity prices. And it can accelerate the deployment of essential transmission capacity to interconnect the network of new solar and wind resources needed to meet the regions doubling power needs. We should get this going ASAP to tap into anticipated Federal infrastructure spending aimed at development of new clean energy resources.

Further Reading

As we consider how to rapidly decarbonize the Northwest region, **we want to make sure we maintain reliable power under worst case conditions**, to prevent harming safety of our population and impacting the economy that depends on energy to function. The following material covers a broad range of Northwest Resource Adequacy material and asks hard questions about the future of load, how fast land can be developed for new renewables, and much more. Each reference includes title, link, and pertinent quotes/summary extracts below each link.

- ▶ **Sierra Club: [The NIMBY Threat to Renewable Energy](#)**

“In Vermont, everyone loves clean energy—when it comes from someplace else”

Decarbonizing the Northwest will require an [estimated](#) 3 million to 14 million acres of land to host required and solar and wind projects. All over the US, planners are discovering it will take much longer to acquire and permit land due to NIMBYism.

- ▶ **[Wind Power Project Rejection Database](#)**

Numerous examples of wind power permit projects rejected by state and county governments.

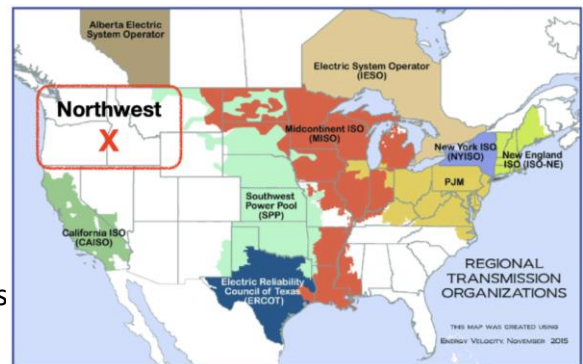
- ▶ **[Not In Our Backyard](#)**

An example of public policy entities fighting the proliferation of renewables by drafting legislation, testifying before legislative committees, placing op-eds in newspapers.

- ▶ **[Pacific Northwest poised to test 100% renewables as utilities weigh gas vs. storage](#)**

- ▶ **[Imagine the unimaginable': How the Pacific Northwest is trying to build a reliable grid in a changing climate](#)**

"I don't think anyone is super prepared for a future where we're electrifying everything, just because it's so hard to [prepare]. You would have to invest so much money, and if you're wrong, it would look so bad to go out and spend a bunch of money on something that just doesn't materialize." – Ben Kujala, Director of Power Planning at the Northwest Power and Conservation Council



▶ **NWPCC: [2021 Northwest Power Plan](#)**

“As we look to the future, we anticipate that the transition to a new paradigm will be accompanied by risk and uncertainty.”

“While the total nameplate capacity of the region’s power supply is significantly higher than the expected 2023 winter peak electrical demand of about 32,600 megawatts, the **deliverable (effective) capacity of the system is much lower.**”

“To maintain adequacy, **the region will need about 1,600 megawatts of effective capacity (or some combination of added capacity and additional balancing reserves) before 2023. The Council’s adequacy assessment does not go beyond 2025.**”

▶ **PNUCC: [Northwest Regional Forecast of Power Loads and Resources, 2021 through 2031](#)**

“The Northwest has a growing difference between supply and demand over the next decade due to coal plant retirements and forecasted load growth. The figure below shows how utilities’ peak loads and expected peaking capability of resources stack up for winter (January) and summer (August). **The winter deficit grows from around 1,600 MW to 6,500 MW, and the summer deficit grows from 200 MW to 5,900 MW over the 10-year study horizon.**”

▶ **“The Northwest Power and Conservation Council indicates the region is inadequate as of the last assessment.** They conduct an annual Adequacy Assessment that estimates the odds of the region having an outage in a specific year. The Council’s benchmark for an adequate system is a 5% or lower annual loss-of-load probability (LOLP). Their 2019 analysis focused on years 2021, 2024, and 2026. **Their projection for 2021 indicates that the system is inadequate, with a LOLP of 7.5%.5 The LOLP value grows to 12.8% in 2024 and reaches 26% in 2026. The growing LOLP is largely due to coal unit retirements in the Northwest.**

▶ **Energy + Environmental Economics: [Capacity Needs of the Pacific Northwest—2019 to 2030](#)**

Land is a sleeper issue in transforming the grid. From a national perspective, it has been estimated that we need to build three 1,000-mile-long transmission lines every year for the next 30 years to interconnect distributed solar and wind generation with the grid. In the past 10 years, we haven’t built even one. It’s going to be a big expensive job.

To maintain resource adequacy and prevent rolling blackouts similar to what we have seen in Texas and California, E3, in their 25% load increase model, estimates 97 GW of new wind and 46 GW of new solar are needed, **requiring an estimated 3 to 14 million acres of land – or 20 to 100 times the land area of Portland and Seattle combined.** It is unclear whether there are enough sites that are suitable, available for purchase and permissible for that level of renewable energy deployment. And that’s just for a 25% load increase by 2050, not the 90% Washington energy strategy estimate.

“Near-term (today-2025): the **Pacific Northwest faces a near-term capacity shortfall of 3-7 GW.**”

“Mid-term (2025-2030): **capacity need grows to as much as 10 GW as additional firm capacity retires and this need is not fully replaced by planned additions.** “

“Long-term (2030-2050): **the region needs to grow or maintain firm dispatchable capacity to address the energy sufficiency challenges created by a deeply decarbonized grid.**”

▶ **“All planned capacity additions, and significantly more, are required by 2030.”**

- ▶ **“Even in an optimistic scenario (if all planned capacity additions detailed in the reviewed utility IRPs are approved and constructed), the region remains approximately 3 GW short by 2030.”**

- ▶ **NWPP Northwest Power Pool: [Resource Adequacy Program – Detailed Design](#)**

“The integrated regional power system is in transition. The impending retirement of several thermal generators within and outside the region (the Western US and Canada) mixed with increasing variable energy resources (VERs), has led to questions about whether the region will continue to have an adequate supply of electricity during critical hours. In the past four years, several studies have identified an urgent and immediate challenge to the regional electricity system’s ability to provide reliable electric service during high demand conditions.”

“These developments threaten to upset the balance of loads and resources within the region and, if not properly addressed, will increase the risk of supply disruptions during Winter and Summer, increase financial risk for utility customers, and hinder the ability of the system to meet environmental goals and legal requirements.”

- ▶ **BPA: [2019 Pacific Northwest Loads and Resources Study](#)**

“Annual Energy Surplus/Deficits: Under critical water conditions; **the Federal system is projected to have annual energy deficits across the study period, ranging from as low as -194 aMW, to as large as -354 aMW.** These annual energy deficits projections are similar to those projected in the 2018 White Book, however the first two years are forecast to have slightly greater deficits and rest of the study period has slightly smaller deficits.”

“January 120-Hour Capacity Surplus/Deficits: Under critical water conditions; **the Federal system is projected to have January 120-Hour capacity deficits over the study period, ranging from as low as -950 MW to as high as -1,226 MW.**”

- ▶ **WA Department of Commerce: [State Electric Utility Resource Planning 2020 Report Pursuant to RCW 19.280.060](#)**

“The Pacific Northwest Utilities Conference Committee 2020 Regional Forecast report **reveals a projected electricity deficit for the Northwest starting in 2024 (283 aMW) and continuing to grow through the end of the 10-year planning period (3,200 aMW).** PNUCC identifies a large amount of planned resources in the region, but because they have less certainty from a financial or regulatory standpoint, they therefore are not included in the forecast.

“The region’s premier planning body, the Northwest Power and Conservation Council, evaluated the adequacy of the Northwest electric power supply in 2020 and concluded that resources are not expected to meet its adequacy standard after 2020. Resources are considered adequate when the loss-of-load probability (LOLP) is less than 5 percent. However, with the planned retirements of Boardman and Centralia 1 at the end of 2020, the LOLP will reach of 7.5 percent in 2021 and will no longer meet the Power Council’s adequacy standard. The retirement of the Hardin coal-fired power plant and the Klamath Hydro facility in 2021 were forecast to raise the LOLP to 8.2 percent by 2024. The Council noted that other power plant retirements announced for later in the decade would raise the LOLP value further if replacement resources are not brought online in a timely manner.”

- ▶ **WA Department of Commerce: [2021 Energy Strategy Transitioning to an Equitable Clean Energy Future](#)**
“In the Electrification Scenario, total energy demand drops 28%. **Electricity demand grows 90% over 2020 levels by 2050**, displacing fossil fuels in buildings and transportation through assumptions that drive replacement of existing equipment with electrified appliances and vehicles at the end of their useful lives.”

- ▶ **Pacificorp: [2021 Integrated Resource Plan](#)**
“**To unlock the full promise of these abundant resources, we must add transmission and storage capacity, unlock customer demand response resources with a modernized grid**, and replace retiring thermal resources with non-emitting resources like advanced nuclear, to connect the West to its energy future—built on a resilient, hardened, adaptable grid that safely delivers power when and where it’s needed.”