

## Operations Highlights Report

### Notable Events

#### *Operations Highlights (April 2009)*

##### New Market Implementation

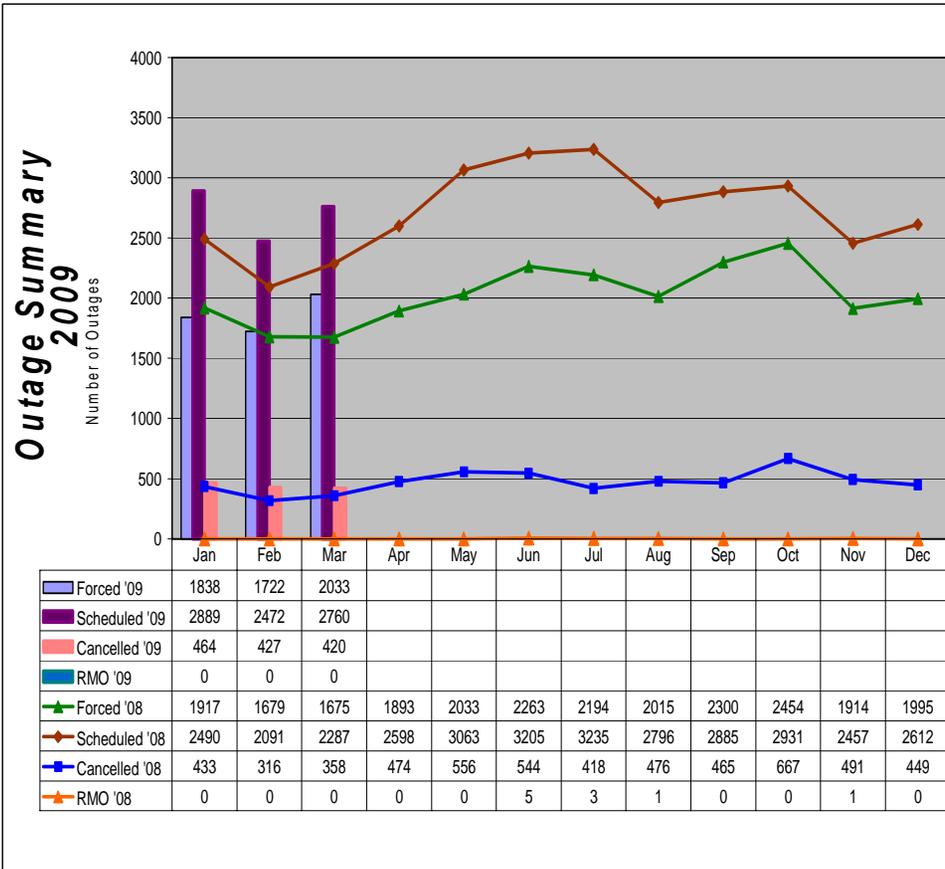
The new market was successfully implemented for trade day April 1, 2009. The transition to the new market went extremely well. Among the numerous benefits of the new market, Operations has gained a greater balancing control ability allowing us to better manage transmission constraints throughout the balancing authority well in advance of the real time operations.

##### Transmission Emergency

A Southern California Region, Transmission Emergency was declared starting at 11:50 and ending at 15:18 on April 17, 2009. The transmission (the Southwest power link) was interrupted and the Transmission Emergency was successfully managed using the new market.

##### Completed the 2009 Summer Workshop

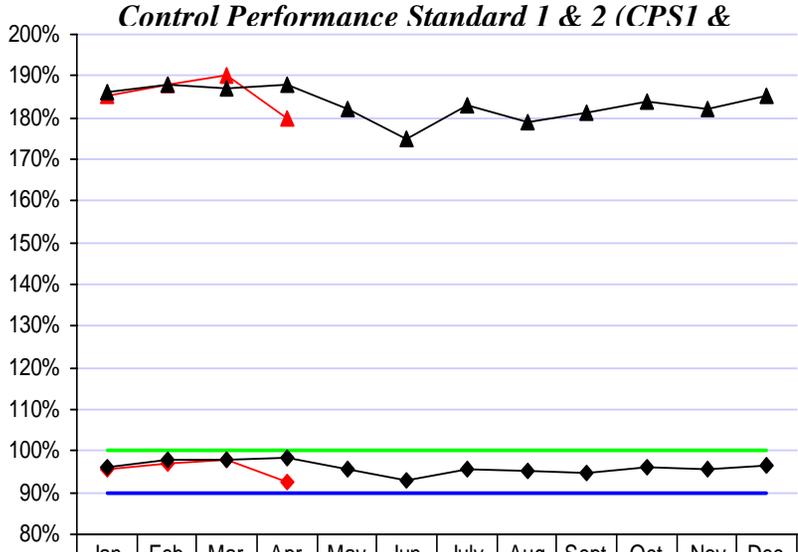
The ISO completed a successful 2009 Summer Workshop with over 475 people from 22 entities participating. The intent of the Summer Workshop is to provide the opportunity to practice the communication and restoration activities under various scenarios to be prepared for emergency situations.



### Real Time Bias

Due to the transition to the new market on April 1, 2009 this activity is no longer available for tracking and therefore, this subject matter is removed from this and future report. New areas will be provided in future reports.

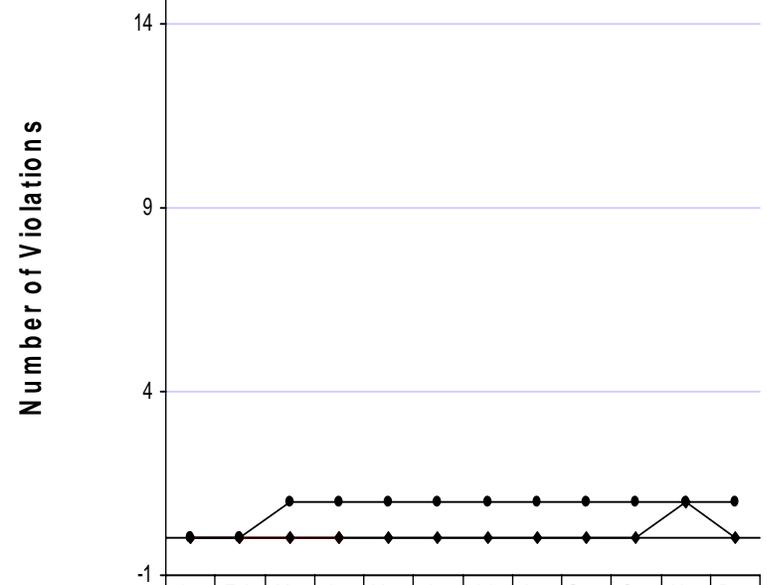
The *Outage Activity Summary* graph shows the number of forced, scheduled, and cancelled generation and transmission outages processed per month by the Outage Coordination office. Included in the graph is the number of restricted maintenance operations (RMO). RMO accommodates additional transmission or other maintenance on the grid.



	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
'09 CPS 1	185%	188%	190%	180%								
'09 CPS 2	95.78	97.15	97.84	92.61								
'08 CSP 1	186%	188%	187%	188%	182%	175%	183%	179%	181%	184%	182%	185%
'08 CPS 2	96.19	98.08	97.89	98.31	95.74	92.93	95.45	95.33	94.95	96.28	95.82	96.52
CPS1 Min Req	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
CPS2 Min Req	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%

CPS1 is a statistical measure of area control error (ACE) variability. It measures ACE in combination with the interconnection frequency. Because the CPS1 formula (was developed on a conformance scale, values over 100% are not only desired, but also expected. 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. Note: April's 2009 values are cumulative up to April 20, 2009.

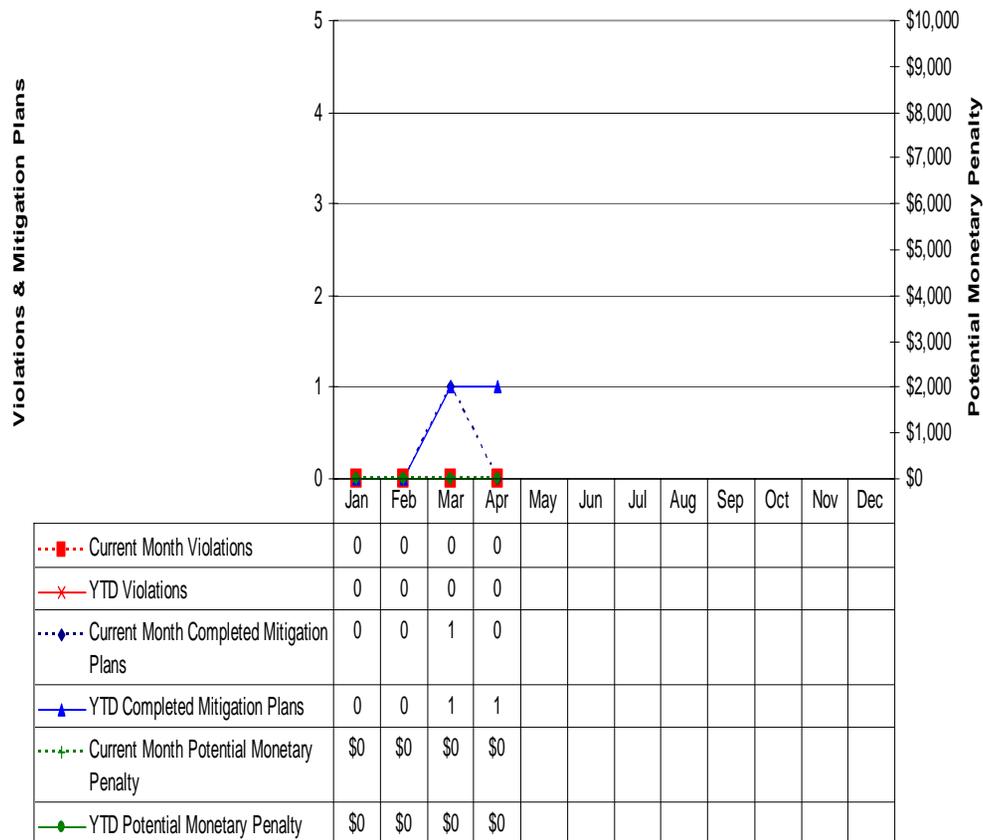
### Operational Transfer Capability Violations (OTC)



	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
'09 Violations	0	0	0	0								
'09 YTD Violations	0	0	0	0								
'08 YTD Violations	0	0	1	1	1	1	1	1	1	1	1	1
'08 Violations	0	0	0	0	0	0	0	0	0	0	1	0

OTC violations are defined as path overloads that exceed Western Electricity Coordinating Council (WECC) allowable time limits for both stability-rated and thermally-rated paths. Note: April's 2009 values are cumulative up to April 20, 2009.

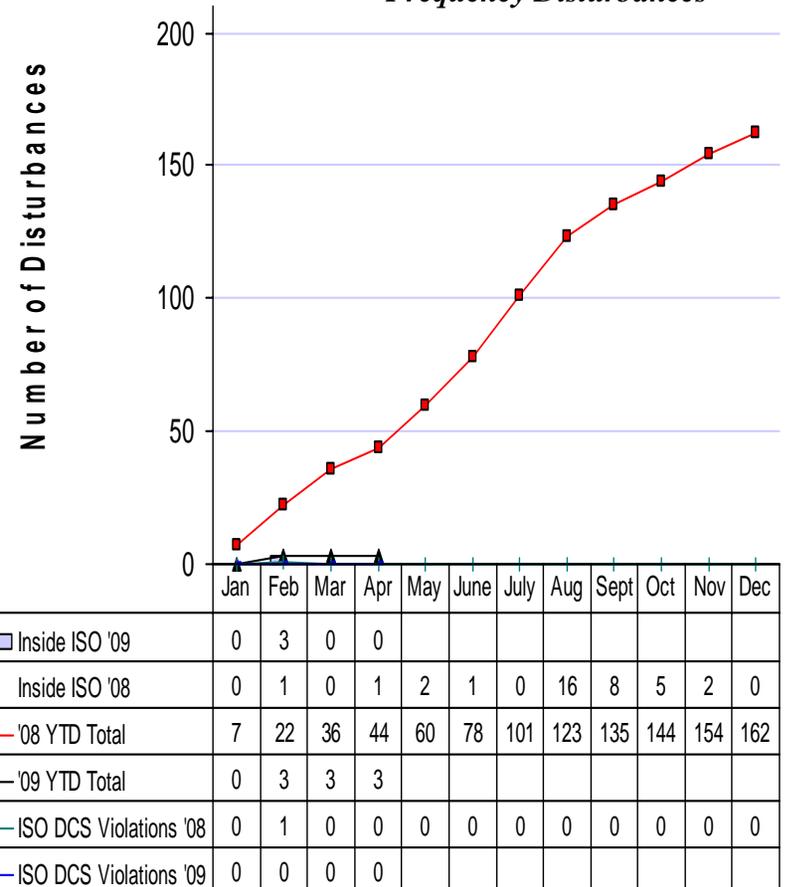
### NERC/WECC 2009 Monetary Sanctions



There were no Reliability Standards violations or notices of proposed penalties for the current month, as of April 28, 2009.

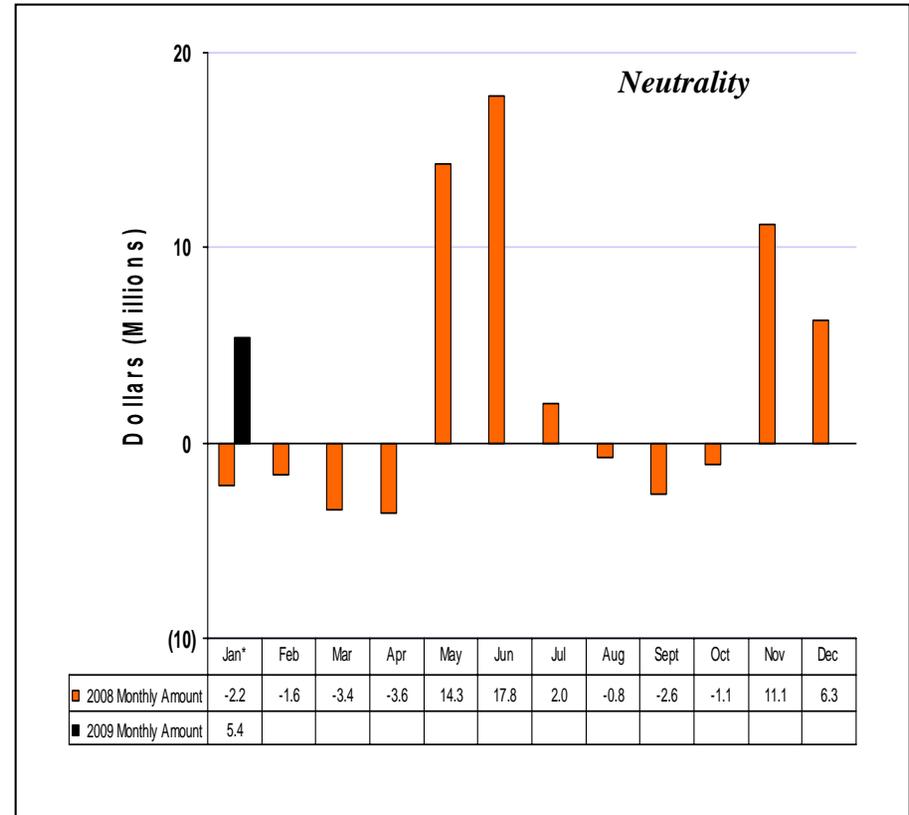
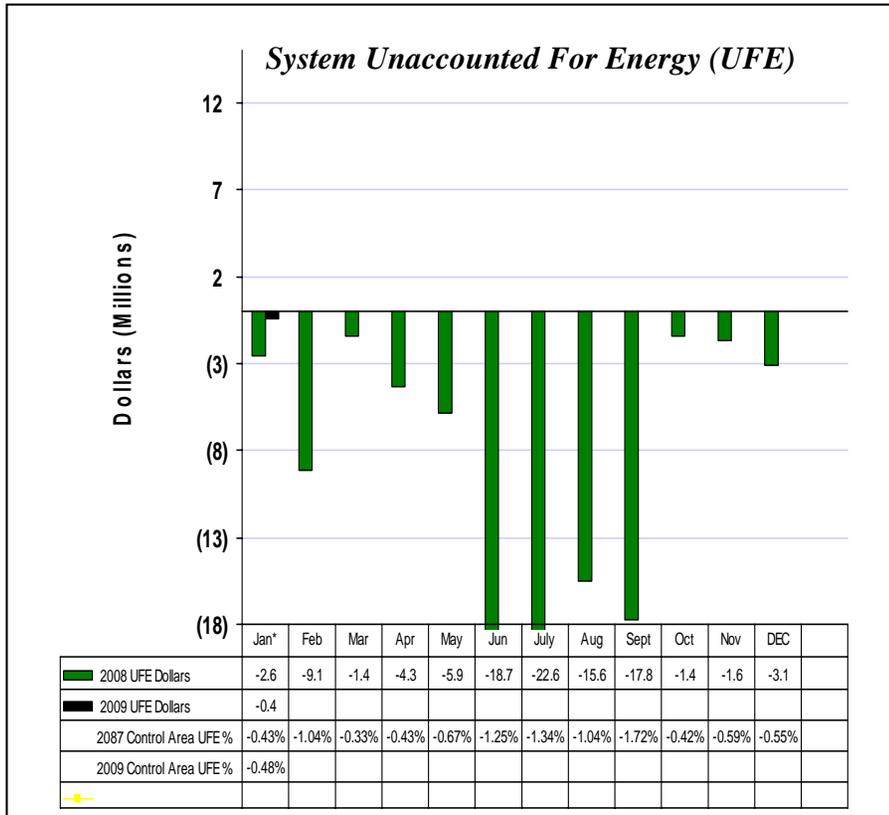
There was one completed Mitigation Plan, in March, submitted to WECC for a violation of TOP-STD-007-0 that occurred on November 7, 2008.

### Frequency Disturbances



Frequency disturbances are result of a sudden loss of load or generation. ISO DCS violations are those losses of generation greater than 35% of our most severe single contingency (currently 402.5 MW), where the *area control error* (ACE) is not recovered within 15 minutes.

Note: April's 2009 values are cumulative up to April 20, 2009.



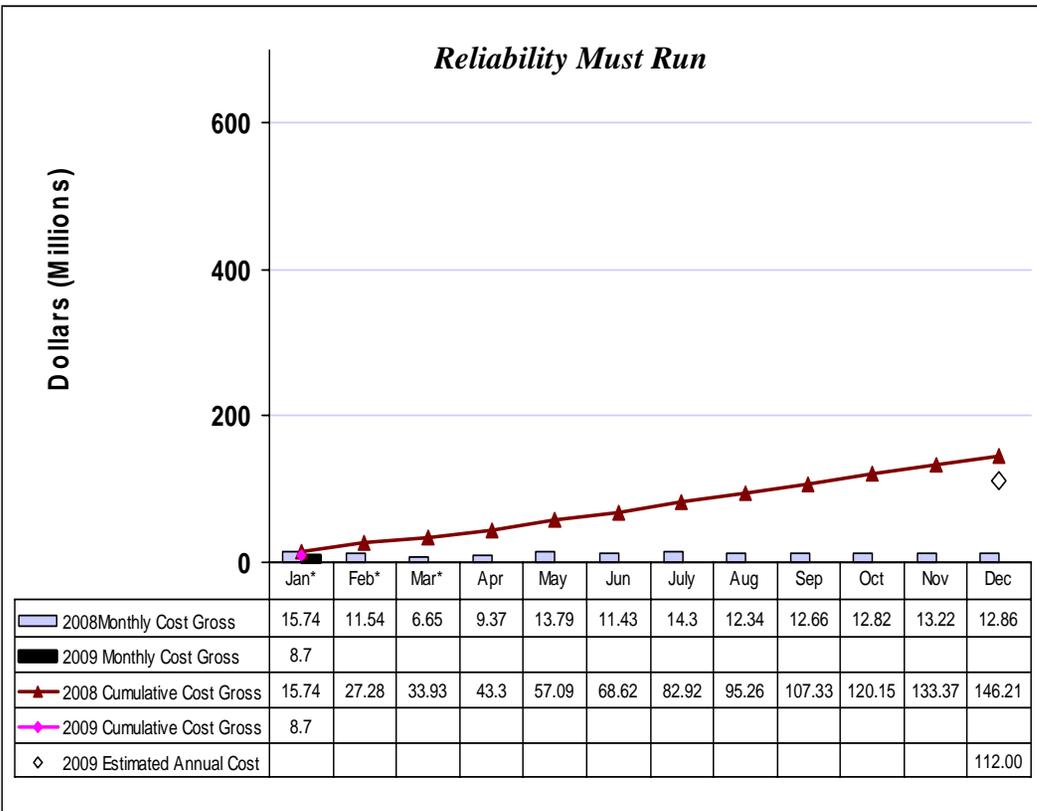
Operations Support continues to monitor changes in trends (both positive and negative) of *unaccounted for energy* (UFE) prior to and after preliminary settlement statements.

\*Amounts estimated for January 2009. There is a 75 day time lag before actual UFE data becomes available.

NOTE: UFE% is estimated at this time.

Neutrality number includes both the neutrality adjustment (CT-1010, CT-1401) & existing contract charge/adjustment (CT-1210)

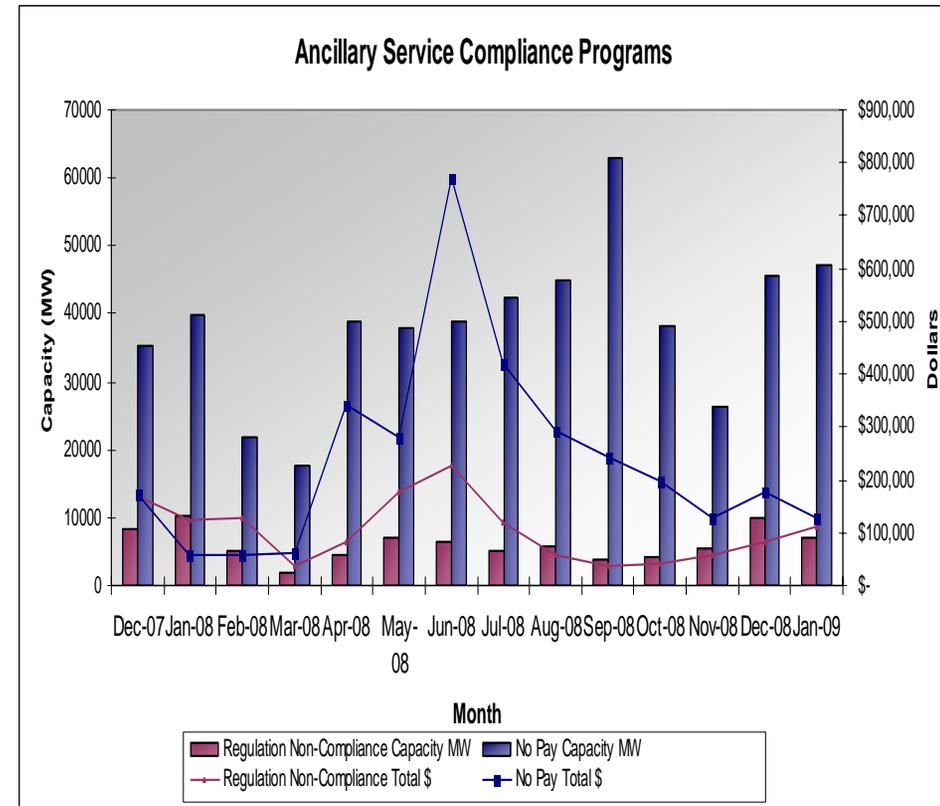
\*There is a 75 day time lag before actual neutrality data becomes available.



RMR decreased in 2009 to 6 facilities; down from 10 facilities in 2008.

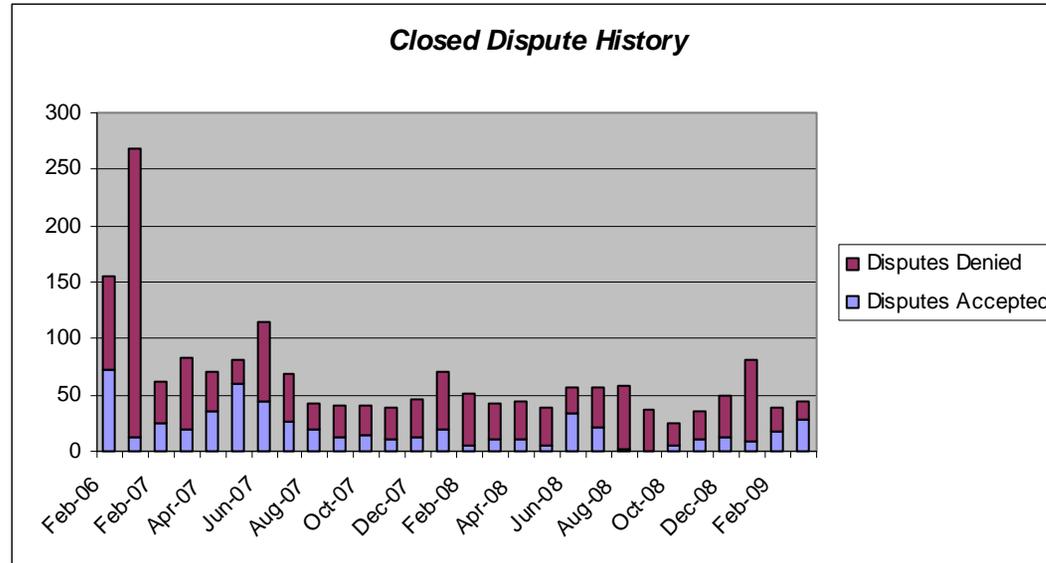
\* Adjusted invoice are not yet due from facilities .

Note: There is a 120 day lag time before final RMR data becomes available.



Operations Support monitors suppliers of ancillary services to ensure that ancillary service capacity awarded in the ISO markets is available in real-time. In December 2008, an average of 98 percent of scheduled regulation was available. An average of 96 percent scheduled spinning reserve and non-spinning reserve was also available in December. In January 2009, an average of 98 percent of scheduled Regulation was available. An average of 96 percent scheduled spinning reserve and non-spinning reserve was also available in January. The total value of rescinded payments was approximately \$259,090 for December and \$238,646 for January.

The graph shows the monthly totals of non-compliant ancillary service capacity (MW) for twelve months.



The graph above shows the volume of disputes from February 2006 through March 2009.

**Definitions**

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

**WECC Monetary Sanctions** - Issued when there has been a violation of a *Reliability Standard*. Monetary Sanctions are based on violation risk factors, violation severity levels and impact on the *Bulk Power System* as stated in the FERC Policy Statement on Enforcement and the NERC *Sanctions Guidelines*.

**Control Performance Standards 1 & 2.** - *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** - OTC violations are defined as those transmission path overloads that exceed WECC allowable time limits for stability rated (20 minute) and thermally rated (30 minute) paths.

**ISO Control Area Frequency** - 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 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** - The number entered manually by an ISO operator into real time market application (RTMA) to adjust for the energy deviation between RTMA and the energy management system (EMS).