

**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.

R.11-10-023
Filed October 20, 2011

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON PROPOSED DECISION ADOPTING LOCAL PROCUREMENT
OBLIGATIONS FOR 2014, A FLEXIBLE CAPACITY FRAMEWORK,
AND FURTHER REFINING THE RESOURCE ADEQUACY PROGRAM**

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**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.

R.11-10-023
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**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON PROPOSED DECISION ADOPTING LOCAL PROCUREMENT
OBLIGATIONS FOR 2014, A FLEXIBLE CAPACITY FRAMEWORK,
AND FURTHER REFINING THE RESOURCE ADEQUACY PROGRAM**

In accordance with the provisions of Rule 4.3 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)¹ hereby submits these comments on *the Proposed Decision Adopting Local Procurement Obligations, for 2014, a Flexible Capacity Framework, and Refining the Resource Adequacy Program*, issued by Administrative Law Judge David M. Gamson on May 28, 2013 (“Proposed Decision”).

I. INTRODUCTION.

As the Proposed Decision notes,² CESA advocates for a detailed framework to be established by the Commission to determine how flexible resource adequacy (“RA”) capacity procurement obligations should be met by Load Serving Entities (“LSEs”) that will explicitly

¹ The California Energy Storage Alliance consists of A123 Systems, Alton Energy, AU Optronics, Beacon Power, CALMAC, Chevron Energy Solutions, Christenson Electric Inc., Clean Energy Systems Inc., CODA Energy, Deeya Energy, DN Tanks, East Penn Manufacturing Co., Energy Cache, EnerVault, FAFCO Thermal Storage Systems, Flextronics, Foresight Renewable Systems, Greensmith Energy Management Systems, Growing Energy Labs, Gridtential Energy, Halotechnics, Hecate Energy LLC, Hydrogenics, Ice Energy, Innovation Core SEI, Invenergy, KYOCERA Solar, LG Chem, LightSail Energy, NextEra Energy Resources, Panasonic, PowerTree Services, Primus Power, RedFlow Technologies, RES Americas, Saft America, Samsung SDI, Sharp Labs of America, Silent Power, SolarCity, Stem, Sovereign Energy Storage LLC, Sumitomo Corporation of America, TAS Energy, UniEnergy Technologies, and Xtreme Power. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. <http://storagealliance.org>.

² Proposed Decision, pp. 27-28.

include preferred resources and all forms of energy storage, and that specifically takes into full consideration all of the flexible capabilities of energy storage resources. The framework should explicitly allow energy storage resources to provide energy, capacity, and ancillary services. Specifically, the framework should address such services being provided by energy storage resources including, but not limited to, (i) standalone energy storage systems, (ii) energy storage integrated with preferred resources, and (iii) energy storage integrated with fossil generating resources.³

CESA further advocates (as it also has in the Commission's Long Term Procurement Planning ("LTPP") proceeding) for adoption of: (a) a net qualifying capacity ("NQC") value for energy storage resources with less than three-hour capacity by which they can be allocated MWs of flexible RA capacity corresponding to their sustained discharge over 15 minute intervals,⁴ and (b) a multi-year contracting mechanism for procurement of flexible RA capacity that includes energy storage resources.⁵ Finally, CESA urges the Commission to proactively address the subject of deliverability of distributed generation ("DG") for purposes of NQC.

II. THE COMMISSION'S FLEXIBLE RESOURCE ADEQUACY FRAMEWORK SHOULD BE SPECIFICALLY DESIGNED TO EMPHASISE THE PRIMACY OF PREFERRED RESOURCES AND ENERGY STORAGE.

CESA advocates that the Commission's flexible resource adequacy framework should specifically prioritize preferred resources and energy storage resources, which may provide flexible capacity with lower emissions than fossil-fueled resources. This is consistent with other

³ Energy storage is capable of providing energy, capacity, and ancillary services simultaneously or sequentially, and should therefore not be arbitrarily limited to providing flexible RA capacity to the exclusion of other energy related products and ancillary services, either expressly or as an unintended consequence of Commission policies established in this and other Commission proceedings. *See, Comments of the California Energy Storage Alliance on Proposed Decision Adopting Long-Term Procurement Obligations for 2013 and Further Refining the Resource Adequacy Program*, filed June 11, 2012.

⁴ *See, Reply Comments of the California Energy Storage Alliance on Administrative Law Judge's Ruling Seeking Comment on Workshop Topics*, filed October 23, 2012, in R.12-03-014.

⁵ *Id.*

proceedings and aspects of asset procurement planning, which collectively emphasize the primacy of preferred resources and energy storage resources in asset procurement. CESA agrees completely with the Proposed Decision's agreement with the approach to addressing resources such as energy storage recommended by SDG&E, PG&E and SCE:

“SDG&E recommends further vetting and deliberations concerning eligibility criteria encouraging the provision of flexible capacity by suppliers representing energy-storage technologies, demand response, renewable resources, and use-limited.

PG&E recommends the Commission and the parties work to ensure that the flexible component of the RA program is structured so that it fully captures all of the flexibility attributes needed to operate the system reliably, and so that it does not unintentionally disadvantage available non-traditional resources (such as demand response, energy efficiency, and storage) that may be able to help meet those flexibility requirements cost-effectively but with less GHG impact than traditional, fossil fuel-powered resources.

SCE similarly recommends refinements to the interim flexible capacity procurement requirements should be further discussed in workshops later this year and resolved in time for implementation in the 2015 RA compliance cycle, including establishment of refined eligibility criteria and/or removal of participation barriers for qualified energy storage, demand response, and non-hydro use limited resources.

We will prioritize this issue as a refinement to the adopted interim flexible capacity framework and work with parties to resolve the issue in a decision in June 2014.” (pp. 47-48).

This addresses several points. First, the flexible component of the RA program should not disadvantage preferred resources and energy storage resources through asset criteria, valuation specifics, or other program details. For example, 3-hour discharge requirements may be overly restrictive and prevent certain preferred resources or energy storage resources from participating; such requirements should be evaluated and adjusted to allow full participation of preferred resources and energy storage resources.

Second, asset evaluation under the flexible component of the RA program should fully account for all system benefits provided by resources. Notably, dynamic assets capable of

providing multiple grid services should have their full array of benefit streams recognized and properly valued, so that assets may be procured that provide the greatest array of highest-value and highest-need grid services at the lowest cost. Likewise, system needs regarding flexibility and flexible assets should be fully and properly laid out; this will allow for procuring assets that best align with system needs and have the lowest cost and environmental impact.

CESA ultimately agrees with the quoted IOUs that further conversations should occur that refine eligibility criteria, system needs evaluation, asset evaluation, and other aspects of flexible capacity procurement in a way that properly allows for full and fair participation of energy storage and other procured assets.

III. THE COMMISSION SHOULD ADOPT A NET QUALIFYING CAPACITY VALUE FOR ENERGY STORAGE RESOURCES WITH LESS THAN THREE-HOUR CAPACITY.

For no apparent reason, the Proposed Decision begins on entirely the wrong foot in addressing the definition of “Flexible Capacity”:

“In this decision, we also adopt an interim ‘flexible capacity’ framework as an additional component of local capacity requirements. ‘Flexible need’ is defined as the greatest 3-hour continuous amount of ramping power needed in each month by the California ISO to manage grid reliability. Resources will be considered as ‘flexible capacity’ if they can sustain or increase output during the hours of the ramping period of ‘flexible need.’” (pp. 2-3).⁶

The requirement for three-hour capacity is overly restrictive and accordingly disadvantages preferred resources and energy storage resources. It is also unnecessary given the actual system needs related to flexible capacity, as flexible capacity can be provided by individual resources and/or a combination of resources with sustained output capabilities less

⁶ In fairness, it may be that the unstated linkage is to the view expressed by the CAISO that “flexible capacity needs increase by about 800-1000 MW year over year in non-peak months, with this increase almost exclusively caused by 3-hour ramp arising from existing load net of increasing solar generation, not caused by overall increase in peak load.” (Proposed Decision, p. 13).

than three hours. Thus, CESA advocates that the Commission strike the requirement of three hours output capability and provides a valuation methodology that allows for, and properly values, assets with output durations less than three hours. Specifically, methodologies should allow for and value outputs of 15 minutes, as certain preferred resources and energy storage resources capable of providing flexible capacity have approximately 15-minute outputs and others can be adequately evaluated using outputs of 15-minute intervals.

As CESA has previously highlighted, the Commission already considers energy storage to have an NQC value at least equivalent to demand response (“DR”) resources:⁷

“. . . we point out that the existing QC counting methodology differentiates in general between three classes of resources in setting QC – dispatchable resources, non-dispatchable resources, and wind/solar resources. Storage is not called out specifically, but depending on whether it was dispatchable or non-dispatchable, storage would count towards RA obligations under the existing QC methodology.” (p. 23).

In its Post-Workshop Comments filed in the LTPP proceeding,⁸ SCE proposed a one-hour floor NQC value for energy storage an interim measure.⁹ In SCE’s view, energy storage should be evaluated in local capacity requirement (“LCR”) solicitations as an asset class comparable to conventional generation resources. CESA suggested in its response to SCE that:

“A more appropriate NQC value for energy storage with less than one hour capacity would be to use the capacity formula that the CAISO applies under its Regulation Energy Management (“REM”) market for frequency regulation, in which energy storage resources with less than one hour of capacity are allocated MWs of capacity corresponding to their sustained output over 15 minutes” (CESA Comments, p. 9).

⁷ *Decision Adopting Local Procurement Obligations for 2013 and Further Refining the Resource Adequacy Program*, D.12-06-025, issued June 21, 2012.

⁸ *Comments of Southern California Edison on the Joint LTPP/Storage Workshop, held September 7, 2012*, filed October 5, 2012.

⁹ “Energy storage devices with one hour or greater capacity should receive an NQC equal to their maximum sustainable rate of output. . . Energy storage devices with less than one hour of capacity should not have an NQC, since their primary value is in ancillary service markets and/or as frequency response resources.” (SCE Comments, pp. 15-16).

CESA submits that the NQC discussion needs to be part of the Commission's consideration of flexible RA capacity, ramping, and the move from hourly to 15-minute scheduling that is well under way at the CAISO and nationally.¹⁰ The Commission should accordingly revise flexible capacity resource requirements to allow for assets with 15-minute output capabilities, and utilize asset valuation methodologies that properly account for sub-one-hour output intervals.

IV. THE COMMISSION SHOULD ADDRESS MULTI-YEAR CONTRACTING FOR FLEXIBLE RESOURCE ADEQUACY CAPACITY PROVIDED BY ENERGY STORAGE.

There is now a broad stakeholder consensus that a contracting mechanism for multi-year flexible RA capacity must be developed as soon as possible.¹¹ CESA is on record in this and other Commission proceedings as advocating for multi-year or long-term (*i.e.*, 10 years or greater) contracting for flexible RA capacity provided by energy storage resources.

CESA fundamentally agrees with the motion regarding multi-year procurement that Pacific Gas and Electric Company ("PG&E") filed concurrently in this proceeding and in the LTPP proceeding in September 2012.¹² In its motion, PG&E persuasively argued:

"There appears to be an emerging consensus among the parties that participate in the various procurement-related proceedings at the Commission that the current, one year forward resource adequacy program should be improved in at least two respects. First, it should take into account the need for some level of resource "flexibility" in order for the system to be operated reliably. . . . Second, the current, one-year forward resource adequacy procurement requirement applicable to all load serving entities should be extended to a multi-year timeframe. The Commission has recognized the importance of both

¹⁰ The CAISO's is currently engaged in a stakeholder process devoted to implementation of the Federal Energy Regulatory Commission's Order No. 764 removing intra-hourly transmission scheduling barriers to integration of variable energy resources.

¹¹ *Long Term Resource Adequacy Summit*, February 26, 2013.

¹² *Motion of Pacific Gas and Electric Company to Move the Multi-Year Procurement Requirement Issue From the Long-Term Procurement proceeding to the Resource Adequacy Proceeding*, filed September 20, 2012 ("PG&E Motion").

issues, and is currently considering both of them. Flexibility is being addressed in this proceeding, and the multi-year procurement requirement is currently slated to be addressed in Track 3 of the LTPP. PG&E requests that the two issues be considered together, in this [RA] proceeding where efforts are already underway to address flexibility. The two topics are too closely related to be artificially separated.” (pp. 2-3).

The Proposed Decision acknowledges this state of affairs, and notes the CAISO’s reiterated statements of its concern that the Commission needs to address the issue in some manner, but yet inexplicably gives no indication whatsoever of how, when, or where the Commission may determine to address the subject.¹³ CESA advocates that multi-year procurement timelines should be explicitly addressed in the RA proceeding, and echoes the statements of PG&E in the section referenced above. Especially with the ongoing shift toward intermittent generation resources, multi-year procurement requirements in RA proceedings will allow for more efficient and lower-cost asset mixes and overall asset integration, directly benefiting system reliability and affordability.

V. THE COMMISSION SHOULD ADDRESS THE SUBJECT OF DELIVERABILITY OF DISTRIBUTED GENERATION FOR DETERMINATION OF NET QUALIFYING CAPACITY.

CESA submits that the Commission should address the subject of DG deliverability as soon as possible. The Proposed Decision states:

“The ISO circulated a compliance proposal regarding the FERC Order on March 25 and proposed tariff language on April 2. After conducting stakeholder calls, receiving comments, and making appropriate modifications, the ISO has now filed tariffs with the FERC to respond to the FERC’s modifications.

Montauk Energy states that it appears that the ISO’s revised approach to allocation of distributed generation deliverability could be implemented without requiring any specific activity on the part of the Commission. IEP also believes that events appear to have overtaken the Commission’s consideration of deliverability for distributed generation. IEP has reviewed the ISO

¹³ To date the Commission has given no indication of how the PG&E Motion will be addressed.

compliance proposal and finds that the ISO has developed a reasonable response to the FERC orders on deliverability for distributed generation.

Given that FERC has not made a decision on this issue and impact of such decision remains to be seen, it is premature for the Commission to make any decisions on RA deliverability for distributed generation at this time.” (pp. 58).

CESA agrees that no Commission decision is needed at this time, but the subject should clearly be included in the stakeholder workshops to be scheduled and addressed in discussion of the details of the planned flexible capacity framework. Given capacity requirements included in the Proposed Decision, many smaller-capacity DG resources would not be eligible for consideration under flexible asset RA procurement. This potentially would eliminate participation of certain high-quality and low-cost DG resources, with related detrimental impacts on system performance and cost. It is accordingly prudent for the Commission to begin proceedings that will identify the desirability and feasibility of including DG resources in flexible capacity RA procurement, and appropriately establish frameworks for allowing and evaluating DG resources.

VI. CONCLUSION.

CESA appreciates the opportunity to submit these comments on the Proposed Decision, and looks forward to working with the Commission and stakeholders in the next phase of this proceeding.

Respectfully submitted,



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