

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

Application of Southern California Edison Company (U338E) for Approval of the Results of Its 2013 Local Capacity Requirements Request for Offers for the Moorpark Sub-Area.

Application 14-11-016
(Filed November 26, 2014)

Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.

Rulemaking 16-02-007
(Filed February 11, 2016)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON THE SOUTHERN CALIFORNIA EDISON COMPANY'S REVISED MOORPARK
PROCUREMENT PLAN**

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

September 7, 2018

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

Application of Southern California Edison Company (U338E) for Approval of the Results of Its 2013 Local Capacity Requirements Request for Offers for the Moorpark Sub-Area.

Application 14-11-016
(Filed November 26, 2014)

Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.

Rulemaking 16-02-007
(Filed February 11, 2016)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON THE SOUTHERN CALIFORNIA EDISON COMPANY’S REVISED MOORPARK
PROCUREMENT PLAN**

In accordance with an e-mail from the California Public Utilities Commission (“Commission”) Energy Division on August 29, 2018 requesting comments on the revisions to the Revised Moorpark Sub-Area Local Capacity Requirements Procurement Plan (“Moorpark Procurement Plan”) from Southern California Edison Company (“SCE”), the California Energy Storage Alliance (“CESA”)¹ hereby submits these comments for the Commission’s consideration.

¹ 8minutenergy Renewables, Able Grid Energy Solutions, Advanced Microgrid Solutions, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Axiom Exergy, Brenmiller Energy, Bright Energy Storage Technologies, Brookfield Renewables, Carbon Solutions Group, Centrica Business Solutions, Consolidated Edison Development, Inc., Customized Energy Solutions, Dimension Renewable Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, ElectrIQ Power, eMotorWerks, Inc., Enel, Energport, ENGIE, E.ON Climate & Renewables North America, esVolta, Fluence Energy, GAF, General Electric Company, Greensmith Energy, Ingersoll Rand, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Iteros, Johnson Controls, Lendlease Energy Development, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, NantEnergy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NRG Energy, Inc., Parker Hannifin Corporation, Pintail Power, Primus Power, Range Energy Storage

CESA proposes two modifications to SCE’s proposed Resource Adequacy (“RA”) crediting for hybrid storage projects that are needed to ensure a successful solicitation:

- Ensure that estimated Effective Load Carrying Capability (“ELCC”) values for renewable resources firmed with storage are not under-estimated or limited by the size of the paired energy storage.
- Account for the reliability contribution of exports from behind-the-meter (“BTM”) hybrid resources.

I. INTRODUCTION.

SCE submitted its Revised Moorpark Procurement Plan in light of the issuance of Decision (“D.”) 18-06-030 in Track 1 of the RA proceeding (R.17-09-020) that “remove[d] the prohibition on combined storage and DR resources being eligible for RA” and determined that “parties should consider combined storage and DR resources to be eligible for system, local and flexible RA” going forward in this proceeding.² In the e-mail from Energy Division, it was clarified that the Commission had not set forth how the RA on combinations of energy storage and demand response (“DR”) resources should be counted, nor how other hybrid resources should be counted. Given that SCE proposed revisions to RA counting for hybrid resources as part of the Moorpark Sub-Area Local Capacity Requirements (“LCR”) Request for Offers (“RFO”), Energy Division created an opportunity for parties to comment on SCE’s proposed RA counting rules for hybrid resources.

Specifically, CESA observes that SCE proposes the following rules for accounting for Net Qualifying Capacity (“NQC”) and Effective Flexible Capacity (“EFC”) values for hybrid energy storage resources:

Systems, Recurrent Energy, Renewable Energy Systems (RES), Sempra Renewables, Sharp Electronics Corporation, SNC Lavalin, Southwest Generation, Sovereign Energy, Stem, STOREME, Inc., Sunrun, Swell Energy, True North Venture Partners, Viridity Energy, VRB Energy, 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>).

² D.18-06-030, p. 44.

- **Pairing battery with a dispatchable generating resource:** Since both paired resources are fully dispatchable, the NQC value is the sum of the two parts subject to the interconnection establishing deliverability, while the EFC value is the sum of the full Pmax of the generating resource and the full charge-discharge range of the battery.
- **Pairing battery with a non-dispatchable generating resource:** In cases where the paired battery is fully dispatchable, the NQC value is the sum of the ELCC of the solar/wind resource and the Pmax of the battery resource, while the EFC value comes from the EFC of the battery. In cases where the battery is not dispatchable and is merely self-scheduling, the NQC value is determined by ELCC value for the combined resource, but there would be no EFC value from the non-dispatchable battery.
- **Pairing battery with DR resource:** The NQC value is the sum of the two parts so long as export is not allowed.

CESA appreciates the opportunity to comment on SCE's proposed RA counting methodology for hybrid resources, as hybrid resources represent a growing class of resource configurations and deployments. In general, CESA is supportive of most of SCE's proposals, but has concerns specifically around what is meant by "self-scheduling" for energy storage resources that are paired with a non-dispatchable generating resource, since CESA believes that such resources could be dispatched smartly, even if self-scheduled from the point of view of the California Independent System Operator ("CAISO"), improving RA value. Likewise, CESA is concerned with the treatment of exported energy from BTM hybrid resources. CESA recommends that SCE's proposals around hybrid resource RA counting methodologies be more thoroughly addressed in Track 2 of the RA proceeding. However, in the meantime, the Commission should encourage effective interim methodologies for use in procurement by the load-serving entities ("LSEs") to address their identified needs.

II. THE COMBINED RA COUNT OF A HYBRID STORAGE PLUS RENEWABLE RESOURCE SHOULD BE HIGHER THAN THAT OF A STANDALONE RENEWABLE RESOURCE.

CESA notes that some resources may add energy storage to solar or wind resources in order to firm and shape output so as to improve the base (solar or wind) resource's ELCC value. Consider that a 100 MW solar farm may be augmented by a co-located 25 MW energy storage system with 30 minutes of energy duration capability. In this configuration, the energy storage amount would have limited RA value (3.125 MW)³ as a standalone resource, and the solar farm would have an ELCC based on current ELCC calculations. The paired energy storage resource could also be eligible for Federal Investment Tax Credit ("ITC") benefits from charging from the ITC-eligible generation resource. If the energy storage is operated to 'firm' and 'shape' the solar output by discharging during cloudy patches and, say, modestly extending production at the end of the day, the solar farm would likely warrant a higher ELCC value. CESA maintains that this increase in ELCC could materially exceed the standalone 3.125 MW count. This, along with the ITC or other benefits related to the energy storage system, may allow this approach to be cost-competitive. As CESA envisions this situation, however, the combined resource may at times appear as a 'self-schedule'.⁴ As such, CESA requests SCE clarify its recommendations regarding resources that 'self-schedule' so that the above outcome is reasonably authorized.

CESA is actively developing modeling efforts to calculate the improvements in the ELCC afforded through relatively small additions of energy storage. If full statistical modeling calculations are not available, CESA recommends that reasonable estimates of the combined

³ This 25 MW for 30-minute energy storage resource would have 12.5 MWh of energy. If valued based on its capability to deliver for four-hours, the RA count is 2.5 MW – *i.e.*, calculated based on $(25 \text{ MW} \times 0.5 \text{ h}) / 4 \text{ h} = 3.125 \text{ MW}$.

⁴ The actual scheduling of co-located resources could occur in various ways. CAISO procedures, Resource IDs, the availability and relevance of some forecasting tools, charging requirements for qualifying for the ITC, and other factors may inform how these resources are scheduled.

resources' ELCC be made. It is reasonable to assume the combined ELCC value should be higher than the what CESA understands the above configuration would 'count' for under SCE's proposal.

III. ADDITIONAL CONSIDERATION OF BEHIND-THE-METER RESOURCE CAPABILITY SHOULD BE EXPLORED, ESPECIALLY COUNTING THE CONTRIBUTION OF EXPORTS.

CESA supports the development of a NQC value for a facility with a "non-dispatchable" energy storage system and believes this may be an opportunity to examine, at a fundamental level, the routes to maximize the potential for BTM energy storage to deliver Local RA Capacity and RA more generally. CESA believes that SCE seeks to reasonably and fairly count the amount of reliably available dispatchable capacity while also avoiding counting resource capacity not reliably available for RA duties. SCE should try to overcome limitations in counting the very real reliability contributions that exported energy can provide. CESA understands that RA rules direct supply-side DR resources to participate in the CAISO's market, and so SCE proposes to use market participation pathways as the criterion for RA counting eligibility. Since the Proxy Demand Resource ("PDR") model only schedules DR actions but does not count any energy exports, SCE proposes to count RA for these resources without valuing exports.

CESA members have observed that these limitations on the counting and use of exports may 'leave value on the table'. Thus, CESA recommends that, for resources with the requisite interconnection to export, SCE endeavor to value this capability, thereby enabling a broader set of resources to cost-effectively contribute to capacity needs.

Additionally, while the PDR model supports energy storage configurations that are dispatchable through the CAISO markets, other 'firming' type of load modification programs, such as a permanent load shifting ("PLS") program, may also be useful and provide certainty to shape load, which may otherwise not exist. As such, the role for new load-modifying solutions, or

perhaps for reducing uncertainty, should be added to the proposed ‘counting’ approach, even if such a program is used in practice to reduce RA obligations, rather than to count as part of an RA showing.

IV. CONCLUSION.

CESA appreciates the opportunity to submit these comments on SCE’s Revised Moorpark Procurement Plan and looks forward to working with the Commission and SCE in ensuring the least-cost, best-fit resources are appropriately valued and selected in this RFO.

Respectfully submitted,



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

Date: September 7, 2018