

**Stakeholder Comments Matrix**  
**Draft Energy Imbalance Market Entity Readiness Criteria - May 7, 2015**

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Company	Date	Submitted By
PacifiCorp	May 19, 2015	
<b>Opening Statement:</b>		
<i>PacifiCorp generally supports the ISO's EIM readiness criteria proposal with respect to the proposed categories and metrics, criteria, and threshold proposals for each category.</i>		
<b>1<sup>st</sup> Comment:</b>		
<i>PacifiCorp requests that the ISO consider adding criteria under its Data Monitoring Readiness category to require the Department of Market Monitoring to produce a report that provides an explanation of any anomalous pricing, and publish such report as a criterion of market readiness.</i>		
<b>ISO Response</b>		
As part of the overall process, the department of Market Validation and Quality will be analyzing and validating market outcomes, including prices, during the market simulation phase. The ISO also will be providing a midterm and final report on market simulation performance that will quantify frequency and causes of infeasibilities observed in parallel operations. The results of implementation activity during the market simulation phase will be discussed on public calls held periodically throughout the period of market simulation. During those calls, stakeholders will have an opportunity to learn about market outcomes and have an opportunity to ask questions. In addition, after the EIM Entity initiates financially-binding market operations, the ISO will provide a regular market report that will have publicly available information to all market participants regarding market performance and pricing issues that may arise.		
<b>Supplemental Statement:</b>		
<i>PacifiCorp hereby submits the following supplemental comments to the California Independent System Operator Corporation ("ISO") on its proposed Energy Imbalance Market ("EIM") readiness criteria. PacifiCorp appreciates the opportunity to provide comments on this initiative for the ISO's consideration.</i>		
<b>Supplemental Comment:</b>		
<i>PacifiCorp conveyed in previously delivered comments its general support and request for anomalous pricing reporting as a criterion of market readiness, if such a report is feasible and possible. As a supplement to those comments, PacifiCorp requests that the ISO also consider adding to its criteria for market readiness, a requirement that both the ISO and the EIM Entity issue sample settlement statements and supports Southern California Edison's comments with regard to settlements criteria.</i>		
<b>ISO Response</b>		
The ISO will include in the implementation plan a requirement that the ISO produce settlement statements that the EIM Entity can verify with its own settlements software as of the date of		

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readiness certification.
<b>Conclusion Statement:</b>
<i>PacifiCorp appreciates the ISO’s consideration of these supplemental comments and looks forward to the ISO’s response.</i>

Company	Date	Submitted By
<b>Southern California Edison</b>	May 22, 2015	Paul Nelson & Eric Little
<b>Opening Statement:</b>		
<p><i>Southern California Edison’s (SCE) herein comments on the Energy Imbalance Market (EIM) Readiness Matrix published on May 6, 2015.<sup>1</sup> The Readiness Matrix is being developed through a stakeholder process to be in compliance with the FERC Order<sup>2</sup> on March 16, 2015, for the CAISO to update their tariff to “include requirements to ensure readiness prior to new EIM Entities commencing EIM operations.” Furthermore, the Order included “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”. The readiness matrix would identify those process and systems that must be certified ready 30 days prior to full activation of a financially binding EIM. SCE supports the categories included in the matrix but notes there is a critically important process of settlements (both the CAISO and EIM Entity) that are missing which should be included in the matrix. In addition, under either System Readiness or Parallel Production there is a lack of detail surrounding the learning curve that troubled PacifiCorp during the first few months of EIM operation. Many of these readiness issues resulted in artificial shortfalls that resulted in high prices due to constraint violations.</i></p> <p><sup>1</sup> <a href="http://www.caiso.com/Documents/Presentation_EnergyImbalanceMarketEntityReadinessCriteria.pdf">http://www.caiso.com/Documents/Presentation_EnergyImbalanceMarketEntityReadinessCriteria.pdf</a>  <sup>2</sup> March 16, 2015 order in EL15-53, 150 FERC ¶ 61,191, P 34</p>		

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**1<sup>st</sup> Comment:**

**Settlements should be added as a category to the EIM Readiness Matrix Settlements related to EIM occur for both the CAISO and the EIM Entity.**

*The CAISO submits a settlement statement to the EIM Entity and Participating EIM Resources showing their imbalance. The EIM Entity sends settlements statements to Non-Participating EIM resources for their respective imbalance plus any allocations of EIM settlement charges (from the CAISO) to both participating and non-participating resources. Settlements are a critical process for a functioning market and is in scope with the FERC Order for EIM Readiness.*

*SCE recommends adding a settlements criteria with the following two metrics, one for CAISO and one for the EIM Entity, be added to the Reliability Matrix:*

Settlements

**For the CAISO**

*Metric: CAISO Settlement Statement and Invoice Publication to EIM Entity and EIM Participating Resources*

*Criteria: Settlement statements and invoices match the operational data fed into Settlement System and the calculations correspond to the formulas defined in CAISO's BPMs.*

*Threshold: 1 clean monthly settlement statement and invoice with corresponding clean daily statements produced during market simulation and/or parallel process.*

**For the EIM Entity**

*Metric: EIM Entity Settlement Statement and Invoice Publication to EIM Participating Resources and non-EIM Participating Resources*

*Criteria: Settlement statements and invoices match the input data from the CAISO and allocations correctly performed per EIM Entity tariffs and BPMs.*

*Threshold: 1 clean monthly settlement statement and invoice with corresponding clean daily statements produced during market simulation and/or parallel process.*

**ISO Response**

The ISO will include in the implementation plan a requirement that both the ISO and EIM Entity produce settlement statements reflecting accurate functioning of the settlements software as of the date of readiness certification.

**2<sup>nd</sup> Comment:**

**More detail surrounding the criteria and threshold of a successful parallel process is needed in the EIM Readiness Matrix**

*From the CAISO reports on EIM results and statements made at the FERC technical conference<sup>3</sup> on EIM, a significant issue was PacifiCorp operators' learning curve in implementing the new tools that are required for the EIM. For example, there were delays in notifying EIM of manual dispatches, system outages, and exchanges with sharing agreements with neighboring balancing authorities. Many of these problems could have been avoided if there was a longer parallel process for PacifiCorp's system operators to become accustomed to what they learned in training sessions. SCE notes that during the parallel process for PacifiCorp there were only two good days of pricing results to determine if the market was functioning as intended. Both the CAISO and any new EIM Entity need to improve their efforts to document*

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*that systems, and the people using those systems, are actually ready to begin a financially binding EIM. The readiness matrix lacks sufficient detail of how issues will be documented that may be discovered in a parallel process with a new EIM Entity and the actions taken to resolve those issues. For example, during the parallel process, a metric on the number of manual dispatch occurrences and system outages can be kept. In addition, a metric tracking how long it took for operators to input the information into the EIM process should be documented. Only once the threshold criteria is met, then the EIM Entity can certify that their processes and people are ready to begin a full financially binding participation in EIM.*

<sup>3</sup> Held at the FERC on April 9, 2015, as part of the FERC 206 investigation on the reasonableness of EIM pricing in docket EL15-53.

**ISO Response**

Market simulation and other implementation activity is designed to ensure systems and operational readiness. The parallel production period is intended to allow the EIM Entity to experience system conditions and practice deploying EIM systems and software in advance of committing the market to financially-binding settlements. The parallel production period length is optimized to provide the EIM Entity full exposure to market operations and foreseen market conditions; it is not designed to perfect the EIM Entity's operational response to all unforeseen market conditions. Therefore, it is not appropriate to apply performance-based metrics to the parallel operations period. The EIM Entity will, however, certify that the parallel operations will emulate real time operations as closely as feasible, with the understanding that the parallel production platform does not result in financially binding dispatches and cannot provide a precise simulation of actual operations.

**3<sup>d</sup> Comment:**

**The implementation schedule with Nevada should be adjusted in order to comply with the FERC order.**

*SCE notes the implementation schedule for Nevada Energy lacks sufficient time for both the EIM Entity and CAISO to certify that their processes, systems, and people are ready to begin a binding EIM on October 1. Currently, the schedule is to begin parallel operation on September 1, which would also be when the 30 day readiness certifications is due to the FERC. SCE fails to see how readiness certifications can be made without the experience from real data from the parallel process. CAISO and Nevada Energy need to adjust the implementation schedule to include a parallel process of at least 30 days prior to the requirement to notify FERC of system readiness. This may result in a parallel process for 60 days prior to go-live, which would allow for an additional 30 days of fine tuning to improve processes and systems as necessary.*

**ISO Response**

FERC directed that the ISO and EIM Entity certify to systems and operational readiness. The implementation plan through market simulation, which will be complete as of thirty days before the EIM Entity's commencement of market operations, is designed to ensure systems and operational readiness. The parallel production allows the EIM Entity to experience operations in a manner that closely simulates real time operations; therefore, the EIM Entity must achieve

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systems and operational readiness before parallel production begins. Although it is not appropriate to require the EIM Entity to certify to performance thresholds during or at the completion of parallel production, the ISO and EIM Entity will certify that neither will commence operations on the scheduled go-live date if 1) any unexpected conditions or issues arise during the parallel production period that undermine grid operation or market operation within the existing EIM footprint, and (2) those issues are unresolved as of the scheduled go-live date

Company	Date	Submitted By
<b>Pacific Gas &amp; Electric Company</b>	May 21, 2015	Jordan Parrillo & Tyson Brown

**Opening Statement:**

*Pacific Gas and Electric Company (PG&E) offers the following comments on the California Independent System Operator's (CAISO) May 7, 2015 Energy Imbalance Market (EIM) Draft Readiness Criteria.*

*PG&E supports the development of robust readiness criteria to ensure that all new EIM entrants are sufficiently prepared for EIM go-live and the commencement of financially binding EIM operations. PG&E's major comments on the EIM Draft Readiness Criteria are as follows:*

- PG&E recommends a guiding principle for EIM readiness criteria to incorporate lessons learned from implementation of prior EIM entities. The Federal Energy Regulatory Commission's (FERC's) March 16, 2015 directive to CAISO to develop measurable readiness criteria through a collaborative process with its stakeholders offers the opportunity for all market participants to engage in a discussion on how lessons learned from PacifiCorp's implementation into the EIM can inform future efforts to effectively include new EIM entities.*
- All market participants should be informed of the data and results from market simulation and parallel production through public reports containing key metrics and observations. PG&E offers examples of metrics to include in the reporting and requests that sufficient time is built in for all market participants, including non-EIM entities, to have a robust market simulation that accommodates four full cycles of billing and settlement statements to ensure the overall market is not impacted.*
- PG&E offers specific recommendations regarding the CAISO's proposed EIM readiness criteria thresholds.*
- The CAISO's EIM readiness proposal should indicate that failing to meet the criteria and thresholds will result in delayed implementation of the new EIM entity.*

**1<sup>st</sup> Comment:**

*EIM readiness criteria should incorporate lessons learned from implementation of prior EIM entities.*

*The readiness testing for new EIM entrants should capture the lessons learned from implementation of prior EIM entities. Specifically, the readiness criteria should require that each new EIM entrant can demonstrate that the tools that have been used to smooth transitional issues with prior EIM entities have been deployed by the new EIM entity and work correctly. In the case of NV Energy, the lessons learned through implementation and the first six months of EIM operations with PacifiCorp should inform NV Energy's readiness requirements.*

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*Specifically, the following lessons learned from PacifiCorp's experience should be incorporated into NV Energy's and all future EIM entrants' readiness criteria:*

- *The process of entering or cancelling outages, including maximum capacity derates, and minimum capacity re-rates;*
- *Modeling the transition ramping for multi-stage generating resources and collecting data to define the startup and shutdown profiles of resources with high PMin values; and*
- *Utilizing the new unit deviation display that CAISO added to the EIM Entity user interface, which has been used by PacifiCorp to identify which resource is deviating and the amount of deviation per resource and on aggregate basis per balancing area.*

*These specific lessons learned should be incorporated into all applicable readiness criteria categories. For instance, the mandatory training courses should include these topics and should be specified as EIM readiness criteria in the CAISO's proposal. Additionally, these particular challenges should be included in the system readiness and market simulation categories to ensure each new EIM entity is coordinated and operating in a manner that is consistent with how PacifiCorp is operating six months into EIM participation.*

### **ISO Response**

The ISO agrees that lessons learned from prior EIM entities will inform and improve the readiness criteria for future EIM entities. The market performance reports published by the ISO and its Department of Market Monitoring in FERC Docket No. ER15-402 provide details about issues experienced by PacifiCorp that resulted in MW balance infeasibilities and how it addressed those issues. In advance of the June 16, 2015 stakeholder call regarding EIM Entity market readiness, the ISO will compile and post a list of those reported issues with a mapping to how the implementation activities and market readiness criteria incorporate the solutions to those issues.

### **2<sup>nd</sup> Comment:**

*All market participants should be informed of the results from market simulation and parallel production through public reports containing key metrics and observations and sufficient time should be built in for all market participants to have robust market simulation.*

*The CAISO should publicly report on the EIM market simulation and parallel production testing so that all market participants are informed of the results that CAISO is observing and the issues that have been identified. The reports should represent an aggregated, high-level view of the data resulting from market simulation and parallel production and should include the following key metrics:*

- *Number of hours of stable operations without disruptions;*
- *Minimum participation levels;*
- *Net MW's offered and cleared;*
- *Number of violations and type of violation (e.g. power balance, A/S);*
- *Identify missing SCADA points, mismatches in network model and ongoing efforts to remedy them;*
- *Identify and explain significant issues and expected timeline to resolve.*

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*In addition to keeping all market participants informed of the testing progress with NV Energy from the proposed metrics above, PG&E requests that sufficient time is built in for non-EIM entities to have a robust market simulation. Specifically, the start of market simulation for non-EIM entities is staggered (i.e., currently scheduled to begin on August 3rd) and a market readiness certificate is due 30 days prior to full activation of 2015 EIM (anticipate September 1st). PG&E requests that sufficient time is incorporated in CAISO market simulation plan to accommodate four full cycles of billing and settlement statements to ensure the overall market is not impacted from NV Energy implementation.*

*PG&E also notes that the CAISO has indicated that it will address EIM Year 1 Enhancement design changes during market simulation, including the proposed EIM transfer cost. The proposed EIM readiness criteria do not address the EIM Year 1 Enhancements design changes. The CAISO should indicate whether these design changes will be included in this readiness plan or a separate plan.*

**ISO Response**

As part of the overall process, the Division of Market Quality will be analyzing and validating market outcomes, including prices, during the market simulation phase. The results of implementation activity during the market simulation phase will be discussed on public calls held periodically throughout the period of market simulation. During those calls, stakeholders will have an opportunity to learn about market outcomes and have an opportunity to ask question. In addition, after the EIM Entity initiates financially-binding market operations, the ISO will provide a regular market report that will have publicly available information to all market participants regarding market performance and pricing issues that may arise.

The market simulation tests the systems and operations of the EIM Entity and any participating resources registered with the EIM Entity. To the extent future registered participating resources seek the benefit of market simulation, the ISO offers the platform for use by any entity that has completed its scheduling coordinator certification.

The ISO intends to include the EIM Year 1 Enhancements design changes in the Fall 2015 Release market simulation plan posted at:

[http://www.caiso.com/Documents/MarketSimulationPlanExternalFallRelease2015\\_draftv1.pdf](http://www.caiso.com/Documents/MarketSimulationPlanExternalFallRelease2015_draftv1.pdf)

The market simulation structure scenario results for EIM Year 1 Enhancement design changes will be shared during market simulation calls and will be resulted with this readiness plan.

**3<sup>rd</sup> Comment:**

***PG&E offers the following specific recommendations regarding the CAISO's proposed EIM readiness criteria thresholds.***

- a) *Threshold regarding SCADA measurements in Full Network Model integration should*

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*also include a high minimum EIM system MW percentage as well as a percentage of SCADA points to ensure that smaller generators are not skewing results and so that a reliable system model is supported. PG&E feels that this minimum MW metric should approach 99%.*

- b) The CAISO proposes that 90% or greater of base schedule balance tests are within 5% average imbalance of load forecast over a two day period before full activation. This threshold allows too great of a tolerance so close to full activation. The CAISO should provide numbers to indicate a reasonable threshold as it applies to a given EIM entity and indicate the potential implications of a swing from 5% over to 5% under forecast in one interval to the next.*
- c) The CAISO proposes that an EIM entity must demonstrate that it can pass the EIM capacity test 90% of the time or greater of one day before parallel operation and two days before full activation. A 90% threshold for passing the capacity test is not sufficient. Failure to pass the capacity test 10% of the time indicates a fundamental issue with the reliability of an EIM entity to meet its capacity requirements. The CAISO should explain the reasonableness and potential implications of using this threshold.*
- d) The Market Simulation and/or Parallel Production process should include minimum criteria for a set number of days where all market inputs are mirrored between the Production and Testing systems. During the PacifiCorp market simulation it was found that days where such coordination occurred produced the most useful result sets and helped isolate issues that would have otherwise gone unnoticed until the full production activation.*

**ISO Response**

The ISO has included a MW quantity measure associated with the SCADA metric.

The ISO believes that these metrics are sufficiently rigorous to demonstrate readiness on the system before going into production; some of the actions that the EIM entity will take are not appropriate during market simulation and parallel operations when the instructions are not binding. i.e., to support higher thresholds for balancing the EIM entity will have to use production e-tag information, which is not available prior to production. The thresholds reflect an operational success rate that accounts for the inability of market simulation to precisely emulate all real time system operations.

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**4<sup>th</sup> Comment:**

***The EIM readiness proposal should indicate that failing to meet the readiness thresholds will result in delayed implementation of the new EIM entity.***

*PG&E recommends that if a new EIM entity fails to meet all of the EIM readiness criteria and thresholds, the implementation schedule for the new EIM entity should be delayed until all criteria and thresholds have been met. The CAISO should specify in its proposal that the fallback plan is to resume the current EIM operation without the new EIM entity until their readiness has been demonstrated.*

**ISO Response**

FERC directed that the ISO and EIM Entity certify to systems and operational readiness. The implementation plan through market simulation, which will be complete as of thirty days before the EIM Entity's commencement of market operations, is designed to ensure systems and operational readiness. The parallel production allows the EIM Entity to experience operations in a manner that closely simulates real time operations; therefore, the EIM Entity must achieve systems and operational readiness before parallel production begins. Although it is not appropriate to require the EIM Entity to certify to performance thresholds during or at the completion of parallel production, the ISO and EIM Entity will certify that neither will commence operations on the scheduled go-live date if 1) any unexpected conditions or issues arise during the parallel production period that undermine grid operation or market operation within the existing EIM footprint, and (2) those issues are unresolved as of the scheduled go-live date.

<b>Company</b>	<b>Date</b>	<b>Submitted By</b>
<b>Western Power Trading Forum</b>	May 21, 2015	Ellen Wolfe (Resero Consulting)

**Opening Statement:**

*WPTF appreciates the opportunity to submit comments in response to the CAISO's EIM Readiness Criteria presented on May 6, 2015.*

*WPTF offers three areas of feedback. First we offer three categories of suggested improvements for the current metrics. Second, we requests definition of a minimum parallel operations duration, and third we suggest that the CAISO develop with stakeholder guidance specific language for the executive attestation that EIM executes would execute prior to cutover to an EIM.*

- 1. WPTF offers three categories of Suggested Improvements.*

*While the CAISO's proposal creates a broad set of areas of readiness, the criteria do not seem to hold the descriptive precision and substance of testing exit criteria. We indicate below three ways in which the criteria can be improved. These are identified below.*

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**1<sup>st</sup> Comment:**

**Criteria should be specific and quantifiable:**

*Many of the criteria suggested by the CAISO are quite general and do not lend themselves to measurement. We offer some examples below, by metric and criteria, and offer more specific feedback on the ways in which the proposed criteria should be further specified.*

**Examples:**

**Metric:** "Functional Testing Completed"

**Criteria:** "EIM Entity Operators complete functional testing plan."

Questions raised by this criteria:

- What is the functional testing plan?
- Which entities are involved in developing that plan?
- For which aspects of EIM operations does this prepare the EIM Entity?
- What are the "tasks identified by ISO and EIM Entity for functional testing"?

**Metric:** "ISO-EIM Entity interfaces tested"

**Criteria:** "EIM Entity systems tested as specified."

Questions raised by this criteria:

- Which EIM Entity systems are tested?
- What are the specifications for the tests, and where will those specifications be posted?
- Which CAISO systems are implicated in this test?

*The same problem of lack of specificity exists in the following metrics:*

- EIM Entity Operating Procedures
- Day in the Life Simulation
- Structured Scenarios Simulation
- Unstructured Scenarios Simulation
- Market Results Reports
- Market Quality Review
- Data monitoring
- Deployment Plan

*WPTF asks the CAISO to redefine the criteria to be specific and address questions such as those identified above. For each metric WPTF asks that the ISO identify the measureable metric and the threshold that would result in a "passing" score on that metric.*

**ISO Response**

The ISO agrees that greater transparency as to the implementation plan activity will enable the stakeholders to more fully contribute to the strength of the readiness plan and criteria. The ISO has therefore provided the details of the Functional, EIM Systems, Integration, and Day in the Life testing. Structured Scenarios Simulation (including EIM Year 1 Enhancement are posted at: <http://www.caiso.com/Documents/EIM-NVEand1YearEnhancementsStructuredScenarios11.pdf>.

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**2<sup>nd</sup> Comment:**

*Testing thresholds should be sufficiently rigorous:  
For criteria that are specific, and quantifiable, some have testing thresholds that are insufficiently rigorous. Each criterion should have thresholds that are sufficiently rigorous to ensure that the resulting EIM market will operate successfully and efficiently.*

*The following exemplifies a metric for which the threshold seems insufficiently rigorous.*

**Example:**

**Metric:** *“Flexible Ramping Sufficiency Test Capability of Passing Established”*

**Testing threshold:** *“Passes 90% of the time or greater over monitored hours of one day before parallel operation and two days before full activation.”*

*We identify the following problems with such a threshold: It is unclear how many “monitored hours” there will be. It is unclear how many total days must be “passed”? And it is unclear what steps would be taken to ensure the test period includes a representative range of conditions or, more importantly, tests the ability to comply under adverse conditions?*

*An EIM Entity’s 90% passage rate for the flexible ramping sufficiency test allows a large margin of error and would not avoid the same problems seen in the PacifiCorp EIM. This is particularly concerning given that the flexible ramping sufficiency requirement is based on ensuring sufficient ramping capacity to meet imbalance energy needs in only 95% of cases.*

*The testing thresholds for passing the metrics “Base Schedule Balancing Capability Established” and the “Capacity Test Capability of Passing Established” similarly appear to allow too great a margin for test failure. Similarly the proposal needs additional details regarding the “Capacity Test.”*

**ISO Response**

The thresholds are appropriate for the activity contemplated through the end of market simulation. The ISO believes that these metrics are sufficiently rigorous to demonstrate readiness on the system before going into production; some of the actions that the EIM entity will take are not appropriate during market simulation and parallel operations when the instructions are not binding. i.e., To support higher thresholds for balancing the EIM entity will have to use production e-tag information, which is not available prior to production. The thresholds reflect an operational success rate that accounts for the inability of market simulation to precisely emulate all real time system operations.

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**3<sup>d</sup> Comment:**

*Criteria should be comprehensive in order to ensure that new EIM Entities avoid the specific and acknowledged problems encountered by the PacifiCorp BAAs' entrance into the EIM WPTF is concerned that additional criteria may be needed to ensure that future EIMs do not encounter the same communications and operational challenges that plagued the PacifiCorp EIM. We encourage the CAISO to revisit each of those price spike drivers and create measurable performance criteria for each to apply to each subsequent EIM implementation.*

**Define a Minimum Duration Parallel Operations Period**

*The CAISO-PacifiCorp EIM market simulation period had a very minimal period during which parallel operations took place. Further parallel operations were provided for the start of the EIM was delayed. Yet there were numerous areas of readiness that seemed incomplete once the EIM went "live". WPTF recommends a formal parallel operations phase of no less than 60 days, with a longer period likely being desirable. We ask the CAISO to adopt such a readiness requirement.*

**Develop Specific Attestation Language**

*The ISO agreed to file a certificate of readiness including the EIM Entity attesting to readiness. This mechanism is only as strong as is the language in the attestation and the linkage to an executive within the EIM organization. WPTF strongly recommends that the CAISO propose the language that would be included in this certification and circulate that language to stakeholders for their review. The attestation should include certifications that the entity is fully trained to participate in the EIM both from the vantage point of interfacing with the CAISO but also from the perspective of integrating EIM operations with the balance of their EIM functions, that they have demonstrated operational success on end-to-end tests, and that their organization is prepared to accept the market risks of EIM operations.*

**ISO Response**

The ISO agrees that lessons learned from prior EIM entities will inform and improve the readiness criteria for future EIM entities. The market performance reports published by the ISO and its Department of Market Monitoring in FERC Docket No. ER15-402 provide details about issues experienced by PacifiCorp that resulted in MW balance infeasibilities and how it addressed those issues. In advance of the June 16, 2015 stakeholder call regarding EIM Entity market readiness, the ISO will compile and post a list of those reported issues with a mapping to how the implementation activities and market readiness criteria incorporate the solutions to those issues.

Parallel production will allow the EIM Entity to experience operations in an environment that more closely emulates real time operation than the market simulation. Parallel production does not precisely emulate real time operations, however, and therefore cannot guarantee that the EIM Entity will experience all possible market conditions or operational issues in advance of financially-binding activation. Thus, the length of the parallel operations period is designed to

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allow the EIM Entity to experience a significant array of foreseeable market conditions at least once before live operations.

The attestation will certify that both the ISO and the EIM Entity have engaged in and completed all implementation plan activities designed, with the help of this stakeholder process, to ensure systems and operational readiness. The ISO will separately post draft points of attestation that will be included in the final documentation submitted to FERC.

Company	Date	Submitted By
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<b>Calpine Corporation</b>	May 11, 2015	
<b>Opening Statement:</b>		
<p><i>Calpine views the creation of “readiness criteria” and an officer’s attestation thereof as important to the efficient inclusion of new EIM Entities in the CAISO markets. Calpine believes that structure and content of the attestation is critical to an evaluation of readiness and offers possible language binding the EIM Entity to financial exposure to the markets. In addition, the criteria presented thus far appear to be progress milestones, not exit criteria.</i></p> <p><b><u>Officer Attestation</u></b></p> <p><i>The core of the FERC compliance order in our view is that an officer of the EIM Entity must attest, under oath, that they are ready to participate in the EIM. The content of that attestation is critical and will guide the development of readiness, or exit criteria.</i></p> <p><i>Calpine suggests that the officer should attest to the following facts:</i></p> <ul style="list-style-type: none"> <li>• <i>They have read and understand sections 29 (EIM) and 37 (Rules of Conduct) of the ISO tariff, and</i></li> <li>• <i>They have been briefed on all other relevant sections of the tariff, Business Practice Manuals and Operating Protocols, and</i></li> <li>• <i>They have been briefed on the status of readiness by both their staff and that of the CAISO, and</i></li> <li>• <i>They are satisfied that both EIM Entity and CAISO systems will function properly from the submission of bids to the payment of bills, and</i></li> <li>• <i>They have been briefed on all available tariff-based remedies to unexpected results, and finally,</i></li> <li>• <i>Attest that the EIM Entity is ready to take both the risks and opportunities associated with participating in CAISO markets.</i></li> </ul> <p><i>At a minimum, Calpine believes that the form and content of the attestation should be known and a part of this stakeholder initiative.</i></p>		
<b>1<sup>st</sup> Comment:</b>		
<p><i>In our view the readiness criteria presented in the PowerPoint are development targets, not exit criteria. Some development criteria are likely very important to the sequential progress in the preparing for a go-live, but in our view, are quite insufficient for a release to commercial operations.</i></p> <p><i>For instance, we see no reason to allow and EIM Entity to go-live when 5 percent of the base schedules are unbalanced, or when 10 percent of the time the EIM Entity fails the Flexible Ramping test. The criteria should be restructured and refined to reflect, as close as possible, current CAISO BA metrics.</i></p> <p><i>In addition, the criteria lack sufficient specificity. For instance, in training, the ISO requires “EIM Entity Operators”, an undefined term, complete “100 series” and other classes. It would be helpful to know which classes this entails. CAISO reports on early start-up with PacifiCorp suggested that things such as outage reporting and MSG bidding were areas of particular difficulty. It would be helpful to have a more complete list of expectations.</i></p>		
<b>ISO Response</b>		

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The ISO included a MW quantity measure associated with the SCADA metric. Also, the ISO will provide greater transparency as to the training process by posting a description of the training modules that the EIM Entity must complete.

The thresholds are appropriate for the activity contemplated through the end of market simulation. The ISO believes that these metrics are sufficiently rigorous to demonstrate readiness on the system before going into production; some of the actions that the EIM entity will take are not appropriate during market simulation and parallel operations when the instructions are not binding. i.e., to support higher thresholds for balancing the EIM entity will have to use production e-tag information, which is not available prior to production. The thresholds reflect an operational success rate that accounts for the inability of market simulation to precisely emulate all real time system operations.

Market simulation and other implementation activity is designed to ensure systems and operational readiness. The parallel production period is intended to allow the EIM Entity to experience system conditions and practice deploying EIM systems and software in advance of committing the market to financially-binding settlements. The parallel production period length is optimized to provide the EIM Entity full exposure to market operations and foreseen market conditions; it is not designed to perfect the EIM Entity's operational response to all unforeseen market conditions. Therefore, it is not appropriate to apply performance-based metrics to the parallel operations period. The EIM Entity will, however, certify that the parallel operations will emulate real time operations as closely as feasible, with the understanding that the parallel production platform does not result in financially binding dispatches and cannot provide a precise simulation of actual operations.

Company	Date	Submitted By
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<b>Powerex</b>	May 21, 2015	Mike Benn
<b>1<sup>st</sup> Comment:</b>		
<p><b>Supporting WPTF Comments Regarding CAISO EIM Readiness Criteria</b></p> <p><i>Powerex appreciates the opportunity to submit comments in response to CAISO’s EIM Readiness Criteria that were published on May 6, 2015. Powerex fully supports the comments submitted by the Western Power Trading Forum on May 21, 2015 regarding the EIM Readiness Criteria. Specifically, Powerex supports WPTF’s positions that the Readiness Criteria and testing thresholds should be revised to ensure that they are:</i></p> <ul style="list-style-type: none"> <li>• <i>specific and quantifiable;</i></li> <li>• <i>rigorous; and</i></li> <li>• <i>comprehensive.</i></li> </ul> <p><i>Powerex further supports WPTF’s suggested revisions. The suggested revisions are the bare minimum necessary to ensure that the EIM Readiness Criteria (1) comply with FERC’s March 16, 2015 order issued in Docket Nos. ER15-861-000 and EL15-53-000 and (2) enable future EIM Entities to avoid the same kinds of unjust and unreasonable results that FERC and CAISO have acknowledged in the first several months of EIM operations.</i></p>		
<b>ISO Response</b>		
See response to WPTF comments above.		

Company	Date	Submitted By
<b>Bonneville Power Administration</b>	May 22, 2015	Robb Davis
<b>Opening Statement:</b>		
<p><i>Bonneville Power Administration (BPA) appreciates the opportunity to comment on the CAISO’s proposed Energy Imbalance Market Entity Readiness Criteria. BPA encourages the CAISO to continue a robust stakeholder discussion on these very complicated topics, including allowing sufficient time for reasoned decision-making.</i></p>		

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**1<sup>st</sup> Comment:**

*BPA believes that it is important for the readiness criteria to be objective and transparent. That is, affected stakeholders, if presented with the data the CAISO uses for evaluation, would be able to reach the same readiness assessment as the CAISO. The CAISO proposed in its May 6 tariff compliance filing that it would determine, along with the EIM entity, whether the criteria had been met. If the criteria are properly structured, however, the determination should be self-evident. BPA acknowledges that the ability to make that determination depends on data which may be sensitive or confidential, and that the CAISO and the EIM entity might be the only parties with access to that information. BPA is not recommending that this data be shared with all stakeholders, but to design the criteria such that the determination of readiness could be independently verified.*

**ISO Response**

The ISO agrees that readiness will be self-evident to the EIM entity and the ISO. The release of market information will be consistent with Section 6 of the ISO tariff. The ISO will provide a market report that will provide publicly available information to all market participants.

**2<sup>nd</sup> Comment:**

*BPA also notes that, while the CAISO's proposal contains measurable elements, as the Commission directed, it is unclear whether those measurements actually provide the protection the Commission is seeking. That is, if PacifiCorp had been subject to these criteria, would it have passed them before starting EIM operations in 2014? This is an important measure of the effectiveness of any criteria that are ultimately adopted. In particular, the CAISO should consider whether its proposed criteria aligns with a finding that the EIM Entity is ready for EIM operations. For example, the CAISO's presentation describes a ninety percent success rate as passing the threshold for base-schedule balancing and flexible ramping sufficiency. A ten percent failure rate appears high, and indeed, is higher than what prompted the Commission to initiate its section 206 proceeding on the CAISO's EIM. BPA would like to see, as part of future stakeholder discussions, how the proposed criteria would have caught some of the initial problems before they occurred.*

**ISO Response**

The ISO agrees you cannot compare a prior implementation readiness to a future readiness. Criteria will evolve based on lessons learned.

The market performance reports published by the ISO and its Department of Market Monitoring in FERC Docket No. ER15-402 provide details about issues experienced by PacifiCorp that resulted in MW balance infeasibilities and how it addressed those issues. In advance of the June 16, 2015 stakeholder call regarding EIM Entity market readiness, the ISO will compile and post a list of those reported issues with a mapping to how the implementation activities and market readiness criteria incorporate the solutions to those issues.

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<b>3<sup>d</sup> Comment:</b>
<i>Finally, BPA would like to share its concerns about the timeline for this stakeholder process. The CAISO noted in its compliance filing that it expects to have the stakeholder process completed by June 15, to coincide with the start of NV Energy's market simulation. BPA believes that it is important that this stakeholder process yield meaningful criteria that address the concerns of affected stakeholders, even if that requires minor modifications to the NV Energy schedule. Ultimately, it is preferable for NV Energy to be ready when it starts EIM operation, and appropriately crafted criteria will help establish that readiness.</i>
<b>ISO Response</b>
The ISO has included a second round of formal stakeholder process and will evaluate the completeness of the criteria prior to the final posting.
<b>Closing Statement:</b>
<i>Thank you again for taking the time and opportunity to review these comments on the EIM Entity Readiness Criteria proposal. We look forward to ongoing discussions about finding responsible methods for implementing such significant changes.</i>

<b>Company</b>	<b>Date</b>	<b>Submitted By</b>
<b>San Diego Gas &amp; Electric</b>	May 21, 2015	Lisa Olson
<b>Opening Statement:</b>		
<i>SDG&amp;E appreciates the opportunity to comment on the Energy Imbalance Market (EIM) Readiness Criteria as outlined by the CAISO on May 6th and presented to stakeholders on May 13th. The criteria creation was directed by FERC to ensure new EIM entrants have prepared systems and processes to sync to the EIM market prior to participation.</i>		
<b>1<sup>st</sup> Comment:</b>		
<i>SDG&amp;E believes the criteria is well thought out and achieves FERC goals except for the proposed Market Simulation criteria. SDG&amp;E would like to see CAISO detail out a more thorough Market Simulation plan. We do not believe the current plan contains enough detail, nor testing requirements, to prove a new EIM market participant is ready for EIM market entrance and full participation from timely bid creation and submission to settlement processing.</i>		
<b>ISO Response</b>		
The ISO agrees that greater transparency as to the implementation plan activity will enable the stakeholders to more fully contribute to the strength of the readiness plan and criteria. The ISO has therefore provided the details of the Functional, EIM Systems, Integration, and Day in the Life testing. Structured Scenarios Simulation (including EIM Year 1 Enhancement are posted at: <a href="http://www.caiso.com/Documents/EIM-">http://www.caiso.com/Documents/EIM-</a>		

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[NVEand1YearEnhancementsStructuredScenarios11.pdf](#).

**2<sup>nd</sup> Comment:**

*SDG&E would like to see the Market Simulation readiness criteria include a true parallel (with outages) 'Bid-to-Bill' process such that participants have the requirement to test that their systems can submit bids, see awards, and download and process settlements statements from these simulation market runs. The first implementation of EIM introduced a significant amount of billing determinants to settlement statements. Market participants didn't have a sense of this until receiving the settlement statements from the bid- to-bill test cases. This is an important readiness validation step.*

**ISO Response**

The Day in the Life and Structured Market Simulation Scenarios will include bid to bill processes. The ISO will include in the implementation plan a requirement that the ISO produce settlement statements that the EIM Entity can verify with its own settlements software as of the date of readiness certification.