

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

Order Instituting Rulemaking to Consider
Annual Revision to Local Procurement
Obligations and Refinements to the Resource
Adequacy Program.

R.08-01-025
(Filed January 31, 2008)

**COMMENTS OF THE
LARGE-SCALE SOLAR ASSOCIATION
ON WORKSHOP REPORT**

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I. Introduction and Summary

Pursuant to the October 30, 2008 ALJ Ruling, as modified on January 27, 2009,¹ the Large-scale Solar Association (“LSA”), provides these comments on the Energy Division’s February 6, 2009 Workshop Report on Phase 2 Resource Adequacy (“RA”) Workshops. (“Workshop Report”.)

LSA is trade organization representing eleven of the nation’s largest developers and providers of utility-scale solar generating resources, including entities with over 5 gigawatts under contract to California load-serving entities (“LSEs”). Its members represent various types of utility-scale solar technologies, including photovoltaic and solar thermal system designs. LSA, and its individual member companies, are leaders in the renewable energy industry, advancing solar generation technologies and advocating for competitive market structures that facilitate significant integration of renewable energy throughout the western United States. LSA is actively involved in California, Arizona, and Nevada as well as regional and federal venues when appropriate.

¹ *Administrative Law Judge’s Ruling Adopting Dates Certain for, and Making Other Changes to, the Phase 2 Schedule*, October 30, 2008, in CPUC Docket R.08-01-025, as modified by emailed ALJ Ruling on January 27, 2009.

LSA presented its proposals and participated in the January 22 and 23 RA Workshops to bring the large-solar perspective to the discussion of potential changes to the CPUC RA program. The CPUC's RA program is designed to assure that LSEs forward procure sufficient resources to meet expected loads and requisite reserves primarily at peak hours, although the program's year-ahead, month-ahead approach has never exclusively focused on the relatively few super-peak hours during the year. The program has successfully ensured that the California Independent System Operator Corp. ("CAISO") has the resources it needs to call upon primarily during those peak hours, and allows the use-limited resources that California relies upon to meet its super-peak demand to be employed when truly needed. The significant wave of new large-scale solar projects expected to come online soon in California will bring clean, renewable solar generation that will support the peak hour needs of the grid.

The CAISO, as well as the Western Electricity Coordinating Council ("WECC"), are starting to seriously investigate the operational changes required to integrate increased levels of renewable generating resources, including solar and wind, in light of energy and environmental mandates. Moreover, the make-up of the generation fleet is changing, with an accelerated retirement as well as greater use-limitations for some fossil resources, due to environmental issues and associated changes in the nature and scope of the fossil generation fleet's operational characteristics. In the near future, these changes will translate into changes in the way the grid operates; the way that capacity is viewed and utilized can be expected to undergo significant changes as well. Accordingly, LSA asks that the Commission explicitly acknowledge that changes to the RA program, including some of the issues under review now, will likely need revisiting again as the CAISO and WECC explore reliable renewables integration, and the new

wave of solar capacity and other renewables are added to the system and the characteristics of the system's generating fleet change.

LSA's remaining comments here address the determination of Net Qualifying Capacity ("NQC") for large solar projects, including the initial establishment of new solar projects or capacity additions' NQC value. In light of the pending studies on renewable integration both at CAISO and regionally, it may be appropriate for solar resources, which are undergoing a unique flourishing of new and innovative technologies whose actual operating characteristics are relevant to grid needs, to remain governed by the current NQC counting rules so that revisions may incorporate those results, avoiding year-on-year program design changes that would impact new solar projects coming on-line after 2010. LSA's proposals presented for the workshops, including maintaining the functionality associated with MCC procurement limitations as a means of addressing concerns about over-reliance on intermittents, sought a continuation of the current NQC counting rules for solar, and adoption of technology-appropriate approach for setting new projects' initial NQC values.

II. Comments

A. The RA Program is Designed to Require Forward Procurement of Resources that Provide CAISO with Resources to Meet Peak Loads.

RA capacity is the most basic form of capacity supporting system demand and should explicitly recognize the value of capacity that provides energy across many peak hours. The existing RA capacity counting rules recognize capacity as long as it can be made available for four hours on three contiguous days.² The RA procurement obligations were adopted to ensure supply sufficiency throughout the year by mandating capacity procurement well in advance of the summer peak season and at minimum a month ahead of the delivery requirement. Coupled

² See, D.05-10-042 at 73 *et seq.*; *cf.* D.04-10-035 at 25-26.

with the CAISO market mechanisms that value capacity providing Ancillary Services, the RA program moved the California market design from an energy-only system that over-relied on backstop procurement by CAISO, to a system that required LSEs to make capacity available to CAISO on a forward basis for peak months.

The Workshop Report notes the dichotomy between views on the purpose or goal of the RA program and the bases for counting RA capacity at page 21. Part of the inherent tension at play is a desire for certainty with respect to reliability, but not reliability at any cost, as well as a desire to meet other goals for our energy infrastructure, including Renewables Portfolio Standard (“RPS”) and Greenhouse Gas (“GHG”) goals. Proponents of the so-called “exceedance” type methodology recommend changes to the NQC counting methodology take a much narrower view of the RA program and would essentially convert it from a supply sufficiency regime that focuses primarily on peak hours to a specialized reliability product, an ancillary service in all but name, that would devalue capacity that is not available for dispatch during a handful of specific hours and with an availability factor better than the fleet average forced outage rate. Some of the proposed changes to NQC counting rules for intermittents focus only on the super-peak hours, thus failing to recognize the capacity value that intermittent resources provide, particularly when they can free other generation capacity that may have limited run capabilities to be available for dispatch at the super-peak hours. The net result of this narrow focus is to unduly raise the costs of the RA program to ratepayers, by requiring over-procurement of dispatchable resources while discounting the resource adequacy value of non-dispatchables. A more comprehensive view of all of the pieces of the puzzle that, in reality, add together to provide reliability would attain both the Commission’s goals for reliability as well as its other goals for the energy infrastructure. At a minimum, if the exceedance-type of methodology is ultimately adopted (which is not LSA’s

preference for solar as noted above), LSA recommends that the span of hours be expanded to recognize contribution to peak loads and not be limited to a handful of super-peak hours, so as to minimize this transformation of RA to a specialized ancillary service project and reduce the negative impacts to California ratepayers. Accordingly, LSA supports a methodology that counts contributions to peak as defined in the IOUs time-of-delivery tariff rules since it both better recognizes the contribution of solar resources and is consistent with existing Commission precedents.

B. Any Changes In The NQC Rules Should Account For The Expected Influx Of New Solar Capacity Additions Starting In 2010.

California can expect to see over 5 GWs of new solar capacity from different technology types coming online in the next several years over a wider range of locations. With an increase to the RPS procurement obligation percentage, and incentives to avoid the GHG emissions associated with combustion technologies, solar capacity additions can be expected to increase significantly in the next ten years. There is no question that these resources, which will provide substantial peak hour energy, will contribute substantially to reliability. The RA program must reflect this value to avoid unnecessary over-procurement of other resources that may not be consistent with the Commission's other energy infrastructure goals.

As discussed above, it is anticipated that operational changes will occur with an increased integration of solar and other non-dispatchable capacity in the near future. The Commission should anticipate a need to reexamine the NQC counting rules for solar within the next few years as new solar technologies come on line, as the CAISO and WECC consider the requisite changes to grid management, and as experience is gained. LSA suggests that at least in the case of solar resources it may make more sense to maintain the current NQC counting system for solar to allow time to see if the integration study efforts provide additional useful information on solar's

capacity credits. This is appropriate because of the limited focus on the impact of solar generation to date.

C. A Location- and Technology-Specific Methodology Should be Adopted for New Large-Scale Solar Projects' Initial Capacity Value.

As noted in the Workshop Report at pages 16-17, LSA presented an outline for developing an initial capacity value for new solar resources that would capture differences in technologies as well as locations. The goal behind LSA's proposal is to properly reflect differences in technology and innovation, so that new projects are not presumed to perform no better than some set of older and potentially different types or vintages of technology. This proposal would use location-specific data, reflecting both the degree of solar radiation (i.e., solar fuel) as well as other relevant meteorological conditions to create a project-specific proxy capacity value reflective of the specific technology to be employed at the site. This proxy value would supply the initial data set used for the standard three-year rolling average capacity calculation, with actual historic data eventually replacing the original values going forward. The proxy performance data would then be utilized for the then-applicable NQC counting convention. LSA suggests that this approach would be used for both new projects as well as new incremental solar capacity additions at existing sites.

LSA's recommendation for the first year NQC determination avoids some potential issues with imputing a TAC-area based assumption on new projects in different solar resource locations with potentially very different generation technology types that may have differences in their generation profiles. Because of this diversity, application of a TAC-based production assumption like that proposed to be applied to wind would not be appropriate. LSA's recommendation avoids the problem associated with projects located in locations that do not

have existing solar resources. It also avoids the problem of failing to account for technological innovations in new solar resources or nuances in solar resource locations.

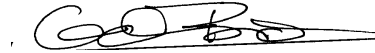
LSA therefore asks that the Commission adopt this conceptual approach. Because the wave of new large-scale solar projects is expected to arrive after the 2010 RA compliance year, some additional time would be available to permit the LSA and others interested in new solar development to work with the Energy Division and CEC to better standardize this approach, including how to properly undertake the production modeling in a way that will maintain confidential treatment of proprietary information while allowing for an appropriate validation of results.

III. Conclusion

LSA appreciates the opportunity to present the perspective of large-scale solar generation interests in the continuing refinement of the Commission's RA program. California and the West will soon see a substantial expansion of solar generation capacity serving loads in a clean and reliable manner. Because the expansion of large-scale solar and its variety of new technologies present new challenges, care must be taken to properly assess the capacity contribution of solar facilities. Limiting the determination of NQC value to only the super-peak hours fails to recognize the stable energy production expectation from these technologies. Because there will be significant new solar technologies coming on line, as well as significant changes to the way the transmission networks will be operated in light of increasing integration of renewables in the coming years, LSA urges the Commission to maintain the current counting conventions for solar for the next few years to allow time to see if the coming integration study efforts provide additional useful information on solar's capacity credits. Additional time will avoid multiple rounds of methodological changes before the increased solar capacity additions

come online after 2010. Finally, LSA requests approval of its proposal for establishing the initial NQC for new solar resource capacity additions based upon a project- and location-specific proxy for the three-year rolling average value until such time as there is sufficient actual production history for the solar resource.

Respectfully submitted,



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Certificate of Service

I hereby certify that I have this day served a copy of “COMMENTS OF THE LARGE-SCALE SOLAR ASSOCIATION ON WORKSHOP REPORT” on all known parties to R.08-01-025 by transmitting an e-mail message with the document attached to each party named in the official service list. Parties without e-mail addresses were mailed a properly addressed copy by first-class mail with postage prepaid.

Executed on February 17, 2009 at Sacramento, California

/s/

Eric Janssen

R.08-01-025
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February 17, 2009

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