

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Oversee
the Resource Adequacy Program, Consider
Program Refinements, and Establish
Annual Local and Flexible Procurement
Obligations for the 2016 and 2017
Compliance Years.

Rulemaking 14-10-010
(Filed October 16, 2014)

**CLEAN COALITION COMMENTS IN RESPONSE TO TRACK 2 QUESTION 1 ON
FLEXIBLE CAPACITY REQUIREMENTS**

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I. INTRODUCTION

Pursuant to the December 23, 2015 *Assigned Commissioner and Administrative Law Judge's Phase 2 Scoping Memo and Ruling* ("Scoping Memo"), the Clean Coalition submits the following comments on the first Track 2 question related to flexible capacity requirements ("FCR").

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

The Clean Coalition seeks to encourage a Resource Adequacy program that makes full use of available resources, including distributed resources, in order to avoid procuring potentially redundant capacity or unnecessary fossil fuel-based assets, and to

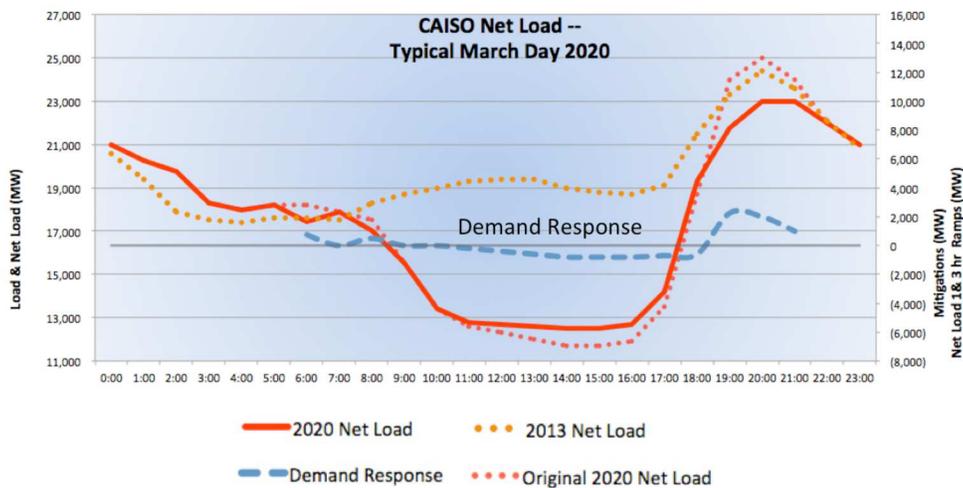
most cost effectively support the development of renewable energy resources. The Clean Coalition specifically provides comments on the first question provided by the Scoping Memo.

1. Defining the reliability needs

In defining the reliability needs to be met by FCRs, the Clean Coalition encourages the Commission to leverage demand-side resources to reduce the need for developing new additional flexible capacity. The Resource Adequacy program has focused primarily on the supply-side of the equation, but demand-side resources may often provide a significantly more cost-effective solution. Demand-side resources can effectively reshape the demand curve and, in some cases, could enable CAISO to both reduce the need for FCRs and more cost effectively procure flexible capacity products.

Loads are increasingly capable of offering themselves as highly dispatchable flexible resources capable of adjusting to changes in variable resource supply and market pricing. However actual deployment of this capability is entirely dependent upon development of clear price signals, compensation mechanism, and opportunities for market participation.

The Commission is very familiar with the CAISO Net Load “duck curve,” which indicates how net load is expected to develop over the coming years as additional solar power systems are installed. The steep ramp from 5pm to 8pm is the primary reason that flexible capacity products are needed. However, demand-side load management programs, ranging from time-of-use (TOU) pricing signals to demand response contracts, can largely flatten the load curve.



It is critical that the Commission compare the cost of meeting needs through an ISO marketplace for flexible capacity products against the cost of reducing demand during periods of expected ramping through the use of demand-side programs. In fully evaluating the relative cost effectiveness of alternative resources and programs the ISO should consider the indirect costs and impact of each resource category, including the acceleration or deferral of demand for additional transmission capacity and contribution toward achieving the state's GHG and air quality emission reduction goals.

Demand management programs, for example, could dramatically reduce the over-generation and ramping factors simultaneously. Demand management incentivizes customers to shift use of power to periods of potential over-generation while discouraging increased demand during ramping hours. This may provide a more cost-effective solution than procuring flexible capacity resources.

Time-of-use ("TOU") pricing, including both fixed tariff schedules and dynamic pricing, offers a similar opportunity to reduce steep ramping periods. Given the opportunity, operators will find that the most cost-effective solution in some circumstances is to adjust energy prices on either side of a ramping periods in order to shift demand and flatten sharp ramps. The cost of procuring and dispatching flexible generation and storage capacity should be compared to the impact on FCR need of directing comparable payment incentives to dynamic pricing participant market.

Managing demand curves through demand-side programs is far preferable to stimulating development of additional fossil generation capacity or curtailing renewable power generation during periods of potential over-generation. The Clean Coalition encourages the Commission to model these impacts in order to ensure that capacity from available renewable resources is fully utilized, including capacity from all varieties of distributed energy resources (DER) and demand management.

III. CONCLUSION

The Clean Coalition respectfully urges the Commission to ensure that demand-side programs are incorporated into the development of the flexible capacity requirements in order to find cost-effective solutions to ramping challenges.

The Clean Coalition appreciates the opportunity to comment and looks forward to working with the Commission and other parties to further improve the Resource Adequacy program.

Respectfully submitted,

/s/

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Dated: February 5, 2016