

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

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 ORDER INSTITUTING RULEMAKING TO DEVELOP AN ELECTRICITY  
INTEGRATED RESOURCE PLANNING FRAMEWORK AND TO COORDINATE AND  
REFINE LONG-TERM PROCUREMENT PLANNING REQUIREMENTS**

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In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)<sup>1</sup> hereby submits these comments on the *Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements*, issued on February 11, 2016 (“OIR”).

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<sup>1</sup> 1 Energy Systems Inc., Advanced Microgrid Solutions, AES Energy Storage, Alstom Energy, Aquion Energy, Bright Energy Storage Technologies, Brookfield, California Environmental Associates, Consolidated Edison Development, Inc., Cumulus Energy Storage, Customized Energy Solutions, Demand Energy, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, ELSYS Inc., eMotorWerks, Inc., Energy Storage Systems, Inc., Enphase Energy, GE Energy Storage, Geli, Gordon & Rees, Green Charge Networks, Greensmith Energy, Gridscape Solutions, Gridtential Energy, Inc., Hitachi Chemical Co., Ice Energy, IMERGY Power Systems, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Invenergy LLC, Johnson Controls, JuiceBox Energy, K&L Gates, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Mitsubishi Corporation (Americas), NEC Energy Solutions, Inc., NextEra Energy Resources, NRG Solar LLC, OutBack Power Technologies, Panasonic, Parker Hannifin Corporation, Powertree Services Inc., Primus Power Corporation, Qnovo, Recurrent Energy, RES Americas Inc., Saft America Inc., Samsung SDI, Sharp Electronics Corporation, Skylar Capital Management, SolarCity, Sovereign Energy, Stem, SunEdison, SunPower, Toshiba International Corporation, Trina Energy Storage, Tri-Technic, UniEnergy Technologies, Wellhead Electric, 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.

The Commission is tasked with rethinking procurement processes to optimally procure least-cost, most-reliable, and cleanest resources to achieve the goals set out by Senate Bill (“SB”) 350. CESA understands that this is a tall, unprecedented order in the Commission’s history to optimize around these three parameters, which are already individually complex and come with tradeoffs – *e.g.*, optimizing procurement for the most reliable and least cost resources may not optimize for the cleanest resources. The challenge is compounded by the need to have the Integrated Resource Plan (“IRP”) framework in place by 2017, at which point load-serving entities (“LSEs”) will be required to file their Integrated Resource Plans (“IRPs”). CESA is therefore looking forward to working closely with the Commission and parties in establishing an IRP framework that ensures that California can meet its SB 350 requirements.

Overall, CESA strongly supports the scope of the OIR, in particular its focus during the 2016 procurement planning cycle to identify needs for new resources to meet local, flexible, and system resource adequacy (“RA”) requirements and to consider authorization of procurement to meet that need. CESA similarly supports the OIR’s consideration of unresolved issues from R.13-12-010, especially the need to develop and refine modeling assumptions to assess the need for additional flexible resources. The 50% Renewable Portfolio Standard (“RPS”) established by SB 350, the Commission’s recent Net Energy Metering (“NEM”) decision,<sup>2</sup> and extension of the federal Investment Tax Credit (“ITC”)<sup>3</sup> create an urgent need to model, assess the need, and procure flexible resources to ensure grid reliability while capturing all the greenhouse gas (“GHG”) emission benefits of California’s renewable investments.

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<sup>2</sup> See, *Decision Adopting Successor to Net Energy Metering Tariff*, issued on January 28, 2016, D.16-01-044.

<sup>3</sup> See, *Consolidated Appropriations Act, 2016*.

In these comments, CESA focuses on the need to develop procurement frameworks to advance toward near-term procurement authorizations and to consider alternative procurement mechanisms for demand-side resources to meet its SB 350 objectives. CESA also adds that the scope of this proceeding should also include regionalization of the California Independent System Operator (“CAISO”), which was missing from the Preliminary Scoping Memo.

**II. STRUCTURING OF THE RESOURCE AUTHORIZATION AND PROCUREMENT PROCESSES MUST BE PRIORITIZED IN 2016 GIVEN THE NEAR-TERM FLEXIBILITY NEEDS OF CALIFORNIA’S GRID.**

The OIR indicates that “it may be premature to assess need and authorize additional procurement in light of the most recent R.13-12-010 need analysis and the changing procurement landscape envisioned by SB 350.”<sup>4</sup> However, CESA believes that there is a sufficient record in R.13-12-010 that highlights near-term flexibility issues to immediately begin developing procurement frameworks and to advance toward near-term procurement authorizations that address these renewable integration needs. While procurement authorization decisions are unlikely for the 2016 procurement planning cycle, CESA recommends that structuring of the resource authorization and procurement processes to be prioritized in 2016 to allow for the actual procurement process to begin in 2017.

In R.13-12-010, the CAISO and Wellhead Electric Company, Inc. (“Wellhead”) submitted into the record their studies under high RPS scenarios to demonstrate the near-term need for flexible generation resources. Through its “no curtailments” simulation study under a 40% RPS in 2024 scenario, the CAISO identified significant upward and downward reserve shortfalls along with unsolved overgeneration for nearly every month (*i.e.*, nearly 10% of the

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<sup>4</sup> OIR, p. 3.

hours of the year).<sup>5</sup> The CAISO added that the “changes to the net load curve in the spring of 2015, for example, outpaced expectations, and significant renewable generation additions in 2016 and 2017 will only expedite the need for fast-ramping and flexible resources to balance the grid and mitigate over-generation.”<sup>6</sup> Wellhead also shared its sub-hourly modeling simulation results under 33% RPS by 2019 and 37% RPS by 2019 scenarios that highlighted an immediate need for renewable integration solutions today and in the near future. Its results showed a 37% increase in gigawatt-hours of overgeneration and 125% increase in the number of hours of overgeneration in its 5-minute interval simulations as compared to its hourly modeling simulations under a 33% RPS by 2019 scenario.<sup>7</sup> A similar 5-minute interval analysis under a 37% RPS by 2019 scenario showed overgeneration in as much as 18% of the hours in a single month.<sup>8</sup>

Given these near-term flexibility needs and the sufficient record demonstrating evidence of these needs, CESA believes that the OIR should prioritize how resource authorization and procurement will be structured for 2017. Perhaps through a separate track of this proceeding, the Commission should evaluate how flexible resources can be authorized and procured by prioritizing zero-GHG resources to the maximum extent possible and by establishing standards of reasonableness for relying on fossil fuel-based resources after having exhausted the available least-cost, reliable zero-GHG resources.

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<sup>5</sup> *California Independent System Operator Corporation Deterministic Studies*, submitted on May 8, 2015 in the *Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans*, R.13-12-010. p. 6.

<sup>6</sup> *Ibid*, p. 3.

<sup>7</sup> *Comments of the Wellhead Electric Company, Inc. to the California Independent System Operator Corporation’s May 8, 2015 Filing*, submitted on May 29, 2015 in the *Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans*, R.13-12-010.

<sup>8</sup> *Ibid*.

Furthermore, one of the key flexible resources that are available today is bulk energy storage, which faces unique procurement challenges but provides significant grid ramping benefits to integrate very large quantities of renewable energy. Again, the CAISO already submitted comments into the record of R.13-12-010 that identified the need for pumped storage capacity to meet the state’s RPS goals. Given the long development timelines of bulk energy storage resources, CESA recommends that this proceeding prioritize the evaluation of “cost-sharing mechanisms and, more generally, planning for the procurement of resources that may benefit customers served by more than one load-serving entity,”<sup>9</sup> as identified in the OIR.

**III. THE SCOPE OF THIS PROCEEDING SHOULD INCLUDE GREATER CONSIDERATION OF ALTERNATIVE PROCUREMENT MECHANISMS FOR DEMAND-SIDE RESOURCES.**

As the OIR considers how resource authorization and procurement processes are structured, CESA recommends that the Commission also rethink procurement processes to shift away from relying on traditional request for offers (“RFO”) procurement practices that have been a staple of the Long-Term Procurement Plans (“LTPP”). Rather, CESA requests that alternative procurement mechanisms also be considered and developed in this proceeding. CESA notes that many of the SB 350 requirements are related to the deployment of demand-side resources, including the goals to double energy efficiency savings in electricity and natural gas end-uses by 2030, to enhance transportation electrification efforts, and to enhance distribution system and demand-side energy management. Even the stated objectives to strengthen diversity and resilience of the bulk transmission and distribution system and to ensure local reliability can be met cost effectively by demand-side resources, which are located closer to loads and identified grid issues.

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<sup>9</sup> OIR, p. 24.

The modularity and ease of deployment of demand-side resources allows such alternative procurement mechanisms to be feasible and likely more cost effective from an ongoing administrative standpoint. In the December 2, 2015 workshop discussing the implementation of SB 350, the Commission identified a number of individual resource proceedings that will need to be coordinated with R.16-02-007, one of which is the Integrated Distributed Energy Resources (“IDER”) proceeding, R.14-10-003. Rather than building these mechanisms from scratch, the lessons and outcomes of the IDER proceeding should be integrated in the IRP proceeding and should inform IRP processes. Currently, the IDER proceeding is potentially considering alternative procurement mechanisms in “optimal” locations where the distribution line or circuit has sufficient hosting capacity and an identified need for deferral, but CESA believes that this analysis should be extended across the transmission and distribution system and that demand-side resources can be procured through tariffs or price signals rather than through traditional RFO processes.

**IV. THE IMPACT OF REGIONAL EXPANSION OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR SHOULD BE INCLUDED IN THE SCOPE OF THIS PROCEEDING.**

A key topic that is missing from the OIR is consideration of the impacts of regional expansion of the CAISO’s market on the pursuit of achieving the SB 350 goals. Studies have been commissioned by the CAISO to investigate these impacts, but the OIR does not include how these studies will inform the IRP processes. With a thoughtful and reasonable consideration of the benefits and limits of imports of out-of-state renewables and exports of in-state renewables, the IRP processes will better identify how much renewable and flexible resources are needed within the state and how much out-of-state resources can be reasonably relied upon to meet in-state grid needs. This is a critical issue that must be included in the scope of the OIR.

V. **CONCLUSION.**

CESA appreciates the opportunity to submit these comments on the OIR and looks forward to working with the Commission and parties as this proceeding progresses.

Respectfully submitted,



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