**From:** rhardy@hardyenergy.com
**To:** Tech Forum
**Cc:** Miller,Mike P (BPA) - T-DITT-2
**Subject:** Comments on BPA GAT Proposals
**Date:** Monday, March 23, 2026 12:50:46 PM
**Attachments:** RTO Insider Jan 27 2026 - Beware of Unintended Consequences.pdf

---

Tech Forum,

This email contains my comments on BPA's latest proposals, in its pre TC-27 workshops, as part of its Grid Access Transformation (GAT) process. I offer these comments from my perspective as both a consultant for several companies participating in, or affected by, GAT, and as a former BPA Administrator.

1. While the various GAT issues for your 2025 cluster study (CS) are voluminous and complicated, staff did an excellent job of sorting through them and explaining their reasoning for "staff leanings" on each issue. While all participants may not agree with BPA on each issue, I think you succeeded in accurately describing your logic in reaching conclusions.
2. I agree with your predominant focus on prioritizing Conditional Firm Service (CFS) so BPA can offer some type of quasi-firm service, that many customers will be able to use, as soon as possible. This prioritization of CFS (over conventional LTF service) was certainly responsive to most customers' desire to have CFS offerings promptly.
3. I realize, and I think most customers do as well, that BPA did not create the 65 GW backlog in your 2025 CS queue. I am attaching an article I recently wrote for RTO Insider that more fully explains how this backlog materialized. In short, Washington and Oregon legislation (in 2019 and 2021 respectively) mandating their state utilities achieve 80 percent clean/decarbonized energy portfolios by 2030 created a renewable development "gold rush" which primarily drove such long queues. This dynamic was then severely complicated by data center driven surges in load growth and 2025 federal staffing restrictions imposed by the Department of Energy. Even without these complicating factors, such 10 year timeframes for new tx capacity were simply not consistent with real world tx construction periods.
4. This situation created an amount of TSRs in the 2025 CS which were not capable of analysis by any of your standard tx planning/analysis methodologies. Given these circumstances, you are doing the best you can to provide some form of CFS in the next 1-2 years and deferring development of long term firm service offering accordingly. In my opinion, this approach is the best, most realistic option possible.

Good luck as you move forward. At a minimum, I think most customers now understand and appreciate the difficulties BPA faces in addressing the overall GAT issue.

Randy Hardy

# Beware of Unintended Consequences

## The Realities of Clean Energy Development in the Pacific Northwest

*Nearly all wind and solar sites are east of the Cascade Mountain Range, while loads are mostly in Seattle and Portland. Existing high voltage cross-Cascades transmission lines are fully loaded. | © RTO Insider*

Jan 27, 2026
*By Randy Hardy*

**Why This Matters**

While well intended, Washington/Oregon goals of 80% clean/decarbonized energy by 2030 were set without consideration of the transmission access and construction realities BPA and other regional transmission providers would face, writes Randy Hardy.

Since 2019, the Bonneville Power Administration, Pacific Northwest utilities, independent power producers and other interested parties have struggled with politically required, but operationally difficult, development of renewable/storage resources in the region.

While much of this struggle involved slower than expected generation interconnection and transmission access/construction by BPA, the dynamics behind such clean energy development are considerably more complicated. As a former BPA CEO with over 40 years of dealing with PNW energy issues, I thought a more comprehensive analysis of this situation might be helpful.

## Background

In 2019 and 2021, Washington and Oregon set ambitious clean energy goals, requiring their utilities to achieve 80% clean/decarbonized energy portfolios by 2030. At that time, those states' two main utilities, Puget Sound Energy (PSE) and Portland General Electric (PGE), were roughly 35 to 40% clean/decarbonized. Today they are only 45 to 50%. While such limited progress seems problematic, the nature of the non-ISO/RTO grid in the PNW and our specific transmission difficulties slowed renewable energy development substantially.

## Geography

Northwest geography significantly complicates regional transmission development. Nearly all wind and solar sites are east of the Cascade Mountain Range, while loads are mostly in Seattle and Portland. In addition, current high-voltage cross-Cascades transmission lines are fully loaded. So devising methods to provide new transmission to PNW load centers or even upgrading existing 230-kV transmission to 500 kV across this environmentally sensitive barrier is a major challenge. I would estimate the degree of difficulty associated with overcoming this challenge, since it affects nearly all PNW renewables development, probably exceeds such geographic/environmental challenges in any other region.

## BPA Generation Interconnection/Transmission Access

BPA owns and operates roughly 70% of the region's high voltage transmission. Despite this transmission position, it operates, not as an RTO/ISO, but under *FERC*'s Open Access Transmission Tariff (OATT) regime. It currently has 115 GW in its generation interconnection (GI) queue and, like RTOs/ISOs in other regions, is struggling to interconnect these resources as rapidly as possible.

*Randy Hardy*

Unlike those entities, however, as an OATT utility it also must operate a separate transmission access process complete with its own first-come, first-served queue for providing transmission capacity to renewable resource developers and others.

BPA typically processed this queue via an annual transmission cluster study that analyzed each submitted transmission service request (TSR) and thereby provided a specific plan of service for each such project. That CS queue has increased dramatically since 2020. Specifically: 2020 CS, 4 GW; 2021 CS, 6 GW; 2022 CS, 11 GW; 2023 CS, 17 GW; and 2025 CS, 65 GW.

This recent exponential growth in TSRs has stalled BPA's ability to analyze the 65 GW in its 2025 CS because of the multiple years required to perform such complicated power flow analyses and because the amount far exceeds any credible projection (even with data centers) of future PNW load. As a result, any project in the 2025 CS probably will not receive any long-term firm (LTF) transmission until well after 2030.

## BPA TSRs From 2020-2023

For TSRs submitted to BPA from 2020 to 2023, the situation is better but still challenging. As a result of these TSRs, BPA plans to significantly expand its transmission portfolio, primarily through

upgrading cross-Cascade 230-kV transmission lines to 500 kV, plus adding series capacitors and reconductoring existing high-voltage transmission.

This program, labeled its Grid Expansion Transmission Portfolio (GERP), will cost $5 billion according to BPA, although realistically closer to $10 billion given all the environmental and procurement cost escalation factors involved. However, given the permitting realities, BPA staffing shortages and GI/TSR processing challenges, most GERP transmission projects will not be energized until well after Washington/Oregon 2030 80% clean energy deadlines.

The relatively good news: when eventually energized, GERP projects probably will enable PSE and PGE to meet their 80% clean energy goals. In addition, BPA also has enabled 3 to 5 GW of clean energy projects to reach Portland and Seattle by repurposing existing LTF transmission freed up by retirement of Colstrip and other thermal resources.

## Complicating Factors

- Data Center Load Growth

Similar to electric utilities in other regions, PNW entities have experienced dramatic increases in projected loads driven by data centers and, to a lesser extent, electrification. From 2001 to 2022, annual PNW load growth equaled 1% or less. Loads from 2025 to 2034 now are estimated to grow by 2 to 3% annually.

Recent announcements of potential data center amounts/locations in the PNW total 12 to 15 GW by the mid-2030s mainly in Hillsboro (west of Portland), Salem or east of the Cascades (e.g. northeastern Oregon). Current data center load projections could easily be double or half of the 12- to 15-GW estimate.

In almost any case, they will increase regional loads substantially. This phenomenon dramatically increases the transmission capacity required to serve them, as well as the time needed to build such transmission and its cost. For example, over 3 GW of data center load is projected for Hillsboro (mostly in PGE's service territory), but reaching this densely populated area involves multiple 230/500-kV upgrades by BPA and PGE and likely will cost $2 billion or more.

- BPA Staffing

BPA experienced substantial staff reductions and associated turmoil resulting from the Trump/Musk actions in early 2025. While regional parties helped BPA avoid the worst of these, they still lost 200 of their 3,100 employees in February 2025 and, despite finally being exempted from the federal hiring freeze in November, have yet to even get back to their start of 2025 staffing levels. Then there's the additional 400-plus staff they are projected to need (bringing total eventual staffing to roughly 3,500) to timely process all the GI/transmission access requests needed to meet reliability/clean energy requirements.

Both the data center boom and administration staffing restrictions came at the worst possible time, given BPA's GI/TSR queues and unique transmission processing problems. Better late than never for DOE to exempt them from the federal hiring freeze, but the PNW effectively lost a year or more in its

ability to identify and build the high voltage transmission necessary to meet PNW clean energy, reliability and data processing needs.

## Conclusions

- While well intended, Washington/Oregon goals of 80% clean/decarbonized energy by 2030 were set without consideration of the transmission access and construction realities BPA and other regional transmission providers would face.
- Achieving such goals also was handicapped by emerging data center load growth and administration staff reductions on BPA.
- Perhaps most significant, besides these transmission realities, the 80% by 2030 mandates set off a virtual gold rush of TSRs, resulting in the 65 GW in BPA's 2025 CS queue that are not capable of being processed in any reasonable time frame — if at all.
- Many of these outcomes could/should have been foreseen and planned for. Others represented unfortunate surprises that were unanticipated under reasonable assumptions.
- The probable result: BPA/PNW will simply need to muddle through this mess over the next five to seven years. As mentioned before, GERP projects eventually will enable PNW utilities to reach 80%, but probably not until 2033 to 2035.
- Even with these transmission realities now plainly visible, Washington and Oregon legislators have yet to deal with the affordability of these clean energy mandates. This is an emerging problem but no doubt will worsen significantly in the next five years. Given that both PGE and PSE are only at 45 to 50% clean/decarbonized now, reaching 80% (whenever that occurs) will involve substituting 1 GW or more of renewable energy for energy from existing thermal resources. Such substitution involves replacing current coal/natural gas generation, probably costing utility consumers $40 to $50/MWh, with wind/solar which nominally cost $50 to $60/MWh busbar. However, when you include balancing, load following, additional transmission costs and purchasing additional energy to serve load when the wind does not blow or the sun is not shining, increases delivered cost to utility customers by $25 to $30/MWh. Then this $80 to $85/MWh delivered cost energy could well increase by an additional $20 to $30/MWh when federal tax credits expire, raising the overall cost for renewables to reach the 80% goal past $100/MWh. While this problem is belatedly being recognized, it has yet to be dealt with in any meaningful way by either state legislature.

## Lesson Learned

Beware of unintended consequences. As this article hopefully illustrates, they already have adversely impacted the timing and (potentially) the cost of achieving 80% by 2030, and, if further action is not taken, they will further frustrate achieving such goals in the next four to five years.

*Industry watcher Randy Hardy was CEO of the Bonneville Power Administration from 1991 to 1997. Prior to that, he held a similar title at Seattle City Light.*

KEYWORDS BONNEVILLE POWER ADMINISTRATION (BPA) STAKEHOLDER FORUM