

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



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Order Instituting Rulemaking to Oversee
the Resource Adequacy Program, Consider
Program Refinements, and Establish
Annual Local and Flexible Procurement
Obligations for the 2019 and 2020
Compliance Years.

Rulemaking 17-09-020
(Filed September 28, 2017)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON THE SCOPING MEMO AND RULING OF ASSIGNED COMMISSIONER AND
ADMINISTRATIVE LAW JUDGE**

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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)¹ hereby submit these comments on the *Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge* (“Scoping Memo”), issued by Commissioner Liane M. Randolph and Administrative Law Judge Peter V. Allen on January 18, 2018.

¹ 8minutenergy Renewables, Able Grid Energy Solutions, Adara Power, Advanced Microgrid Solutions, AES Energy Storage, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Brenmiller Energy, Bright Energy Storage Technologies, BrightSource Energy, Brookfield, Consolidated Edison Development, Inc., Customized Energy Solutions, Demand Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, ElectrIQ Power, eMotorWerks, Inc., Enel X, Energport, Energy Storage Systems Inc., ENGIE, GAF, Geli, Greensmith Energy, Gridscape Solutions, Gridtential Energy, Inc., IE Softworks, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Johnson Controls, LG Chem Power, Inc., Lendlease Energy Development, Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NICE America Research, NRG Energy, Inc., Ormat Technologies, Parker Hannifin Corporation, Qnovo, Range Energy Storage, Recurrent Energy, RES Americas Inc., Semptra Renewables, Sharp Electronics Corporation, SNC Lavalin, Southwest Generation, Sovereign Energy, STOREME, Inc., Sunrun, Swell Energy, Viridity Energy, Wellhead Electric, and Younicos. 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>).

I. INTRODUCTION.

Resource Adequacy (“RA”) continues to be a key component of the state’s reliability and grid planning efforts. CESA strongly supports capacity planning efforts that ensure reliability and provide a sufficient and workable fleet by which the California Independent System Operator (“CAISO”) or other grid operators can effectively manage and balance the grid.

CESA mostly supports the proposed scope in the Scoping Memo but offers the following three key points of feedback.

- Track 1 should explicitly address updates to the Flex RA product to focus on shorter-duration ramping needs.
- Track 1 should explicitly authorize Effective Load Carrying Capacity (“ELCC”) calculation methodologies for solar and wind resources paired with energy storage. To boost the RA usefulness of solar and wind, on behalf of ratepayers, many resources seek to add energy storage ‘behind’ their renewable resource but need insight into how RA values will improve and be counted.
- Track 2 should include consideration of ‘Flex RA Down’ capacity needs to ensure reliability is assured through the RA process.
- More workshops should be used to develop RA Program considerations and incorporate stakeholder input.
- Track 2 should include efforts to decouple the Effective Flexible Capacity (“EFC”) of any resource from its Net Qualifying Capacity (“NQC”) so that flexibility solutions can be designed more efficiently and benefit ratepayers.
- RA counts for distributed energy resource (“DER”) aggregations should be developed.

CESA represents over 65 member companies focused on the energy storage industry in various ways. CESA promotes competitive outcomes and technology-neutral approaches to ensure good outcomes for ratepayers. CESA’s member companies respond to information and signals from markets, and the current RA market does not appear to signal that fast flexibility, downward ramping capability, load increase capability, or short minimum-run or minimum-down times are critical to ensuring a reliable grid that can be operated efficiently through market

mechanisms in nearly any circumstance. As such, CESA believes the RA planning tool may be under-performing in its ‘signaling’ of need, which may hinder larger reliability goals over time. The Scoping Memo for RA should ensure these key matters are addressed.

II. TRACK 1 SHOULD EXPLICITLY ADDRESS UPDATES TO THE FLEX RA PRODUCT TO FOCUS ON SHORTER-DURATION RAMPING NEEDS.

The Scoping Memo includes enhancements to the Flex RA product in stating that “[d]epending on the timing of this initiative, the Commission may consider revisions to our Flexible RA rules in either Track 1 or Track 2 to address ramping over shorter intervals...”.² The CAISO naturally needs a fleet with the right must-offer-obligations (“MOO”) that works for the conditions it faces. Absent this, the CAISO will leverage ‘backstop’ tools to meet its needs. These backstop efforts indicate inefficiency in the capacity planning market and fleet. The Commission should carefully ensure that the fleet yielded by the RA market is sufficient to meet the CAISO’s needs. This is an essential part of the Commission’s reliability planning and oversight role.

Fleet changes are occurring very quickly. Grid and economic conditions may lead to earlier retirements from older resources, and the RA market must be structured to manage this type of grid transition. Ensuring fair and appropriate valuation and eligibility for Flex RA are thus critical-path issues for the RA proceeding.

CESA notes that it provided proposals for changing the ‘counting eligibility’ of Flex RA resources in R.14-10-010.³ CESA appreciates the Commission’s consideration of these types of ideas as clear enhancements to Flex RA that are needed to ensure fast flexible resources are valued appropriately, compared with slower flexible resources.

² Scoping Memo, p. 6.

³ *California Energy Storage Alliance’s Preliminary Phase 3 Proposals*, filed on December 16, 2016, pp. 2-5.

III. TRACK 1 SHOULD AUTHORIZE CAPACITY COUNTING FOR SOLAR-PLUS-STORAGE OR OTHER ‘PLUS STORAGE’ RA TOOLS.

The Commission has implemented its ELCC counting convention but has not authorized any solar-plus-storage ELCCs. CESA requests the Commission definitively authorize an RA value for this important resource combination so that solar resources can improve the RA value with some amount of energy storage that is not designed to provide stand-alone RA. If it is assumed that an ELCC will improve for resources that have co-located energy storage, CESA requests that the Commission clarify the Year 1 assumed ELCC value. Additionally, consideration of the EFC of a paired resource is needed. Generally, a Ruling directing that the Commission supports this type of paired resource will support the development of these more helpful resource configurations.

Through power purchase agreements (“PPAs”), many ratepayers are paying for resources with declining RA values. Ratepayers should also be exposed to the financial benefits of boosting the RA value of resources by adding energy storage. Since ELCC calculations for solar and wind can be greatly affected by the performance of a resource in short-duration increments, the addition of even modest amounts of energy storage should be able to materially boost the ELCC of the combined resource. CESA notes that the energy storage in this ‘plus storage case’ would not have stand-alone RA value, but instead would be part of the renewable resource’s RA count. These resources would also have improved dispatchability and economics via the addition of energy storage.

The actual ‘counting’ of an ELCC for a solar-plus-storage can likely be determined using data amassed by the Commission. Importantly, if the Commission does not wish to be responsible for performing calculations of plus-storage ELCCs, the Commission should direct a ‘Year 1’ RA amount. For Year 2 and beyond, the normal ELCC calculation can reflect the performance and

dispatch of the paired resource, thereby increasing the ELCC. Consideration of EFCs is also warranted. Pre-approval or pre-authorization by the Commission of any approach should be clear so that developers have a clear path forward.

In light of these material system and ratepayer benefits, the Commission should prioritize the authorization of ELCCs for these plus-storage configurations. Nearly all new renewable resources may explore energy storage additions, and the lack of RA counting rules creates problematic and detrimental uncertainty for these projects, ultimately harming ratepayers.

CESA notes that it provided proposals for plus-storage ELCCs in the 2017 cycle of the RA proceeding.⁴ CESA appreciates the Commission's consideration of these types of ideas as clear enhancements to ELCC rules that are needed to ensure energy storage additions are appropriately reflected and valued in RA counting conventions, ultimately supporting improved reliability.

IV. MORE WORKSHOPS SHOULD BE USED TO DEVELOP RA PROGRAM CONSIDERATIONS AND INCORPORATE STAKEHOLDER INPUT.

Workshops provide opportunities for collaboration and in-person discussions. CESA believes workshops also provide opportunities to understand parties' views and collaborate on solutions in ways that may be limited through the comment process alone. CESA recommends the Commission consider greater use of workshops than what is proposed in the Scoping Memo.

V. TRACK 2 SHOULD INCLUDE CONSIDERATION OF FLEX RA DOWN CAPACITY NEEDS TO ENSURE RELIABILITY IS ASSURED THROUGH THE RA PROCESS.

Capacity market valuations and competitive outcomes are linked to actual grid dispatches and energy markets. The Commission should ensure any fleet yielded by the RA market is

⁴ *California Energy Storage Alliance's Preliminary Phase 3 Proposals*, filed on December 16, 2016, pp. 2-5.

sufficient to prudently address and meet grid conditions. As such, an RA value for downward flexibility is needed.

Any assumptions that overgeneration is an ‘operational issue only’ understates the complicated nature of energy markets, grid reliability, capacity contracts, and other factors. CESA believes it is discriminatory and unreasonable to presume, particularly in planning exercises, that curtailments can occur in unlimited quantities. In many cases, this is not true due to physical or contractual matters, and it relies on selective treatment in CAISO markets where some resources are shut off so others can run. An over-reliance on curtailment may also inadvertently authorize over-commitments of fossil resources, again where out-of-market costs lead to inefficiency and where greenhouse gas (“GHG”) emissions can be higher. In some cases, curtailments may be allowing import of unspecified power, potentially coal, into California. For all of these reasons, the Commission should explore how to evolve capacity planning to meet downward ramping needs. Such an exploration will likely yield a more efficient, clean, and reliable operation of the grid in ways that also signals to market participants and to contracting parties what types of grid services are valuable and why.

Further, the CAISO is regulated by the Federal Energy Regulatory Commission (“FERC”), which has historically focused on free-market concepts to meet reliability needs. Out-of-market actions, over time, indicate an inefficient market structure, which may prompt overhauls or increased penalties. California should hand a fleet to the CAISO where excessive curtailments, especially out-of-market curtailments are not deemed normal or unduly necessary.

Finally, downward ramping shortages are occurring and may occur with greater frequency. Planning for this eventuality with a smartly designed capacity planning tools is logical and reasonable for ratepayers, who may otherwise bear costs of out-of-market payments and backstop

procurement. CESA notes that resources willing to provide curtailment are actually signaling a willingness to provide Flex Down capacity at zero cost. This is important because it counters assertions that a new product might just be used to direct more payments to generators. That is not CESA's goal. Rather, CESA aims to position the CAISO to have efficient and sufficient fleets for meeting reliability needs. Consideration of all grid needs, including downward ramping and over-generation conditions, is appropriate for this RA proceeding and can be done in ways that boost procurement efficiencies and reliability on behalf of ratepayers. CESA plans to detail this matter in a proposal to be submitted by February 16, 2018.

VI. TRACK 2 SHOULD INCLUDE EFFORTS TO DECOUPLE THE EFC OF ANY RESOURCE FROM ITS NQC SO THAT FLEXIBILITY SOLUTIONS CAN BE DESIGNED MORE EFFICIENTLY.

With flexibility in the fleet becoming as important, if not more important, than peaking capacity, energy storage resources may face unreasonable under-valuations as capacity resources if their full flexibility offering is not efficiently valued because it must be also deemed deliverable at peak. Specifically, when an energy storage resource charges, it 'raises the belly of the duck' in a timely manner that reduces or serves flexibility needs in periods where grid conditions are not reflective of peak deliverability periods. The Commission should thus explore ways to further decouple eligibility and counting of an EFC from that of an NQC. CESA plans to detail this matter in a proposal to be submitted by February 16, 2018.

VII. RA COUNTS FOR DISTRIBUTED ENERGY RESOURCE AGGREGATIONS SHOULD BE DEVELOPED.

CESA recommends the Commission also scope into this RA proceeding an opportunity to develop and further the RA rules for DER aggregations. Currently, such aggregations participate in the CAISO as Non-Generator Resource ("NGR") Distributed Energy Resource Providers ("DERP"). The DERP model currently does not allow for RA value. Such resources also can take

the form of demand-reducing aggregations or exporting resources.⁵ A key issue for DERPs, however, is that such resources may be eligible for RA, but that their ‘typical retail use’ is not currently measured. These types of considerations should be explored so that ratepayers can benefit from competitive RA markets that allow for participation from distributed as well as centralized resources.

VIII. CONCLUSION.

CESA appreciates the opportunity to submit comments on the Scoping Memo. The RA proceeding is important for ensuring reliability and for shaping the fleet. CESA greatly looks forward to working with the Commission and parties on the further development of a durable and robust RA program.

Respectfully submitted,



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⁵ CESA understands that RA values for DERPs are not authorized under current rules. CESA recognizes that such resources may be eligible for RA value through the separate “RA Deliverability for Distributed Generation” rules, but this may not apply for non-exporting DERPs.