| **Readiness Criterion Identifier** | **Readiness Category** | **Criteria**  | **Measurable Elements**  | **Threshold**  | **Owner** | **Status** | **Evidence** | **Tariff Mapping** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Prospective EIM Entity Full Network Model Integration | Generation, Interchange and Load comparison | Load, EIM Internal Intertie and EIM External Interties, and Generating Unit definition in the Full Network Model is consistent with the Load, EIM Internal Intertie and EIM External Interties, and Generating Unit definition in the exported prospective EIM Entity network model file that it delivered to the CAISO. | Data matches within 10%, measured in MW capacity to start parallel operation, and within 5% before full activation. Any Discrepancies are accounted for in terms of imbalance adjustment | **CAISO** |  |  | **Tariff section 29.2(b)(7)(A)(i)** |
| 2 | Prospective EIM Entity Full Network Model Integration | Comparison of SCADA measurement | SCADA measurements used in prospective EIM Entity EMS model match the measurements observed by the CAISO through the CAISO EMS model | Critical and used SCADA measurements match 90% to start parallel operation and 95% before full activation, measured in MW, outside of any exception in EMS model  | **CAISO** |  |  | **Tariff section 29.2(b)(7)(A)(ii)** |
| 3 | Prospective EIM Entity Full Network Model Integration | State Estimator solution  | CAISO state estimator solution is equivalent or superior to the prospective EIM Entity state estimator solution for its Balancing Authority Area. | State Estimator solutions converge >90% of the time in two days before parallel operation and three days before full activation. Solution differences within 10% before parallel operation and 5% before full activation measured in MW or justified due to different external BAA modeling | **CAISO** |  |  | **Tariff section 29.2(b)(7)(A)(iii)** |
| 4 | Prospective EIM Entity Full Network Model Integration | Non-Conforming Load, Behind-the-Meter Generation, Pseudo Ties, and Dynamic Schedules | Physical representation of the prospective EIM Entity’s network matches the Base Market Model that accounts for non-conforming load, behind-the-meter generation, pseudo-ties, and dynamic schedules, and third party transmission service provider and path operator information that supports EIM Transfers and Real-Time Dispatch in the Energy Imbalance Market, as applicable | Prospective EIM Entity major non-conforming loads > 5% of prospective EIM Entity total actual load in MW are modeled separately from conforming load in market model | **CAISO** |  |  | **Tariff section 29.2(b)(7)(A)(iv)** |
| 5 | Agreements | Execution of Necessary Agreements | The prospective EIM Entity has executed all necessary agreements. | The prospective EIM Entity will execute all agreements, as outlined in Section 5 of the EIM BPM within the required timelines outlined in Section 5. | **JOINT** | Complete |  | **Tariff section 29.2(b)(7)(K)(i)** |
| 6 | Operations Training | Completion of mandatory training courses  | Prospective EIM Entity operators who will have responsibility for EIM operations, transactions and settlements, will complete CAISO training modules. | Prospective EIM Entity operators will Complete training and close-of-training assessment in the appropriate timeframes as outlined in “100 series”– an introduction to Energy Imbalance Market training “200 series”– the specific hourly and daily tasks and duties for normal operation training module; and “300 series”– the assessment of market results and response to contingencies and abnormal situations training module. | **TEP** |  |  | **Tariff section 29.2(b)(7)(B)** |
| 7 | Forecasting Capability | Load forecast capability  | Definition of EIM demand forecast boundaries based on the conforming and non-conforming load characteristics, as applicable.* Accuracy of the CAISO forecast of EIM demand based on historical actual load data for the defined EIM demand forecast boundaries.
* Identification of weather station(s) locations used in forecasting, if applicable.
 | All Plant Information (PI) tags and historical data for defined load area(s), and non-conforming load, if applicable, compared with load forecasts provided from CAISO (if CAISO load forecast used). | **CAISO** |  |  | **Tariff sections 29.2(b)(7)(C)(i)-(iii)** |
| 8 | Forecasting Capability | Variable Energy Resource (VER) forecast capability  | Identification of the source of VER forecasts. (If a participating wind or solar unit requires a CAISO forecast, then BPM and Tariff requirements apply.) | Forecasting entity must demonstrate delivery of Unit MW forecast at 5 min intervals for at least three hours ahead. Forecasting entity must also provide base schedule by T-75, T-55 and T-40. EIM Entity provides to CAISO real-time MW production PI tags.  | **CAISO** |  |  | **Tariff section 29.2(b)(7)(C)(iv)** |
| 9 | Forecasting Capability | Flexible capacity requirements | CAISO has established flexible capacity requirements for the prospective EIM Entity Balancing Authority Area and the combined EIM Area including the prospective EIM Entity  | The CAISO has received and stored all historical data from the prospective EIM Entity necessary and sufficient for the CAISO to perform the flexible ramp requirement. | **CAISO** |  |  | **Tariff section 29.2(b)(7)(K)(iv)** |
| 10 | Balanced Schedules  | Base schedule balancing capability  | The prospective EIM Entity Scheduling Coordinator demonstrates its ability to balance EIM demand and EIM supply for the prospective EIM Entity’s Balancing Authority Area | 90% or greater of base schedules balance tests during monitored hours are within 10% average imbalance of load forecast over one day period before parallel operation, and 5% average over five full days before full activation. The CAISO will provide examples of MW thresholds for each prospective EIM Entity 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 hour to the next. | **TEP** |  |  | **Tariff section 29.2(b)(7)(D)(i)** |
| 11 | Balanced Schedules  | Flexible ramping sufficiency test capability | The prospective EIM Entity \ Scheduling Coordinator demonstrates its ability to pass the flexible ramping sufficiency test. | Passes 90% of the time or greater over monitored hours of one day before parallel operation and five non-consecutive days before full activation. | **TEP** |  |  | **Tariff section 29.2(b)(7)(D)(iii)** |
| 12 | Balanced Schedules  | Capacity test capability  | The prospective EIM Entity Scheduling Coordinator demonstrates its ability to pass capacity test | Passes 90% of the time or greater over monitored hours of one day before parallel operation and five non-consecutive days before full activation. The CAISO will explain the implications of any potential issues with the reliability of an EIM Entity to meet its capacity requirements. | **CAISO** |  |  | **Tariff section 29.2(b)(7)(D)(ii)** |
| 13 | Operating Procedures | CAISO operating procedures (relevant to EIM operations) | The prospective EIM Entity signs CAISO non-disclosure agreement and receives appropriate CAISO “public” and “restricted” operating procedures | Operating procedures NDA signed by the prospective EIM Entity. The prospective EIM Entity receives CAISO operating procedures four months prior to the parallel operations date. | **JOINT** | Complete |  | **Tariff section 29.2(b)(7)(K)(i)** |
| 14 | Operating Procedures | Prospective EIM Entity operating procedures | The prospective EIM Entity operating procedures are defined, updated, and tested for the EIM Entity Scheduling Coordinator | The prospective EIM Entity operating procedures are updated tested and implemented prior to parallel operations date. | **TEP** |  |  | **Tariff section 29.2(b)(7)(K)(ii)** |
| 15 | System Readiness & Integration | Functional Testing  | The prospective EIM Entity and the CAISO will test the functional and system elements in accordance with functional and system testing documentation posted on the CAISO website | All tasks identified in the functional and system testing documentation are complete and will not have any issues deemed significant. Any exceptions will be explained or have an interim solution that is functionally equivalent.  | **TEP** |  |  | **Tariff section 29.2(b)(7)(E)(i)** |
| 16 | System Readiness & Integration | System Integration | The prospective EIM Entity and CAISO will test system integration testing in accordance with the system integration testing documentation posted on the CAISO website | All tasks identified in the system integration testing documentation are complete and will not have any issues deemed significant. Any exceptions will be explained or have an interim solution that is functionally equivalent.  | **TEP** |  |  | **Tariff section 29.2(b)(7)(E)(ii)** |
| 17 | System Readiness & Integration | The prospective EIM Entity system access complete | All prospective EIM Entity employees who require system access to perform EIM-related job functions identified and have necessary certificates. | All prospective EIM Employees performing job functions for EIM market are identified.All CAISO issued certificates are requested within the appropriate timeframes. All identified employees provided the necessary EIM system access certificates. | **TEP** |  |  | **Tariff section 29.2(b)(7)(E)(iii)** |
| 18 | System Readiness & Integration | ISO - prospective EIM Entity interfaces  | Data interfaces between prospective EIM Entity’s systems and CAISO systems are tested | ISO and prospective EIM Entity identify significant data interface issues.EIM Entity and CAISO executives to approve exceptions.  | **JOINT** |  |  | **Tariff section 29.2(b)(7)(E)(i)** |
| 19 | Market Simulation | Day in the life simulation  | The prospective EIM Entity operators are able to meet the market timelines | The prospective EIM Entity grid operations staff complete end-to-end daily market workflow with no critical defects. | **JOINT** |  |  | **Tariff section 29.2(b)(7)(I)(ii)** |
| 20 | Market Simulation | Structured scenarios simulation  | The prospective EIM Entity operators execute and pass all structured scenarios provided by CAISO | All significant issues resolved or have an interim solution that is functionally equivalent.  | **JOINT** |  |  | **Tariff section 29.2(b)(7)(I)(iii)** |
| 21 | Market Simulation | Unstructured scenarios simulation | The prospective EIM Entity operators execute and pass all unstructured scenarios provided by prospective EIM Entity  | All significant issues resolved or have an interim solution that is functionally equivalent.  | **JOINT** |  |  | **Tariff section 29.2(b)(7)(I)(iv)** |
| 22 | Market Simulation | Market results reports | Market results are appropriate based on inputs  | The prospective EIM Entity and CAISO executive project sponsors approve the market results reports during market simulation | **TEP** |  |  | **Tariff section 29.2(b)(7)(I)(v)** |
| 23a | Market Simulation | Market quality review | Prices are validated based on input data | Market simulation prices and MWs schedules/dispatches are validated by CAISO market quality team for entry into parallel operations | **CAISO** |  |  | **Tariff section 29.2(b)(7)(I)(vi)** |
| 23b | Parallel Operations | Market quality review | Prices are validated based on input data | Parallel operations prices and MWs schedules/dispatches are validated by the CAISO market quality team | **CAISO** |  |  | **Tariff section 29.2(b)(7)(I)(vi)** |
| 24 | Market Simulation | The prospective EIM Entity Identification | Validation of SCID’s and Resource ID’s | The CAISO has established and the prospective EIM Entity has tested all necessary SCIDs and Resource IDs established for the prospective EIM Entity’s Balancing Authority Area | **JOINT** |  |  | **Tariff section 29.2(b)(7)(I)(i)** |
| 25 | Settlements | ISO Settlement Statements and Invoices published to the prospective EIM Entity and EIM Participating Resources | The CAISO Settlement statements and invoices match the operational data published to stakeholders or fed into settlement system and the resulting calculations correspond to the formulas defined in ISO’s tariff and BPMs | Monthly settlement statement and invoice with corresponding daily statements produced during market simulation and parallel operations are verifiably accurate against available data.  | **JOINT** |  |  | **Tariff section 29.2(b)(7)(F)(i)** |
| 26 | Settlements | The prospective EIM Entity settlement statements and invoices reflect accurate allocations to the prospective EIM Entity customers prior to financially binding operations. | Verification that settlement statements and invoices accurately reflects system and market data  | The prospective EIM Entity settlement statements and invoices that allocate charges and credits to its customers accurately reflect system and market data during parallel operations.  | **JOINT** |  |  | **Tariff section 29.2(b)(7)(F)(ii)** |
| 27 | Monitoring | Data monitoring | Sufficient and adequate data is available to the CAISO and the Department of Market Monitoring  | All required market monitoring data is available during testing and during post go-live for the key metrics (any exceptions will be addressed).CAISO will provide a market report that will provide publicly available information to all market participants. | **CAISO** |  |  | **Tariff section 29.2(b)(7)(K)(v)** |
| 28 | Parallel Operations Plan | Deployment plan  | Parallel operations run consistently and in accordance with the timeframe set forth in the prospective EIM Entity specific parallel operation plan | Parallel operations runs consistently within normal production CAISO Market disruption tolerances. | **CAISO** |  |  | **Tariff section 29.2(b)(7)(J)** |
| 29 | Outage Management System | Transmission and generation outage submittal and retrieval | The prospective EIM Entity will verify its ability to submit and retrieve outage information with the CAISO  | The prospective EIM Entity validate their ability to submit and retrieve transmission out-of-service outages, generation Pmax derates, generation Pmin rerates, and generation out-of-service outage tickets within the required timelines.  | **JOINT** |  |  | **Tariff section 29.2(b)(7)(G)** |
| 30 | Communications between the CAISO and the prospective EIM Entity  | Voice and/or electronic messaging | Implemented process and procedures used for voice and/or electronic messaging  | The process and procedures are incorporated into the prospective EIM Entities business processes before the start of market simulation.  | **TEP** | Complete |  | **Tariff section 29.2(b)(7)(H)(i)** |
| 31 | Communications between the CAISO and the prospective EIM Entity  | Communication tools | Staff are trained on communication procedures and tools | The prospective EIM Entity operations staff who will have responsibility for EIM operations, transactions and settlements are trained on the relevant operating procedures and tools used for EIM related communications before the start of parallel operations | **TEP** | Complete |  | **Tariff section 29.2(b)(7)(H)(ii)** |
| 32 | Communications between the CAISO and the prospective EIM Entity | 3rd party transmission service provider | The third party transmission service provider information that supports EIM Transfers and Real-Time Dispatch included in the Full Network Model is available during parallel operations | The CAISO provides third party transmission service provider and path operator information to the prospective EIM Entity through parallel operations | **TEP** |  |  | **Tariff section 29.2(b)(7)(H)(iii)** |
| 33 | EIM Available Balancing Capacity | Identification of EIM Available Balancing Capacity | Participating resources and non-participating resources for EIM Available Balancing Capacity. | The prospective EIM Entity has identified EIM participating resources and non-participating resources that it intends to designate in the EIM Resource Plan as EIM Available Balancing Capacity | **TEP** |  |  | **Tariff section 29.2(b)(7)(K)(iii)** |