

**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 March 26, 2015)

**COMMENTS OF  
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**I. Introduction**

The California Independent System Operator Corporation (“CAISO”) provides comments supporting Commissioner Alice Reynolds’ Proposed Decision (“PD”) adopting station power rules for hybrid and co-located resources, issued on August 30, 2023. The CAISO participated actively in this proceeding by filing comments and presenting in the initial workshop on August 29, 2022. The PD represents a balanced approach that will clarify station power settlement rules for complex mixed-fuel configurations.

**II. Comments**

The CAISO supports the PD. Clarifying the station power and netting rules for hybrid and co-located resources will provide much-needed clarity to developers and stakeholders.<sup>1</sup> The CAISO’s generator interconnection queue has seen hundreds of new

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<sup>1</sup> The CAISO tariff defines a “Co-located Resource” as “A Generating Unit with a unique Resource ID that is part of a Generating Facility with other Generating Units. An EIM Participating Resource with a unique Resource ID that is part of a single resource with other EIM Participating Resources;” and a

interconnection requests and modifications to existing interconnection requests to implement co-located and hybrid projects including energy storage. The station power and netting rules adopted in Decision (D.) 17-04-039 should apply to these resources, as described in the PD. Like stand-alone storage and conventional generation, co-located and hybrid resources are engaged in the sale for resale of energy and ancillary services, and therefore they should be able to self-supply their own station power energy and receive wholesale treatment for station power when operating.

#### **A. CAISO Treatment of Station Power**

Generators and storage resources typically have load at their locations. All such load is called “auxiliary load.” Auxiliary load typically includes station power, which the CAISO defines as “retail energy, as defined by the Local Regulatory Authority, for operating electric equipment, for the sole purpose of participating in the CAISO Markets.”<sup>2</sup> Generally, station power consists of load used exclusively to run generation and storage. The CAISO notes that station power is considered “retail energy” because the local regulatory authority has jurisdiction over station power; not the Federal Energy Regulatory Commission.<sup>3</sup> However, that does not mean station power must be subject to a retail consumer rate. Typically, generators’ station power demand is subject to a wholesale rate because they can self-supply energy from their generation to meet their station power demand. For example, a generator with 100 MW of nameplate capacity

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“Hybrid Resource” as “A Generating Unit, with a unique Resource ID at a single Point of Interconnection, with components that use different fuel sources or technologies.” Both co-located and hybrid resources typically consist of variable energy resources paired with energy storage.

<sup>2</sup> Appendix A to the CAISO tariff.

<sup>3</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).

and 1 MW of station power load could provide the CAISO markets with 99 MW while meeting its station power demand. The value of this 1 MWh would equal the CAISO's wholesale locational marginal price ("LMP") because it represents the opportunity cost of self-supplying station power instead of delivering it to the CAISO markets for settlement. This practice is called "netting," because the CAISO and the retail billing entity only see the net supply (or demand) based on the generator's ability to self-supply station power.

The CAISO allows generators and storage resources to engage in any netting construct for station power the local regulatory authority allows.<sup>4</sup> This includes the netting constructs permitted for storage under D.17-04-039. However, under the CAISO tariff, only station power can be netted under the CAISO wholesale meter.<sup>5</sup> Generators cannot serve other retail loads through self-supply.<sup>6</sup> This rule prohibits generators from avoiding retail charges for load that does not support the sale for resale of energy.<sup>7</sup>

## **B. Hybrid Resources**

The CAISO agrees with the PD that station power rules established for stand-alone storage should apply to hybrid resources.<sup>8</sup> The intent and reasoning in the PD represent an extension of the original storage Decision D.17-04-039, which itself extended the rules for conventional generation. In other words, the PD simply extends the self-supply and netting rules that exist for stand-alone storage to hybrid resources. This ensures a level and fair playing field. The PD notes that the Commission is not

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<sup>4</sup> Section 10.1.3 of the CAISO tariff.

<sup>5</sup> And eligible cogeneration load for Qualifying Facilities, which is not relevant here.

<sup>6</sup> Section 10.1.3.2 of the CAISO tariff.

<sup>7</sup> See Section 10.1.3 *et seq.* of the CAISO tariff.

<sup>8</sup> PD at 2.

proposing to require physical or financial assurance to prevent grid charging; however, avoiding grid charging should be straightforward for hybrid resources because the resource operator has autonomy to model and manage the storage and intermittent resources. Generally, resource owners elect the hybrid model over the co-located model for this specific purpose.

The CAISO also supports the PD’s preference for “Path 1” for hybrid resources with grid-charging capabilities.<sup>9</sup> Path 1 would apply the netting rules established in D.17-04-039 to energy storage components of hybrid resources that can charge from the grid and serve the resource’s station load. Whenever a hybrid resource exports to the grid from on-site generation, station power load would be acknowledged as self-supplied and would not be billed at retail. The storage device could not cover its station power load when the energy storage system is idle. The CAISO agrees with the PD that “[t]his approach is not burdensome, is based on an approach that is already in use, and equitable as hybrid resources pay a fair share of the costs of the station power that they consume at retail.”<sup>10</sup>

The CAISO also agrees that Path 2 may be unduly challenging, and the Commission should not adopt this path at this time. Path 2 represents a far more granular accounting system for a small portion of demand from a small set of resources. The CAISO notes that although Hybrid Resources on the CAISO system may increase, the CAISO has seen the vast majority of new resources elect to use the Co-located Resources

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<sup>9</sup> PD at 15-16.

<sup>10</sup> *Id.* at 19.

configuration. The CAISO expects that trend to continue with implementation of the new charging constraints, which will allow Co-located Resources to avoid grid-charging.<sup>11</sup>

The PD notes that Path 2 implementation is unclear because the record does not describe what the accounting mechanism would be or how the utilities would implement it.<sup>12</sup> The PD also notes there is ambiguity from the other parties “whether CAISO is willing to implement it.”<sup>13</sup> The CAISO notes that its tariff already accommodates the netting of station power to accommodate retail station power rules, as described above. Scheduling coordinators also can share their CAISO schedules and CAISO meter data with their load-serving entities. Beyond this, the Commission should avoid solutions that would require the CAISO to revise its rates, terms, and conditions of service. Because station power rules are *per se* non-jurisdictional to the Federal Energy Regulatory Commission, implementing those rules inherently falls to utilities under their retail tariffs.

### C. Co-located Resources

The CAISO also supports the PD’s determination that station power rules for stand-alone storage are not applicable to co-located resources because netting to serve station power load is not permitted between two co-located resources.<sup>14</sup> Netting across separate Resource IDs, meters, and points of interconnection would be complex. It also would risk undermining the co-located configuration, which is premised on treating

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<sup>11</sup> <http://www.caiso.com/Documents/Aug1-2023-TariffAmendment-EnergyStorageEnhancements-Phase2-ER23-2537.pdf>.

<sup>12</sup> PD at 18-19.

<sup>13</sup> *Id.*

<sup>14</sup> *Id.* at 23.

individual resources as separate. To the extent this is costly or challenging, resources can elect to use the Hybrid Resource model.

Respectfully submitted,

**By: /s/ William H. Weaver**

Roger E. Collanton

General Counsel

William H. Weaver

Assistant General Counsel

California Independent System

Operator Corporation

250 Outcropping Way

Folsom, CA 95630

T – 916-608-1225

F – 916-608-7222

[bweaver@caiso.com](mailto:bweaver@caiso.com)

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