

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



**FILED**

03/04/19  
04:59 PM

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)

**TRACK 3 PROPOSAL OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
IN RESPONSE TO THE AMENDED SCOPING MEMO AND RULING OF ASSIGNED  
COMMISSIONER**

Alex J. Morris  
Vice President, Policy & Operations

Jin Noh  
Policy Manager

**CALIFORNIA ENERGY STORAGE ALLIANCE**  
2150 Allston Way, Suite 400  
Berkeley, California 94704  
Telephone: (310) 617-3441  
Email: [amorris@storagealliance.org](mailto:amorris@storagealliance.org)

March 4, 2019

**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 and Flexible Procurement Obligations  
for the 2019 and 2020 Compliance Years.

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

**TRACK 3 PROPOSAL OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
IN RESPONSE TO THE AMENDED SCOPING MEMO AND RULING OF ASSIGNED  
COMMISSIONER**

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)<sup>1</sup> hereby submits this Track 3 proposal in response to the *Amended Scoping Memo and Ruling of Assigned Commissioner* (“Scoping Memo”), issued on January 29, 2019. Pursuant to the *E-Mail Ruling Extending Track 3 Proposal Deadline* (“E-Mail Ruling”), issued by Administrative Law Judge

---

<sup>1</sup> 174 Power Global, 8minutenergy Renewables, Able Grid Energy Solutions, Advanced Microgrid Solutions, Alligant Scientific, LLC, AltaGas Services, Amber Kinetics, Ameresco, American Honda Motor Company, Inc., Avangrid Renewables, Axiom Exergy, Better Energies, Boston Energy Trading & Marketing, Brennmiller Energy, Bright Energy Storage Technologies, Brookfield Renewables, Carbon Solutions Group, Clean Energy Associates, ConEd Battery Development, Customized Energy Solutions, Dimension Renewable Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, EDF Renewable Energy, ElectriQ Power, eMotorWerks, Inc., Enel X North America, Energport, Engie Storage, E.ON Climate & Renewables North America, esVolta, Fluence, Form Energy, GAF, General Electric Company, Greensmith Energy, Gridwiz Inc., Hecate Grid LLC, Ingersoll Rand, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Johnson Controls, Lendlease Energy Development, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Energy Solutions, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, NantEnergy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., Nuvve, Pattern Energy, Pintail Power, Primus Power, Polyjoule, Quidnet Energy, Range Energy Storage Systems, Recurrent Energy, Renewable Energy Systems (RES), SNC-Lavalin, Southwest Generation, Sovereign Energy, Stem, STOREME, Inc., Sunrun, Swell Energy, Tenaska, Inc., Tesla, True North Venture Partners, Viridity Energy, VRB Energy, WattTime, Wellhead Electric, and Yunicos. 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>).

(“ALJ”) Debbie Chiv on February 22, 2019, CESA timely files its Track 3 proposal on March 4, 2019.

## **I. INTRODUCTION.**

CESA appreciates the opportunity to comment on the Ruling and related Track 3 proposed scope.

The Commission should focus on enhancements to the RA program that address both near-term and longer-term needs. In fact, a focus on longer-term issues can be implemented and tuned with less rancor, allowing for reasoned discussion by the CPUC and stakeholders. Alternatively, when pressing, material, and binding issues are addressed with speed and urgency, the commission may be less able to evaluate compromise solutions as many stakeholders may instead express less flexibility due to concerns about zero-sum game outcomes, etc.

Energy storage solutions are clearly a growing part of the California electric mix and of the RA program. CESA’s recommended proposals, enhancements, and areas of focus highlight smart near-term and long-term solutions that are or will be needed or beneficial to the RA program. The Commission knows that RA ensures that LSEs show a viable fleet to the CAISO, along with sufficient must-offer obligations for adequate market participation. While some products and services, such as ‘flex down’ are provided without enforcements or RA capacity payments at this time, it is reasonable to assume these services may become more important and may not be sufficient absent appropriate market designs and price signals. Now is the time to act on key energy storage directed market enhancements.

CESA is an industry advocacy association focused on grid-connected energy storage. CESA’s mission is to make energy storage a mainstream resource that accelerates the adoption of renewable energy and promotes a cleaner, more efficient, reliable, affordable, and secure electric

power system. The CAISO's ESDER initiative specifically addressed market participation pathways for energy storage in select applications and is a core priority of CESA's.

CESA is a 501(c)(6) non-profit that represents approximately 80 member-companies and leaders in the energy storage industry.<sup>2</sup> [www.storagealliance.org](http://www.storagealliance.org)

## **II. THE COMMISSION SHOULD AUTHORIZE APPROPRIATE SOLAR-PLUS-STORAGE AND OTHER 'PLUS STORAGE' RA COUNTS IN TRACK 3**

CESA strongly supports the inclusion of the topic of determining RA 'counts' for storage-combined resources, such as solar plus storage. Resources and developers bearing costs to provide extra benefits to the system, *e.g.* a solar farm that has lower intermittency and can generate further into the evening should have a superior RA count.

To do this, RA counting conventions should establish a "Year 0" RA count for hybrid solar-plus-storage and wind-plus-storage resources. The CPUC should also direct a working group

---

<sup>2</sup> 174 Power Global, 8minutenergy Renewables, Able Grid Energy Solutions, Advanced Microgrid Solutions, Alligant Scientific, LLC, AltaGas Services, Amber Kinetics, Ameresco, American Honda Motor Company, Inc., Avangrid Renewables, Axiom Exergy, Better Energies, Boston Energy Trading & Marketing, Brenmiller Energy, Bright Energy Storage Technologies, Brookfield Renewables, Carbon Solutions Group, Clean Energy Associates, ConEd Battery Development, Customized Energy Solutions, Dimension Renewable Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, EDF Renewable Energy, ElectrIQ Power, eMotorWerks, Inc., Enel X North America, Energport, Engie Storage, E.ON Climate & Renewables North America, esVolta, Fluence, Form Energy, GAF, General Electric Company, Greensmith Energy, Gridwiz Inc., Hecate Grid LLC, Ingersoll Rand, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Johnson Controls, Lendlease Energy Development, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Energy Solutions, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, NantEnergy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., Nuvve, Pattern Energy, Pintail Power, Primus Power, Polyjoule, Quidnet Energy, Range Energy Storage Systems, Recurrent Energy, Renewable Energy Systems (RES), SNC-Lavalin, Southwest Generation, Sovereign Energy, Stem, STOREME, Inc., Sunrun, Swell Energy, Tenaska, Inc., Tesla, True North Venture Partners, Viridity Energy, VRB Energy, WattTime, 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>).

to explore how a historical data-based re-calculation for a site-specific solar plus storage resource's ELCC could be used.

For these types of hybrid resources, ratepayers can benefit from the lower costs associated with tax credits and a single interconnection in addition to downstream cost-savings associated with better operational performance, more output from a renewable facility, and lower 'integration' needs, etc.

CESA does not support a general 'peanut-buttering' of the capacity benefits of storage to other resources since this approach removes the incentives for individual developers to add useful capabilities, such as storage, to solar farms, etc.

Proposal 1: The Commission should authorize the following RA rules in Track 3:

- RA rules should establish that solar-plus-storage ELCC values can exceed traditional ELCC values.
- Solar-plus-storage ELCC values should be established based on forecasted 'Year 0' operations, and historical performance should inform RA values for Year 1 and beyond.
- Solar thermal resources should be able to access these updated ELCCs where appropriate.

To develop this proposal, CESA recommends the use of workshops or technical working groups to build a record regarding this matter. Key questions for this effort can be, but are not limited to, the following:

- What is the current status and statistics of solar-plus-storage and wind-plus-storage procurement?
- What are the historical trends and future projections in ELCC values of standalone variable renewable resources?
- What are the benefits, costs, and risks of procuring standalone variable renewable resources versus those paired with energy storage resources?
- Are there modeling and implementation complexities to consider in reforming the ELCC methodology to appropriately value resources with energy storage?
- What are the representative production profiles and configurations of solar-plus-storage and wind-plus-storage resources? If more simplified approaches are pursued, how do we determine what is 'representative'?
- How will the ELCC values be affected by whether and by how much the paired energy storage resources charges from the grid versus the renewable resource? How will ELCC values be affected by the sizing of the energy storage relative to the nameplate capacity of

the renewable resource? How will ELCC values be affected by the energy storage duration (e.g., load following versus load shifting applications)?

- How can the ELCC methodology be refined for different types of paired energy storage technologies?
- Can the ELCC value be modified when retrofitting energy storage with existing variable renewable generation? What are the financial and competitive implications in allowing this?

### **III. MULTIPLE ADDITIONAL ITEMS SHOULD BE INCLUDED IN SCOPE FOR TRACK 3 POLICY REFINEMENTS**

While CESA supports the inclusion of ‘plus storage’ hybrid resources which need fair ELCC counts in light of their superior capacity and operational abilities, several other items should be included in Track 3.

Many of these changes are important and implementable now since they can be pursued with little to no consequences to existing RA market prices. By tackling these changes before the conditions become materially binding or consequential, stakeholders can support implementation and anticipate future changes without upsetting the balance of benefits and burdens in resource contracts, operations, etc.

First, the Commission should unbundle the system components of RA from the flexibility components of RA. Storage developers can deliver flexible capacity benefits in different configurations, and with potentially different interconnection costs, from approaches where system RA requirements are layered on top of flexibility benefits.

Proposal 2: the Commission should unbundle system and flex RA attributes starting in the 2020 RA year. The Commission should also support and incorporate findings from the CAISO’s ‘flex only’ deliverability studies, which could inform EFCs (and NQCs) for resources.

Second, the Flex-RA definition should be adjusted to fit with operational needs by ‘counting’ a resource’s flexible capacity based on its ramping ability across a shorter period of

time. CESA recommends any new flex capacity determination be based off of operational needs, such as those discussed in the CAISO's Flexible Resource Adequacy Criteria and Must Offer Obligations (FRACMOO) initiative which identified 15-minute and 5-minute flexibility as key system needs.

Proposal 3: The Commission should re-define EFC based on sub-hourly, e.g. 15-minute trough-to-peak, ramp-ability. This new 'count' for ramping should be used in place of any older definition.

Third, behind-the-meter and distributed energy resource aggregations RA capacity counts should be established and explored for enhancements. While demand response resources, including those coupled with energy storage, can count for RA, CESA understands that exporting DERs currently cannot count for RA.<sup>3</sup> Some studies indicate large amounts of local RA may be additionally available from DERs. Track 3 should allow for record-building and a determination of how to provide market access from this resource class.

Proposal 4: The Commission should direct workshops to establish RA counts for DERs and to explore any related performance, participation or 'offer' obligations for these resources.

#### **IV. CONCLUSION.**

CESA appreciates the opportunity to submit this Track 3 proposal and looks forward to continuing to be an active stakeholder in this proceeding.

Respectfully submitted,



Alex J. Morris

---

<sup>3</sup> Footnote to CAISO RA Tariff Section 40.4.6

Vice President, Policy & Operations  
**CALIFORNIA ENERGY STORAGE ALLIANCE**  
2150 Allston Way, Suite 400  
Berkeley, California 94704  
Telephone: (310) 617-3441  
Email: [amorris@storagealliance.org](mailto:amorris@storagealliance.org)

Date: March 4, 2019