Question, Comments and Specific Requests Resulting from the PAG Sessions on 10/5/17, and 10/20/17

We question the suitability of EPE's process to "…evaluate all feasible supply and **demand-side resource options** on a consistent and comparable basis." It appears that EPE's resource template, and the Strategist software which will be used to identify the most cost-effective resource portfolio, are designed to evaluate supply side resources, and may not accommodate demand-side resources "on a consistent and comparable basis." Achieving consistent and comparable consideration of demand-side resources is a major concern of the undersigned PAG participants.

Question: **Will EPE model Energy Efficiency and other demand side resources in a way that allows them to compete fairly with supply side resources within the IRP portfolio, and that allows them to be evaluated in terms of their full potential to meet a significant amount of all needed capacity?**

This concern or challenge has a number of levels:

1. It was discouraging to us that on slide 48 of EPE's 10/5/17 PAG presentation Energy Efficiency was not included in the table of "Assumptions for Resource Options" even though considerable evidence has been provided to EPE that Energy Efficiency can be far more cost effective in terms of meeting capacity needs than any other resource.

In Public Advisory Group (PAG) meetings, participants have heavily referenced the Northwest Power and Conservation Council's "Seventh Northwest Power Plan" (https://www.nwcouncil.org/energy/powerplan/7/plan/) which shows that **Energy Efficiency will make up approximately 80% of its own resource portfolio for meeting new capacity needs** in the four state northwest region of the United States.

An American Council for an Energy Efficient Economy study of the cost of Energy Efficiency programs conducted in 20 states from 2009 to 2012 found that costs for Energy Efficiency ranged from 1.6 cents to 4.8 cents per kilowatt hour, which is on average 2 to 3 times less expensive than alternative new energy sources.
http://aceee.org/sites/default/files/publications/researchreports/u1402.pdf

2. Despite evidence that Energy Efficiency is a cost effective resource, it is nowhere to be found in the "Resource Capacity Assumptions" contained in the EPE PAG presentation of 10/5/17. On slide 50, Demand Response for initial modeling is allotted a grand total of one (!) megawatt of capacity. Energy Efficiency is not mentioned. All but one of the other resources listed in the

Resource Capacity Assumptions are supply side resources (there is a small allotment for storage). No other demand side resources are included.

This seems to violate the intent of PRC regulations requiring that the IRP "…**identify the most cost effective portfolio of resources to supply the energy needs of customers**." (17.7.3.7), and the requirement that the **"most cost effective resource portfolio means those supply-side resources and demand-side resources** that minimize the net present value of revenue requirements proposed by the utility to meet electric system demand during the planning period consistent with reliability and risk considerations". (17.7.3.7)

3. It seems clear that EPE has focused on Energy Efficiency compliance required by statute resulting in an unsatisfactory level of work to incorporate Energy Efficiency in its IRP planning. We understand that shareholders receive a larger return when capital costs are high. We also know this is in direct conflict with ratepayer interests, which is why the PRC, as the entity charged with protecting ratepayers in a regulated market, requires the IRP process to identify "the most cost effective portfolio of resources to supply the energy needs of **customers**." It is imperative to address this fundamental challenge now and in this process as well as to work cooperatively to integrate energy efficiency measures in the IRP process on a significant scale.

Note the primacy of providing cost effective energy to **customers** throughout the IRP process. Once the "**most cost effective portfolio of resources to supply the energy needs of customers**" has been established, it is up to the utility to figure out how to provide these most cost effective resources within a successful business model, even if that requires considerable corporate adaptation and reallocation of capital investment.

4. Energy Efficiency and other demand side resources also have a wide variety of advantages relative to supply side resources. Since demand side resources lower overall demand, they eliminate the need for new capital expenditures for generating facilities and (something that is often overlooked) for transmission and distribution infrastructure as well. Achieving decreased demand isn't dependent on fuel costs, or (for the most part) on whether the sun shines or the wind blows. It is safe and reliable, and, with proper planning and consultation, predictable. It is also easily scalable – as demand increases or old generating facilities are retired, demand for new capacity can be met largely by Energy Efficiency, as the Northwest Power and Conservation Council has been doing for the past twenty years, and plans to do for the next twenty as well.

5. The current IRP process outlined by PRC requirements is, **with responsible utility participation and careful oversight by regulators**, well-designed to maximize the role of supply side resources in meeting future capacity needs.

According to "Using Integrated Resource Planning to Encourage Investment in Cost-Effective Energy Efficiency Measures", a 2011 report issued by the State and Local Energy Efficiency Action Network (SEE Action) and facilitated by the U.S. Department of Energy and the U.S. Environmental Protection Agency:

> An IRP can be a powerful impetus for Energy Efficiency and other demand management alternatives to new supply, especially where the planning process is mandatory and overseen by a PUC, because the IRP may require utilities to consider demand side resources that benefit ratepayers even if those resources do not benefit utility shareholders. The availability of Energy Efficiency and other demand side resources at very low costs and in significant quantities was often ignored in traditional planning processes that focused exclusively on supply side resources. (page vi)

Among the best practices suggested in the report is:

> **"Energy efficiency and other demand side resources**: create levelized cost curves for demand side resources that are comparable to the levelized cost curves for supply side resources and allow the model to choose an optimum level of investment." (page viii)

The SEE Action report can be found at:
https://www4.eere.energy.gov/seeaction/sites/default/files/pdfs/ratepayer_efficiency_irpportfoliomanagement.pdf

Clearly the time is right to utilize the procedure already outlined in PRC requirements to produce an IRP that allows Energy Efficiency and other demand side resources to compete as comparable assets in IRP modeling.

6. The SEE Action report outlines three approaches for including demand side resources in an IRP, in increasing order of effectiveness:

> Planners can use at least three different approaches for including demand side resources in an IRP. The first two approaches incorporate these resources in forecasts of future demand for energy, whereas the third approach treats these resources as assets that can be deployed to meet forecasted demand if doing so is less costly than deploying supply side resources.
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> One way for planners to include demand side resources in the future load forecast is to build in the effects of an energy efficiency policy as a defined model input. For example, if a state has a requirement that utilities achieve annual energy savings equal to 1% of the prior year's load, planners can adjust their future demand forecast to ensure that the results of the policy are included. This approach is the simplest of the three approaches described in this paper and may be the best option in cases where planners have limited information about the costs of demand side resources. This approach, however, will not necessarily result in the least-cost resource plan, because it presupposes a certain level of demand side resources

> before evaluating the cost-effectiveness of all options for meeting demand. It also will not encourage investments in energy efficiency beyond the minimum level specified by the policy.
>
> A better option for including demand side resources in the future load forecast is to evaluate supply side options against multiple load forecasts. For example, planners can develop one forecast based on the minimum level of efficiency investments required by state policies, another forecast based on increased investments, and a third based on investing in all cost-effective efficiency measures. The costs of "minimum efficiency," "more efficiency," or "all cost-effective efficiency" are then added to the costs of supply side resources to evaluate plans. This approach is preferable to the first option because it allows planners to consider the overall system cost implications of different levels of energy efficiency investments; it presupposes, however, that credible information is available on the costs of achieving each level of load reduction.
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> Finally, planners can develop a forecast of future energy demand that assumes no demand side resource investments beyond the ongoing impacts of existing policies and programs. Instead, additional demand side investments are treated as resources that can "generate" negative energy and demand at specified costs. Thus, a kilowatt of demand or a kilowatt-hour of energy can be served through either demand side resources or supply side resources. This approach will not only result in a true least-cost plan and (in most cases) high levels of energy efficiency investment, it will also provide useful information about the true value of demand side resources as an alternative to supply side resources. This approach would normally be considered the best option, provided that cost curves are available for supply side and demand side resources alike.

Clearly the best way to meet the PRC requirement that the IRP produce a "least cost option" is the third option, and this is exactly what EPE should do in its modeling in the current process: treat Energy Efficiency measures as a <u>resource</u>, in order to deliver what the report identifies as "a true least-cost plan."

7. The IRP process is the appropriate venue for EPE to develop cost curves for demand side resources, and map out Energy Efficiency measures and other demand side resources for evaluation of the least cost portfolio. It should be noted that the Joint Stipulation related to Case No. 15-00241-UT, the protest of El Paso Electric's 2015 IRP, item 4.g, states:

> EPE agrees that the statutory Energy Efficiency goals are not considered ceilings on demand-side resources included in the EPE portfolio for the purposes of the IRP analysis. EPE shall model and assess cost-effectiveness of reasonably available energy efficiency and load management resources. EPE will provide specific parameters used in modeling load management resources evaluated.

Relatively small investments in Energy Efficiency resources that are effective during hours of peak demand would be especially valuable, since EPE has a

large amount of excess capacity for all but a handful of hours a year. And, as the PRC requirements for the IRP make clear, a least cost portfolio is meant to benefit the **customers** of the regulated utility.

8. We believe EPE, must balance its inherent business interests outlined above, with Energy Efficiency measures and other demand side resources.

There are literally hundreds of Energy Efficiency measures that can be implemented as resources – a large list of Conservation Supply Curve Files is available at https://www.nwcouncil.org/energy/powerplan/6/supply-curves with dozens of reports covering residential, commercial, industrial, agricultural and distribution system Energy Efficiency measures.

The SEE Action report provides considerable detail about the success achieved by U.S. utilities in avoiding millions of dollars in capital costs through including Energy Efficiency in the IRP process. There are a wide variety of consulting resources available for EPE to utilize in developing Energy Efficiency measures as a robust part of its portfolio – Navigant is one firm that has been recommended for this kind of assistance: https://www.navigant.com/capabilities/industries/energy?section=UtilityConsultingServices

The SEE Action report also makes clear that there are many ways for utilities to restructure their resource and investment portfolios in such a way that they can still receive an acceptable rate of return on investments in Energy Efficiency and other demand side resources that create a more cost effective portfolio for ratepayers.

9. A final challenge we have is whether EPE has the commitment and willingness to utilize soundly researched inputs for Energy Efficiency measures and other demand side resources in the current IRP process. As the SEE Action report makes clear:

> An IRP will not be truly integrated and won't encourage energy efficiency unless demand side resources receive fair consideration. Most investor-owned utilities have the opportunity to earn a return on their investment when they build new supply side resources, but not when they purchase or fund demand side resources. Unless the IRP process itself is one that requires the utility to treat these resources equally, the utility might have an inherent preference for the more profitable supply side resources. (p. 5)

In the current IRP process, EPE has made its own modeling preferences clear (e.g. through the very modest attention paid to demand side resources included in its Resource Capacity Assumptions). It has also required that PAG

participants do the ground work in developing alternatives to EPE's continuing the status quo.

This is inherently difficult for PAG, because a collection of unpaid volunteers – no matter how talented and committed – are unable to garner the resources to assist EPE and customers in an effective solution.

We believe EPE should do the necessary research to model viable resources identified by the PAG process, to include Energy Efficiency measures, Demand Response, and Power Purchase Agreements for the hours of peak demand, to name a few. With EPE staff providing technical analysis, PAG participants would perform the more appropriate role of suggesting resource options and reviewing the assumptions and parameters that underlie their modeling.

This requirement, and the constructive dialogue with EPE that would result, is much closer to what the PRC appears to want from the PAG process. **For this reason, we are hereby making an explicit request that the procedure we suggest in the above paragraph become part of the current IRP process.**

Since EPE may not have the relevant data to comparably model Energy Efficiency measures, we also specifically request that EPE provide, through contracting with an agreed upon consultant, levelized costs and other relevant parameters necessary to model Energy Efficiency measures as fully comparable IRP portfolio resources.

This increased cooperation between EPE staff and participants in the PAG process should include a review and adoption of best practices informed by those outlined in the SEE Action report. As that document makes clear:

> An IRP process that is based on the best practices described above is very likely to result in the selection of a portfolio that includes a substantial amount of energy efficiency, if not all cost-effective efficiency. There are two factors above all others that lead to that result. First, some amount of energy efficiency is virtually always achievable at a cost that is less expensive than new generation resources. When given a chance to compete on a fair basis with supply side resources, those energy efficiency measures will emerge as a preferred resource on cost alone. In fact, any IRP process that does not allow demand side resources to compete fairly is unlikely to identify a true "least-cost" portfolio. Second, the models that evaluate risk tend to find that demand side resources are much less risky than supply side options. (p. 9)

We want to make it clear that the IRP portfolio development process must include a fair and transparent modeling of Energy Efficiency measures and other viable resource options suggested by PAG participants. Any dispute of the

interpretation of these very basic requirements will be advanced by the undersigned within the IRP dispute process for PRC review and instruction.

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