

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 Procurement Obligations.

Rulemaking 11-10-023

CLEAN COALITION REPLY COMMENTS ON THE STAFF PROPOSAL ON  
THE IMPLEMENTATION OF THE FLEXIBLE CAPACITY PROCUREMENT  
FRAMEWORK

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THE IMPLEMENTATION OF THE FLEXIBLE CAPACITY PROCUREMENT  
FRAMEWORK

I. Introduction

Pursuant to the February 18, 2014 e-mail ruling of Administrative Law Judge Gamson, the Clean Coalition appreciates the opportunity to offer these Reply Comments on the Staff Proposal on the Implementation of the Flexible Capacity Procurement Framework issued February 10, 2014 (the Proposal).

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to local energy systems through innovative policies and programs that deliver cost-effective renewable energy, strengthen local economies, foster environmental sustainability, and provide energy resilience. To achieve this mission, the Clean Coalition promotes proven best practices, including the expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load. The Clean Coalition drives policy innovation to remove barriers to the procurement and interconnection of WDG projects, integrated with Intelligent Grid (IG) solutions such as demand response, energy storage, and advanced inverters. The Clean Coalition also works with utilities to develop demonstration projects that prove that local renewables can provide at least 25% of the total electric energy consumed within the distribution grid, while maintaining or improving grid reliability. The Clean Coalition is active in numerous proceedings before California agencies and other state agencies throughout the United States.

## II. Discussion

The Clean Coalition broadly supports the Energy Division's Proposal and deeply appreciates the work by both CAISO and CPUC staff in effectively responding to and incorporating the recommendations of parties in this proceeding, as is evidenced by the general consensus on most of the Proposal and the narrow range of the majority of opening comments. The Clean Coalition further notes our general support for the recommendations of Parties in opening comments. We take this opportunity to address several specific recommendations made by Parties in opening comments.

### **Cost Allocation and Market Efficiency**

As noted by the Concentrating Solar Power Alliance ("CSPA")<sup>1</sup>, Independent Energy Producers (IEP), and Pacific Gas & Electric (PG&E), and as we advocated in prior comments, the Proposal has crucially recognized that grid flexibility needs may result not only from the introduction of solar and wind resources, but also from inflexible existing conventional resources<sup>2</sup>. IEP further correctly notes that "flexible capacity needs are a function of changes in both demand and supply".<sup>3</sup> In light of the broad range of factors contributing both to increased net load ramping and mitigations, we strongly agree that cost causation attribution has not been adequately developed, and note our agreement with the large number of Parties supporting the Proposal's interim peak load-share approach until a determination on appropriate alternative cost allocation has been made by the Commission.

PG&E has, however, put forward a specific allocation proposal that differs from that currently proposed by either the Energy Division or the CAISO, recommending instead that "a portion of this obligation to provide flexible RA

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<sup>1</sup> CPSA Opening Comments at 1

<sup>2</sup> Staff Proposal at 5

<sup>3</sup> IEP Opening Comments at 2

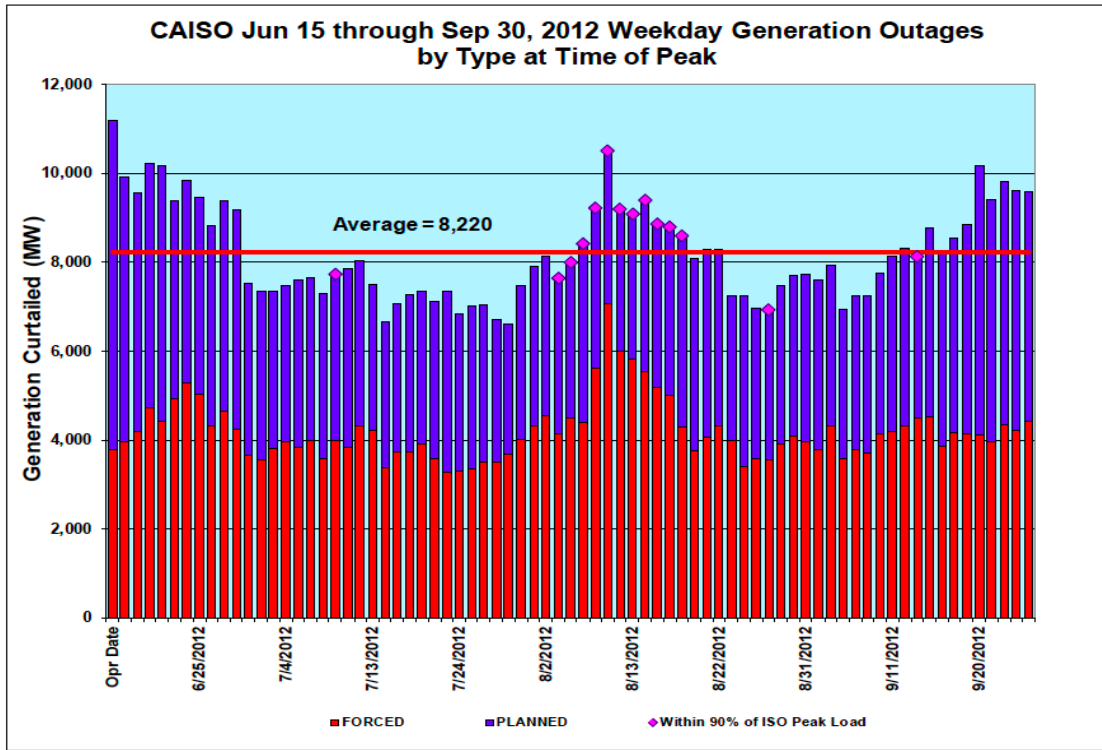
be allocated to the variable energy resources, as they are collectively a part of the reason that flexible RA resources are necessary.”<sup>4</sup> The Clean Coalition strongly disagrees with this approach. It is clearly the responsibility of each LSE to offer procurement contract incentives for suppliers to meet the needs of the LSE and to provide incentive opportunities to their customers to adapt demand in response to the availability and cost of supply. To assign costs of an aggregate mismatch of contracted supply and demand to either a class of generators or individual energy resources is unwarranted as these generators are supplying energy in accord with their contracts. It would be highly problematic to either account for differences in contracts among similar resources, or to fail to account for these differences.

We further object again to the continued implication that variable resources are especially responsible or in some way uniquely culpable for the adjustments resulting from the State’s conversion to sustainable energy sources. Renewables have predictable variability, especially with improvements in forecasting and when individual units are aggregated and managed as virtual large power stations, as is being done today in Germany and elsewhere. Nuclear and fossil fuel power plants often shut down unexpectedly, forcing energy consumers to foot the bill for capacity and frequency response reserves to mitigate the unavailability of large conventional facilities, as illustrated in the following chart.

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<sup>4</sup> PG&E Opening Comments at 2

Figure 1 - Conventional & Nuclear Generation Outages (Summer 2012)



Source: CAISO Summer Loads and Resources Assessment (2013)

This CAISO Summer 2012 Generation Outage Graph shows the weekday hour-ending 16:00 forced and planned outage amounts during the summer peak days from June 15 through September 30 for 2012 (excluding holidays). A forced outage is the outage where the equipment is unavailable due to unanticipated failure. A planned outage is the outage where the shutdown of a generating unit, transmission line, or other facility, is for inspection or maintenance, in accordance with an advance schedule. The graph does not include ambient and “normal” outages as these amounts are accounted for in the NQC listing, based on most likely summer peak weather conditions.

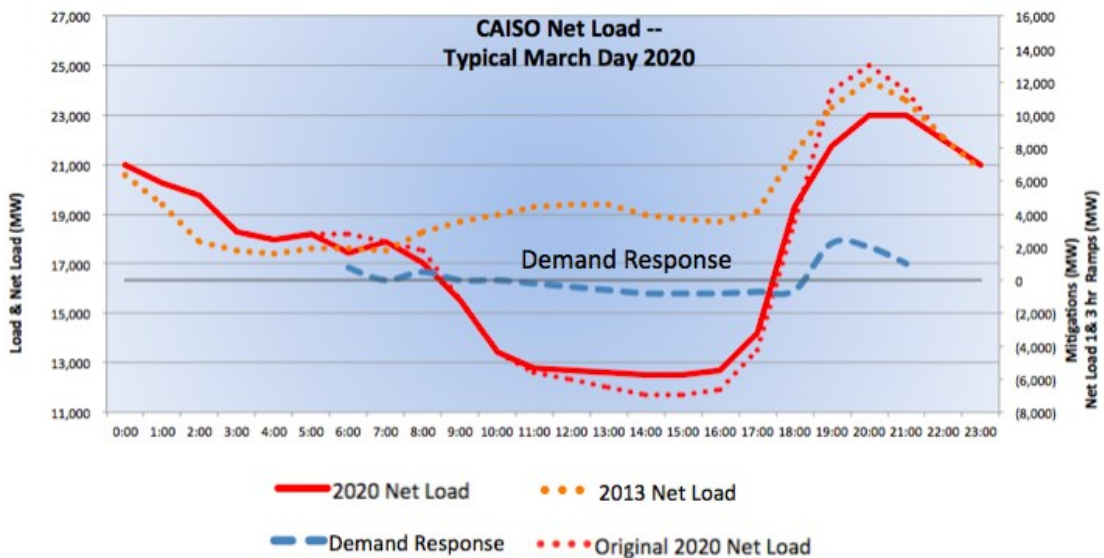
All resources present both operational constraints and opportunities to mitigate those of others. As previously introduced, Clean Coalition analysis<sup>5</sup> of

<sup>5</sup> See *Flattening the Duck*, available at [http://www.clean-coalition.org/site/wp-content/uploads/2013/06/Flattening-the-Duck-21\\_ssw-16-Dec-20131.pdf](http://www.clean-coalition.org/site/wp-content/uploads/2013/06/Flattening-the-Duck-21_ssw-16-Dec-20131.pdf)

opportunities to mitigate potential net load over-generation and ramping issues demonstrate that California can substantially mitigate ramping and flexible capacity concerns while avoiding the cost and emissions of conventional generation solutions.

The example below illustrates the changes observed when Demand Side Management is incorporated, profoundly reducing both the over-generation and ramping factors.<sup>6</sup>

**Figure 2 – Ramp Mitigation Results of 3 GW Load Shifting**



This is particularly important to consider in light of the NREL study cited in the Proposal demonstrating the opportunity to integrate preferred resources to achieve very high effective load carrying capacity (ELCC). Quoting the *Update: Effective Load-Carrying Capability of Photovoltaics in the United States*:

It is important to remark that ELCCs can be increased to nearly 100% -- i.e., firm power equivalence -- with modest amounts of storage and/or load control, even at significant levels of penetration. Considering New York City's ConEdison for instance, and considering a 15% load penetration

<sup>6</sup> See Clean Coalition's *Flattening the Duck* analysis assumptions slides for details about the amounts of demand response used above.

with optimized fixed array, the ELCC of PV could be increased from 40% to 100% with 2.5 hours worth of storage and/or load control capability.<sup>7</sup>

As a matter of economic principle, it is far more efficient to have the LSEs utilize their role as wholesale energy contractors and suppliers to aggregate the necessary resources than to charge generators with the responsibility to individually acquire flexible capacity through the market, where higher costs associated with small contracts will necessarily be incorporated into contract pricing that is ultimately passed through to ratepayers. At the same time, market offers can appropriately value functional aggregation of these resources either by individual suppliers (such as generation with associated energy storage) or by the LSE acting as the coordinator.

The Commission and LSEs should be seeking the most cost effective approach, including exploring ramp mitigation options as opposed to contracting for flexible capacity. For example, time of delivery (TOD) and time of use (TOU) pricing incentives support efficient market mitigation of a mismatch between existing demand and supply profiles without the complexities of attempting other forms of individual cost allocation, and mitigate ramping requirements.

### **Flexible capacity categories and bundling of generic and flexible capacity**

We agree with EnerNOC, Green Power Institute (GPI) and others where each respectively addresses the inefficiencies of attempting to structure procurement within operational profiles associated with conventional generation, which fail to account for the unique attributes and opportunities presented by each resource. EnerNOC points out quite accurately that supply side Demand Response does not match either the characteristics of generic generation for resource adequacy

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<sup>7</sup> NREL, 2006. Available at: <http://www.nrel.gov/docs/fy06osti/40068.pdf>

for bundled offers, and can be targeted much more efficiently than if conforming as a category 1 flexible resource product. Unnecessarily restricting the qualifying attributes would exclude very substantial portions of available and potential DR from the flexible market. Likewise GPI outlines specific opportunities for baseload preferred resources to effectively provide significant and unique ramping if market categories do not exclude or devalue these capabilities. Both of these opening comments deserve particular consideration.

More broadly, PG&E, SDG&E, EnerNOC and others recommend changing the proposed bundling of generic and flexible capacity, at least in application to supply-side demand response resources. The Clean Coalition agrees that bundling should be reconsidered – a more flexible market response can achieve greater efficiencies at lower cost, as discussed above.

### **Conclusion**

The Clean Coalition appreciates the opportunity to offer these reply comments in broad support of the work of Staff in developing the Proposal for interim flexible capacity procurement with ongoing attention to the Loading Order and attributes of preferred resources, and in the majority of refinements offered in Party Comments.

Respectfully submitted,

/s/ Kenneth Sahm White

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Dated: March 3<sup>rd</sup>, 2014