

153 FERC ¶ 61,205  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Norman C. Bay, Chairman;  
Cheryl A. LaFleur, Tony Clark,  
and Colette D. Honorable.

California Independent System  
Operator Corporation

Docket No. ER15-861-004

ORDER ON COMPLIANCE FILING

(Issued November 19, 2015)

1. On August 28, 2015, the California Independent System Operator Corporation (CAISO) submitted proposed tariff revisions (August 28 Filing) specifying readiness requirements and criteria that will apply to all prospective Energy Imbalance Market (EIM) entities, intended to comply with the Commission's order issued in this proceeding on July 21, 2015 (July 21 Order).<sup>1</sup> In this order, the Commission accepts CAISO's August 28 Filing, effective March 16, 2015, as requested.

**I. Background**

2. The EIM enables entities with balancing authority areas (BAAs) outside of CAISO to voluntarily take part in the imbalance energy portion of the CAISO locational marginal price-based real-time market alongside participants from within the CAISO BAA.<sup>2</sup> PacifiCorp's two BAAs – PacifiCorp East and PacifiCorp West – were the initial participants in the EIM.<sup>3</sup>

---

<sup>1</sup> *Cal. Indep. Sys. Operator Corp.*, 152 FERC ¶ 61,063 (2015) (July 21 Order). The July 21 Order rejected in part and conditionally accepted in part CAISO's proposed readiness criteria, effective March 16, 2015.

<sup>2</sup> *Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231, *order on reh'g*, 149 FERC ¶ 61,058 (2014).

<sup>3</sup> *PacifiCorp*, 147 FERC ¶ 61,227 (conditionally accepting in part and rejecting in part revisions to PacifiCorp's open access transmission tariff to enable participation in the

(continued...)

3. PacifiCorp commenced financially binding participation in the EIM on November 1, 2014, following a one-month period of parallel operation, during which CAISO ran a real-time representation of the EIM in a parallel but non-binding production environment. On November 13, 2014, CAISO filed in Docket No. ER15-402-000 a petition (Initial Waiver Petition) seeking limited waiver of the pricing parameters in sections 27.4.3.2 and 27.4.3.4 of its tariff for the 90-day period from November 14, 2014 to February 12, 2015. In the Initial Waiver Petition, CAISO explained that transitional conditions in the EIM caused the transmission and system energy-balance constraints to bind more frequently than expected since the EIM began operation, resulting in high prices that were not always indicative of actual physical conditions on the system.<sup>4</sup> CAISO asserted that these high prices reflected challenges PacifiCorp had in providing timely and complete data to ensure CAISO had system visibility under the new procedures, exacerbated by limitations on the resources available to PacifiCorp for use in the EIM and several forced outages of large EIM participating resources.<sup>5</sup>

4. On December 1, 2014, the Commission granted the requested limited waiver for the period from November 14, 2014 through February 12, 2015 and directed CAISO to file informational reports at 30-day intervals during the waiver period providing

---

EIM), *order on reh'g*, 149 FERC ¶ 61,057 (2014), *reh'g rejected*, 150 FERC ¶ 61,084 (2015). NV Energy is currently undertaking preparations to join the EIM. *Nevada Power Co.*, 151 FERC ¶ 61,131 (2015) (conditionally accepting revisions to NV Energy's open access transmission tariff to enable participation in the EIM). Puget Sound Energy, Inc. (Puget) and the Arizona Public Service Company (APS) have stated their intentions to join the EIM on October 1, 2016. Both Puget and APS have executed implementation agreements with CAISO. *See Cal. Indep. Sys. Operator Corp.*, 151 FERC ¶ 61,158 (2015) (accepting EIM implementation agreement between CAISO and Puget); *Cal. Indep. Sys. Operator Corp.*, 152 FERC ¶ 61,090 (2015) (accepting EIM implementation agreement between CAISO and APS). In addition, Portland General Electric and Idaho Power Company have announced plans to investigate EIM participation. *See* CAISO September 18, 2015 Market Notice: ISO Welcomes Portland General Electric Plans to Pursue EIM, *available at*: <https://www.caiso.com/Documents/ISOWelcomesPortlandGeneralElectricPlanstoPursueEIM.htm>; CAISO September 25, 2015 Market Notice: ISO Welcomes Idaho Power Plan to Explore EIM, *available at*: <https://www.caiso.com/Documents/ISOWelcomesIdahoPowerPlanToExploreEIM.htm>.

<sup>4</sup> Initial Waiver Petition at 3, 11.

<sup>5</sup> *Id.* at 8-11.

supporting data demonstrating the progress towards identifying and eliminating the problems giving rise to the Initial Waiver Petition.<sup>6</sup>

5. On January 15, 2015, CAISO submitted proposed tariff revisions in Docket No. ER15-861-000 intended to address the imbalance energy price spikes in EIM BAAs by waiving the pricing parameters to all new EIM Entities<sup>7</sup> for a 12-month period and setting the flexible ramping constraint relaxation parameter to a range between \$0 and \$0.01 (instead of \$60) for each new entity's BAA during such period. CAISO proposed that the new tariff provisions would also apply to the PacifiCorp BAAs for the remainder of their first 12 months of participation in the EIM.

6. On March 16, 2015, the Commission rejected CAISO's proposed tariff revisions but extended the waiver of EIM pricing parameters<sup>8</sup> as previously granted in the December 1 Order.<sup>9</sup> The Commission also instituted an investigation pursuant to section 206 of the Federal Power Act<sup>10</sup> into the justness and reasonableness of the EIM pricing provisions of CAISO's tariff related to the imbalance energy price spikes in PacifiCorp's BAAs. In addition, the Commission concluded that readiness safeguards were immediately necessary prior to full activation of any new EIM Entity into the EIM.<sup>11</sup> The Commission directed CAISO to submit a compliance filing within 60 days of the order "to revise the EIM provisions in its tariff to include requirements to ensure

---

<sup>6</sup> *Cal. Indep. Sys. Operator Corp.*, 149 FERC ¶ 61,194, at PP 22-23, 25-26 (2014) (December 1 Order). On December 31, 2014, CAISO filed an additional waiver petition, which sought to apply the same relief granted in the December 1 Order to the period from November 1, 2014 through November 13, 2014. The Commission granted CAISO's petition on July 29, 2015 in Docket No. ER15-817-000. *Cal. Indep. Sys. Operator Corp.*, 152 FERC ¶ 61,086 (2015), *reh'g pending*.

<sup>7</sup> An EIM Entity is a balancing authority that opts to participate in the EIM. See CAISO Tariff, Appendix A (Master Definition Supplement).

<sup>8</sup> *Cal. Indep. Sys. Operator Corp.*, 150 FERC ¶ 61,191 (2015) (March 16 Order).

<sup>9</sup> The waiver was further extended by Commission order on June 19, 2015, effective June 23, 2015 until implementation of a solution addressing the imbalance energy price spikes. *Cal. Indep. Sys. Operator Corp.*, 151 FERC ¶ 61,247 (2015).

<sup>10</sup> 16 U.S.C. § 824e (2012).

<sup>11</sup> March 16 Order, 150 FERC ¶ 61,191 at P 34.

readiness prior to new EIM Entities commencing EIM operations.”<sup>12</sup> The March 16 Order required such revisions to include:

(1) a robust market simulation and appropriate period of parallel operation to ensure that new entities joining the EIM have adequate opportunity to identify and resolve operational issues prior to full activation; and (2) a requirement that CAISO and the new entrant each submit a market readiness certificate at least 30 days prior to full activation in the EIM, certifying the readiness of the new EIM Entity’s processes and systems.<sup>13</sup>

7. The Commission further stated that CAISO should develop measurable readiness criteria through a collaborative process with its stakeholders, upon which effectiveness of the new EIM Entity’s entry into the EIM can be predicated.<sup>14</sup>

8. On April 9, 2015, Commission staff held a technical conference to discuss issues related to the underlying causes of the price spikes. Since the April 9, 2015 technical conference, CAISO has proposed three separate measures to address the price spike issues in the EIM and protect consumers from potential price anomalies that do not reflect actual market conditions: (1) requirements and criteria to assess a potential new EIM Entity’s readiness prior to commencing EIM operations, which are at issue here; (2) proposed tariff revisions to enable the EIM to recognize and account for capacity available to EIM Entities to resolve power imbalance infeasibilities in their own BAAs (in Docket Nos. ER15-861-003 and -006);<sup>15</sup> and (3) a six-month transition period during which a new EIM Entity is not subject to the pricing parameters that normally apply

---

<sup>12</sup> *Id.*

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

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

<sup>15</sup> CAISO, Tariff Amendment in Compliance with July 20, 2015, Order, Docket No. ER15-861-003 (filed August 19, 2015). On September 24, 2015, the Commission issued a deficiency letter seeking additional information regarding the changes proposed in CAISO’s compliance filing. CAISO filed its response to the deficiency letter on October 21, 2015 in Docket No. ER15-861-006.

when the market optimization relaxes a transmission constraint or the power balance constraint in clearing the real-time market (in Docket No. ER15-2565-000).<sup>16</sup>

9. On May 6, 2015, CAISO submitted a filing (May 6 Filing) intended to comply with the March 16 Order proposing revisions to its tariff to establish the readiness requirements for prospective EIM Entities. CAISO proposed that it would determine, at least 30 days prior to the prospective EIM Entity's implementation date, whether the prospective EIM Entity's systems and processes are ready for participation in the EIM.<sup>17</sup> CAISO also proposed to develop criteria through a stakeholder process to determine the readiness of the prospective EIM Entity's systems and processes to commence participation in the EIM, consistent with the prospective EIM Entity's EIM implementation agreement.<sup>18</sup> In addition, CAISO proposed revisions to provide for CAISO and the prospective EIM Entity to: (1) engage in necessary activities to satisfy the readiness criteria; (2) engage in a market simulation that accounts for the prospective EIM Entity's implementation circumstances; and (3) operate in a parallel production mode representing the EIM to demonstrate how the prospective EIM Entity's processes and systems will function in the financially-binding production environment upon implementation.<sup>19</sup>

10. On July 21, 2015, the Commission conditionally accepted in part, subject to a further compliance filing, and rejected in part the May 6 Filing, effective March 16, 2015.<sup>20</sup> In doing so, the Commission found that the May 6 Filing only partially complied with the directives in the March 16 Order with respect to the readiness safeguards for new entrants joining the EIM. In particular, the Commission conditionally accepted CAISO's proposed market simulation and parallel operations readiness activities and certificate requirements, subject to a further compliance filing.<sup>21</sup> In addition, the Commission accepted CAISO's proposed tariff revisions requiring CAISO and the

---

<sup>16</sup> CAISO's proposed tariff revisions implementing transition period pricing for the EIM were accepted by the Commission on October 29, 2015. *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,104 (2015).

<sup>17</sup> May 6 Filing at 3.

<sup>18</sup> *Id.*

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

<sup>20</sup> July 21 Order, 152 FERC ¶ 61,063 at P 28.

<sup>21</sup> *Id.* PP 28, 31, 33-35.

prospective EIM Entity to make a readiness determination.<sup>22</sup> However, the Commission found that CAISO's proposal requiring it to develop readiness criteria in consultation with its stakeholders, without specifying such criteria in the tariff, did not comply with the March 16 Order and rejected that provision.<sup>23</sup> The Commission directed CAISO to submit a compliance filing within 60 days of the order specifying in its tariff measurable readiness criteria and explaining the standards and process for granting any exceptions to such criteria.<sup>24</sup> The Commission also directed CAISO to clarify that meeting the readiness criteria is a condition precedent to the prospective EIM Entity commencing financially binding EIM operations.<sup>25</sup> In addition, the Commission rejected CAISO's proposed language requiring an attestation of "expected readiness," explaining that CAISO and the prospective EIM Entity must at least be prepared to:

(1) certify that, barring any unforeseen developments, the systems and processes will be ready on the anticipated start date; (2) identify any known issues requiring resolution prior to implementation and plans to resolve such issues; and (3) attest that actual implementation on the start date will be subject to resolution of remaining concerns.<sup>26</sup>

**A. CAISO's August 28 Filing**

11. In the instant filing (August 28 Filing), CAISO proposes several tariff modifications intended to comply with the July 21 Order. CAISO proposes a series of standards, or readiness criteria, a prospective EIM Entity must meet before CAISO and the prospective EIM Entity can certify the entity's readiness to begin financially binding EIM participation. CAISO also proposes to use pre-established metrics, or "thresholds," to be included in CAISO's business practice manual, to measure satisfaction of the readiness criteria. For cases in which an exception to one or more criteria is necessary, CAISO proposes a process for granting exceptions to the thresholds and resolution to the exception before initiation of financially-binding operations. Lastly, CAISO proposes three "readiness requirements," which establish the requirements that must be met before

---

<sup>22</sup> *Id.* PP 28, 37.

<sup>23</sup> *Id.* PP 28-30.

<sup>24</sup> *Id.* PP 29-30.

<sup>25</sup> *Id.* P 34.

<sup>26</sup> *Id.* P 35.

a prospective EIM Entity may begin financially binding EIM operations. As explained in detail below, these readiness requirements mandate: (1) a certification by CAISO and the prospective EIM Entity that the entity is ready to begin financially binding EIM participation, based on the prospective EIM Entity's satisfaction of the "readiness criteria"; (2) completion of a market simulation; and (3) completion of no less than a full 30 days of parallel operations. We address each part of CAISO's proposal in detail below.

### **B. Effective Date**

12. In its August 28 Filing, CAISO requests that the Commission allow the proposed tariff revisions to become effective March 16, 2015, consistent with the effective date approved in the July 21 Order.<sup>27</sup>

## **II. Notice and Responsive Pleadings**

13. Notice of CAISO's August 28 Filing was published in the *Federal Register*, 80 Fed. Reg. 56,979 (2015), with interventions or protests due on or before September 18, 2015. Timely comments were submitted by Pacific Gas and Electric Company (PG&E), Powerex Corp. (Powerex), NV Energy, PacifiCorp, Bonneville Power Administration (BPA), and Puget. The Western Power Trading Forum (WPTF) filed a timely protest. CAISO filed an answer to the comments and protests on September 25, 2015 (September 25 Answer). Puget filed an answer to CAISO's answer on September 29, 2015. On October 19, 2015, Powerex filed an answer to CAISO's answer. On October 26, 2015, CAISO filed an answer to Powerex's answer.

## **III. Discussion**

### **A. Procedural Matters**

14. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2015), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. We will accept CAISO's September 25 Answer and Puget's answer because they have provided information that assisted us in our decision-making process. We are not persuaded to accept Powerex's answer or CAISO's October 26, 2015 answer and will, therefore, reject them.

---

<sup>27</sup> CAISO August 28 Filing at 2; *see* July 21 Order, 152 FERC ¶ 61,063 at P 28 and ordering para. (A).

**B. Substantive Matters**

15. We find that CAISO's August 28 Filing complies with the July 21 Order and we will accept it for filing effective March 16, 2015, as requested. Consistent with the requirements of the July 21 Order, CAISO's proposal sets forth readiness requirements based on measurable readiness criteria.<sup>28</sup> As directed by the Commission, CAISO's proposal includes tariff provisions identifying specific, measurable readiness criteria that must be met prior to the potential EIM Entity commencing financially binding EIM operations. CAISO's proposal also sets forth specific initial thresholds, to be set out in its business practice manual, to measure satisfaction of those criteria and explains the process for granting exceptions.<sup>29</sup> Lastly, CAISO's proposed readiness requirements: (1) mandate a market readiness certificate, signed by senior officers of CAISO and the potential EIM Entity, certifying readiness of the potential EIM Entity's processes and systems, based on the proposed readiness criteria and thresholds; and (2) require completion of a market simulation and a period of parallel operations.<sup>30</sup>

**1. Readiness Criteria and Measurements for Meeting the Readiness Criteria****a. CAISO's Proposal**

16. As noted above, CAISO proposes, in tariff section 29.2(b)(7), specific standards (readiness criteria and associated thresholds) that must be met for a prospective EIM Entity to attain readiness certification. CAISO states that it developed its proposed readiness criteria through the stakeholder process, in compliance with the July 21 Order.<sup>31</sup> CAISO proposes readiness criteria in each of the categories listed by the Commission in the July 21 Order: full network model integration, systems readiness, load and variable energy resource forecasting, communications systems between the prospective EIM Entity and CAISO, the ability to issue settlement statements, outage management, scheduling, market simulation, parallel production plan, and training.<sup>32</sup> CAISO also proposes to include a miscellaneous criteria category that requires

---

<sup>28</sup> See July 21 Order, 152 FERC ¶ 61,063 at PP 34-35.

<sup>29</sup> See, *id.* PP 29-30.

<sup>30</sup> See, *id.* PP 31-32.

<sup>31</sup> August 28 Filing at 12 (citing July 21 Order, 152 FERC ¶ 61,063 at P 30).

<sup>32</sup> *Id.*

registration of resources eligible to provide EIM available balancing capacity, development of operating procedures, execution of all necessary agreements, and confirmation that sufficient data is available for market monitoring.<sup>33</sup>

17. To determine whether a prospective EIM Entity has met the criteria, CAISO proposes to apply a metric that it refers to as the threshold, i.e., the minimum performance standard required to meet the criteria. CAISO proposes to include the threshold for each criterion in its business practice manual, which will set forth the manner in which CAISO will apply the threshold measure that must be satisfied.<sup>34</sup> CAISO contends that including such thresholds in the tariff is not necessary to make them transparent and rigorous, because any future changes to the thresholds would be developed through the business practice manual change management process, which includes the opportunity for stakeholder comment. Moreover, CAISO states, stakeholders will have opportunities to raise any concerns regarding the thresholds during regular teleconferences, and can raise them for Commission consideration in response to filed readiness certifications.<sup>35</sup> Although it is not seeking Commission approval of the thresholds for the various criteria, CAISO describes them for each criteria category.<sup>36</sup>

18. CAISO's proposed readiness criteria, as well the thresholds it plans to employ to measure whether such criteria are met, are outlined below.

**i. Full Network Model Integration**

19. CAISO proposes to include in tariff section 29.2(b)(7)(A) four readiness criteria that must be met to demonstrate that the prospective EIM Entity's full network model is completely integrated into CAISO's full network model. CAISO states that satisfying these criteria ensures that the full network model is accurate and the solutions produced by it are correct, including information associated with an EIM Entity's use of a third-party transmission system.<sup>37</sup> CAISO's proposed criteria include:

---

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> *Id.* at 11.

<sup>36</sup> *Id.*

<sup>37</sup> *Id.* at 13.

- (1) In CAISO's full network model, the load, EIM internal inerties and EIM external inerties, and generating unit definitions must be consistent with those definitions in the exported prospective EIM Entity network model file;
- (2) The supervisory control and data acquisition (SCADA) measurements used in the prospective EIM Entity's energy management system model must match the measurements observed by CAISO through CAISO's energy management system;
- (3) The state estimator solution must be equivalent or superior to the prospective EIM Entity's state estimator solution for its BAA; and
- (4) The physical representation of the prospective EIM Entity network must match the base market model that accounts for non-conforming load, behind-the-meter generation, pseudo-ties, dynamic schedules, and third-party transmission service providers and path operator information that CAISO agrees is used to support EIM transfers and dispatch in the EIM, as applicable.<sup>38</sup>

20. To satisfy the first element, CAISO explains the threshold requirement that the data between the CAISO full network model and the prospective EIM Entity's network model must match within 10 percent, measured in megawatt (MW) capacity, prior to starting parallel operations, and within five percent before full integration. According to CAISO, the thresholds reflect an operational success rate that accounts for the inability of market simulation to precisely emulate all real-time system operations all the time.<sup>39</sup> For the second element, CAISO specifies the threshold requirement that the critical measurements and appropriate SCADA measurements match 90 percent, measured in MW, to start parallel operation and 95 percent, measured in MW, before full activation outside of any exception in the energy management system model.<sup>40</sup> For the third element, CAISO specifies the threshold requirement that the state estimator solutions between the two systems converge more than 90 percent of the time for at least two days before parallel operations begin, and for at least three days before full integration.<sup>41</sup> For the fourth element, CAISO specifies the threshold requirement that the EIM Entity must model the major nonconforming loads that exceed five percent of the EIM Entity total actual load in MW separately from conforming load in the market model. CAISO states

---

<sup>38</sup> *Id.* at 12-13.

<sup>39</sup> *Id.* at 14.

<sup>40</sup> *Id.* at 13.

<sup>41</sup> *Id.*

that this threshold is necessary because non-conforming loads can account for a significant portion of the load in a prospective EIM Entity BAA and affect the accuracy of the market model accordingly.<sup>42</sup>

**ii. Operations Training**

21. CAISO proposes to include in tariff section 29.2(b)(7)(B) the requirement that all operations staff responsible for EIM operations and, when relevant, transactions and settlements, that are identified by the prospective EIM Entity complete necessary training prior to the start of parallel operations.<sup>43</sup> According to CAISO, this criterion ensures that the prospective EIM Entity staff is trained on each of the critical tasks in preparation for financially binding operations.<sup>44</sup> CAISO states that the thresholds for this criterion are that the prospective EIM Entity operators complete the training and an assessment of their competency in the subject matter as outlined in a specific set of CAISO training modules.<sup>45</sup>

**iii. Forecasting Capability**

22. CAISO proposes to add in tariff section 29.2(b)(7)(C) the requirement that CAISO, and when appropriate the prospective EIM Entity, demonstrate its relevant forecasting capability. The criterion requires that CAISO and the prospective EIM Entity: (1) establish the definition of EIM demand forecast boundaries based on the conforming and non-conforming load characteristics, as applicable; (2) examine the accuracy of the CAISO forecast of EIM demand based on historical actual load data for the defined EIM demand forecast boundaries; (3) identify weather station(s) locations used in forecasting, as applicable; and (4) identify the source of variable energy resource forecasts.<sup>46</sup>

23. CAISO states that it has adopted a threshold for the first three elements of this criterion. This threshold requires that all plant information tags and historical data for defined load areas and nonconforming load, if applicable, parallel load forecasts provided

---

<sup>42</sup> *Id.* at 14.

<sup>43</sup> *Id.* at 15-16.

<sup>44</sup> *Id.* at 16.

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

from CAISO (if a CAISO load forecast is used). For the fourth element, CAISO states that it has adopted the threshold that the forecasting entity must demonstrate the ability to deliver unit forecasts in MWs at five-minute intervals for at least three hours ahead of the trading hour. The threshold also requires that the forecasting entity be able to provide base schedules by 75, 55, and 40 minutes prior to the operating hour and that the prospective EIM Entity provide to CAISO real-time MW production plant information tags.<sup>47</sup>

**iv. Balanced Schedules**

24. CAISO proposes to include in tariff section 29.2(b)(7)(D) the requirement that the prospective EIM Entity's scheduling coordinator demonstrate its capability to submit balanced schedules. The criterion requires that CAISO and the prospective EIM Entity demonstrate: (1) the ability to balance EIM demand and EIM supply; (2) the ability to pass the capacity test set forth in tariff section 29.34(l); and (3) the ability to pass the flexible ramping sufficiency test set forth in tariff section 29.34(m).<sup>48</sup> CAISO states that these three tests are Commission-approved resource sufficiency tests and important components of the EIM design.<sup>49</sup> According to CAISO, they appropriately allow EIM Entities to realize the benefits of participation in the EIM while preventing them from inappropriately leaning on other EIM BAAs.<sup>50</sup> CAISO asserts that the thresholds described below ensure the prospective EIM Entity can pass the test for a reasonable amount of time and over a reasonable array of operational scenarios.<sup>51</sup>

25. With respect to the prospective EIM Entity's ability to balance EIM demand and supply, CAISO adopted the threshold requirement that, before the commencement of parallel operations, 90 percent or more of the base schedule balance tests performed during monitored hours must be within 10 percent of the average imbalance of load forecast over a one-day period. Prior to full integration of the prospective EIM Entity, 90 percent or more of the base period schedule tests performed during parallel operations

---

<sup>47</sup> *Id.* at 16-17.

<sup>48</sup> *Id.* at 17.

<sup>49</sup> *Id.* (citing *Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231 at PP 122-124 (accepting CAISO's resource sufficiency tests)).

<sup>50</sup> *Id.*

<sup>51</sup> *Id.* at 19.

must be within five percent of the average imbalance of load over five non-consecutive days during the parallel operations period.<sup>52</sup>

26. With respect to the prospective EIM Entity scheduling coordinator's ability to pass the flexible ramping sufficiency test, CAISO has adopted the threshold that the prospective EIM Entity must pass the test at least 90 percent of the time over the monitored hours of one day before commencement of parallel operations and five non-consecutive parallel operations days before full integration.<sup>53</sup>

27. Finally, with respect to the requirement that the prospective EIM Entity's scheduling coordinator demonstrate its ability to pass the capacity test, CAISO has adopted the threshold that it must pass the test at least 90 percent of the time over monitored hours of one day before parallel operation and over monitored hours of five non-consecutive parallel operations days before full integration of the prospective EIM Entity.<sup>54</sup>

**v. System Readiness and Integration**

28. CAISO proposes to add in tariff section 29.2(b)(7)(E) the requirement that CAISO and the prospective EIM Entity evaluate system readiness and integration by testing system elements and integration in accordance with documentation posted on the CAISO website.<sup>55</sup> CAISO also proposes to require the prospective EIM Entity to issue all necessary certificates to its employees that require system access to perform EIM-related job functions.<sup>56</sup>

29. CAISO has adopted specific thresholds regarding this criterion that require completion without significant issues of all tasks identified in the functional and system testing documentation. According to CAISO, any exceptions must be explained and workarounds developed as appropriate. CAISO states that it will also require that: (1) the prospective EIM Entity identify all EIM employees performing job functions for

---

<sup>52</sup> *Id.* at 17.

<sup>53</sup> *Id.* at 18.

<sup>54</sup> *Id.*

<sup>55</sup> *Id.* at 20 (citing <http://www.caiso.com/Documents/MarketSimulationPlanFall2015Release.pdf>).

<sup>56</sup> *Id.*

the EIM market; (2) the prospective EIM Entity request all CAISO issued certificates within the appropriate timeframes; and (3) the prospective EIM Entity provide all identified employees the necessary EIM system access certificates. In addition, testing of all data interfaces between the prospective EIM Entity's systems and CAISO systems must be approved by CAISO executives.<sup>57</sup>

**vi. Settlements**

30. CAISO proposes to include in tariff section 29.2(b)(7)(F) a criterion to address the prospective EIM Entity's and CAISO's ability to process settlement statements. The specific elements of the criterion are: (1) whether CAISO settlement statements and invoices match the operational data fed into the settlement system and the resulting calculations correspond to the formulas defined in the CAISO tariff and applicable business practice manuals; and (2) whether the settlement statements and invoices of the prospective EIM Entity that allocate charges and credits to its customers accurately reflect system and market data during parallel operations.<sup>58</sup>

31. CAISO states that it has adopted two thresholds for this criterion. First, the monthly settlement statement and invoice with corresponding daily statements produced by CAISO during market simulation must be verifiably accurate against available data. Second, the prospective EIM Entity's settlement statements and invoices that allocate charges and credits to its customers must accurately reflect system and market data during parallel operations.<sup>59</sup>

**vii. Outage Management**

32. CAISO proposes to add in tariff section 29.2(b)(7)(G) the requirement that CAISO and the prospective EIM Entity evaluate the prospective EIM Entity's ability to submit and retrieve outage information to CAISO within the required timelines. CAISO states that it has adopted a threshold to require the prospective EIM Entity to validate its ability to submit and retrieve transmission outages, generation Pmax derates, generation Pmin rerates, and generation outage tickets within the required timelines.<sup>60</sup>

---

<sup>57</sup> *Id.* at 20-21.

<sup>58</sup> *Id.* at 21.

<sup>59</sup> *Id.*

<sup>60</sup> *Id.* at 22.

**viii. Communications Between CAISO and the Prospective EIM Entity**

33. CAISO proposes to add in tariff section 29.2(b)(7)(H) the requirement that CAISO and the prospective EIM Entity confirm the readiness of communications. CAISO states that this criterion considers whether the process and procedures used for voice and electronic messaging are identified and incorporated into the prospective EIM Entity's business processes before the start of market simulation. It also considers whether the identified operations staff are trained on the relevant operating procedures and tools used for EIM-related communications before the start of parallel operations, including communications associated with EIM use of certain third-party transmission provider systems used to support EIM transfers and dispatch.<sup>61</sup>

34. CAISO states that it has adopted several thresholds to evaluate this criterion. To test that the prospective EIM Entity's process and procedures used for voice and electronic messaging are ready, CAISO will require that the prospective EIM Entity has incorporated the process and procedures into its business processes before the start of market simulation.<sup>62</sup> To test whether staff are trained on communication procedures and tools, CAISO will require that the prospective EIM Entity's operations staff are trained on the relevant operating procedures and tools used for EIM-related communications before the start of parallel operations.<sup>63</sup> Regarding third-party transmission provider information, CAISO must confirm during parallel operations that third-party transmission service provider and path operator information that supports EIM transfers and real-time dispatches is in fact made available.<sup>64</sup>

**ix. Market Simulation**

35. CAISO proposes to add in tariff section 29.2(b)(7)(I) a criterion that the market simulation must include: (1) the establishment and testing of all necessary scheduling coordinator identifications and resource identifications for the prospective EIM Entity's BAA; (2) a day-in-the-life simulation, including end-to-end daily market workflow with no critical defects; (3) a structured scenarios simulation where all structured scenarios provided by CAISO are executed and all significant issues are resolved; (4) an

---

<sup>61</sup> *Id.*

<sup>62</sup> *Id.* at 22.

<sup>63</sup> *Id.* at 22-23.

<sup>64</sup> *Id.* at 23.

unstructured scenarios simulation where all unstructured scenarios provided by the prospective EIM Entity are executed and all significant issues are resolved; (5) a determination that market results are appropriate based on inputs; and (6) a validation of CAISO prices based on input data for parallel operations.<sup>65</sup> CAISO also states that it will seek feedback from market participants in identifying relevant structured scenario exercises in developing the market simulation plan.<sup>66</sup>

36. CAISO states that it has adopted the following thresholds to evaluate whether this criterion has been met: (1) CAISO has established and the prospective EIM Entity has tested all necessary scheduling coordinator identifications and resource identifications for the prospective EIM Entity's BAA; (2) the prospective EIM Entity's operations staff has completed end-to-end daily market workflow with no critical defects; (3) all significant issues in the structured scenarios simulation have been resolved or have an interim solution that is functionally equivalent; (4) all significant issues in the unstructured scenario market simulation have been resolved or have an interim solution that is functionally equivalent; (5) the prospective EIM Entity and CAISO executive project sponsors have approved the market results reports during market simulation; and (6) the CAISO market quality team has validated the prices and schedules based on input data prior to entry into parallel operations.<sup>67</sup>

**x. Parallel Operations**

37. CAISO proposes to include as a criterion in tariff section 29.2(b)(7)(J) the requirement that parallel operations must run consistently and in accordance with the parallel operation plan. CAISO states that it and the prospective EIM Entity will develop and publish a parallel operation plan, providing transparency and accountability into the tasks associated with this phase of implementation. For this criterion, CAISO states that it has adopted a threshold requiring that parallel operations run consistently within the normal production market disruption tolerances threshold.<sup>68</sup>

---

<sup>65</sup> *Id.*

<sup>66</sup> *Id.* at 24.

<sup>67</sup> *Id.* at 23.

<sup>68</sup> *Id.* at 25.

**xi. Additional Criteria**

38. CAISO explains that, during the stakeholder process, it determined that additional readiness criteria are necessary, outside of the categories discussed above and in the July 21 Order.<sup>69</sup> CAISO proposes to add criteria in tariff section 29.2(b)(7)(K) addressing the execution of necessary agreements, completion of operating procedures, the identification of available balancing capacity, flexible capacity requirements and associated data, and availability of data necessary for market monitoring.<sup>70</sup>

39. CAISO states that proposed tariff section 29.2(b)(8) requires it to report on its website, at least monthly during market simulation and at least twice monthly during parallel operations, on the progress toward achieving the readiness criteria. CAISO also proposes to revise the Appendix A definitions of “State Estimator” and “Base Market Model” to include EIM Entity BAAs for the purpose of the EIM.<sup>71</sup>

**b. Comments and Protests**

40. NV Energy, Puget, and PacifiCorp support the readiness criteria in CAISO’s proposal. NV Energy supports the length and adequacy of the stakeholder process and CAISO’s consideration of stakeholder input in developing its proposal. NV Energy adds that the readiness criteria cover every aspect of EIM Entity participation to ensure that appropriate levels of training and systems integration are conducted and demonstrated prior to any readiness certification before the Commission.<sup>72</sup> NV Energy supports the scope and content of CAISO’s proposed readiness criteria, asserting that CAISO’s proposed criteria provide a comprehensive foundation to examine the readiness of personnel, procedures, and systems prior to an EIM Entity engaging in financially binding operations.<sup>73</sup>

---

<sup>69</sup> *Id.*

<sup>70</sup> *Id.* at 25-26.

<sup>71</sup> *Id.* at 26.

<sup>72</sup> NV Energy Comments at 6-7.

<sup>73</sup> *Id.* at 9.

41. Furthermore, even though NV Energy supports CAISO's proposed six-month transition period that temporarily avoid penalty pricing for new EIM Entities,<sup>74</sup> NV Energy argues "this does not mean that the readiness criteria and the periods for testing or parallel operation are insufficient."<sup>75</sup> According to NV Energy, the development of the readiness criteria, market simulation, and parallel operation are separate from the need for a transition period. NV Energy adds that the transition period and the readiness criteria are complementary and both are necessary to facilitate the new EIM Entity's entrance into the EIM while ensuring that just and reasonable prices protect customers.<sup>76</sup>

42. NV Energy contends that CAISO has properly addressed the issues of resource sufficiency pointed out by commenters and highlighted by the Commission<sup>77</sup> by proposing increasing thresholds, for before and during parallel operations, to determine whether base schedules are reasonably close to being balanced a high percent of the time. Moreover, NV Energy points out that CAISO has increased the number of days tested during parallel operations.<sup>78</sup> NV Energy adds that it has registered over 6,000 MW of capacity to participate in the EIM, noting that much of what remains are renewable resources not suited to provide imbalance, and that the only coal capacity not registered is a 260 MW share of a plant co-owned with Idaho Power.<sup>79</sup>

43. Puget asserts that the detailed readiness requirements in CAISO's proposal will provide the Commission, CAISO, current EIM Entity BAAs, and prospective EIM Entity BAAs confidence in the planned market expansions.<sup>80</sup> PacifiCorp supports CAISO's

---

<sup>74</sup> Under this proposal, CAISO would defer the application of the transmission and power balance relaxation parameters during infeasibilities and instead clear the market on the last marginal economic bid in new EIM Entity's BAA. The Commission accepted CAISO's proposal, subject to condition, on October 29, 2015. *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,104.

<sup>75</sup> NV Energy Comments 14-15.

<sup>76</sup> *Id.* at 15.

<sup>77</sup> *Id.* at 9 (citing July 21 Order, 152 FERC ¶ 61,063 at P 30).

<sup>78</sup> *Id.* at 9-10.

<sup>79</sup> *Id.* at 10.

<sup>80</sup> Puget Comments at 3.

proposed tariff amendments to include readiness criteria in each of the categories listed by the Commission in its July 21 Order.<sup>81</sup> PacifiCorp also points out that CAISO's prior stakeholder process provided interested parties an opportunity to express concerns regarding the scope and sufficiency of the proposed readiness criteria.<sup>82</sup> PacifiCorp also believes that CAISO has complied with the Commission's guidance in the July 21 Order by adding metrics by which to measure compliance with each readiness criterion in the business practice manual.<sup>83</sup>

44. Powerex and BPA both remain concerned about the lack of rigor of CAISO's proposed readiness criteria and thresholds. Powerex's primary concerns relate to the resource sufficiency tests in CAISO's proposed readiness criteria in tariff section 29.2(b)(7)(D) regarding balanced schedules. According to Powerex, the measures in CAISO's proposed readiness criteria and thresholds only require the most minimal demonstration that it can satisfy those requirements, and only for a limited and non-representative period of time.<sup>84</sup> Powerex states that in order to avoid the significant issues that arose immediately following implementation of the EIM in the PacifiCorp BAAs, it is critical that CAISO's criteria and thresholds contain rigorous measures of resource sufficiency that provide a meaningful assurance that there will be sufficient resources bid into the EIM from the relevant BAA to meet imbalance needs in the vast majority of intervals.<sup>85</sup>

45. Powerex argues that CAISO's proposed criteria and thresholds to assess the resource sufficiency of a prospective EIM Entity tolerate a level of resource insufficiency comparable to that which prompted the Commission to institute a section 206 investigation and direct CAISO to develop readiness safeguards in the first place.<sup>86</sup> In particular, Powerex states that under CAISO's proposal, a prospective EIM Entity will be deemed "ready" to begin participation in the EIM if it passes CAISO's flexible ramping sufficiency test in 90 percent of the hours during a single day before parallel operation and five non-consecutive parallel operation days before full integration of the prospective

---

<sup>81</sup> PacifiCorp Comments at 4.

<sup>82</sup> *Id.* at 5.

<sup>83</sup> *Id.* at 3-6.

<sup>84</sup> Powerex Comments at 8.

<sup>85</sup> *Id.* at 9.

<sup>86</sup> *Id.*

EIM Entity. Powerex asserts that this is a standard that even PacifiCorp may have passed during the period preceding the March 16 Order.<sup>87</sup>

46. Powerex argues that, while it does not deny that there may be certain issues and system conditions that may not fully materialize until a BAA begins financially-binding operations in the EIM, CAISO has failed to provide any reasonable explanation of why the limitations of the market simulation and parallel operation require adoption of more permissive criteria for demonstrating readiness to satisfy resource sufficiency requirements.<sup>88</sup> Powerex states that it is unclear why the measurement and data limitations identified by CAISO do not instead support the use of a more, rather than less, rigorous threshold or the inclusion of a greater number of days over a longer period of time to assess readiness and ensure that when the market commences operation, sufficient flexible resources are offered to meet the imbalance needs in all but the rarest of circumstances.<sup>89</sup>

47. Powerex also notes ambiguities in the manner in which CAISO will actually apply the threshold. For example, it is unclear whether the requirement that the prospective EIM Entity pass 90 percent of the time means that the EIM Entity must pass 90 percent of the total hours of the five days (i.e., 108 out of a total 120 hours), or 90 percent of the hours on each of the five days (i.e., 22 hours on each of the five days). According to Powerex, it is also unclear how CAISO will select the days on which it will assess the prospective EIM Entity's ability to pass the flexible ramping sufficiency test.<sup>90</sup>

48. Powerex states the Commission should direct CAISO to modify its proposed threshold to require each prospective EIM Entity to pass the flexible ramping sufficiency test in every hour for an extended period of time (e.g., every hour for 30 consecutive days) prior to being permitted to integrate into the EIM.<sup>91</sup> Powerex asserts that requiring a prospective EIM Entity to meet a more rigorous threshold may require a longer period of parallel operation, and may push out the EIM Entity's preferred start date, but this

---

<sup>87</sup> *Id.* at 9-10.

<sup>88</sup> *Id.* at 12.

<sup>89</sup> *Id.* at 12-13.

<sup>90</sup> *Id.* at 10 n.35.

<sup>91</sup> *Id.* at 13.

would provide confidence that there will be sufficient flexible resources bid into the EIM to meet the imbalance needs on a consistent basis.<sup>92</sup>

49. Similarly, BPA also expresses concerns regarding CAISO's proposed resource sufficiency requirements. Specifically, BPA asserts that the Commission should require CAISO to demonstrate that there are sufficient resources participating in the EIM to achieve just and reasonable results.<sup>93</sup> BPA argues that meeting the North American Electric Reliability Corporation reliability requirements does not mean that the EIM Entity has sufficient resources to avoid market infeasibilities.<sup>94</sup> BPA also requests that CAISO demonstrate how the proposed readiness criteria would have prevented the "learning curve" problems that contributed to the initial EIM price spikes.<sup>95</sup>

50. In addition to its concerns about resource sufficiency, Powerex also asserts that the proposed readiness criteria fail to adequately address other key issues, including the need for accurate and timely EIM invoicing and settlement and finalization of the arrangements for the use of third-party transmission facilities to facilitate EIM transactions.<sup>96</sup> Powerex states that CAISO's proposed criteria and thresholds require only that CAISO and the EIM Entity verify the accuracy of settlement statements and invoices, and do not allow for customer review. Powerex also expresses concerns that there is no criterion or threshold proposed to measure "accuracy," and that CAISO qualifies the requirement as based on "available data," with no discussion regarding the limitations of data availability during the limited parallel operation period.<sup>97</sup> Powerex argues that CAISO and the prospective EIM Entity should be required to issue draft settlements statements and invoices to market participants and transmission customers for at least two complete billing cycles during parallel operation.<sup>98</sup>

---

<sup>92</sup> *Id.*

<sup>93</sup> BPA Comments at 4.

<sup>94</sup> *Id.*

<sup>95</sup> *Id.*

<sup>96</sup> Powerex Comments at 16.

<sup>97</sup> *Id.*

<sup>98</sup> *Id.* at 17.

51. Powerex and BPA also express concerns regarding the use of third-party transmission facilities to facilitate the EIM. Powerex states that integration of Puget into the EIM will pose unique challenges because, unlike PacifiCorp and NV Energy, Puget is not directly interconnected to any BAAs participating in the EIM. Consequently, in order to participate in the EIM, Puget will need to enter into an agreement with BPA to facilitate Puget's use of BPA's transmission system for EIM transfers.<sup>99</sup> Powerex and BPA both take issue with CAISO's neglect to include any readiness requirement that Puget and any other similarly situated EIM Entities demonstrate that they have actually secured the necessary rights and authorizations from third-party transmission service providers to facilitate their participation in the EIM.<sup>100</sup> Therefore, Powerex urges the Commission to require CAISO to revise its proposed criteria to explicitly require a showing that: (1) the prospective EIM Entity has entered into any necessary contractual arrangements with appropriate third-party providers; and (2) the relevant third-party transmission providers have represented that they are ready to accommodate such service, as well as identified any limitations or constraints on the ability of the EIM Entity to use its system to support EIM transfers.<sup>101</sup> Likewise, BPA contends that CAISO and new EIM Entities should certify that they have made sufficient arrangements on third-party transmission systems to facilitate the EIM.<sup>102</sup>

52. BPA also requests that CAISO develop post-commencement criteria to evaluate the performance of new EIM Entities after those entities commence binding operation in the EIM and before the end of the proposed six-month transition period proposed in ER15-2565-000.<sup>103</sup> Finally, BPA request that the Commission take appropriate time to evaluate this filing and not take into account NV Energy's desired commencement date of November 1, 2015, in making its determination.<sup>104</sup>

---

<sup>99</sup> *Id.* at 14.

<sup>100</sup> *Id.* at 15; BPA Comments at 1.

<sup>101</sup> Powerex Comments at 15.

<sup>102</sup> BPA Comments at 3.

<sup>103</sup> *Id.* at 5.

<sup>104</sup> *Id.*

c. Answers

53. CAISO asserts that Powerex's arguments that stricter readiness criteria are needed because the resource sufficiency tests are inadequate misunderstand the nature of the readiness criteria.<sup>105</sup> In response to this and BPA's request that CAISO demonstrate how the proposed readiness criteria would have prevented learning curve problems, CAISO adds that the Commission did not expect the readiness activities alone to solve all the issues identified after the launch of the EIM.<sup>106</sup> Instead, CAISO explains, the Commission directed CAISO to file tariff language for its proposed remedy to the EIM pricing issues. CAISO notes that it has filed its proposed remedy for the EIM pricing issues with the Commission, as well as a proposal for a transition period for new EIM Entities.<sup>107</sup> CAISO states that the Commission should reject Powerex's attempts to include additional resource sufficiency requirements in the readiness criteria as an attempt to impose the equivalent of a must-offer requirement upon the EIM.<sup>108</sup>

54. In response to Powerex's concerns about the resource sufficiency test, CAISO explains that during parallel operations it runs three separate tests each hour – the balancing test, the capacity test, and the ramping test – and that these tests apply as they would during actual operations.<sup>109</sup> CAISO explains that, considering the practical limitations of parallel operations, including that production e-tag information is not useful when submitting base schedule and other information required for the resource sufficiency evaluation, passing the relevant tests 90 percent of the time in a given day for five days is reasonable. Therefore, CAISO argues that the limitations of the parallel operation environment make it more challenging to pass the resource sufficiency evaluation than in actual operation, and that these limitations support CAISO's thresholds, rather than undermine them as Powerex argues.<sup>110</sup>

55. In response to Powerex's concerns about invoicing and settlement, CAISO asserts that two full days of settlement statements during parallel operation is a sufficient test of

---

<sup>105</sup> CAISO September 25 Answer at 9.

<sup>106</sup> *Id.* at 10.

<sup>107</sup> *Id.* at 9-10.

<sup>108</sup> *Id.* at 10.

<sup>109</sup> *Id.* at 9 n.20, 11.

<sup>110</sup> *Id.* at 11-12.

the readiness of the prospective EIM Entity's settlement systems and processes. According to CAISO, just two trade days of testing would fully exercise NV Energy settlements systems and processes because the charge codes have been configured at this point in the implementation process and are generally all triggered on any given trade day.<sup>111</sup> CAISO adds that Powerex is unclear about what it considers a settlement cycle in its requests for least two complete billing cycles of testing. CAISO explains that it issues settlement statements for each day, meaning its current proposal would meet Powerex's request. However, if Powerex intends to refer to the full settlement period under a prospective EIM Entity's open access transmission tariff (OATT), this could potentially increase parallel operations to 90 days.<sup>112</sup> CAISO further asserts that the July 21 Order did not require this, and demanding 90 days of parallel operations would be contrary to the Commission's directive.<sup>113</sup>

56. With respect to third-party transmission service agreements, CAISO continues to believe that "determining contractual third-party transmission service arrangements remains a matter to be decided between the third-party and the prospective EIM Entity."<sup>114</sup> CAISO argues that it supports efforts to secure those agreements, but that they are not a factor in readiness. CAISO explains that a prospective EIM Entity can participate in the EIM without any such contractual arrangements, and CAISO can dispatch resources within the new EIM Entity's BAA without inter-BAA EIM transfers.<sup>115</sup> While the lack of EIM transfer capability may lower the value of participation, CAISO argues that a prospective EIM Entity should not be precluded from deciding to commence production operations even if third-party transmission provider arrangements are not in place. CAISO asserts that the decision should be left to the prospective EIM Entity, not dictated by CAISO's readiness criteria.<sup>116</sup>

---

<sup>111</sup> *Id.* at 13.

<sup>112</sup> For example, CAISO explains that if the prospective EIM Entity settles monthly, then Powerex's request could require that parallel operations continue for 60 days prior to certification, which, including the 30-day notice requirement, would result in at least 90 days of parallel operations.

<sup>113</sup> CAISO September 25 Answer at 14.

<sup>114</sup> *Id.* at 16.

<sup>115</sup> *Id.*

<sup>116</sup> *Id.*

57. In response to BPA's request that readiness certifications account for the use of third-party transmission facilities, CAISO points out that its proposal includes readiness criteria to ensure that the network model represents third-party transmission system information and to establish effective communications with third-party transmission service providers.<sup>117</sup> CAISO adds that the purpose of these criteria is "to ensure that the systems and procedures representing any necessary third-party arrangements have been tested."<sup>118</sup> Furthermore, CAISO argues that involvement of third-party transmission service providers in the certification would be inappropriate because they are not directly part of the implementation. Lastly, CAISO notes that the March 16 Order requires only certification by the prospective EIM Entity and CAISO, and BPA and Powerex did not seek rehearing of this determination.<sup>119</sup>

58. Puget's answer also addresses the comments filed by BPA and Powerex regarding third-party transmission rights. Puget states that it believes issues regarding the use of third-party transmission rights in the EIM should be addressed outside of the consideration of readiness criteria.<sup>120</sup> Puget confirms that it intends to use long-term firm transmission rights over BPA's system to effectuate EIM transfers, but states that this intent is grounded in the basic application of long-standing nondiscriminatory transmission access principles, and EIM participation does not represent any sort of new paradigm in transmission rights usage. Puget further asserts that the Commission's own precedents – as well as BPA's existing tariff and business practices – provide a framework for EIM transfers, without the need for a further specific contractual arrangement.<sup>121</sup> Puget points out that BPA already offers transmission customers 15-minute scheduling, per the requirements of Order No. 764.<sup>122</sup> According to Puget, the EIM can utilize 15-minute static tags where more granular transmission information is unavailable. Puget states that, in circumstances where Puget's transmission rights are used for non-dynamic EIM transfers, the Commission has already provided a framework

---

<sup>117</sup> *Id.* at 17.

<sup>118</sup> *Id.*

<sup>119</sup> *Id.*

<sup>120</sup> Puget Answer at 3.

<sup>121</sup> *Id.*

<sup>122</sup> *Id.* at 4 (citing *Integration of Variable Energy Resources*, Order No. 764, FERC Stats. & Regs. ¶ 31,331 (2012)).

for this use.<sup>123</sup> Puget provides a similar argument for dynamic transfers but acknowledges that they require case-by-case study for each transmission customer seeking dynamic transfer capability on its system.<sup>124</sup>

59. Finally, CAISO asserts that BPA's request that CAISO identify criteria for evaluating a new EIM Entity's performance once it has entered financially-binding operations is beyond the scope of this proceeding. According to CAISO, this subdocket concerns CAISO's compliance with the Commission's directives in the July 21 Order, and BPA's request is not directly related to any of the Commission's directives in that order.<sup>125</sup>

**d. Commission Determination**

60. We find that CAISO has complied with the March 16 Order directing it to develop measurable readiness criteria through a collaborative process with its stakeholders.<sup>126</sup> We accept CAISO's proposed readiness criteria and find that they will help to ensure that new entrants joining the EIM are able to demonstrate market readiness and identify any operational issues prior to full activation in the EIM. CAISO's readiness criteria address full network model integration, systems readiness, load and variable energy resource forecasting, communications systems between the prospective EIM Entity and CAISO, the ability to issue settlement statements, outage management, scheduling, market simulation, parallel production plan, and training, as required by the Commission in the July 21 Order.<sup>127</sup> With respect to CAISO's proposed additional criteria in tariff section 29.2(b)(7)(K), we agree that the new criteria are appropriate, and accept them. The additional criteria cover aspects of readiness that do not fall within the other categories of criteria and require information needed for the proper functioning of the EIM.

---

<sup>123</sup> *Id.* (citing *Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231 at P 287; *Cal. Indep. Sys. Operator Corp.*, 148 FERC ¶ 61,243, at P 29 (2014)).

<sup>124</sup> *Id.* (citing BPA Comments at 3 n.10; BPA, *Dynamic Transfer Operating and Scheduling Requirements Business Practices v. 4* (2014), *available at* [http://transmission.bpa.gov/ts\\_business\\_practices/Content/7\\_Scheduling/Dynamic\\_Transfer\\_Op\\_Sched.htm](http://transmission.bpa.gov/ts_business_practices/Content/7_Scheduling/Dynamic_Transfer_Op_Sched.htm)).

<sup>125</sup> CAISO September 25 Answer at 21.

<sup>126</sup> March 16 Order, 150 FERC ¶ 61,191 at P 34.

<sup>127</sup> July 21 Order, 152 FERC ¶ 61,063 at P 30.

61. We accept CAISO's proposed process to apply thresholds reflecting the minimum performance standard required to meet each readiness criterion. CAISO proposes to establish those thresholds and explain the manner in which it will apply each threshold measure that must be satisfied in its business practice manual. Thresholds may specify, for example, numeric percentages indicating success at passing a certain test or require completion of a certain activity. CAISO's proposal is consistent with the Commission's guidance that the specific metrics used to determine whether each criterion has been met may be contained in a business practice manual.<sup>128</sup> The thresholds have been vetted through the stakeholder process, and CAISO would be required to follow its business practice manual change management process in order to revise them. This will provide stakeholders with an opportunity to review and comment on any proposed changes to the thresholds. Furthermore, there will be an opportunity for stakeholders to comment on whether the thresholds have been met during the telephone conferences held during market simulation and parallel operations, at which time CAISO will discuss testing results.<sup>129</sup>

62. We disagree with Powerex and BPA that additional resource sufficiency requirements must be included in the readiness criteria. The purpose of the readiness criteria is to ensure that a prospective EIM Entity is well-prepared for EIM participation given the EIM framework the Commission has previously approved. CAISO's threshold will measure whether a prospective EIM Entity has demonstrated that it will be able to pass the resource sufficiency test in the market simulation and parallel operation environments and is ready for financially-binding operations. However, the readiness criteria and thresholds alone are not intended to guarantee that there will be sufficient resources bid into the EIM from the relevant BAA to meet imbalance needs in the vast majority of intervals as Powerex requests. CAISO's tariff includes other EIM provisions that provide incentives for resource sufficiency, including, for example, penalties for under-scheduling and the freezing of EIM transfers into an EIM BAA when the BAA fails the resource sufficiency tests.<sup>130</sup> For these reasons, we disagree with Powerex that additional resource sufficiency requirements must be included in the readiness criteria.<sup>131</sup>

---

<sup>128</sup> *Id.* P 30 n.73.

<sup>129</sup> August 28 Filing at 11.

<sup>130</sup> *See* CAISO Tariff §§ 29.11(d)(1) (Under-Scheduling Charges) & 29.34(n) (Effect of Resource Plan Insufficiency).

<sup>131</sup> July 21 Order, 152 FERC ¶ 61,063 at P 30.

63. We also find that CAISO has sufficiently explained the application of the thresholds for measuring the resource sufficiency of a prospective EIM Entity. CAISO explains that the 90 percent threshold sets the frequency at which the prospective EIM Entity must be able to pass the test in a given day to demonstrate its readiness for EIM participation.<sup>132</sup> We find that this clearly sets forth how CAISO will apply the thresholds, and we are therefore not persuaded by Powerex's arguments regarding ambiguities in CAISO's description of their application.<sup>133</sup> Furthermore, we find that CAISO has sufficiently explained its inclusion of five days of testing, given that the limitations of the parallel operation environment can make it more difficult to pass the resource sufficiency evaluation than in the production environment. Prior to production time, some of the information that would be available during production, such as e-tag information, is not available because, among other things, CAISO's instructions are not binding. Moreover, operators need to run simulation and parallel operations at the same time they are balancing their systems during their actual operations using different sets of information. As CAISO explains, the combination of having to run different systems using different information places an additional burden on operators that we believe CAISO appropriately considered when developing the thresholds. Moreover, CAISO can keep testing the appropriateness of these thresholds and, if necessary, update them, with stakeholder input, through changes to its business practice manual.

64. We do not share Powerex's concerns about the accuracy of settlements. The monthly settlement statement and invoice with corresponding daily statements produced by CAISO during market simulation must be verified against available data, and the prospective EIM Entity's settlement statements and invoices that allocate charges and credits to its customers must accurately reflect system and market data during parallel operations. With regard to Powerex's request that the Commission require CAISO and the prospective EIM Entity to issue draft settlement statements and invoices to market participants for at least two complete billing cycles during parallel operation, we find that CAISO's current tariff already satisfies this request. Pursuant to section 11.29.7.1 of CAISO's tariff, which will not change under CAISO's proposal, CAISO issues settlement statements for each day, and there is already a requirement in the settlements criterion that the prospective EIM Entity issue settlement statements for two full days during parallel operations, which accounts for two billing cycles. We also agree with CAISO that, to the extent Powerex intends "settlement cycle" to refer to the full settlement period under a prospective EIM Entity OATT, if the prospective EIM Entity settles monthly, then Powerex's proposal could require that parallel operations continue

---

<sup>132</sup> CAISO September 25 Answer at 11.

<sup>133</sup> See Powerex Comments at 10.

for 60 days prior to certification.<sup>134</sup> We find that such a requirement is unnecessary to ensure the readiness of a prospective EIM Entity's settlement systems and processes, and would be inconsistent with our finding below that a minimum of 30 days of parallel operations is sufficient.

65. We find that it is not necessary for CAISO or the EIM Entity to certify any contracts with third-party transmission providers and that this issue is not a factor in readiness. We agree with CAISO that its proposed readiness criteria already address the modeling and communications needed to incorporate third-party transmission systems. Accordingly, the Commission does not find that it is necessary for CAISO or the EIM Entity to certify OATT transmission service arrangements and reject BPA's and Powerex's arguments regarding this issue.

66. We acknowledge the concerns expressed by Powerex and BPA regarding the sufficiency of the readiness criteria to address all of the issues that led to price spikes following the launch of the EIM. However, we note that the tariff revisions proposed in this docket are intended only to address the issue of readiness, and that CAISO has proposed tariff revisions in different proceedings to address other underlying problems that contributed to the price spikes in PacifiCorp's BAAs. The Commission has already addressed in a separate order CAISO's proposal to implement a six-month transition period to provide additional protection against learning curve issues.<sup>135</sup> CAISO has also proposed tariff revisions to address issues limiting the visibility of capacity available to an EIM Entity to meet load in its BAA. This proposal is currently pending before the Commission. Here, we find that CAISO's proposals in the instant proceeding will help to mitigate learning curve issues for future EIM Entities by ensuring their readiness to participate in the EIM prior to commencing financially-binding operations.

## **2. Exceptions Process**

### **a. CAISO's Proposal**

67. CAISO's proposal requires that the certification by senior officers of CAISO and the prospective EIM Entity that the entity is ready to begin financially-binding EIM operations must be based on the prospective EIM Entity's satisfaction of measurable readiness criteria.<sup>136</sup> In its proposal, CAISO describes the standards and processes for

---

<sup>134</sup> See CAISO September 25 Answer at 14.

<sup>135</sup> *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,104.

<sup>136</sup> CAISO's proposed readiness criteria are described in detail above.

granting exceptions to the measurements or thresholds that apply to determine whether the readiness criteria have been met. CAISO states that any exception to a threshold would be reviewed by the responsible staff, escalated to senior officers, and then documented in the readiness report that supports the certification. CAISO and the prospective EIM Entity will engage in a collaborative approach to satisfy the readiness criteria and endeavor to make decisions based on consensus between the parties. According to CAISO, both parties will strive to avoid exceptions by providing comprehensive updates and proactively managing issues and risks. CAISO explains that when an exception is required, the parties will define it by specifying what does not conform and why an exception is necessary.<sup>137</sup> CAISO does not propose specific standards by which to judge whether an exception is warranted under any given circumstances. CAISO believes that it should suffice that a senior officer is willing to attest that reliance of their readiness certification on an exception follows the results of the exception process outlined above. CAISO contends that stakeholders will have an opportunity to raise concerns regarding any exceptions with the Commission in the filing of the readiness certificate.<sup>138</sup>

**b. Comments**

68. PacifiCorp notes its support for CAISO's proposed processes for granting exceptions to certain measurements or thresholds that determine whether the readiness criteria have been met.<sup>139</sup> NV Energy also notes that the proposal deals with potential exceptions to the thresholds set to serve as a bar to assess readiness by having them reviewed by different levels of CAISO staff and officers and giving stakeholders the opportunity to consider these exceptions and raise concerns with the Commission.<sup>140</sup>

69. Conversely, WPTF argues that the proposed process for exceptions is vague, and that the use of an after-the-fact explanation for justifying exceptions weakens the effectiveness of the readiness criteria.<sup>141</sup>

---

<sup>137</sup> August 28 Filing at 11.

<sup>138</sup> *Id.*

<sup>139</sup> PacifiCorp Comments at 5.

<sup>140</sup> NV Energy Comments at 8-9

<sup>141</sup> WPTF Comments at 4.

**c. CAISO's Answer**

70. With respect to WPTF's argument regarding the vagueness of CAISO's proposed process for exceptions, CAISO replies that WPTF neglects to identify other relevant language in the draft version of the business practice manual that explains how exceptions would be reviewed. According to CAISO, that language provides that both CAISO and the prospective EIM Entity will strive to avoid exceptions, and when an exception is required, it will be defined and supported. CAISO also points out that any exceptions will be included in the certification required by senior officers.<sup>142</sup>

**d. Commission Determination**

71. We find that CAISO has complied with the directive to explain the standards and processes for granting exceptions to the thresholds that it will apply to determine whether the readiness criteria specified in the tariff has been met.<sup>143</sup> We are not persuaded by WPTF's argument that the process for exceptions is vague, and that the use of an after-the-fact explanation for justifying exceptions weakens the effectiveness of the readiness criteria.<sup>144</sup> CAISO explains that its staff will review any exceptions to a particular threshold prior to escalating the review of the exception to the senior officers responsible for attesting to the readiness certification. Any exceptions will be documented in the readiness report that supports the certification. If an exception is required, the parties will define it by describing what is not conforming and providing a justification of why it is needed. Stakeholders will be able to comment on any potential exception through CAISO's regular stakeholder reporting procedures, and retain their existing rights to raise concerns with the Commission. We find that CAISO has sufficiently explained the process by which exceptions will be granted and has appropriately included measures to ensure transparency regarding the exceptions as well as opportunity for stakeholder input.

**3. Readiness Requirements**

72. CAISO proposes three readiness requirements that must be met before a prospective EIM Entity may begin financially binding EIM operations: (1) a certification by CAISO and the prospective EIM Entity that the entity is ready to begin financially binding EIM participation, based on the prospective EIM Entity's satisfaction of

---

<sup>142</sup> CAISO September 25 Answer at 18-19, referencing the EIM Entity Readiness Criteria, Attachment D to the August 28 Filing at 13.

<sup>143</sup> July 21 Order, 152 FERC ¶ 61,063 at P 30.

<sup>144</sup> See WPTF Comments at 4.

measurable readiness criteria; (2) completion of a market simulation; and (3) completion of no less than a full 30 days of parallel operations. Each requirement is detailed below.

**a. CAISO's Proposal**

**i. Certification and Determination of Readiness**

73. Relevant to the first requirement, CAISO proposes to add a new section 29.2(b)(5) to the CAISO tariff that sets forth the previously-approved requirement<sup>145</sup> that senior officers of both CAISO and the prospective EIM Entity must file a certification of participation readiness 30 days prior to the entity participating in financially binding operations in the EIM. The certification must attest: (1) that the processes and systems of the prospective EIM Entity have satisfied or will have satisfied the specified readiness criteria; (2) to any known issues requiring resolution prior to the EIM Entity's participation in the EIM; (3) to any exception from the established thresholds specified in the business practice manuals, and that despite such exception CAISO and the EIM Entity have met the readiness criteria specified in tariff section 29.2(b)(7); and (4) that the prospective EIM Entity's participation in the EIM is conditional on resolving known issues identified in the certificates and any unforeseen issues that undermine the satisfaction of the readiness criteria.<sup>146</sup>

74. CAISO explains that a clear statement of the known issues and that integration of the prospective EIM Entity is conditional on resolution of those issues is necessary because the certifications are made at least one month prior to the actual date for integrating the prospective EIM Entity into the EIM.<sup>147</sup> According to CAISO, the resolution of known issues will be visible to stakeholders through the readiness reporting procedures established in section 29.2(b)(8) and to the Commission through the representations made in the readiness certification filing. Likewise, CAISO asserts that any exceptions from established thresholds specified in the business practice manuals will be fully visible and traceable.<sup>148</sup>

---

<sup>145</sup> CAISO explains that the previously-approved requirement was in old section 29.2(b)(4)(A) of its tariff in the May 6 Filing. August 28 Filing at 6 (citing July 21 Order, 152 FERC ¶ 61,063 at P 27).

<sup>146</sup> *Id.* at 6-7; CAISO, Proposed Tariff § 29.2(b)(6).

<sup>147</sup> August 28 Filing at 7.

<sup>148</sup> *Id.*

75. CAISO states that proposed tariff section 29.2(b)(6)(B) provides that if CAISO determines after filing of the certifications that it cannot proceed with activation of a prospective EIM Entity, it will notify the Commission of the delay, the reason for the delay, the new implementation date if it can be determined, and whether it will need to re-issue a portion or all of the readiness certification.<sup>149</sup>

**ii. Market Simulation and Parallel Operations**

76. Relevant to the second and third readiness requirements, CAISO's proposed tariff sections 29.2(b)(4)(A) and (B) incorporate the previously approved requirements<sup>150</sup> that CAISO conduct a market simulation and an appropriate period of parallel operations prior to the integration of the prospective EIM Entity.<sup>151</sup> CAISO explains that it deleted references in those provisions to the implementation agreement, consistent with the Commission's directive in the July 21 Order. In addition, and at the suggestion of stakeholders, CAISO proposes to require it and a prospective EIM Entity to complete no less than a full 30 days of parallel operations prior to the implementation date,<sup>152</sup> but does not propose a specific duration of the market simulation because it may vary based on the prospective EIM Entity's specific operational and system circumstances.<sup>153</sup> Instead, with respect to the market simulation, CAISO believes it is appropriate to require generally that the length of time be sufficient to meet the readiness criteria specified in section 29.2(b)(7).<sup>154</sup> CAISO explains that it will post a market simulation plan including the planned duration of market simulation, descriptions of each scenario, and other relevant information in order to ensure transparency.<sup>155</sup>

---

<sup>149</sup> *Id.* at 8.

<sup>150</sup> July 21 Order, 152 FERC ¶ 61,063 at P 31.

<sup>151</sup> CAISO, Proposed Tariff §§ 29.2(b)(4)(A) and (B).

<sup>152</sup> August 28 Filing at 8-9.

<sup>153</sup> *Id.* at 9.

<sup>154</sup> *Id.*

<sup>155</sup> *Id.* at 10.

**b. Comments and Protests**

77. Puget, PacifiCorp, PG&E, and NV Energy state their support the three readiness requirements set forth in CAISO's compliance filing. PG&E states that meeting the proposed readiness criteria, as required by the first certification readiness requirement, should reduce the likelihood that a new EIM Entity would experience prolonged implementation challenges like those PacifiCorp experienced.<sup>156</sup> NV Energy also supports CAISO's proposal in that its reporting requirements and certification process are consistent with the July 21 Order.<sup>157</sup> PacifiCorp supports CAISO's proposals regarding the length and timing of parallel operations prior to the implementation date. PacifiCorp also agrees with CAISO's proposal to establish the duration of market simulation for each particular prospective EIM Entity on a case-by-case basis.<sup>158</sup> Puget comments that parallel operations should not be longer than necessary, noting that parallel operations are costly and that a great deal of the readiness criteria will have already been implemented in earlier stages of preparation.<sup>159</sup>

78. Powerex, in contrast, remains concerned that CAISO's proposed readiness criteria and thresholds are not sufficiently rigorous to protect against a recurrence of the difficulties that followed PacifiCorp's integration. Powerex argues that the proposal establishes a standard that neither requires a meaningful demonstration of resource sufficiency nor ensures that a prospective EIM Entity is any more "ready" to participate in the EIM than PacifiCorp was on the day the EIM commenced financially-binding operations.<sup>160</sup> WPTF expresses similar concerns and argues that there should be a minimum of one calendar month of parallel operations before any new EIM Entity may commence operations in the EIM.<sup>161</sup> Finally, WPTF contends that the combination of this readiness proposal and the six-month transition period proposal in ER15-2565-000 indicates that CAISO is not confident that these readiness criteria are sufficient.<sup>162</sup>

---

<sup>156</sup> PG&E Comments at 1.

<sup>157</sup> NV Energy Comments at 7.

<sup>158</sup> PacifiCorp Comments at 3-6.

<sup>159</sup> Puget Comments at 3-4.

<sup>160</sup> Powerex Comments at 12.

<sup>161</sup> WPTF Comments at 3-4.

<sup>162</sup> *Id.* at 5.

79. Lastly, Powerex states that it is troubled by CAISO's recent announcement of its intent to implement significant software changes only days before NV Energy's integration into the EIM because CAISO's decision to implement significant modeling changes and the EIM in quick succession last year created serious price formation issues in the CAISO markets, some of which remain unaddressed to this day.<sup>163</sup> Powerex states that CAISO should have adequate time to verify that it has successfully implemented one market change before making another, and it therefore urges the Commission to direct CAISO to ensure that the implementation of new market software does not occur within 30 days of integrating a new EIM Entity.<sup>164</sup>

80. WPTF requests that the Commission require CAISO to submit a compliance filing six months after NV Energy commences operations in the EIM commenting on any deficiencies in the readiness criteria and proposing revisions to the processes, criteria, or threshold approaches applied to future EIM Entities.<sup>165</sup>

**c. CAISO's Answer**

81. In its answer, CAISO states that commenters neglect the distinctions among the filing in this sub-docket and two other separate filings by CAISO in response to the directives issued by the Commission in the March 16 Order.<sup>166</sup> In response to those directives, CAISO undertook analyses through which it identified two different causes of infeasibilities: (1) "learning curve" issues associated with integrating a new EIM Entity; and (2) structural design limitations.<sup>167</sup> Based on those findings, CAISO developed a multi-prong solution, which is reflected in three separate filings that are in front of the Commission: (1) the enhanced readiness criteria to reduce the potential for problems associated with a new EIM Entity's learning curve (in this docket); (2) a proposed 6-month transition period to address learning curve issues that the readiness activities cannot resolve (in Docket No. ER15-2565-000); and (3) an available balancing capacity proposal that addresses the identified structural limitations (in Docket No. ER15-861-003). CAISO argues that these three proposals work in harmony and that there is no need

---

<sup>163</sup> Powerex Comments at 17.

<sup>164</sup> *Id.* at 18.

<sup>165</sup> WPTF Comments at 4.

<sup>166</sup> CAISO September 25 Answer at 5, referencing Docket Nos. ER15-861-003 and ER15-2565-000.

<sup>167</sup> *Id.* at 5.

to expand the readiness criteria to consider issues already covered in the other proceedings.<sup>168</sup>

82. CAISO answers Powerex's and WPTF's concern regarding the rigor of its readiness requirements, explaining that the readiness criteria apply a rigorous test of the capability of the prospective EIM Entity to meet CAISO's resource sufficiency tests, which include a balancing test, a capacity test, and a ramping test.<sup>169</sup> Further, CAISO states that it has already addressed WPTF's concern regarding the need for a full month of parallel operations. CAISO argues that, even though the July 21 Order specifically granted CAISO discretion with respect to an adequate period of parallel operations, in response to stakeholder comments it has proposed tariff section 29[.2](b)(4)(B) [sic], which calls for a period of parallel operations "not less than 30 days."<sup>170</sup>

83. CAISO adds that it has already made a commitment to review and improve the readiness thresholds based on what it learns from each new EIM Entity, and notes that the transitional measure proposal includes a specific provision to continue issuing monthly reports during the transition period. CAISO argues that WPTF does not show these measures to be insufficient. CAISO therefore argues that WPTF's request that CAISO submit a report within six months detailing deficiencies with the readiness criteria is unnecessary.<sup>171</sup>

84. Lastly, CAISO explains that it has for some time bundled multiple software changes into its fall and spring release cycles. CAISO asserts that, contrary to Powerex's suggestion, this minimizes risks by ensuring support staff from CAISO and software vendors are focused and available to quickly resolve issues. Moreover, CAISO explains, it minimizes the periods in which market participants must be available to do the same and to confirm the accuracy of the results.<sup>172</sup>

---

<sup>168</sup> *Id.* at 6.

<sup>169</sup> *Id.* at 8.

<sup>170</sup> *Id.* at 18.

<sup>171</sup> CAISO September 25 Answer at 20.

<sup>172</sup> *Id.* at 14.

**d. Commission Determination**

85. We find that CAISO has complied with the directives in the July 21 Order. The July order required CAISO to submit a compliance filing to include the readiness criteria in its tariff and to explain the process for granting exceptions. CAISO has proposed revisions to sections 29.2(b)(5) and (6) of its tariff that are consistent with the directives in the July 21 Order, and we therefore accept them.

86. First, CAISO has, as directed in the July 21 Order, added new tariff section 29.2(b)(5) setting forth the previously accepted requirement that CAISO and the prospective EIM Entity determine that the prospective EIM Entity is or will be ready for participation in the EIM.<sup>173</sup> Second, we find that a certification filed with the Commission, as an informational filing,<sup>174</sup> no less than 30 days prior to the prospective EIM Entity starting financially-binding EIM operations, as outlined in proposed section 29.2(b)(6), is appropriate, and will therefore accept it. CAISO is in the best position, as the independent system and market operator and already having worked with PacifiCorp when it entered the market, to assess whether due diligence has been satisfactorily performed. Placing this obligation on CAISO and each prospective EIM Entity makes sense because each prospective EIM Entity will be differently situated prior to initiating its participation in the EIM, and a full accounting of any deficiencies in preparedness – and assurance that these deficiencies will be remedied – by both a senior officer of the prospective EIM Entity and a senior officer of CAISO is appropriate. The requirement that CAISO must notify the Commission if it determines that the prospective EIM Entity cannot proceed with implementation after filing of the readiness certification provides transparency.

87. Regarding Powerex's concern over CAISO's recent announcement of its intent to implement significant software changes only days before NV Energy's integration into the EIM,<sup>175</sup> we find Powerex's concerns to be speculative at this time. We encourage CAISO to carefully plan and test such updates, allowing ample verification time, and timely inform the market participants of the implemented changes, the outcome of its testing, and whether such changes affected the certification criteria. CAISO also states that it has, for some time, bundled software changes into its fall and spring release cycles,

---

<sup>173</sup> July 21 Order, 152 FERC ¶ 61,063 at P 35.

<sup>174</sup> The readiness certificates will be informational filings only and no notice or action will be taken by the Commission on those submittals.

<sup>175</sup> See Powerex Comments at 17.

which CAISO states minimizes risk because vendors are focused and available and minimizes the impact on market participants.<sup>176</sup>

88. We find acceptable the requirement that any exceptions be fully attested to by senior officers of both CAISO and the prospective EIM Entity. Although exceptions to readiness criteria should be infrequent, we agree with CAISO that a process whereby senior officers are aware and attest to the exception makes sense. We note that, as proposed, the readiness certificate must outline and describe any exceptions from the required thresholds prescribed in the business practice manual. This requirement provides transparency, and gives interested parties the opportunity to examine those exceptions 30 days before the start of financially-binding operations. Once the Commission receives the readiness certificate, there remains a burden on CAISO and the prospective EIM Entity to ensure the prospective EIM Entity is prepared for market start-up. Further, the tariff specifies that the prospective EIM Entity's implementation date is conditional on the resolution of any known issues identified in the certification and any unforeseen issues that undermine the satisfaction of the readiness criteria.<sup>177</sup>

89. We deny WPTF's request that the Commission require CAISO to submit a compliance filing six months after NV Energy commences operations in the EIM commenting on any deficiencies in the readiness criteria and proposing revisions to the processes, criteria, or threshold approaches applied to future EIM Entities. The Commission's October 29, 2015 order accepting CAISO's tariff revisions providing for a six-month transition period in Docket No. ER15-2565-000 requires monthly informational filings, which the Commission found will provide transparency to market participants and the Commission regarding any implementation challenges a new EIM Entity is experiencing.<sup>178</sup> We find that those informational filings are sufficient to allow stakeholders and the Commission to identify any deficiencies in CAISO's readiness criteria.

90. We find CAISO's proposal to require a minimum of 30 days of parallel operations prior to a prospective EIM Entity entering the EIM acceptable. As an initial matter, the Commission did not specify in the March 16 and July 21 Orders the duration of parallel operations, only that parallel operations must be adequate. We also agree that the length of market simulations need not be specified because the appropriate extent of simulations could vary greatly among prospective EIM Entities, based, for example, on an entity's

---

<sup>176</sup> CAISO September 25 Answer at 14.

<sup>177</sup> See CAISO Proposed Tariff § 29.2(b)(6)(A)(iv).

<sup>178</sup> *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,104 at P 45.

operational experience with CAISO systems. It is more important that market simulations ensure that the prospective EIM Entity can be certified as ready to participate. We also support CAISO's commitment to maintain its current level of transparency regarding the expected length of market simulations and what scenarios will be run, for each prospective EIM Entity, as described in CAISO's proposal.<sup>179</sup>

91. Regarding WPTF's recommendation that parallel operations be run for a minimum of one calendar month prior to when a prospective EIM Entity begins operations in the EIM, we find that the proposed minimum 30 days of parallel operations prior to financially-binding EIM operations is likely to be, in practice, nearly identical to WPTF's request of one calendar month. Therefore, we will not require CAISO to mandate a strict calendar month's parallel operations prior to integration.

The Commission orders:

CAISO's compliance filing is hereby accepted, effective March 16, 2015, as requested, as discussed in the body of this order.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

---

<sup>179</sup> August 28 Filing at 10.