

Comments of Pacific Gas and Electric Company

EIM Draft Readiness Criteria

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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.

I. 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.

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.

II. 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.

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.

III. 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 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.

IV. 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.