

137 FERC ¶ 61,025  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;  
Philip D. Moeller, John R. Norris,  
and Cheryl A. LaFleur.

California Independent System Operator Corporation      Docket No. ER09-1542-001

ORDER ACCEPTING COMPLIANCE FILING

(Issued October 7, 2011)

1. On December 31, 2009, the California Independent System Operator Corporation (CAISO) submitted a compliance filing pursuant to the Commission's October 2, 2009 order<sup>1</sup> to provide greater transparency for CAISO's transmission constraint management practices. As discussed below, the Commission accepts CAISO's compliance filing, effective October 2, 2009, as requested.

**I. Background**

2. CAISO operates its day-ahead and real-time markets through the use of market models, which need to be frequently updated with current information from various inputs. The starting point to optimizing CAISO's markets is the full network model, which formulates specific models that will be used in each of CAISO's markets.<sup>2</sup> The full network model is derived from and consistent with a version of the west-wide Western Electricity Coordinating Council (WECC) model and is updated every six to

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<sup>1</sup> *Cal. Indep. Sys. Operator Corp.*, 129 FERC ¶ 61,009 (2009) (October 2 Order).

<sup>2</sup> Appendix A of the CAISO Tariff defines the full network model as a computer-based model that includes all CAISO balancing authority area transmission network (load and generating unit) busses, transmission constraints, and intertie busses between the CAISO balancing authority area and interconnected balancing authority areas. The full network model models the transmission facilities internal to the CAISO balancing authority area as elements of a looped network and models the CAISO balancing authority area interties with interconnected balancing authority areas in a radial fashion.

eight weeks. Next, CAISO uses the base market model that is derived from the full network model and is refined to produce a network model that more closely reflects the actual market resources and facilities in the CAISO controlled grid. The base market model is used as the base model for CAISO's market optimization software. The base market model is updated with each update of the full network model. Finally, because the base market model does not reflect current system conditions, CAISO uses optimization market software to apply any needed adjustments and inputs to reflect anticipated and current system conditions for CAISO's markets. For example, CAISO must update the market optimization software with any existing transmission constraints, among other inputs.

3. On August 3, 2009, CAISO submitted proposed amendments to clarify, among other things, tariff language regarding the role of the full network model in enforcement of transmission constraints. Specifically, CAISO explained that in running the CAISO markets there are occasions when certain transmission constraints are relaxed in the market optimization in lieu of pursuing more costly re-dispatch solutions. CAISO explained that it similarly does not enforce constraints on certain lower voltage facilities on its network, due to lack of sufficient visibility on those constraints, which stem from inadequate telemetry. In the October 2 Order, the Commission conditionally accepted CAISO's proposed amendments. The Commission found the proposed revisions reasonable in part because CAISO did not change its authority to relax transmission constraints. Notwithstanding, the Commission shared market participants' concerns regarding the transparency of CAISO's enforcement (and non-enforcement) of transmission constraints<sup>3</sup> and therefore ordered CAISO to (1) provide the general guidelines it will follow when it must relax, enforce, or manually intervene to manage transmission constraints,<sup>4</sup> and (2) convene a stakeholder process with the aim of addressing these transparency concerns.<sup>5</sup>

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<sup>3</sup> *Id.* P 43. The intervening market participants were concerned that the lack of specific information in the CAISO tariff may negatively impact their abilities to participate in the CAISO markets and, thus, argued that details concerning relaxing, not enforcing, and manually adjusting transmission constraints should be included in the CAISO tariff.

<sup>4</sup> The Commission recognized that, although it would be impractical to list in the tariff all the instances in which CAISO will relax, enforce, or manually adjust constraints, it is reasonable for the tariff to include the general guidelines explaining CAISO's constraint management practices. *Id.* P 45.

<sup>5</sup> *Id.* P 44.

4. On December 31, 2009, CAISO submitted the instant compliance filing to provide greater transparency regarding its transmission constraint management practices and to report on the status of the stakeholder process regarding transmission constraints.<sup>6</sup> Additionally, CAISO submitted a motion for extension of time to allow CAISO and its stakeholders additional time to complete the stakeholder process. CAISO subsequently completed the stakeholder process and, as a result, on May 7, 2010, CAISO submitted further amendments to the proposed revisions contained in the instant filing. These amendments enabled CAISO to release information regarding its enforcement and management of transmission constraints in market operations. Notwithstanding that CAISO's May 7, 2010 Filing included amendments to the revisions contained in the instant filing, that filing was assigned Docket No. ER10-1229-000 and on July 12, 2010, the Commission accepted CAISO's amendments, effective July 13, 2010.<sup>7</sup>

## II. CAISO's Filing

### A. Transmission Constraints

5. CAISO proposes several tariff modifications to incorporate the general guidelines for the management and enforcement of transmission constraints in the CAISO markets. CAISO states that the proposed modifications are based on existing practices reflected in the business practice manual for the management of the full network model.<sup>8</sup>

6. First, CAISO proposes to include the base market model in section 27.5.1 of its tariff and to clarify the base market model's purpose and distinction from the full network model. Specifically, section 27.5.1 explains that the base market model is derived from the full network model, but is refined to reflect the actual market resources and facilities in the CAISO controlled grid. Section 27.5.1 further characterizes the base market model as a mechanism to formulate the individual models used in each of the CAISO markets to establish, enforce, and manage transmission constraints.<sup>9</sup>

7. Further, CAISO proposes a new section 27.5.6 to incorporate the actual guidelines that it will follow in preparing the market model. The section further explains that CAISO will manage the enforcement of transmission constraints consistent with good utility practice to ensure that (1) the market models used in each CAISO market

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<sup>6</sup> CAISO December 31, 2009 Filing at 1.

<sup>7</sup> *Cal. Indep. Sys. Operator Corp.*, 132 FERC ¶ 61,023 (2010) (July 12 Order).

<sup>8</sup> CAISO December 31, 2009 Filing at 4-5.

<sup>9</sup> *Id.* at 5-6.

accurately reflect factors that contribute to actual real-time flows on CAISO's controlled grid, and (2) CAISO's market results are aligned with actual physical conditions on the grid.<sup>10</sup> CAISO provides five guidelines that it will follow to manage transmission constraints. Specifically, CAISO states that it may enforce, not enforce, or adjust transmission constraints:<sup>11</sup>

1. If CAISO observes that the CAISO markets produce or may produce inaccurate or infeasible market solutions either because (a) CAISO reasonably anticipates that the CAISO market run will include congestion that is unlikely to materialize in real-time, or (b) CAISO reasonably anticipates that the CAISO market will fail to identify congestion that is likely to appear in the real-time.
2. If CAISO determines that enforcement or non-enforcement of such constraints may result in the unnecessary commitment and scheduling of use-limited resources.
3. If CAISO determines that it lacks sufficient visibility to conditions on transmission facilities necessary to reliably ascertain constraint flows required for a feasible, accurate and reliable market solution.<sup>12</sup>
4. For the duration of a planned or unplanned outage, creating and applying alternative transmission constraints may add to or replace certain originally defined constraints.
5. For the purpose of setting prudent operating margins consistent with good utility practice to ensure reliable operation under conditions of unpredictable and uncontrollable flow volatility consistent with the requirements of section 7 of the tariff.

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<sup>10</sup> *Id.* at 7.

<sup>11</sup> *See id.* at 7-9 (providing detailed explanation of the five general guidelines).

<sup>12</sup> CAISO notes that in instances where it "lacks sufficient visibility in certain pockets to manage the grid reliably due to lack of telemetry or lack of infrastructure to transmit the telemetry to the control center at the transmission owner and the ISO," it is not prudent to enforce constraints in the CAISO software because it is not able to discern whether the enforcement is accurate. Thus, according to CAISO, it "manages such portions of its grid in close coordination with the transmission owner." *Id.* at 8-9.

8. CAISO requests that the Commission accept the proposed tariff amendments, effective October 2, 2009.

### **III. Notice of Filing and Responsive Pleadings**

9. Notice of CAISO's Filing was published in the *Federal Register*, 75 Fed. Reg. 2533 (2010), with interventions and protests due on or before January 21, 2010. The Cities of Anaheim, Azusa, Banning, Colton, Pasadena and Riverside (Six Cities) filed a timely motion to intervene. Comments were filed by the California Department of Water Resources State Water Project (SWP), and Western Power Trading Forum (WPTF). Pacific Gas and Electric Company filed comments in support of CAISO's Filing. CAISO filed an answer to SWP's comments.

10. WPTF states that it agrees that CAISO's compliance filing provides high level guidelines regarding CAISO's transmission constraint enforcement practices, as required by the October 2 Order. Nevertheless, WPTF argues that CAISO should be required to report on instances in which it does not enforce transmission constraints or adjusts transmission constraints in accordance with its tariff. WPTF requests that the Commission defer acting on CAISO's compliance filing until after completion of the stakeholder process and require that CAISO's tariff revisions include reporting requirements.<sup>13</sup>

11. SWP requests that the Commission encourage CAISO not only to continue its effort toward greater transparency, but also to use the information gained to better integrate its engineering and its market software so that greater integration and accuracy of these programs will reduce the incidence of market disruption and the need to use exceptional dispatches..<sup>14</sup>

12. Additionally, SWP states that this is the first time that CAISO's Filing indicates that "instances where CAISO lacks sufficient visibility of portions of the CAISO controlled grid . . . , it will not use its software, but rather will rely on the applicable

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<sup>13</sup> WPTF comments at 2-3. Subsequent to this Filing, CAISO completed the stakeholder process which resulted in CAISO's May 7, 2010 Filing, in Docket No. ER10-1229-000. The Commission accepted that filing in the July 12 Order. As a result, CAISO is required to provide market participants (1) a report describing the constraints it plans to enforce or not enforce in the next day's market, and (2) in the next trading day, a report listing the transmission constraints it actually enforced.

<sup>14</sup> Exceptional Dispatch allows CAISO to manually commit and/or dispatch resources that are not cleared through market software in order to maintain reliable grid operations under unusual and infrequent circumstances. SWP comments at 2-3.

Participating Transmission Owner (PTO).”<sup>15</sup> In this regard, SWP asks the Commission to require CAISO to further explain the role of PTOs in transmission constraint management as it relates to reliability, nondiscriminatory transmission access, and costs and rates for transmission service. Given that the purpose of an independent system operator is to direct operational control of the grid and to maintain independence from transmission owners, SWP states that CAISO’s assertion that it may have to deviate from its software and rely on the PTOs to manage constraints raises concerns.<sup>16</sup> SWP asserts that PTOs have an inherent interest in favoring their own generation and loads. Thus, if CAISO lacks visibility and so relies on the PTOs, SWP questions what protections are in place to prevent unduly discriminatory outcomes. Moreover, according to SWP, PTOs’ activities in transmission operation raise questions about whether CAISO actually controls parts of its grid and whether all costs are eligible to be included in the transmission access charge.<sup>17</sup>

13. In its answer, CAISO notes that none of the commenting parties protests the high-level guidelines that CAISO proposes to include in its tariff to comply with the October 2 Order.<sup>18</sup> Also, CAISO argues that SWP’s request for the Commission to impose additional requirements on CAISO to (1) better integrate its engineering and its market software and (2) further explain PTOs’ role in transmission constraint management are unnecessary and exceed the scope of the October 2 Order. According to CAISO, SWP’s additional requirements do not pertain to the requirements in the October 2 Order directing CAISO to file tariff revisions to delineate the general guidelines CAISO will follow for the management of transmission constraints.<sup>19</sup>

14. CAISO explains that in its continued efforts to improve market performance, it already evaluates the impact of constraints enforcement or adjustments on market outcomes, as well as the exceptional dispatch and market disruption data to determine whether market enhancements are needed.<sup>20</sup> CAISO argues that SWP’s comments do not explain what additional requirements SWP seeks and do not explain the relationship between the enforcement of transmission constraints and the use of exceptional dispatch

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<sup>15</sup> *Id.* at 3.

<sup>16</sup> *Id.* at 4.

<sup>17</sup> *Id.* at 5.

<sup>18</sup> CAISO answer at 3.

<sup>19</sup> *Id.* at 3-4.

<sup>20</sup> *Id.* at 4.

to resolve market disruptions. CAISO states that it is already committed to ensure that the proper balance is struck between accurate modeling and appropriate use of exceptional dispatches to operate the CAISO system. CAISO argues that extensive Commission proceedings have already occurred to address issues related to exceptional dispatch and SWP does not explain how the high-level guidelines proposed by CAISO in this proceeding or its actual enforcement or non-enforcement of transmission constraints might diminish the occurrence of market disruptions.<sup>21</sup>

15. CAISO argues that, contrary to SWP's assertions, CAISO has repeatedly informed market participants of its transmission constraints management practices. CAISO states that the business practice manual for management of the full network model provides a thorough description of procedures and guidelines that CAISO follows in determining what transmission constraints should or should not be enforced in operating the CAISO markets. Also, CAISO asserts that it provided opportunities for market participants to review and comment on the general guidelines through the stakeholder process, prior to the instant filing.<sup>22</sup>

16. Further, CAISO argues that SWP's concerns regarding the possibility that transmission constraints management practices may erode CAISO's independent operation of facilities is erroneous and based on a misunderstanding of CAISO's operations. CAISO explains that the fact that it may not enforce some transmission constraints due to lack of visibility does not mean that CAISO dispatches resources on the instruction of the transmission owner.<sup>23</sup> Rather, CAISO explains, the role of the transmission owner is to provide visibility regarding conditions on that part of the grid that would otherwise be provided by automated communications equipment, as is done elsewhere on the integrated grid. CAISO asserts that the transmission owner plays no decision-making role in whether constraints are enforced through the CAISO markets or whether CAISO makes use of exceptional dispatch to dispatch resources necessary to reliability operate that part of the grid.<sup>24</sup> Thus, CAISO argues that its ability to operate the system reliably is not compromised or changed.

17. Finally, CAISO argues that the enforcement or non-enforcement of transmission constraints is unrelated to the structure of the transmission access charge. According to CAISO, the transmission access charge reflects the cost of accessing the entire grid

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<sup>21</sup> *Id.* at 5-6 (citing *Cal. Indep. Sys. Operator Corp.*, 126 FERC ¶ 61,150 (2009)).

<sup>22</sup> *Id.* at 8-9.

<sup>23</sup> *Id.* at 10.

<sup>24</sup> *Id.* at 10-11.

controlled by CAISO, including those facilities that lack communication equipment to provide CAISO's market systems direct visibility.

#### **IV. Discussion**

##### **A. Procedural Matters**

18. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2011), the Six Cities' timely, unopposed motion to intervene serves to make them a party to this proceeding.

19. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2011), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We will accept CAISO's answer because it has provided information that assisted us in our decision-making process.

##### **B. Commission Determination**

20. The Commission accepts CAISO's tariff amendments. We find that the general guidelines provided in the tariff will help market participants better understand how transmission constraints are enforced and managed on CAISO's transmission system. The inclusion of transmission constraint guidelines will also give market participants additional market confidence by providing additional transparency into CAISO's market optimization practices, while preserving CAISO's ability to engage in reasonable operating practices and market management that will ensure a reliable and efficient market.

21. We find SWP's concerns to be unfounded and generally beyond the scope of this proceeding. This compliance filing was intended to provide high-level guidelines describing CAISO's transmission constraint management practices. With regard to SWP's concerns, we agree with CAISO that requiring manual communication with PTOs regarding the state of the grid in areas where automatic communication equipment is unavailable is unrelated to the independent operation of the facilities over which CAISO has been given control. SWP's comments give us no reason to believe that CAISO's independent operation of the grid is compromised by the existence of areas without automatic communication equipment and no reason to believe that CAISO will rely on the PTOs to manage transmission constraints on the CAISO-controlled grid. Nor do we see a reason for concern regarding the reasonableness of inclusion of facilities in the computation of the transmission access charge.

22. We find that WPTF's concerns have already been resolved by CAISO's Filing and the Commission's approval of further amendments in Docket No. ER10-1229-000. As a result, CAISO is currently required to provide (1) a report describing the constraints it plans to enforce or not enforce in the next day's Day-Ahead Market, and (2) a post-Day-

Ahead report listing the transmission constraints it actually enforced. These amendments made CAISO's actions more transparent and enabled WPTF and other parties to better understand and evaluate the impact of such enforcement on market outcomes, and permitted them to more effectively participate in the CAISO markets.

The Commission orders:

The Commission hereby accepts CAISO's revised tariff sheets, effective October 2, 2009, as requested, as discussed in the body of this order.

By the Commission. Commissioner Spitzer is not participating.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

Document Content(s)

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