## **Operations Highlights**

## **Description**

Highlights of Operations System Performance. A high-level summary of notable events and update of important operation information not otherwise covered in other Board Agenda items.

Please note that because of the settlement timeline some graphs will reflect the prior year's data.

## Notable Events

## **Daylight Savings Time**

On March 11, 2007 the ISO successfully transitioned to Daylight Savings Time. The transition was the result of many months of planning and work effort that incorporated a large scope of work that touch nearly all of the ISO computer systems. Thanks to the extraordinary cross departmental team work, the transition was smooth and uneventful with all operating systems performing as expected.

# Operations Performance Scorecard

The Operations Performance graphs briefly explain the monthly year-to-date (YTD) results for Operations Performance. This section includes: WECC Monetary Sanctions, Control Performance Standards 1 and 2, Operating Transfer Capability Violations, ISO Control Area Frequency and Generation Outage Summary. Definitions of the Performance Standards are included in Appendix A

## WECC Monetary Sanctions (Figure A)

The WECC Monetary Sanctions graph shows the quarterly and YTD number of violations of the WECC's Reliability Management System (RMS) criteria.

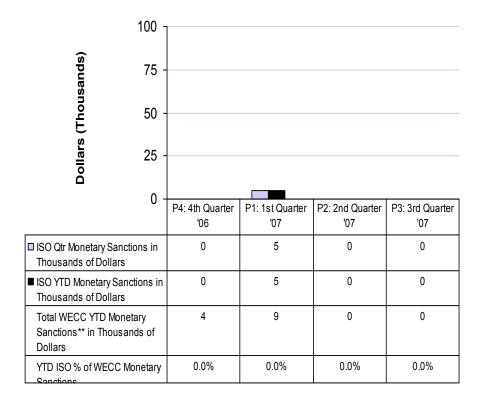


Figure A

Please Note: Chart begins with 4th Quarter 2006 to allow for delay in finalization and receipt of year-end WECC sanction data, and to enable analysis of Performance goals based on a full year.

Control
Performance
Standards
1 & 2
(Figure B)

The Control Performance Standards graph shows the number of monthly and YTD system disturbances through Control Performance Standard 1 (CPS1) and Control Performance Standard 2 (CPS). WECC Minimum Operating Reliability Criteria for CPS1 is 100%. The CPS1 Target and Stretch Goal are to attain a score of 100% 12 of 12 months during the calendar year. WECC Minimum Operating Reliability Criteria for CPS2 is 90%. The CPS2 Target and Stretch Goal are to attain a score of 90% 12 of 12 months during the calendar year.

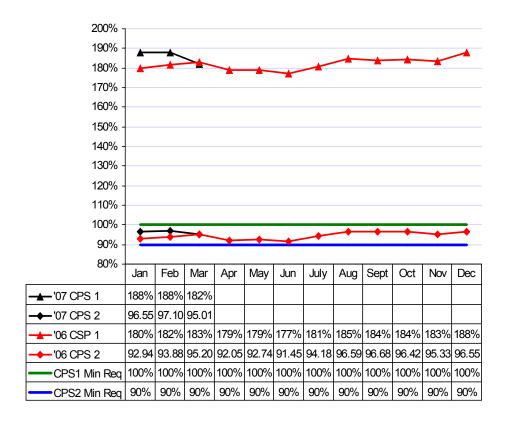


Figure B

Operating Transfer Capability Violations (OTC) (Figure C) The Operating Transfer Capability graph reports the number of monthly, YTD OTC Violations, and their duration. OTC violations are one category of the four-category corporate goal to meet or exceed NERC operating standards. OTC Violations are defined as path overloads that exceed WECC allowable time limits for both stability-rated and thermally rated paths. The OTC Violation Target Goal is not to exceed 2 violations, with the Stretch goal of zero violations for the calendar year.

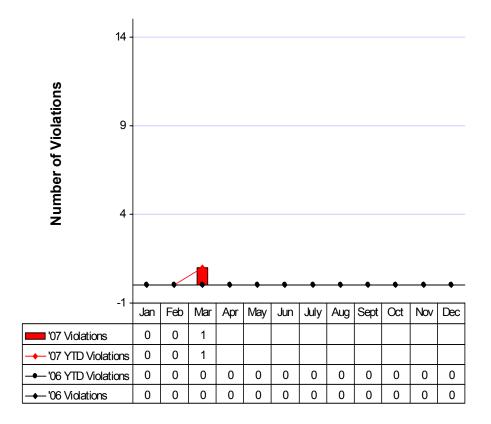


Figure C

ISO Control Area Frequency (Figure D) The Control Area Frequency graph reports monthly and YTD totals of qualifying disturbances that represent the number of contingencies that meet Disturbance Control Standard (DCS) criteria. Frequency Disturbances are results of a sudden loss of load or generation.

DCS violations are one category of the four category corporate goal to meet or exceed WECC and NERC operating standards.

The DCS Violation Target Goal is not to exceed 2 violations, with the Stretch goal of zero violations for the calendar year.

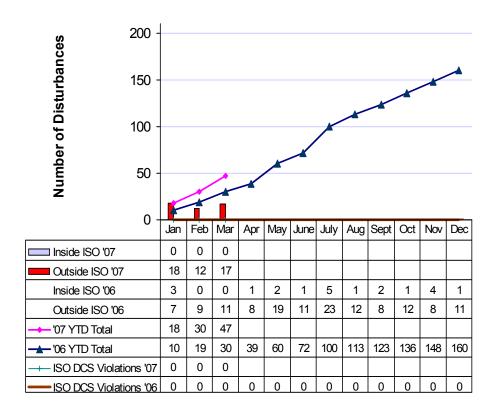


Figure D

Outage Activity Summary (Figure E) The Outage Activity Summary graph shows the number forced, scheduled, and cancelled generation and transmission outages processed per month by the Outage Coordination office. Included in the graph is the number of Restricted Maintenance Operations (RMO), which was previously referred to as No Touch Days. RMO accommodates additional transmission or other maintenance on the grid.

Since 2001, Outage Coordination has investigated all forced generation outages. To date, there have been no concerns over the generation forced outage rate.

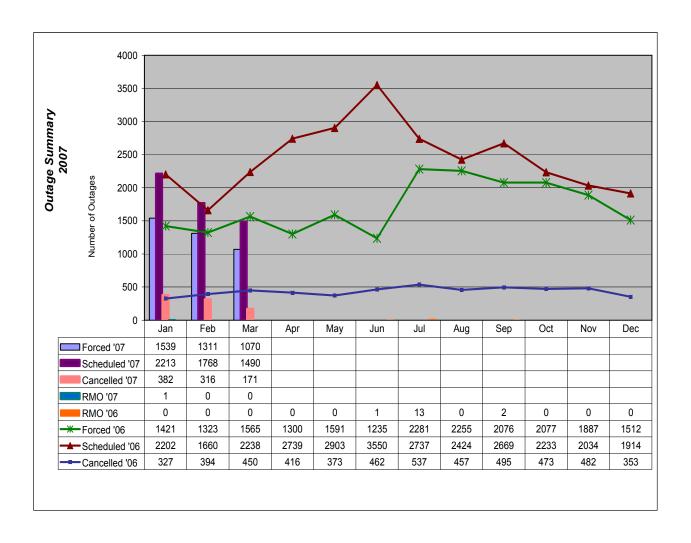


Figure E

Real Time Bias (Figure F) The following is the monthly average percent bias for March 2007. After a long period of favorable biasing levels, the number shot up in March to almost 22%. The cause was due to delays in data transfer between the inter-tie scheduling system and RTMA. The delays were an unintended consequence of the implementation of CAS, the new inter-tie scheduling system. DMM will be reporting on this issue in further detail before the board.

By early April the data transfer issues were resolved and it is expected that the bias level will decrease in the following months.

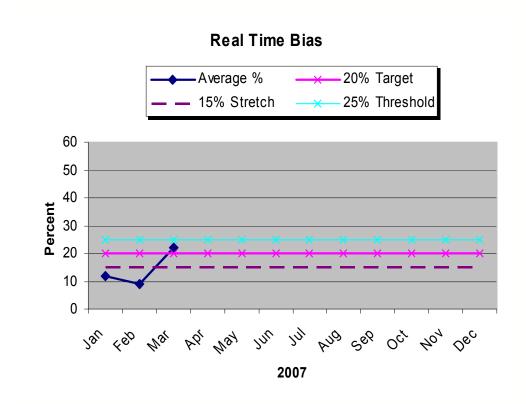


Figure F

## **Market Services Highlights**

## **Description**

Highlights of the Market Services system status, activities, and anomalies relating to Market applications and systems. It is intended that additional graphs will be added to the Market Services Highlights as deemed relevant. Please note that because of the settlement timeline for RMR, Neutrality, and UFE some graphs will reflect the prior year's data.

## **System Status**

Core Market Systems availability times are reported **<u>quarterly</u>**. The Corporate goals for system availability are: Threshold of 99.8%, Target of 99.9% and Stretch of 99.99%.

Market Application	% Availability Qtr 1 (2007)
Scheduling Infrastructure (SI)	100%
Scheduling Application (SA)	100%
Real Time Market Application (RTMA)	99.97%
Automated Dispatch System (ADS)	99.93%
Interchange Transaction System (BITS)	99.96%
OASIS (Information System)	100%
Vitria (Integration Software)	99.95%

Settlements Reliability Must Run (RMR) (Figure G) The following graph shows the monthly and annual cost of Reliability Must Run resources. The graph also indicates cumulative gross costs and the 2006 annual cost estimate.

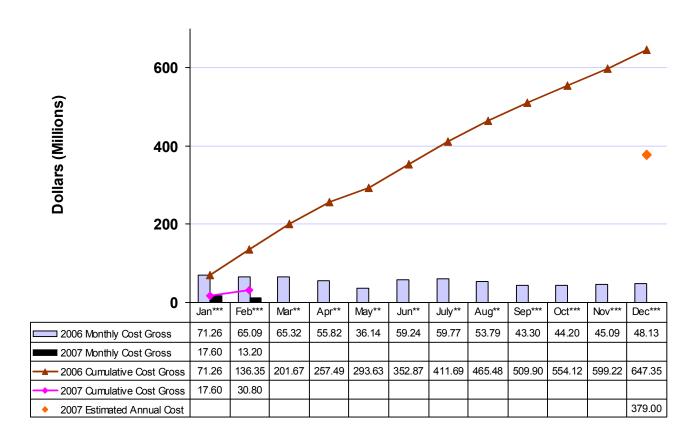


Figure G

Please note: RMR decreased in 2007 to 12 facilities consisting of 35 units.

- \* There is a 120 day lag time before final actual RMR data becomes available.
- \*\* January thru December 2006 RMR has not yet received Adjusted invoices for Border, El Cajon, Enterprise, and VacaDixon.
- \*\*\* Sept. 2006 thru Feb. 2007 RMR has not received estimated invoices for Enterprise, Border, and El Cajon. Sept. 2006 thru Feb. 2007 Month Cost for the listed facilities are based on an average of the previous two months' data.

Settlements Neutrality (Figure H) The graph below shows the monthly settlement neutrality amounts. Settlement charges for Instructed, Uninstructed, and Unaccounted for Energy, Unscheduled RMR Energy, and Transmission Loss Obligation is expected to balance out for each settlement interval, resulting in revenue neutrality for the ISO. However, revenue neutrality may not always occur due to certain operational realities such as interchange inadvertent flows and zonal price differences. The Imbalance Energy Offset settlement account (CT 1401) serves as the adjustment account used by the ISO to offset balances related to the aforementioned settlement charges.

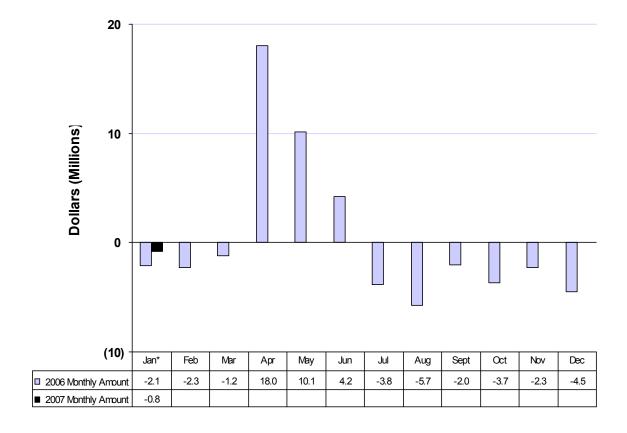


Figure H

Neutrality number includes both the Neutrality Adjustment (CT-1010, CT-1401) & Existing Contract Charge/Adjustment (CT-1210).

<sup>\*</sup> There is a 75-day time lag before actual Neutrality data becomes available.

System Unaccounted For Energy (UFE) (Figure I) Operations Support continues to monitor changes in trends (both positive and negative) of Unaccounted for Energy (UFE) prior to and after Preliminary Settlement Statements. For the month of October, Operations Support has not identified any outstanding issues. However, high pricing has contributed to the increase in UFE dollars. The following graph shows the amount of system Unaccounted for Energy.

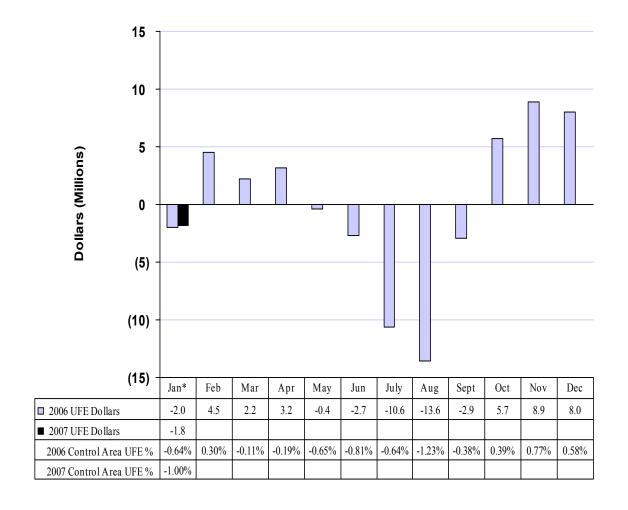


Figure I

<sup>\*</sup>Amounts estimated for January 2007. There is a 75 day time lag before actual UFE data becomes available. This chart represents the total UFE Dollars in a given month, which is calculated on a settlement interval basis and the UFE the overall average of UFE for a given month

## **Operations Support Highlights**

#### **Description**

Highlights of the operational compliance for Regulation, Ancillary Services, Rescinded Payments, and Settlement Dispute Trend.

Please note that because of the settlement timeline for RMR, Neutrality, and UFE the following graphs will reflect the prior year's data for Regulation Non-Compliance, No Pay Capacity, and Payments Rescinded.

Regulation Performance Monitoring (Figure J) Operations Support monitors suppliers of Regulation to ensure that the Regulation capacity scheduled in the ISO markets is available in real-time. In January 2007, 99 percent of scheduled Regulation was available and capable of performing each month. The following graph compares the monthly amount of unavailable Regulation capacity (MW) for January 2006 through January 2007, with the 2006 monthly average.

monthly average.

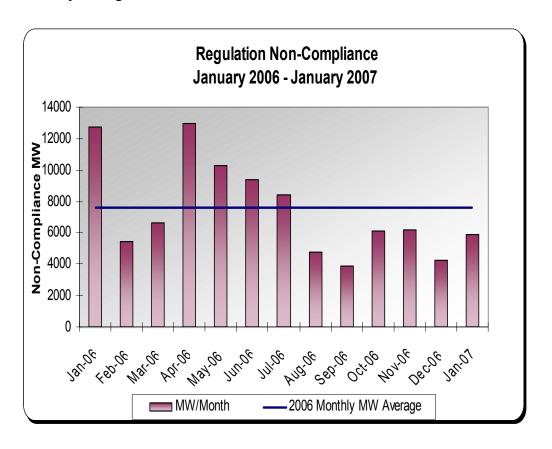


Figure J

Please note: There is a 75-day time lag before actual data becomes available.

No Pay Capacity (Figure K) Suppliers of Ancillary Services are monitored by the "No Pay" software to ensure that Ancillary Service capacity awarded in the ISO markets is available in real-time. In January 2007, an average of 95 percent of scheduled Spinning Reserve and Non-Spinning Reserve was available and capable of performing. The following graph compares the monthly totals of non-compliant Ancillary Service capacity (MW) from No Pay for twelve months with the monthly average from 2006.

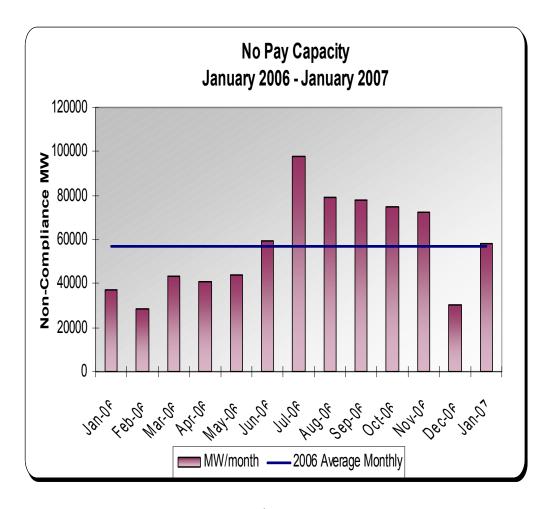


Figure K

Please note: There is a 75-day time lag before actual data becomes available.

Summary of Payments Rescinded (Figure L) The following graph summarizes the settlement adjustments for twelve months under the No Pay and the Regulation Performance Monitoring programs. The total value of rescinded payments was approximately \$244,743 for January 2007.

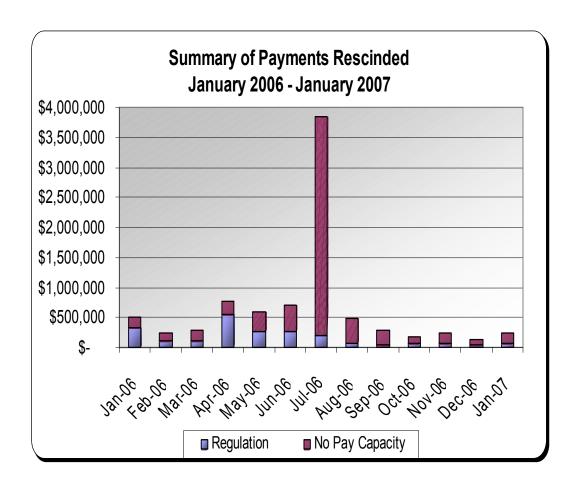
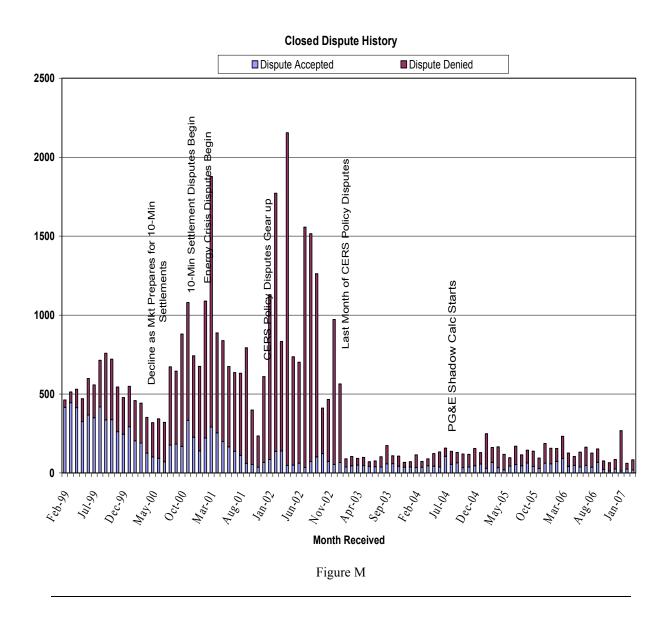


Figure L

Please note: There is a 75-day time lag before actual data becomes available.

Dispute Trend (Figure M)

The graph below shows the volume of disputes from February 1999 through March 2007. It also shows the running average of disputes over an eight year time period, which incorporates a peak volume in April 2002 of 2107 disputes.



#### Appendix A

#### **Definitions**

The following are definitions of the items and or systems covered in the Operations Performance Scorecard section of this report:

#### **Operations Performance Scorecard:**

WECC Monetary Sanctions (Figure A)- Measures through WECC's Reliability Management System (RMS) criteria. The RMS criteria include items such as Operating Reserve (OR), Operational Transfer Capability (OTC), Disturbance Control Standard (DCS), System Operator certification, and compliance with the WECC Unscheduled Flow Reduction Procedure. The ISO's goal is to have zero monetary sanctions per quarter.

Control Performance Standards 1 & 2. (Figure B)- Control Performance Standard 1 (CPS1) is intended to provide a control area with a frequency sensitive evaluation of how well it is meeting its demand requirements. CPS1 is a statistical measure of Area Control Error (ACE) variability. Control Performance Standard 2 (CPS2) is a statistical measure of ACE magnitude. It is designed to limit a Control Area's unscheduled (or inadvertent) power flows that could result from large ACE values.

**Operating Transfer Capability Violations (Figure C)-** OTC Violations are defined as those transmission path overloads that exceed WECC allowable time limits for stability rated (20 min.) and thermally rated (30 min.) paths.

ISO Control Area Frequency (Figure D)- The ISO Control Area Frequency figures report internal and external system disturbances and include violations of the Disturbance Control Standard (DCS) resulting from ISO Control Area internal disturbances, such as loss of a large generating unit or transmission line. WECC allowable time limit for disturbance recovery is 15 minutes. Per WECC criteria, qualifying disturbances are defined as those greater than 35% of our maximum generation loss from our most severe single contingency. The California ISO's most severe single generation contingency is a nuclear unit with maximum generation output 1120 MW, 35% of which is the 392 MW thresholds used herein.

**Real Time Bias** (Figure F)- The number entered manually by the ISO operator into Real Time Market application (RTMA) to adjust for the energy deviation between RTMA and the Energy Management System (EMS).