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Comments of EnerNOC, Inc. on Puget Sound Energy's Draft Request for Proposals for Technology and Implementation Services for a Commercial and Industrial Demand Response Program

(UE-160808 / UE 160809)

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EnerNOC, Inc. (EnerNOC) appreciates the opportunity to provide these comments on the draft Request for Proposals (RFP) for Technology and Implementation Services in support of Puget Sound Energy's (PSE) Commercial & Industrial Demand Response Program.

EnerNOC is the world's largest and leading provider of demand side resource solutions. EnerNOC operates in more demand response programs worldwide than any other provider. Our solutions create a win-win for customers and utilities and grid operators: we provide electricity customers with a means to extract value from their demand side flexibility through a valuable payment stream and we provide utilities and grid operators a highly reliable, cost-effective and proven demand-side resource. EnerNOC's energy intelligence software (EIS) enables customers to better address budgets, utility bill management, facility analysis and optimization, sustainability and reporting, project tracking, and demand management. EnerNOC's SaaS platform helps enterprises control energy costs, mitigate risk, and streamline compliance and sustainability reporting.

In our comments on PSE's Integrated Resource Plan,[1] we indicated that demand response (DR) resource requirements should be defined with more detail, including product types, response times, and availability requirements. PSE's RFP addresses the goals of the program; outlines the roles and responsibilities; defines the product types, response times and availability requirements; articulates how PSE intends to use the resource; and allows bidders the flexibility to address both the primary and secondary objectives outlined in the RFP. In addition, Section 2.4 provides information on PSE's customers. This level of transparency is very helpful and allows DR resource providers to shape RFP responses to better meet the needs of PSE.

While we think that the draft RFP is generally well-designed, we would like to use this opportunity to suggest ways in which the RFP could be substantially improved. Our comments are informed from on our years of experience designing and implementing more than 50 utility bilateral and grid operator DR programs for commercial and industrial customers around the globe. EnerNOC offers the following recommended improvements for the Commission's consideration.

[1] Joint Comments of Joint DR Providers, EnerNOC, Inc., and CPower Inc., to Dockets UE-141170, Puget Sound Energy 2015 Integrated Resource Plan, February 1, 2016.

Awarding The RFP To Multiple Vendors Would Be Highly Inefficient And Confusing To Customers.

PSE states that multiple bidders may be selected to meet the 51MW of load curtailment by winter 2021.[2] This raises two significant issues. The first is whether the size of PSE's territory will support a 51MW program. Assuming the answer to that question is yes, the second issue is whether a 51MW program that is divided up between multiple bidders is sufficiently scalable to make the investment in the infrastructure necessary to provide a cost-effective demand response program.

We lack sufficient information to know with certainty whether the addressable market of commercial and industrial customers with the demand side flexibility necessary to support the DR resource proposed in the RFP will support a 51MW program in the PSE territory. Based upon our experience in other contexts, we expect there could be an adequate pool of customers from whom to develop a reliable portfolio of DR. That said we would not expect the addressable market for customers to be so large that there would be substantial excess.

One of the most important attributes of a DR aggregator is the expertise to assemble a portfolio of different types of customers with differing capabilities in order to be able to reliably perform under a variety of both expected and unexpected dispatch conditions. In other words, working with the utility, DR aggregators actively recruit a diverse customer set in order to ensure reliable and cost effective performance of the DR resource portfolio.

Splitting a 51MW program amongst more than one vendor in a market unlikely to have resource potential substantially in excess of the program size is likely to lead to challenges for each vendor to build and maintain a reliable DR portfolio that would provide consistently good performance under various dispatch scenarios.

Moreover, multiple vendors in this RFP would likely lead to higher overall costs, and significant problems of coordination between the utility and vendor and between the multiple vendors and customers.

Turning first to the higher costs concern, each utility DR program requires a certain level of investment of human and technology resources by the selected vendor or vendors in order to cost effectively deliver upon commitments. There is a substantial fixed cost aspect of every utility DR program that does not vary with the size of the program. Among other fixed costs, there is a required minimum level of sales, marketing, program management, customer enablement and operations resources, as well as programming resources needed to integrate the utility's systems with the aggregator's systems to ensure efficient, reliable, and secure

[2] PSE RFP at page 1.

dispatch protocols and customer information management. If the RFP is awarded to multiple vendors, individual vendors will have to price the fixed costs into a smaller award into RFP bids, and that will likely lead to higher bid prices.

Addressing the second concern, undoubtedly multiple vendors would be seeking to enroll many of the same customers in order to properly shape each vendor's individual DR resource portfolio. While this happens all of the time and is not a problem in very large open markets such as RTO and ISO markets, multiple vendors competing in a smaller single utility market with limited market potential is a concern. This competition for customers within the utility's service territory raises transaction costs between the utility, the vendors, and customers at a minimum. But the bigger problem is that it will lead to inefficient negotiations: multiple bidders competing for the same customers will undoubtedly lead to negotiating customer incentive payments above the levels necessary to attract participation. While this could be viewed positively from the customer perspective, it raises overall program costs and risks to each vendor that each vendor must price into its RFP bid.

Apparently recognizing the challenges of splitting the program between multiple vendors, PSE asks bidders to describe how they propose to coordinate with other Providers to ensure that customers are not solicited by multiple vendors.[3] And in the section outlining PSE and Vendor responsibilities, PSE proposes to "recruit customers in coordination with the vendor. PSE's account managers will serve as a primary touchpoint to customers during all stages of customer recruitment."[4] EnerNOC strongly supports the use of account managers as a touchpoint to customers during recruitment. It is critical to the success of the program. However, these sections of the RFP emphasize our concern that it becomes very challenging for DR providers and for utility account managers to avoid soliciting the same customers. Utility account managers would want to remain impartial to vendors, but then how do they fairly administer customer outreach across multiple vendors?

It is our strong recommendation that PSE not break up this procurement into multiple vendors. Our experience is that small utility DR procurements result in higher program costs, and multiple vendors competing in a limited market introduces further risks that will negatively impact both costs and performance. The RFP will be a competitive process already. Vendors will be competing based on price and experience, among other things. We strongly encourage PSE not to also require vendors to compete for customers for the reasons stated above.

While it is important that the RFP be awarded to a single winner, it is important to clarify one important detail. This notion does not foreclose the possibility for multiple vendors to

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[3] PSE RFP at page 22

[4] PSE RFP at page 10

coordinate amongst themselves to submit a single combined RFP offer, or for a single winning vendor to be allowed to work with other DR resource vendors as subcontractors or channel partners to attract customers and otherwise meet the needs of the DR program cost effectively. In this cooperative context, issues such as scalability and resource commitment can be potentially addressed to avoid inefficiency and excess costs. This type of cooperation and coordination between and among potential vendors can also potentially add value and should not be discouraged or disallowed. The scenario that should be avoided in the context of the RFP is that in which multiple vendors are not coordinated and are competing against each other.

In the event that PSE chooses to award to multiple vendors, however, it is important that the customer have the opportunity to compare offers from multiple vendors to ensure that the customer has access to the best possible provider for their organization.

Lack Of Specificity Around DR Program Reliability-Based Dispatch Trigger Can Impact Performance And Make It More Difficult To Enroll Customers.

PSE has mitigated performance risk by limiting the total number of hours of dispatch to 40 hours and clarifying that there is a temperature trigger.[5] There is, however, additional language that says: "DR events can also be triggered at any time to address system emergency conditions within the program parameter constraints."[6]

While we support utilities having the flexibility to utilize their DR resources to meet multiple needs, the more clearly defined the reliability trigger can be, the better DR providers are able to predict the likelihood of dispatch, preparing customers and managing customer expectations, all of which results in superior performance. Moreover, an explicit reliability purpose to the program is helpful to attract customer participation.

A well designed DR program should have some degree of predictability about the system conditions that will likely prevail when a dispatch is likely to occur. There is no advantage to PSE or the DR provider or the customer in having surprise or lack of predictability around when PSE will use the resource.

In our experience, it is vital that a DR program such as that proposed by PSE should have a relatively predictable, or at least transparent and clearly defined dispatch trigger that is tied to system reliability. Indeed, while the utility should want to preserve some dispatch flexibility, it is not in the utility's interest to have open-ended or less than clearly defined dispatch criteria.

[5] PSE RFP at page 4
[6] Id.

Customers are much more willing to enroll in a DR program and provide good performance when they understand that the explicit purpose of the program is to contribute to grid reliability. The flip side is that they are less than enthusiastic about participating in DR when it is not helping reliability. Indeed, we have observed conditions of customer fatigue, frustration, and reduced performance where customers participating in reliability-based DR programs are dispatched outside of those conditions.

We also respectfully suggest that an explicit reliability trigger avoids a "use it or lose it" trap for the utility. Less than clearly defined reliability-based dispatch triggers can lead to the utility feeling that it must deploy the DR resource that is designed to address reliability needs whether it is needed or not. There are generally very high opportunity costs for customers when they are dispatched. Customers who reduce load are to some extent reducing economic productivity – they may be shutting down operations for the day, for example. While this is entirely appropriate in the context of supporting reliability, it is not helpful to the customer, the utility or the local economy that the utility is serving for the utility to be in the position that it feels that it must dispatch the resource whether it is needed or not.

We have observed in other contexts that some utilities with reliability DR programs feared that regulators would react negatively if the full option value of the allowed hours of dispatch was not fully utilized. If a period with mild weather occurred and there were perhaps no or few dispatches of DR, the utility felt compelled to dispatch the program outside of conditions where there was a reliability concern. This is a situation that should be avoided. We respectfully suggest that the utility can maintain the flexibility it needs, while not unwittingly putting itself at odds with expectations of regulators or risking customer dissatisfaction. The parameters around clarifying dispatch conditions should be addressed in the final RFP, or be allowed to be negotiated after the winner of the RFP is selected.

Avoided Capacity Costs

Appendix E provides a Schedule of Estimated Avoided Energy Costs, but it is unclear if PSE is suggesting that pricing for the RFP be based on levelized energy avoided costs over a month. If so, that does not account for the typical situation where DR is dispatched at the end of the economic stack to avoid calling the most expensive resource. As we indicated in our comments on PSE's 2015 Integrated Resource Plan,[7] it would be very helpful if PSE could reflect all avoided costs, including avoided capacity costs.

Baselines

[7] Joint Comments of Joint DR Providers, EnerNOC, Inc., and CPower Inc., to Dockets UE-141170, Puget Sound Energy 2015 Integrated Resource Plan, February 1, 2016.

PSE does not establish a specific baseline methodology in the RFP but anticipates using a day-matching approach with a symmetric up or down day-of event adjustment. PSE also intends to measure based on each 15-minute interval during the course of the event.

Customer baseline and measurement and verification are fundamental to good DR program design. A properly designed baseline should appropriately balance at least four important priorities: 1) program alignment – the baseline should be aligned around the purposes of the DR program; 2) integrity – the baseline should not be susceptible to abuse or manipulating customer performance; 3) accuracy – the baseline should reasonably estimate customers demand levels that would have occurred outside of a dispatch and not over or understate performance; and, 4) simplicity – the baseline should not be overly burdensome or complicated to determine administratively, or difficult for customers to understand.

EnerNOC encourages PSE not to necessarily limit their baseline methodology to the day-matching approach but to consider other approaches, including x-of-y methodologies that have become best practices in the industry. Baselines are certainly critical to the success of any DR program, and the appropriate baseline for PSE's program could be part of negotiations with the selected RFP winner.

Customer Incentives

EnerNOC is concerned about the language in the Pricing Attachment that pertains to customer incentives:

> "Note that PSE will be administering the incentive directly to the customer. Indicate in the table below the proposed incentive level (based on your judgement/industry expertise) that would be necessary/sufficient to attain the MW curtailment amounts you provided in the previous table. PSE intends to negotiate payment terms with the selected bidder such that payments to bidder will be reduced if the incentive payments required to attract participation are higher than proposed here; conversely, if bidder's marketing/delivery efforts result in participation at lower incentive levels, PSE will share some of the cost savings."

Best industry practice is that the utility should allow aggregators the maximum flexibility to negotiate incentives with customers. Aggregators build portfolios and provide incentives on a customer-by-customer basis because the resource size and capabilities of customers differ substantially across a portfolio, and because customers react favorably to different types of incentives to induce reliable performance. Indeed the flexibility for negotiation of incentives is a key feature of successful aggregated DR programs. On the other hand, the traditional lack of contracting flexibility that regulated utilities themselves could offer (because of the monopoly regulatory compact) has led to less than optimal results of many utility-run DR programs. In whatever final program design is adopted, the successful aggregator should be allowed to maintain flexibility around designing different incentive payment structures to customers.

Another common feature in modern DR programs is insulating customers from any penalty exposure from underperformance. The potential for penalty exposure is a significant deterrent to customer participation, and consequently aggregators have developed novel methods of designing incentives that reward good performance while also insulating the customer from penalties. Typically the aggregator is exposed to penalties for underperformance of the portfolio, and insulating customers from penalties adds risk to the aggregator. In order to provide this significant value to customers and allow the aggregator to mitigate its risks, there must be flexibility for the aggregator to negotiate appropriate incentives to induce reliable customer performance. This is a critical component of the value proposition of the program, as aggregators build portfolios of customers with varying degrees of flexibility. PSE's proposal seems to assume that all customers will meet the program parameters directly, which is generally not the case with aggregated DR portfolios.

It is not unreasonable for PSE to be able to deliver the incentive directly to the customer or otherwise leverage the DR program to enhance utility-customer account relationships. EnerNOC supports finding ways in which the utility can enhance its relationship with customers by making available to them innovative energy management programs that enable customers to reap substantial savings. On the other hand, it is generally uncommon and can potentially be a double-edged sword for the utility to become too deeply involved in the management of the aggregation aspects of a DR program. It is at least an issue that should be thought through with some care and attention.

The double-edged sword is the following: while the utility may benefit from the enhanced customer relationship with the customer by involving itself in the DR program administration, doing so may also lead customers to complain to the utility about too frequent dispatches or to complain when payments are possibly reduced as a result of underperformance. The utility will not want to feel constrained in its proper dispatch of DR resources for fear of customer backlash, and secondly, while rare, the utility should not want to involve itself in resolution of disputes over incentive payments where contracts are being administered correctly. It is best industry practice for the customer and aggregator to resolve complaints without the need to seek recourse to the utility.

While a DR aggregator's efforts in administering a utility-sponsored DR program should always enhance customer satisfaction with its utility, utilities often find that it is in their interest to have a little distance between the aggregator-customer relationship. We believe the details of an ideal win-win utility/customer/DR aggregator relationship can and should be resolved through negotiations with the selected vendor. However, it is critical in the RFP that bidders are clear that they will have the flexibility to negotiate customized performance incentives with customers.