

July 2, 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 July 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

# UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

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

# JULY 2007 STATUS REPORT OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

The California Independent System Operator Corporation ("CAISO") respectfully submits this monthly progress report ("Report") 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-referenced 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 CAISO's MRTU readiness program. The CAISO will continue to file this monthly report on the first Monday of the month through the implementation of MRTU, currently slated for January 31, 2008 following the California Board of Governors' December 19, 2006 decision to extend the implementation date.

The monthly report contains two attachments: Attachment A includes the following elements as previously provided: (1) detailed timeline with the sequential and concurrent nature of the design elements; (2) cost estimates for

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 – completed CIM parser design optimization effort, released to Functional Integration Testing (FIT) and continued build for various defects, and provided support for Integrated Market Simulation (IMS) Release 2 in staging environment, IMS Releases 3 and 4 in FIT environment and Load & Performance testing; (2) Settlements and Market Clearing (SaMC) Systems – tested Period 1A process, completed negative testing for cancellation and RMR invoice import and cancellation, completed Release 5 charge code design guides; (3) Integrated Forward Markets/Real-Time Nodal – IFM Coordinated Release (CR)3b / CR4 Factory Acceptance Testing: continued ETC/TOR testing, and successfully ran CR3b FIT in Folsom environment; (4) SIBR – CR4 Site Acceptance Testing (SAT) completion on track for July 6; (5) Market Quality Systems – began FAT with v2.0, and created first Expected Energy (EE) and Allocation payloads from IFM/RTM save cases; (6) Congestion

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").

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: <a href="http://www.caiso.com/docs/2005/06/21/2005062113583824742.html">http://www.caiso.com/docs/2005/06/21/2005062113583824742.html</a>.

Revenue Rights – completed FAT at Nexant for FERC Release 1 functionality, completed SAT in Folsom for FERC Release 1 functionality, and finalized FERC Release 2 requirements for 2009; (7) Testing – Integration Testing team conducted Integrated Market Simulation Release 2 Day-Ahead execution, and for IMS Release 3: prepared FIT environment for Real-Time and Day-Ahead runs for integration with Real-Time, and started running RTM continuously in FIT environment.

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 – began first followup assessment for Market Participants by communicating timeline and providing
an assessment workbook to be filled out prior to the assessment; (3) Market
Participant Training – conducted Bid to Bill Training for Market Participants onsite and off-site sessions hosted by Market Participants including Southern
California Edison and Morgan Stanley; and (4) MRTU Training for CAISO Staff
– 78% of CAISO Staff have completed Level 100, 200 and 300 training; and
conducted an Open House for CAISO employees to provide an opportunity to
view the new applications and learn more on Readiness and Training activities.

Dated: July 2, 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 - July 2007

# Market Redesign and Technology Upgrade FERC Update

July 2007

# MRTU Executive Summary

California Independent System Operator Corporation

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

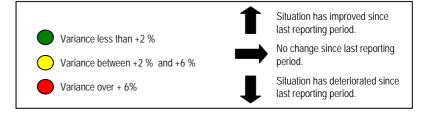
•	Application development completed	for majority of MRTU scope, with
	the exception of some FERC scope.	Focus shifting to integration
	testing.	

- Integration testing of Real-Time engine underway; focus on Real-Time runs and downstream systems;
- Operating automatically with Real-Time constraints was proven successful at the factory and in Folsom with improved Day-Ahead information
- IMS R2 preliminary evaluation on 7/6 and R2 final evaluation/target end date extended to 7/20 based on Market Participant feedback; R2 report cards to be published on 6/25, 7/2, 7/9 and 7/16.

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

- PMO continues to process change requests and evaluate against approved budgets.
- PMO evaluating April 20<sup>th</sup>, May 8<sup>th</sup> FERC Orders and June 25<sup>th</sup> FERC Compliance Order.
- PMO implemented resource changes to Testing team to mitigate schedule delays. Budget impact currently being managed without Program contingency.





## External Readiness:

- ✓ Distributed all action plans from initial Stakeholder assessment
- ✓ Posted the first follow-up Participant Assessment workbook
- ✓ Begun conducting the first follow-up Stakeholder Assessments

## Internal Readiness:

- ✓ Facilitated phase 2 internal process walkthrough kickoff meetings with Human Resources and Treasurer's Office
- ✓ Completed revisions to Internal Readiness Criteria Dashboard and finalized internal assessment results
- ✓ Began first of three Internal Readiness Certification Milestone checkpoints.

# Training team:

- ✓ Continued working on OASIS and No-Pay/UDP CBTs,
- ✓ Continued Grid Ops training development
- ✓ Completed Bid-to-Bill sessions in San Gabriel, Folsom and New York and continued registration for final Bid-to-Bill sessions



# **Integrated Market Simulation (IMS) Status**

- Release 2 beginning on 5/29, conducted market participant workshops, held briefing and debriefing market participant calls, and published weekly report cards, and issues and variance reports.
- IMS R2 participation is less than IMS R1 in terms of bid submissions and participation in retrieving IMS R2 settlement statements, which has been declining over the simulation. CAISO working on resolution of outstanding issues.
- IMS R3/4 planning stakeholder meeting was on 6/28. Stakeholders requested a re-evaluation of the market simulation timeline given the lessons learned to date.



# **CRR Production Readiness**

- 66 entities have been registered, executed CRR agreements and became Candidate CRR Holders ready to start CRR allocation/auction
- TRTC Instructions Overdue still working with some Participating TOs for data
  - CAISO will use data received so far in TRTC Instructions as well as all other available data, including the CRR Dry Run data for: 1) Modeling of ETCs, TORs and CVRs; 2) Adjustments to Load Metrics; and 3) Intertie set aside
- 7/24: Close Load Submittal Market
- 8/1: Close Tier 1 Annual CRR Nominations
- 8/6: Post results from Tier 1 Annual Allocation



# **Accomplishments & Milestones**

#### Integration (Interfaces)

- Completed Cimparser design optimization effort and released to Functional Integration Testing (FIT)
- Continued build for various defects
- Provided support for IMS R2 in staging environment, IMS R3/4 in FIT environment, and Load & Performance testing

#### **SaMC**

- Tested Period 1A process
- Completed negative testing for cancellation and RMR invoice import and cancellation
- Completed R5 charge code design guides

#### **Integrated Forward Markets/Real-Time Nodal**

- IFM CR3C / CR4 FAT: Continued ETC/TOR testing
- Ran CR3B FIT successfully in Folsom environment

#### Scheduling Infrastructure and Business Rules (SIBR)

SIBR CR4 SAT completion on track for 7/6

#### **Market Quality Systems**

- Began Factory Acceptance Testing (FAT) with v2.0
- Created first Expected Energy (EE) and Allocation payloads from IFM/RTM save cases

#### **Congestion Revenue Rights**

- Completed FAT at Nexant for FERC Release 1 functionality
- Completed SAT in Folsom for FERC Release 1 functionality
- Finalized FERC Release 2 requirements for 2009

#### **Testing**

- Integration Testing team conducted IMS R2 Day-Ahead execution
- IMS R3: Prepared FIT environment for Real-Time and Day-Ahead runs for integration with Real-Time; started running RTM continuously in FIT environment

### **Planned Activities**

#### **Integration (Interfaces)**

- Continue build of SaMC services
- Upgrade framework to 1.9.8
- Continue various FIT environment upgrades
- Analyze and fix duplicate payload issue

#### **Integrated Forward Markets/Real-Time Nodal**

- CR3B FIT to merge Real-Time (RT) with NA
- CR3C / CR4 FAT: Continue ETC/TOR testing; review operator display requests related to FNM

#### Legacy

Request approval to exit CAPS and OASIS SAT

#### **Market Quality Systems**

- Complete FAT and begin SAT
- Support FIT testing for v1.1 FIT for IMS R3/4

#### **Congestion Revenue Rights**

- Continue working with participants to confirm verified source amounts and upload historical load data into CRR system
- MUI load data and nomination upload preparation

#### **Testing**

- Integration Testing team to perform IMS R3 FIT test execution with integrated RT runs
- Support IMS R2 Day Ahead activities; continue IMS R3 test data preparation

#### Market Simulation

- R2 preliminary evaluation on 7/13 and R2 final evaluation/target end date on 7/20; R2 report cards to be published on 6/25, 7/2, 7/9, and 7/16
- Develop IMS R3/4 scripts and documents; post technical interface documents
- The target start date for R3/4 is no longer 7/23; the structure and schedule of IMS-R3/4 is being evaluated based on Market Participant feedback and updates will be provided on 7/2 and 7/9.

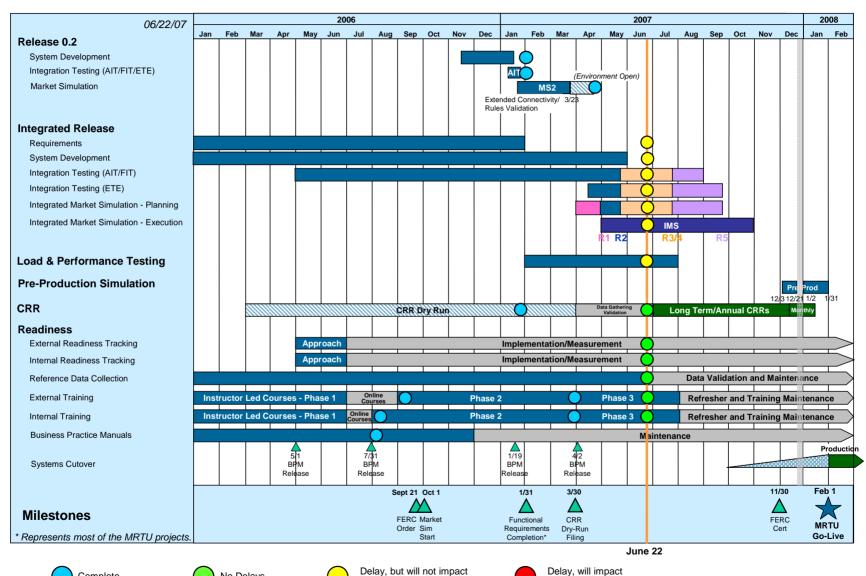


# MRTU Program Progress as of June 26th, 2007

Program Area	Design	Build	Test	Integration Test	End-to-End Test	Market Simulation	Deployment	
Phase 1A	Design	Bulla	rest	Test	Test	Simulation	Deployment	
Phase 1B								
Market Systems								
Real-Time Market								
Integrated Forward Market								
Hour-Ahead Processor								
Residual Unit Com.								
Scheduling								
Policy Must-Haves								
FERC Changes - Market Systems								
Settlements								
Base Product								
Charge Types								
Congestion Revenue Rights								Preliminary
FERC Changes - Settlements/CRRs								application -
Legacy								specific testing
Automated Dispatch System (ADS)								1 -
Reference Level Calculator (RLC)								conducted
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								
Legend		Supporting	Progra	am Area	Planning	Development	Execution	
Phase not started			Internal Readi					
Phase in progress			External Read					
Phase complete		i.	Training					
·				esses (Phase 1)				
			BPMs	, , ,				



# **MRTU High-Level Timeline**



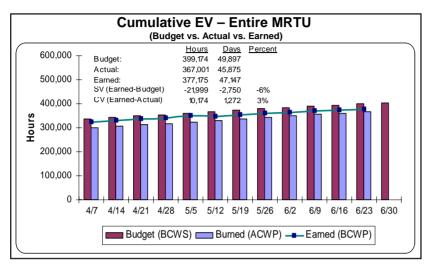
02/01/08 Go Live Date

02/01/08 Go Live Date

No Delays



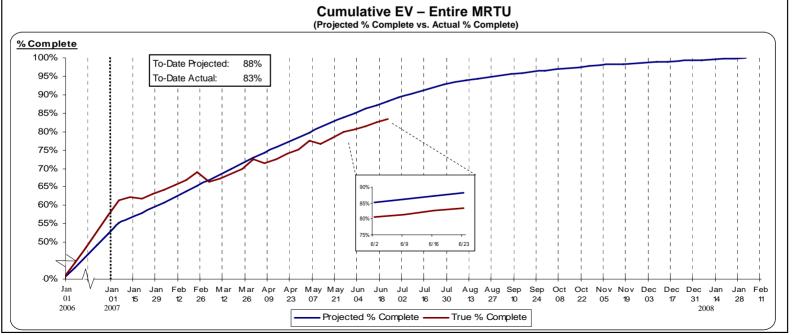
# **Program Key Metrics**



# Notes/Comments:

Graph represents the new baseline as of June 2006.

Addition of MDS project starting 52107.





## **MRTU Financials**

California Independent System Operator Summary of Expected Completion Costs vs. December, 2006 Budget May 31, 2007 (In Thousands) \*

	Project	 e-baselined ect Costs Dec. 2006 (a)**	tual Costs ough 2006 (b)	7	id Invoices To Date 5/31/07 (c)	С	stimated costs to complete (d)	at C	t of Project Completion	(Dec from E	ease ease) aseline (e-a)
	Market Redesign	\$ 64,807	\$ 49,990	\$	53,090	\$	11,717	\$	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		25,980		7,392		33,372		0
4	Congestion Revenue Rights (CRR)	4,516	3,986		4,191		324		4,516		0
4A	Market Quality System (MQS)	6,261	2,315		2,903		3,359		6,261		0
11A	Hardware & Software Purchases	3,588	2,947		2,947		642		3,588		0
	Technology Upgrade	\$ 74,179	\$ 61,020	\$	66,393	\$	7,786	\$	74,179	\$	_
5	Scheduling Infrastructure Business Rules (SIBR)	13,323	9.727		10,258		3,065		13,323		0
6	Settlements and Market Clearing (SaMC)	18,030	16,170		16,994		1,036		18,030		0
6	Master File (MFRD)	2,300	2,291		2,340		(40)		2,300		0
9	Post Transactional Repository (PTR)	2,461	2,236		2,649		(187)		2,461		0
10	Legacy Systems	7,785	6,379		6,870		914		7,785		0
10A	State Estimator/Full Network Model	1,345	1,040		1,159		187		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		6,067		857		6,923		0
12A	System Integration/Enterprise Architecture	17,989	15,540		17,160		829		17,989		0
12B	Technology Architecture	1,957	389		846		1,112		1,957		0
	Common Projects ***	\$ 41,214	\$ 25,738	\$	31,724	\$	9,491	\$	41,214	\$	
13	Training/Readiness Projects	 9,709	6,975		8,635		1,074		9,709		0
14A	Project Management	17,666	11,907		13,057		4,609		17,666		0
14B	Testing	13,840	6,856		10,032		3,808		13,840		0
	Ongoing Scope Adjustments	\$ 1,523	\$ -	\$		\$	1,523	\$	1,523	\$	
		·				-	-		-		
	Pending MRTU Scope Changes	 1,523	0		0		1,523		1,523		0
	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	\$	151,206	\$	38,017	\$	189,223	\$	-

Columns and rows may not total due to rounding.

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

<sup>\*\*\*</sup> Common Projects Allocation: 47.9% to Market Redesign; 52.1% to Technology Upgrade

#### **ATTACHMENT B**



Attachment B - FERC Status Report - July 2007

# MRTU Readiness Program Summary FERC Update

July 1, 2007



# **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:

 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

• Kicked off Phase 2 Process Walkthrough sessions across Business Units for the original 12 processes plus 4 new processes.

 Approximately 78% of CAISO staff have completed Level 100, 200, and 300 MRTU Training

 Conducted an Open House for all CAISO employees to provide an opportunity to view the new applications and learn more on Readiness and Training activities.

 Conducted an Internal Readiness Survey to track the ongoing effectiveness of the communication activities for MRTU progress

 Began the 1<sup>st</sup> Follow-up assessment for Market Participants by communicating timeline and providing an assessment workbook to be filled out prior to the assessment.

 Continued conducting ongoing Market Participant Meetings such as PRAG, Implementation Workshop and Technical Workshops

 Conducted Bid to Bill Training for Market Participants on-site and off-site sessions hosted by Market Participants including Southern California Edison and Morgan Stanley.



#### **MRTU Readiness Overview**

#### **Internal Readiness**

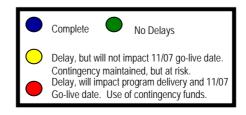
<b>Current Period</b>	Trend

- All Internal Business Units have begun the Build Phase activities of the internal readiness assessment process.
- 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 May 2007.
- 60 Day Certification process for Milestone 1 completion is in progress.

#### **External Readiness**

<b>Current Period</b>	Trend

- Market Participants are expressing concerns on readiness based on lack of ability to see more details such as end-to-end processes and applications available in Market Simulation
- Participants are not demonstrating high participation rates in Market Simulation based on average participation statistics over a 4 week period at an aggregate level.





# **Overall 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> <li>Settlement files to date have not met Participant expectations and requirements for testing</li> </ul>	<ul> <li>CAISO recognizes that the ability for Participants to retrieve and verify settlements data within the published scope of the simulation is currently the most significant issue and risk to Market Simulation</li> </ul>
All specific details and activities outlining the scope of the Market Simulation Release 2 are not available	<ul> <li>Release 2.</li> <li>This issue is actively being addressed so that participants will be able to validate the in-scope charge types on their settlement statements, as well as verify bill determinants in the Configuration Files.</li> <li>CAISO will provide a status update during the June 28 Integrated Market Simulation Release 3 and 4 Planning Session</li> </ul>
•Market Simulation Release 2 has reached the 4 week timeframe without achieving simulation success relevant to product testing and business processes	<ul> <li>Issues being experienced by participants hindering their ability to achieve the bid to bill objective of the simulation has been acknowledged by CAISO as a risk.</li> <li>CAISO will continue to work with participants during he remaining weeks of Release 2 to identify issues that pose the highest risk to simulation and will develop a detailed action to mitigate those risks</li> <li>CAISO has resolved issues that hinder meeting Release 2 objectives and has extended R2 simulation by an additional week for Participant testing.</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 and mitigations that can impact CAISO's Readiness level as Business Units progress towards the next internal readiness milestone (Build Phase):

Risk	Proposed Mitigation
Testing delays are impacting readiness workplans for Business Units.	•Business Units are proactively investigating alternative methods and workshops to understand what the applications will provide.
Business Units do not have a clear understanding of testing and market simulation	<ul> <li>A communication effort has been launched to work with the Business Units to explain the scope and impacts of their roles in end to end testing</li> <li>More opportunities will be explored to include Business Unit Resources to participate in testing and market simulation activities more actively and for longer durations to become familiar with the application changes</li> </ul>
Business Units are managing multiple projects in addition to MRTU leading to some situations of resource constraints on MRTU.	Each Business Unit is reviewing their projects and are asked to re-prioritize resources to focus on MRTU
Business Units need more focus on confirming data and reporting requirements.	A project team has initiated efforts to work with the Business Units to understand what the reporting requirements/data validation requirements are and if the Enterprise Data Repository will meet the needs.



# **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).
- Work with Internal Business Units on Readiness mitigation strategies towards the Build phase
- Work with Market Participants on mitigation actions for Market Simulation Phase 2
- Begin Phase 2 Process Walkthrough sessions for original 12 business processes and 4 new processes across impacted Business Units.
- Develop Business Unit action plans for Readiness Survey results
- Begin conducting the 1st follow-up Assessment with Market Participant
- Continue tracking all readiness activities using updated Readiness Criteria for June report
- Complete 1<sup>st</sup> 60 Day Certification Status Milestone and begin gathering deliverables for 2<sup>nd</sup> 60 Day Status Milestone
- Complete remaining MRTU Market Participant Bid to Bill sessions
- Conduct additional 200 Level Training course for Market Participants in July

#### **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 July 2007.

/s/ Charity N. Wilson
Charity N. Wilson