



California Independent  
System Operator Corporation

August 3, 2007

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 Ms. Bose:

Enclosed for filing in the above-captioned docket, please find an electronic copy of the August 2007 Status Report of the California Independent System Operator Corporation.

Respectfully submitted,

**/s/ Sidney Mannheim Davies**

Sidney Mannheim Davies  
The California Independent System  
Operator Corporation  
151 Blue Ravine Road  
Folsom, CA 95630

Attorneys for the California Independent  
System Operator Corporation



each element; (3) progress report; (4) accomplishments/milestones; and (5) planned activities<sup>1</sup>. 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.<sup>2</sup>

Highlights related to MRTU implementation identified in Attachment A include: **(1) Integration Interfaces** – provided support for Integrated Market Simulation (IMS) Release 2 in staging environment and IMS Releases 3 and 4 in Functional Integration Testing (FIT) environment and Load & Performance testing; **(2) Settlements and Market Clearing (SaMC) Systems** – (a) released Phase 1 configuration version 1.0 for IMS Release 3 and 4, and (b) began Phase 2 configuration testing; **(3) Integrated Forward Markets/Real-Time Nodal** – (a) IFM Coordinated Release (CR)3B / CR4 Factory Acceptance Testing: continued ETC/TOR testing and began testing Market Power Mitigation changes, (b) reviewed operator display requests related to Real-Time, and (c) CR 3B executed continuous runs of Real-Time in the FIT at the Folsom facility; **(4) SIBR** – completed CR4 Site Acceptance Testing (SAT); **(5) Market Quality Systems** – (a) completed version 2.0 FAT; (b) began version 2.0 SAT; and (c) began full FIT testing with IFM/RTM using version 1.1; **(6) Congestion Revenue Rights** –

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<sup>1</sup> 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”).

<sup>2</sup> 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.aiso.com/docs/2005/06/21/2005062113583824742.html>.

released Database 18 to participants and completed data collections with participants for the CRR Auction and Allocation; **(7) Master File Redesign** – completed Master File Database 18 updates and creation of Master File CSV; **(8) MDS** – obtained internal signoff on Portal design; **(9) Testing** – (a) IMS Release 3 and 4 continuously ran in Real-Time, (b) began Market Quality System (MQS) payload generation and broadcast to downstream systems, and (c) began analyzing Real-Time Market save cases; **(10) Full Network Model/State Estimator** – commenced system build of Database 19 and development of Master File Database 18.

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, and the MRTU Implementation Workshop for July was postponed until August 8<sup>th</sup> due to Market Simulation planning activities; **(2) Market Participant Assessments** – scheduled 73 of 83 first follow-up assessment with Market Participants, with 47 completed; **(3) Market Participant Training** – conducted Session 10 of MRTU Level 200 training for Market Participants and conducted Bid to Bill Training for Market Participants in Houston, hosted by Calpine and Dynegy; and **(4) MRTU Training for CAISO Staff** – 82% of CAISO Staff have completed Level 100, 200 and 300 training, completed five out of seven Phase 2 Process walkthrough sessions across the Business Units, continued to conduct weekly progress reporting and tracking for internal readiness with all key Business Units, and continued to support activities

for completion of the fourth readiness milestone for all core and non-core  
Business Units.

Dated: August 3, 2007

Respectfully submitted,

**/s/ Sidney Mannheim Davies**

Sidney Mannheim Davies

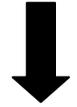
Counsel for the California Independent  
System Operator Corporation

## ATTACHMENT A

Attachment A - FERC Status Report – August 2007

# Market Redesign and Technology Upgrade FERC Update

August 2007

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

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

- Application development completed for majority of MRTU scope, with the exception of some FERC scope. Focus shifting to integration testing.
- Market Applications are running in the Integration test environment. Focus is on stabilizing applications, producing a consistent solution and integrating upstream and downstream systems.
- Integrated Market Simulation (IMS) R2 concluded July 28th.
- MRTU Implementation Workshop will be held on 8/8.
- Options for R3/4 (Fully Integrated Day Ahead and Real-Time functionality) and R5 are being evaluated by PMO.

- PMO continues to process change requests and evaluate against approved budgets.
- PMO is evaluating impacts of April 20th, May 8th, June 25th and July 6th FERC Orders.
- PMO implemented resource changes to Testing team to mitigate schedule delays. Budget impact currently being managed without using Program contingency.

	 Delay, but will not impact 2/1/08 Go-Live Trade date.
	 Delay, will impact 2/1/08 Go-Live Trade date. 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.



- Integrated Market Simulation (IMS) Release 2 completed final evaluation on 7/20. Other IMS activities included: conducted market participant workshops, held briefing and debriefing market participant calls, and published weekly report cards and issues and variance reports. The focus is now on planning for the next Market Simulation while incorporating lessons learned and concerns raised by Market Participants. IMS R3/4 scripts and documents have been developed and are being reviewed, technical interface documents have been posted, and option analysis for future Market Simulation phases is underway.
- The Readiness team conducted and supported several Participant Assessments (69 of 83 complete). The Training team continued working on various CBTs (focus is currently on OASIS and ADS), Internal Bid-to-Bill and Grid Ops Level 400 training development. Several training sessions were held including two Bid-to-Bill sessions in Houston (at Calpine and Dynegy), session 10 of the Level 200 series and a Market LITE Level 300 class in Folsom. The team continues to prepare for the remaining Bid-to-Bill session at WAPA.
- The Testing team has been working to stabilize Market Application with focus on Real-Time Market for R3/4. Integration of downstream systems including SaMC, MQS and Legacy applications and automation testing is underway.

## Accomplishments & Milestones

### Integration (Interfaces)

- Provided support for IMS R2 in staging environment, IMS R3/4 in FIT environment, and Load & Performance testing

### SaMC

- Released P1 configuration version 1.0 for IMS R3/4
- Began P2 configuration testing

### Integrated Forward Markets/Real-Time Nodal

- IFM CR3C/CR4 FAT: Continued ETC/TOR testing, began testing for MPM changes
- Reviewed operator display requests related to RT
- CR3B executed continuous runs of RT/NA in Folsom FIT

### Scheduling Infrastructure and Business Rules (SIBR)

- SIBR completed CR4 SAT and passed QRB

### Market Quality Systems

- Completed v2.0 FAT and passed QRB
- Began v2.0 SAT
- Began full FIT testing with IFM/RTM using v1.1

### Congestion Revenue Rights

- Release DB 18 Model to participants
- Completed data collection with participants for Auction/Allocation

### MFRD

- Completed DB18 MasterFile update and creation of MasterFile CSV

### MDS

- Obtained internal signoff on Portal Design
- Held two Notification design reviews with market participants

### Testing

- IMS R3/4: Continuously ran RT; began MQS payload generation and broadcast to downstream systems; analyzing RTM save cases

### Full Network Model/State Estimator

- Commenced system build of DB19 and development of DB18 MasterFile

## Planned Activities

### Integration (Interfaces)

- Continue various FIT environment upgrades
- Continue upgrade of framework to 1.9.8
- Provide support for IMS R3/4 in FIT and updates for CR403 and CR682 services for R5

### SaMC

- Deliver P2 Charge Type to Integration Test
- Continue updating test cases and data clean up based on updated requirements; continue design and unit testing

### Integrated Forward Markets/Real-Time Nodal

- Continue CR3B FIT/ End to End testing
- CR3C/CR4 FAT: Continue ETC/TOR testing

### Legacy

- Complete QRB for formal exit from SAT of Legacy applications

### Market Quality Systems

- Support v1.1 FIT testing for IMS R3/4
- Continue v2.0 SAT
- Resolve v1.1 performance issue regarding RT data retrieval

### Congestion Revenue Rights

- Release DB18 FNM and TOR/ETC/CVR nominations
- Prepare Data Input Module

### Testing

- Complete MQS payload and DA CMRI testing; test updated SLIC integration services and integrate ALFS with IFM
- Continue RT stabilization for R3/4
- Begin business validation of CMRI and OASIS reports

### Full Network Model/State Estimator

- Place DB19 into EMS production (system build only); continue with DB18 model update testing

## MRTU Program Progress as of July 28th, 2007

Program Area	Design	Build	Test	Integration	End-to-End	Market	Deployment
Phase 1A							
Phase 1B							
<b>Market Systems</b>							
Real-Time Market							
Integrated Forward Market							
Hour-Ahead Processor							
Residual Unit Com.							
Scheduling							
Policy Must-Haves							
FERC Changes - Market Systems							
<b>Settlements</b>							
Base Product							
Charge Types							
Congestion Revenue Rights							
FERC Changes - Settlements/CRRs							
<b>Legacy</b>							
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)							
<b>Other Applications</b>							
Market Quality System							
PTR							
Portal							
MFRD							
FERC Changes - Legacy/Other Applications							

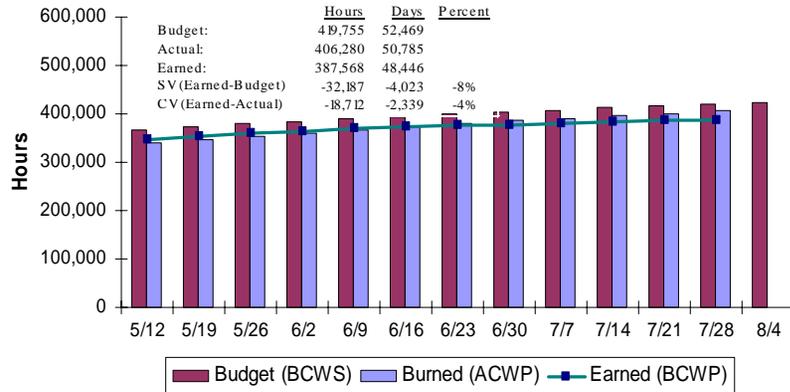
Legend	Supporting Activities
Phase not started	
Phase in progress	
Phase complete	

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





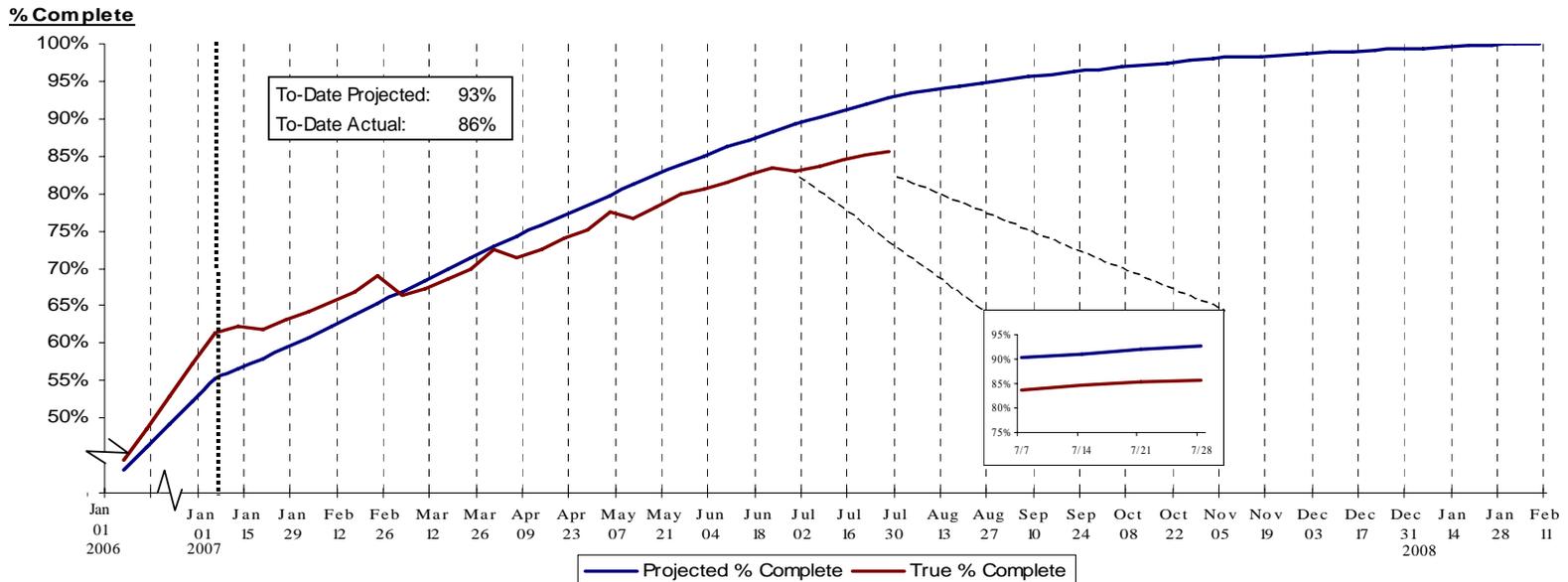
**Cumulative EV – Entire MRTU**  
(Budget vs. Actual vs. Earned)



**Notes/Comments:**

Graph represents the new baseline as of June 2006.  
5/21/07 - Addition of MDS Project

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



Included in Graphs: BPM, Business Process, SIBR, Training, FNM/SE, IFM, MQS, CRR, MDS, MFRD, SaMC, Portal, Testing, Integration, PTR, PMO, Legacy, STING, Readiness, and Technical Architecture.

Not Included in Graphs: n/a

California Independent System Operator  
Summary of Expected Completion Costs vs. December, 2006 Budget  
June 30, 2007  
(In Thousands) \*

Project	Re-baselined Project Costs Dec. 2006 (a)**	Actual Costs Through 2006 (b)	Paid Invoices To Date 6/30/07 (c)	Estimated Costs to Complete (d)	Cost of Project at Completion (e)=(c+d)	Increase (Decrease) from Baseline (f)=(e-a)
<b>Market Redesign</b>						
	\$ 64,807	\$ 49,990	\$ 54,169	\$ 10,637	\$ 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	26,598	6,774	33,372	0
4 Congestion Revenue Rights (CRR)	4,516	3,986	4,206	310	4,516	0
4A Market Quality System (MQS)	6,261	2,315	3,349	2,912	6,261	0
11A Hardware & Software Purchases	3,588	2,947	2,947	642	3,588	0
<b>Technology Upgrade</b>						
	\$ 74,179	\$ 61,020	\$ 67,330	\$ 6,848	\$ 74,179	\$ -
5 Scheduling Infrastructure Business Rules (SIBR)	13,323	9,727	10,361	2,963	13,323	0
6 Settlements and Market Clearing (SaMC)	18,030	16,170	17,207	823	18,030	0
6 Master File (MFRD)	2,300	2,291	2,347	(47)	2,300	0
9 Post Transactional Repository (PTR) - CMRI	2,461	2,236	2,692	(230)	2,461	0
10 Legacy Systems	7,785	6,379	6,984	800	7,785	0
10A State Estimator/Full Network Model	1,345	1,040	1,176	169	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	6,227	697	6,923	0
12A System Integration/Enterprise Architecture	17,989	15,540	17,354	635	17,989	0
12B Technology Architecture	1,957	389	932	1,025	1,957	0
<b>Common Projects ***</b>						
	\$ 41,214	\$ 25,738	\$ 33,584	\$ 7,631	\$ 41,214	\$ -
13 Training/Readiness Projects	9,709	6,975	8,971	738	9,709	0
14A Project Management	17,666	11,907	13,355	4,310	17,666	0
14B Testing	13,840	6,856	11,257	2,582	13,840	0
<b>Ongoing Scope Adjustments</b>						
	\$ 1,523	\$ -	\$ -	\$ 1,523	\$ 1,523	\$ -
Pending MRTU Scope Changes	1,523	0	0	1,523	1,523	0
<b>Contingency</b>						
	\$ 7,500	\$ -	\$ -	\$ 7,500	\$ 7,500	\$ -
15 Program Contingency	7,500	0	0	7,500	7,500	0
<b>Total MRTU Project</b>	<b>\$ 189,223</b>	<b>\$ 136,748</b>	<b>\$ 155,083</b>	<b>\$ 34,140</b>	<b>\$ 189,223</b>	<b>\$ -</b>

\* 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 – August 2007

# **MRTU Readiness Program Summary**

## **FERC Update**

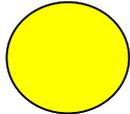
**August 1, 2007**

## MRTU Readiness Program Executive Summary

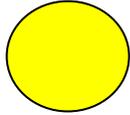
**This summary represents a status of the MRTU Readiness program that focuses on activities to ensure that the people, processes, and technologies for both CAISO and the Participants are ready for the implementation of the MRTU program. For the month of July, the MRTU Readiness Program continued to make progress in the following areas:**

- Continued to conduct weekly progress reporting and tracking for Internal Readiness with all key Business Units.
- Continued to support activities to be completed during the fourth readiness milestone (Build) for all core and non-core Business Units.
- Completed 5 out of 17 Phase 2 Process Walkthrough sessions across Business Units.
- Completed communication of Readiness Survey results to employees and created action plans for bottom 3 to 4 results by department.
- Approximately 82% of CAISO staff have completed Level 100, 200, and 300 MRTU Training.
- Scheduled 73 of 83 1<sup>st</sup> Follow-up assessments with Market Participants. 47 out of the 83 1<sup>st</sup> Follow-up assessments have been completed.
- Continued conducting ongoing Market Participant Meetings such as PRAG and Technical Workshops. Implementation Workshop for July was postponed until August 8<sup>th</sup> due to Market Simulation planning activities.
- Conducted Session 10 of MRTU Level 200 training for Market Participants.
- Conducted Bid to Bill Training for Market Participants in Houston hosted by Calpine and Dynegy.

## MRTU Readiness Overview

Internal Readiness	
Current Period	Trend
	

- Due to delays in Testing and Market Simulation activities, Internal Business Units are in jeopardy of not completing their process and procedure tasks within the Build phase of readiness.
- CAISO internal readiness activities for core Business Units continue to be reviewed on a weekly or monthly basis.
- Readiness Criteria was updated at end of June 2007.
- 60 Day Certification process for Milestone 2 is in progress.

External Readiness	
Current Period	Trend
	

- Market Participants continue to express concerns on readiness based on results of Market Simulation Release 2 and the delay of Market Simulation Release 3 and 4.
- Participation in Market Simulation Release 2 remained low. Market Simulation Release 2 ended on 07/20/07.

	Complete		No Delays
	Delay, but will not impact 02/08 go-live date. Contingency maintained, but at risk.		
	Delay, will impact program delivery and 02/08 Go-live date. Use of contingency funds.		

## MRTU Participant Readiness

Based on feedback from Participants and information resulting from Market Simulation Release 2, the following represents some of the key risks and mitigations that represent the Participants current MRTU Readiness level (yellow):

Risk	Mitigation
<ul style="list-style-type: none"> <li>■ Settlement files in Release 2 have not met Participant expectations and requirements for testing</li> </ul>	<ul style="list-style-type: none"> <li>■ Market Simulation Release 2 ended on July 20<sup>th</sup> with 2 High+ issues in the area of Settlements that are still outstanding. It was decided that it was a better use of time to develop these fixes in R3/4 than to prolong the simulation and incorporate these fixes in R2.</li> <li>■ The Market Simulation R3/4 planning session scheduled for 7/19 was postponed. CAISO is currently evaluating several options for the future Market Simulation schedule and activities.</li> </ul>
<ul style="list-style-type: none"> <li>■ All specific activities described as being in-scope for Release 2 were not available</li> </ul>	
<ul style="list-style-type: none"> <li>■ Market Simulation Release 2 concluded on July 20<sup>th</sup> without achieving simulation success relevant to the Market Simulation objectives</li> </ul>	<ul style="list-style-type: none"> <li>■ CAISO continues to work to get issues resolved and to be prepared so that Market Participants can use the software as soon as possible in the next Market Simulation.</li> <li>■ CAISO will clarify what is in the simulation and what is not in the simulation.</li> </ul>

## Internal Readiness Update

At the completion of the Design Phase, Business Units were assessed against criteria and deliverables outlining how the progress of their future processes, accountabilities and organization transition plans. The following represents risks identified and status update on mitigation steps being taken:

Risk	Mitigation Update
<ul style="list-style-type: none"> <li>Testing delays are impacting readiness work plans for Business Units.</li> </ul>	<ul style="list-style-type: none"> <li>Business Units continue to participate in testing activities and exploring ways outside of testing to gain the knowledge needed to support their knowledge transfer process.</li> </ul>
<ul style="list-style-type: none"> <li>Business Units do not have a clear understanding of testing and market simulation</li> </ul>	<ul style="list-style-type: none"> <li>Readiness Team is supporting the End to End Team by identifying the Business Owners, IT Owners and resources assigned to support End to End Testing phases. The End to End Testing Team will meet with these Business and IT Owners to develop a resource schedule and communicate the approach for Business sign-off of processes. The first End to End phase is scheduled to begin in August.</li> </ul>
<ul style="list-style-type: none"> <li>Business Units are managing multiple projects in addition to MRTU leading to some situations of resource constraints on MRTU.</li> </ul>	<ul style="list-style-type: none"> <li>Business Unit's are continuing to review their projects and re-prioritize resources to focus on MRTU</li> </ul>
<ul style="list-style-type: none"> <li>Business Units need more focus on confirming data and reporting requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Two initiatives are in progress: 1) Enterprise Data Repository Project to provide a means to store the data and ability to create internal adhoc queries; and 2) IT Reporting Project to understand reporting requirements and create internal reports for business users.</li> </ul>

## Next Steps

**The following list summarizes the remaining activities to be completed:**

- Continue to work with CAISO's Internal Business Owners to receive status on Readiness activities and deliverables to prepare for the next major readiness milestone (Build Phase).
- Continue to work with Internal Business Units on Readiness mitigation strategies towards the Build phase
- Continue Phase 2 Process Walkthrough sessions for remaining 12 of the 17 business processes across impacted Business Units.
- Complete the last internal MRTU Level 200 training session for mandatory attendees
- Continue conducting the 1st follow-up Assessment with Market Participants
- Continue tracking all readiness activities using updated Readiness Criteria for August report
- Complete one remaining MRTU Market Participant Bid to Bill session hosted by WAPA the last week of August
- Begin creating additional Settlements training materials to deliver in multiple workshops to the Market Participants
- Continue gathering documentation for 2<sup>nd</sup> 60 Day Certification Status Milestone targeted for 10/01/07

## 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 3<sup>rd</sup> day of August 2007.

*/s/ Charity N. Wilson*  
Charity N. Wilson