

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

UM 2005

In the Matter of

PUBLIC UTILITY COMMISSION OF  
OREGON,

Investigation into Distribution System  
Planning.

RENEWABLE NORTHWEST'S  
COMMENTS ON PART 2 DSP  
PLANS FROM PORTLAND  
GENERAL ELECTRIC, PACIFIC  
POWER AND IDAHO POWER

**October 07, 2022**

**I. INTRODUCTION**

Renewable Northwest thanks the Oregon Public Utility Commission (“Commission”) and Commission Staff (“Staff”) for this opportunity to submit comments on the Distribution System Planning (“DSP”) Part 2 Plans from Portland General Electric (PGE), Pacific Power (PAC), and Idaho Power (IPCo). These plans are the last piece of this first DSP cycle: a multi-year endeavor and countless hours on the part of the Commission, Staff, the utilities, and a multitude of stakeholders. Throughout this process Renewable Northwest endeavored to provide constructive input with our perspective with the goal of ensuring that all Oregon residents benefit from a cleaner, safer, optimized and more resilient electric grid; we have appreciated being part of the process over the last few years. Moreover, Renewable Northwest and its members have benefitted tremendously from the rich discussions during the many workshops and the insight gained about the inner-workings of the utilities. Our comments focus primarily on the Part 2 submissions in terms of some of the larger themes that are connected to this docket.

**II. COMMENTS**

In the following sections we will initially provide some high-level feedback on the Part 2 DSP plans from each utility, commending them for producing thoughtful and responsive submissions. Next, we discuss how each of the Part 2 Plans succeeds in achieving the drivers for the DSP investigation set out by Staff in their Guidelines. As we have advocated throughout this docket, distribution system planning needs to be considered through the holistic lens of Systems Thinking, and we believe it is paramount to the ability for Oregon and its utilities to have a meaningful impact in the fight against climate change. We will discuss how the Part 2 plans reflect this perspective as well as considering the implications of HB2021. This will lead to a broader discussion on the need for regulatory and business model evolution in order to enable a

successful transition for the utilities. Finally, we will provide some thoughts on the Part 2 Guidelines as well as looking ahead towards the next cycle for DSP.

## **1. Appreciation and Highlights**

Renewable Northwest thanks PGE, PAC, and IPCo for the countless hours that they invested in meeting the requirements set out in the Guidelines and producing thoughtful plans. It is never easy to change how something is done when it was sufficient and successful in the past but then requires evolution to meet the needs of the current times. Utilities are “big ships” and typically turn slowly; we would like to acknowledge their leaning into this process and willingness to be uncomfortable doing new things. We would like to highlight just a few of the many areas that stood out:

- PGE’s approach to community engagement, commitment to address both current and historical disparities as well as its recognition that it needed to build internal competence and add resources for developing that skillset. PGE invested significant time in learning how to engage with, educate, and listen to their CBO partners and community members, which positions them to implement their new process for co-development of solutions for their 2024 capital cycle. In particular, the recognition of needing to address both procedural and outcome equity as well as distinguishing between different types of justice showed thoughtfulness on its part in their approach.
- PAC’s open-ended approach to developing the Non-Wires Solution (NWS) approach. PAC was the only utility in this first cycle that solicited proposals from all stakeholders (DSP partners and community members) upfront, and incorporated them into its NWS evaluation rather than bringing proposals to the community for input.
- Idaho Power’s Oregon service territory is not very large and had fewer grid needs to consider for NWS; the company looked beyond its near-term grid needs in order to identify a potential second NWS pilot candidate. Furthermore, Idaho Power did an excellent job discussing the various solutions and their costs, advantages, and disadvantages. We especially appreciate the company’s consideration of increasing hosting capacity as an advantage when evaluating whether the traditional solution might be the better choice.
- PGE’s discussion of how its near-term plan fits into its overall long-term modernization strategy (Appendix K). Adopting the DOE’s DSPx framework grounds the company’s strategy in a research-based approach that is accepted as best practice by subject matter experts.
- Inclusions of a lessons learned section at the end of each chapter helped us get a better sense of the journey that PAC has been on as it works to evolve DSP and modernize its grid.

- Recognizing that the capacity value that its Weiser NWS solution contributes to its IRP portfolio, IPCo found that the net cost of the NWS was much lower than the cost of traditional solutions. Looking at multiple value streams for NWS is necessary for the evolution of the grid.
- We are pleased that PGE’s plan reflects that the company’s thinking is becoming more and more grounded in overall Systems Thinking. For example, starting with the 2024 capital cycle, PGE is integrating equity metrics into its quantitative grid needs/solutions evaluation prioritization matrix. Throughout its plan, PGE’s language demonstrates a system thinking perspective, such as, “PGE is focused on developing a distribution system planning approach that **considers all solutions from a societal perspective** when making investment decisions.”<sup>1</sup>

## 2. Achievement of Drivers for the DSP Investigation

Staff laid out two proactive drivers in its 2019 whitepaper “A Proposal for Electric Distribution System Planning.”<sup>2</sup> Staff identified insight as the first of these drivers: “the near-term need to establish visibility and holistic engagement in utilities’ distribution-level investments.” In reviewing Part 2 plans, we asked the question of how well do the plans fulfill this process goal of providing insight and holistic engagement. Similarly, Staff identified optimization as the second driver: “The longer-term need to ensure the operation of the changing distribution system maximizes efficiency and customer value.” In the Guidelines<sup>3</sup> Staff identified the goal of the first stage in the evolution of DSP to establish the foundation for future more advanced stages. The initial requirements were not intended to achieve the long-term goals in one giant leap. We therefore asked the question of how well do the Part 2 plans achieve the incremental outcome goal of moving each utility towards a modern, optimized operation of the distribution system.

### *a. Do the Plans provide Insight? Was there holistic stakeholder engagement?*

Overall, the answer is yes for all three utilities; however, there are noteworthy areas where they went above and beyond as well as some areas where a more detailed description would have been helpful. All three utilities describe their respective load forecasting and grid needs identification, and risk/reliability methodologies in detail which provide good to excellent insight into how these processes are done.

For DER and EV forecasting, PGE and PAC chose to leverage external consultants; PGE worked with Brattle and Cadeo to develop an in-house solution called AdopDER, while PAC used DNV and Applied Energy Group (AEG) to develop their DER and EV forecasts, respectively. Both provide ample details about the methodology, analysis and results. Idaho Power’s DER forecast

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<sup>1</sup> PGE, *Distribution System Planning Part 2*, p. 107.

<sup>2</sup> Staff Whitepaper: [A Proposal for Electric Distribution System Planning](#) (March 2019), p. 4.

<sup>3</sup> Order 20-485, available at <https://apps.puc.state.or.us/edockets/orders.asp?OrderNumber=20-485>, p. 8.

was limited to distributed generation (DG) and electric vehicles (EV) and based on their 2021 IRP; tools they used included NREL's System Advisor Model (SAM) for determining generation during peak time and DOE's EV-Pro Lite for estimating EV adoption. A more in-depth description of their scenario modeling as well as feeder allocation process would have been beneficial and provided additional clarity.

Based on stakeholder input and feedback, PGE worked with Cadeo to develop a methodology to incorporate equity data into their AdopDER tool. They provide a thorough description of how the equity metrics were determined in an appendix that allows full transparency of the approach. This capability to overlay equity data with DER forecasts results is a significant advancement in data analysis capability and positions PGE to better tailor programs to advance their environmental justice goals. We commend PGE for their responsiveness to stakeholder feedback and turning it into such meaningful action.

Although all three utilities describe the process and criteria of identifying grid needs very well and each documents its grid needs in the plan, they diverge in the amount of insight provided to the prioritization process. PGE excelled in this area in terms of providing insight; the company's process is very quantitative, and it thoroughly explains the methodology, calculations, and results for how it ranks identified grid needs into one prioritized list. Additionally, PGE invited staff from its Asset Management Team to share the company's economic life cycle model used to assign system risk which is incorporated in the ranking of grid needs with the TWG stakeholder group; the details are also included as an appendix. In its discussion on their current planning practices, PAC provides the prioritization matrix from its DSP Guide that field engineers use as well as the force rank priority order that the field engineering manager uses and the process for prioritization by investment reason. The grid needs overall prioritization is an area where IPCo did not provide full clarity. The company does an excellent job detailing the programs that assess and rank reliability-driven grid needs, such as the Circuit Performance Index (CPI), but it does not provide a comprehensive overview of the final prioritization process that occurs to force rank asset replacement, growth, and reliability grid needs into a single list and subsequent budget allocation; inquiry during the PUC special public meeting (September 15th, 2022) revealed that this overall prioritization of grid needs is done at a senior level of the organization.

Turning to the question of holistic engagement, the regular partner meetings that PGE and PAC held throughout the development of Part 2 plans provided frequent opportunities for engagement. These meetings provided regular updates on their progress and provided the ability for partners to comment on the content in a timely manner where there was a chance to incorporate feedback. All three utilities participated actively in the Technical Working Group (TWG) meetings, and PGE also used these meetings as an additional venue for engaging with stakeholders on the

development of its plan or to provide a deeper dive into topics than was possible during the monthly partner meetings. Many of these supplemental details are included in its Part 2 plan.

All three utilities held community meetings to not only educate their customers on the DSP process but also enable input from them on topics related to the grid, its evolution, and NWS. Additionally, PAC worked with MDC Research to do an in-depth customer survey using multiple communications paths including online access, bilingual (English and Spanish) phone surveys, and paid in-depth interviews. PGE used an iterative approach to its community-focused workshops in order to adapt to participants' needs and incorporate lessons learned. Its community engagement chapter includes a discussion of terms and themes identified through these workshops. PGE sought input on several questions related to working within communities, responding to their needs, and communicating grid needs/solutions effectively; and the recommendations received from community partners are included as well. Based on their lessons learned, PGE developed an action plan for improving engagement with communities impacted by large projects. We appreciate that PGE took the time to compile, analyze, and distill into common themes what the company heard in all of the workshops (community and technical). Reflecting back to stakeholders its take-aways shows PGE's commitment to active listening, a cornerstone of effective communication.

*b. Optimization*

There are distinct differences in the service territories of the three utilities; it is therefore natural that they differ in their grid-modernization and optimization journey in terms of scope and pace. The challenges described by the utilities regarding the ability to evolve as the DSP Guidelines envision underscores the need for the PUC to work to remove regulatory barriers and encourage proactive grid modernization investments. Furthermore, the new DSP process enables more collaboration between utilities and ability to learn from each other what works and what doesn't - we hope that the PUC will encourage utilities to adapt the successful approaches and thus accelerate the pace of DSP optimization for all.

This first cycle of DSP was meant to set a baseline and start the journey towards optimization; therefore, these plans should be viewed not in absolute terms relative to an optimized outcome but rather in terms of the journeys the utilities have embarked on towards that optimized goal. It is clear that all three utilities have changed how they approach distribution system planning over the last few years, and as such, they have all begun their evolutionary journeys. This in of itself means that they have achieved the incremental optimization goal.

PGE included a detailed discussion about its longer term strategy for DSP which is grounded in adopting the DOE's DSPx framework.<sup>4</sup> We whole-heartedly support its choice to align itself with this framework and are encouraged by how its near-term action plan fits into the longer term evolution for an optimized distribution grid.

As PAC acknowledges, DSP has challenged the organization to evolve, which is not always easy. As already highlighted, we appreciated that PAC shared its many lessons learned in its Part 2 plan and recognize that PAC has learned a tremendous amount in this first cycle. Its Near-Term Action Plan reflects its incorporation of the input received and lessons learned to address identified gaps. These investments in process improvements, new toolsets, and personnel will enable its continued evolution towards an optimized DSP in the second cycle.

Idaho Power's small Oregon service territory makes the company's approach to DSP unique because much of its system is not in the state and is subject to other regulations. Nonetheless, its approach to planning has evolved over the last years in line with goals for the first cycle of DSP and puts the company in a position to build on this foundation in future cycles. Additionally, its solutions identification process already considered NWS as potential solutions for every grid need prior to DSP. We hope that in the future Idaho Power will incorporate more types of DERs as well as Behind The Meter (BTM) DERs as possible solutions.

### **3. Climate Change and HB2021/CEP**

Renewable Northwest has advocated for grounding the evolution of the distribution system and its planning in Systems Thinking since the beginning of the development of the Guidelines. The complex interactions of the electrical grid (a system in of itself), societal, economic, and terrestrial systems are why it is crucial to continue to use Systems Thinking to inform not only the end state envisioned by DSP but also the process to get to the goal.

Renewable Northwest has similarly advocated for centering climate change and the need for decarbonization in the distribution system planning process since this docket was opened in 2019. Since then, the policy landscape in the west has changed significantly. Oregon, Washington, and California have all made legislative commitments to a fully decarbonized grid between 2040 and 2045, and Idaho Power has also voluntarily committed to 100% clean electricity by 2045. We are extremely pleased that there is such a strong policy and corporate focus on the urgency of decarbonization.

The Guidelines do not have extensive requirements related to emissions reductions in this first cycle, with only the potential GHG reductions from the NWS proposals being needed. While PGE and PAC include this as part of their plans, we unfortunately did not see it in IPCo's

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<sup>4</sup> US Department of Energy's Modern Distribution Grid Project is available at <https://gridarchitecture.pnnl.gov/modern-grid-distribution-project.aspx>

discussion of NWS proposals. Throughout its plan, PGE discusses how its DSP strategic initiatives relate to the company's corporate strategy which includes decarbonization. This alignment is further evidence of how it is incorporating a Systems Thinking approach in transforming its business. PAC includes a discussion at the beginning on how its vision for a clean energy future relates to DSP as a whole; it also investigated how customers across its service territory felt about energy and climate change. We would have liked to see more discussion around how IPCo's 100% clean strategy is changing their DSP approach.

Moving on, HB 2021 made it abundantly clear that decarbonizing the electricity sector is the policy of the state.<sup>5</sup> HB 2021 also established specific mechanisms for achieving 100% clean electricity for PGE and PacifiCorp -- in particular, the new mechanism of a Clean Energy Plan ("CEP"). This policy change means three key things for the DSP process: First, CEPs provide a formal means of integrating work done through the DSP process into broader utility system planning. This new mechanism will help ensure DSPs are not siloed but are co-optimized with or integrated into other planning efforts, and both PGE and PAC discuss that they are planning closer coordination between the IRP and DSP processes in their plans.

Second, HB 2021's policy direction provides the Commission with additional clarity that it has a legal mandate and obligation to consider greenhouse gas implications of utility actions, strengthening the Commission's regulatory oversight of relevant sections of utility DSPs. And third, while HB 2021 establishes a cost cap "for investments made, costs incurred or forecasted costs estimated by the electric company for the purpose of compliance"<sup>6</sup> with HB 2021, DSP predates and is not congruent with HB 2021, so distribution system investments may support decarbonization without being counted under HB 2021's cost cap.

These potential interactions between DSP and HB 2021 are important to bear in mind both in reviewing utility DSPs, evolving the DSP Guidelines, and in the Commission's implementation of HB 2021 through docket UM 2225 and otherwise. We appreciate that PGE made a clear delineation between investments made as part of DSP and those that will be part of the HB2021 compliance such as their Virtual Power Plant. PAC also discusses how the CEP has changed their plans for its Community Input Group (CIG) in order to consolidate all activities into a single group that complies with the CEP requirements. We appreciated their illustration of the relationship between DSP, CEP, and IRP stakeholder engagement.<sup>7</sup>

#### **4. Business model evolution**

As mentioned above, the economic system cannot be ignored when approaching DSP using Systems Thinking; the following comments look at the plans through this lens - utilities are

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<sup>5</sup> See Oregon HB 2021, sec. 2 (2021).

<sup>6</sup> *Id.*, sec. 7.

<sup>7</sup> Pacific Power, *Distribution System Planning Part 2*, Figure 55, p. 144.

businesses at their core, and the modern, optimized grid must allow them to continue to thrive. Furthermore, enabling communities and customers to thrive is an integral part of the overall economic system as well.

PGE pointed to the current cost-recovery mechanisms as impacting their ability to proactively invest in projects that could accelerate DER and TE adoption. In considering additional avenues for recovery of costs and possible incentives, we are not advocating for gold-plating the system -- in fact, quite the opposite. Investments that are not aligned with the current regulatory paradigm may be the most efficient means to accelerate decarbonization, in part by enabling higher penetrations of DERs sooner. Furthermore, modernizing the paradigm is one of the recommendations that IREC makes for needed regulatory changes for the planning use-case.<sup>8</sup> RMI also discusses in detail the need for creating a supportive regulatory environment as one of the fundamental best-practices.<sup>9</sup>

PGE also discusses the work it has done on researching other jurisdictions and advocates for an incentive mechanism for NWS and Virtual Power Plants (VPP). It makes sense that PGE has been doing work in this area -- a number of parties, Renewable Northwest included, have expressed a strong interest in new incentives and, more broadly, performance-based regulation (PBR) since at least the SB 978 process. That process led to a commitment by the PUC to launch a PBR process under existing Oregon law that authorizes alternative forms of regulation.<sup>10</sup> The Commission initiated the distribution system planning docket in 2019 partly as an offshoot of the SB 978 process, and again a number of parties, Renewable Northwest included, viewed the docket as a potential venue for work on PBR. While this docket has not resulted in direct work on PBR, it has laid the groundwork for utilities and parties to work together on potential PBR proposals. For example, by determining the potential GHG reductions from NWS proposals, PGE and PAC have made it possible to incent those GHG reductions on a per-ton basis via PBR. Additional groundwork has occurred in PGE's work to develop a flexible load plan. It is Renewable Northwest's understanding that the Commission will be requesting funding from the legislature in 2023 in part to work on PBR. We look forward to supporting that effort and participating in future efforts to develop PBR proposals that build on the good work done in UM 2005.

While we appreciate PGE's proactive work on a new, more comprehensive cost-effective calculation methodology, which they have named "Ben-Cost", we also want to emphasize the need to do this work transparently and in concert with Staff and stakeholders. We feel that a consistent, state-wide framework for cost-effectiveness and evaluation of the value that DERs

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<sup>8</sup> IREC, *Optimizing the Grid: A Regulator's Guide to Hosting Capacity Analyses for Distributed Energy Resources* (2017), p.12.

<sup>9</sup> RMI, *The Non-Wires Solutions Implementation Playbook: A practical Guide for Regulators, Utilities, and Developers* (December 2018).

<sup>10</sup> Oregon Public Utility Commission, "SB 978: Actively Adapting to the Changing Electricity Sector" (Sept. 2018).

represent to Oregon’s grid should be one that is a result of robust collaboration. This type of framework, and the resulting values, is likely either to lead to contention or to sit on a shelf -- or both -- if there is not broad buy-in by affected parties, as has happened in other dockets. Their example incentive structure<sup>11</sup> underscores the need to make sure that cost-effectiveness evaluation methodologies are not developed without collaboration. We encourage Staff to review PGE’s new methodology using the principles of the NESP’s National Standard Practice Manual for Benefit-Cost Analysis for DERs<sup>12</sup>, its newly released companion guide on quantifying DER benefits<sup>13</sup>, as well as RMI’s NWS Implementation Playbook<sup>14</sup> and consider the best path forward for the evolution of Oregon’s regulatory landscape, including DSP, given the state’s policy goals such as HB2021.

The RMI playbook discusses barriers to NWS proliferation and best-practices to enable operationalization of NWS. Several of the best practices can already be seen in the utilities’ plans, and a few examples include: PGE and IPCo’s use of screening metrics, PAC includes a discussion of its evaluation criteria, and IPCo’s considered IRP value streams in the cost-effectiveness evaluation. IPCo publicly shared its quantitative screening metrics during its meeting in June; however, including the quantitative versions in the report along with a discussion of the reasons for establishing specific criteria would have been valuable. In the same vein as our comments regarding PGE’s work on a cost-effectiveness methodology, we feel that considering multiple value streams in NWS evaluations needs to happen transparently and collaboratively.

## **5. Looking ahead to next DSP cycle**

With the submission of the Part 2 plans, the first DSP cycle is coming to an end, and it will soon be time to start revising the Guidelines for the next cycle. We have appreciated being part of the journey over the last three years and have learned a tremendous amount from everyone involved. We offer a few, forward-looking thoughts regarding the evolution of the DSP Guidelines.

First, taking time to gather all of the lessons learned should be a first step so that they can be incorporated into the revised guidelines. For example, while analyzing the three Part 2 plans collectively, a few requirements laid out in the Guidelines turned out to be unrealistic given the total workload and available time for the part 2 plans. This is neither a criticism of the Guidelines nor of any of the utilities’ plans, but rather a reflection that it was too early in the evolution of DSP, and the requirements were possibly too ambitious.

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<sup>11</sup> PGE, *Distribution System Planning Part 2*, Figure 55, p. 140.

<sup>12</sup> NESP, *National Standard Practice Manual for Distributed Energy Resources* (August 2020).

<sup>13</sup> NESP, [\*Methods, Tools and Resources: A Handbook for Quantifying Distributed Energy Resource Impacts for Benefit-Cost Analysis\*](#) (March/June 2022).

<sup>14</sup> RMI, *The Non-Wires Solutions Implementation Playbook: A practical Guide for Regulators, Utilities, and Developers* (December 2018).

Second, establishing clear lines of sight between the DSP requirements and state policy as well as long-term DSP goals will help utilities and stakeholders understand how each requirement supports these overarching policies and goals. This is particularly relevant given the significance of HB2021 as well as the potential for Oregon to emulate CA and WA with policy banning sales of gas-powered vehicles.<sup>15</sup> Furthermore, it will be important to reflect on how to adapt DSP's phased evolution so that it matches the timelines set forth in HB2021.

Finally, continue to ground the evolution of both the process and outcome goals in Systems Thinking as well as research-based best practices. Valuable resources include IREC's comprehensive reports on HCA and integrating DERs, RMI's playbook on NWS Implementation, DOE's DSPx grid architecture structure, and GWAC's Transactive Energy Framework. Prior to developing the inaugural DSP Guidelines, Staff hosted a series of workshops on a myriad of DSP topics which was very beneficial for stakeholders. Considering the pace of change in the energy transition - policy, technology, experience based best-practices - as well as the fact that the first DSP cycle has provided invaluable experience and knowledge, starting the second cycle with revisiting relevant (and new) topics would be valuable.

### III. CONCLUSION

Renewable Northwest again thanks Staff for this opportunity to respond to the utilities' DSP Part 2 Plans and the utilities for the effort and resources they invested in these plans. We look forward to further engagement with Staff, utilities, and other stakeholders as this investigation takes its next steps toward evolving and optimizing the process and guidelines for utility distribution system planning.

Respectfully submitted this 07th day of October, 2022.

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<sup>15</sup> <https://www.opb.org/article/2022/08/26/oregon-transition-zero-emissions-vehicles/>, visited 10/06/2022.