August 29, 2016

Mr. Steven King
Executive Director and Secretary
Washington Utilities and Transportation Commission
1300 S. Evergreen Park Drive SW
Olympia, WA 98504-7250

RE: Puget Sound Energy
Draft Request for Proposals for Technology and Implementation Services In Support of Puget Sound Energy's Direct Load Control Program P (UE-160808), and

Proposals for Technology and Implementation Services for a Commercial and Industrial Demand Response Program (UE-160809) Pursuant to
WAC 480-107-015

Mr. King:

Thanks for opportunity to comment on PSE Demand Response RFPs. We realize demand response is new to the region and the utility perspective and program results are being carefully watched. We have been working since 2011 to ensure DR works well with existing Energy Efficiency programs and receives higher value capacity when delivered on the distribution system. EQL Energy is part of the NPCC's Demand Response Advisory Committee (DRAC) and the Distribution System Collaborative (DiSCo). We have also been active proponents to deploy programs that fit the resource and utility infrastructure needs, and are accepted and sought out by customers.

WAC 480-107 perspective

From the perspective of WAC 480-107 we think the RFP is deficient in two key areas, 1) Resource dispatchability should be for day-ahead notification, and 1) the Avoided Cost estimate in RFP is a Mid-C energy forecast. PSE should aggregate all the Avoided Costs, e.g., peaking power plants, transmission and distribution costs. Below are some suggestions on how to improve RFP to address these deficiencies.

1. **PSE should be requesting day ahead notification.** PSE is looking for system peak capacity and is capable of calling 3 day winter cold snaps at least a day ahead. We think that a day-ahead requirement would allow for more customer participation and would lower the cost. If Day-ahead notification does not meet PSE resource requirements, then PSE should give an explanation. We even think that **energy efficiency programs** that target winter peak could play a role in meeting PSE's IRP resource needs, and

should be compensated for kW winter peak savings, above and beyond kWh energy savings.

2. **Avoided Cost (WAC 480-107-055)**
PSE should provide an avoided cost that represents **ALL** the avoided costs that demand response resources address for utility and its ratepayers. These include avoiding peaking power plants, transmission, and distribution costs. PSE has only provided a Mid-C energy market forecast. PSE has done the analysis in its IRP, and Transmission and distribution planning to provide a levelized cost ($/kW-yr) for the avoided cost for supply side resources and infrastructure that would be avoided when demand side resources are managed to avoid system peaks and respond to contingent events. Demand Response is mostly an avoided capacity investment. The avoided energy is a small component of its value. The Table

Table 1: Avoided Costs from PSE's IRP and Transmission planning process

Benefits (avoided capital costs)			
Transmission Deferral cost	155	$/kW-yr	$220MM capital cost for Energize Eastside
Generation Capacity Cost	184	$/kW-yr	PSE study E3 based on SCCT $190/kW -yr levelized cost. http://www.energizeeastsideeis.org/uploads/4/7/3/1/47314045/attachment_5_-_screening_study.pdf
Distirbution costs	31	$/kW-yr	Based on Northwest Power and Conservation value
Flexibility (Ancillary Services)	99	$/kW-yr	2015 Strategen report. http://www.energizeeastsideeis.org/uploads/4/7/3/1/47314045/eastside_system_energy_storage_alternatives_screening_study_march_2015.pdf
Oversupply	1.4	$/kW-yr	2015 Stratagen report
DER Benefit	**470.4**	**$/kW-yr**	
DER Cost	**$25 to $218**	**$/kW-yr**	High side cost is storage cost (2015 Strategen reportin the EE EIS)
Benefit/Cost ratio	**216%**		**most expensive**

Other Comments

While the RFPs provide plenty of detail, we think much of the detail is too prescriptive and limits vendors and service providers.

- **Sector separation limits participation.** The DLC RFP limits customer participation to residential customers and commercial customers whose maximum demand is estimated to be less than 150kW (page 6, DLC RFP), while the DC RFP is limited to customers with more than 150 kW of maximum demand (page 5, DC RFP).

  - It may be premature to decide what amount of savings will come from which customer category (70 MW of load curtailment from the DLC RFP and 51 MW from the DC RFP), particularly since the savings will be applied to system wide peak load, rather than to a customer subset.
  - It seems the kind of savings and when it is available would be more to the point than the customer source of the savings, since both RFPs have the same primary objective of achieving dispatchable load reduction capacity and the same secondary objectives for summer load curtailment/rapid load curtailment, shifting consumption from high priced to low priced periods and greater integration of demand response with grid monitoring.
  - Two RFPs may be more complicated than necessary, since the notable difference between the two seems to lie in the requirement for certain technologies for the DLC approach (page 15, 3.2 of both RFPs – see below).

  - If the process moves ahead with two RFPs, a small clarification may be necessary. PSE intends to allow commercial customer in Schedules 25 to participate in both programs. It is not explicitly clear in either RFP how many of the customers in Schedule 25 would be eligible for each respective program, as that Schedule includes customers with peak demands between 50 kW to 350kW.
    - If Tables 1 and 2 (page 7 of the DLC RFP) include all the customers in that Schedule, it may help bidders to know how many of those customers have demands less than 150 kW. The same clarification applies to Table 2 in the DC RFP on page 9.
    - If that adjustment has already been calculated into the numbers shown in those two tables, then that information should be noted in some way.

- **Capacity firmness.** PSE should consider MW amounts based on variable correlated with system peak, e.g., temperature. Some Demand Side Capacity will vary based on temperature, while others remain fixed.

- **Load reduction and system peaks are affected by temperature.** Since the objective is to reduce system peaks, would PSE consider proposals that provided capacity amounts adjusted in relation to temperature? In other words, very cold days contract provides higher load reduction than warmer days?

- **PSE has separated RFPs by customer size and technology.** A better way to divide RFPs is based on delivered product to PSE. For instance, Product 1 is guaranteed dispatchable, and Product 2 is Generic Capacity, and Product 3 is Load

Modifying. Pricing and comparing these products would be easier for PSE and WUTC to compare proposals. See Table 2 above.

- **Secondary Objectives #1, #2, and #3 should be considered and priced separately in RFP, or part of commission workshop on Demand Side Resources.** These resources are very different than those to meet Primary Objective and will confuse bidders and bid evaluations. They should not be included in RFP evaluation. Secondary Objective #4 is part of RFP marketing plan.

- **Technology and demand side resources flexibility.** EQL supports a wide-ranging RFP that does not limit the kinds of technology and demand side resources that may be submitted in an RFP response. An RFP provides an opportunity to learn what is available in the demand response sector. The DLC RFP requirement that bidders include electric furnaces, heat pumps for electric heating, and electric water heaters (page 20, C.2.) and relevant thermostats (page 21 D) in *every* response may inadvertently exclude some who may be able to provide substantial amounts of kW savings, but with other technologies.

    - PSE should discuss use of backup generation, storage, EV Charging, CHP, and other cost effective demand side resources that could meet requirements listed in DR RFPs.

- **Marketing and recruitment roles - Responsibility without control.** PSE is taking on a big part of marketing and recruitment, while putting performance risk on vendor. PSE should consider separating marketing and recruitment costs and share some of the risk of attracting customers. DR Aggregators with both BPA and PGE have experienced difficulty in customer recruitment. The PSE RFP looks like PGE's program, where utility continues to control customer marketing and recruitment. In PGE's case, DR aggregator has only secured 11MW out of 50MW potential.
    - PSE should provide customer utility data?

- **Customer Incentives.** PSE is planning to administer customer incentives. We think this may limit solutions that involve subsidized equipment or leasing programs. Vendors are taking all performance risk and should therefore have control over customer incentives and methods of contracting with customers.

- **Regional Value.** If the need for DR is more critical in some distribution areas of PSE's system than others, then that information should be added, which might help focus some bidder's efforts; some responses might prove effective in deferring costs related to distribution or service upgrades or expansions in stressed distribution areas. And efforts to reduce system constraints should coordinate with targeted energy efficiency measures. For example, BPA is experimenting with this approach in the South of Alston area in Oregon, where BPA recently $1 million transferred to energy efficiency programs to address locational constraints.

- From a review of PSE resource and infrastructure plans, it appears that there is more value to peak capacity reduction in the Eastside. PSE should be requesting more DR capacity and pay a premium on products or services in these areas. Overall, this would include not only demand response, but energy efficiency and other distributed energy resources. These RFPs should reflect PSE's willingness to pay more and achieve a higher MW target to reflect deferral of distribution or transmission related investments.

We support PSE's efforts to reduce seasonal system and regional peaks.

Sincerely,

Ken Nichols, Principal
EQL Energy