

sequential and concurrent nature of the design elements; (2) cost estimates for each element; (3) progress report; (4) accomplishments/milestones; and (5) planned activities¹. Attachment B addresses the development of both the CAISO and market participant readiness criteria. The information contained in Attachment B reflects the current status of the CAISO's MRTU Readiness Program.²

Highlights related to MRTU implementation identified in Attachment A include: **(1) Integration Interfaces** – all Coordinated Release (CR)3b designs and upgrades finalized, completed build and release of the Automated Load Forecasting System (ALFS), Market Quality System (MQS) and Post Transaction Repository (PTR) retrieve services, and updated the MQS Mitigated Bid schema; **(2) Settlements and Market Clearing (SaMC) Systems** – completed build and unit tests of Integrated Market Simulation components, completed Site Acceptance Testing (SAT) for Release 4b, and Release 4b ready for Functional Integration Testing (FIT); **(3) Full Network Model and State Estimator** – completed validation of database 13 model and started preparation for the database 14 model; **(4) Integrated Forward Markets** – continued CR3b Factory Acceptance Testing (FAT); **(5) Market Quality Systems** – completed version 1.1 SAT and version 2.0 Design review; **(6) Legacy** – continued OASIS and Compliance Application Program System (CAPS) SAT and continued Automated

¹ The Market Redesign and Technology Upgrade Program is comprised of seven major system projects – (1) Integrated Forward Markets/Real-Time Market/Full Network Model (“IFM/RTM/FNM”), (2) Scheduling Infrastructure Business Rules (“SIBR”), (3) Congestion Revenue Rights (“CRR”), (4) Settlements and Market Clearing (“SaMC”), (5) Legacy Systems, (6) Master File Redesign (“MFRD”) and (7) Post Transaction Repository (“PTR”).

² Documents relating to the CAISO's MRTU implementation and readiness activities, including the MRTU Readiness Criteria Dashboard posted on January 31, 2007, can be found at the following link: <http://www.caiso.com/docs/2005/06/21/2005062113583824742.html>.

Dispatching System (ADS) testing; and **(7) Testing** – mitigated and configured end points in IFM/RTN and SIBR, MQS successfully tested CR3b data retrieval scripts, and submitted Real-Time Bids.

Highlights on status of readiness activities included in Attachment B: **(1) MRTU Working Groups** – continue to support Participant Readiness Advisory Group, MRTU Implementation Workshops, SaMC User Group and Systems Interface User Group; **(2) Market Participant Assessments** – (a) 86% of participants completed initial assessments for readiness along People, Process and Technology dimensions, and received customized Action Plans, (b) 15 participants received standardized Action Plans, and (c) all participants received their Action Plan; **(3) Market Participant Training** – completed nine Level 200 training sessions for participants with a high level of participation (averaged five individuals representing entire population of Scheduling Coordinators (80)); and **(4) MRTU Training for CAISO Staff** – 65% of CAISO Staff have completed Level 200 training; and 35% of CAISO Staff have completed Level 300 training.

Dated: March 30, 2007

Respectfully submitted,



Sidney Mannheim Davies

Counsel for the California Independent
System Operator Corporation

ATTACHMENT A

Attachment A - FERC Status Report – April 2007

Market Redesign and Technology Upgrade FERC Update

April 2007

MRTU Executive Summary

MRTU Schedule	
Current Period	Trend
	
<p>Tracking Delay: 0 weeks Critical Path Items: Vendor Delivery, Integration Testing <i>*Based on approved 2/1/08 Trade Date Go-Live date</i></p>	

MRTU Budget	
Current Period	Trend
	
<p>Approved MRTU budget: \$189.223 M* <i>*Based on approved budget on 12/06</i></p>	

- System development activities nearing completion, with exception of FERC related changes and some IFM/RTN and Legacy components.
- Project remains challenged with vendor delivery of applications. Mitigation plans are under development to accommodate expected delays and to avoid impacts to Go-Live.
- Factory Acceptance, Site Acceptance, and Integration Testing are ongoing for different components, in preparation for upcoming Integrated Market Simulation.
- Market Simulation Phase 2 successfully completed 3/23; environment to remain open for unstructured testing until 4/20.
- Integrated Market Simulation to begin 4/30 with 5 phased releases over the next 6 months, each phase to introduce new functionality.

- CAISO working with key vendors to negotiate remaining work and costs.
- Finalizing remaining change requests for FERC and remaining components.
- Revising Project work plans to align to new Integrated Market Simulation approach.
- Currently analyzing impact of vendor delays on MRTU budget. Delays expected to be absorbed by existing approved budget.

	 Delay, but will not impact 2/1/08 Trade Date Go Live.
	 Delay, will impact 2/1/08 Trade Date Go Live. Use of contingency funds.

	Variance less than +2 %		Situation has improved since last reporting period.
	Variance between +2 % and +6 %		No change since last reporting period.
	Variance over +6 %		Situation has deteriorated since last reporting period.

MRTU Executive Overview

- Market Simulation Phase 2: Enhanced Rules/Connectivity & Inter-SC Trades was successfully completed on 3/23, and the environment will remain open until 4/30 to allow for continued unstructured testing by Market Participants.
- Revised Market Simulation schedule to begin on 4/30, with 5 releases over 6 months versus 2 releases over a 4 month period. This Integrated Market Simulation will include structured, semi-structured and unstructured testing.
- Integration of the various systems is continuing with the Testing Team passed 119 of 153 (78%) Technical Functional Integration Tests, completed OASIS Application Integration Testing and submitted Real-Time Bids in the test environment.



Program Area	Design	Build	Test	Integration Test	End-End Test	Market Simulation	Deployment
Phase 1A							
Phase 1B							
Market Systems							
Real-Time Market							
Integrated Forward Mkt							
Hour-Ahead Processor							
Residual Unit Com.							
Scheduling							
Policy Must-Haves							
FERC Changes – Market Systems							
Settlements							
Base Product							
Charge Types							
Congestion Revenue Rights							
FERC Changes – Settlements/CRRs							
Legacy							
Automated Dispatch System (ADS)							
Reference Level Calculator (RLC)							
Scheduling and Logging System (SLIC)							
Compliance Automation Production System (CAPS)							
Existing Transmission Contract Coordination (ETCC)							
Operational Meter Analysis and Reporting (OMAR)							
Open Access Same-Time Information System (OASIS)							
Reliability-Must-Run Application Validation Engine (RAVE)							
Other Applications							
Market Quality System							
PTR							
Portal							
MFRD							
FERC Changes – Legacy/Other Applications							

Preliminary application-specific testing conducted

Legend	
Phase not started	
Phase in progress	
Phase complete	

Supporting Activities

Program Area	Planning	Development	Execution
Internal Readiness			
External Readiness			
Training			
Business Processes (Phase 1)			
BPMS			

Integration (Interfaces)

- All CR3b Designs and upgrades complete
- Completed Build & Release of ALFS, MQS and PTR retrieves services
- Updated MQS Mitigated Bid schema and various IS Documents

SaMC

- Completed build & unit tests of components required for the first releases of Integrated Market Simulation
- Completed Site Acceptance Testing (SAT) for Release 4b
- Release 4b ready for Functional Integration Testing (FIT)

Full Network Model and State Estimator

- Completed validation of DB13 model and began preparation for DB14 model

Integrated Forward Markets/Real-Time Nodal

- Continued CR3b Factory Acceptance Test (FAT)
- Begin CR3c pre-FAT

Scheduling Infrastructure and Business Rules (SIBR)

- CR3b SAT completed

Market Quality Systems

- Completed v1.1 SAT and v2.0 Design Review

Legacy

- Continued OASIS and CAPS SAT
- Continued ADS testing, CR3b SAT Changes targeted for 4/2

Testing

- Migrated and configured end points in IFM/RTN, SIBR CR3b systems in AIT environment
- MQS successfully tested CR3b data retrieval scripts
- Submitted Real Time Bids; continued RLC Payload

Planned Activities

Integration (Interfaces)

- Complete FERC Design 3/30
- Finalize FERC updates; initiate IS Document updates for FERC release
- Test and release Cim-Parser changes; support CR3b FIT activities

SaMC

- Market Clearing Functional Acceptance Testing (FAT) to begin 4/20
- Update Requirements based on Post 4b Release changes
- Finalize remaining Charge Codes Requirements, Design Guides and Build

Congestion Revenue Rights

- File FERC Dry Run Report (3/30)
- Continue to share Dry Run results with Market Participants
- Complete defect free version of N/A Tool by End of March

Integrated Forward Markets/Real-Time Nodal

- Exit MS3 SAT Priority 1 and Full Test (3/30)
- Complete CR3b FAT and CR4 Design (3/30)
- Begin CR4 Design and CR3c FAT (4/2)
- MasterFile integration with IFM/RTN and SIBR

Market Quality Systems

- Continue Integration testing in Folsom: Validation of CR3b services, and new SAT Build and AIT/FIT Build with variance fixes
- Complete development of v2.0 schedule and final cost negotiations

Legacy

- Complete RAVE Integration Logic and begin SAT execution

Testing

- Continue Technical FIT; MasterFile FIT
- Functionality and Interfaces completion for various SAT applications
- Continue AIT/FIT; introduce various interfaces to FIT

Market Simulation

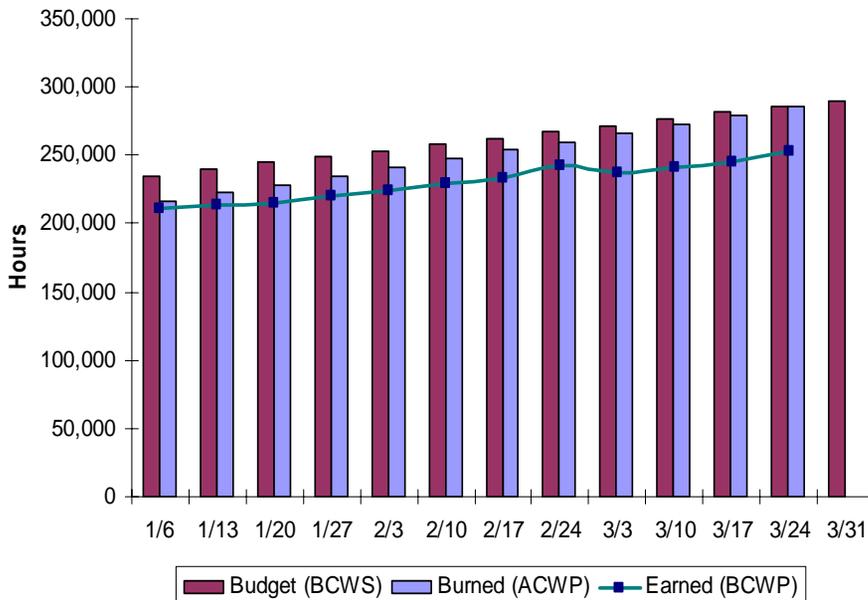
MRTU High-Level Milestone Description

The following are descriptions for some of the milestones indicated on the MRTU High-Level Timeline;

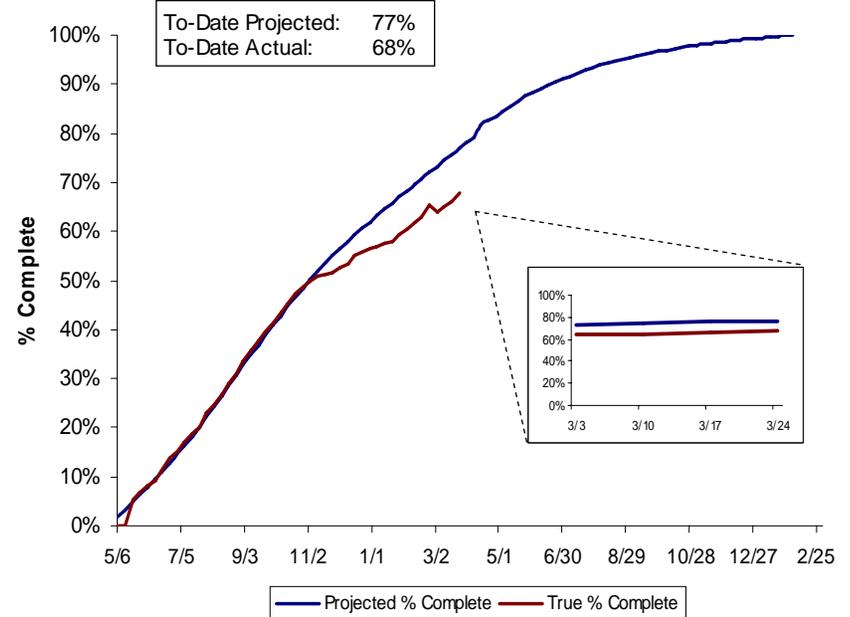
- **Functional Requirements Completion – January 31, 2007**
Allows system development design activities to begin, with the exception of three MRTU projects: SaMC, SIBR, and IFM/RTN. Design activities will start for SIBR and IFM/RTN during the first week of April.
- **CRR Dry-Run Filing – March 30, 2007**
CAISO filing to FERC of the report for the Dry-Run results for Annual and Monthly auctions and allocations.
- **Market Simulation Documents – Technical Interface documents for Market Simulations released specifying interface details required for participants to access CAISO Systems and participate in the simulation. Separate releases for Market Simulation Phases. Documents for the next Market Simulation were posted between March 1, 2007 and March 17, 2007.**

Program Key Metrics

Cumulative EV – Entire MRTU
(Budget vs. Actual vs. Earned)



Cumulative EV – Entire MRTU
(Projected % Complete vs. Actual % Complete)



Included in Graph: BPM, Business Process, SIBR, Training, FNM/SE, IFM, MQS, CRR, MFRD, SaMC, Portal, Testing, Integration, CMRI, PMO, Legacy, CAS, Readiness, and Technical Architecture.

Not Included in Graph: n/a

California Independent System Operator
Summary of Expected Completion Costs vs. December, 2006 Budget
February 28, 2007
(In Thousands) *

Project	Re-baselined Project Costs Dec. 2006 (a)**	Actual Costs Through 2006 (b)	Paid Invoices To Date 2/28/07 (c)	Estimated Costs to Complete (d)	Cost of Project at Completion (e)=(c+d)	Increase (Decrease) from Baseline (f)=(e-a)
Market Redesign						
	\$ 64,807	\$ 49,990	\$ 50,422	\$ 14,385	\$ 64,807	\$ -
1 Automatic Mitigation Procedures/Phase 1A	773	773	773	0	773	0
2 Real Time Markets/Phase 1B	16,297	16,297	16,297	0	16,297	0
3 Integrated Forward Markets/Real -Time Market (IFM/RTM)	33,372	23,673	23,941	9,431	33,372	0
4 Congestion Revenue Rights (CRR)	4,516	3,986	4,049	467	4,516	0
4A Market Quality System (MQS)	6,261	2,315	2,416	3,845	6,261	0
11A Hardware & Software Purchases	3,588	2,947	2,947	642	3,588	0
Technology Upgrade						
	\$ 74,179	\$ 61,020	\$ 62,798	\$ 11,381	\$ 74,179	\$ -
5 Scheduling Infrastructure Business Rules (SIBR)	13,323	9,727	9,733	3,590	13,323	0
6 Settlements and Market Clearing (SaMC)	18,030	16,170	16,429	1,600	18,030	0
6 Master File (MFRD)	2,300	2,291	2,303	(3)	2,300	0
9 Post Transactional Repository (PTR)	2,461	2,236	2,318	144	2,461	0
10 Legacy Systems	7,785	6,379	6,493	1,292	7,785	0
10A State Estimator/Full Network Model	1,345	1,040	1,077	269	1,345	0
11 Technology Infrastructure/ Portal	2,065	2,050	2,051	14	2,065	0
11B Hardware & Software Purchases	6,923	5,197	5,822	1,101	6,923	0
12A System Integration/Enterprise Architecture	17,989	15,540	16,065	1,924	17,989	0
12B Technology Architecture	1,957	389	507	1,450	1,957	0
Common Projects ***						
	\$ 41,214	\$ 25,738	\$ 27,487	\$ 13,727	\$ 41,214	\$ -
13 Training/Readiness Projects	9,709	6,975	7,586	2,123	9,709	0
14A Project Management	17,666	11,907	12,250	5,416	17,666	0
14B Testing	13,840	6,856	7,652	6,188	13,840	0
Ongoing Scope Adjustments						
	\$ 1,523	\$ -	\$ -	\$ 1,523	\$ 1,523	\$ (1)
Pending MRTU Scope Changes	1,523	0	0	1,523	1,523	(1)
Contingency						
	\$ 7,500	\$ -	\$ -	\$ 7,500	\$ 7,500	\$ -
15 Program Contingency	7,500	0	0	7,500	7,500	0
Total MRTU Project	\$ 189,223	\$ 136,748	\$ 140,708	\$ 48,515	\$ 189,222	\$ (1)

* Columns and rows may not total due to rounding.

** Budgets include: Consultant Labor, Vendor Costs, Travel & Meals Expenses, Training, Hardware, Software, Maintenance, Employee Backfill costs

*** Common Projects Allocation: 47.9% to Market Redesign; 52.1% to Technology Upgrade

ATTACHMENT B

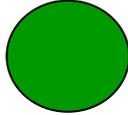
Attachment B - FERC Status Report – April 2007

MRTU Readiness Program Summary

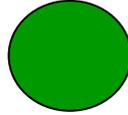
FERC Update

April 1, 2007

MRTU Executive Summary

MRTU Readiness Schedule	
Current Period	Trend
	

- Internal training continues to be conducted.
- CAISO internal readiness has completed the 'Analysis' phase assessment across all the core Business Units with milestones met and deliverables accomplished.
- Nine key end-to-end business process sessions have been completed with representation across Business Units.
- Readiness Criteria representing a roll-up of all readiness categories indicating readiness for Participants and CAISO continue to be tracked and reported monthly.
- Completed the majority of action plans from readiness assessment results and provided to Market Participants.
- Planning has begun for Follow-up Market Participant Assessments.
- Planning has begun for 60 Day Certification and Go Live Process.

MRTU Readiness Budget	
Current Period	Trend
	

- Training and Readiness activities remain under budget.
- CAISO staff supporting internal business unit readiness have been working regularly to provide readiness update information for all key areas.
- Reviewing Market Participant Readiness timeline of activities to align with Market Simulation.

	Complete		No Delays
	Delay, but will not impact 11/07 go-live date. Contingency maintained, but at risk.		
	Delay, will impact program delivery and 11/07 Go-live date. Use of contingency funds.		

MRTU Readiness Program Executive Summary

The MRTU Readiness program focuses on a set of activities to ensure that the people, processes, and technologies for both CAISO and the Participants are ready for the implementation of the MRTU program in February 08. The MRTU Readiness Program continues to make progress in the following areas:

- Conducting weekly progress reporting and tracking for Internal Readiness with all key Business Units
- Approximately 65% of CAISO staff have completed Level 200 Training
- Approximately 35% of CAISO staff have completed Level 300 Training which is still being developed and in progress
- Assessed second readiness milestone for all core Business Units
- Implemented Process Walkthrough sessions that engage Business Units across CAISO to confirm accountabilities and interactions for end to end processes that will be impacted by MRTU
- Completed 86% (64 out of 74) Participant initial assessments for readiness along People, Process and Technology dimensions
- Completed 99% (78 out of 79) of Participant action plans on assessment results (including 5 new Participants since initial assessment)
- Conducted ongoing Market Participant Meetings such as PRAG, Implementation Workshop and Technical Workshops
- Completed 9 Level 200 Training Sessions for Participants (August 06 to February 07)
 - A total of 457 individuals attended
 - A total of 86 Market Participants were represented
 - This represents an average of 5 individuals representing the entire population of Scheduling Coordinators (80) demonstrating a very high participation in the Market Participant training

Participant Assessment Action Plan Status

The Readiness Team is concluding the final steps related to establishing a baseline assessment for all Participants that involved On Site, Assisted and Self Assessment approaches for collecting information on People, Process and Technology related to MRTU readiness. The following is a summary of the results:

- 86% of Participants (64 out of 74) completed assessments and received a customized Action Plan
 - Total Participants number does not include the 5 new SCs that will receive Generic Action Plans
 - Includes the Participants that meet significant CAISO demand requirements
- 100% of Participants (79 out of 79) have now been contacted by receipt of an Action Plan
- 15 Participants received a standardized Action Plans
 - 5 new SCs
 - 2 declined participation in Initial Assessment
 - 8 did not complete an assessment
- All Participants received their Action Plan.

Internal Readiness Assessment Summary for Core Business Units

At the completion of the Analysis Phase, Business Units were measured against criteria and assessed on deliverables to determine if they had acquired the necessary data required to build out To-Be processes and conduct gap and impact analyses.

The following are key accomplishments that occurred during the Analysis phase:

Communication	All core Business Units have a plan in place and have begun communicating Readiness activities to their direct reports and their employees on a consistent basis.
Process	All core Business Units have completed their first draft of key processes. Cross Business Unit walkthroughs have been completed for: FNM, DAM, RTM, Transmission, Outage, After the Fact (MQS), Settlements, and Issue Management.
Organization	Employees continue to receive Level 100, 200, and 300 MRTU Training. 60% of CAISO employees that have MRTU Training as a 'mandatory' requirement, have completed the training.
Application	End-to-End 1, even though it was not an integrated end to end test, it did allow selected employees to begin accessing the new systems and through testing identify potential issues.
Facilities	All core Business Units have contacted facilities to begin planning any identified changes to their department facility layouts.

Next Steps

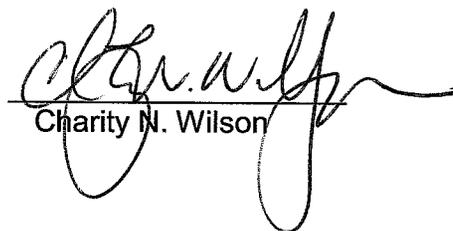
The following list summarizes the remaining activities to be completed:

- Continue to work with CAISO's Internal Business Owners to develop detailed readiness status, deliverables, and actions to prepare for the next major readiness milestone (Design Phase)
- Continue with remaining Business Unit Business Process Walkthroughs
- Complete Analysis Phase Assessment for non-core (e.g Group B) Business Units by 03/31/07
- Determine timeline and assessment criteria for follow-up Participant assessments to align with Market Simulation
- Continue tracking all readiness activities using established Readiness Criteria for March report
- Continue to plan 60 Day Certification Requirements and define more detailed plan

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 30th day of March 2007.


Charity N. Wilson