

No.	Readiness Category	Criteria	Measureable Element	Threshold	Status	Update	Tariff Mapping
1	Prospective EIM Entity Full Network Model Integration	Generation, Interchange and Load comparison	Load, EIM Internal Inertie and EIM External Inerties, and Generating Unit definition in the Full Network Model is consistent with the Load, EIM Internal Inertie and EIM External Inerties, 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. Discrepancies, if any, are accounted for in terms of imbalance adjustment	Complete	<p>Records for August 17, 2015 - August 28, 2015 show averages for load, generation and interchange values within 5% tolerance.</p> <p>Comparison analysis of load and generation for SCADA vs SE estimate in the EMS over the past two weeks shows differences of less than 1.7%</p> <p>Interchange values, being derived values for Generation and Load, one can state that Load, Generation and interchange are with 1.4 %.</p>	<a href="#">Tariff section 29.2(b)(7)(A)(i)</a>
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	Complete	<p>Comparison analysis at unit level for SCADA vs SE estimate in the EMS shows differences for less than 10% prior to parallel operations.</p> <p>SCADA measurements match the CAISO SE solutions within 95% in paralell operations.</p> <p>Two comparison measurements are used,                      1. Total Deviation / Total Actual MW = 99.34%;                      2. Average of deviation percentage based on generating units with capacity greater than 48 MW equals 98.1%</p>	<a href="#">Tariff section 29.2(b)(7)(A)(ii)</a>

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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	Complete	SE solutions converged 96.9% of the time within two days prior to parallel operations.  SE, including the network model of NV Energy, solved 99.97% of all cases as 'Valid Solutions' during the period Sep 15 , 2015 midnight to Sep 28, 2015, 1500. Solution differences average are less than 1.5% between SE and SCADA MW.	<a href="#">Tariff section 29.2(b)(7)(A)(iii)</a>
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 nonconforming 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	Complete	There are no non-conforming loads in NV Energy BAA.	<a href="#">Tariff section 29.2(b)(7)(A)(iv)</a>
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.	Complete	NV Energy has executed all agreements, as outlined in Section 5 of the EIM BPM within the required timelines.	<a href="#">Tariff section 29.2(b)(7)(K)(i)</a>

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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.	Complete	NV Energy confirms full completion of all training series and knowledge testing with minimum required score for all NV Energy operators.	<a href="#">Tariff section 29.2(b)(7)(B)</a>
7	Forecasting Capability	Load forecast capability	Definition of EIM demand forecast boundaries based on the conforming and non-conforming load characteristics, as applicable <input checked="" type="checkbox"/> Accuracy of the CAISO forecast of EIM demand based on historical actual load data for the defined EIM demand forecast boundaries. <input checked="" type="checkbox"/> 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 nonconforming load, if applicable, compared with load forecasts provided from CAISO (if a CAISO load forecast used).	Complete	All plant information and historical data for NV Energy load areas have been defined. Full compliance with threshold metric for all intervals during parallel operations: Average Load forecast error for T-60 is 1.08%; Average Load forecast error for the 15-minute is 0.86%; Average Load forecast error for the 5-minute is 0.53%;	<a href="#">Tariff sections 29.2(b)(7)(C)(i)-(iii)</a>

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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/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.	Complete	Full compliance with threshold metric. NV Energy forecasting entity has demonstrated delivery of VER forecasts. VER forecasts are provided in parallel operations and ready to move to production. In addition, NVE energy has also successfully submitted corresponding base schedules within appropriate timeframes.	<a href="#">Tariff section 29.2(b)(7)(C)(iv)</a>
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.	Complete	Full compliance with threshold metric. CAISO has established flexible capacity requirements based on received and stored data from NV Energy.	<a href="#">Tariff section 29.2(b)(7)(K)(iv)</a>
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.	Complete	Full compliance with threshold metric met prior to parallel operations. Full compliance with threshold metric during parallel operations on the following 5 days: 9/1, 9/2, 9/4, 9/6, 9/7. NV Energy successfully balanced schedules on the following trade dates; 9/1, 9/2, 9/4, 9/6, 9/7, 9/10 and 9/12 - 9/30.	<a href="#">Tariff section 29.2(b)(7)(D)(i)</a>

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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 nonconsecutive days before full activation	Complete	Full compliance with threshold metric met prior to parallel operations.  Full compliance with threshold metric. NV Energy successfully met flexible capacity requirements on the following trade dates; 9/18 - 9/30.	<a href="#">Tariff section 29.2(b)(7)(D)(iii)</a>
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 nonconsecutive 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.	Complete	Full compliance with threshold metric met prior to parallel operations.  Full compliance with threshold metric. NV Energy successfully met capacity test capability of at least 90% over monitored hours.	<a href="#">Tariff section 29.2(b)(7)(D)(ii)</a>
13	Operating Procedures	CAISO Operating Procedures (relevant to EIM operations)	The prospective EIM Entity signs CAISO nondisclosure 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.	Complete	NDA - signed - April 22, 2015	<a href="#">Tariff section 29.2(b)(7)(K)(i)</a>

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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.	Complete	NV Energy confirms all required operating procedures are updated, tested and validated as of August 28, 0215.	<a href="#">Tariff section 29.2(b)(7)(K)(ii)</a>
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 completed and will not have any issues deemed significant. Any exceptions will be explained or have an interim solution that is functionally equivalent.	Complete	Confirmation of successful completion for all functional and system tests.	<a href="#">Tariff section 29.2(b)(7)(E)(i)</a>
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 completed and will not have any issues deemed significant. Any exceptions will be explained or have an interim solution that is functionally equivalent.	Complete	All system integration tests completed successfully in CAISO simulation environment.	<a href="#">Tariff section 29.2(b)(7)(E)(ii)</a>
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 CASIO issued certificates are requested within the appropriate timeframes. All identified employees provided the necessary EIM system access certificates.	Complete	Complete access configuration in production environment completed on September 30, 2015.	<a href="#">Tariff section 29.2(b)(7)(E)(iii)</a>

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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.	Complete	Confirmation of successful completion of all data interfaces including, automated meter data upload completed on September 21, 2015.	<a href="#">Tariff section 29.2(b)(7)(E)(i)</a>
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.	Complete	NV Energy confirms completion of end-to-end workflow in simulation environment on August 3, 2015.	<a href="#">Tariff section 29.2(b)(7)(I)(ii)</a>
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.	Complete	CAISO and NV Energy confirms completion of all market simulation structured scenarios including NV Energy validation of settlements statements.	<a href="#">Tariff section 29.2(b)(7)(I)(iii)</a>
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.	Complete	NV Energy confirms completion of all related unstructured scenarios in simulation environment.	<a href="#">Tariff section 29.2(b)(7)(I)(iv)</a>

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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.	Complete	CAISO and NV Energy executive project sponsors have approved the market results reports during market simulation.	<a href="#">Tariff section 29.2(b)(7)(I)(v)</a>
23	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 operation	Complete	CAISO confirms validation of market prices and MWs schedules/dispatches observed during market simulation exercises.	<a href="#">Tariff section 29.2(b)(7)(I)(vi)</a>
23b	Parallel Operations	Market quality review	Prices are validated based on input data	Parallel operations prices and MWs schedules/dispatches are validated by CAISO market quality team	Complete	Market solution in general, including prices are being validated for parallel operations; there have been data quality, set-up and functionality issues identified, which have been and are being resolved.	<a href="#">Tariff section 29.2(b)(7)(I)(vi)</a>
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.	Complete	Successful verification of criteria during market simulation testing for trade date August 20, 2015.  CAISO published initial statements for trade date September 9, 2015 and September 16, 2015 in parallel operations, monthly statement posted on September 24, 2015.	<a href="#">Tariff section 29.2(b)(7)(F)(i)</a>

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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.	Complete	NV Energy prepared settlement statements and invoices that allocate the associated charges and credit to their customers and accurately reflects system and market data for trade date September 16, 2015 parallel operation.	<a href="#">Tariff section 29.2(b)(7)(F)(ii)</a>
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.	Complete	Currently all requested data is available and DMM started evaluation of correctness and completeness of data.	<a href="#">Tariff section 29.2(b)(7)(K)(v)</a>
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.	Complete	Parallel operations plan posted on August 26, 2015. CAISO verified parallel operations ran consistently within normal CAISO disruption tolerances. From September 10, 2015 through September 30, 2015 RTD/RTPD cumulative uptime average of 99.97%; RTD - 99.40%, FMM - 97.67%, and STUC - 97.42%	<a href="#">Tariff section 29.2(b)(7)(U)</a>

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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 derates, and generation out-of-service outage tickets within the required timelines.	Complete	NV Energy verifies its ability to submit and retrieve outage information with CAISO.	<a href="#">Tariff section 29.2(b)(7)(G)</a>
30	Communications between the CAISO and the EIM Entity Initiate	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.	Complete	Completed as part of the NV Energy real-time desk certification process.	<a href="#">Tariff section 29.2(b)(7)(H)(i)</a>
31	Communications between the CAISO and the EIM Entity Initiate	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.	Complete	NV Energy confirms completion of training on communication procedures and tools for staff who will have responsibility for EIM operations, transactions and settlements.	<a href="#">Tariff section 29.2(b)(7)(H)(ii)</a>
32	Communications between the CAISO and the prospective EIM Entity	3 <sup>rd</sup> 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.	Complete	Not applicable for NV Energy EIM integration.	<a href="#">Tariff section 29.2(b)(7)(H)(iii)</a>

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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	Complete	NV Energy designated EIM participating resources and/or non-participating resources in the EIM Resource Plan as EIM Available Balancing Capacity.	<a href="#">Tariff section 29.2(b)(7)(K)(iii)</a>