EXH. AEW-1T
DOCKETS UE-220066/UG-220067
2022 PSE GENERAL RATE CASE
WITNESS: AMY E. WHEELESS

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY,** **Respondent.**	**Docket UE-220066** **Docket UG-220067**

PREFILED RESPONSE TESTIMONY (NONCONFIDENTIAL) OF

AMY E. WHEELESS

ON BEHALF OF NW ENERGY COALITION, FRONT AND CENTERED, AND SIERRA CLUB

JULY 28, 2022

NW ENERGY COALITION, FRONT AND CENTERED, AND SIERRA CLUB

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INTRODUCTION

Q. Please state your name, title, and business address.

A. My name is Amy Wheeless. I am a Senior Policy Associate at the NW Energy Coalition ("NWEC" or "the Coalition"). My business address is 811 1st Ave., Suite 305, Seattle, WA 98104.

Q. Please describe your background and experience.

A. I have bachelor's degrees in Chemistry and Political Science from North Carolina State University and a Master's in Public Administration from the University of Washington. I have worked at consultancies on projects related to environmental policy, process facilitation, program evaluation, and utility industry research, as well as specifically on energy efficiency and clean energy program development. I have been employed by NWEC since 2017, working on energy policy and programs in Washington State and regionally. In my capacity as Senior Policy Associate with NWEC, I regularly work with utilities to provide feedback on their energy efficiency and demand response programs for customers; for example, I am NWEC's representative on all of the Washington investor-owned utilities conservation advisory groups. I also represent NWEC's positions on topics related to energy efficiency, demand response, energy codes, resource cost-effectiveness, decarbonization, and performance-based regulation in legislative and regulatory settings.

Q. Have you provided testimony before the Washington Utilities and Transportation Commission before?

A. Yes, I provided formal written testimony in Avista's 2019 general rate case (Docket Nos. UE-190334/UG-190335/UE-190222, consolidated) and Puget Sound Energy's 2019

general rate case (Docket Nos. UE-190529/UG-190530) before the Washington Utilities and Transportation Commission ("UTC" or "Commission"). In addition, I have provided verbal and written comments in various dockets related to utility energy efficiency targets and programming, integrated resource planning, natural gas line extension allowances, decarbonization of gas utilities, and impacts of the COVID-19 pandemic on utility customers. I am also participating on behalf of NWEC in the Commission's ongoing policy docket on performance-based regulation, Docket No. U-210590, as I will discuss in more detail later.

Q. On whose behalf are you appearing in this proceeding?

A. I am testifying as a witness for NWEC, which is jointly intervened in this proceeding with Sierra Club and Front and Centered (referred to herein as the "Joint Environmental Advocates"). For more background on NWEC and on our interests in this proceeding and on the other parties with which we have jointly intervened, please refer to the testimony of Lauren C. McCloy (LCM-1T).

Q. What is the scope of your testimony?

A. My testimony will focus on Puget Sound Energy's ("PSE" or "the Company") proposals for metrics and performance incentive mechanisms ("PIMs") as part of its proposed multiyear rate plan ("MYRP"). I will provide ideas for metrics the Company should track as a part of this rate case, and will specifically review the proposed PIMs related to demand response and transportation electrification. My testimony complements that of other witnesses, Ronald J. Binz and Lauren C. McCloy and refers to testimony from other witnesses for the Joint Environmental Advocates, Josh B. Keeling and Ed A. Burgess.

ANALYSIS

Performance-Based Regulation

Q. You mentioned that you have provided comments related to performance-based regulation to the UTC. Can you provide more detail on these comments?

A. Yes, on behalf of NWEC, I have submitted comments in Docket No. U-210590. This docket was initiated due to the passage of Senate Bill 5295 ("SB 5295"), which passed the Washington legislature in 2021 and directed the UTC to:

> *"[C]onduct a proceeding to develop a policy statement addressing alternatives to traditional cost of service rate making, including performance measures or goals, targets, performance incentives, and penalty mechanisms. As part of such a proceeding, the utilities and transportation commission must consider factors including, but not limited to, lowest reasonable cost planning, affordability, increases in energy burden, cost of service, customer satisfaction and engagement, service reliability, clean energy or renewable procurement, conservation acquisition, demand side management expansion, rate stability, timely execution of competitive procurement practices, attainment of state energy and emissions reduction policies, rapid integration of renewable energy resources, and fair compensation of utility employees."*
>
> *[2021 c 188].*

This performance-based regulation ("PBR") proceeding is still in its introductory phase. On behalf of NWEC, I have thus far provided three sets of comments regarding the workplan for the docket, the goals and outcomes of what utility regulation should seek to

achieve in Washington, how well current regulatory mechanisms facilitate achievement of these goals, and the principles for designing metrics to measure outcomes.

Q. Can you briefly summarize NWEC's past comments to the UTC related to PBR in Washington State?

A. Yes. As expressed in our comments, we think that any regulatory model should serve customers such that they have equitable access to energy services that are clean, affordable, reliable, and transparent. The regulated utilities should have the opportunity to earn a profit, if such services are provided with minimal environmental impacts and are serving the best interests of customers.

The current traditional cost of service regulatory ("COSR") model encourages and incentivizes utilities to develop and own large capital additions in the form of large generation resources and sometimes transmission and distribution system additions. The testimony of Ronald J. Binz describes in detail the COSR model, and its potential drawbacks. In some cases, these utility investment could be better served by purchased power (e.g., market purchases), distributed energy resources (e.g., rooftop solar), and/or non-wires alternatives (e.g., targeted demand response programs). However, under a COSR approach there is no incentive to make these types of investments, even if they are better for customers. The outcomes that traditional cost of service regulation facilitate are generally what is in the best interest of utilities and its shareholders or owners, not necessarily what is in the best interest of customers and the outcomes they experience.

There are a number of regulatory tools that are often used in PBR, namely: multiyear rate plans ("MYRPs"), decoupling mechanisms, performance metrics and scorecards, performance incentives and penalty mechanisms. These tools have been used

to varying degrees by the regulated energy utilities in Washington state. The testimony of Ronald J. Binz describes each of these tools, and why it is important to integrate them into a PBR proposal.

Q. Do the Joint Environmental Advocates have commentary on PSE's proposed MYRP and performance-based regulation proposal?

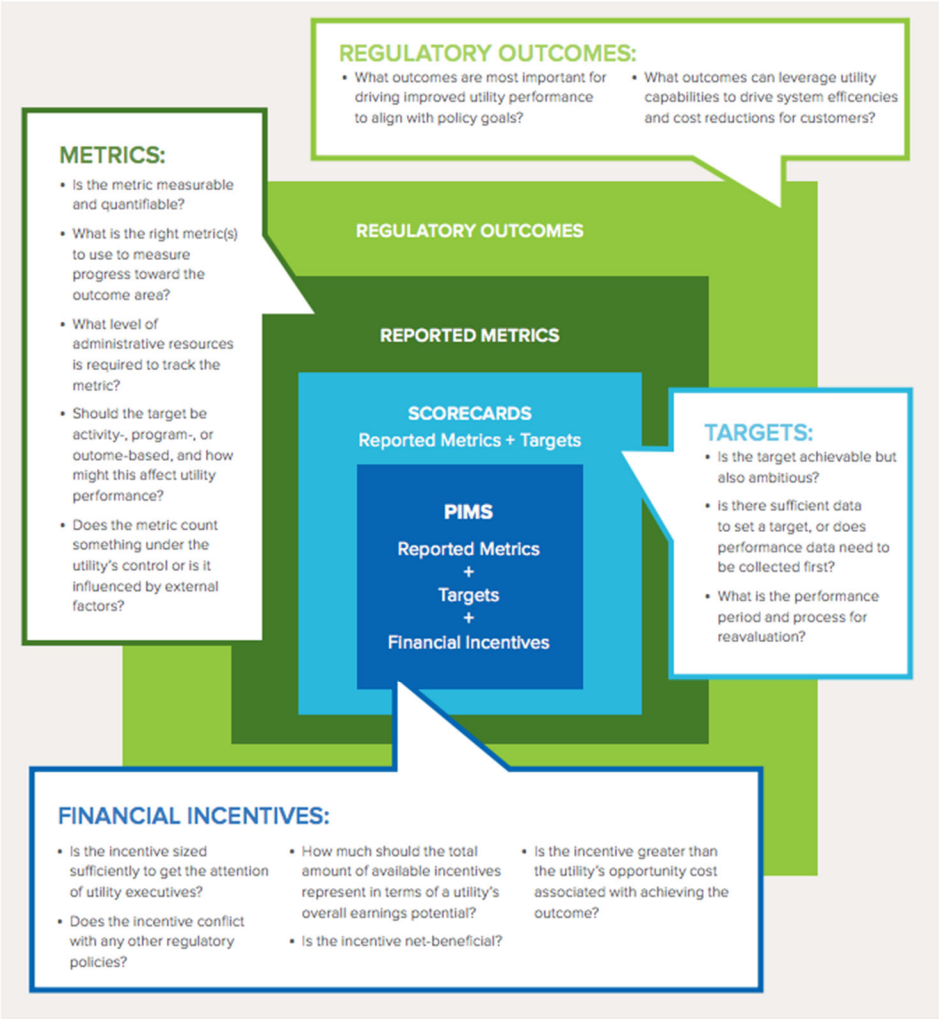
A. Yes, please refer to the testimony of Ronald J. Binz (RJB-1T) for further commentary and recommendations on PSE's proposal. Herein, I will speak specifically to the metrics and PIMs that have been proposed by the Company as a component of their MYRP, and our recommendations for how these proposals can be improved to better serve customer interests.

Q. In your view, what is the role of metrics, targets, and performance-incentive mechanisms in a PBR framework?

A. Regulators and stakeholders are seeking to achieve desired outcomes in exchange for the utility's opportunity to earn an authorized rate of return. Metrics, targets, and performance-incentive mechanisms ("PIMs") can help measure achievement toward desired outcomes and improvement in those outcomes.

- Metrics are specific, quantifiable measures to assess a utility's performance in achieving those desired outcomes.
- Putting a target on a metric (e.g., a "scorecard") can help enable comparison between utilities or within a utility over a period of time, and can provide a means of accountability and transparency, if a utility has not achieved a desired outcome.
- A PIM takes a metric and its target and links part of a utility's revenues to the desired outcome. A PIM can include a financial incentive (award and/or penalty).

As the figure from the Rocky Mountain Institute shows, the relationship between these three tools is hierarchical, with all supporting a desired regulatory outcome.[1]



Q. When designing metrics to measure performance toward regulatory outcomes, are there certain things that regulators, utilities, and stakeholders should have in mind?

[1] Cara Goldenberg, Dan Cross-Call, Sherri Billimoria, and Oliver Tully, PIMs for Progress: Using Performance Incentive Mechanisms to Accelerate Progress on Energy Policy Goals, Rocky Mountain Institute, 2020, https://rmi.org/insight/pims-for-progress/

A. Yes. Here are a few principles I recommend for designing metrics and any resulting performance targets and PIMs:

- Metrics should be understandable to customers and the general public.
- If a metric is incentivized, it should be controllable by the utility and not duplicative of other requirements.
- Metrics that track issues that are not directly controlled by the utility or that report on other requirements can be valuable for presenting a full picture of information to customers and the general public, but should be complemented by outcome-based metrics, as I will discuss.
- There is a need for some comparability amongst utilities – there should be some regulatory consistency.
- The reporting on metrics should have an indication of directionality – what does "improvement" look like? What direction should the metric be moving in? What does historic data show?
- Metrics should ideally be outcome-based in order to adequately understand progress toward a regulatory outcome. Input-based metrics can be useful in some cases, but they should complement outcome-based metrics.

Puget Sound Energy's Proposed Performance Metrics and PIMs

Q. The Company has proposed a number of performance metrics and two new PIMs to include as part of this general rate case. Have you reviewed these proposals?

A. Yes, I have reviewed the testimony of Mark N. Lowry and associated exhibits, as well as other relevant testimony, such as that of witness Jon A. Piliaris.

Q. Witness Mark N. Lowry mentions a "metrics collaborative" to "exchange ideas with stakeholders about metrics and PIMs"[2] regarding the Company's MYRP proposal. Did NWEC participate in this metrics collaborative?

A. Yes, staff from NWEC participated in each of the four meetings that the Company convened in the late summer and fall of 2021 (August 20, 2021; October 8, 2021; October 20, 2021; and November 15, 2021) to discuss metrics and PIMs.

Q. Witness Lowry says that "NWEC presented a proposal that included PIMs in several areas, such as demand response, equity, and transportation electrification, in the meeting on November 15 [2021]."[3] Did NWEC present a proposal for PIMs in these areas at the November 15, 2021 meeting?

A. At the request of the Company, NWEC developed some PIM ideas for conversation and discussion with the Company and with other stakeholders, and I and my colleague, NWEC Policy Associate Annabel Drayton, presented these slides and facilitated discussion during part of the meeting on November 15, 2021. I have attached this presentation as Exh. AEW-3. These ideas were in the areas of demand response, targeted demand-side management programs for named communities, energy burden reduction, and managing load from transportation electrification. Each PIM idea included some placeholders and questions for the Company and other stakeholders to prompt discussion. While these ideas were informed by past discussions with the metrics collaborative and NWEC's stance on the goals of performance-based regulation, I would not characterize

[2] MNL-1T, p. 20 at 8-9.

[3] MNL-1T, p. 20 at 13-15.

the November 15 presentation as a "proposal," since there were many unanswered questions and the purpose of the presentation was to get input from both the Company and other stakeholders.

Metrics

Q. Can you summarize the metrics that the Company is proposing as part of this general rate case proposal?

A. Yes, as detailed in MNL-4 and summarized in MNL-1T Tables 1 and 2, the Company is proposing changes and additions to its metrics. Currently, the Company provides an annual Service Quality Indicators Scorecard. These metrics would be an expansion of this scorecard.

- Service quality: The Company proposes some updates and additions to its service quality metrics, including the addition of metrics that track reliability amongst highly impacted communities and vulnerable populations (also sometimes referred to as "named communities").
- Demand-side management: The Company proposes to report a peak load management savings metric, a peak load savings metric attributable to residential customers, and its first-year gas and electric energy efficiency savings. Three metrics (all except the residential peak load management metric) are otherwise required to be reported in other areas, but would be included as part of reporting on this MYRP. The Company is also proposing to track a new metric related to participation (as number of customers) in energy efficiency programs from customers who are part of highly impacted communities and vulnerable populations.

- Electric vehicles: The Company proposes a number of new metrics related to electric vehicles, including the total number of light-duty plug-in electric vehicles in PSE's electric service area; number of residential and fleet chargers which are in a PSE load management program or time-of-use ("TOU") rate program; and number of public charging ports in highly impacted communities and vulnerable populations. These metrics would be new for PSE, though the first one can be accessed through data from the Washington State Department of Licensing.
- Greenhouse gas emissions: The Company proposes to report a metric related to its Scope 1 carbon dioxide equivalent emissions for PSE-owned electric generation. This metric is reported elsewhere.
- Advanced metering infrastructure ("AMI"): The Company proposes reporting metrics related to AMI bill read success for electric and gas customers; remote disconnection/reconnection success rate for customer-initiated requests; and first year reduction in energy consumption resulting from lowering the voltage on a circuit at the substation. The last metric is otherwise reported as part of the Company's conservation reporting; the others would be new metrics.
- Additional equity metrics: The Company proposes a few other metrics that they characterize as "equity metrics," including number of customers who received income-qualified bill assistance and share of those customers who are in highly impacted communities and vulnerable populations. These metrics would also be new, though the first metric is similar to past reporting.

Q. Do you think these metrics constitute a comprehensive proposal to track PSE's performance as part of a MYRP?

A. No. While the Company has proposed some metrics we think are worthwhile to track as part of this MYRP, there are some that should be amended, and others that should be added, in order to make this a comprehensive proposal and scorecard for this rate plan.

Q. Has NWEC proposed metrics for the Company to track in other proceedings?

A. In part. Many of these metric areas overlap with proposed Customer Benefit Indicators ("CBIs") as part of the Company's electric Clean Energy Implementation Plan ("CEIP") (see Exh. AEW-4). CBIs are a new requirement for utilities under the Clean Energy Transformation Act ("CETA"): utilities need to evaluate each specific action and program through the lens of CBIs to ensure that all customers are benefiting equitably from the transition to clean electricity.[4] While the CEIP is being adjudicated in a different docket (Docket No. UE-210795), we think that there is important overlap between the metrics discussion in this docket and the CBIs that the Company will track as part of the CEIP. NWEC, in collaboration with Front and Centered, The Energy Project, and the Public Counsel Unit of the Attorney General's Office (collectively, the "Joint Advocates") proposed a number of CBIs for the Company, in a number of different areas, including resilience, energy burden, energy benefits, and non-energy benefits.

Q. Has NWEC proposed metrics for other Washington regulated energy companies to track?

A. Yes, NWEC with the Joint Advocates proposed the same list of CBIs to Avista and to PacifiCorp as part of those companies' CEIPs.

[4] WAC 480-100-640(4).

In addition, NWEC is a party to Avista's Multiparty Settlement Stipulation in Avista's latest general rate case (Docket Nos. UE-220053 and UG-220054). That settlement stipulation includes a list of performance metrics that Avista would track (quarterly or annually, depending on the metric) and post publicly on its website, should the Commission approve the settlement. Avista would also maintain and make historical results available to stakeholders. The Commission has not yet reviewed and made a final determination regarding these dockets, but, as reflected in the Joint Testimony filed July 8, 2022, NWEC supports the list of metrics proposed, which includes the areas of affordable service, capital formation, equitable service, electric reliability, wildfire, customer experience, pollution and greenhouse gas emissions reductions, electric grid benefits, and natural gas system benefits.[5] I have provided this attachment to the stipulation as an exhibit to this testimony (Exh. AEW-5).

Q. Do you have recommendations for other metrics that PSE should track as part of this MYRP?

A. Yes, based on our other recommendations to PSE and work with other companies, I will provide some additional recommendations for metrics. In some cases, we are suggesting ways in which the Company should better align its CEIP and this rate case, as we agree with Witness Joshua J. Jacobs:

> *"PSE views the multiyear rate plan and the CEIP as two interrelated elements on the path to regulatory implementation of the clean energy transition. The CEIP is connected to the multiyear rate plan primarily through treatment of costs, and the*

[5] See UTC Docket No. UE-220053, et al. Revised Joint Testimony in Support of Multiparty Settlement Stipulation. Filed July 8, 2022. Page 41 at 1-3.

performance measures associated with the rate plan establish a means of transparency and accountability or how PSE is executing its CEIP commitments, especially in areas that are of primary importance to public policy goals."[6]

I will speak specifically to metrics regarding demand-side management, pollution and greenhouse gas emissions reduction, advanced metering infrastructure (AMI), and electric vehicles/transportation electrification. I think these metrics should be reported in some sort of scorecard format that is easily accessible to customers, includes historic data where available, and includes an indication of directionality (i.e., is the Company heading in the right direction?).

There are likely other areas, particularly regarding affordable service, equitable service, reliability, customer service and experience, and wildfire management that I would expect other intervening parties to speak to, and I look forward to reviewing their testimony.

To facilitate review, I have numbered my additional suggested metrics, and they should be considered to apply to both the electric and gas sides of the utility unless otherwise stated.

Q. What are your recommendations regarding demand-side management performance?

A. I support the proposed metrics the Company has put forward regarding demand-side management.

I also suggest that the Company track and report on the following additional

[6] JJJ-1T, p. 24 at 16-21.

metrics related to demand-side management and distributed energy resource programs:

1. Percentage of customers, by class, who participate in energy efficiency programs
2. Percentage of known low-income customers who participate in energy efficiency programs
3. Percentage of known low-income customers who participate in demand response, distributed energy resources, and renewable energy utility programs
4. Percentage of utility energy efficiency program spending that benefits highly impacted communities and vulnerable populations
5. Percentage of utility spending on demand response, distributed energy resources, and renewable energy utility programs that benefits highly impacted communities and vulnerable populations

Adding these metrics to the proposed metrics will help tell a more complete story of how energy efficiency, demand response, and other distributed energy resource programs are directly benefiting customers, with a focus on highly impacted communities and vulnerable populations. Metrics #2 and #3 will also facilitate reporting on PSE's proposed CBI metric in its filed CEIP, "Increase percentage of participation in energy efficiency, demand response and distributed resource programs or services by PSE customers within highly impacted communities and vulnerable populations."[7] This reporting is required in the Company's Clean Energy Compliance Report.[8]

[7] Puget Sound Energy, 2021 Clean Energy Implementation Plan, Chapter 3, Table 3-6 at p. 66 https://irp.cdn-website.com/dc0dca78/files/uploaded/2022_0201_Chapter3.pdf

[8] WAC 480-100-650.

In addition, I recommend that the Company add the following metrics related to demand response to its proposed metric regarding peak load savings capability.

6. Peak load reduction attributed to demand response programs

7. Annual capital expenditures avoided through non-wires or non-pipes alternatives

As I will expand on in my discussion on the Company's proposed PIMs, tracking the desired outcome (i.e., utilization, not just capacity) of demand response resources is important, and adding these metrics will help stakeholders understand the results and the value of the Company's demand response efforts.

Q. What recommendations regarding greenhouse gas emission performance metrics do you have?

A. The Company has proposed one metric regarding GHG emissions – carbon emissions from company-owned electric operations. To provide a more thorough picture related to greenhouse gas emissions resulting from PSE, including its natural gas utility, I recommend modifying this metric to the following:

8. Total GHG emissions from energy delivery systems

I also recommend that there be a target associated with this metric, given that the Company has its own carbon reduction goals and there is state law requiring emission reductions. The Company should set a 2030 target, commensurate with its stated goals related to its electric and natural gas businesses[9] and the requirements of the CCA. Further, this metric should be reported separately for the electric utility and the gas utility.

[9] Puget Sound Energy. "We aspire to be a beyond net zero carbon energy company by 2045." Accessed July 25, 2022. https://www.pse.com/en/pages/together

This modified metric is better for two reasons. First, it syncs up better to the proposed CBI metric in PSE's CEIP, which aims to reduce CO_2e emissions from both PSE-owned electric operations and PSE-contracted electric supply.[10] Second, this modified metric would also allow customers to better understand the impact of natural gas use; the Company's proposed metric would only focus on PSE-owned electricity emissions, but Washington law requires emission reductions for both aspects of the utility. Alternatively, the Company should report metrics for Company-owned electric generation, Company-procured electric generation, and natural gas supply.

I also recommend adding two metrics so that customers can better contextualize carbon emissions and the impact programming can have on them:

9. Carbon intensity per customer (CO_2e/customer), reported separately for gas and electric customers
10. Annual utility system CO_2e emissions avoided through non-pipe and non-wire alternative programs

Finally, as further described in the testimony of Witness Ed A. Burgess, the Company should be substantially reducing or stopping the number of new gas customers added to the system, while also increasing the number of new full electric customers added, if it plans to meet its statutory and corporate carbon targets. Another metric that can help characterize progress is:

11. Ratio of new gas customers to new fully electric customers

Q. Are these the only recommendations you have regarding metrics for pollution?

[10] Puget Sound Energy, 2021 Clean Energy Implementation Plan, Chapter 3, Table 3-6 at p. 66 https://irp.cdn-website.com/dc0dca78/files/uploaded/2022_0201_Chapter3.pdf

A. No. As noted in the Company's CEIP, public health—improved outdoor air quality and community health—are also important to the Company and stakeholders, and so a proposed metric therein is "Reduce regulated pollutant emissions (SO_2, NOx, PM2.5)" and "Reduce the occurrence of health factors like hospital admittance and work loss days."[11] As part of this rate case's scorecard, the Company should also track the following metrics:

12. Ambient criteria pollutant levels in service territory
13. Annual sulfur dioxide ("SO_2") emissions from utility-owned electric generation resources and combustion of gas delivered by the utility, by census tract
14. Annual nitrogen oxides ("NOx") emissions from utility-owned electric generation resources and combustion of gas delivered by the utility, by census tract
15. Annual fine particulate matter ("PM2.5") emissions from utility-owned electric generation resources and combustion of gas delivered by the utility, by census tract

These metrics should report measured values where they are available, and where measured values are not available, the metrics should report estimated or modeled values based on established tools and techniques (e.g., EPA emission factors). While these metrics are not completely within PSE's control, they do provide important context for customers about the level of pollution in the service area and track closely with the proposed CBIs in the PSE CEIP.

Q. What recommendations regarding Advanced Metering Infrastructure (AMI) performance metrics do you have?

[11] *Id*.

A. The Company has proposed metrics related to network performance and customer utilization, which are summarized in MNL-1T and expanded on in CAK-1Tr, pages 54-55.

I recommend PSE also include the following metrics related to interval read reliability and customer access to data:

16. Percentage of AMI reads not requiring estimation
17. Percentage of customers able to access data from their meter within 24 hours of interval read

Q. What recommendations regarding electric vehicle and transportation electrification performance metrics do you have?

A. The Company's proposed metrics regarding electric vehicles are:

A. Number of light-duty plugin electric vehicles in the Company's service territory
B. Number of EV Chargers Used in Managed Load or TOU Rate Programs (Single-Family Residential)
C. Number of EV Chargers Used in Managed Load or TOU Rate Programs (Fleet)
D. Number of publicly-available charging ports in highly impacted communities or vulnerable populations.

I have no concerns with the Company tracking Metrics B and C, as long as they are also tracked with metrics regarding percentage of load in these programs, as I suggest later.

Metric A can inform transportation electrification planning but I do not think it is a metric that should be prioritized for the purposes of performance-based regulation and for public scorecard reporting. Metric D, number of publicly-available charging ports in

highly impacted communities and vulnerable populations, seems to assume that publicly-available ports are the primary method for distributing benefits to these communities. I recommend that the Company remove Metrics A and D above from their scorecard, and I will expand on this point further.

Q. Why is the estimated number of light-duty plugin electric vehicles in the Company's service territory not an appropriate metric to track and report on as a part of this rate case proposal?

A. The estimated number of light-duty plug-in electric vehicles in the Company's service territory is not an appropriate metric for several reasons. First, this data is already tracked and used by the Company for their Transportation Electrification Plan[12] and is readily available, public data that is provided by the Department of Licensing and can be found on the open data portal for the State of Washington.[13] The Company should maximize its capacity and prioritize metrics that are not already tracked and publicly available. Second, while the number of electric vehicles in the Company's service territory is a useful data point, it tracks activity that cannot be attributed to the Company's actions. There are numerous factors influencing a customer's decision to purchase an electric vehicle and we do not know whether a given electric vehicle would or would not have been purchased but for the utility's investment. While tracking metrics such as this can be useful information to customers and stakeholders to provide the broader context, I do not think this particular metric should be prioritized for reporting on a scorecard for the

[12] UTC Docket No. 210191.

[13] Data.wa.gov. Electric Vehicle Population Map – by Zip Code. Accessed July 25, 2022. https://data.wa.gov/Demographics/Electric-Vehicle-Population-Map-by-ZIP-Code/bhmw-igtj

Company, at least not without other metrics that would be better indicate the Company's performance.

Q. Why is the number of publicly-available charging ports in highly impacted communities and vulnerable populations not an appropriate metric to track and report on as a part of this rate case proposal?

A. It seems as though the Company is seeking to assess benefits to highly impacted communities and vulnerable populations due to transportation electrification investments, whether funded by the Company or not. However, this metric seems to assume that public charging infrastructure is the primary method for distributing benefits to highly impacted communities and vulnerable populations.

Public charging infrastructure is not the only means to distribute benefits to these customers and can actually result in harm to these customers when not installed through a collaborative process that centers the needs of highly impacted communities and vulnerable populations. For example, locating a new publicly-available EV charger in a neighborhood could result in gentrification by attracting higher income households into an area; working directly with communities to identify needs and locations can mitigate this potential harm.

When combined with other metrics, the use of this proposed metric could be acceptable, but as a sole metric, it narrowly or incorrectly assesses benefits to highly impacted communities and vulnerable populations. Relying on this metric could result in increased investments that do not advance equity, and even exacerbate harms. For these reasons, the number of publicly-available charging ports in highly impacted communities

and vulnerable populations is not an appropriate metric for this rate case and this scorecard.

Q. Do you have a recommendation for a new metric related to transportation electrification?

A. Yes. In order to track the distribution of benefits and burdens to highly impacted communities and vulnerable populations due to the Company's investments in transportation electrification, I recommend the Company use these metrics:

18. Percentage of utility-owned and supported electric vehicle supply equipment ("EVSE") by use case located within and/or providing direct benefits and services to highly impacted communities and vulnerable populations (electric only)
19. Percentage of utility transportation electrification spending that benefits highly impacted communities and vulnerable populations (electric only)

While these metrics would not assess all methods to distribute transportation electrification benefits and burdens, it would help assess the extent to which PSE's transportation electrification investments are facilitating access to various types of charging infrastructure in highly impacted communities and vulnerable populations versus other parts of the Company's service territory. When using data from this metric to inform program design, the Company should first collaborate with highly impacted communities and vulnerable populations to assess whether more charging infrastructure is needed or whether alternative programmatic investments should be pursued to meet customer needs, such as electrification of transit or fleets.

Q. Are there other performance metrics related to transportation electrification and/or electric vehicles that you think would be appropriate for the Company to track as part of this rate case?

A. Yes, to better incentivize new electric vehicle load being managed load, I recommend the Company also track these metrics, which would complement the Company's proposed metrics related to number of EV chargers used in managed load or TOU rate programs:

20. Percentage of EV load shift to off-peak periods attributable to TE tariff offerings by use case (electric only)
21. Percentage of EV load subject to managed charging (electric only)
22. Percentage of EVSE in demand response programs (electric only)
23. Percentage of EVSE using TOU rates (electric only)

Q. Could you please summarize the metrics you would suggest removing from PSE's proposal, and the additional metrics you would propose adding?

A. Of course. I recommend the Company remove these two metrics from the scorecard proposal:

- Number of light-duty plugin electric vehicles in the Company's service territory
- Number of publicly-available charging ports in highly impacted communities and vulnerable populations.

I recommend the following metrics be included as part of this rate case; note that number 8 is a modification of the Company's proposed metric:

1. Percentage of customers, by class, who participate in energy efficiency programs
2. Percentage of known low-income customers who participate in energy efficiency programs

3. Percentage of known low-income customers who participate in demand response, distributed energy resources, and renewable energy utility programs
4. Percentage of utility energy efficiency program spending that benefits highly impacted communities and vulnerable populations
5. Percentage of utility spending on demand response, distributed energy resources, and renewable energy utility programs that benefits highly impacted communities and vulnerable populations
6. Peak load reduction attributed to demand response programs
7. Annual capital expenditures avoided through non-wires or non-pipes alternatives
8. Total GHG emissions from energy delivery systems, reported separately for gas and electric utilities (note: modification of proposed metric)
9. CO_2e/customer, reported separately for gas and electric customers
10. Annual utility system CO_2e emissions avoided through non-pipe and non-wire alternative programs
11. Ratio of new gas customers to new fully electric customers
12. Ambient criteria pollutant levels in service territory
13. Annual SO_2 emissions from utility-owned electric generation resources and combustion of gas delivered by the utility, by census tract
14. Annual NOx emissions from utility-owned electric generation resources and combustion of gas delivered by the utility, by census tract
15. Annual PM2.5 emissions from utility-owned electric generation resources and combustion of gas delivered by the utility, by census tract
16. Percentage of AMI reads not requiring estimation

17. Percentage of customers able to access data from their meter within 24 hours of interval read
18. Percentage of utility-owned and supported EVSE by use case located within and/or providing direct benefits and services to highly impacted communities and vulnerable populations
19. Percentage of utility transportation electrification spending that benefits highly impacted communities and vulnerable populations
20. Percentage of EV load shift to off-peak periods attributable to TE tariff offerings by use case
21. Percentage of EV load subject to managed charging
22. Percentage of EVSE in demand response programs
23. Percentage of EVSE using TOU rates

I am supportive of or unopposed to the other metrics that the Company has proposed in its modified scorecard.

Q. Have you seen an example of a utility reporting on dozens of metrics, as you suggest?

A. Yes. For example, Hawaiian Electric, the largest electricity provider in Hawaii, reports scorecards in a number of different areas that are important to regulators and

stakeholders.[14] Other examples are the electric utilities in Ontario, Canada, which report on a variety of metrics to the Ontario Energy Board.[15]

Performance-Incentive Mechanisms (PIMs)

Q. What are the proposed PIMs that the Company has developed for this rate case proposal?

A. As discussed in the testimony of Witness Lowry, the Company is proposing two PIMs, one regarding demand response and one regarding managed load from electric vehicles.

Q. Please describe the Company's proposal for a demand response PIM ("DR PIM").

A. As detailed in Exh. MNL-5, the Company proposes a reward-only PIM related to DR capacity. As with any PIM, there are three main components:

Metric: The metric the Company proposes to track is the expected MW reduction in the Company's need for planning reserves to meet the winter coincident peak demand, as attributable to eligible demand response initiatives, including direct load control, curtailable or interruptible load, and pricing programs[16]

Target: There are different targets for each year of the proposed rate plan:

- 2023: 5 MW of incremental demand reduction or incremental DR capacity
- 2024: 6 MW of the same
- 2025: 12 MW of the same

Financial incentive:

[14] Hawaiian Electric. Perforance Scorecards and Metrics. Accessed July 25, 2022. https://www.hawaiianelectric.com/about-us/performance-scorecards-and-metrics

[15] Ontario Energy Board. Electricity utility scorecards. Accessed July 25, 2022. https://www.oeb.ca/ontarios-energy-sector/performance-assessment/electricity-utility-scorecards

[16] "Effective DR capacity," as MNL-1T, p. 28 at 20 provides as a suggested shorthand.

This proposal is for a reward-only PIM. The Company has proposed that it could earn a payment equal to the percentage of the total projected costs attributable to DR resources which are added in that year. In each of the three target years, if the Company were to achieve:

- 90% to 110% of the target, the financial reward would be 15% of program costs (roughly twice the Company's weighted average cost of capital ("WACC")); and
- More than 110% of the target, the financial reward would be 25% of the program costs.

Q. Does the Company have an estimate for what the program costs could be, and thus the estimated financial reward?

A. As noted in MNL-5, preliminary estimates for the DR costs are provided in the Company's filed CEIP in Appendix F-2. In this appendix, the Company provides estimated costs (setup, operations and maintenance, equipment, marketing, incentives) for 15 different DR products or scenarios between 2022 and 2025. As we do not know which DR programs or products the Company plans to move forward with, it is difficult to estimate costs for the DR program, but the DR budget estimate the Company provides in the CEIP Appendix F-2 is:

- 2023: $1,017,981
- 2024: $1,252,897
- 2025: $3,142,219[17]

[17] Puget Sound Energy, 2021 Clean Energy Implementation Plan, Appendix F - Detailed Costs by Program Area, Sheet F2, Cells G223, H223, and I223. https://irp.cdn-website.com/dc0dca78/files/uploaded/2022_0201_Appendix%20F_Detailed%20Costs%20by%20Program%20Area_2.1.22.xlsx

Based on these cost estimates, the potential financial reward for the Company would be:

	2023	**2024**	**2025**
Estimated DR Costs (from Appendix F-2 of the CEIP)	$1,017,981	$1,252,897	$3,142,219
Potential Reward for being 90-110% of target (15% of costs)	$152,697	$187,934	$471,333
Potential Reward for being 110%+ of target (25% of costs)	$254,495	$313,224	$785,555

So, if the Company achieved 100% of its stated targets (5 MW in 2023, 6 MW in 2024, and 12 MW in 2025), the potential reward would be $811,964 over the three-year period. Again, these costs are estimates, and could change based on what DR programs the Company acquires or implements.

Q. Do you think that the metric this DR PIM is tracking is appropriate for an incentive?

A. No, I do not think it is an appropriate metric to track and incentivize. As defined in MNL-5, the metric would track "effective DR capacity" which is "based on the impact of DR on the generation capacity required to meet the Company's planning reserve requirement, not the DR resources that are actually called upon during any particular winter."[18] I have two concerns with this approach:

- Tracking the acquisition of demand response capacity rather than the utilization could incentivize the Company to procure demand response resources that are rarely utilized.

[18] MNL-5, p. 1.

- The metric weights all demand response resources equally, rather than differentially valuing resources based on their contribution to peak. An approach that was focused on DR utilization would give greater weight to the more valuable resources with a higher Effective Load Carrying Capability ("ELCC"). Given that PSE reviews ELCC when assessing resource cost-effectiveness, doing so as part of a PIM also seems reasonable. For more discussion on the importance of ELCC when evaluating DR resources, please see the testimony of Josh B. Keeling.

Q. Do you think that the targets for this DR PIM are appropriate?

A. No, I do not think that these are appropriate targets. As further detailed in the testimony of NWEC witness Josh B. Keeling, the demand response target developed for the CEIP is not reasonable, and should be much higher.

Q. Do you have concerns that this DR PIM is reward-only and does not include a penalty?

A. At this time, I am not concerned that this PIM is reward-only. PIMs for DR can help offset the potential capital bias when a utility compares investment in demand response versus a traditional peaking generator. PSE has been exploring demand response needs and programs since 2005,[19] but has not deployed any large-scale programs. While the Company has been slow to adopt DR, and I wish they were further along in developing DR as a resource, I also recognize that new program areas sometimes need additional incentive. In addition, if the Company does not meet its demand response target through

[19] Exh. AEW-6, PSE response to NWEC DR 062.

the CEIP, there are other avenues to pursue penalties through that process.

However, as the Company becomes more experienced with DR programs, a PIM that also includes a penalty for failing to achieve DR targets will likely make sense in the future.

Q. Do you have any concerns about the design of the financial reward for the DR PIM?

A. Yes, I am concerned. As designed, the Company would earn a percentage of the project demand response program costs based on achievement or partial achievement of its target. There are at least three issues with this design:

- The Company would earn at least 15%, or roughly twice its WACC. Witness Lowry argues that "[t]he percentage payment should be higher than the WACC because... the utility deserves a premium payment if it performs well in an important new policy area, i.e., it should be financially better off than if relied on supply-side resources for the same capacity."[20] However, as I noted earlier, the metric that this PIM is tracking is acquisition-focused, not utilization-focused: in our view, the utility should only be made better off to the extent that these resources are utilized, not merely acquired.
- Though there is a cap on achievement level ("No additional payment will be provided for achievement levels of 150% of the targets."[21]), there is no cap on the amount of reward the Company could achieve related to the total amount of

[20] MNL-1T, p. 30-31, at 19-3.

[21] MNL-5, p. 2.

program costs. This design feature could incent the Company to procure more expensive programs than necessary.

- The Company would earn a reward for only meeting 90% of its target, which then begs the question – what is the purpose of setting the target? The Company should only earn a reward if it exceeds its target, preferably with a dead band over the target.

Q. The Company has not yet implemented any demand response programs. Shouldn't the Company receive some incentive for getting at least part of the way there?

A. No, the Company should not, for the reasons I explained earlier. Further, the CEIP requires PSE to achieve discrete DR targets. The Company should not be rewarded for achieving targets that it is required to achieve under CETA.

Witness Lowry, however, disagrees with my view:

"NWEC's suggested approach [no incentive below target] prevents any reward for achievement levels below the goals in the CEIP. This threshold is too restrictive given the effort, risks, and financial disincentives inherent in the DR initiatives. An incentive applied only to achievement levels beyond the CEIP goals also appears to offer insufficient rewards, unless very high percentages of expenses or shared savings are specified."[22]

While I recognize that this is a new program area for the Company, despite exploring the use of DR to fill capacity needs for almost 15 years, DR is a cost-effective resource for meeting capacity needs. Customers should not have to pay the Company to acquire cost-

[22] Exh. AEW-7, PSE response to Public Counsel DR 156.

effective resources. I do think the Company should be incented for going further and faster, however, as I will speak to later.

Q. Absent any performance incentive mechanism, would PSE have any existing financial incentives to invest in demand response resources?

A. Maybe. Depending on the DR programs that the Company implements, there may be some capital investment wherein the Company would receive a return on these investments. However, given that the Company has not yet determined which programs to move forward with, it is difficult to know what other financial incentives would exist.[23]

Q. Are the monetary gains that PSE would accrue through this DR PIM appropriate in light of the benefits this program would provide to ratepayers?

A. No. Given that this PIM focuses on acquisition of DR, rather than the use of DR and the very low target for DR, there do not seem to be sufficient benefits to customers to outweigh the potential high reward the Company would receive for partially meeting, meeting, or exceeding its lackluster DR target.

Q. In your view, what should be the goal of a DR PIM?

A. Demand response programming should reduce peak demand to mitigate or eliminate the need for other peaking resources; often these peaking resources are thermal resources and they may not be the lowest reasonable cost for meeting that resource need. The goal of a demand response PIM should be to encourage the utilization of a demand response resource over other resources that may be more polluting and do not confer net benefits to customers. There may be savings from the use of these services relative to the cost of

[23] Exh. AEW-8, PSE response to NWEC DR 126.

any forgone investments to meeting peak demand, and these savings could benefit both the utility and customers.

Q. What would you recommend as a DR PIM for the Company?

A. I recommend a PIM that is similar in concept to what was discussed in our November 15, 2021 presentation.

- Metric: MW of demand reduction from entire portfolio, winter and summer
- Target: At least 160 MW
- Financial incentive:
  - Contingent on exceeding 105% of the target
  - Shared Savings Mechanism that would confer net benefits of program to customers (50/50 split), capped at the smaller of 15% of the program costs or 25% of net benefits
  - Adder for exemplary performance for residential demand reduction and/or early action on meeting target

Q. How is your recommendation different from what PSE has proposed?

A. This recommendation is different from the Company's proposal in several ways.

- First, the metric I suggest looks at both winter and summer capacity, rather than just winter. Though the Company has been a traditionally winter peaking utility, increased summer heat and increased installation of air conditioning in the service territory mean that summer capacity needs will likely become more important (see further in testimony of Josh B. Keeling).
- Second, this metric focuses on the use of these resources, rather than the acquisition. I think such a metric will confer more benefits to customers as the

Company would be incentivized to procure resources that will actually be called to meet resource needs.

- Third, I propose a much higher target, as further detailed in the testimony of Josh B. Keeling.
- Fourth, I suggest a financial incentive that is tied to actually exceeding the target, rather than only partially meeting it.
- Fifth, I suggest a financial incentive that would share the net benefits of the program with customers, rather than allowing the Company to earn the incentive based on DR program costs.
- Sixth, I suggest a cap on the total incentive that could be provided, rather than what seems to be an uncapped financial incentive proposed by the Company.
- Finally, I suggest considering some additional incentive ("adder") for the Company to receive if it achieves exemplary performance in the residential sector related to DR and/or if the Company achieves early success in meeting its DR target before the end of the CEIP period.

Q. Please describe the Company's proposal for an electric vehicle managed load PIM ("TE PIM").

A. As detailed in Exh. MNL-5, the Company proposes a reward-only PIM based on the number of new electric vehicle chargers in a given year and used under either managed load programs or TOU rates.

Metric: The proposed metric is the number of EV chargers used under managed load programs or TOU rates.

Target: The Company does not propose a target in initial testimony, but aims to update its proposal in this proceeding, and distinguish between single-family residences and fleet chargers.

Financial Incentive: The proposed financial incentive is for the Company to earn a payment for exceeding its target number of EV chargers for single-family residences and fleet customers that are served under managed load programs or a residential TOU rate. The payment would be equal to the number of installations in a given year in excess of the target times a predetermined payment rate per installation.

Q. Has the Company updated its target for this TE PIM since the initial testimony was filed?

A. As noted in a discovery response, the Company has proposed conditional fleet EVSE targets for the three years covered by this rate case, but has not yet proposed targets for single-family residential Level 2 EVSE.[24] The conditional fleet EVSE targets include Company-installed EVSE and non-Company-installed EVSE. The proposed conditional fleet EVSE targets are:

Fleet EVSE Type	2023	2024	2025	Total
Level 2 EVSE	25	38	37	100
DC Fast Charge EVSE	50	76	74	200

As noted in the discovery response, the Company classifies the fleet targets as conditional because they need to first secure funding through this rate case to support the proposed

[24] Exh. AEW-9, PSE response to NWEC DR 125.

conditional targets and there are external factors such as supply chain limitations and inflationary issues that the Company can neither predict nor control.

Q. How would the payment rate per installation be calculated?

A. The Company has not proposed sharing percentages or specific reward amounts. However, as noted in discovery, PSE has outlined a proposed methodology to calculate net benefits and determine sharing percentages and specific reward amounts.[25] PSE proposes to calculate net benefits, per charger, by estimating load shift and associated avoided costs resulting from chargers participating in a load management product. The Company proposes to rely on data from Up & Go Electric pilot products and services, which will conclude at the end of 2022, to estimate load shift and utilize avoided energy, capacity, and transmission and distribution costs from the most current Integrated Resource Plan. While the Company has provided this high-level proposal, specific data and detailed methodology has not been provided.

Q. Would the Company receive an award only if it installs or builds the charging infrastructure?

A. No. The proposed PIM would reward the Company for ***any*** charger installed by either PSE, or another non-Company party, if enrolled in a managed charging or TOU rate program.

Q. Does the Company have an estimate of the potential financial reward it could achieve under this PIM?

A. No. As detailed in a discovery response, the Company has not yet proposed a value for

[25] *Id*.

the avoided costs and benefits, so does not yet have an estimate of a potential financial reward.[26]

Q. PSE is able to earn an incentive rate of return on capital investments, as allowed under RCW 80.28.360. Is it appropriate for the Company to be further incentivized through a PIM related to these same investments?

A. No, I do not think so. The current COSR model already incentivizes capital expenditures and the additional incentive rate of return allowed under RCW 80.28.360 further incentivizes capital expenditures; for example, if PSE builds a charger, it could receive the approved ROE as well as the incentive rate of return on that investment. In this case, the proposed PIM from the Company would result in the Company receiving the approved ROE on the capital investment, the incentive rate of return for building a charger, and an award if that Company-owned charger is enrolled in a managed load program. I think the Company already has sufficient incentive to invest in chargers, and this proposed PIM potentially triply incents that capital investment. Additionally, testimony from Lauren C. McCloy (LCM-1T) expands on newer policy tools, other than RCW 80.28.360, that support utility investment in EVSE.

Q. Should the Company be incentivized through PIMs at all for TE-related investments?

A. Yes, potentially. While there is sufficient incentive for the Company to invest in capital expenditures for TE charging infrastructure, the Company is not necessarily incentivized to implement programs with higher operations and maintenance costs (e.g., direct

[26] Exh. AEW-10, PSE response to The Energy Project DR 082.

incentives and rebates to customers) or to manage load. If there is a TE PIM, it should focus on incentivizing utility actions and performance that result in benefits to customers.

Q. What concerns do you have about the Company's targets for the TE PIM?

A. My concerns are two-fold. First, it is important to note that the targets include non-Company or customer-owned installations. The decision to install customer-owned EVSE is out of the Company's control and cannot be attributed solely to the Company's actions. Second, the Company has provided only conditional targets for Fleet EVSE and no targets for single-family residential Level 2 EVSE. With no targets or conditional targets, it is impossible to evaluate these targets as a part of this rate case proposal.

Q. Do you think this proposed TE PIM is appropriate?

A. No, this is an inappropriate PIM for the Company, and I consider it actively harmful to customer interests for several reasons. First, PSE's proposed TE PIM is based on expected net benefits (avoided costs) and not actual net benefits. Basing the PIM on the number of new EV chargers installed in a given year under a managed load product or TOU rate does not actually track and reward for programs and rates that result in benefits to customers. Under the current proposal, while the chargers need to be enrolled in a managed load program or TOU rate, the Company does not have to call a demand response event or ensure that their TOU rate is successful in shifting load to off-peak periods.

Second, all single-family residential and fleet customer chargers participating in a load management product, including TOU rates, would be eligible. This includes

chargers owned by the Company, the customer, or a third party.[27] Not only is the decision to install customer- or third party-owned EVSE out of the Company's control but there is significant risk in utilizing the same customer- or third party-owned EVSE to establish targets. Targets and the underlying metrics should be based on actions within the utility's control, such as actual load shifted.

Third, there is no cap proposed with this PIM, which could result in runaway costs for customers. If, for example, third parties installed a number of chargers in PSE's service territory, the Company could be substantially rewarded for actions it did not take.

Finally, given that the targets are not complete and the potential financial reward is unknown, it is difficult to evaluate the validity of this proposal, and thus this proposal is incomplete for this filing.

Q. In your view, what should be the goal of a PIM regarding managed load for electric vehicles?

A. Utility earnings are primarily tied to capital investments and Washington investor-owned utilities are further incentivized to pursue capital investment in transportation electrification given the opportunity to earn an additional two percent incentive rate of return on these investments.[28] Utilities are simultaneously disincentivized from promoting demand response and managing load, including EV load. As stated in the justification for proposing reward-only PIM structures for DR, "...the Company is being encouraged to take steps that tend to reduce rate base and earnings."[29] The current

[27] MNL-4, p. 3.

[28] RCW 80.28.360.

[29] MNL-1T, p. 42 at 5-6.

regulatory model makes it difficult to achieve different and desired outcomes, specifically managed electric vehicle load that reduces costs and the need for new resources. To shift incentives and achieve desired outcomes, a PIM supporting managed load for electric vehicles should be designed to target the actions within the utility's control, with the goal to demonstrate actual progress towards achieving these desired outcomes.

Q. What recommendation would you make to the Company regarding a PIM for managed load from electric vehicles?

A. Similar to the DR PIM, I recommend the Company consider a PIM similar to what was discussed in our November 15, 2021 presentation.

- Metric: Percent of load shifted to off-peak periods attributable to TE tariff offerings (all use cases)
- Target: 50% peak load reduction of load attributable to TE tariff offerings (all use cases)
- Financial Incentive:
  - Shared Savings Mechanism
  - 25% share of the net present value of avoided costs, with a potential cap
  - Avoided costs: marginal demand related costs

This proposed PIM would shift focus away from rewarding the utility for charger installation, potentially by third parties, and instead would re-focus the incentive on factors within PSE's control, specifically reducing charging during peak electric-demand periods.

Q. How is your recommendation different from what PSE has proposed?

A. There are two main differences between what PSE has proposed and what I recommend.

- First, the Company is proposing a metric based on the number of new EV chargers installed in a given year and used to provide service under either a managed load program or TOU rates, while I suggest a metric based on the percent of load actually shifted to off-peak periods attributable to TE tariff offerings. My recommendation is focused on the outcome, rather than the output, which I think is more in line with the goal that we are seeking to achieve with such a PIM, which is to show actual results in managing load from transportation electrification.
- Second, I recommend that the financial incentive be based on *actual* net benefits associated with load shifted to off-peak periods, rather than the *expected* net benefits.

Q. For both PIMs the Company has proposed, what is your recommendation for this rate case proceeding?

A. I recommend that the Commission adopt the PIMs I have proposed in my testimony to ensure that any incentives promoted through these PIMs actually benefit customers. In the alternative, I recommend that the Commission reject the PIMs proposed by PSE, because they provide excess financial benefit to the Company, without incentivizing action that would benefit ratepayers. Further, I recommend that the Commission update metrics used to track PSE's performance, as described earlier in my testimony. Adopting the metrics I propose would better integrate "environmental health and greenhouse gas

emissions reductions, health and safety concerns, economic development, and equity" into the proposed rate case.[30]

CONCLUSION

Q. Please summarize your recommendations.

A. I recommend that the Company add a number of new metrics to its reporting for this rate case, specifically in the areas of demand-side management, pollution and greenhouse gas emissions, advanced metering infrastructure, and electric vehicles/transportation electrification. I also recommend that the Commission remove two of PSE's metrics from the proposed scorecard. Finally, I recommend that the Company's proposed PIMs related to demand response and managed load for electric vehicles be significantly altered, or in the alternate, that the Commission should reject these proposed PIMs.

Q. Does this conclude your testimony?

A. Yes, it does.

[30] RCW 80.28.425(1).