ITEM NO. RA1

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
SPECIAL PUBLIC MEETING DATE: March 21, 2023

REGULAR __X__ **CONSENT** ____ **EFFECTIVE DATE** __________N/A__________

DATE: March 14, 2023

TO: Public Utility Commission

FROM: Nick Sayen

THROUGH: Bryan Conway, JP Batmale, and Sarah Hall **SIGNED**

SUBJECT: PACIFIC POWER:
(Docket No. UM 2198)
Acceptance of Oregon Distribution System Plan – Part 2.

STAFF RECOMMENDATION:

Accept the Oregon Distribution System Plan – Part 2 filing by Pacific Power as meeting the criteria and requirements of the Distribution System Planning Guidelines established in Order No. 20-485.

DISCUSSION:

Issue

Whether the Public Utility Commission of Oregon (Commission) should accept Pacific Power's (PacifiCorp, Company, or PAC) Oregon Distribution System Plan – Part 2 filing (Plan or Part Two Plan) filed August 15, 2022, in UM 2198 as meeting the criteria and requirements of the Distribution System Planning (DSP) Guidelines established in Order No. 20-485.

Applicable Rule or Law

ORS 756.040 describes the general powers of the Commission to supervise and regulate every public utility, and to do all things necessary and convenient in the exercise of that authority.

Under ORS 756.105(1), "Every public utility or telecommunications utility shall furnish to the Public Utility Commission all information required by the commission to carry into effect the provisions of ORS chapters 756, 757, 758 and 759."

In Order No. 19-104, the Commission opened Docket No. UM 2005 to "develop a transparent, robust, holistic regulatory planning process for electric utility distribution system operations and investments."

In Order No. 20-485 the Commission suspended the Smart Grid Report filling cycle for 2021 in anticipation that Order Nos. 12-158 and 17-290 may be revised or superseded by new requirements adopted in UM 2005.

Order No. 20-485 established procedural and substantive DSP planning requirements, including Part One and Part Two DSP Plans as well as the process for Commission review of the Plans. The Part Two Guidelines require that utilities:

1. Document current load forecasting processes and build on that foundation with forecasts of distributed energy resource adoption and electric vehicle adoption by substation;
2. Document the process by which the Company compares the current capabilities of the system, and future demands on that system to infer future "grid needs;"
3. Document assessment of proposed solutions to address grid needs, and evaluate at least two pilot concept proposals utilizing non-wires solutions which are to be informed by a community needs assessment;[1]
4. Present a near-term action plan consisting of selected, proposed solutions to address grid needs.

Analysis

This memo provides brief policy context prior to Staff's review of the Plan, and next steps in distribution system planning. The memo integrates stakeholder feedback and concludes with Staff's recommendation to accept PAC's Plan. Throughout, Staff identifies opportunities for continued learning or improvement, shown in Appendix A. These observations are not intended as proposed conditions for Commission acceptance of the Plan. Rather, Staff intends to reference these insights while working in partnership with utilities and stakeholders moving forward in the evolution of DSP.

[1] See Guideline 5.3d. An electric utility that makes sales of electricity to retail electricity consumers in an amount that equals less than three percent of all electricity sold to retail electricity consumers may evaluate one pilot concept proposal.

Pacific Power's DSP Part Two Plan demonstrates significant evolution of the Company's traditional distribution planning practices. The Plan provides detailed insight for non-technical audiences on highly complex topics. It presents a rich analytical framework and data on non-wires solutions (NWS) and demonstrates major development in engaging community stakeholders on NWS. The Company's Part One and Part Two filings are notable for clearly and coherently presenting current practices and how they are changing.

Background
The Part Two filing represents the culmination of more than three years of work and conclusion of the opening chapter of distribution system planning at the Commission. Staff's investigation into distribution system planning (UM 2005) began in March 2019. The key drivers behind the docket were to increase insight into utility planning processes and distribution-level investments, and optimization to ensure system operational efficiency and customer value.[2] These drivers led to the adoption of DSP Guidelines in 2020.[3] The Guidelines set forth an initial path to evolve utilities' legacy practices for distribution system planning through a transparent stakeholder process aimed at advancing legacy practices in new ways.

The Guidelines directed the utilities to file their first DSP in two parts. PacifiCorp filed Part One in October 2021,[4] which included major components such as a baseline system assessment, community engagement requirements, and a long-term plan involving a 5- to 10-year roadmap of planned investments. The Commission accepted PAC's Part One filing in March 2022.[5]

Policy Shift in Planning
Since the launch of the DSP process, Oregon has undergone a dramatic energy policy shift. In 2021, the Legislature passed into law HB 2021. The law established a clean energy framework for electric companies to decarbonize their retail electricity sales by 2040. The law requires utilities to file Clean Energy Plans (CEPs) along with Integrated

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[2] See Docket No. UM 2005, Staff Whitepaper: A Proposal for Electric Distribution System Planning, https://edocs.puc.state.or.us/efdocs/HAU/um2005hau15477.pdf.
[3] See Order No. 20-485 in Docket No. UM 2005, https://apps.puc.state.or.us/edockets/orders.asp?OrderNumber=20-485.
[4] See Docket No. UM 2198, Pacific Power Oregon Distribution System Plan Report – Part 1, https://edocs.puc.state.or.us/efdocs/HAA/um2198haa12716.pdf.
[5] The Guidelines call for the Commission to consider whether to accept the filed Plan (or Plan Part) as meeting the objectives of the Guidelines. As used, "acceptance" means the Commission finds the Plan meets the criteria and requirements of these Guidelines. Acceptance does not constitute a determination on the prudence of any individual actions discussed in the Plan. A decision to not accept a Plan means that the Plan does not meet the criteria or requirements of the Guidelines. See Order No. 22-083 in Docket No. UM 2198, https://apps.puc.state.or.us/orders/2022ords/22-083.pdf.

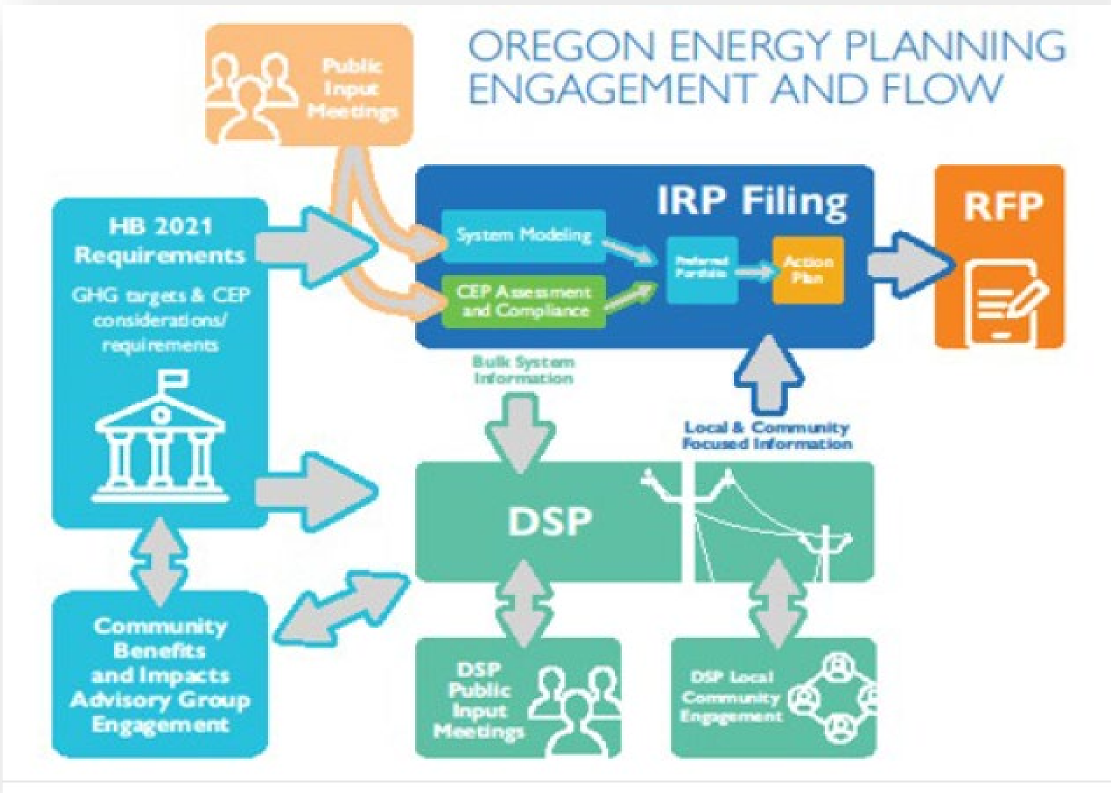
Resource Plans (IRPs) to detail specific actions that make progress towards clean energy targets. The Commission set expectations that the first CEP will be fully integrated into the IRP and contemplated a strong, but evolving, connection to the DSP.[6] The Commission also set an expectation that the CEP include targets and strategies for acquiring community-based renewable energy projects, or CBREs, that are informed by a quantitative CBRE potential study and initial Community Benefits Indicator (CBI) metrics. The initial CBIs will be used to begin capturing resilience, health and community well-being, environmental impacts, energy equity, and economic impacts of the utility's overall decarbonization strategies and ongoing IRP updates. HB 2021 also requires utilities to develop Utility Community Benefits and Impacts Advisory Group (UCBIAG) to inform a broad range of utility activities, that will likely include CEPs and DSPs.

HB 2021 requires that the CEP include a risk-based examination of resiliency opportunities based on industry standards and Commission guidelines. The Grid Modernization Laboratory Consortium (GMLC) of the U.S. Department of Energy developed the report, *Considerations for Resilience Guidelines for Clean Energy Plans*, to support the Commission's understanding of industry practices and standards.[7] This process revealed that resiliency is a key CBI and a key focus for the development of CBRE acquisition strategies for the first CEP. Further, the GMLC report revealed that resource planning is only one component of resiliency planning and the majority of best practices and standards are even more applicable to other planning practices at the Commission, including DSP. At a technical conference on December 15, 2022, the Commission, stakeholders, and Staff highlighted the importance of continuing to incorporate the resiliency planning practices discussed in the GMLC report into the broader planning framework over time.

PAC articulates its perspective on the relationship between the interrelated planning activities, specifically on stakeholder engagement, in Figure 55 excerpted below.[8]

[6] See Order No. 22-206 in Docket No. UM 2225, https://apps.puc.state.or.us/orders/2022ords/22-206.pdf.
[7] See Docket No. UM 2225, Staff's Resiliency Planning Standards and Practices, September 7, 2022, https://edocs.puc.state.or.us/efdocs/HAH/um2225hah113046.pdf.
[8] Pacific Power Pacific Power Oregon Distribution System Plan – Part 2, page 144.

Figure 55: Stakeholder Engagement Relationship for DSP-IRP-CEP



Since 2019, Oregon has also experienced several wildfires. In 2021, Oregon utilities filed their first Wildfire Mitigation Plans detailing investments related to vegetation management and risk.[9] DSP Guidelines predated HB 2021 and do not address CEP requirements or wildfire mitigation planning. However, the Guidelines do explicitly require that utilities develop DSPs and IRPs that inform one another. To this end, Staff envisions future IRP/CEPs being both informed by and informing DSPs and will work to make sure DSP Guideline revisions support this. In procedural equity and inclusion, utilities are now combining the community outreach and engagement efforts of DSP and IRP/CEP development. Staff understands utilities are currently proposing engagement activities for topics such as diversity, equity, and social justice, shift to UCBIAGs, while

[9] See Docket No. UM 2207, 2022 Wildfire Protection Plan, https://edocs.puc.state.or.us/efdocs/HAA/um2207haa15230.pdf. Additionally, PacifiCorp filed its 2023 Plan on December 29, 2022, in UM 2207 and the first public workshop on the 2023 Plan takes place on March 14, 2023.

engagement activities for projects with impacts to local communities, or for tailoring investments/actions specific to communities will be addressed in future DSPs.

Pacific Power Part Two Plan and Staff Review

Pacific Power has developed new practices for distribution system planning. These include forecasting, identifying grid needs and solutions, and contemplating NWS. The Company is at the early stages of implementing these new processes. As outlined in the Part One filing, PacifiCorp targeted two regions to use as “Transitional Study” areas where the Company could explore new DSP processes and potential NWS. The Company selected Klamath Falls and Pendleton as Transitional Study areas for a variety of reasons including capacity and readiness for distributed generation resources, timing, and area demographics and characteristics. Looking ahead, a sizeable and important next step for Pacific Power is the broad implementation of these new processes across the Company’s Oregon service territory.

PacifiCorp began preparing its Part Two Plan and hosting a stakeholder workshop series in early 2022. The workshops represented substantial effort in involving the public in preparing the Part Two Plan, contributing information and ideas, and making inquiries and receiving information from PAC. On September 15, 2022, the Commission held a Special Public Meeting for the utilities to present their DSP Part Two filings to stakeholders, Commissioners, and Staff.[10] Staff solicited stakeholder comment through the DSP dockets.[11] Oregon Solar + Storage Industries Association (OSSIA), Renewable Northwest (RNW), and NW Energy Coalition (NWEC) provided approximately 30 comments on PAC’s Plan. Staff is grateful to these organizations for providing feedback and looks forward to additional discussions in the future. Broadly speaking, comments provided constructive feedback; Staff discusses this feedback throughout the memo.

Below, Staff discusses five key areas that increase insight into DSP or enable optimization of the distribution system: load growth forecasts, including adoption of distributed energy resources (DERs) and electric vehicles (EVs); grid needs and solutions identification; NWS; and the near-term action plan. This discussion roughly corresponds to the structure of PacifiCorp’s Part Two Plan. Community engagement and equity are addressed throughout the Plan and Staff discusses those topics below.

[10] See Docket No. UM 2198, Meeting Agenda, https://edocs.puc.state.or.us/efdocs/HAH/um2198hah154938.pdf, Staff’s Presentation, https://edocs.puc.state.or.us/efdocs/HAH/um2198hah134618.pdf, and PAC’s Presentation, https://edocs.puc.state.or.us/efdocs/HAH/um2198hah165458.pdf.

[11] See Docket No. UM 2005, https://edocs.puc.state.or.us/efdocs/HAH/um2005hah135743.pdf.

1. <u>Community Engagement and Equity Considerations</u>

In the context of DSP, community engagement and equity include a variety of activities, and are discussed in chapter seven and throughout PAC's Plan. Examples of these activities include public involvement in the preparation and implementation of the Plan, and engaging community-based organizations (CBOs) to increase awareness of large upcoming projects, inform utility forecasting, and provide input on development and deployment of NWS. These activities represent new steps in traditional distribution planning practices.

Community engagement is important because it provides stakeholders and community members increased insight into both the distribution system itself and the planning processes utilities use to make decisions. Stakeholders and community members can examine outcomes such as the location of substations, or outage performance of feeders. The DSP Guidelines required utilities to develop community engagement plans in Part One filings with the understanding that utilities would implement those plans in both preparing NWS proposals for the Part Two filings, and when beginning to construct large projects proposed in the Part Two filings. PAC successfully developed such a plan in preparing the Company's Part One filing, although as discussed below, a key component has evolved in implementation.

Pacific Power made significant advances in community engagement and equity considerations in preparing the Part Two Plan. Discussed below, Staff finds that the community engagement accomplishments and planned future work presented in PAC's Plan meet the Guideline requirements.[12]

Workshops, Community Input Group and UCBIAG – In preparation of the Part Two filing Pacific Power conducted a stakeholder workshop series of five meetings and discussed DSP at CEP and IRP workshops. In addition to the workshop series, establishment of a Community Input Group (CIG) was a unique part of the Company's Part One community engagement plan. The CIG was a key avenue for PAC to gather input from customers and to engage communities. However, the Company decided to utilize the newly formed UCBAIG to engage DSP stakeholders in lieu of the CIG due to synergies within the Company and to simplify participants and stakeholders engaging with the Company. To this end, NWEC urged PAC to establish one group as soon as possible to meaningfully streamline community input across several dockets and relieve CBO resource constraints. The Plan notes that DSP will engage with UCBIAG for input regarding equity matters, and the DSP team will continue to host DSP-specific workshops. Staff supports PAC's approach.

[12] See Guidelines 5.3c and 5.3d.

Non-Wires Solution Pilots – The DSP Guidelines call for utilities to perform a community needs assessment to inform development of two NWS pilot concept proposals.[13] PAC began the process with a known grid need in the Klamath Falls area, one of the Transitional Study areas. After preliminary analysis confirmed the area was suitable for more detailed study, the Company developed a list of potential NWS that would address the grid need. The Company also engaged stakeholders in a request for proposals (RFP) for NWS for the areas. This resulted in three proposals from two different stakeholders. These proposals and several different NWS concepts were presented at a DSP workshop, and the Company identified five options as feasible.

The Company then conducted local engagement and an in-person meeting in Klamath Falls. Participants included a local CBO, various arms of County government, City government, as well as commercial, irrigation, and residential customers. The Company shared background and context for DSP, and the grid need. PAC presented and compared the NWS options using high level categories and solicited feedback. Based on feedback, the Company selected two NWS concepts to evaluate for the grid need. A summary of the Klamath Falls workshop is included in the Plan as Appendix D. The workshop was sufficiently valuable that the Company anticipates incorporating similar workshops in the DSP planning process.[14]

Staff applauds Pacific Power's approach to this endeavor and the efforts to implement the approach quickly. Staff believes it represents pioneering work in the development and deployment of NWS. NWEC also applauds PAC for its robust engagement and would like to see utilities engage at this level throughout the DSP process. NWEC noted there may be value in building a "standard toolkit" of community engagement, especially for projects with a medium cost.

Customer Survey – Another key part of PAC's Part One plan was the administration of a customer survey to measure the public's awareness of DSP, prioritize the benefits associated with clean energy, understand concerns, and obtain high-level stakeholder feedback.[15] The spring 2022 survey was conducted via online and phone surveys (both of which included Spanish versions), and remote in-depth interviews with stakeholders. A total of 4,627 surveys (4,497 online, 130 phone) including 30 from frontline customers were completed.[16] Twenty-four in-depth surveys were completed by stakeholders including energy consultants, local governments, CBOs, economic development agencies, and tribal agencies.

[13] See Guideline 4.3a ii.
[14] Pacific Power Oregon Distribution System Plan – Part 2, page 146.
[15] Pacific Power Oregon Distribution System Plan – Part 2, page 35.
[16] Pacific Power Oregon Distribution System Plan – Part 2, page 37.

The research led to numerous findings and recommendations, with a full report included in Appendix B. The Plan identifies key findings and notes primary themes in the survey responses. Themes include: cost of electricity; a need for better understanding of energy equity; customers' wide variety of attitudes, interests, and priorities with respect to DSP; and importance of engaging locally via several methods. Pacific Power states a commitment to continuing an annual survey of Oregon customers and stakeholders to keep in step with their needs, measure the impact of changes, improve communication and engagement, and track benefits and challenges over time.[17] Staff supports this approach to developing a high-level understanding of the communities it serves, and applauds the speed with which Pacific Power accomplished this work. NWEC would like the Company to provide more detail on plans for the survey results and plans to respond to its customer's concerns.

Equity Considerations – The Plan includes other additional efforts to address equity. The Company has developed Spanish versions of various DSP documents, feedback forms, and the DSP webpage and plans to continue translating DSP-related content. PAC's Distribution System Planning Map includes U.S. DOE's Low-Income Energy Affordability Data (LEAD), as well as the Company's recent reliability performance. Providing such equity data combines new information with the engineering-centric data traditionally used in DSP. It allows for improved targeting of future investments that may benefit underserved communities at risk of being left behind in the clean energy transition and is another step in fostering a human-centered approach to DSP. Looking ahead, PAC notes that LEAD data, correlated to U.S. Census blocks, has been adequate to date, however improved insight may result from more granular datasets and the Company is evaluating alternatives.[18] Staff supports PacifiCorp's ongoing work on equity data, and encourages the Company to keep track of other related efforts such as the Oregon Environmental Justice Council and Energy Trust equity metrics developed under HB 3141.[19] NWEC believes the DSP process should include ways to identify communities disproportionately negatively impacted by the current energy system and prioritize their needs for an equitable, safer, and reliable energy future.

2. <u>Forecasting of Load Growth, DER Adoption, and Electrical Vehicle (EV) Adoption</u>

Utility forecasting is a key element of DSP Guidelines. It can play a critical part in achieving optimization of distribution system operational efficiency and customer value, especially over the long-term. This is because historically load growth has been one of

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[17] Pacific Power Oregon Distribution System Plan – Part 2, pages 40 and 142.
[18] Pacific Power Oregon Distribution System Plan – Part 2, page 138.
[19] See for example, the Oregon Environmental Justice Council is working to develop a publicly available environmental justice mapping tool, https://www.oregon.gov/gov/policies/Pages/environmental-justice-council.aspx.

the key factors determining traditional utility investments in the distribution system. In addition, increased adoption of DERs has led to new and expanded utility investments, and in the future increased adoption may do so to an even greater extent. Further, growth in the adoption of EVs in the coming years will play a major part in load growth.

Chapter two of PAC's Plan includes a clear articulation of the current approach to load forecasting. Chapter three presents new processes developed to evolve forecasting in line with the DSP Guidelines. The new processes involve applying load and DER forecasts with high, medium, and low scenarios to the circuit level of the grid, and were implemented in the two specific Transitional Study areas.[20] Timing was a factor in the limited implementation of these new practices, as key components of the forecasting were under development until mid-2022. Staff notes broad implementation of the new circuit-level processes is the next step before the Company, and PAC includes steps for doing so in the Action Plan. Staff finds that the Company's forecasts for load growth, DER adoption, and EV adoption by substation meet the Guideline requirements.[21] Staff notes an opportunity for future forecasting improvement below.

Load Growth

Pacific Power thoroughly describes its current approach to load forecasting in DSP. The building block for the process is an engineering study for a specific geographic area. Germane to DSP are scheduled planning studies, which will be used to for evaluation and evolution of new DSP tools and processes.[22] There are currently 99 planning studies on five-year cycles in PacifiCorp's Oregon service territory. Local field engineers familiar with the area play a critical role as lead authors of these studies. To forecast load growth for a planning study, the field engineer considers numerous factors, and develops a load growth rate for each substation and circuit, which is applied to the starting load for summer and winter five years into the future.[23] The field engineer shares forecast information related to block load additions and interconnections with

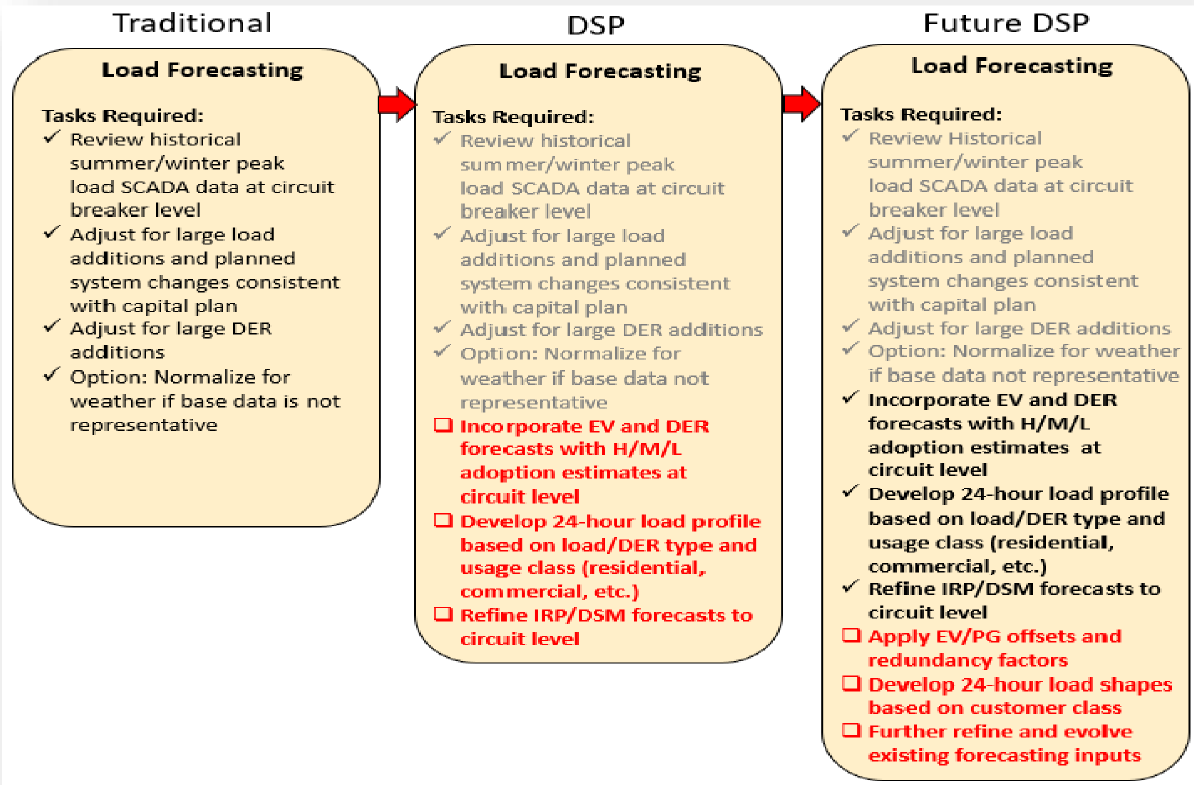
[20] Pacific Power Oregon Distribution System Plan – Part 2, page 63.
[21] See Guidelines 5.1a, 5.1b, and 5.1c.
[22] An engineering study can also be an ad-hoc study. However, the Plan states ad-hoc studies typically have a short timeline, are unpredictable, limited in scope and focus on a specific location, and are customer driven, for example in response to a load or generation interconnection service request. All of these characteristics make them ill-suited to new DSP processes at this time. Pacific Power Oregon Distribution System Plan – Part 2, page 19.
[23] Pacific Power Oregon Distribution System Plan – Part 2, page 21.

transmission planning, but otherwise does not specifically consult IRP/system load forecasts.[24, 25]

The Plan states that load forecasting methods are expected to remain relatively stable for the DSP and IRP, and interaction between the two ensures coordination between the processes. Critically, PacifiCorp will continue to evaluate opportunities to integrate the two forecasts as the DSP and IRP processes evolve.[26] Staff notes that the importance of accurate forecasting and the newness of DSP processes present an opportunity and need for *ongoing transparency in the functioning and accuracy of DSP and IRP interaction*. Figure 29, excerpted below, is a useful summary of the differences PAC identified between traditional load forecasting, current, and future DSP forecasting.[27]

[24] Pacific Power Oregon Distribution System Plan – Part 2, page 22.
[25] The Plan notes that the IRP focuses on generation and transmission requirements, and thus utilizes various statewide or higher load forecasts. These forecasts are disaggregated to “load bubbles” or geographic areas developed on transmission constraints. DSP focuses on the distribution system within the load bubble. Pacific Power Oregon Distribution System Plan – Part 2, page 69.
[26] Pacific Power Oregon Distribution System Plan – Part 2, page 69.
[27] Pacific Power Oregon Distribution System Plan – Part 2, page 70.

Figure 29: Traditional Versus Current DSP Versus Future DSP Forecast



EV Adoption

PAC developed four separate scenario analyses: high, medium-high, medium, and low. The high and medium-high scenarios apply national growth rates from published studies.[28] Both the medium and low scenarios come from an econometric analysis of EV registrations at the feeder level using historical EV adoption rates in the Company's Oregon service territory.[29] The high and medium-high scenarios result in exponential EV adoption patterns with accelerated adoption in later years, while the medium and low scenarios lead to more linear growth rates with slower later-year adoption rates. For

[28] The high scenario uses a national growth rate from Bloomberg New Energy Finance. The medium-high scenario forecast comes from Wood-Mackenzie. Pacific Power Oregon Distribution System Plan – Part 2, page 45.

[29] Though the focus of the plan is on the four scenarios noted above PacifiCorp also presents a forecast based the growth rates published in the Energy Information Administration's Annual Energy Outlook (AEO). This forecast comes in even lower than PacifiCorp's low scenario. Pacific Power Oregon Distribution System Plan – Part 2, page 45.

allocation of EVs across the system, the Company groups feeders into low, medium, and high groups based on historic registration and uses this approach to create the distribution of EVs to the feeder level across all scenarios.[30]

The Company states that it believes the high and medium-high forecasts are most appropriate for planning purposes, given the state's aggressive EV adoption goals and future investments tailored toward growing EV adoption.[31] Staff initially had concerns about the discrepancy between the results of the high scenario and the medium-high scenario (84,074 EVs), but notes that the proportion of EVs in the high case seems to be of the same magnitude as the high case presented in PGE's Part Two DSP filing. Given known characteristics of PacifiCorp's service territory, Staff ultimately concludes that the high scenario is appropriate for this forecasting, and that the high scenario and medium-high scenario appear to be useful for DSP planning purposes.

DER Adoption

PacifiCorp's DER adoption forecasting consists of private generation, energy efficiency, and demand response. PAC's plan notes that the vast majority of private generation is solar PV technologies. The Company has no reason to believe that it will change significantly in later years.[32] The Plan includes a low-, base-, and high-case scenario. The base-case assumes current federal and state incentives, retail rate escalations consistent with U.S. EIA Annual Energy Outlook projections, and a technology cost forecast consistent with the moderate and conservative cases from NREL.[33] The high case assumes a higher escalation in retail rates and a faster decline in technology costs, while the low case assumes the opposite.

The assumptions for the three scenarios are used to calculate a payback from implementing the technology, which is then used to estimate a maximum market potential. This market potential is then modeled for technology adoption and eventual market saturation.[34] Historic census-track-level data is then used to disaggregate the state-level forecast to the circuit level and, ultimately, the substation level.[35] At the end of this analysis, the Company's projections of cumulative incremental adoption by 2023 range from approximately 150 – 400 MW-AC. The Company states the base case

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[30] Pacific Power Oregon Distribution System Plan – Part 2, pages 45, 46.
[31] Pacific Power Oregon Distribution System Plan – Part 2, page 48.
[32] Pacific Power Oregon Distribution System Plan – Part 2, page 49. The Company also notes there is no expected influx of solar PV + battery storage installations due to Oregon's current net metering structure. Pacific Power Oregon Distribution System Plan – Part 2, page 56.
[33] National Renewable Energy Laboratory's Annual Technology Baseline, Pacific Power Oregon Distribution System Plan – Part 2, page 50.
[34] Pacific Power Oregon Distribution System Plan – Part 2, page 51.
[35] Pacific Power Oregon Distribution System Plan – Part 2, page 52.

forecast is most appropriate for planning purposes.[36] The Company concludes its analysis by discussing improvements to its circuit level analysis, including finding ways to include potential new circuits in high-growth areas, better understanding customer preferences, and integrating finer-grain data.[37]

The Company works closely with the Energy Trust to forecast energy efficiency opportunities. The Energy Trust generally prepares a conservation potential assessment (CPA) for each IRP. The CPA serves as the basis for efficiency potential and cost assumptions specific to PacifiCorp's Oregon service area. For DSP forecasting, PAC relied on the CPA prepared for the 2021 IRP, and developed low, medium, and high case scenarios. The medium case is informed by the cost-effective energy potential that was identified by the 2021 IRP model. The high case is informed by the CPA achievable efficiency potential, which is approximately 28 percent greater than in the medium case. The low case is informed by Energy Trust's single savings objective per utility, which is calculated as 85 percent of the Board-approved savings goal.

To identify potential on a more granular level, PacifiCorp took energy efficiency potential totals by measure and allocated those savings to the CPA's 27 customer segments. PacifiCorp then took 2021 customer data and mapped annual usage to the customer segments using Standard Industrial Classification codes and dwelling codes.[38] Once customer usage was segmented, PacifiCorp could allocate measure savings to segments by feeder and substation for forecasting.

Demand response has previously been a very limited resource for PacificCorp in Oregon as the Company operated only an irrigation demand response pilot. A 2021 RFP resulted in the development of four new programs (nonresidential, residential, irrigation, and customer sited batteries). With no substantive historical data to draw on, the Plan relies on the implementation contracts being finalized for the four programs to inform forecasting. The Plan presents cumulative capacity of the four programs in 2024 (the first full year of operation) at approximately 70 MW.

The Plan includes low, medium, and high case scenarios. The medium case is informed by the 2021 RFP and current contract expectations for the four programs. The high case assumes programs operate within 130 percent of expected performance, while the

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[36] Pacific Power Oregon Distribution System Plan – Part 2, page 56.
[37] Pacific Power Oregon Distribution System Plan – Part 2, page 57.
[38] The Plan notes that mapping SIC and dwelling codes relies on the same methods used by Energy Trust for the CPA, leading to consistency in load treatment as it relates to energy efficiency in both the IRP and DSP. Pacific Power Oregon Distribution System Plan – Part 2, page 59.

low case assumes 70 percent of expected performance.[39] Capacity reductions are allocated across the system based on varying characteristics. For example, the proportion of residential sites on a substation or feeder is the basis for allocating residential program reductions; the proportion of August demand from irrigation customers on a feeder or substation is the basis for allocating the irrigation program reductions.

Implementation in Transitional Study Areas and Next Steps

As noted, the Company implements these new forecasting practices at substations in the Pendleton and Klamath Falls areas. The results of the new forecasting practices are a decrease in load of 0.83 percent in the average load forecast for the Klamath Falls substation, and a 0.5 percent decrease per year in the annual peak load forecast for the Pendleton substation, indicating that private generation growth outpaces EV growth.[40]

The Company then combined the high/medium/low forecasts for both EV and private generation adoption rates to learn about the best- and worst-case scenarios in both of the areas. The results indicate that the DSP method for peak load forecasting for each of these methods closely matches the traditional peak load forecasting method.[41] The analyses of the two areas are an informative, well-presented demonstration of overall DSP peak load forecasting process.

While Staff finds the Company's methods to forecast load, EV, and DER growth meet the Guideline requirements, Staff is interested to see how the new analyses will be implemented in day-to-day planning across the Company's full Oregon service territory. The Company has indicated that conducting analysis of the lessons learned from the Transitional Study areas, further development of the new practices, and steps required for implementation into day-to-day planning are parts of its near-term action plan.[42] OSSIA expressed concern that legacy-based forecasting will result in upgrade planning that only strengthens inequitable access and level of services between communities with traditionally higher levels of DER adoption due to income levels.

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[39] The high case reflects expectation in PacifiCorp's demand response tariff, Schedule 106, that any expenditures greater than 130 percent of projection would require Commission and Staff notice and authorization. Pacific Power Oregon Distribution System Plan – Part 2, page 62.
[40] Pacific Power Oregon Distribution System Plan – Part 2, page 64.
[41] Pacific Power Oregon Distribution System Plan – Part 2, pages 68-70.
[42] Pacific Power Oregon Distribution System Plan – Part 2, page 124.

3. Grid Needs and Solutions Identification

Grid needs and solutions identification are important because these processes drive the investment of millions of dollars annually and so play a major part in achieving optimization. A clear articulation of a system need, and possible solutions to that need, are fundamental to providing increased insight. Pacific Power's discussion of grid needs and solution identification presents this material in a clear and accessible manner, improving understanding and insight of this critical work. Staff finds that the grid needs and solutions identification discussion presented in PacifiCorp's Plan meets the Guideline requirements.[43,44] Staff's review of Pacific Power's solutions helped illuminate a need to clarify in the future the extent to which filings should include project specific information and how proposed projects should be evaluated to meet the Guideline requirements.

Grid Needs

Chapter two of PAC's Plan includes a clear description of the current approach to identifying grid needs. Chapter four describes a summary of grid needs, as well as new processes developed to evolve needs evaluation in line with the DSP Guidelines. The new processes involve examining the grid with greater precision – determining for example the magnitude, frequency, duration, time of day/year, and customer makeup of the grid need – and engaging community in sharing and reviewing the grid needs. The new processes were implemented in the Transitional Study areas. Identifying grid needs builds off the forecasting work in a planning study. With forecasting complete the field engineer confirms the power flow model for the area is properly configured, and then runs the modeling software (CYME) to identify any grid needs. This begins an iterative process in which the engineer applies a "solution" in the software if there are any needs, reruns the analysis to confirm the solution addresses the need, and then repeats these steps as needed for each year in the study horizon. This process also helps prioritize, at a preliminary level, any identified grid needs.

Pacific Power developed its summary of grid needs by reviewing the latest planning studies (approximately 90) for all study areas in Oregon. Key findings from this exercise included that nearly 80 percent of circuits had no grid needs; 117 grid needs were identified on the remaining circuits. Overcapacity was the most common need. Further, 86 percent of the grid needs identified by this process were estimated to cost less than $200,000 each to correct.[45]

[43] See Guidelines 5.2a, 5.2b, 5.2c, 5.2d.
[44] See Guidelines 5.3a, 5.3b, and 5.3c.
[45] Pacific Power Oregon Distribution System Plan – Part 2, page 76.

Following the development of the summary of grid needs, PacifiCorp then applied new forecasting processes in the Transitional Study areas. In Pendleton, the high, medium, and low adoption rates for EV and private generation showed minor differences from baseline load growth on the three- to five-year horizon. Most circuits showed reduced load growth due to private generation offsetting EV adoption. The Company also reviewed a recent substation addition, applying the new forecasting processes to this completed project in a back-casting exercise. PAC found that the substation addition was sufficient to prevent grid impacts even under new forecasting processes.[46] In Klamath Falls the Company first verified the grid need identified in 2021. Next, PAC used the new forecasting processes to determine the severity of the grid need using worst-case scenarios.[47] Evaluating NWS revealed that additional analysis was needed, which lead to the development of a worst-case peak load day over a 24-hour period model.[48]

Solutions Identification

Chapter two of PacifiCorp's Plan includes a clear explanation of the current approach to identifying solutions to grid needs. Chapter five presents new processes developed to evolve solution development in line with the DSP Guidelines. The new processes involve identifying potential NWS, evaluating and then prioritizing NWS, and engaging community in sharing and reviewing the possible solutions. The new processes were implemented in the Klamath Falls Transitional Study area. The Plan also includes prioritized lists of approved projects from 2022 in Appendix C. While these projects were not the result of new processes, they are illustrative of project scope and scale.

With assessment and prioritization of grid needs complete, the next step in a planning study is to develop possible solutions. This results in a proposed solution, which is accompanied by a description of the work, its purpose and necessity, projected conditions/benefits, risk assessment, alternatives considered, and the "Investment Reason." A completed planning study contains core elements including any proposed solutions, an executive summary, a map, and a load forecast. The completed study is then compiled in the Asset Management and Planning System (AMPS) and routed for approval by the field engineering manager. Once all planning studies are done for the year the field engineering manager compiles a list of proposed solutions and force-ranks them. This results in a priority ranked list of all solutions that are ready to move to implementation.

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[46] Pacific Power Oregon Distribution System Plan – Part 2, page 81.
[47] Pacific Power Oregon Distribution System Plan – Part 2, page 83.
[48] Pacific Power Oregon Distribution System Plan – Part 2, page 84.

The next step is to prioritize solutions against budget availability and seek approval for implementation. Projects are again force ranked against all other construction items sharing the same Investment Reason and are approved. Projects that cannot be completed in a given year are “carried over” and prioritized first during the following year. Between 70 – 95 percent of identified solutions for any given year are moved forward consistent with this process.[49]

Staff appreciates the thorough and accessible discussion of these complex topics. RNW and NWEC both commented on the Company’s detailed discussion of grid needs and solutions.

Review of Proposed Solutions

Pacific Power’s Plan does not include project-specific data used by the Company to develop the solutions for identified grid needs, for example those identified in the near-term action plan or in Appendix C. A key aspect of the DSP Guidelines was documenting how solutions were assessed to meet grid needs. This is fundamental to enabling optimization of distribution system operational efficiency and customer value. Guideline 5.3b also prescribes that a Plan provide a project specific set of data used to develop solutions for each identified grid need. Despite the Guideline’s lack of clarity about how to evaluate whether proposed solutions solve a respective grid need, Commission guidance was clear on documenting the link between grid needs and proposed solutions.[50]

Staff submitted project-specific Information Requests to PacifiCorp to better understand how proposed solutions address grid needs they are intended to resolve. The Information Requests prompted a useful dialogue that revealed clarity lacking from the Part Two Plan in several respects. First, at a practical level, because DSP is a forward-looking exercise, a utility may be prepared to propose a project in a DSP filing, but may not have completed all the engineering and analysis for the project. Further, the Company and other utilities expressed concerns surrounding confidentiality and duplicative effort in providing project specific information as part of a DSP proceeding, a general rate case, or both.

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[49] Pacific Power Oregon Distribution System Plan – Part 2, page 32.
[50] See Guideline 5.3b. For each identified Grid Need provide a summary and description of data used for distribution system investment decisions including: discussion of the proposed and various alternative solutions considered, a detailed accounting of the relative costs and benefits of the chosen and alternative solutions, feeder level details (such as customer types on the feeder; loading information), DER forecasts and EV adoption rates.

Ultimately PAC provided project specific information on select projects from the near-term action plan (specifically those included in Figure 53) as non-confidential and confidential responses to Staff's Information Requests.[51] Staff appreciates PacifiCorp's willingness to provide a set of useful information and engage in productive dialogue. For now, project specific data will be included in general rate cases for projects predicted by utilities to be in service prior to the effective date for rates resulting from the general rate case filing. The clarity of Guideline 5.3b, including whether filings should include project specific information, and when Staff or stakeholders are to evaluate whether proposed projects meet the Guideline requirements, needs to be improved in the future.

4. Non-Wires Solutions

NWS are, in simple terms, the use of programs or investments, often focusing on DERs, to address grid needs. NWS are important because they present the possibility to both address a grid need and to deliver additional benefits to customers. NWS are often pursued as a lower-cost alternative to traditional utility solutions, and so in this response may also play a part in optimization. As previously discussed, Pacific Power worked extensively with stakeholders and members of the Klamath Falls community to select two NWS pilot concepts to evaluate for the identified grid need. The Company thoroughly discusses these pilots, and the use of new processes used to develop the pilots, in chapter five. Staff finds that the NWS discussion meets the requirements of the Guidelines.

The identified grid need in Klamath Falls relates to an overloading on the conductor. The overloading exceeded the conductor limit of 5.865 MVA by as much as 750 kW and 3.8 MWh during peak events. The exceeded load is estimated to occur 20 – 50 hours a year between June and August from 2 p.m. – 10 p.m. PacifiCorp determined that the only traditional solution would be phase balancing and a reconductor of the 3,250 feet of existing conductor. Using historical averages from actual costs of similar projects the preliminary cost was estimated to be $220,740. Should the project be approved a detailed cost estimate would be developed.[52]

To address this grid need using a NWS, two concepts were explored. Concept No. 1 was a combination of proposals from the Farmers Conservation Alliance and OSSIA. It consisted of solar with smart inverters and battery storage at residential and commercial or irrigation customer sites downstream of the identified grid need. This NWS used solar to reduce the peak load during the day and batteries to reduce the remainder of the peak load below the existing conductor rating. PAC used the Company's Wattsmart

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[51] Figure 53 is included in the Near-Term Action Plan section of this memo. See also Pacific Power Oregon Distribution System Plan – Part 2, page 131.
[52] Pacific Power Oregon Distribution System Plan – Part 2, page 92.

Battery program in Utah to develop the framework and assumptions for implementation of such a pilot, and in doing so determined about 300 customers would need to participate by installing solar and storage.[53]

PAC utilized input from stakeholders and assumptions from the Utah program to estimate costs. The concept includes a variety of participant incentives including Energy Trust incentives, a state, and a federal tax rebate. The Plan presents a cost-benefit analysis with two scenarios, key assumptions, and includes utility, participant, and societal scores. The Plan also includes a concise summary of pros and cons. Concept No. 1 has numerous strengths and may be cost effective from the utility perspective. However, there are no scenarios which are cost effective from the participant or societal perspective, and total customer costs are estimated at $15 – $23 million.

Concept No. 2, developed by the Company and selected based on feedback from Klamath Falls stakeholders, consisted of energy efficiency incentives and targeted marketing efforts to influence customers downstream of the grid need to adopt efficiency measures. Adoption of these measures resulted in increased energy savings to reduce the peak load below the existing conductor rating. The concept built off experience from two similar, previous efforts with Energy Trust. Based on the grid need it was found that a total of 4,525 MWh would need to be saved by efficiency measures over a minimum of five years.

The concept looked at three implementation scenarios comparing business as usual, to additional efficiency incentives, to additional incentives for select measures. PacifiCorp used the CPA prepared for the 2021 IRP and worked with the Energy Trust to estimate costs and impacts of the concept. The Plan presents a cost-benefit analysis for the three implementation scenarios and includes utility and societal scores. The Plan also includes a concise summary of pros and cons. The concept is cost effective for all three implementation scenarios from both utility and societal perspectives, however it is uncertain whether the energy and demand reduction targets are feasible and attainable.

The Plan presents high-level lessons learned from both concepts, namely the amount of analysis, evaluation, and time required for NWS are substantial. It also includes next steps such as evolving analytical tools for NWS development, and deeper collaboration with Energy Trust to move beyond a concept to a potential pilot. Staff calls out the substantial work Pacific Power put into developing these two concepts. It includes deep and robust analysis on numerous levels, as well as well as substantive consideration of process development. Staff notes these analyses may be valuable and informative for

[53] The Plan notes PAC is in the process of exploring a derivative where the number of participants is limited to 30 customers, or 90 percent of the total irrigation customers located downstream of the grid need. Pacific Power Oregon Distribution System Plan – Part 2, page 114.

community based renewable energy projects. RNW highlighted PAC's approach to developing the pilots, specifically for soliciting proposals upfront and incorporating them into the evaluation rather than bringing proposals to the community. OSSIA felt like it was a subversion of the process to rely on stakeholders for proposals, and in the future wants PAC to present the Company's proposals for discussion in addition to those proposed by stakeholders. NWEC strongly encourages PAC to include an in-depth community engagement process in an urban setting in the future.

5. Near-term Action Plan

The near-term action plan is important because it presents the utility's proposed investments in the next two to four years, as well as projected spending to implement those investments. A transparent presentation of planned projects and a clear forecast of spending associated with those projects is vitally important in the pursuit of achieving long-term optimization of distribution system operational efficiency and customer value. From this perspective, the action plan may be the most important individual component of the Part Two filings. Staff finds that the action plan presented in the Plan meets the Guideline requirements.[54] However, Staff's review of Pacific Power's action plan suggests the next action plan should provide a finer definition of its scope and financial impacts, including project-specific costs and descriptions. Additionally, Staff notes opportunities for future forecasting improvements below.

PAC's action plan is presented in chapter six and includes four parts. The action plan's first part includes investments in the Company's DSP abilities, and consists of six key items. Each item includes descriptions and specific activities and timelines. Examples of the key items include analytical projects and pilot evaluations, process improvements, DSP-specific outreach and engagement, and utility staffing and development. Staff appreciates the specificity and clear presentation of these items.

Key item number two is DSP Data Evaluation and Improvement. Staff notes the opportunity in this key item for Pacific Power to improve data on the resiliency value of service (VOS) measures and reliability VOS measures. Updated estimates of this sort are especially needed in light of the 2021 ice storm, and the need for future Public Safety Power Shutoffs. The U.S. DOE and the Edison Electric Institute are partnering with U.S. utilities and Lawrence Berkeley National Laboratory to update and upgrade the Interruption Cost Estimate (ICE) Calculator.[55] Staff believes there is an opportunity

[54] See Guidelines 5.4a, 5.4b, 5.4c, and 5.4d.
[55] The ICE Calculator is an electric reliability planning tool developed by Lawrence Berkeley National Laboratory (LBNL) and Nexant, Inc. This tool is designed for electric reliability planners at utilities, government organizations, and other entities interested in estimating interruption costs and/or the benefits

for *updated reliability and resiliency values across the state through coordinated participation of Oregon electric utilities in the DOE update effort.* In so doing, Oregon utilities would acquire better reliability and resiliency values for less cost than acting independently, while also providing data for the state, region, and country. Staff offers to facilitate a workshop for DOE and National Lab staff to present further on the ICE Calculator and benefits and costs of participating in the update effort.

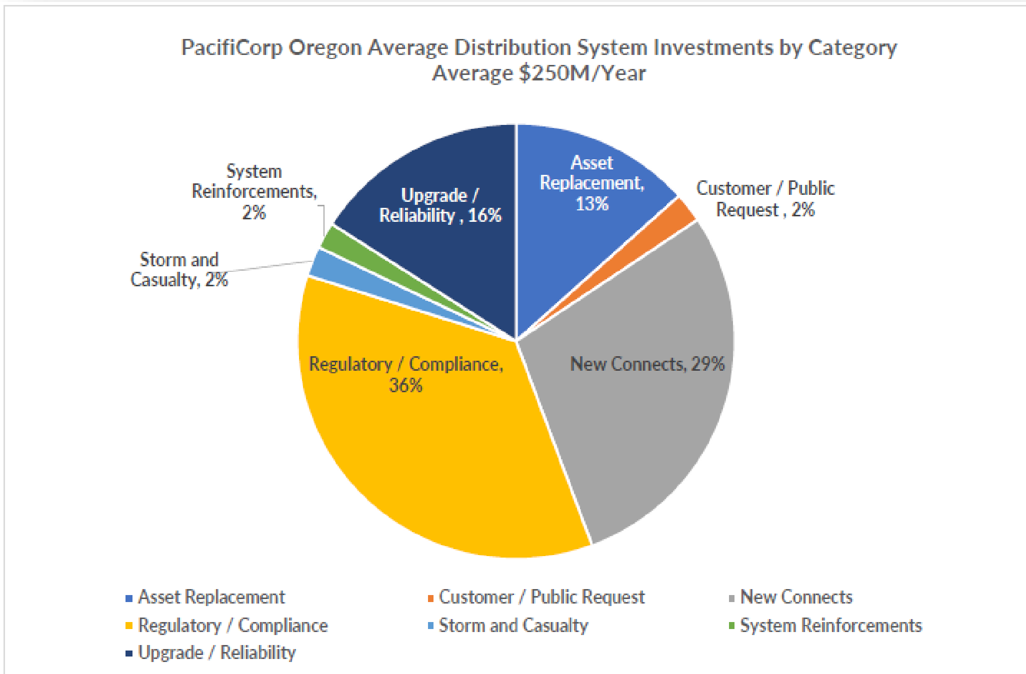
The second part of the action plan is a summary of average annual capital investments to address grid needs, and other investments in the distribution system. As seen in Figure 53, excerpted below, Pacific Power forecasts spending from 2023 to 2026 to be an average of $250 million annually, broken into seven categories.[56] This compares to an average annual investment of approximately $170 million on distribution system upgrades from 2016 to 2020.[57] Unfortunately, Figure 53 investment categories don't match the historical spending categories, which limits additional insight.

associated with reliability improvements. The ICE Calculator is funded by the Energy Resilience Division of the U.S. DOE's Office of Electricity under LBNL. See About page at https://icecalculator.com/home. Staff understands that Puget Sound Energy, Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric have agreed to participate in the update effort.

[56] Pacific Power Oregon Distribution System Plan – Part 2, page 131.

[57] See Pacific Power Oregon Distribution System Plan Report – Part 1, Table 9, page 41, https://edocs.puc.state.or.us/efdocs/HAA/um2198haa12716.pdf.

Figure 53: Distribution Investments by Category



Part two of the action plan also includes descriptions of seven large, in-progress projects that are included in Figure 53. However, additional details are not provided on any of the specific years or categories due to sensitive and confidential nature of the estimates.[58]

The substance of part two of the action plan provides greater insight and transparency than in the past. However, uncertainty about how many projects are included in the forecast is a missed opportunity to improve insight. To be clear, Staff does not suggest PAC erred including or excluding projects in the action plan. The Guidelines do not provide direction on what projects are to be included in the action plan, and this lack of clarity about scope, including whether programmatic investments are to be included with discrete investments, needs to be improved in the future. Further, uncertainty about which projects are given additional description, and what the description is expected to include, reveals an opportunity for *improved clarity and specificity in future action-plans.*

Staff notes the absence of project specific financial information in the action plan. This concern is intertwined with the discussion of omitted project specific data in the

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[58] Pacific Power Oregon Distribution System Plan – Part 2, page 129.

Proposed Solutions section of this memo. In addition, the presentation of the investment forecast as one annual average is a missed opportunity to provide transparency about how the forecast may change over time. Despite this, Staff finds the action plan presented in the Plan meets the Guideline requirements.[59] Staff does not suggest Pacific Power erred in its presentation of projected spending. The Guidelines currently do not provide direction on what level of financial granularity is required in the action plan and should be improved in the future. Staff sees this as a missed opportunity and plans to address it in DSP guidance going forward so to impact the next plan.

Prior to filing the Part Two Plan, Pacific Power identified possible issues with estimating future investment forecasts, for example the negative impact providing estimated project costs may have on the results of competitive bidding outcomes. Staff submitted Information Requests in pursuit of improving insight into future spending, and the Company's responses prompted a useful discussion about Staff's concerns. Staff appreciates the dialogue with PacifiCorp on these topics, as well as the Company's responsiveness to the Information Requests. Staff notes the Plan has improved overall insight substantially, and though there are challenges to resolve, there are opportunities for *improving insight into projects and project costs in future action plans.*

The third part of the action plan includes a variety of DSP-related efforts, such as the Oregon Energy Storage Pilot, the Oregon Community Solar program, the Company's Blue Sky renewable energy credit program, and plans for pumped storage, amongst other things. Staff appreciates the Company's responsiveness to Guideline 5.4d, which calls for documentation of current innovations and pilots being conducted to improve, modernize, and/or enhance the grid beyond its current capabilities.

The fourth part of the action plan includes projected spending for the six items in part one of the action plan. Costs are presented as one-time or annual, depending on the nature of the item, and are presented as a range where uncertainty requires it. Table 14 presents the total estimated cost for the action plan (one-time and annual) to be $36.7 - $44.8 million. The Plan also includes a timeline for the progression of the six items from 2022 to 2026. Staff appreciates the Company's approach to part four of the action plan, but notes tightening the connection between part one and part four, in terms of both content and layout, is another example of an opportunity to improve clarity and specificity in future action-plans.

PacifiCorp also addresses cost recovery and makes three key points. First, for DSP capital investments and projects the Company intends to follow standard practices for review and inclusion in rates through traditional capital project ratemaking. Second, for incremental DSP O&M costs the Company intends to use a deferral account to capture

[59] See Guidelines 5.4a, 5.4b, 5.4c, and 5.4d.

incremental costs until such time as the deferred amounts are included in general rates via general rate case proceedings.[60] Third, all costs associated with DSP are anticipated to be assigned to the Company's Oregon service territory.

Recommended Next Steps in Distribution System Planning
Staff recognizes there is much to be learned in exploring many conceptual areas moving forward. As DSP has evolved, and with the passage of HB 2021, it appears DSP will fill a key gap in an integrated planning framework. In the past, the majority of distribution system planning was conducted when certain thresholds were exceeded, such as loading limits or ages and types of equipment. This resulted in those network elements being examined for options to eliminate the exceedance, but on a very limited set of conditions, such as heavy or light loading cases, or when a certain element might be out of service. This practice was often called "deterministic planning." In the future, more scenarios are anticipated, and Staff expects the impacts of policy, technology, and customer decisions to be profound. Staff sees DSP as the forum in which to vet these additional scenarios with network models, aligning assumptions made in other planning processes so that resource decisions, electrification expectations, and weather possibilities are all recognized when investment decisions are being made.

As clean energy planning requirements and greater incorporation of behind-the-meter uses are incorporated into DSPs, increased clarity on scenarios, resilience, and risks will be helpful to new planning processes in IRP/CEPs and even to wildfire mitigation plans. Identification of risks, and historic and expected performance, along with the various credible scenarios should be considered as part of the analytical framework as they are instrumental in estimating the expected benefits of a given investment. Staff believes future DSP filings can build on the work by PacifiCorp to provide even better levels of information and insights to empower those communities choosing to pursue community-based energy solutions or greater levels of resiliency in the face of climate change.

Staff recommends several next steps in DSP. First, after the Commission acts on Part Two filings, Staff plans to turn to the process of revising and improving the Guidelines in collaboration with stakeholders and utilities. Parties have begun to flag topics for inclusion in the process. Staff proposes launching the effort in Q2 2023 as utilities are required to file their second distribution system plans in the first quarter of 2025.[61] Staff will propose changes both to update Guidelines and address gaps resulting from policy

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[60] See Docket No. UM 2220, Application for Approval of Deferred Accounting for Operating Costs and Capital Investments Made to Implement PacifiCorp's Distribution System Plan, filed January 3, 2022, https://edocs.puc.state.or.us/efdocs/HAQ/um2220haq14016.pdf.
[61] See Guideline 1d: "Each utility must file a subsequent Plan within two years of the Commission order for Part 2."

and legislation to better match the Guidelines with growing utility capabilities and the evolution of the grid, customers and communities, and their needs.

More broadly the primary focus of DSP moving forward should be utility investment planning. The aim would be to improve transparency and consistency in evaluation of investments, to improve clarity around investments for grid improvements versus investments for regular operations, and to improve clarity around distribution planning and utility capital planning. Staff is exploring support from third party experts, such as U.S DOE National Laboratories, to assist in developing understanding and approaches to investment evaluation. Staff also notes the following important related activities that could be included in DSP or may be more appropriate to move to other dockets:

- Improving grid transparency for different uses, such as connecting solar generation or adding EV charging, provides greater insight into the distribution system and how it serves different communities. Staff will engage utilities and stakeholders to consider approaches to, and standards for, improving transparency-related investments – for example through hosting capacity analysis.
- A cost-benefit analysis framework for multiple DERs, similar to what currently exists for energy efficiency, allowing for more informed and optimized utility investment decision making. Staff will work with stakeholders to develop such a framework to capture and include data and information related to locational value, equity, risk, resiliency, and other customer and system benefits.
- Community engagement for utility investments and actions impacting local communities should continue to be addressed in future DSPs. As the UCBIAGs progress, their discussions will inform DSP analysis moving forward.

Staff recommends the Commission accept Pacific Power's plan. Commission acceptance of the Plan does not constitute a determination on the prudence of any individual actions discussed in the Plan. Staff understands that those individual actions, including project specific data, will be reviewed in a general rate case for projects predicted by utilities to be in service prior to the effective date. The Company will need to prove each project was prudent.

Conclusion

Pacific Power's Plan represents a major step forward in DSP. It improves insight into utility planning practices and forecasted outcomes. The Plan also represents progress in engaging communities and exploring NWS. PacifiCorp's plan provides value in supporting decarbonization, and other critical policy goals. Staff finds that PAC's Plan meets the criteria and requirements of the Guidelines and looks forward to the important next step of broad implementation of these new DSP processes.

PROPOSED COMMISSION MOTION:

Accept the Oregon Distribution System Plan – Part 2 filing by Pacific Power as meeting the criteria and requirements of the Distribution System Planning Guidelines established in Order No. 20-485.

RA1 - UM 2198

Appendix A

The following summarizes opportunities for continued learning and improvement in Pacific Power's DSP as noted in Staff's Memo.

Forecasting
(Load Growth)
Staff notes that the importance of accurate forecasting in DSP and the newness of DSP processes present an opportunity and need for *ongoing transparency in the functioning and accuracy of DSP and IRP interaction*.

Improved Insight for Investment planning
(Near-term Action Plan)
Staff believes there is an opportunity for *updated reliability and resiliency values across the state through coordinated participation of Oregon electric utilities in the DOE update effort.*

(Near-term Action Plan)
Staff notes uncertainty about which projects are given additional description, and what the description is expected to include, reveals an opportunity for *improved clarity and specificity in future action-plans.*

(Near-term Action Plan)
Staff notes the Plan has improved overall insight substantially, and though there are challenges to resolve, there are opportunities for *improving insight into projects and project costs in future action plans.*