BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

Docket No. UM 2197

In the Matter of Portland General Electric Distribution System Planning Report.	Comments of NW Energy Coalition

NWEC appreciates the opportunity to provide comments on the Distribution System Plan, Phase 1, submitted by Portland General Electric (PGE).

At the outset, we express our appreciation for the extensive work by PGE in preparing this first submission, as well as the work of all utilities, stakeholders and Commission Staff in the preparatory phase of Docket No. UM 2005.

We provide these initial comments knowing that additional insight will be gained from the forthcoming discussion of this and the other DSP Phase 1 filings by PacifiCorp and Idaho Power.

We start by commending PGE for framing the DSP with three goals: (1) advance environmental justice; (2) accelerate DER adoption; and (3) maximize grid benefits. NWEC agrees that these goals are important to providing electric service benefits while also providing for more choices and protection for customers in a manner that is grounded in equity. The key challenge ahead is turning these goals into action.

PGE also has developed five strategic initiatives: (1) empowered communities; (2) modernized grid; (3) resilience; (4) plug and play; and (5) evolved regulatory framework. While many details still must be worked out, this provides a good set of first steps toward action within an equity framework.

Our discussion below starts with community engagement and then turns to system description and hosting capacity analysis issues.

<u>Community Engagement</u>

Chapter 3, entitled, "Empowered Communities: Equitable Participation in Distribution Decisions," starts as follows:

> *As an essential service provider, PGE must both engage and understand where and how customers live, work, learn and play. The work requires us to co-develop solutions with communities and develop solutions that deliver value to both them and the grid. We see it as imperative to pursue the twin goals of social justice, including racial equity, and*

decarbonization. These goals are needed to ensure that we address and redress disparities and impacts within the environmental justice communities PGE serves.

Later, these "main points" are presented:

- *We have learned that creating a collaborative environment requires building trust first.*
- *Designing programs and solutions with affected communities (instead of for them) produces better outcomes.*
- *We should collaborate and defer to our communities, where and whenever possible.*
- *PGE's Community Engagement Plan is informed by best practices, learnings and the recommendations of Unite Oregon, Community Energy Project and the Coalition of Communities of Color based on their engagement in the first phase of the DSP.*

NWEC believes that PGE is taking the right approach in its community engagement plan. We reiterate the importance of building trust with communities and pursuing meaningful and trustworthy relationships with those that they serve. However, we would also like to see more active engagement by PGE with and within their communities as they enter the second stage of DSP and beyond.

PGE should pursue direct communication and participation with said communities by making time and space for their concerns, needs, and wants to be addressed. In doing so, the company should ensure that the information they share, technical or otherwise, is easily understood and accessible to community members. PGE should also make sure that community members in fact understand the information that is given or requested from them, and if not, make space to address lingering questions.

Considering the complexities involved, It would also be great for PGE to offer its communities and other interested stakeholders a direct line of communication (by phone, text, email, and in-person) that is dedicated to answering questions and concerns regarding DSP. To maintain consistency in communication and increase familiarity and comfort between PGE staff and its communities, it would be best to establish this via a single designated DSP staff. This framework will help remove existing barriers to understanding and participating in DSP processes and will also benefit PGE in collecting information regarding community needs and desires.

In sum, we are pleased to see PGE's robust community engagement plan and hope to see continued participation and active engagement between PGE and its communities.

<u>System Description</u>

The DSP Phase 1 submission contains many elements that, for the first time, provide a comprehensive view of the PGE distribution system. We will not discuss every element in detail here and instead focus on notable aspects and pose further questions for refinement.

Chapter 4 lays out key elements on a theme of the "Modernized Grid: Building a Platform for Participation." NWEC appreciates this perspective because it moves beyond simply what the distribution system can do for customers, and opens the discussion of how to help customers participate and achieve direct and community benefits.

The chapter reviews a number of focus areas, including: (1) virtual power plant; (2) planning and engineering; (3) grid management systems; (4) sensing, measurement and control; (5) telecommunications; and (6) physical grid. PGE makes a good case for why these engineering based building blocks are needed to provide a multi-layered platform for the modernized grid.

The one new concept is the virtual power plant, defined as "[m]ultiple flexible loads and DERs, which in aggregate, supply grid services visible to and dispatchable by PGE power operations, characteristic of a traditional power plant facility." (p. 89) This is a helpful definition from the perspective of grid management and operations, and rightly creates a side by side resource comparable to traditional generation and transmission in providing grid services.

We hope that the DSP discussion going forward will focus on how the virtual power plant can be built up with customer and community interest at the forefront. This will involve balancing of utility and community concerns in shaping the specific programs and activities useful in creating an effective utility resource that also provides for community development and equitable treatment, both within and across communities.

NWEC also supports the development of the AdopDER common DER evaluation tool because it will help provide consistency for the assessment of different resources and programs across the virtual power plant.

In considering the physical elements of the distribution system, NWEC suggests two topics that would benefit from additional refinement.

First, while it is often said that the distribution system must evolve to accommodate "two way flow," it is not entirely clear what that actually requires. It is not simply the addition of system protection at the substation and elsewhere to mitigate the risk of backfeed, it also involves the modification of other elements including sensing, measurement and control and telecommunications. A clearer statement of what is needed to enable the two-way grid would be very helpful.

A second issue concerns load forecasting. The submission states (p. 29), "PGE's distribution system is evaluated for a 1-in-3 peak load condition during the summer and winter seasons for near-term (years 1 through 5) and longer-term (years 6 through 10) studies."

An important debate has arisen on the right method to assess load variation for resource adequacy in IRP, transmission planning and similar contexts for the bulk power system, where a 1-in-2 ("P50") method has often been used but now seems outdated. The same question arises for the distribution system. PGE and its customers have recently endured several extreme weather events that also have tested traditional load forecasting assumptions. During the late June 2021 heat dome event, other utilities reported outages on some feeders where load

growth had occurred and system equipment could not handle the excessive extreme weather demand. Likewise, alignment of DSP and IRP processes suggests that common assumptions should be developed so all planning has the same basic perspective. NWEC suggests this may be a good topic for further discussion in technical workshops in the ongoing DSP process.

Finally, we turn to overall spending levels. As indicated in Table 3 (shown below), Oregon distribution system expenditures have more than doubled recently, from $180 million in 2016 to $390 million in 2020. Some categories as highlighted have rapidly ramped up, while others such as upgrades for capacity have peaked and then fallen. Does PGE anticipate that the current overall higher levels will continue going forward?

Table 3. Distribution of yearly spending by expenditure category[19]

Spending category	Yearly spending (million USD)					Budget average
	2016	2017	2018	2019	2020	2016-2020
New customer projects	$49	$84	$86	$87	$86	$78
Age-related replacements and asset renewal	$50	$52	$60	$86	$175	$85
System expansion or upgrades for reliability and power quality	$39	$51	$76	$122	$84	$74
System expansion or upgrades for capacity	$32	$67	$82	$37	$30	$50
Metering	$9	$7	$7	$12	$9	$9
Preventive maintenance	$0.4	$4	$8	$5	$2	$4
Grid modernization projects	$0.01	$2	$3	$4	$5	$3
Total	**$180**	**$268**	**$322**	**$352**	**$390**	**$302**

On a more specific point, we note that Table 2 provides a helpful summary of Oregon distribution system assets. For the 407 transformers in the PGE system, the current average life is 38 years and the expected average lifetime is 55 years. Is PGE taking special steps to accelerate replacement, and if so what financial impact will that have?

Resilience

The DSP Phase 1 submission only covers some parts of this complex and top priority topic, but NWEC appreciates the effort to center it within DSP.

One question that would benefit from further discussion is whether and where undergrounding of distribution wires and equipment can be beneficial, especially for wildfire and seismic risk mitigation. The submission does not discuss the history of this topic within PGE, the amount of the system that is currently undergrounded and the reasons for that, nor the potential tradeoffs involved.

It would also be useful to include within the DSP a regular process for including the lessons of event analysis such as the recent cycle of wildfire, ice storm and heat dome extreme weather events.

Hosting Capacity Analysis

PGE has taken significant initial steps to create a workable hosting capacity analysis (HCA), but clearly more development is ahead. We have two early concerns.

First, the focus on daytime minimum load (DML) has a number of apparent shortcomings. Data quality is a concern, both in terms of consistency and gaps, regardless of what metric is used. The effects of distribution automation, SCADA and the presence of FLISR capabilities also may affect the interpretation of the DML metric. We are not arguing against DML but rather in favor of further refinement and potentially developing a multi-factor HCA index.

Second, while the Readiness Viewer concept is a good one, clearly it will need further refinement. We suggest designing reference use cases such as rooftop solar, community solar, a couple different forms of EV charging (for example, for light duty and heavy duty vehicles), and different types of battery storage, in order to provide a common framework for assessment of HCA outputs. These use cases should be developed in conjunction with service providers and community based organizations, which will have somewhat overlapping and somewhat different needs for the same HCA data.

Third, while we appreciate PGE's commitment to conduct HCA analysis twice annually starting in 2022, the distribution system is dynamic and becoming moreso, and it will be important to develop guidance jointly with stakeholders about the merits and limits of HCA and how frequently and which parts to update as this progresses from stage to stage.

Finally, NWEC appreciates the detailed discussion of the three options for further HCA development. In general, we believe that Option 2 provides the best balance of cost, effort and capability going forward, but this is also a topic deserving of additional technical workshop review.

Customers and Data

NWEC frequently stated our concern about data access, quality and security during the development phase of UM 2005. In this first DSP submission, PGE correctly notes (p. 44), "As distribution infrastructure and data resolution improve and DER penetration increases, PGE envisions new opportunities to provide customer and community value through new products and services." But the DSP submission does not discuss the many implications of this new complex data fabric, including both benefits and risks.

Since distribution system data is ultimately about and customer use of and participation in the power system, this raises substantial questions of customer protection, agency and access.

Traditionally and rightly, utilities have been obligated to tightly protect customer data. In the not distant past that primarily referred to monthly meter readings and billing data, all under direct utility control. The arrival of advanced metering infrastructure and the development of new customer energy services, automation, and convergence with telecommunications and information technology has dramatically expanded the potential and the risks of data relating to the distribution system.

Data is no longer developed only within the utility's equipment up to the customer meter but also by a variety of other functions and services with many different sources and repositories on the customer side, including distributed generation, demand response and storage. These sources may be distinct from traditional meter and distribution system data, but increasingly are essential to operating the distribution system and may be used in multiple ways by utilities, service providers and customers alike.

Likewise, the same data sources and processes that provide much better identification of system faults, improved customer account management and new distribution system services also expose numerous risks for customers, suppliers and utilities.

All this raises some fundamental issues: who owns, has access to and has responsibility for distribution system and related customer data? What risks must be identified and addressed, including the risks created by combining otherwise disparate data sources as well as the often hidden consequences of variations in data quality?

The DSP filing takes note of the need to screen the details that could identify individual customers, for example, feeder level data for large commercial and industrial customers in HCA analysis. The filing also briefly references concerns about data justice in applying sociodemographic sources to distribution planning. But most of the new data concerns affecting customers remain unmentioned.

We appreciate that these issues have gotten early attention in the UM 2005 technical workshops, but it is time for these data concerns to be addressed in the utility DSP filings.

This concludes NWEC's comments. We look forward to further discussion and development of the PGE Distribution System Plan.

Respectfully submitted,

/s/

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