

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
(Filed October 20, 2011)

CLEAN COALITION'S OPENING COMMENTS ON PROPOSED DECISION
ADOPTING LOCAL PROCUREMENT OBLIGATIONS
FOR 2014, A FLEXIBLE CAPACITY FRAMEWORK, AND FURTHER
REFINING THE RESOURCE ADEQUACY PROGRAM

Kenneth Sahm White
Clean Coalition
2 Palo Alto Square
3000 El Camino Real, Suite 500
Palo Alto, CA 94306
831 425 5866
Sahm@clean-coalition.org

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I. Introduction

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 enhance energy resilience. To achieve this mission, the Clean Coalition promotes proven best practices, including the vigorous expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load.

The Clean Coalition drives policy innovation to remove major barriers to the procurement, interconnection, and financing of WDG projects and supports complementary Intelligent Grid (IG) market solutions such as demand response, energy storage, forecasting, and communications. The Clean Coalition is active in numerous proceedings before the California Public Utilities Commission and other state and federal agencies throughout the United States, in addition to work in the design and implementation of WDG and IG programs for local utilities and governments.

The Clean Coalition appreciates the opportunity to submit the following Opening Comments on the Administrative Law Judge's Proposed Decision Adopting

Local Procurement Obligations for 2014, a Flexible Capacity Framework, and Further Refining the Resource Adequacy Program, filed May 28, 2013 (“Proposed Decision”).

The Clean Coalition broadly supports the direction of the Proposed Decision (PD). We strongly agree with the conclusion that flexible capacity procurement is not needed for 2014 and the emphasis on ensuring that preferred resources and other alternatives such as energy storage are meaningfully incorporated into any flexible capacity procurement approach. We remain sensitive to the need for evolving mechanisms to best address matching demand with reliance upon preferred and sustainable resources, and upon approval of the Proposed Decision, the Commission should immediately begin development of inclusive criteria for such preferred resources to be fully utilized in addressing flexible capacity needs in accord with the State’s Loading Order, preferred procurement, and long term emissions and sustainability goals.

We submit these brief comments to bring attention to points remaining considerations to ensure that preferred and sustainable approaches to addressing flexibility requirements have been adequately considered within this Proposed Decision, including supply and demand side management.

II. Definition of Flexible Ramping Resources

Resources will be considered as “flexible capacity” if they can sustain or increase output during the hours of the ramping period of “flexible need”, which is defined as the greatest 3-hour continuous amount of ramping power needed in each month by the California ISO to manage grid reliability. (PD at 2-3). As discussed in previous RA comments, the Clean Coalition still objects to this requirement, since it can ignore the potential contribution of resources that can provide less than 3 hours continuous output, or can provide it only during a restricted period of the day or year. This definition could also potentially discriminate against preferred resources, which is inconsistent with California’s Preferred Loading Order, and ignore substantial

contribution of more cost effective alternatives. The Final Decision in this proceeding should be modified to ensure that this does not occur, and that cost effective non-generation options are fully utilized.

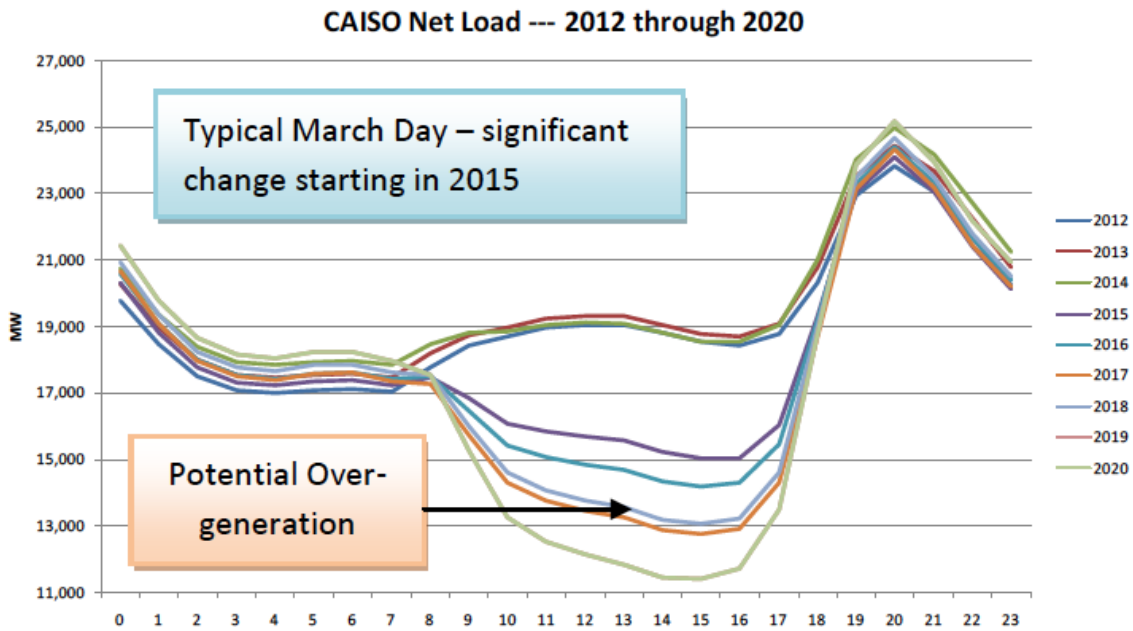
The proposed adjustment for “Use Limited Resources” designed to avoid excluding very significant quantities of flexible hydro capacity is an appropriate recognition of the need for less restrictive criteria, and similar consideration should be applied to maximize the utility of all resources so as to avoid unwarranted procurement. These resources include but are not limited to: demand response, energy efficiency, and storage. (PD at 47-48). These intelligent grid solutions provide for reliable resources and a more resilient grid (including locational benefits, responsiveness, and cost effectiveness) in accordance with the established Loading Order for preferred resources. This is the right step forward in meeting the goals outlined for this proceeding and structuring the RA program for the inclusion of preferred resources.

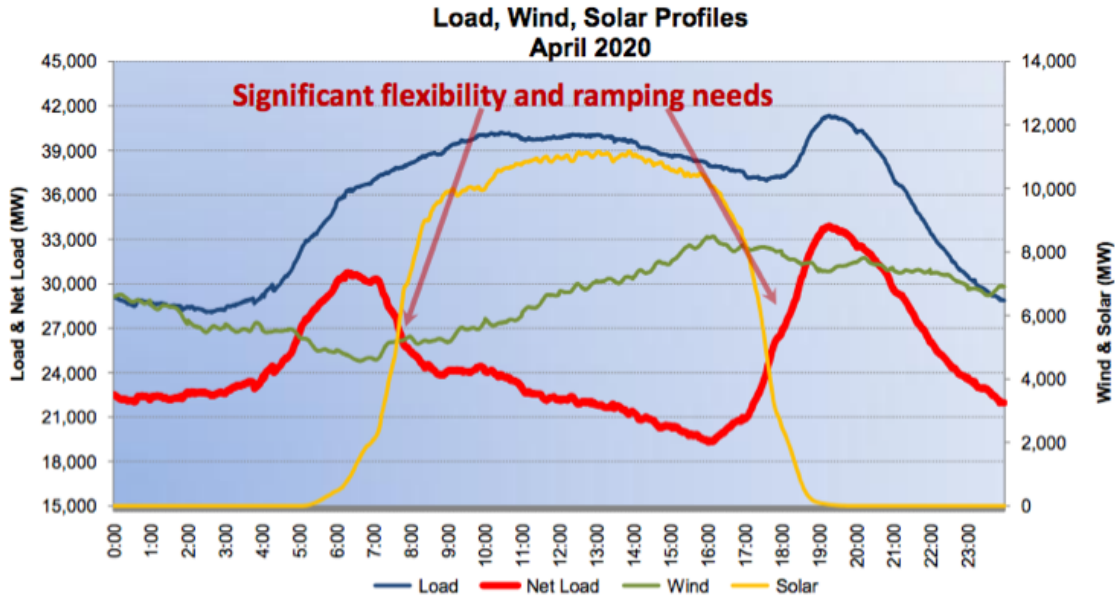
III. Determination of Flexible Capacity Requirements

The PD has determined that “that there is no compelling need to adopt a flexible capacity requirement for the 2014 Resource Adequacy (RA) year, as the likely increased ratepayer costs of such a requirement are not justified given that the ISO has not shown a likelihood of a shortage of flexible capacity for next year.” (PD at 3). The Clean Coalition agrees. As we noted in our reply comments on the Flexible Capacity Proposals, we...” acknowledge the good faith efforts put forth by the Joint Parties in bringing important concerns to the attention of the Commission and offering a possible response.” However, we still cannot determine that the Joint Proposal, “with or without modifications proposed by PG&E and the Energy Division, appropriately considers impacts on markets, opportunities to shift demand trends and scheduling of system generation, imports, and exports, or consider cost, emissions impacts, and opportunities to use preferred resources to address evolving needs.” (Clean Coalition Reply Comments dated April 15th, 2013). These are important elements to consider, and we remain in full agreement with the ISO and this Proposed Decision that additional

flexible capacity is not required prior to 2015 and we look forward to continuing our participation in best determining resource and mitigation needs for the following period.

Much of the impetus underlying this PD and the anticipated issues it addresses were graphically summarized in the following charts produced by CAISO – the “duck” chart, showing progressively significant changes in net load through the end of this decade, and an illustration of the generation and load profiles contributing to the net load, included for reference below:

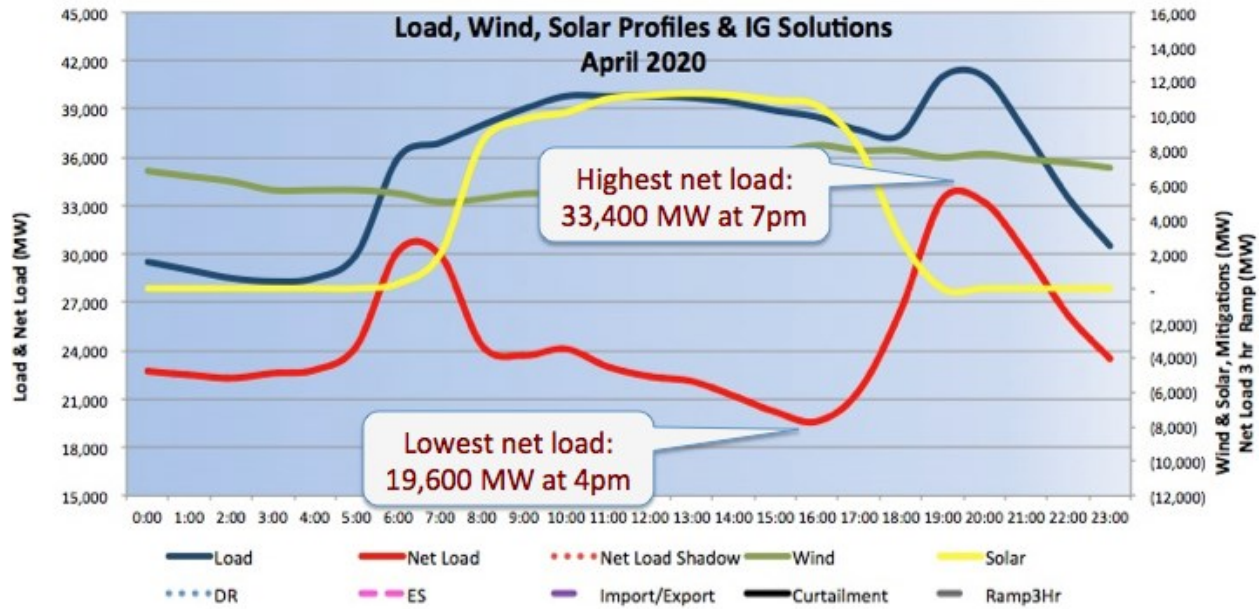




The PD appropriately recognizes that the net load is not anticipated to show substantial change prior to 2015, as illustrated in the “duck” chart. Likewise, the PD acknowledges that we must take whatever steps are necessary to ensure that we are prepared for reasonably likely future needs.

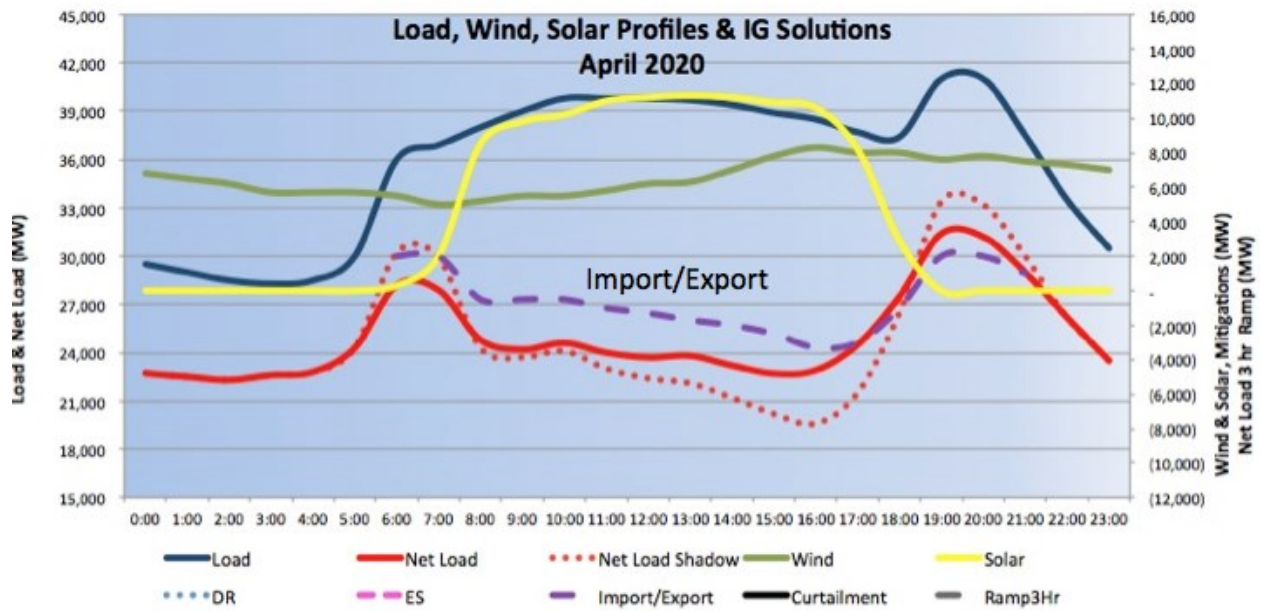
The core responsibility of this proceeding is to determine future needs, assess options for addressing those needs, and move to ensure the most preferred options are secured in time. Toward that end, the Clean Coalition has input CAISO’s model data from a comparable day into a simplified hourly model and would like to take this opportunity illustrate the impact of several alternative or complimentary approaches.

In the following graph we see this data similarly represented. As with the CAISO graph, the left and right hand scales are distinct, however the right hand scale is now adjusted to allow values representing both generation and load mitigations (place zero at the midpoint of the scale).

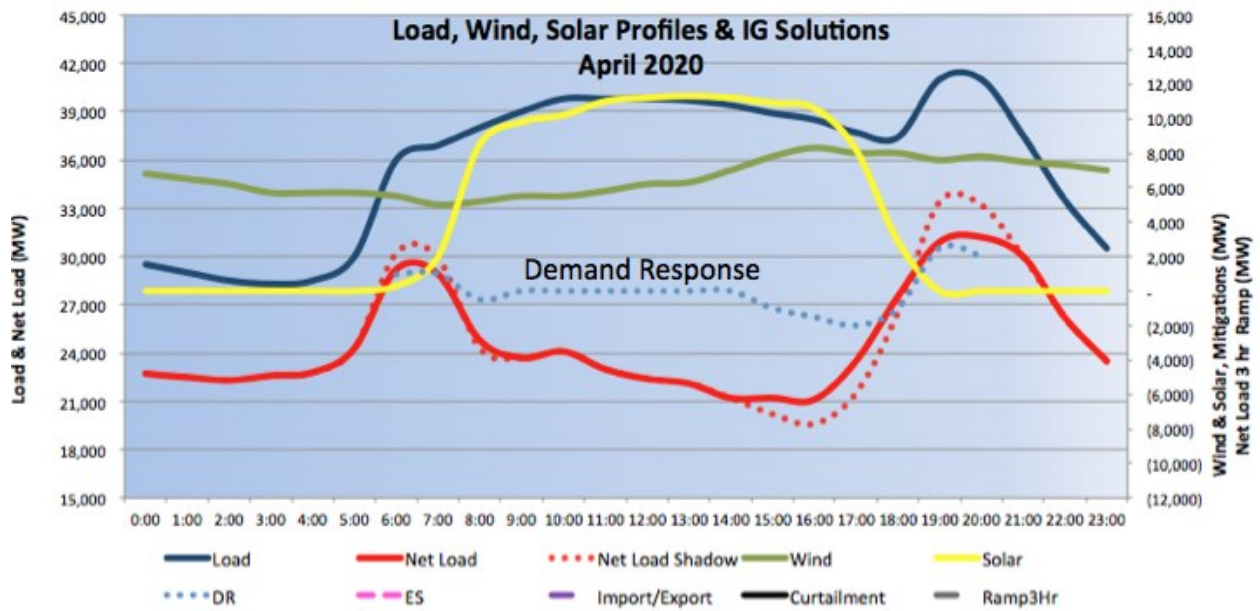


The original CAISO chart only considers resources within CAISO territory, ignoring CAISO’s operation within the wider WECC. Once you remove this artificial limitation and account for imports and exports of energy in and out of CAISO territory, the picture looks much less extreme. Import and export is practical because other balancing authorities within California and throughout the WECC have different portfolios and different demand profiles, supporting, for example, export of excess daytime power eastward on existing transmission facilities, especially as their local solar resource fades. This allows slower ramping existing facilities in California to be more fully and economically utilized.

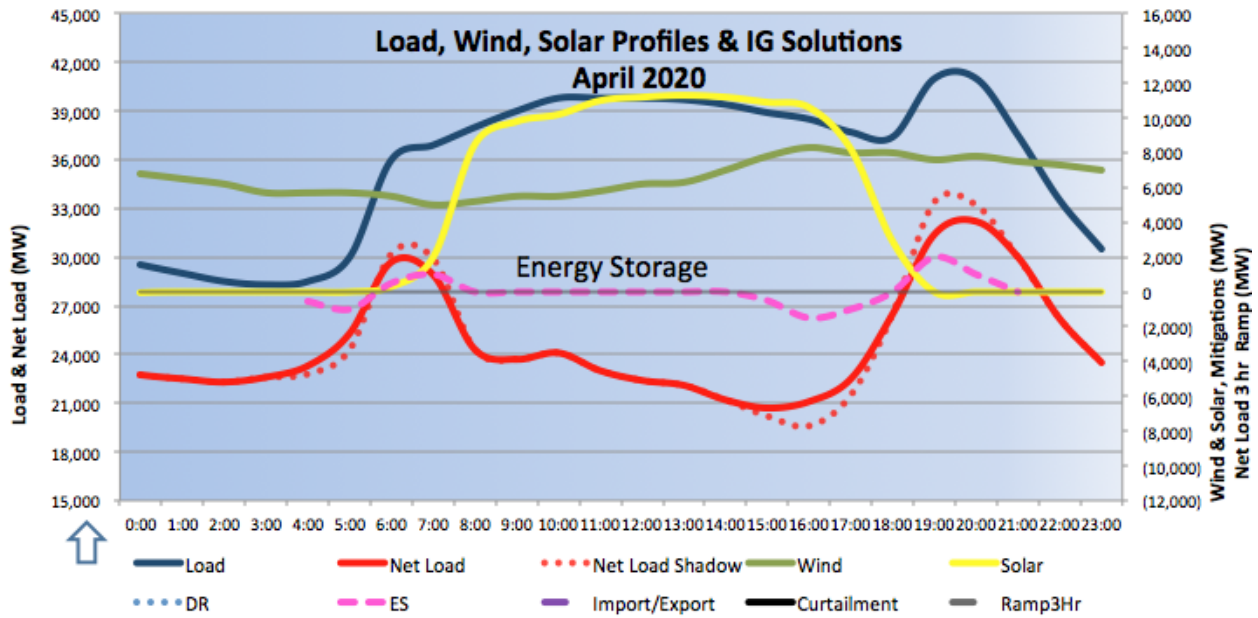
The dotted red line shows the old net load curve, while the new red line shows how Import/Export helps smooth the ramps, with an illustrated maximum export of 3,000 MW, and a maximum late peak demand import of 2000MW, reducing the three hour net load ramp dramatically.



Likewise, we need not treat load as static and immutable, and can look to shape demand to more closely align with supply. Demand is responsive to price, especially when pricing is scheduled to support shifts in routine load patterns, or where signaling supports automated day ahead or hour ahead demand alignment with pricing. Demand Response is not limited to emergency curtailment applications.



Energy storage (ES) is another alternative offering very significant potential contributions, as shown in the illustration below. In this example, ES is modeled to provide a flexible supply for only two hours during the evening ramp, with 2,000 MW for one hour and 1,000 MW in the following hour, for a total of 3,000 MWh capacity. During the potential over-generation period in the preceding hours, ES would also provide a comparable demand, effectively doubling its total capacity contribution. The impact on ramping is profound even when, as in this example, the resource is not modeled to offer a continuous three hour contribution.



Each of the above ramping mitigations are illustrative, and in practice should be used in combination based on economic dispatch and preferred loading order. What we clearly see illustrated however, is that very large scale ramping mitigation is achievable outside of just adding fast ramping generation and associated emissions. We also see that resources providing less than three hours continuous ramping, even in aggregated or serial application, can still substantially lower the net rate of ramp or total ramping range required. As the marginal costs of energy from conventional generation is much greater when such facilities only used during peak ramping periods, alternatives that reduce such ramps become increasingly economically attractive and deserve full consideration.

IV. Conclusion

The Commission should ensure that preferred resources and other mitigating alternatives are fully recognized for their ability to contribute to system needs,

including flexible or scheduled ramping for limited periods, and should adopt for all such resources the approach to inclusion of use limited resources developed by PG&E for obtaining flexible capacity from hydro resources.

The Clean Coalition appreciates this opportunity to provide comments and looks forward to working with the Commission and other stakeholders on these issues.

Respectfully submitted,

Kenneth Sahm White

/s/
Clean Coalition
2 Palo Alto Square
3000 El Camino Real, Suite 500
Palo Alto, CA 94306
831 425 5866
Sahm@clean-coalition.org

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