BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking To Enhance the Role of Demand Response in Meeting the State's Resource Planning Needs and Operational Requirements.	Rulemaking 13-09-011 (Filed September 13, 2013)

COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION ON THE PROPOSED DECISION

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On February 21, 2014, ALJ Hymes issued a Proposed Decision (PD) addressing the bifurcation of the demand response programs. The California Independent System Operator Corporation (ISO) has actively participated in this proceeding and strongly supports the PD's findings and recommendations, with the minor clarifications and modifications suggested below.

I. COMMENTS

A. The Proposed Decision sets a principled and enduring policy on the bifurcation of demand response that unequivocally supports the Loading Order.

The ISO agrees with the PD's definition for the bifurcation of demand response into load modifiers and supply resources, with only a slight clarifying modification in the "supply resource" description. In short, the PD states:

> This decision bifurcates the current Commission-regulated demand response portfolio of programs into two categories: 1) load modifiers, which reshape or reduce the load by indirectly reducing the resource adequacy requirement and 2) supply resources, which can be scheduled and dispatched into the California Independent System Operator (CAISO) energy markets when and where needed. (PD at p. 2)

The ISO believes that demand response can only be cogently classified in these two ways if demand response is to fulfill the spirit of the loading order. The loading

order's aim is to avoid or defer new conventional-generation resources and transmission and distribution infrastructure, and by so doing, reduce greenhouse gas emissions. The proposed decision's bifurcation policy clearly aligns with this purpose since it well reasons that resources must be configured to either modify load, by reducing the amount of load that must be served, or to serve load.

Given this context, there is a minor but important modification that must be made to the bifurcation definition in the PD. To serve load, supply-side resources must be configured to participate in the ISO market, lest they remain load modifying resources. The current bifurcation definition states "supply resources, which *can be* scheduled and dispatched into the California Independent System Operator (CAISO) energy markets when and where needed."[1] The verb "can be," if left as is in the definition could create confusion, which could result in development of an unintended third category of demand response, i.e. supply-side demand resources that are not required to be scheduled and dispatched through the ISO market. There is no place for non-ISO integrated, quasi-supply side resources because there is no logical way to account for their load impacts in the IOU's, ISO's and CEC's load forecasting and planning processes. Additionally, this unintended third category of quasi-supply side demand response will only muddle how to treat load-modifying and true ISO integrated supply-side demand response capacity for resource adequacy purposes. Thus, to add clarity and avoid confusion, the bifurcation definition throughout the PD must be slightly modified as follows:

> This decision bifurcates the current Commission-regulated demand response portfolio of programs into two categories: 1) load modifiers, which reshape or reduce the load by indirectly reducing the resource adequacy requirement and 2) supply resources, which ~~can be~~ **are** scheduled and dispatched into the California

[1] PD at. p. 2.

Independent System Operator (CAISO) energy markets when and where needed. (PD at p. 2)

And, in the "Conclusion of Law" section:

5. It is reasonable to adopt the following definitions for bifurcating the demand response programs: Load Modifier demand response reshapes or reduces the net load curve and Supply Resource demand response ~~can be~~ **is** scheduled and dispatched into the CAISO market, when and where needed. (PD at p. 26)

And in the section "It is Ordered that:"

3. Supply resources are defined as resources that ~~can be~~ **are** scheduled and dispatched into the California Independent System Operators energy markets, when and where needed. (PD at p. 26)

Most importantly, the PD rightly resolves, as a first order issue, the definition of bifurcation and, in doing so, enables other follow-on policy matters to be settled more easily under this bifurcation framework. For instance, resolving issues such as demand response resource adequacy counting and qualification. As the PD points out, "....we find that categorization of the programs [as load-modifiers or supply-side resources] must occur to prevent resource adequacy double counting problems."[2] For these reasons alone - the ability to resolve a key foundational issue that clearly upholds the loading order - the Commission should adhere to the proposed decision's clear and reasoned definition, as modified by the ISO, for the bifurcation of demand response as either load modifying or supply-side resources.

B. Purported wholesale market participation barriers identified in the PD require context and clarification.

The PD recites the oft-heard refrain that demand response integration in the wholesale market is costly and overly burdensome. The PD devotes a sub-section to this

[2] PD at. P. 18.

very issue, while mentioning integration concerns in various other places. In section 4.1.2 it states:

> In opening comments, parties pointed to the costs of integration with the CAISO energy markets as a potential barrier to participation in demand response programs. CLECA states that current CAISO requirements, such as the settlement process and telemetry requirements are expensive and burdensome. CLECA claims that without changes to the requirements, the costs of bidding demand response into the CAISO energy markets will deter participation. (PD at pgs. 7-8, footnotes omitted)

The Commission should take note that little, if any, substantiated or independently verified cost and labor data concerning demand response integration in the wholesale market has been entered into the record of this proceeding or any other Commission proceeding. Indeed, CLECA's particular concerns about the cost of integration, especially related to the ISO's settlement processes and telemetry costs, are without foundation on the record of this proceeding. Furthermore, CLECA's comments in this regard raise ISO wholesale settlement and telemetry cost issues that are incorrect and that the ISO has addressed in other proceedings.

For example, CLECA argues - and the PD notes - that the ISO's settlement process could be cost prohibitive.[3] The ISO believes that this statement is based on a misunderstanding of the ISO's reporting requirements that CLECA described in its comments in the current resource adequacy (RA) proceeding (R.11-10-023).[4] In those comments, CLECA stated mistakenly that the ISO requires submission of performance data for individual loads, which CLECA claimed is costly and a barrier to demand response participation in the ISO markets. Given that similar misplaced concerns expressed by CLECA now have found their way into this PD, it is important to clarify

[3] CLECA comments, p. 9.

[4] *See* Comments of the California Large Energy Consumers Association on Energy Division Staff Resource Adequacy Proposals, R.11-10-023, February 28, 2014.

that CLECA's understanding of the ISO's performance data requirements is misinformed. In fact, the ISO believes that CLECA would likely support the ISO's actual requirements, which allow for the aggregation of performance data from individual loads at the resource level.

CLECA stated in its RA comments:

> Is the proposal [sic] designed to allow an entity, like a DR provider, to provide aggregate performance data without data from the individual loads? If so, this would eliminate a major cost for implementing the DR and thus a deterrent to its participation in the ISO markets. CLECA would support such a proposal. The ISO stakeholder process for considering metering and telemetry requirements for DR has not been completed and current requirements are indeed onerous.[5]

The ISO responded to these assertions in R.11-10-023 and explained that the ISO has always allowed wholesale demand resources to provide aggregated performance data, i.e. meter data at the resource level.[6] ISO Tariff Section 10.3.2.1 states that:

> Each Scheduling Coordinator for a Demand Response Provider shall aggregate the Settlement Quality Meter Data of the underlying Proxy Demand Resource to the level of the registration configuration of the Proxy Demand Resource in the Demand Response System.

Contrary to CLECA's misunderstanding, the ISO supports the ability to submit meter data at the single aggregation point, i.e. at the resource level, not by the individual underlying loads that make up the resource. Since the ISO tariff allows for the aggregation of meter data (performance data) for a demand resource, there is no deterrent or cost barrier associated with this data gathering effort.[7]

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[5] *Id*., p. 3

[6] *See* ISO Reply Comments on Phase 3 Workshop Issues, R.11-10-023, March 3, 2104, p.5.

[7] The direction of Energy Division's qualifying capacity staff proposal for demand response and storage requests comment supporting submitting meter data at a single aggregation point. See Energy Division's staff proposal, "Qualifying Capacity and Effective Flexible Capacity Calculation Methodology for Energy Storage and Supply-side Demand Response Resources", January 16, 2014, R.11-10-023, at pgs. 4-5.

The ISO even allows for statistical sampling to assess resource performance, where appropriate, for large, aggregate resources, such as a demand resource that relies on A/C cycling. The ISO Business Practice Manual for Metering states:

> A Demand Response Provider representing a PDR may submit a written application to the CAISO for approval of a methodology for statistically derived meter data, referred to in this BPM as Generation Data, for the PDR that consists of a statistical sampling of Energy usage data.[8]

Additionally, CLECA's claim concerning the costs of telemetry and the barrier that telemetry presents continues to confound the ISO. CLECA's primary interest has largely been the impact wholesale market integration will have on CLECA's large energy consuming members who participate in emergency demand response programs, specifically the Base Interruptible Program (BIP). A settlement agreement approved by the Commission on June 25, 2010, to which CLECA was a party, requires that retail emergency demand response programs, like BIP, integrate into the ISO market as Reliability Demand Response Resources.[9] As part of the reliability demand response stakeholder process, it was agreed that *telemetry is NOT required for any reliability demand response resource*. Thus, BIP customers, whose loads will be integrated into the ISO market as a reliability demand response resources have no requirement to provide telemetry. Therefore, contrary to CLECA's oft-voiced concern, there is no telemetry cost or barrier associated with the required integration of BIP customers into reliability demand response resources.

Finally, and as a general overview, telemetry is only required under the ISO tariff in limited circumstances; 1) for any resource offering ancillary services (operating

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[8] ISO BPM for Metering V8, at pgs. 57-58.

[9] D.10-06-034, approving the settlement agreement in R.07-01-041, can be found here: http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/119815.PDF

reserves), per WECC standards,[10] or 2) for demand response resources that are 10 MW or greater.

To add a demand response perspective to this 10 MW threshold value, if a medium to larger commercial customer draws 500 kW of load and can shed 10% of its load, or 50 kW, then it would take approximately 200 stores, or 100 MW of underlying load to shed 10 MW. Furthermore, it would be the demand response provider's decision to aggregate all two-hundred stores under one resource ID and within the same sub-load aggregation point (sub-LAP) to trigger the 10 MW telemetry threshold. Given how much load and how many service accounts it actually takes to enable a 10 MW load reduction, the ISO does not believe that it will see very many demand resources within a sub-LAP that are 10 MW and greater. Thus, the ISO does not believe that the 10 MW telemetry threshold will prove a significant, long-term burden on a majority of demand response providers.

Saying this, the ISO acknowledges that certain existing IOU resources, such as the IOUs' conversion of direct load control A/C cycling programs to Proxy Demand Resources and some large industrial customers, will have load reduction capabilities greater than 10 MW. The ISO has committed to work with the IOUs to help transition these unique supply-side resources into the ISO market while minimizing barriers.

C. The ISO supports the PD's aspiration to timely explore the development of a demand response auction mechanism.

The ISO supports the PD's commitment to explore a Commission authorized demand response auction mechanism for the clearing of supply-side demand response

[10] WECC Standard BAL-STD-002-0 - Operating Reserves, Section B- Requirements, states: "Operating Reserves shall be calculated such that the amount available which can be fully activated in the next ten minutes *will be known at all times*." (emphasis added)

resources that are configured to participate in the ISO market. The ISO encourages the Commission to timely pursue such a mechanism. The ISO's two primary interests are: 1) price transparency; and, 2) product definition.

The ISO encourages the Commission to pursue a procurement mechanism design that provides for robust price transparency so that buyers and suppliers can ascertain the market value of demand response capacity relative to the capacity value of other resource types. In this regard, the ISO holds some reservations about a Reverse Auction since this type of procurement mechanism generally does not provide robust price discovery.

Finally, the ISO has a keen interest in the product that clears the Commission's auction mechanism. The ISO is looking forward to working closely with the Commission and the IOUs to ensure that demand response that clears in this future auction mechanism is used and useful as supply-side resources for meeting the system's load-serving and balancing needs.

D. The ISO does not desire exclusive control over demand response, and, therefore, inaccurate and unsubstantiated information about why the ISO should not have exclusive control should be removed from the PD.

The PD correctly bifurcates current demand response programs into "Load Modifier" and "Supply Resource," consistent with comments submitted by the ISO, ORA and other parties, and noted that none of the concerns about bifurcation raised by other parties provided a sufficient basis to delay bifurcation. [11] However, the PD acknowledges concerns raised by PG&E and CLECA that the ISO should not have "exclusive control" over demand response, and agrees that demand response must be available to the utilities to address local issues as well as system-wide issues.[12]

[11] PD, pp.17-18.
[12] *Id.*, p. 20.

The ISO has no desire to have exclusive control of all demand response programs, and its comments should not have been interpreted as advocating this position. Indeed, the demand response bifurcation adopted by the PD provides flexibility for demand response to address local issues on both the Load Modifier side and Supply Resource side.

By clearly identifying that a class of demand response is to be categorized as a load-modifier, a majority of day-to-day demand response actions may be exercised on the demand-side of the supply-demand equation as load-modifying actions, completely outside the ISO market. Many distributed energy resources types, such as rooftop solar, electric vehicles, storage devices, and distributed generation will largely operate independent of the ISO market, and these resources will have real impacts on the load shape. Additionally, load-modifying demand response can take many forms - from programs to tariffs - requiring less complexity and customer engagement than the customer commitment required to participate as a supply-side resource in the ISO market.

On the supply-side, the ISO similarly agrees that demand response operators, such as utility distribution companies, should have the ability and flexibility to operate their supply-side demand response programs when needed to address a local transmission or distribution condition. This capability has already been acknowledged and built into the ISO's wholesale demand response products. For instance, if a proxy demand resource is bid into the ISO market, but must be used to address a local grid condition, the resource operator simply submits an outage ticket to the ISO which indicates the resource is out of service and no longer available to the ISO. Additionally, this particular day is excluded

in the resource's baseline calculation for settlement purposes.[13] Thus, the ISO's rules recognize demand response's historic use by utility distribution system operators to address their own local needs.

On the other hand, the ISO strongly disagrees with CLECA's concern, also noted in the PD, that the ISO should not have exclusive control over demand response because the ISO "has been unable to ensure security-constrained economic dispatch and unit commitment solution" and that the ISO "commits fossil-fired generation out of merit order." These statements are inaccurate and unsubstantiated, and should not be reflected in the final order.

In all but very limited circumstances, the ISO's security constrained economic dispatch ensures supply resources are used efficiently to meet system reliability requirements. There are very limited circumstances in which reliability requirements cannot be solved through the market software and optimization. When this does occur, the ISO must issue manual dispatches, referred to as "exceptional dispatches." Contrary to CLECA's implied assertion that the ISO cannot effectively manage resources, in reality, exceptional dispatches account for an extremely small portion of the total energy served by the ISO market. In 2012, 99.47% and in 2011, 99.6% of *all energy* was served through ISO optimized market dispatches. More specifically, the Department of Market Monitoring's 2013 independent report explains:

> Total energy from exceptional dispatches, including minimum load energy from unit commitments, equaled 0.53 percent of system loads in 2012, compared to 0.40 percent in 2011. *Thus, total energy from exceptional dispatches remains a relatively low portion of total system loads.*

[13] For additional details, see ISO BPM for Outage Management V9, section 8.1.2- *Proxy Demand Resource Outage Reporting.*

> Minimum load energy from units committed through exceptional dispatch remained roughly unchanged from 2011, and accounted for about 55 percent of all energy from exceptional dispatches in 2012. About 35 percent of energy from exceptional dispatches in 2012 was from out-of-sequence energy, with the remaining 10 percent from in-sequence energy.
>
> The increase in total energy from exceptional dispatches was driven mainly by an increase in energy above minimum load. As discussed later in this chapter, *non-modeled constraints relating to the need for ramping capacity and the SONGS outages were two primary drivers of exceptional dispatch in 2012*. [14] (emphasis added)

Thus, CLECA's exaggerated claim about the ISO's inability to ensure a security-constrained economic dispatch and unit commitment solution is incorrect and should be removed from the PD. The ISO requests that the PD be modified as follows:

> Edited Version:
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> In addition, the CAISO contends that, as the balancing area authority, it must have full oversight of the system and, as such, any other entity that dispatches their supply-side demand response will do so sub-optimally, resulting in power imbalances and re-dispatching costs.68 ~~In reply, CLECA claims that the CAISO has been unable to ensure a security-constrained economic dispatch and unit commitment solution.69 CLECA alleges that the CAISO commits fossil-fired generation out of merit order so that generation can be ramped quickly, resulting in additional costs and greenhouse gas emissions.70~~ **However**, CLECA ~~also~~ notes that the Utilities use demand response program to address distribution system reliability problems, thus highlighting the importance that the CAISO cannot have exclusive control of demand response. ~~We find these allegations disconcerting~~. [15]

II. CONCLUSION

The ISO agrees with the PD's overall conclusions and directives, and believes that this decision is an important first step in the direction of enabling demand response programs to achieve the goal of reducing the need for conventional resources. The modifications that the ISO has proposed add clarification and are intended to dispel

[14] Department of Market Monitoring Annual Report on Market Issues and Performance, April 2013, at p. 184, found here: http://www.caiso.com/Documents/2012AnnualReport-MarketIssue-Performance.pdf

[15] PD at p. 20.

unfounded concerns. The ISO looks forward to working with the Commission and parties in the next phases of this proceeding.

Respectfully submitted,

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