Joint DR Parties Comments on July 27, 2016 CAISO Commitment Cost Enhancements Workshop

Joint Demand Response Parties[1] participated in the July 27 Workshop to continue discussion focusing on the process for registering use-limitations, opportunity cost methodology and outage cards. We continue to have significant concerns about CAISO's proposal and look forward to additional discussion on these issues.

General Observations

Joint DR Parties participated in the July 27 workshop and came away with the following general observations, most of which are troubling:

- CAISO's Masterfile can reflect 1 start per day, which is an improvement over the previous proposal of 2 starts per day.
- After an interim, period, CAISO's proposal would not respect annual use limitations - PDR will be non-exempt from RAAIM starting the first day of the subsequent month for which the annual use-limitation was reached.
- The proposed process for documenting use-limitations is completely opaque. The question of how resources prove they are not available has not been resolved, but it sounds like this process will be extremely burdensome.
- Demonstrable costs for PDR do not appear to be analogous to start up or minimum load costs for generation and are extremely difficult to quantify.
- In other markets, the assumption is that opportunity costs are volatile, (changing day-to-day if not hour-to-hour) and are very hard to define and quantify. It's also assumed that no matter how you approach it, the costs of reducing load are incredibly high for many customers and likely always in excess of energy market bid caps. However, CAISO appears to be defining opportunity costs in a different way that does not capture a customers' opportunity costs at all.

[1] EnerNOC and CPower

- If use limited resources such as DR choose not to register as use-limited resources, then they are not subject to RAAIM or replacement.

Registration Process for Use-Limited Resources

Joint DR Parties continue to have questions on this proposed process:

- If we add/lose customer do we have to file a new use plan?
- What documentation is acceptable support for use-limited status and limitations?
    - Discussion at the workshop indicated that for demand response, the limitations are in contracts with the customers. It also appeared that most contracts with customers are selling the minimum RA requirements. There are no use limitations in DRAM. \
    - Would it be acceptable to include a generic customer contract template?
- If a customer can provide additional hours, how is that captured in the use plan?
- Are there demonstrable costs that exist for PDR that may be analogous to a start-up or minimum load cost for a traditional generator?
    - CAISO needs to provide specific examples of might constitute start-up and minimum load costs instead of asking us to provide a laundry list of costs and allowing CAISO to determine where they go. We did provide examples at the workshop of interruptions to industrial processes but are unclear of these are the types of costs CAISO is considering.

Opportunity Costs

Our original presumption was that opportunity costs were intended to capture a customer's cost of participating in demand response. Estimating or calculating a customer's foregone revenue hour-to-hour and spending time defending those calculations would likely drive customers away from participation. Customers have primary sources of business outside of participating in energy markets and

need demand response programs to be simple. These customers are willing to participate to help stabilize the electric grid, but they will be deterred from participating if it requires significant administrative burden. The process of collecting this information across hundreds or thousands of customers in a demand response provider's portfolio on a frequent basis with no added benefit to reliability, operations, or energy market clearing is an unsustainable administrative burden.

For the overwhelming majority of demand resource customers, electricity is worth well more than $1,000/MWh, or even $2,000/MWh. This is supported by studies on the Value of Lost Load, which has been estimated to be as much as $25,000/MWh for commercial and industrial customers.[2] Therefore, if customers are offering consistent with the value of electricity to them, or their foregone commercial revenue, they would legitimately be offering above the current energy market offer cap.

Verifying costs for a demand resource in a manner identical to a generation resource is impractical, if not impossible, especially on an *ex-ante* basis. While a generation resource may include only one unit with one major marginal cost (fuel), a demand resource could include hundreds or thousands of customers, each with a number of inputs that impact opportunity costs. Worse, these customers' costs can fluctuate hour-to-hour and are typically above the energy market offer cap. These costs are extremely difficult to quantify and are largely subjective. For example, the opportunity cost of curtailment faced by a manufacturer could include angering a client due to late deliveries, which could result in immediate and future lost revenues. These opportunity costs can be unpredictable and extremely difficult to determine.

It's important to note that the concerns that drive inclusion of the *ex-ante* cost-based verification do not apply to demand resources. Demand resources have no incentive to "withhold energy." IF a customer offers demand resources into the

[2] See Michael J. Sullivan, PH.D., Matthew Mercurio, PH.D., Josh Schellenberg, M.A., *Estimated Value of Service Reliability for Electric Utility Customers in the United States,* Prepared for the Office of Electric Deliverability and Energy Reliability, U.S. Department of Energy, June 2009, available at http://certs.lbl.gov/pdf/lbnl-2132e.pdf at xxi, Table ES-1.

energy market, they are also paying for using energy and have no guaranty they will be dispatched. Further, demand resources are generally too small to have market power.

In its Order No. 745 compliance filing, ISO-NE proposed not to mitigate or calculate a reference price for demand resources, stating "unlike with supply resources, it would be very difficult to develop a competitive offer or reference price to which to mitigate each demand response resource."[3] For the same reasons it would be very difficult to develop a competitive offer or reference price, it would be very difficult to verify the offer of a demand resource that is based on curtailment of load from many customers.

Instead it appears that CAISO is not considering the customer's opportunity cost in their methodology at all. CAISO is assigning an opportunity cost and then will dispatch the resource based on that cost.

Outage Cards and RAAIM

Our main concern was to see the CAISO's new position that annual use limitations are basically of no value since customers are on the hook for replacement or are subject to RAAIM. It is unclear who is responsible for replacement, but the solution seems to be not registering as use-limited! What a crazy design for use-limited resources!

We will have additional questions as this process moves forward and will continue to be engaged to determine what this means for demand response.

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[3] *ISO New England Inc.,* 138 FERC 61.042, at P. 148 (2012)