

**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 19, 2013)

**CLEAN COALITION RESPONSE TO ADMINISTRATIVE LAW JUDGE'S RULING
REQUESTING RESPONSES TO ADDITIONAL QUESTIONS IN REGARD TO 2018
AND BEYOND DEMAND RESPONSE PROGRAMS**

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I. INTRODUCTION

Pursuant to the May 20, 2016 *Administrative Law Judge’s Ruling Requesting Responses to Additional Questions in Regard to 2018 and Beyond Demand Response Programs* directing the parties of Rulemaking 13-09-011 to reply to questions in response to the Interim Report on Phase I Results: 2015 California Demand Response Potential Study, the Clean Coalition submits the following responses to selected questions, and reserves the opportunity to reply to party responses to all questions.

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of distributed energy resources (“DER”)—such as local renewables, advanced inverters, demand response, and energy storage—and we establish market mechanisms that realize the full potential of integrating these solutions. The Clean Coalition also collaborates with utilities and municipalities to create near-term deployment opportunities that prove the technical and financial viability of local renewables and other DER.

II. COMMENTS

Category 1 Questions: Demand Response Goal and Objectives

The April 2, 2014 Ruling and Revised Scoping Memo established the scope for this proceeding, which includes setting a goal and objectives for demand response.

Parties are asked to respond to the following questions.

1. In general, what should the Commission expect demand response to accomplish?

Demand response (“DR”) should be expected to cost effectively reduce peak capacity requirements and ancillary service needs at both the local and system levels in line with the analysis of the DR Potential Study, and through coordination of variability also integrate both generation and loads at the local and system levels. While Time of Use and Time of Delivery tariffs may broadly align average generation and load profiles, DR can address the frequent and inevitable variation from the average. Critical Peak Pricing and other dynamic TOU rates may properly be considered as DR programs, along with other load modification compensation or incentive mechanisms. DR should be recognized as capable of being applied to the full degree of speed and locational specificity enabled by current and forthcoming communications and devices available to customers and their energy providers.

This proceeding should continue to identify the range of functions DR can perform, to support recognition of the value of those functions within the IRP, IDER and DRP proceedings, including the use of DR in integrating other DER at both the local and system level, and to provide measurable objectives and goals for the use of DR in these functions.

2. In general, what are your expectations of demand response in California?

The Clean Coalition supports the DR Potential Study as the best estimate of the practical and economically viable potential for application of demand response in California. Both with respect to cost effectiveness and preferred Loading Order, the full projected market adoption levels anticipated in the Study are expected to be realized. As such, we expect traditional DR programs and enrollment to remain at current levels while new approaches incorporating high distributed automated incremental DR to equal and then surpass existing programs as quickly as the enabling devices and signaling are deployed.

In addition, DR offers highly effective and low cost support for integration and increased adoption of other preferred resources (both variable and base load) through its ability to offer flexible dispatchable load to follow available generation profiles at both the system and distribution level. The Clean Coalition expects fast acting autonomous and remotely dispatched DR to be a major component of high penetration distributed resource portfolios and distribution resource planning. DR support for high levels of DER will result in substantial net ratepayer

savings both to allow DER to avoid conventional infrastructure investment, and to accommodate customer adoption of DER that would otherwise trigger infrastructure upgrade costs.

3. Should the Commission set a different goal for load modifying and supply demand response resources? If yes, respond to the first two questions separately for load modifying and supply demand response.

Yes and no. The Commission may most appropriately recognize both load modifying resources (“LMR”) and supply resource (“SR”) demand response as a combined total and allow market response and cost effectiveness as the overarching principles to apply in establishing the optimal development of each category, and in this respect there is no need for different goals for each resource. However, a reasonable degree of stability in market demand is an additional relevant principle. This goal supports setting separate individual minimum targets for LMR and SR in order to ensure that both categories of DR are developed - reliable demand in a market promotes investment from potential participants resulting in more competition and efficiency within that market, i.e. lower costs within each category. In terms of a goal as “an overarching principle that guides decision making”—no, different goals are not called for. As objectives, which are “are specific, measurable metrics or steps that can be taken to meet the goal,” different targets are appropriate.

The Clean Coalition is concerned that the value and associated revenue streams for DR services are fragmented through separation of CAISO markets and utility distribution system level value. We strongly recommend the Commission pursue creation of a single market in which all values are recognized and through which all available resources can be dispatched to the optimal resource portfolio without conflict between dispatching agencies and contractual commitments.

We propose this “all value” holistic Common Dispatch Market as an additional goal. This would make both categories of resources more available to meet local utility and CAISO system level needs, and simplified access to markets and compensation will stimulate greater customer participation and increase supply while lowering the cost of the resources. Both DR and other DER resources can provide a variety of market products in both real time markets and longer term contract markets comparable to physical generators ability to provide energy, capacity (resource adequacy), and ancillary services. These resources should have the opportunity to

compete with minimum burdens associated with market participation in order to increase market participation and competition and reduce transactional costs that are ultimately borne by ratepayers.

4. Should the Commission set a different goal for third-party supply resources (e.g., demand response auction mechanism) and utility supply resources (e.g., Southern California Edison's Capacity Bidding Program bid into the CAISO market)? If yes, respond to the first two questions separately.

Please refer to response to Question 3.

5. What metrics and targets (e.g. x number of customers per year per program or y percent of customers able to respond within z number of minutes) should the Commission use to measure the following aspects of demand response: Customer participation, engaging new customers, reliable customer response, deployment of automated technologies, market transformation; and integration with other distributed energy resources including energy efficiency and battery storage.

Dispatch speed and flexibility are important metrics to consider, as these factors greatly influence the range of applications for which DR can be deployed. Grid operators, at both the distribution and transmission level, will be able to make use of information on how many megawatts are available and how quickly, how long, how frequently, and at what locations these may be dispatched. The number of customers, or even which customers within the targeted area, is far less relevant than the electrical characteristics available.

6. Are there additional demand response aspects for which the Commission should develop metrics and targets?

The proportion of cost effective DR potential realized is an important metric for both broad resource adequacy requirements and local capacity and distribution planning purposes. Utilizing information from the Potential Study to establish the quantity of DR available at a cost competitive market price relative to alternatives, the Commission should utilize this metric to determine the degree of success achieved by DR programs in realizing that potential. This is a more salient and relevant metric than customer participation rates or fixed capacity targets.

7. Explain and justify why and how the Commission should prioritize the demand response aspects provided in questions five and six above?

No response at this time.

8. Who should be responsible for meeting the goal and objectives of demand response?

Each electric planning and procurement entity should be responsible for meeting goals and objectives applicable to their activities and authority. DR objectives are appropriately applied to RA requirements for LSEs, separately distribution operators should include DR objectives in Distribution Resource Plans and associated procurement or incentive programs, and transmission operators should actively include DR procurement as a component or alternative to transmission infrastructure investment in the planning process whenever the Commission approves expenditures or cost recovery, in line with the prioritization of DR in the Loading Order for both procurement and dispatch.

In meeting these objectives, the Clean Coalition notes the potential for a Distribution System Operator (“DSO”), as a neutral party, to act as a central intermediary between CAISO markets and operational transmission dispatch value and customer load optimization across the distribution systems, in consort with third party aggregators relationships with those customers. For DR to be optimally utilized, coordination between distribution and transmission-level needs and value streams is essential. Likewise, the DSO can offer a central nexus for both customer and aggregator access to all value streams while also supporting dispatch to the highest use value from moment to moment for each individual resource.

Category 2 Questions: Improving Demand Response Program Design

1. The Interim Report found that demand response resource potential and costs within an end-use category varies widely across customer sites depending upon cost of incentives, program administration, marketing and individual customer load shapes. The report recommends targeting customers within each sector who have eligible end-uses with strong coincidence between end-use load baselines and times of system need, large potential load reduction, and characteristics that indicate a propensity to participate. How should programs be designed to best make use of this information?

Customer identification and enrollment is central not only to success in meeting DR objectives, but across the full range of distributed energy resource development and utilization, including both implementation of DRP and IDER as well as development of new Integrated Resource Planning. It is essential that utility data be readily accessible regarding capacities and loads of the distribution system with the highest level of granularity available, including individual meter and even analysis of opportunities behind the meter that would indicate opportunities to replace customer appliances. Over coming this barrier to identification of opportunities and deployment of DR and other energy efficiency and DER solutions in which both the customer and other ratepayers benefit is essential. The Commission should prioritize coordination and access to this data while respecting customer privacy through the use of anonymized data or neutral intermediaries.

Category 3 Questions: Increasing Participation and Performance in Demand Response

No response at this time.

Category 4 Questions: Increasing Third-Party Provider Participation

No response at this time.

Category 5 Questions: CAISO Market Integration of Utility Programs

1. Should the Commission require that all demand response resources have one trigger or should the Commission allow multiple triggers, as is the current policy?

As the applications and capabilities of different types of DR resources proliferate, it is appropriate to allow separate triggers in association with separate applications. In particular, transmission-level needs may trigger dispatch over a broad area for several hours, while coordination of DER portfolios within specific locations on the distribution system may contraindicate load reduction at that location, or need to reserve this capacity to address local peak demand that does not coincide with transmission peak profiles. Coordination of dispatch to meet the highest value application is essential for optimized grid investment and operation.

2. In designing triggers for demand response programs, what elements should the Commission take into account? To what extent does participant fatigue factor into trigger design? Explain in detail what steps the Commission should take to ensure that demand response programs are being maximized (bid at prices that result in dispatch) while avoiding participant fatigue.

It is important to recognize that participant fatigue is only a factor when dispatch of DR requires a change in participant behavior. While such traditional DR programs are effective, newer automated marginal dispatch typically has no noticeable impact on the participating customer. This approach appears to offer the greatest opportunity for further growth in DR capacity and dramatically more frequent dispatch, thereby offering a broader range of applications. As such, particular attention should be given to programs such as PG&E's Smart AC cycling and extended to other major customer loads, including EV charging, electric hot water heating, residential and commercial pumps, etc.

I. CONCLUSION

The Clean Coalition appreciates the opportunity to comment and looks forward to working with the Commission and other parties to further develop the Demand Response program.

Respectfully submitted,

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