

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

Order Instituting Rulemaking to Consider  
Policy and Implementation Refinements to the  
Energy Storage Procurement Framework and  
Design Program (D.13-10-040, D.14-10-045)  
and related Action Plan of the California  
Energy Storage Roadmap.

Rulemaking 15-03-011  
(Filed on March 26, 2015)

**RESPONSES OF THE CALIFORNIA ENERGY STORAGE ALLIANCE TO THE  
ASSIGNED COMMISSIONER'S RULING REQUESTING RESPONSES TO  
QUESTIONS REGARDING HYBRID AND CO-LOCATED STORAGE RESOURCES**

Jin Noh  
Policy Director

Sergio Duenas  
Policy Manager

**CALIFORNIA ENERGY STORAGE ALLIANCE**  
2150 Allston Way, Suite 400  
Berkeley, California 94704  
Telephone: (510) 665-7811  
Email: [cesa\\_regulatory@storagealliance.org](mailto:cesa_regulatory@storagealliance.org)

December 3, 2021

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

Order Instituting Rulemaking to Consider Policy and Implementation Refinements to the Energy Storage Procurement Framework and Design Program (D.13-10-040, D.14-10-045) and related Action Plan of the California Energy Storage Roadmap.

Rulemaking 15-03-011  
(Filed on March 26, 2015)

**RESPONSES OF THE CALIFORNIA ENERGY STORAGE ALLIANCE TO THE  
ASSIGNED COMMISSIONER’S RULING REQUESTING RESPONSES TO  
QUESTIONS REGARDING HYBRID AND CO-LOCATED STORAGE RESOURCES**

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits this response to the *Assigned Commissioner’s Ruling Requesting Responses to Questions Regarding Hybrid and Co-Located Storage Resources* (“Ruling”), issued by Assigned Commissioner Martha Guzman Aceves on October 27, 2021.

**I. INTRODUCTION.**

CESA deeply appreciates the Commission’s attention to this matter. As highlighted in CESA’s Petition for Modification (“Petition”), clarity surrounding station power rules for hybrid and co-located assets is more important than ever before. While the pairing of energy storage resources with variable energy resources (“VERs”) was a novel solution when the Commission first issued Decisions (“D.”) 17-04-039 and 18-01-003 within Rulemaking (“R.”) 15-03-011, hybrid and co-located represent a the fastest growing type of assets in the California Independent System Operator’s (“CAISO”) footprint today.

According to data from the CAISO, over 4 GW of energy storage will be online by Q1 2022. Of those 4 GW, upwards of 1,000 MW (around 26%) are coming from hybrid and co-located configurations.<sup>1</sup> This trend is expected to continue, as recognized by the Commission in its Integrated Resource Planning (“IRP”) proceeding within D.21-06-035, where it stated the resources set to replace the capacity of the Diablo Canyon Power Plant “are expected to be largely incremental renewables paired with storage [...] that can deliver continuous power”.<sup>2</sup> Moreover, preliminary data from the CAISO’s Queue Cluster (“QC”) 14 shows that of the 94.5 GW of energy storage capacity are seeking interconnection in the latest cluster.<sup>3</sup> Of these, 32 GW (33.8%) are paired with solar photovoltaic (“PV”) generation and 2.7 GW (2.9%) are paired with wind generation.<sup>4</sup> These figures demonstrate that paired resources are poised to substantially contribute to meet California’s environmental targets in the near term while maintaining reliability in a cost-effective manner. CESA therefore believes it is urgent that the Commission provide the relief sought in the Petition as soon as possible to minimize delays in the contracting, development, and operation of these resources.

Overall, CESA’s Petition requests the Commission use its jurisdiction over station power issues to: (1) affirm that the rules for standalone in-front-of-the-meter (“IFOM”) energy storage, including the permitted netting rules, apply equally to hybrid and co-located resources; (2) affirm that hybrid and co-located resources have the right to self-supply their internal power needs, including station service, and avoid retail energy charges, as is the case with any conventional

---

<sup>1</sup> See, CAISO, *Energy Storage Forum – Energy Markets for the Future*, October, 28, 2021, at 4. Available at <http://www.caiso.com/Documents/Presentation-StorageForum-Oct28-2021.pdf>.

<sup>2</sup> CPUC, *Decision Requiring Procurement to Address Mid-Term Reliability (2023-2026) – D.21-06-035*, issued under R.20-05-003 June 30, 2021, at 44.

<sup>3</sup> CAISO, *Preliminary Cluster 14 Project List as of May 20, 2021*, May 26, 2021, available at <http://www.caiso.com/Documents/PreliminaryCluster14ProjectListasofMay20-2021.xlsx>.

<sup>4</sup> *Ibid.*

generator; and, (3) affirm that a single “high-side” meter is sufficient to delineate between wholesale and retail electricity draws.

In the Petition and in our Reply to Responses, CESA presented a thorough case and analysis regarding the importance of these issues, the specific modifications required to resolve them, and the Commission’s authority to enact them. In Responses to the Petition, several key stakeholders underscored the merits of the Petition, as well as the urgency of these matters. American Clean Power California (“ACP-CA”) noted that the case-by-case treatment of station power requirements poses a material risk to new, under-construction, and planned hybrid and co-located resources.<sup>5</sup> This fact was echoed by the Solar Energy Industries Association (“SEIA”), which noted that, absent clarity regarding these rules, the possibility exists that these projects will be assessed retail charges for loads at the combined generating facility, thus raising questions regarding their economic viability and, concomitantly, their ability to arrange necessary financing.<sup>6</sup> Furthermore, in contrast to arguments posed in Responses by the investor-owned utilities (“IOUs”), the CAISO agreed fully with the urgency and pertinence of the Petition, noting that the station power and netting rules in D.17-04-039 should apply to hybrid and co-located resources,<sup>7</sup> and that granting CESA’s Petition would not require any modification to the CAISO tariff since its provisions on station power are designed to accommodate such a clarification.<sup>8</sup>

The perspectives of these key industry stakeholders demonstrate the pressing nature of this issue and its irrefutable relation to maintaining the reliability of the electric grid and meeting ambitious procurement mandates such as those considered in D.21-06-035. In this context, CESA

---

<sup>5</sup> ACP-California Response, at 3.

<sup>6</sup> SEIA Response, at 3.

<sup>7</sup> CAISO Response, at 2.

<sup>8</sup> *Ibid*, at 5.

urges the Commission to provide timely relief sought by immediately moving towards the Proposed Decision (“PD”) and Final Decision process after reviewing Responses to the Ruling.

**II. THE SCOPE OF THE PETITION FOCUSES ON HYBRID AND CO-LOCATED RESOURCES AND DOES NOT ADDRESS OTHER RESOURCE TYPES, SUCH AS VEHICLE-TO-GRID RESOURCES.**

While D.17-04-039 applies to standalone IFOM energy storage resources and CESA’s Petition seeks to extend these rules and requirements for hybrid and co-located resources, the specific relief requested should not be immediately applied to other functional storage resource types, such as vehicle-to-grid (“V2G”) resources. Certain V2G projects may function as energy storage resources and interconnect under the Wholesale Distribution Access Tariff (“WDAT”), but there may be unique considerations for V2G projects where the Petition may not fully apply. For example, though the Petition does not seek to prescribe any specific metering configuration, the use of a single high-side meter to delineate station load treatment may not be directly applicable to V2G projects. As such, CESA recommends that, in resolving the matters of the Petition, the Commission specifically focus the scope on hybrid and co-located storage resources.

**III. RESPONSES TO QUESTIONS REGARDING HYBRID AND CO-LOCATED STORAGE RESOURCES.**

Given that the majority of questions are directed to seek further information on the contents of CESA’s Petition and analysis, our responses are brief in order to avoid repeating ourselves from previous filings. Rather, CESA looks forward to reviewing parties’ responses and will respond in accordance and as appropriate.

**Question 1:** The key questions that need to be addressed to resolve the Petition are the following: 1) What is the appropriate treatment for station power for hybrid resources? 2) Is the appropriate treatment for station power for co-located resources different than that for hybrid resources? 3) What elements of station power rules for stand-alone storage are applicable to hybrid and co-located resources and what

**changes, if any, are needed to address hybrid and co-located resources? Are there any other key questions that need to be addressed? If yes, provide specific questions.**

CESA believes that the Petition demonstrates that extending the self-supply and permitted netting rules to hybrid and co-located resources will ensure a level and fair playing field, consistent with what the Commission decided to do for standalone IFOM energy storage in D.17-04-039. As noted by the CAISO, co-located and hybrid resources are even more similar to conventional generation than standalone storage, such that station power for these assets should be assessed in the same way as it is for all other resources,<sup>9</sup> per D.17-04-039 and D.18-01-003.

**Question 2: CESA provides a case-by-case assessment of operating modes of hybrid and co-located resources to demonstrate “how the proposed modifications to D. 17-04-039 combined with self-supply provisions in place for generation resources appropriately assess station power for hybrid and co-located resources” (Petition at 14-15). Do you agree or disagree with the Petitioner’s assessment? Are there other operating modes that should be considered? Explain your reasoning.**

CESA looks forward to reviewing and replying to parties’ responses.

**Question 3: CESA argues that a single high-side meter is sufficient for the purposes of delineating between wholesale and retail electricity draws to assess station power loads, however SDG&E provided an example to demonstrate that this may not be sufficient (SDG&E Response at 6-8). Do you agree or disagree that a single high-side meter is sufficient for this purpose? Do you agree or disagree with SDG&E’s explanation? Should metering configurations for determining retail power differ between hybrid and co-located resources? Explain your reasoning and illustrate how it relates to different charging circumstances (charging from grid vs charging from on-site generation).**

In the Petition, CESA summarized the requested relief highlighting three core modifications: “(1) affirm that the rules for standalone IFOM energy storage, including the permitted netting rules, apply equally to hybrid and co-located resources; (2) affirm that hybrid

---

<sup>9</sup> CAISO Response at 4-5.

and co-located resources have the right to self-supply their internal power needs, including station service, and avoid retail energy charges, as is the case with any conventional generator; and (3) **affirm that a single ‘high-side’ meter is sufficient for the purposes of delineating between wholesale and retail electricity draws.**<sup>10</sup> With regards to the third point, CESA explained that a single high-side meter is sufficient to capture when CAISO dispatch occurs and when station loads are being supplied by the grid.<sup>11</sup>

In their Response to the PFM, San Diego Gas & Electric (“SDG&E”) interpreted the Petition to imply that only the “high-side” meter read is needed to determine whether there is station load billable at a retail energy rate.<sup>12</sup> SDG&E argued that such implication would be misleading and incorrect, highlighting an example in which both low- and high-side meters are needed to determine measure the amount of energy that should be assessed at a retail energy rate.<sup>13</sup> In our Reply, CESA explained that the relief sought did not contend that low-side meters were not to be used, but rather, that a single revenue-grade high-side meter read in a given settlement interval is the *determining factor* on the rate treatment for the station power consumption that is measured at the low-side meters.<sup>14</sup> As such, CESA’s reference to “a single high-side meter” should be understood in contrast to the possibility of only using low-side meters without consideration of the high-side meter read to determine whether station power loads are being served by the grid or in response to CAISO dispatch. Otherwise, without taking the high-side meter into account, there is a likelihood of self-supplied station loads being assessed retail charges. The importance of this clarification is also underscored in the Response filed by the Independent Energy Producers

---

<sup>10</sup> See PFM, at 5. Emphasis added.

<sup>11</sup> PFM, at 22.

<sup>12</sup> SDG&E Response, at 7.

<sup>13</sup> *Ibid.*

<sup>14</sup> CESA Reply, at 13.

Association (“IEP”), which notes that quickly clarifying station power billing and metering requirements would “avoid costly and unnecessary metering of these facilities”.<sup>15</sup> As such, CESA disagrees with the concerns presented by SDG&E given the clarification provided in Responses and Reply to the Petition.

**Question 4:** Do you agree or disagree with the IEP’s revisions to the Petitioner’s proposed modifications to Conclusion of Law 9, 13, 14, and Ordering Paragraph (OP) 8 of D.17-04-039 (IEP Response at 3-4)? Explain your reasoning.

In their Response to the Petition, IEP identified an error with regards to the drafting of the proposed revisions to Conclusions of Law (“COL”) 9, 13, and 14, and Ordering Paragraph (“OP”) 8 of D.17-04-039.<sup>16</sup> Crucially, as noted by IEP, these errors have been confirmed by CESA<sup>17</sup> and are affirmed once again in agreement here.

**Question 5:** If any, provide specific examples to explain why the station power rules for stand-alone in-front-of-the-meter energy storage, including the permitted netting rules, should not apply equally to hybrid and co-located resources. What are the differences between co-located and hybrid resources that may render a different outcome? Provide specific examples in the context of the relief requested by CESA.

CESA looks forward to reviewing and replying to parties’ responses. As explained in our Petition, CESA does not see any differences to why station power rules should be differently applied for hybrid versus co-located resources.

**Question 6:** SCE contends that granting the petition’s requests will create a conflict with the CAISO tariff, and that “The Commission should not alter its tariffs without first having a complete understanding of how these changes will interact and potentially conflict with the CAISO Tariff and its settlement procedures,” (SCE Response at 2). Do you agree or disagree with SCE’s assertion that some of the relief requested in the petition would conflict with CAISO’s FERC jurisdictional tariff, and is therefore outside the Commission’s

---

<sup>15</sup> IEP Response, at 4.

<sup>16</sup> IEP Response, at 2-3.

<sup>17</sup> *Ibid*, at 2.



**jurisdiction? Please provide specific details of how and when these conflicts would occur.**

CESA strongly disagrees with the arguments made by Southern California Edison (“SCE”) with regards to the potential for conflict between the relief sought in the Petition and the CAISO’s Tariff and settlement rules. CESA’s position is based on the fact that the CAISO’s Tariff allows for any netting construct for station power allowed by the local regulatory authority (“LRA”), thus recognizing that the Commission has full jurisdiction over station power matters and in asserting what warrants retail treatment. The CAISO similarly referenced Section 10.1.3 of the CAISO Tariff that CAISO Metered Entities and Scheduling Coordinator Metered Entities may net Station Power *to the extent allowed by the Local Regulatory Authority*.<sup>18</sup> Importantly, the CAISO also explained in their Response that station power issues fall squarely in the jurisdiction of the LRA, the Commission, since the Federal Energy Regulatory Commission (“FERC”) has no regulatory authority over retail sales of electricity, which includes station power as conceded in *Duke Energy Moss Landing v. CAISO* and *Calpine Corp. v. FERC*.<sup>19</sup> It must be noted, that the term “retail sales of electricity” above is used for the explicit purpose of clarifying this jurisdictional boundary. As stated by CAISO, station power is defined as “retail energy” in the CAISO Tariff because the LRA, not FERC, has jurisdiction over it.<sup>20 21</sup> Importantly, the CAISO also noted that the use of the concept “retail energy” in this context does not mean that station power must be subject to a retail rate.<sup>22</sup>

---

<sup>18</sup> See CAISO Response, at 4 and CAISO, CAISO Tariff, Section 10.1.3, available at <http://www.caiso.com/Documents/Conformed-Tariff-as-of-Sep26-2021.pdf>.

<sup>19</sup> See *Duke Energy Moss Landing v. CAISO*, 132 FERC ¶ 61,183 at P 2 (2010); and *Calpine Corp. v. FERC*, 702 F.3d 41, 47 (D.C. Cir. 2012).

<sup>20</sup> CAISO Response, at 3.

<sup>21</sup> See *S. Cal. Edison Co. v. FERC*, 603 F.3d 996 (D.C. Cir. 2010); *Indiana Municipal Power Agency v. PJM Interconnection LLC*, 172 FERC ¶ 61,243 (2020).

<sup>22</sup> CAISO Response, at 3.

Given the arguments presented above, and the confirmation on behalf of the CAISO that granting the relief requested in the Petition would not require any modification of its tariff,<sup>23</sup> CESA disagrees with SCE's contentions and requests the Commission dismiss them when considering the relief sought by the PFM.

**IV. CONCLUSION.**

CESA appreciates the opportunity to submit this response to the Ruling and respectfully requests that the Commission grant the requested relief from CESA's Petition as soon as possible.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. Noh', written in a cursive style.

Jin Noh  
Policy Director  
CALIFORNIA ENERGY STORAGE ALLIANCE

Date: December 3, 2021

---

<sup>23</sup> *Ibid*, at 5.