

December 1, 2006

#### VIA OVERNIGHT DELIVERY

The Honorable Magalie Roman Salas 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 Salas:

Enclosed for filing in the above-captioned docket, please find an original and 14 copies of the Status Report of the California Independent System Operator Corporation ("CAISO"). An additional copy is also enclosed. Please date-stamp and return it in the self-addressed prepaid Federal Express envelope.

Respectfully submitted,

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

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California Independent System Operator Corporation Docket No. ER06-615

### 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 November 2007.

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.

Attachment B provides current detail responsive to P. 1415 of the September 21 Order, including measurable readiness criteria that the CAISO has developed through a collaborative process, mitigation actions for nonperformance or failure to meet readiness criteria, the methodology for determining if the CAISO, Scheduling Coordinators and market participants are prepared for MRTU implementation and an MRTU readiness tracking system tied to specific milestones within the MRTU program timeline. As directed by the Commission, the CAISO also intends to include in its readiness criteria an assessment of the system's effectiveness when responding to instances where demand bids exceed supply bids. The information contained in Attachment B reflects the current status of the CAISO's MRTU Readiness Program.<sup>2</sup>

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<sup>&</sup>lt;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 can be found at the following link:

http://www.caiso.com/docs/2005/06/21/2005062113583824742.html.

Dated: December 1, 2006

Respectfully submitted,

You

Sidney Mannheim Davies

Counsel for the California Independent System Operator Corporation

### ATTACHMENT A



California Independent System Operator Corporation

Attachment A - FERC Status Report - December 2006

# Market Redesign and Technology Upgrade FERC Update

December 1, 2006

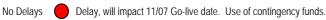


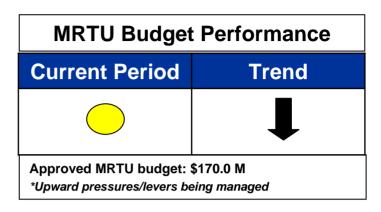
# **MRTU Executive Summary**

MRTU Schedule Performance				
Current Period Trend				
Tracking Delay: 4 weeks Critical Path Items: System Development, Integration Testing				

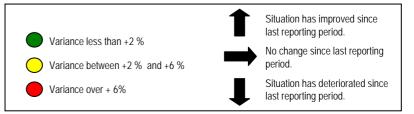
- The majority of System Development activities are complete and the PMO is working with vendors to finalize project specific delivery dates. Mitigations are enforced to address slips in the program schedule.
- FERC response to MRTU tariff is currently undergoing impact assessment and is on the CAISO Governing Board agenda for decision on December 12, 2006.
- Successful conclusion of Market Simulation Phase I. Connectivity applying multiple technologies has been confirmed with Participants.
- Integration team is conducting release planning sessions and revising workplan to mitigate delays to Functional Integration Test (FIT) schedule due to vendor delivery.
- Integration Test team produced Integration Release test plan.
- Supporting activities progressing on schedule to maintain 11/07 go-live date.
- Level 100 and half of Level 200 training of Operations staff complete and on schedule.
- CRR Dry Run published the Tier III allocations and the CRR Dry Run Auction opened on November 21, 2006.

Complete O Delay, but will not impact 11/07 Go-live date.





- Completed periodic financial analysis on all MRTU projects to confirm Actuals, Estimates to Complete, and Estimate at Completion – identifying budget savers and pressures.
- Worked with the Business Units to confirm CAISO staff participation requirements to support MRTU.
- Working with business units to address upward budget pressures: backfill, hardware costs, technology architecture.
- Completed high-level impact assessment of FERC ruling on MRTU.





# **MRTU Executive Summary**

Over the past month, MRTU has moved closer towards implementation with the various MRTU projects steadily achieving their development, testing, and delivery milestones.

The month's primary System Development, and Functional and Site Acceptance Testing accomplishments include: Various projects have progressed with Site Acceptance Testing and have met the appropriate exit criteria; several applications have progressed with Functional Acceptance Testing and transferred into Application Integration Test (AIT). Build phases are complete and regression testing has begun for appropriate projects.

Concurrently, project teams have worked closely with the Integration team and the Integration Testing teams to synchronize development and delivery efforts against the new release plan. Over the past month the Integration team has identified services to be amended from early releases, progressed in building the integration services, and supported testing activities. Infrastructure also made significant progress by drafting technical requirements and deployed code to support .NET connectivity to MRTU applications as requested by the Market Participants.

Concurrent Internal and External Readiness efforts continue to make good progress. The Training team completed all Level 100 courses, as well as four of the Level 200 courses. The Readiness team conducted the Organization Assessment Survey, analyzed results, and created an Action Plan and Next Steps. The readiness update is incorporated in the subsequent appendix to this update.

## MRTU Program Progress as of November 17, 2006



California Independent System Operator Corporation

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							
Settlements							
Base Product							
Charge Types							
Congestion Revenue Rights							
Legacy							
Auto Dispatch System							
Reference Level Calc.							
Outage Mgmt System							
Compliance (CAP)							
Trans. Cont. System							
Metering System							
OASIS							
RMR Application Validation Engine							
Other Applications							
Market Quality System							
PTR							
Portal							
MFRD							
Legend			Program Area		Planning	Development	Execution
Phase not started		Supporting	Internal Readiness External Readiness Training Business Processes (Phase 1) BPMs				
Phase in progress		Activities					
Phase complete							
		l					



# **Accomplishments & Milestones**

### **Readiness and Training Activities**

- Conducted, analyzed results and created Action Plan and Next Steps for Organization Assessment Survey
- Level 100 Training complete, completed session four MRTU Level 200 Training for internal staff

### Program Management Office (PMO)

- Budget mitigation analysis completed
- Drafted Configuration Management Plan
- Produced and reviewed External Specifications Management Plan
- Evaluated impact of FERC Order

### **Market Simulation**

 As of 12/1, Phase 1 complete (Rules Validation/Connectivity Simulation)

### Testing

 Completed Application Integration Testing and progressing on completion of Functional Integration Testing for applications required for the first phase of End to End Testing

### **Congestion Revenue Rights**

- Published Tier III allocation results
- Opened Tier I CRR auction

# **Planned Activities**

#### Integration

- Interface design and build activities in progress, and are scheduled to be complete 12/15/07
- Infrastructure Orchestration (Automated Market Open and Close) to complete 12/30

### **Integration Testing**

Continue re-planning of various Testing activities

### Legacy

- Continue Application Integration Test (AIT) and Functional Integration Test (FIT) execution
- Energy Allocation data model and mapping to be complete

### Applications

- Functional and Site Acceptance Tests to progress
- Interoperability testing of web services to be completed
- Model Update Testing Process to be finalized

### **Readiness and Training Efforts**

- Internal and External Readiness to finalize readiness criteria with stakeholders, Readiness Assessment and User Guide
- Training to conduct session six MRTU Level 200 training for internal staff;

### **Market Simulation**

 Business Structure Simulation Planning commences for Integrated Market Simulation Phase

#### Testing

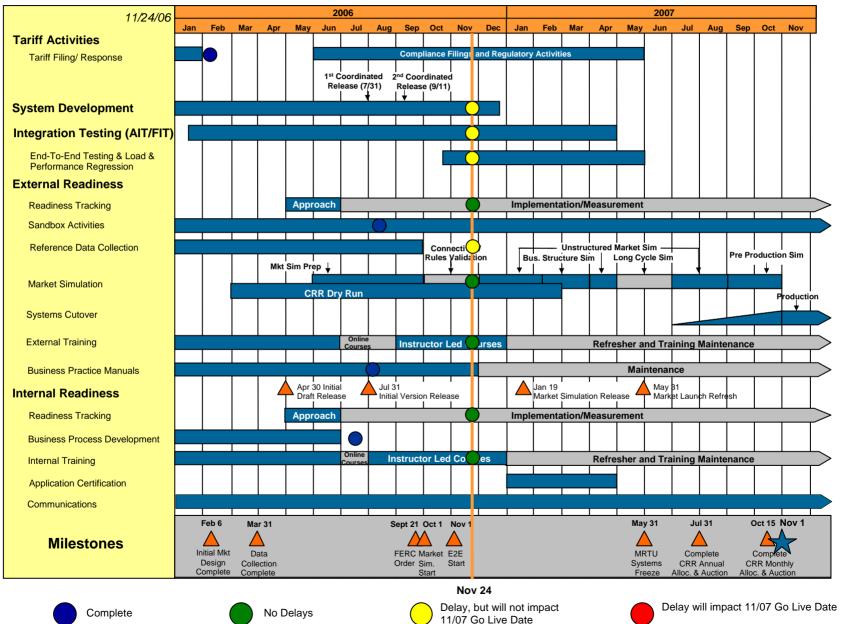
 Completed Functional Integration Testing for second phase of Market Simulation

### **Congestion Revenue Rights**

Continue CRR Dry Run Auction



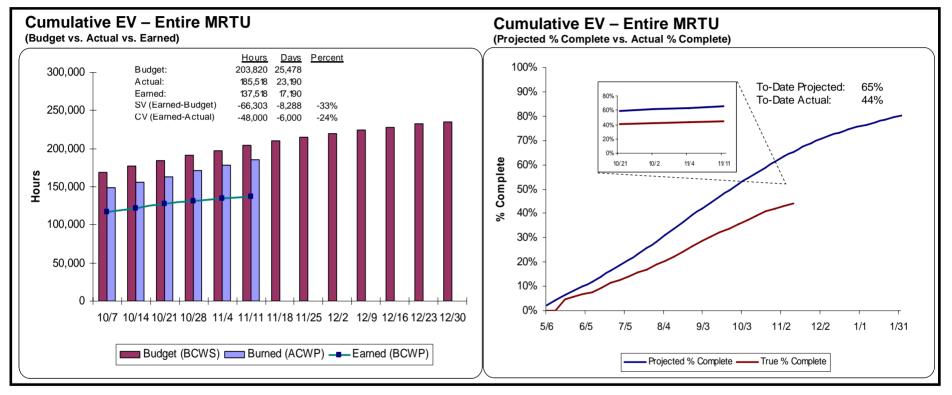
# **Critical Path**





California Independent System Operator Corporation

# **Program Key Metrics**



Included in Graph: BPM, Business Process, SIBR, Training, FNM/SE, IFM, MQS, CRR, MFRD, SaMC, Portal, Testing, Integration, PTR, Readiness, PMO, Legacy, STiNG, and Technical Architecture. Not Included in Graph: n/a

- Actual hours burned by MRTU projects are below the planned rate. A significant portion of the discrepancy can be explained by Testing remaining understaffed until systems come online and earned value is consistent with burned hours
- Current earned value is tracking below planned earned value due to various delays



## **MRTU Financials**

#### California Independent System Operator Summary of Expected Completion Costs vs. January 30, 2006 Budget October 31, 2006 (In Thousands) \*

RA Increase Paid Invoices Estimated Cost of (Decrease) Re-baselined Project Actual Costs To Date Costs to Project at from Costs June 2006 Through 2005 10/31/06 Complete Completion Reforecast Project (a)\*\* (b) (c) (d) (e) = (c+d)(f)=(e-a) 56,519 \$ 40,235 \$ 47,548 \$ Market Redesign \$ 9,674 \$ 57,222 \$ 703 Automatic Mitigation Procedures/Phase 1A \$ 773 \$ 773 773 \$ 773 0 1 16,297 2 Real Time Markets/Phase 1B 16.297 16,297 16,297 0 0 Integrated Forward Markets/Real -Time Market/Full Network Model (IFM/RTM/FNM) 868 3 29.205 17.010 22.528 7,545 30.073 4 Congestion Revenue Rights - (CRR) 4,014 3,386 3,771 454 4,225 211 Market Quality System - (MQS) \*\*\*\* 4A 1,233 1,033 2,266 2,643 0 (376)Hardware & Software Purchases 11A 3,588 2,769 2,947 642 3,588 0 56.097 \$ Technology Upgrade \$ 68.954 \$ 34,137 \$ 12,742 \$ 68,839 \$ (116) 5 Scheduling Infrastructure Business Rules - (SIBR) 12,086 6,326 9.436 2.447 11,882 (203)6 Settlements and Market Clearing -(SaMC) 17.391 5.313 15.146 2.011 17,158 (234)7 Master File -(MFRD) 2.279 1.860 2.266 28 2.294 15 9 Post Transactional Repository - (PTR) 2.177 1.041 1.890 335 2.225 48 Legacy Systems 10 7,638 3,434 5,787 715 6,502 (1, 135)State Estimator/Full Network Model 1,024 157 964 1,080 10A 116 56 11 **Technology Infrastructure** 2.065 2.028 2.046 15 2,062 (3)11B Hardware & Software Purchases 6.923 4.566 4.908 2.015 6.923 0 12 System Integration/Enterprise Architecture 17,372 5,060 9,412 13,653 18,712 1,341 Common Projects \*\*\* \$ 36,215 \$ 9,670 \$ 21,038 \$ 16,052 \$ 37,090 \$ 875 Training/Readiness Projects 10,021 13 916 5,572 4,189 9,761 (259)14A **Project Management** 14.248 7.674 10.781 3.217 13.998 (249)14B Testing 11,946 1.080 4,684 8,646 13,330 1,384 \$ \$ \$ (1,463) \$ \$ \$ **Ongoing Scope Adjustments** 3,357 1,894 1,894 Pending MRTU Scope\*\*\*\* 3,357 1,894 1,894 (1,463) 0 0 Contingency \$ 5,000 \$ -\$ -\$ 5,000 \$ 5,000 \$ -Contingency 5,000 0 0 5,000 5,000 0 15 **Total MRTU Project** \$ 170,045 \$ 84.042 \$ 124,683 \$ 45,363 \$ 170,045 \$ 0

\* 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

\*\*\*\* Monthly ongoing scope adjustments

## ATTACHMENT B



California Independent System Operator Corporation

Attachment B - FERC Status Report - December 2006

# MRTU Readiness Program Summary FERC Update

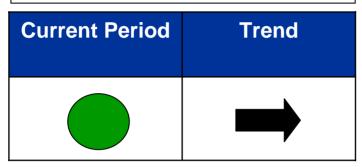
November 29, 2006



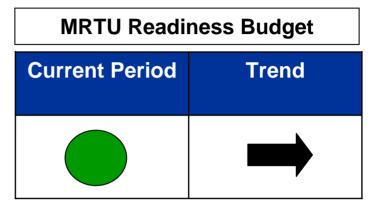
California Independent System Operator Corporation

# **MRTU Executive Summary**

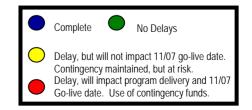
## MRTU Readiness Schedule



- Training conducted on schedule.
- Tracking internal CAISO readiness has been fully initiated and launched across the all Business Units.
- Participant Readiness activities are now on schedule as readiness criteria and measures have been completed as agreement has been made between CAISO and Participants.
- Participant Assessments to establish readiness baseline are now on schedule to be completed during November and December. The previous delay due to the lack of consensus on readiness criteria has been closed.
- Recent accomplishments include:
  - Approval of Readiness Criteria definitions with Participants
  - 16 amount of Participant Assessments have been completed
  - 32 amount of Participant Assessment are scheduled and will take place during December.



- Training activities are under budget.
- Communicated and confirmed CAISO staff participation across the business to support internal business unit readiness efforts.
- Executing to the reduced Consultant budget and have established more responsibilities and accountability for business unit readiness with internal CAISO staff.





# **MRTU Readiness Program Executive Summary**

The MRTU Readiness program focuses on a set of activities that ensure people, processes, and technologies are ready for the implementation of the MRTU program in November 07. The MRTU Readiness Program has successfully launched and implemented concurrent Readiness efforts during the past 2 months since August 06 with the following areas of progress:

- Operating an ongoing Stakeholder Interaction process to work with Participants to gain awareness, get an understanding of the changes, and to address inquiries.
- Operating an Outreach program for both Participants and CAISO to identify gaps and make required process adjustments as necessary.
- Conducted working sessions with all CAISO business units to set expectations, outline roles and responsibilities, and provide templates to develop detailed plans to revise processes, update job responsibilities, update technology requirements and address knowledge transfer and training needs.
- Accomplished the first planning milestone on November 30,06 to have project plans for all key business units completed
- Gathered and incorporating Participant comments on Readiness Criteria that will be used to assess and monitor readiness towards the MRTU Implementation in November 07.
- Developed and implemented a Participant Assessment approach to assess and monitor Participants readiness along People, Process and Technology dimensions.
- Prepared to launch a baseline assessment in November 06 for Participant Readiness that will be updated with follow-up assessments throughout the months of January 07 to August 07.



## **Readiness Progress (As of November 29, 2006)**

## **Internal Readiness Summary**

Program Area	Planning	Development	Execution	Comments
Outreach	~	$\checkmark$	~	<ul> <li>Implemented Outreach Campaign (Kick-off meetings, periodic assessments, progress communication).</li> <li>Conducted majority Business Unit Readiness Kick-off meetings with ISO departments</li> </ul>
Assessments	$\checkmark$	$\checkmark$	$\checkmark$	<ul> <li>Completed and achieved first planning milestone with impacted Business Units</li> <li>Scheduled Readiness assessments with non-impacted Business Units</li> </ul>
Business Unit Readiness	~	~	~	<ul> <li>Implemented readiness criteria and approach for progress reporting and continuous improvement across all Business Units</li> <li>Conducted first phase of assessment for November 30, 06 milestone to have project plans completed by all impacted Business Units</li> </ul>
Training	~	~	~	<ul> <li>Introductory courses developed and scheduled for 2006-2007</li> <li>Intermediate courses developed, scheduled for 2006 - 2007</li> <li>Advanced level courses under development, scheduled for 2007</li> <li>Additional courses as required</li> </ul>



## **Readiness Progress (As of November 29, 2006)**

## **External Readiness Summary**

Program Area	Planning	Development	Execution	Comments
Stakeholder Interaction	~	~	~	<ul> <li>Established and supporting Participant Readiness Advisory Group</li> <li>Established and supporting MRTU Implementation Workshop</li> <li>Developed Stakeholder Action Items &amp; Issues Report</li> </ul>
Outreach	~	~	~	<ul> <li>Developed and implemented Outreach Campaign Design (phone campaigns, MRTU Milestone Details, etc )</li> <li>Supporting MRTU Bulletin Board content</li> </ul>
Market Participant Readiness	~	~	~	<ul> <li>Implemented participant assessments for approximately 70 market participants that include following: On-site assessment, Assisted self-assessment, Self-assessment</li> <li>Scheduled: 12 of 13 on-sites and 18 of 25 assisted assessments</li> <li>Completed 6 On-Site assessment including SoCal Ed, WAPA and Coral Power</li> <li>Completed 9 Assisted assessments including Sempra, SDGE, ConocoPhillips and BP</li> </ul>
Training	✓	~	~	<ul> <li>Introductory course developed, posted on CAISO web</li> <li>Intermediate courses developed and scheduled for 2006 and 2007</li> <li>Additional training as required</li> </ul>



## **Readiness Progress (As of November 29, 2006)**

## **Readiness Criteria Summary**

Program Area Pla	nning	Development	Execution	Comments
Readiness Criteria	•	✓		<ul> <li>Gathered and incorporating Participant comments to finalize Readiness Criteria that will be used to assess and monitor readiness towards the MRTU Implementation in November 07.</li> <li>Reports are in progress of development to include the following: <ul> <li>Roll-up of categories indicating readiness, risks and actions</li> <li>Dashboards provided to the Business Unit owners, MRTU Steering Committee, Officers, Board and Market Participants</li> </ul> </li> </ul>



# Accomplishments & Milestones

### **Internal Outreach**

- Conducted information sessions and provided readiness updates for all CAISO management
- Conducted Business Unit Readiness Kick-off meetings with non-impacted ISO departments
- Conducted follow up working sessions with impacted ISO departments to provide MRTU updates

## **CAISO Internal Assessment (Personnel)**

Implemented internal communication actions based on feedback from company wide readiness assessment

## **Business Unit Readiness**

Achieved first major planning milestone to have all Readiness workplans completed for all impacted Business Units Business Units including Grid Operations, IT, External Affairs, Market Services, and Operations Support

## **Internal Training**

Completed implementation of intermediate courses scheduled for 2006 – 2007

## **Stakeholder Interaction**

Continued to implement Participant Readiness Advisory Group and MRTU Implementation Workshops

## **External Outreach**

 Implemented new triage process for answering Participant inquiries for MRTU and reporting capabilities to address FERC turnaround requirements

## **Market Participant Readiness**

- Scheduled 32 assessments
- Conducted 16 assessments

## **Participant Training**

Completed all external sessions with Market Participants for 2006

## **Readiness Reporting**

- Finalized and achieved consensus with Participants on Readiness Criteria and Measures
- Developed Readiness Progress Assessment provided to the Business Unit owners and MRTU Steering Committee



### **Internal Outreach**

Continue CAISO wide information sessions and meetings to provide MRTU readiness updates

## **CAISO Internal Assessment (Personnel)**

- Implement ongoing communication activities based on feedback from company wide readiness assessment
- Conduct follow-up company wide readiness assessment survey

### **Business Unit Readiness**

Begin working on the next readiness milestone, completing the impact analysis for each key Business Units Business Units including Grid Operations, IT, External Affairs, Market Services, and Operations Support

## **Internal Training**

- Complete role based training based on requirements identified by Business Unit readiness activities
- Conduct Intermediate courses scheduled for 2006 2007
- Conduct Advanced Courses for 2007

## **Stakeholder Interaction**

Continue supporting Participant Readiness Advisory Group and MRTU Implementation Workshops

## **External Outreach**

Provide performance report for the new triage process for answering Participant inquiries for MRTU and reporting capabilities to address FERC turnaround requirements

## **Market Participant Readiness**

Schedule and conduct remaining assessments with Participants

## **Participant Training**

Training to continue for Level 200 courses

## **Readiness Reporting**

- Establish 60 Day Prior to MRTU Implementation sign-off process and governance approach
- Publish first baseline Readiness report for Participants and CAISO Business Units

### 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 1<sup>st</sup> day of December 2006.

Charity N. Wilson