

Oregon Citizens' Utility Board

610 SW Broadway, Suite 400
Portland, OR 97205

(503) 227-1984
www.oregoncub.org

August 30, 2019

Attn:
Caroline Moore
Chief Analyst
Oregon Public Utility Commission
Salem, OR, 97308

Re: UM 2005 – Distribution System Planning Staff Questionnaire to All Stakeholders

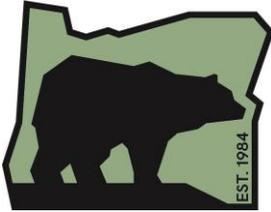
The Oregon Citizens' Utility Board (CUB) hereby submits its responses to the questionnaire circulated by the Oregon Public Utility Commission Staff (Staff) to help inform the Commission's investigation into Distribution System Planning (DSP). CUB appreciates the opportunity to share our perspective to help inform the scope of an investigation that has the opportunity to create great efficiencies in the distribution system, enhance opportunities for customer choice and participation in grid services, and lead to cost savings to end use customers. CUB's responses will address each question posed in the Staff questionnaire in turn.

1) Commission principles for distribution system planning:

a) What principles should the Commission adopt? Please explain and define.

CUB believes the Commission should apply the same core principles that govern the regulation of investor-owned utility regulation to distribution system planning. However, CUB recognizes that planning at the distribution level represents a paradigm shift that will require increased engagement and participation from customers to purchase and provide energy services. This increased level of engagement requires the Commission to expand upon its traditionally applied principles to include meeting customer demands for clean energy, empowering and engaging customers, and requiring high levels of transparency.

- i. **Reliability and Resiliency:** Provide required electricity service to customers while maintaining voltage stability and frequency and reduce the number of outages. Ability to recover from a major outage event and secured from cyber and physical threats.
- ii. **Affordability:** Provide electricity at a fair and affordable price to customers
- iii. **Safety:** The distribution system should not pose any physical risk to the general public and utility workers.
- iv. **Clean power:** Improve technology and Increase incentives and opportunities to integrate cleaner source of electricity in the grid.
- v. **Customer engagement:** Greater engagement and empowerment for customers, more information and technology information for better understanding and management of their energy bills.



Oregon Citizens' Utility Board

610 SW Broadway, Suite 400
Portland, OR 97205

(503) 227-1984
www.oregoncub.org

- vi. Transparency: Relevant information must be accessible to market participants (i.e., end use customers participating in grid services) in a timely manner. There should be public visibility into planning, market design, and operational performance without putting sensitive information at risk.

b) What level of specificity is most helpful to include in principles?

Principles should be high level and not overly specific. This will enable robust buildout of distribution system planning designs that are tailored to general principles without getting too bogged down into details.

2) Maximizing customer value:

a) How you would define “maximize customer value” in the context of distribution system planning?

Customer value is the net benefit that customers would receive from a reliable, resilient grid, better technology, cleaner power, minus costs incurred by customers in participating and/or supporting these necessary elements of a modernized grid. For instance, customers could benefit not only from less outages but also their ability to sell energy services to utilities through demand response, including locational values. These are distribution system benefits arising from demand response programs and rooftop solar. Customers should be adequately compensated for the distribution system benefits that they provide.

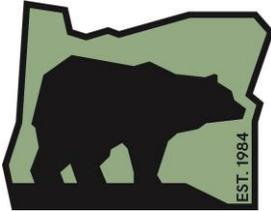
b) What considerations (from Staff whitepaper or other thoughts) are most important to focus upon when maximizing customer value in planning for the distribution system?

- i. Least-cost least-risk approach to managing and operating distribution system.
- ii. Customer receives affordable, good quality and reliable service
- iii. Opportunities for greater customer engagement and empowerment
- iv. Access to modern technology, better communication between utilities and customers
- v. Greater customer choice
- vi. Utilities purchasing energy from customers vs. market.

3) Evaluation of utility distribution system plans:

a) Which criteria or metrics should the Commission use in evaluating the proposed distribution plans (Plans)?

- i. Locational costs and benefits of distributed resources on the distribution system
- ii. Building system reliability and resiliency
- iii. Customer choice of technologies and engagement
- iv. Integration of clean and renewable resources



Oregon Citizens' Utility Board

610 SW Broadway, Suite 400
Portland, OR 97205

(503) 227-1984
www.oregoncub.org

- v. Energy savings in terms of DER avoided costs

b) How will your organization evaluate and/or otherwise use the proposed Plans?

CUB is fully aware that distribution system must change to evolve with a changing grid, and a resource mix that is increasingly intermittent and with a changing load that uses electricity to fuel transportation and buildings. Customers' role in and expectations from the electric grid are also transforming with the growth in DERs. The electric distribution system has to be modernized "to accommodate two way flows of energy and energy services throughout the IOU's network."¹ Currently, US utilities invest over \$20 billion per year replacing and modernizing their electricity distribution infrastructure."² This investment also must be modified to keep up with the evolving nature of the distribution system. This calls for a more detailed analysis of the needs, costs and benefits associated with DERs and distribution system infrastructure. CUB would evaluate how a utility's integrated distribution plan follows the Commission principles and in order to eventually result in maximizing customer value. CUB would also evaluate the energy and capacity services supplied to the distribution system. The evaluation approach would be similar to that used to evaluate IRPs.

b) How should distribution system plans be integrated with other planning activities, such as resource planning, interconnection, transmission, or others?

One way would be to maintain consistency in inputs. For example, load and DER forecasts, scenarios and modeling methods. But this is an area that has to be explored further. CUB looks forward to engaging with the Commission and stakeholders on this issue.

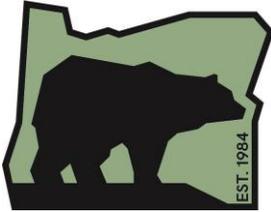
c) What are reasonable options for stakeholder participation in the planning process: direct engagement in the development of plans, the review of draft and final plans, other?

- i. Attending public meetings and workshops to help develop the scope of the DSP process and identify key issues
- ii. Reviewing and commenting on draft and final plans

As the details of distribution system planning—and specific planning metrics—are developed, different options for stakeholder engagement may be explored.

¹ [PNNL-27066](#).

² Utility Dive, Nov.14, 2018.



Oregon Citizens' Utility Board

610 SW Broadway, Suite 400
Portland, OR 97205

(503) 227-1984
www.oregoncub.org

d) How often should a utility distribution plan be submitted for Commission review?

Every two years, in order to both provide inputs to as well as derive inputs from IRPs.

4) Planning Scenarios:

a) How should the selection of scenarios used in distribution planning be determined?

The scenarios should be based on future economics of renewables (e.g. wholesale market values of wind and solar), technology futures, state policies regarding clean power and energy conservation. Economic conditions including trade policies and adoption scenarios for transportation and building electrification should also be considered. This would aid in the construction of base-case, medium and high scenarios of DER adoption.

b) What criteria should be used by utilities to identify relevant planning scenarios?

Same as in part (a).

5) Access to grid and planning data by customers and third parties:

a) Discuss categories of data needed by third parties to:

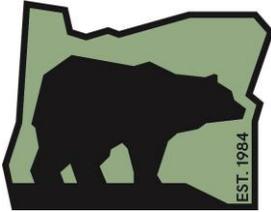
i. Participate in developing system plans.

- a. System data such as existing share of substations and feeders with monitoring and control capabilities and any planned addition, number of customers with and without smart meters, planned investment in smart meters, distribution substation and transmission capacity, total miles of overhead and underground distribution wire, total number of distribution premises, estimated distribution system annual loss percentage and other system related data for DER generation. Information on modeling software used.
- b. Financial data on historical and projected distribution system spending on for instance, system expansion or upgrades, grid modernization and pilot projects, metering and others and planned distribution capital projects.
- c. DER Deployment including load and DER forecast by location, scenario analysis, assessment of DER location value, hosting capacity analysis, assessment of non-wires alternatives and others.
- d. Information on how the utility is integrating distribution system planning with other electric grid planning processes, including integrated resource planning and transmission planning.

ii. Critically review proposed plans.

The same categories discussed above.

iii. Prepare commercial projects in response to plans.



Oregon Citizens' Utility Board

610 SW Broadway, Suite 400
Portland, OR 97205

(503) 227-1984
www.oregoncub.org

CUB has no comment on this issue at the time

b) Identify any categories of data that may be unsuitable for access, e.g. for reasons of security, trade secret, customer privacy, or burdensomeness.

Individual customer data should not be made available for security reasons. However, information that is aggregated and helpful to understand distribution constraints, etc., should be made available.

c) How should and in what format should the results of a hosting capacity analysis or native loading analysis be made available by utilities? Please indicate which formats are currently available and which are not currently available.

Hosting capacity maps, both static and interactive and tabular format. Maps are more commonly available.

d) How should the commission evaluate utility investments that enable more transparent interconnection data to be made available? What are the costs and benefits that the Commission should consider?

Use a net-benefit analysis.

6) Are there other issues or topics not covered here that are relevant to discuss in distribution system planning? If so, what are they and why are they relevant?

Identifying and analyzing capacity and energy services supplied to the distribution system are relevant for distribution system planning. These capacity and energy benefits enabled by distribution investments support DERs. This information is needed for the right allocation of costs.

Sudeshna Pal, Economist
Oregon Citizens' Utility Board
610 SW Broadway, Ste. 400
Portland, OR 97205
T | 503.227.1984 x 1