

September 2, 2008

The Honorable Kimberly D. Bose Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, DC 20426

Re: Monthly Status Report re MRTU, California Independent

**System Operator Corporation** 

Docket No. ER06-615

Dear Secretary Bose:

Enclosed for filing in the above-captioned docket, please find an electronic copy of the September 2008 MRTU Status Report of the California Independent System Operator Corporation.

Respectfully submitted,

#### /s/ Sidney M. Davies

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Operator Corporation
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Attorney for the California Independent System Operator Corporation

# UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

California Independent System	)	Docket No. ER06-615	
Operator Corporation	)		
	)		

# SEPTEMBER 2008 STATUS REPORT OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

The California Independent System Operator Corporation ("CAISO") respectfully submits the monthly progress report ("Report") here attached in compliance with Paragraph 1415 of the Commission's September 21, 2006 "Order Conditionally Accepting The California Independent System Operator's Electric Tariff Filing To Reflect Market Redesign and Technology Upgrade," 116 FERC ¶ 61,274 (2006) ("September 21 Order"), issued in the above-captioned docket. The September 21 Order requires the CAISO to file monthly reports concerning the progress in designing and implementing the CAISO's Market Redesign and Technology Upgrade ("MRTU") and, as required by P 1415 of the September 21 Order, on the status of the CAISO's MRTU readiness program. The CAISO will continue to file this monthly report on the first Monday of the month until implementation of MRTU, which date is currently being reevaluated. The attached Report provides a high level update concerning the status of the three components of the MRTU project: People, Process and Technology.

As previously reported, the CAISO had been targeting an October 1, 2008 launch date for MRTU. At the July 9, 2008 Board of Governors meeting, CAISO management presented an extensive MRTU update concerning the status of

CAISO readiness and acknowledged that the target MRTU launch date of October 1, 2008 was not feasible but that a fall 2008 implementation was still feasible. In its August Report, the CAISO acknowledged that a fall 2008 implementation date was not possible. Since then the CAISO has further committed to stakeholders that it would not commence MRTU in December 2008 or January 2009.

Since the filing of the August Report, the CAISO paused the Integrated Market Simulation Update 2 ("IMS Update 2") in order to enable additional functionality and to improve performance. As set forth in the attached Report, the CAISO resumed IMS Update 2 on August 20. Since then, IMPS Update 2 has performed successfully with all constraints enabled in both the Day Ahead and Real-Time Markets (except for the Forbidden Regions in the Real-Time Market). Although the CAISO has committed to stakeholders that it will not launch MRTU prior to February 1, 2009, it has not established a new target start date. The CAISO will continue to work closely with Market Participants to establish a stable market simulation experience and in the September Board of Governors meeting will report on the CAISO's readiness status and, if feasible, will then establish a new MRTU Go Live date.

Respectfully submitted,

/s/ Sidney Mannheim Davies
Sidney Mannheim Davies
Anna A. McKenna

Counsel for the California Independent System Operator Corporation

Dated: September 2, 2008

#### **CERTIFICATE OF SERVICE**

I hereby certify that I have caused the public version of the foregoing document to be served upon the Public Utilities Commission of the State of California and upon all parties of the official service lists maintained by the Secretary for Docket No. ER06-615.

Dated at Folsom, California, this 2<sup>nd</sup> day of September 2008.

<u>Isl Anna Pascuyo</u> Anna Pascuzzo

#### **ATTACHMENT**

# Market Redesign and Technology Upgrade

## **FERC Report**

September 2, 2008



# Market Redesign and Technology Upgrade FERC Report September 2, 2008



#### **Executive Summary:**

This status report provides the Federal Energy Regulatory Commission ("Commission") with information supporting the CAISO's efforts to prepare itself and its Market Participants to commence Market Redesign and Technology Upgrade ("MRTU") operations. This status report is an update to the August 4, 2008 report regarding the status of MRTU readiness. At the time of this report, CAISO has not established a new MRTU Go Live date, although it has committed to Market Participants that MRTU will not go live in December 2008 or January 2009.

#### This month's highlights:

- Market Simulation resumed on 8/20 after a week and a half downtime which was used to enable additional MRTU functionality and to stabilize and improve performance of the market systems.
  - Progress continues on completing system readiness
    - 103 out of 125 charge codes are now validated
    - Final constraints have been enabled in both the Day-Ahead Market ("DAM") and Real Time Market ("RTM") (except Forbidden Operating Regions in RTM).
    - CAISO has identified and resolved lingering pricing issues that have caused concern to market participants
  - We fully implemented a program restructure and have key vendor personnel on site full time.
  - DAM results were published within the MRTU Tariff-specified market timeline
    with regularity since resuming IMS Update 2. DAM results have been
    published on time 11 out of 13 days since IMS Update 2 resumed with one of
    the late days being only 20 minutes late because of operator error.
  - RTM stability seems to have been achieved with performance on solving intervals for both the 15 minute and 5 minute dispatches exceeding 95% over the last several days.
- CAISO is now focusing on "What's Left"
  - Continued demonstration of system stability
  - Scenario testing
  - Validation of final charge codes
  - Publishing of monthly settlement statements and invoices with inclusion of the vast majority of charge codes
  - Resolution of remaining open variances
  - Migration to the production hardware environment
  - Implementation of a more up to date system model (DB 32 or higher)
  - Operational testing
  - Closure of Market Participants' Market Simulation issues



- Internal and External Readiness activities continued throughout the month
- Market Simulation Team is providing daily Price Validation of the DAM as well as weekly discussions of our activities to review the quality of solution during Market Simulation
- Two meetings were held with Market Participants to discuss the Market Simulation Guidebook and to prioritize each Market Simulation Scenario and the IMS Update 2 Exit Criteria
- Eight MRTU Operator Go Live Training sessions have been held at various client sites in Texas and throughout California with the final session scheduled to begin on September 5<sup>th</sup>
- CAISO Operators have completed the first rotation of "Hands-On" training.
   Training environment stability challenges have impacted the training effort, yet "hands-on" values still achieved through functionality discussions with subject matter experts. Additional training rotations will be scheduled through Go Live
- Planning of an External Readiness Touchpoint, to be performed next month, to determine any major gaps in the Market Participant's progress to be ready for Go Live
- Future reporting on MRTU status will transition to identifying and focusing on the remaining activities necessary for Go Live.



#### **Overall Dashboard**

The following dashboard outlines the current status for Business Units, Market Participants and the MRTU Program Management for the components People, Process, and Technology at the time the report was filed.

**Please Note:** The overall program status is based on a Go Live date in the Fall of 2008. A new Go Live date has not been announced. Once a new date is determined and announced, the Overall Dashboard will be updated to reflect the status based on this new date.

MRTU Schedule		
Current Period	Trend	
R	<b></b>	

MRTU Budget		
<b>Current Period</b>	Trend	
R	<b></b>	

#### **Overall Readiness Status:**

Please Note: The status of readiness provided below for the CAISO Business Units and Market Participants was evaluated as of July 31, 2008. The CAISO continues to work with Market Participants through touchpoint updates and will re-evaluate their readiness after the participants have had additional time to test their systems. The CAISO completed a Pre-Final Assessment touchpoint with Market Participants in June 2008; action items from this touchpoint continue. The CAISO will align the final assessment with the new project timeline when the timelines is established. Also, the CAISO concluded the June IMS Functionality Touchpoint. An additional touchpoint will be conducted in mid-September to gauge Market Participant engagement.

Category	Business Units		Market Participants	
	Core	Non-Core		
People	G	G	Y	
Process	G	G	Y	
Technology	R	R	R	

G = No Delays

Y = Delay, but will not impact an 11/1/08 Go-Live Trade Date. Contingency maintained, but at risk

R = Delay, will impact program delivery and an 11/1/08 Go-Live Trade Date. Use of contingency funds



#### **Technology/Testing Readiness:**

Effective June 16<sup>th</sup> Market Participants have been able to submit bids and trades based on their specific strategies while being encouraged by CAISO to submit bids and trades consistent with the operational scenario for that day.

#### **Key Initiatives/Issues:**

- Vendor Delivery: In the month of August the CAISO continued focusing on variances impacting system stability and Settlements charge code validation. As part of this initiative, the market systems vendor increased its on-site presence at the CAISO premises to help with root cause analysis and to improve variance turn around time. The CAISO continues to manage the flow of variances by prioritizing them and dedicating resources strategically to mitigate the most severe variances first.
- **Market Systems:** The remaining outstanding Market System end to end functionality continues to be tested internally. Quality of solution testing also continues.
- **Settlements:** All charge codes have been delivered and unit-tested. In August, the number of charge codes validated continued to increase with 103 of 125 codes validated. Final charge code validation will be dependent on fixing remaining variances in upstream systems and running specific scenarios.
- Market Simulation Experience: During the month of August, the IMS Update 2 environment was taken down to address the stability issues experienced in July. Downtime started Friday, August 8<sup>th</sup> at 5:00 PM. Market Simulation resumed for the Wednesday, August 20<sup>th</sup> Trade Date. The CAISO has successfully enabled all market functionality and constraints in IFM and all functionality (with the exception of Forbidden Operating Regions) is enabled in RTM. This final piece of Real-Time functionality continues to be tested internally.

Increased stability in the Day-Ahead and Real-Time has been experienced after the downtime. The DAM results have been published within the MRTU Tariff-specified market timeline 11 of 13 days since IMS Update 2 resumed. RTM stability seems to have been achieved with performance on solving intervals for both the 15 minute and 5 minute dispatches exceeding 95% over the last several days.

Following the August downtime, the CAISO has committed to meeting criteria gates in order to move forward with various phases of IMS Update 2. The first phase will focus on the stability and availability of the systems. Stability criteria gates have been defined based on progress toward IMS Update 2 Exit Criteria; these criteria must be substantially met prior to the scenario execution phase. The CAISO has worked with Market Participants to prioritize which scenarios are necessary to complete prior to the final phase of IMS Update 2. The Market Simulation Guidebook has been updated to reflect the prioritization of the scenarios and IMS Update Exit Criteria.



#### **Key Accomplishments:**

#### CAISO Internal Business Unit Readiness

- Training: CAISO Employees completed knowledge transfer activities. First round of final hands on technical training courses was completed at the end of July with the second round continuing in August and ongoing through Go Live. Scenario execution for Business Units is ongoing.
- **To-Be Processes:** Of 13 Tier 1 Business Processes, 12 are signed off. The final sign off for the last process is pending due to ongoing functionality testing and validation.
- Assessment of Readiness: Business Units are tracking remaining activities for Go-Live. Core Business Units as a group have open items due to system functionality concerns; resolution is pending model updates, display development, and analysis tool development. As the training and analysis environments stabilize, the Business Unit Owners will be able to continue to test their business processes. Non-Core Business Units are currently on track.
- MRTU Application Transition: Completed final sign off for 21 MRTU applications with responsibility for on-going management transferred from the MRTU project to the IT group and the responsible Business Unit.

#### External Readiness

 Integrated Market Simulation: IMS Update 2 was paused on August 8th and resumed for the August 20<sup>th</sup> Trade Date. During the down time the CAISO was able to enable all Day-Ahead and Real-Time "Go Live" functionalities, with the exception of Forbidden Region in Real-Time, into the IMS environment and apply patches to improve the system's stability.

Although some scenario testing has been performed, the CAISO will commence scenario testing once the IMS Update 2 stability, reliability and functionality has been obtained. After discussions with the Market Participants the IMS Update 2 scenarios have been reviewed, prioritized, and in some cases consolidated. A new scenario testing schedule will be provided to the Market Participants. Additional information will be provided with the description of the scenarios identifying the specific actions needed to run the scenarios as well as items for the Market Participant to review in their efforts to validate the completion of the scenarios. With the high priority scenarios to be performed first, the CAISO intends to provide initial testing results, both on the daily Touchpoint calls and the website. A final report will be issued and analysis feedback is expected to be received from the Market Participants.

• **Training:** The CAISO is in its last session of the "Go Live" training courses. Having completed eight sessions throughout the United States, the last session will be held in Houston, TX on September 5-6<sup>th</sup>. Response to these classes has been positive, and the CAISO continues to proactively assess the training needs of Market Participants and offer courses as needed. In the meantime, the CAISO is developing Settlements refresher courses that will be given via Webex to Market Participants. Registrations for these courses will be open once all logistics are finalized. A computer based training



module was posted this month on the CAISO website. This module provides the well attended Bid-to-Bill training material in a manner that can be accessed at any time.

Assessment of Readiness: Due to the changes in the program timeline, the CAISO is
reassessing the schedule of the Final Assessment. The CAISO recognizes that Market
Participant's readiness is heavily dependent on an effective market simulation in order
to adequately test out their technology and processes. Therefore, at this time, the
CAISO does not anticipate conducting the Final Assessment until IMS is stable and the
Market Participants are comfortable with the level of testing they are receiving from
market simulation.

In the meantime, the Readiness team will continue to hold frequent discussions with the Market Participants and evaluate additional External Readiness activities and align them with the new program milestones accordingly.

Planning of an additional External Readiness Touchpoint has begun. The Touchpoint is planned for the middle of September and is intended to confirm the general status of readiness by the Scheduling Coordinators ("SC") and determine if any gaps exists in their preparation for MRTU Go Live. The CAISO will continue to focus on People, Process, and Technology and look for confirmation that those SCs that need vendor support are on schedule for completing their project. The CAISO will work with the SC in helping to resolve issues.

• Quick Response Team: All Market Participants' open Market Simulation Issues are being closely evaluated for resolution. Issues continue to be prioritized and status provided to the originating Market Participants and general status in a report posted on the website. During the market simulation touchpoint calls, issues are discussed to alert participants of identified concerns, resolutions based on system patches, and the number of items open or ready for verification testing by the participants. Over the past few weeks, discussion of system usability issues have been occurring during the Market Simulation briefing and debriefing weekly phone calls. The Quick Response Team works with the Market Participants to provide the Market Participants with the status of Open and Market Test issues. This effort continues to help identify key issues that have a significant impact on Market Simulation results and supports gaining quick resolution of issues.



## **Risks and Mitigations**:

Risks and Mitigations	S
Technology/Testing	<ul> <li>High Availability/Cutover to Production Systems has not yet</li> </ul>
Technology/Testing	<ul> <li>High Availability/Cutover to Production Systems has not yet occurred. The build process continues and the environment is expected to be fully functional by Sept. 4<sup>th</sup>. Cutover to that environment is still being planned.</li> <li>Application and Infrastructure Monitoring - IT continues to work with the infrastructure team and application owners to refine monitors, alerts, and the communication process surrounding them. Additional monitoring and processes for the new integration layer guaranteed message delivery implementation has been built in the new Production environment and will also be tested as part of the environment checkout effort.</li> <li>System Stability and Performance – The DAM and RTM stability levels have been more consistent since resuming IMS Update 2 on August 20<sup>th</sup>. During the August IMS Update 2 downtime, enhancements were introduced to the hardware and system configuration that will help improve the performance and stability of the market systems. Work continues with the market system vendor to address issues impacting the RTM forbidden region functionality. IT continues to enhance/refine monitoring to target specific areas for performance tuning.</li> <li>Full Network Model and Daylight Savings Time (DST) Testing These efforts have not been introduced into the CAISO's integrated test environments yet. The validation of the new network model in a standalone environment has been completed and is planned to be introduced into an integrated environment in early September. DST testing will be performed this fall prior to</li> </ul>
Business Units	<ul> <li>Core Business Units – Continued focus on the readiness of the core business units. Based on feedback from the grid operating crews, readiness efforts are centralized around improving the analysis and display tools to ensure that the operators have the best tools available to support operating the grid. This month a new team was created to be dedicated to the Grid Operations group and to identify and expedite resolution to their suggestions. All other core business units are being monitored to ensure they continue with their readiness efforts and identify and resolve any gaps.</li> <li>Non-Core Business Units – Ongoing readiness monitoring of Non-Core Business Units reveals that all People and Processes are on track. The Readiness Team will continue to work closely with the applicable Business Units, Program Management and Testing Team to complete the remaining Go Live activities and deliverables including processes and tools.</li> </ul>



#### **Market Participants**

The Market Participants' Readiness in the People, Process and Technology areas is highly dependent upon a stable and effective Market Simulation environment to practice their internal processes and validate Settlement charge codes. The CAISO continues to do the following:

- Continue to perform Charge Code Validation and publish consistent Settlement documentation.
- Continue to work with the Scheduling Coordinators and their settlement vendors to support their efforts on charge code validation. With 101 charge codes validated from the CAISO perspective the CAISO expects that the Scheduling Coordinators validate the charge codes based on their settlement activities and software and provide their concurrence.
- The next External Readiness Touchpoint will begin in the middle of September. All certified Scheduling Coordinators will be contacted and asked about their MRTU readiness efforts. Participation in Market Simulation, open issue resolution, and charge code validation will be encouraged.
- Ensure the ability of Market Participants to provide their own bids during Market Simulation.
- The Quick Response Team continues with their objectives prioritizing and helping to resolve specific IMS issues until Go Live. The team encourages Market Participants to retest issues that have been fixed.
- Working with the Market Participants to create a schedule for Scenario testing during IMS Update 2.
- Provide daily Market Simulation status reports showing which Charge Codes have valid results for each day of Market Simulation along with an update on system status.
- Continue with scheduled meetings and workshops (i.e., monthly MRTU Implementation Workshops, bi-weekly SIUG and weekly SaMC meetings.)
- Conduct Touchpoints during IMS Update 2 to gauge Market Participants' experience with Market Simulation and ensure an effective Market Simulation.
- Track Scheduling Coordinators' Market Simulation activities by system (i.e. SIBR, CMRI, OASIS, BAPI). Those Scheduling Coordinators, who are not participating, will be contacted to discuss the reason why.
- Conduct Market Simulation Issues Review meetings to communicate status and resolution of issues.
- Provide increased visibility into weekend system patching activities via an interim Release Management process.



#### **Upcoming Activities and Next Steps:**

- Continue to monitor and stabilize the market systems with all constraints, to the extent necessary.
- Continue Market Simulation, including Market Participant Scenario testing in IMS Update 2 with final MRTU functionality.
- The Quick Response Team will continue to address Market Participant issues.
- Continue to analyze and resolve market simulation issues. Communicate issue status and retesting when appropriate to ensure resolution has been achieved.
- Continue weekly discussions on the quality of solution of market simulation results.
- External Readiness Final Assessment schedule will be aligned with new program milestones once they are established.
- Completion of PwC Audit Opinion on the settlement process is contingent on the identification of a Go-Live date.
- Continue the ongoing testing and training of Operations functionality and processes.
- Garner final sign off for the remaining Tier 1 Business Process.
- File FERC informational report, with status of remaining activities & milestones, 60-Days in advance of Go-Live.
- A Touchpoint will be initiated in September to gather additional External Readiness information.



#### Readiness Criteria High Level Overview: August 31, 2008

The following shows the overall status of the MRTU Readiness Criteria as of August 31, 2008.

#### **Total Number of MRTU Readiness Criterions: 33**

- # of Completed Readiness Criteria: 7
- # of "On Track" Readiness Criteria: 25
- # of "Not On Track" Readiness Criteria: 1

#### **August Status Changes:**

- # of Readiness Criteria that have changed status from Orange to Purple: 2
  - The following Readiness Criteria changed status from Orange to Purple:
    - LMP-PRD
    - STL-2
- # of Readiness Criteria that have changed status from Orange to Blue: 0
- # of Readiness Criteria that have changed status from Purple to Orange: 0
- # of Readiness Criteria that have changed status from Purple to Blue: 0

#### Readiness Criteria status is indicated by the following color codes:

- Clear: A Readiness Criterion is clear (C) if:
  - · The Readiness Criterion has not begun.
- Purple: A Readiness Criterion is purple (P) if:
  - The completion or status updates are on schedule based on the specified target due date or milestone, OR
  - A mitigating action has been implemented successfully and the Readiness Criterion is back on schedule to be completed on the specified target due date.
- Orange: A Readiness Criterion is orange (O) if:
  - One or more Readiness Components in that Readiness Criterion are not complete on the specified target due date or milestone. OR
  - A Readiness Criteria has reported risks or issues that have a potential for not allowing it to be completed on the specified target due dates or milestones.
- Blue: A Readiness Criterion is blue (B) if:
  - All Readiness Components in that category are complete.

<sup>\*</sup>Only status change on parent criteria are counted in these statistics. Any status changes on sub-criteria are not counted.



Criterion	Status	Comments	Criterion	Status	Comments
Completed Readiness Criteria			"On Track" Readiness Criteria		
BPM - 1	B	As of November 2007, all BPMs have met FERC directives and have been posted on the CAISO website.	CRR-3	P	The timeline for the monthly allocation process is being reevaluated due to the changes in the MRTU schedule.
CRR - 1	<b>B</b>	As of April 2007, the CAISO has completed the CRR Dry Run in Market Simulation.	ENT-1	P	All enterprise systems are in the verification process to ensure that they will meet availability requirements.
CRR-4	<b>B</b>	The CAISO made its compliance filing with the FERC's Long-Term Transmission Rights Final Rule on January 29, 2007.	GO-1	<b>P</b>	All Procedures have been completed. The CAISO is On Track to post these procedures 1 day prior to MRTU Go-Live.
ECA-1	B	The Control Area Scheduler went live on 2/13/07 and all tags applicable to CAISO from Partisans have been linked to CAS.	INF-1	P	Monitoring tools and production environment are available to support Market Simulation.
MM-Study 2	B	Analysis of the potential LMPM deficiency showed that it was not a valid concern.	LMP PRD	P	IT and Market Ops have completed performance tests of the tool in the production environment and are analyzing the results. Work continues on the SAS Code and the output viewer. SAS consultants have been given requirements for the Kick Off controller.
SE-1	B	As of 6/30/07, the State Estimator has meet all stipulations of this Readiness Criterion.	LMP Testing	P	Analysis Track Testing (ATT) effort has completed review of 100% of test cases identified for IFM. Work continues for validation in the Market Sim environment.
TST-1	<b>(B)</b>	Performance Testing for IMS Update 2 has been completed and passed QRB Review.	MKS-1	P	The CAISO plans to re-run scenario 10 in September 2008.
"On Track" Readiness Criteria				"On Track" Readiness Criteria	
MKS-2	•	The CAISO is in the final stages of finalizing the list of reporting metrics.	ORG-3	<b>P</b>	The EDR is available to DMM and issues arising from testing are being addressed.
MM-Study	P	The final CPA report will be published one month prior to Go-Live.	REG-1	P	Filings are On Track to be completed 90-60 days prior to MRTU Go-Live.
MOD-1	P	FNM model DB32 is currently being tested and the DB35 model is under development. The DB35 model is planned for simultaneous promotion with market s and EMS in October 2008.	STL-1	P	Revised Settlements BPM have been posted on the CAISO website. Audit of the SaMC software has begun and scheduled to complete by end of IMS U2.
MS-1	P	All Hardware and monitoring tools have been deployed to measure availability of the systems during PPS.	STL-2	P	To date, 101 out of 125 Charge Codes have been validated from Bid to Bill.
ORG-1	<b>(</b>	Business Units have met the 5/1 corporate goal and are On Track.	SIM - 1	<b>P</b>	IMS Update 2 continues.
ORG-2	P	Continued tracking the remaining activities and deliverables for all Business Units.	TECH-1	P	Operational Readiness Testing is in progress.
PRT-1	P	The CAISO will realign the Final Assessment to the project timeline.	TST- 2	P	Integration testing continues for additional functionality.
PRT-2	P	All Critical and Very High issues in IMS Update 2 are being resolved as they arise.	BUS-BA-1	<b>P</b>	All application transition sign-offs have been completed. Business Units are working at documenting and mitigating workarounds for systems that do not satisfy the required functions.
CRR-2	P	Testing of CRR broadcast services with SAMC is complete except for CC6798 which should be completed by September.	BUS- BA - 2	P	This readippageriteria refers to the 60 Day FERC Filing.



Readiness Criterion	Status	Comments	
"Not On Track" Readiness Criteria			
STL-3	0	This criteria is dependent on the publishment of complete and accurate settlements and invoice statements during IMS U2.	