

Puget Sound Energy's Request for Proposals (RFP) UE-180217 and UE-180272
Open Meeting before the Washington Utilities and Transportation Commission
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Comments by Doug Howell, Sierra Club

Demand Response RFP – UE 180272

For the Demand Response RFP, it does not include the full suite of benefits for potential bidders. Because of this, we fear the RFP may dissuade potential bidders, especially for more dispersed residential initiatives.

For example, if PSE has approximately 500,000 electric hot water heaters in its service territory, and the average electric hot water heater uses up to 4,000 watts (4 kilowatts) of power, then theoretically, that is up to 2,000 megawatts of power. However, typical hot water heaters usually run three hours a day or less, depending on the efficiency. Some of those hours are likely to occur during morning and evening peaks. And penetration rates for 500,000 households would be a challenge. But even modest advances for a residential approach to demand response – such as getting 10 percent of these hot water heaters off peak – could shave 200 megawatts of peak load, thereby negating the need for a new gas peaker plant.

Such demand response opportunities will likely never even be proposed unless and until PSE ensures the full suite of benefits will be recognized. These benefits include, but are not limited to:

- a) peak load reduction system-wide, potentially avoiding generation and transmission upgrades
- b) peak load reduction at specific locations, potentially avoiding distribution system upgrades
- c) load shifting from on-peak to off-peak, providing a storage function
- d) load shifting from on-peak to off-peak, providing a line loss reduction energy savings benefit (losses are much higher on-peak)
- e) ancillary services benefits at the generation level, such as frequency regulation and spinning reserve
- f) ancillary services benefits at the distribution level, such as voltage control.

Unless a single RFP seeks to acquire and compensate all of these, then some resources will not be competitive. Water heaters are in that category. The controls are not cost-effective if the only product compensated is the peak load system relief.

All Sources RFP – UE 180271

General comments

Coal plant closures have consistently occurred faster than stated by the coal plant owners. Six major announcements in the West underscore the trend across the country. Included here are comments made at the public hearing by the Western Clean Energy Campaign on PSE's 2017 Integrated Resource Plan. (Attachment #1) Even though Colstrip Units 1 and 2 have a legally-binding retirement date of December 2022, and given that co-owner Talen Energy continues to change its position about Colstrip's

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economic viability, PSE should be prepared for an earlier closure. This early closure is even more likely for Units 3 and 4, even with PSE's accelerated depreciated date of 2027.

Utilities are obligated to file an RFP if their IRP show a near-term need. This is not the current case but for PSE's supposed potential need for a "quick" build resource discussed below. Regardless of whether an RFP is mandated or not, in this age of climate change acceleration, we can no longer afford to think on short-term time horizons. We now should be building for long-term climate solutions. As such, how valuations occur in this RFP are critical. For PSE's weighted preferences such as location, why isn't there a category that is about fulfilling long-term needs. Yes there is a "public benefit" value, but this needs to be spelled out. For example, any resources built today will meet climate needs for the next 20 to 40 years.

This manifests itself in very real ways for this RFP. For example, wind and solar's lack of a fuel cost should be given higher preferential value because of this long-term benefit, helping avoid unpredictable and increasing fuel costs. Similarly, new gas plants have to be assessed their full lifecycle climate impacts over the life the plant, including upstream methane emissions.

Regarding PSE's point system for preferences, UTC staff recommends that PSE provide a detailed "evaluation criteria weighting." We strongly support this recommendation. While PSE may be concerned about some bidders potentially "gaming" the point system, it is far more important to know the basis upon which PSE is making major decisions for decades to come.

Finally, the UTC commissioners recommend using the social cost of carbon for integrated resource plans. Now we need to apply this same standard for acquisition. PSE testified in strong support of this approach in House Bill 2839 known as the AFOR bill. The \$40/ton of carbon applied to planning and acquisition. It would be wholly inconsistent to say you must plan for carbon impacts yet not hold PSE accountable for this climate damage when real decisions are being made.

Wind and Transmission

In PSE's 2017 formula rate filing with the Federal Energy Regulatory Commission (FERC), they reported that their portion of the Colstrip Transmission System (CTS) cost \$18 million annually. It was subsequently discovered that this \$18 million cost erroneously included property taxes that should have been attributed to the coal plants. In its 2018 formula rate filing PSE revised the CTS annual cost to \$8 million using the correct property taxes. This correction reduces CTS transmission costs for potential renewable energy developers from \$2.32 kilowatt/month to \$1.00 kilowatt/month. This can make a profound difference in the highly competitive energy markets. I grant that this may have been an honest mistake by PSE, but it underscores the need for carefully scrutiny of how PSE portrays their transmission costs.

Related to this, PSE insists that their CTS costs are incremental rather than sunk costs. Said another way, PSE asserts they can avoid some of these CTS costs when Units 1 and 2 retire. However, these costs will continue to be incurred whether power moves across the Colstrip 1 and 2 capacity or not. This has

important implications for this RFP. Here is a hypothetical. Say those CTS costs are equivalent to \$10/megawatt. Say PSE gets a bid for a new gas resource that comes at \$45/MW. Say a Montana wind project is \$50/MW including the CTS sunk costs. If PSE goes for the gas resource because it is supposedly cheaper, PSE still pays for that \$10/MW of sunk transmission costs bringing total costs to \$55/MW. However, if PSE bought the wind project, the total costs would be \$50/MW because they capture those sunk costs. If PSE can't fill this Colstrip transmission line, PSE ratepayers lose. And PSE is one of the most likely buyers of Montana wind, so prospects of other buyers using that Colstrip line are no better.

PSE needs to value diversity of renewable energy resources. This gets back to a long-term view versus a short-term view. Governor Inslee's Deep Decarbonization Pathway Project is our best blueprint for stopping climate pollution in Washington State. The governor's foundational "three pillars" are the same for Washington as they are for other states, the United States, the United Nations and countries across the world. The three pillars are: first, massive energy efficiency across all sectors. Second, remove all carbon from electricity. Third, electrify vehicles, buildings and appliances. Electric utilities are the only industry with energy growth due to massive electrification. In all three growth scenarios in the Governor's blueprint, on-shore wind is the primary new generation resource to meet this growth. What the study fails to find – which the National Renewable Energy Lab and the Lawrence Berkeley Lab have consistently found – is that in order to allow for the replacement of coal and gas in the electricity sector, you must have a diversity of resources for integration and ancillary services. This diversity of renewable energy resources needs to be valued in this RFP. If not, we will continue to undermine our long-term interests.

Lastly, PSE needs to insist upon clarity over their Colstrip Transmission System agreement with the other Colstrip owners. Governor Bullock of Montana and BPA Administrator Elliott Mainzer convened a transmission stakeholder process to address barriers to developing Montana renewable energy resources. One of the clear barriers that has surfaced is that the Colstrip transmission agreement appears to not allow non-coal power and not allow 3rd parties to use the line as part of the Montana Intertie Agreement. The owners now agree that their new interpretation of the existing contract allows non-coal. The 3rd party use may require an amendment to the contract. PSE says this may take six to eight months. It seems untenable that they would invite Montana renewable energy developers to bid into the RFP process but potential developers would not even know if their power could utilize PSE's share of the Colstrip transmission systems. This needs to get resolved as soon as possible in order to provide certainty to potential bidders. I include here two slides from the last Bullock/BPA stakeholder meeting that underscores this incongruity. (Attachment #2, slides 18 and 19)

Fracked Gas

Two thirds of all gas in the United States is from fracked gas and that number will continue to grow. Just as the devastating impacts from the Colstrip coal mine are becoming more obvious, the UTC now needs to be aware that the majority of gas in Washington comes from damaging fracked sources and the percentage will grow.

Synapse Energy Economics provided comments on behalf of Sierra Club for PSE's 2017 IRP. In those comments, Synapse raised concerns about PSE's circumventing the IRP process. (Attachment #3, Synapse report page 5-7) In PSE's 5-year action plan, Item 5 seeks to hedge potential risk of market reliance by "maintaining options to build capacity resources quickly." PSE did not specify which resource was intended and no review was conducted, let alone made available for public review. Furthermore, PSE acknowledged during an IRP stakeholder meeting that they did have a permit for a new gas plant. Subsequent inquiry to the siting agency revealed an air permit for their Fredonia location in Mount Vernon. This potential for a "quick" build of gas undermines the very intent and purpose of an IRP which is a full review of available resources and not some backdoor plan to sneak in a gas plant outside the IRP review process. No such options for "quick" resources should be allowed without sufficient review of all potential alternatives.

A crisis about fracked gas is now rapidly revealing itself across the country. A growing body of academic and government research is showing the extent of damage from upstream leaking methane emissions that escapes throughout the extraction to end-use combustion of fracked gas. This is why the Shoreline Hearings Board accepted upon summary judgment the rejection of the Port of Kalama's approval of the proposed methanol refinery in Kalama, Washington. The Port did not address upstream emissions of natural gas. Now the Puget Sound Clean Air Agency has required a Supplemental Environmental Impact Statement for PSE's proposed liquefied natural gas facility in Tacoma because the City of Tacoma failed to evaluate upstream methane emissions. [One important digression here: No air permit will be issued by the air agency until this SEIS is complete, yet PSE marches forward on construction.] The primary point here is this: Now the UTC needs to step up and require a similar accounting of upstream emissions for all proposed gas projects in this RFP.

We recommend a very specific standard that is now being validated by research across the country. The UTC should assume a minimum of a 3-percent leakage rate. This is a conservative estimate and will never fully account for past damage from past fugitive methane emissions. Further, the UTC should use the 20-year Global Warming Potential which makes methane 87 times more damaging than carbon dioxide. A 3-percent leakage rate multiplied by 87 times Global Warming Potential multiplied by \$42/ton of carbon shows that any new gas plant will have terribly damaging impacts on the climate and be a financial risk for ratepayers. Please see our latest fact sheet: Fracked Gas, The Next Big Climate Fight. (Attachment #4)

During the 2017 IRP process, PSE identified potential financial risks of future carbon prices on new gas plants. In fact, PSE testified about this concern in the last legislative session on H.B. 2839, the AFOR bill. In addition to carbon, longer-term gas prices also become a future risk. Most projections of gas prices remain low for the next 5 to 10 years with much greater uncertainty after that. Two very unique aspects about these two financial risks: they are both operational costs that generally fall to customers. Yes there are power cost adjustments for fuel, but when prices are so low, the most likely direction for long term costs is that they will rise for customers. Here is the end result. PSE builds a new gas plant that is very damaging for the climate. PSE builds new gas that we do not need since there are better, cheaper and more sustainable alternatives. PSE makes extraordinary profit on the capital expenditure (up to

9.8% profit) while customers take on the known risks of future carbon and fuel risks. That's not fair. Here is the solution. PSE foregoes the profit on new gas plants or PSE shareholders pay all of the increases in carbon and fuel costs. But they should not have it both ways: all profit and no risk. That is a rip-off to ratepayers.

One last point. There is one aspect where the Governor's Deep Decarbonization blueprint failed. It is where all these worldwide studies fail in their three pillars. The studies say the first task is deep energy efficiency across all sectors, then 100% clean electricity and then electrify everything. What these studies did not envision was companies making the problem worse. And when faced with any problem, the real first task is stopping digging the hole deeper. That is exactly what is at risk with new gas plants. When it has become imminently clear that we must move away from fossil fuel, it would be a real travesty to allow hundreds of millions of dollars into gas that we do not want or need. Stop digging the hole deeper. Therefore, at a minimum, this commission must ensure that PSE is fully accountable for the all of the impacts from gas on the environment and on ratepayers.