

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

<b>American Wind Energy Association</b>	)	
	)	<b>Docket No. RM15-21-000</b>
	)	

**MOTION TO INTERVENE AND COMMENTS OF  
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

The California Independent System Operator Corporation (“CAISO”) respectfully files this motion to intervene and comments in response to the July 19, 2015 petition by the American Wind Energy Association (“AWEA Petition”) requesting that the Commission institute a new national rulemaking proceeding on generator interconnection procedures.<sup>1</sup> Because the CAISO also filed comments as a member of the ISO/RTO Council (“IRC”), these comments are limited to issues unique to the CAISO.

**I. MOTION TO INTERVENE**

As explained below, the CAISO has a substantial and direct interest in any potential interconnection reform. The AWEA Petition refers to CAISO interconnection procedures in several places and discusses several CAISO procedures in great detail. Because no other party can adequately represent the CAISO’s interests in the proceeding, the CAISO’s intervention is in the public interest and should be granted.

---

<sup>1</sup> The CAISO makes this filing pursuant to Rules 212 and 214 of the Commission’s Rules of Practice and Procedure, 18 C.F.R. §§ 385.212, 385.214.

## II. COMMENTS

The CAISO appreciates the opportunity to comment on interconnection reform in a national context, and supports AWEA's ultimate goal of ensuring that interconnection procedures never hinder the development of reliable generation. The CAISO has worked with AWEA, its members, and especially its regional partner CalWEA in modernizing CAISO generator interconnection procedures to streamline the deluge of interconnection requests for renewable and storage projects seeking to meet California's renewable portfolio standards. Perhaps for this reason, the AWEA Petition generally cites the CAISO as a model for other ISOs and RTOs, and only criticizes CAISO interconnection procedures on two minor points. Nevertheless, the CAISO diverges from AWEA that the method to effect reform is a rulemaking proceeding to re-standardize interconnection procedures nationwide. Because of the many regional differences and unique procedures implemented over the 12 years since Order No. 2003,<sup>2</sup> the CAISO believes that such a proceeding would actually be counterproductive. Instead, the CAISO believes that the Commission should continue to allow the CAISO to work with its stakeholders to tailor enhancements for the region's unique needs.

### **A. The CAISO's unique regional needs demonstrate that a single, national approach would hinder regional development.**

The CAISO is unique in many ways, but perhaps none more so than in generation and development. According to the U.S. Energy Information Administration

---

<sup>2</sup> *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003), *order on reh'g*, Order No. 2003-A, FERC Stats. & Regs. ¶ 31,160, *order on reh'g*, Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh'g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007) ("Order No. 2003").

(“EIA”) last year, 39.2% of California’s generation comes from renewable resources, with only 8% coming from hydroelectricity.<sup>3</sup> California more than doubles the national average of 14.4% renewable generation, and it almost quadruples the national average of 8.2% generation from renewable resources besides hydroelectricity.<sup>4</sup> California’s generation is completely singular in generating only 0.2% of its electricity from coal, or one 1,630th of the national average.<sup>5</sup> California accounts for more than 75% of U.S. utility-scale solar capacity, is home to half of all of the nation’s plug-in electric vehicles, and ranks second-best in energy consumption per capita.<sup>6</sup> As if these numbers were lacking, California’s governor and legislature are now targeting a 50% renewable portfolio standard and increased procurement of energy storage.<sup>7</sup>

The CAISO interconnection queue has seen the lion’s share of this development.<sup>8</sup> In the last ten years, 104 new generator projects have achieved commercial operation.<sup>9</sup> These projects account for 15,722 MW of new capacity in the CAISO. Renewable-resource projects comprise 69% of these projects. Despite

---

<sup>3</sup> EIA, “California State Energy Profile,” *available at* <http://www.eia.gov/state/?sid=CA#tabs-1> (updated July 17, 2014).

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> EIA, “California 2014 Energy Highlights,” *available at* [http://www.eia.gov/state/state\\_one\\_pager/California.pdf](http://www.eia.gov/state/state_one_pager/California.pdf).

<sup>7</sup> See California Public Utilities Commission, “Energy Storage,” *available at* <http://www.cpuc.ca.gov/PUC/energy/storage.htm>. The three California investor-owned utilities are required to procure 1,325 MW of energy storage by 2020.

<sup>8</sup> The CAISO maintains all generator interconnection request data in its public, sortable, and searchable Generator Interconnection Queue spreadsheet, *available at* <https://www.caiso.com/planning/Pages/GeneratorInterconnection/Default.aspx>.

<sup>9</sup> CAISO transmission owners also receive their own interconnection requests for projects interconnecting on distribution lines. The figures represented here do not account for those requests.

mounting environmental hurdles,<sup>10</sup> wind projects also have comprised a significant portion of the CAISO interconnection queue, adding 2,663 MW to the grid in the last ten years with 3,572 MW of additional wind generation scheduled to come online in the next five years. Wind developers have had significant success in the CAISO, achieving commercial operation 18% more often than aggregated non-wind developers.

These figures should make one fact very clear to the Commission: the CAISO has unique interconnection needs. The Commission has recognized that fact on numerous occasions.<sup>11</sup> The corollaries of this fact are manifold: First, because the CAISO has unique interconnection needs, it has unique interconnection procedures. These procedures allow the CAISO to process the hundreds of interconnection requests it receives every year—far more than any other ISO or RTO. More than that, these procedures are designed specifically to allow CAISO developers to compete under the unique California procurement requirements on resource adequacy, deliverability status, fuel-type, and emissions (to name a few). Moreover, these needs frequently change. For this reason the CAISO needs the flexibility to conduct regular stakeholder initiatives to enhance its interconnection procedures, as described below.

---

<sup>10</sup> See, e.g., Andrew Curry, “Will Newer Wind Turbines Mean Fewer Bird Deaths?” National Geographic, April 28, 2014, *available at* <http://news.nationalgeographic.com/news/energy/2014/04/140427-altamont-pass-will-newer-wind-turbines-mean-fewer-bird-deaths/>; Doug Oakley, “Despite Bird Deaths, Electric Altamont Pass Wind Farm Wins Extension,” Contra Cost Times, March 25, 2015, *available at* [http://www.conracoastimes.com/breaking-news/ci\\_27778194/despite-bird-deaths-electric-wind-farm-wins-extension](http://www.conracoastimes.com/breaking-news/ci_27778194/despite-bird-deaths-electric-wind-farm-wins-extension).

<sup>11</sup> See, e.g., *California Independent System Operator Corp.*, 124 FERC ¶ 61,292 (2008); 133 FERC ¶ 61,223 (2010); 151 FERC 61,214 (2015).

Second, the CAISO's unique interconnection needs would be ill-suited to other regions. The rest of the country does not share California's electricity history<sup>12</sup> or its unrivaled procurement standards for renewable generation, energy storage, and greenhouse gasses. Simply put: interconnection procedures that work elsewhere have little chance of working in the CAISO. Likewise, what works in the CAISO may have little chance of working elsewhere. The Commission must recognize that interconnection procedures are designed to work within each ISO's and RTO's specific tariff. In this way interconnection reform is akin to liver reform: it's infeasible without taking into account how it affects the rest of the body. The CAISO has unique processes for transmission planning, resource adequacy, congestion revenue rights, metering, cost allocation, and operations.<sup>13</sup> Each of these processes is intricately linked to the CAISO's interconnection procedures, and the CAISO's interconnection procedures are intricately linked to them. Considering that different links and variations exist in all regions,<sup>14</sup> each region needs flexibility to adopt the interconnection procedures that will work in that region. For this reason, the Commission should reject AWEA's petition for a national rulemaking. Such a rulemaking would only result in making a square peg of interconnection procedures. That peg could not fit into the triangle hole of New England, nor the octagon hole of PJM, and it especially could not fit in the CAISO.

---

<sup>12</sup> See James McGrew, ABA BASIC PRACTICE SERIES: FEDERAL ENERGY REGULATORY COMMISSION at 207 *et seq.* (2d ed. 2004) (detailing the California energy crisis). By contrast, the first result on a Google search for "Alabama electricity crisis" is for the state's health and human services department: <http://www.liheapch.acf.hhs.gov/profiles/Alabama.htm>.

<sup>13</sup> Among others.

<sup>14</sup> For example, ISO-NE's interconnection process is merged with its forward capacity market, which the CAISO does not have.

**B. The CAISO already works continually with its stakeholders and the Commission to enhance its interconnection procedures.**

As explained above, a national rulemaking to standardize interconnection procedures would be counterproductive and hinder regional development. Additionally, such a national rulemaking is unnecessary. The ISO/RTO Council's comments describe how each ISO and RTO already holds regular stakeholder processes to enhance interconnection procedures, often resulting in significant overhauls. This is especially true in the CAISO. The CAISO has conducted several expansive interconnection stakeholder initiatives. These initiatives garner significant participation, including from generation developers, transmission owners, adjacent balancing authorities, and various consultants and advocacy groups, including AWEA's regional partner CalWEA.

The CAISO first conducted a large stakeholder initiative to revise its interconnection procedures in 2008, following California's acceleration of its renewable portfolio standard.<sup>15</sup> The resulting tariff amendments revised the CAISO's Large Generator Interconnection Procedures ("LGIP") and Large Generator Interconnection Agreement ("LGIA") to improve the efficiency of the CAISO's interconnection process, clear existing backlog of interconnection requests, and allow the interconnection process to integrate more efficiently with the CAISO's transmission planning process.<sup>16</sup> Most importantly, these revisions transitioned the CAISO interconnection process from a serial process to a cluster process.

---

<sup>15</sup> CAISO stakeholder processes use committees very infrequently. Instead, any interested party may comment and participate.

<sup>16</sup> See *California Independent System Operator Corp.*, 124 FERC ¶ 61,292.

In 2010 the CAISO conducted another stakeholder process to harmonize the CAISO's LGIP with its Small Generator Interconnection Procedures ("SGIP") by establishing integrated cluster study processes for small and large generators.<sup>17</sup> The CAISO also revised its interconnection procedures to expedite study processes for independent or otherwise adroit generators by implementing new independent study and fast track processes.<sup>18</sup>

In 2012 the CAISO conducted a stakeholder process to address the huge number of requests in the CAISO interconnection queue. To avoid cascading restudies and corresponding cost uncertainty for developers, the CAISO implemented its current Generator Interconnection and Deliverability Allocation Procedures ("GIDAP").<sup>19</sup> The AWEA Petition itself praises the highlights of GIDAP: The CAISO's transmission planning process identifies the capability of the grid in terms of "deliverability."<sup>20</sup> The CAISO then conducts one annual reassessment of deliverability based on current interconnection requests, downsizing, and withdrawals.<sup>21</sup> Interconnection Customers may then receive revised cost allocations for network upgrades, but only consistent with their maximum cost responsibilities, which were established in their initial Phase I and Phase II studies.<sup>22</sup> As the Commission reiterated, the GIDAP thus (1) provides incentives for generation developers to choose interconnection points that are consistent with public policy-driven transmission development, and limit ratepayer

---

<sup>17</sup> *California Independent System Operator Corp.*, 133 FERC ¶ 61,223.

<sup>18</sup> *Id.* at PP 86-97; 110-118.

<sup>19</sup> *California Independent System Operator Corp.*, 140 FERC ¶ 61,070 (2012).

<sup>20</sup> *See id.* at PP 6-7.

<sup>21</sup> AWEA Petition at pp. 24, 30, and 48.

<sup>22</sup> *Id.*

responsibility for inefficient or underutilized upgrades; (2) produces more realistic study result and cost estimates, thereby improving chances that viable projects will achieve commercial operation; (3) provides greater certainty for generation developers that the needed delivery upgrades will be granted permits by relevant state siting authorities; and (4) provides greater transparency into the transmission development process.<sup>23</sup>

Following the GIDAP, the CAISO has continued to improve its interconnection processes with stakeholders. In 2013, the CAISO launched another Interconnection Process Enhancement stakeholder initiative (“IPE”). This IPE initiative resulted in several enhancements to the GIDAP,<sup>24</sup> and encompasses 11 proposed enhancements this year.<sup>25</sup> The CAISO also recently completed the “Energy Storage Roadmap” initiative with the California Public Utilities Commission and the California Energy Commission.<sup>26</sup> The Energy Storage Roadmap identified policy, technology, and process changes to facilitate the nascent energy storage industry.<sup>27</sup> The CAISO simultaneously conducted a stakeholder initiative to examine issues with interconnecting energy storage facilities to the grid under its existing rules.<sup>28</sup>

---

<sup>23</sup> *California Independent System Operator Corp.*, 140 FERC ¶ 61,070 at P 8.

<sup>24</sup> See, e.g., *California Independent System Operator Corp.*, 149 FERC ¶ 61,231 (2014); 148 FERC ¶ 61,077 (2014); 145 FERC ¶ 61,172 (2013).

<sup>25</sup> See <http://www.caiso.com/informed/Pages/StakeholderProcesses/InterconnectionProcessEnhancements2015.aspx>.

<sup>26</sup> See <https://www.caiso.com/informed/Pages/CleanGrid/EnergyStorageRoadmap.aspx>.

<sup>27</sup> [https://www.caiso.com/Documents/Advancing-MaximizingValueofEnergyStorageTechnology\\_CaliforniaRoadmap.pdf](https://www.caiso.com/Documents/Advancing-MaximizingValueofEnergyStorageTechnology_CaliforniaRoadmap.pdf).

<sup>28</sup> See <http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorageInterconnection.aspx>. The CAISO currently is conducting another stakeholder initiative on energy storage and distributed energy resources. See [http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorage\\_AggregatedDistributedEnergyResources.aspx](http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorage_AggregatedDistributedEnergyResources.aspx).

The regional efforts described above are preferable to a national rulemaking for a variety of reasons. First, regional processes allow stakeholders to meet regional needs. Second, regional stakeholder involvement results in tariff revisions with broad support and little opposition. In other words, they are more likely to address the needs of all interested stakeholders. Third, the improvements resulting from such efforts are easier to implement because they have already been crafted to that region and, especially, its other tariff provisions. For these reasons, the CAISO recommends that the Commission reject AWEA's petition for a national rulemaking proceeding, and pursue its interests with other stakeholders on a regional basis.

**C. AWEA's criticisms of CAISO interconnection procedures are misleading and do not warrant a national rulemaking proceeding.**

The AWEA Petition mostly highlights areas where it believes other regions could learn from the CAISO.<sup>29</sup> This in itself demonstrates that regions should continue to be allowed to enhance their own interconnection procedures, and not be dragged into a tepid national middle. However, the AWEA Petition also criticizes the CAISO on two issues: accurate study assumptions and the inability to split generator interconnection agreements ("GIAs"). Both of these criticisms are based on faulty assumptions.

AWEA avers that the CAISO "assumes 100% generation from wind resources which [sic] does not correspond to historical or expected wind generation load condition."<sup>30</sup> The CAISO agrees that assuming 100% generation from wind resources would lead to false conclusions. For this reason the CAISO has assumed and

---

<sup>29</sup> See, e.g., AWEA Petition at pp. 24, 30, 24, and 48.

<sup>30</sup> AWEA Petition at 36.

continues to a 20% to 50% exceedance value from wind resources in interconnection studies.<sup>31</sup>

AWEA also argues that the CAISO should allow interconnection requests to split GIAs to align with multiple power purchase agreements (“PPAs”) for the same resource. AWEA accurately states that the current CAISO tariff does not allow for such splits, but the CAISO has seen few requests to do so. The CAISO is generally wary of splitting interconnection requests because of the already excessive number of speculative requests in the CAISO queue, but where viable interconnection projects wish to divide into multiple projects, the CAISO and the impacted transmission owner work with the developers to execute co-tenancy agreements. In addition, the CAISO tariff allows generation projects to split so that they may be constructed and achieve commercial operation in phases.<sup>32</sup>

In any case, the CAISO affords its stakeholders—including AWEA—every opportunity to raise these issues and propose changes through the CAISO’s stakeholder processes. Neither issue warrants a national rulemaking proceeding.

---

<sup>31</sup> See CAISO On-Peak Deliverability Assessment Methodology, *available at* <http://www.caiso.com/Documents/On-PeakDeliverabilityAssessmentMethodology.pdf>.

<sup>32</sup> See *generally*, Section 14.3.2.2 of Appendix DD of the CAISO tariff.

### III. CONCLUSION

For the reasons discussed above, the CAISO respectfully requests that the Commission deny AWEA's petition and continue to allow generator interconnection reform to progress on a regional basis.

**/s/ William H. Weaver**

Roger E. Collanton  
General Counsel  
Sidney Mannheim  
Assistant General Counsel  
William H. Weaver\*  
Counsel  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel: (916) 608-1225  
Fax: (916) 608-7222  
[bweaver@caiso.com](mailto:bweaver@caiso.com)

Attorneys for the California Independent  
System Operator Corporation

\*Designated to receive service.

Dated: September 8, 2015

## **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each party listed on the official service list for this proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010 (2014)).

Dated at Folsom, California on this 8<sup>th</sup> day of September, 2015.

*Is/ Anna Pascuzzo*

Anna Pascuzzo