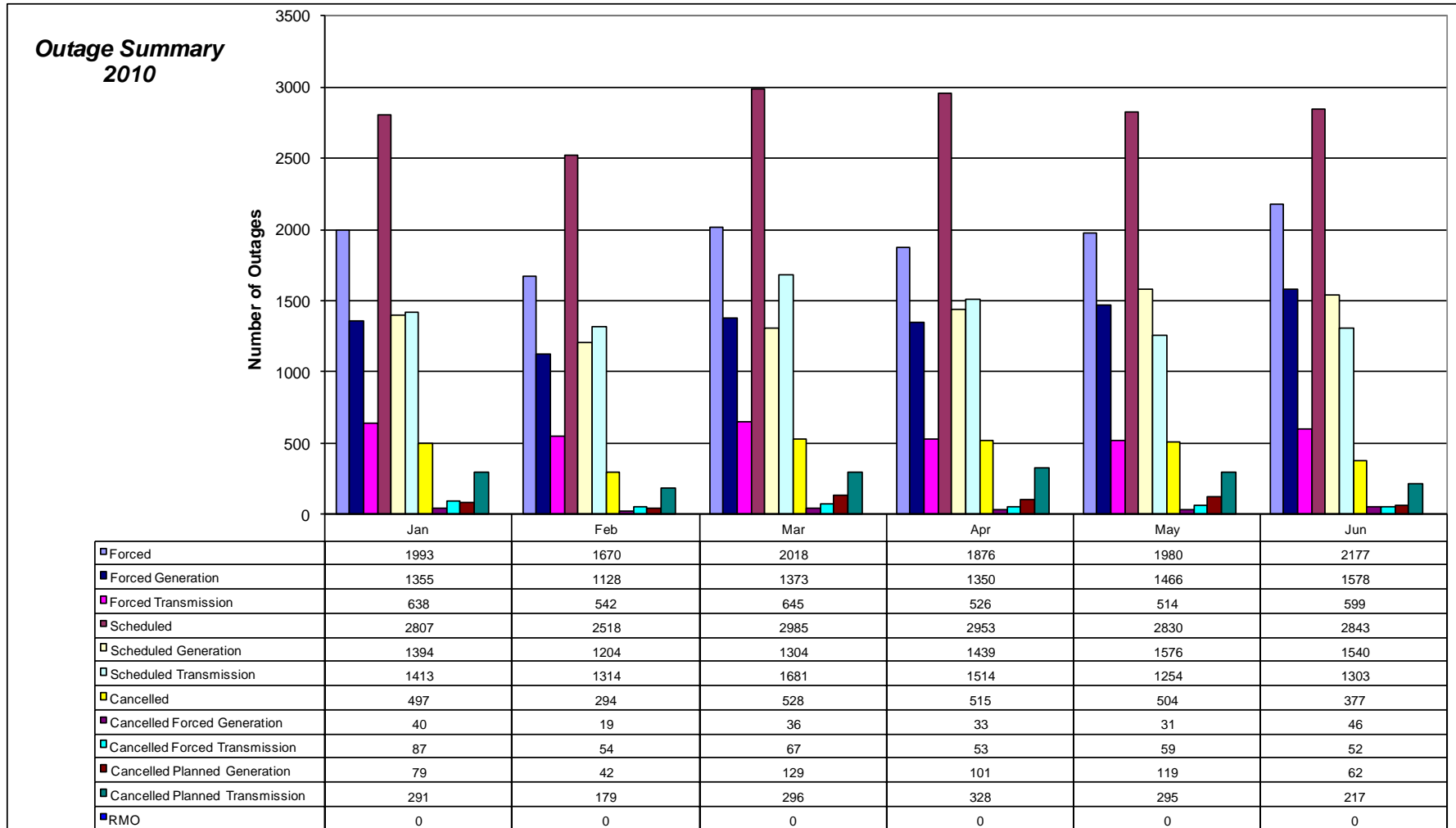
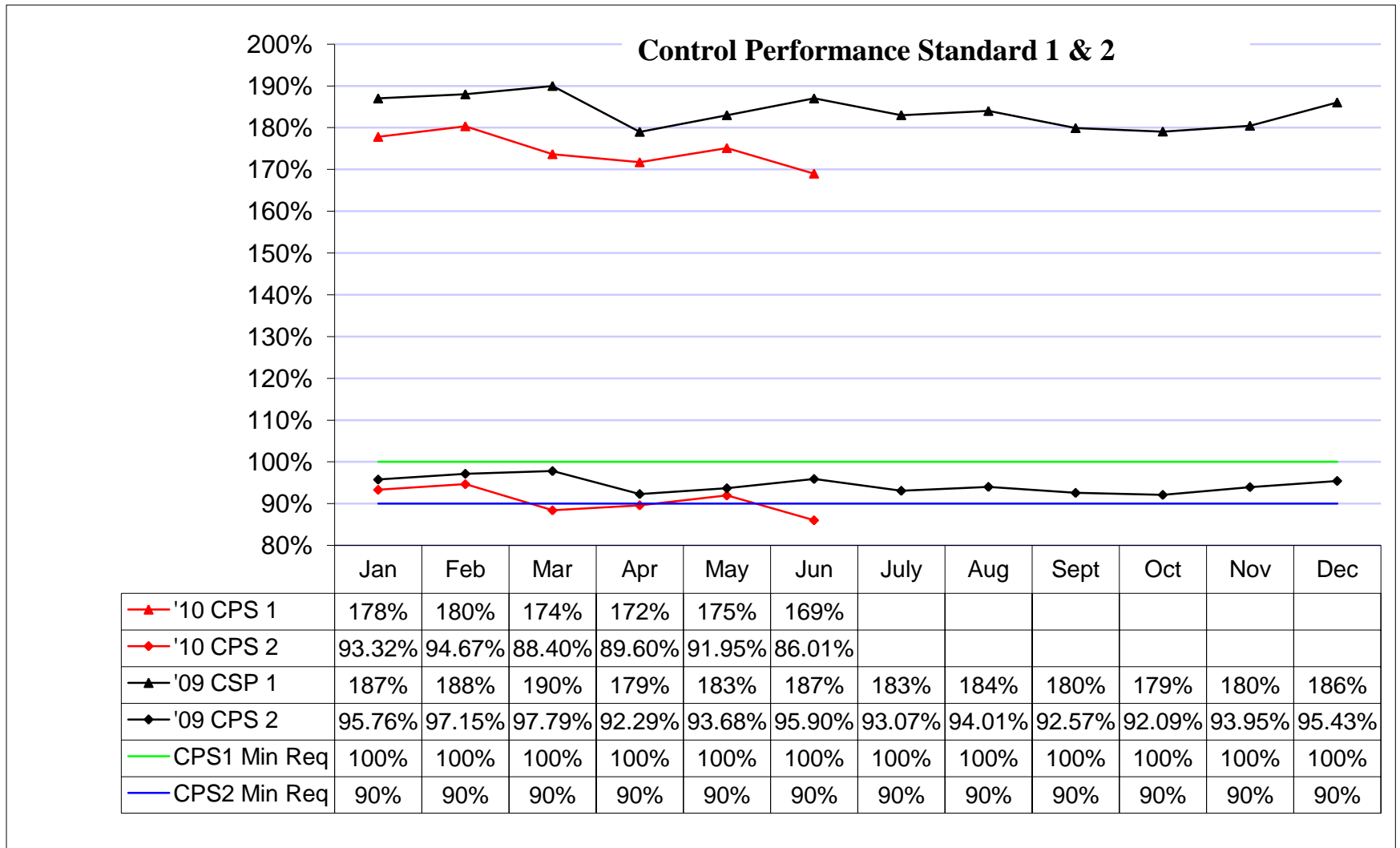


## Operations Highlights Report



The **Outage Activity Summary** shows the number of forced, scheduled and cancelled generation and transmission outages process 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.



**CPS1** is a statistical measure of area control error (ACE) variability. It measures ACE in combination with the interconnection frequency. The CPS1 formula was developed on a conformance scale, therefore 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. The CPS2 measure is impacted by the reliability based control field trial currently underway. The ISO has received a signed release of the CPS2 requirement from WECC to participate in the trial.

## Reliability Based Control



	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
▲ +/- 10 min	*	*	0	1	1	2						
◆ +/- 20 min	*	*	0	0	0	0						
▲ +/- 30 min	*	*	0	0	0	0						
— RBC Requirement +/- 30 min	30	30	30	30	30	30	30	30	30	30	30	30

Reliability Based Control (RBC) is an Eastern and Western Field Trial that supports the Interconnection frequency by requiring Balancing Areas to take action to limit the duration of operating outside a variable Area Control Error (ACE) bound that gets “tighter” as Actual Frequency deviates further from 60 Hz., during field trial reporting, which is required, but not considered a violation. The following actions are taken when exceeding Balancing Area Ace Limit (BAAL) --*high* or *low* for:

- **10 Consecutive Minutes** – Identify any period that exceeded BAAL high or BAAL low for 10 consecutive clock minutes.
- **20 Consecutive Minutes** – Provide a brief explanation of the circumstances related to any period that exceeded BAAL high or BAAL low for 20 consecutive clock minutes.
- **30 Consecutive Minutes** – Provide a detailed account of the event related to any period that s exceeded BAAL high or BAAL low for 30 consecutive clock minutes.

The field trial started in March of 2010 and the chart indicates the number of times the BAAL exceeds a high or low limit each month.

RBC standard took effect on 3/1/2010 – the Jan./Feb. control was monitored under CPS2.

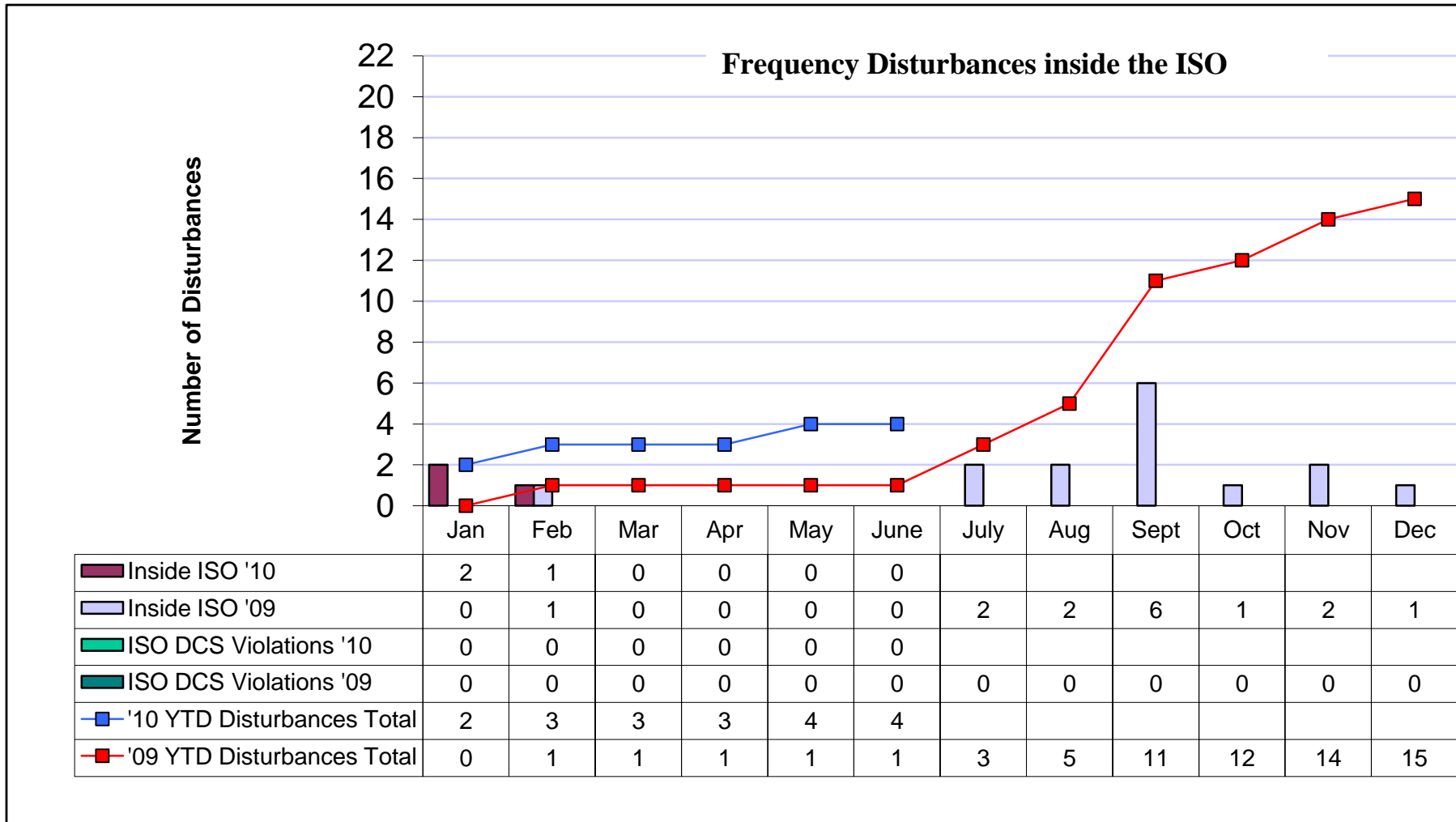
\* The CPS2 requirement for Jan./Feb. 2010 was reported on the previous page.

### Operational Transfer Capability Reportable Events



	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
<span style="color: red;">■</span> '10 Reportable Events	0	0	0	0	0	0						
<span style="background-color: black; color: black;">■</span> '09 Reportable Events	0	0	0	0	1	0	0	0	0	0	0	0
<span style="color: red;">◆</span> '10 YTD Reportable Events	0	0	0	0	0	0						
<span style="color: black;">●</span> '09 YTD Reportable Events	0	0	0	0	1	1	1	1	1	1	1	1

OTC reportable events are defined as path overloads that exceed WECC allowable time limits for both stability-rated and thermally-rated paths.



**NOTE:** This graph now depicts data for “Disturbances inside the ISO” for both '09 and '10 for appropriate comparison.

**Frequency disturbances** are results of a sudden loss of load or generation.

**ISO DCS violations** are those internal losses of generation greater than 35% of our most severe single contingency (currently 402.5 MW), where the ACE is not recovered within 15 minutes. Data provided is current through 6/31/10.

### System Unaccounted for Energy (UFE)



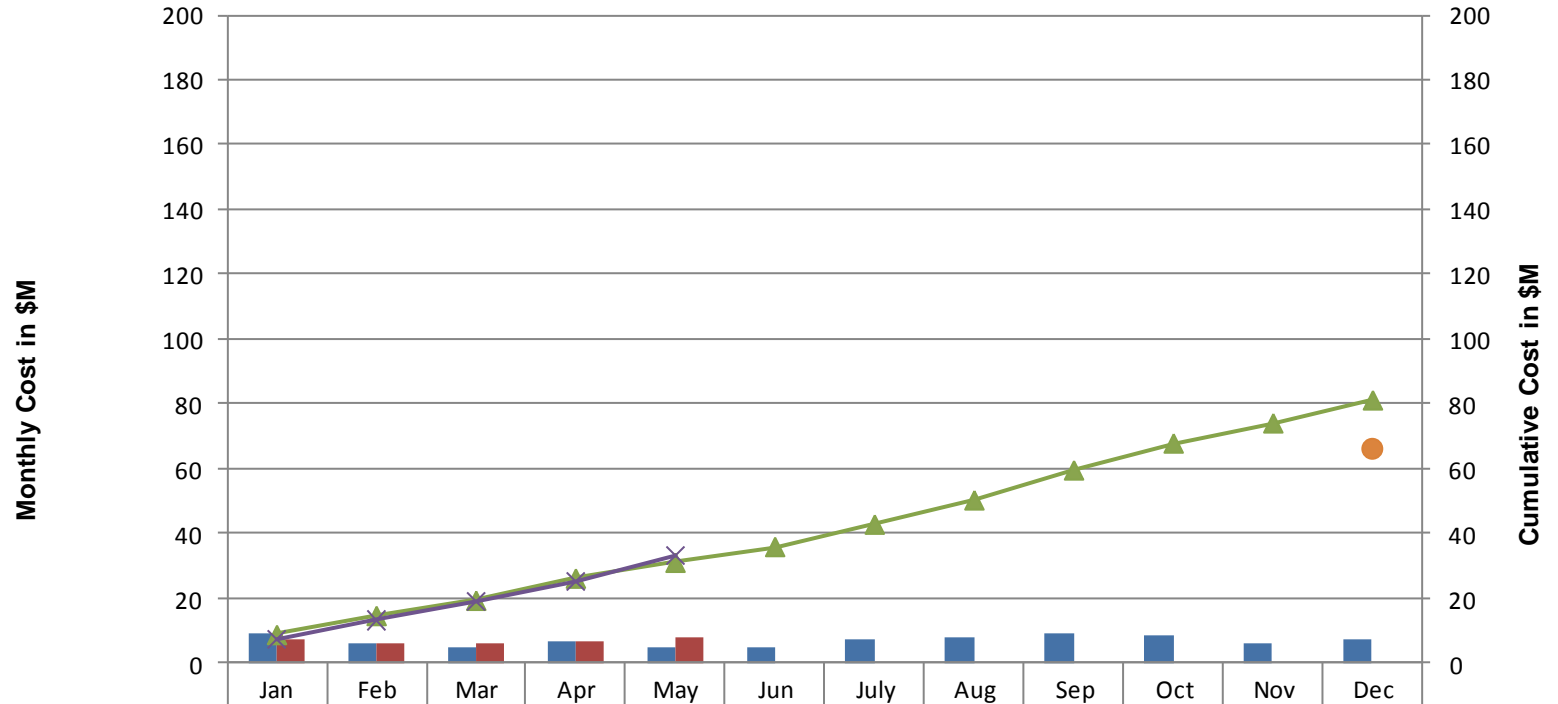
	Jan	Feb	Mar	Apr	May*	June	July	Aug	Sept	Oct	Nov	Dec
2009 UFE Dollars	-0.6	-1.6	0.5	9.3	4.1	2.0	-4.8	-6.3	-4.7	-3.0	3.4	1.1
2010 UFE Dollars	1.2	1.5	0.29	-1.6	6.7							
2009 Control Area UFE %	-0.50%	-0.48%	-0.45%	0.38%	0.19%	0.08%	-0.48%	-0.69%	-0.47%	-0.31%	0.35%	-0.01%
2010 Control Area UFE %	-0.01%	-0.32%	-0.37%	0.14%	0.67%							

\*Initial Amounts are estimated – there is a 38 business day time lag before actual UFE data becomes available.

\*\*Dec. dollar amount has been updated for 38 business days but the updated UFE % will not be available until March 8, 2010.

High Initial UFE numbers is mostly due to the timing of payment acceleration where we calculate statements at 5 business day after the trade date and scheduling coordinators must submit meter data prior to the calculation. Generation meter data can be polled on time however load meter data has to be estimated by either the scheduling coordinator or the ISO. The ISO estimates metered load based on the load schedule plus 3%. This can contribute to higher UFE numbers on the initial and will adjust down when we receive actual meter values which will be reflected in the 38 business days recalculated numbers.

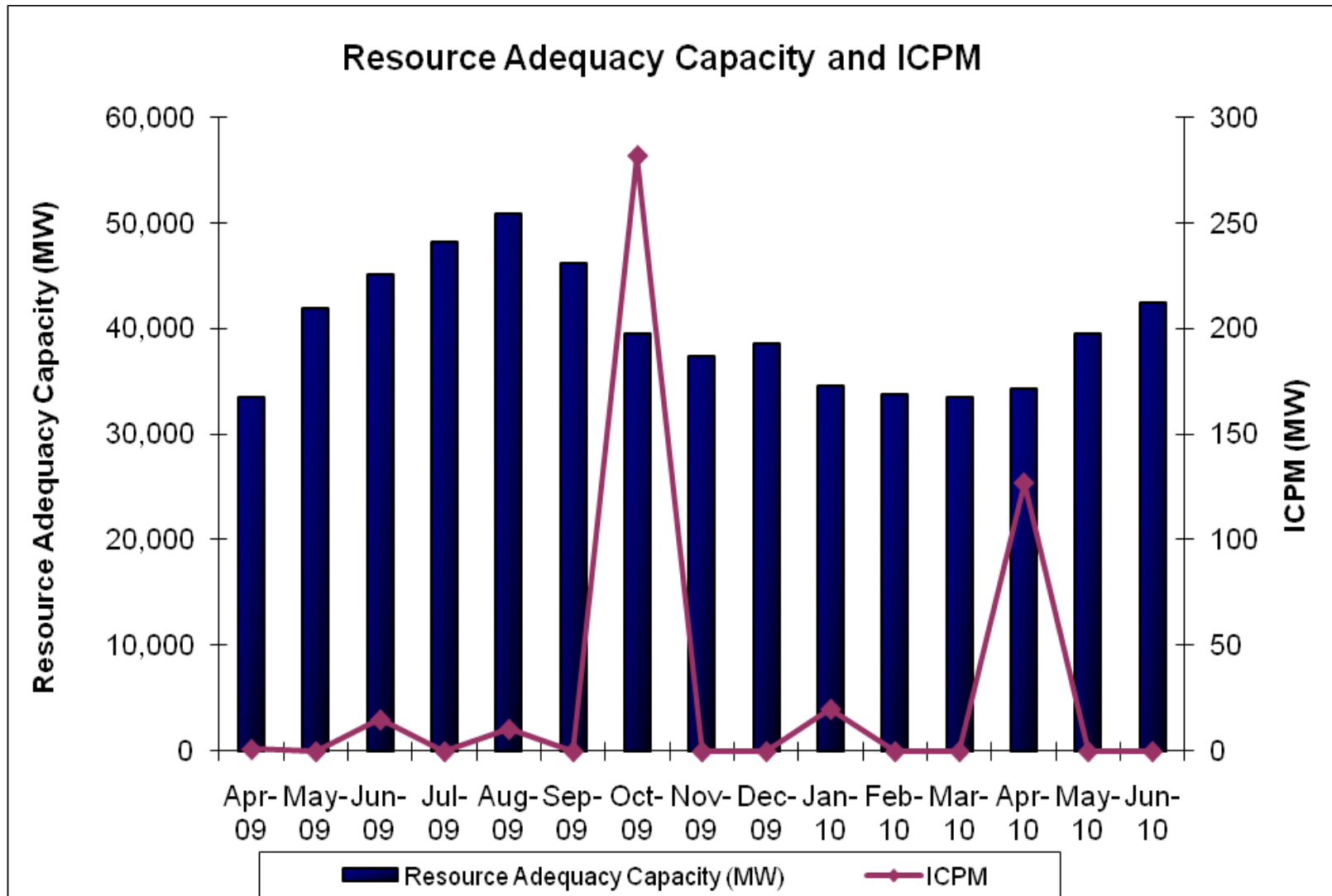
### Reliability Must Run (RMR)



	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
2009 Monthly Cost Gross	8.7	5.85	4.69	6.63	4.88	4.84	6.89	7.46	9.21	8.28	6.19	7.07
2010 Monthly Cost Gross	7.28	5.8	5.71	6.36	7.8							
2010 Estimated Annual Cost												66
2009 Cumulative Cost Gross	8.7	14.55	19.24	26.05	30.93	35.77	42.66	50.12	59.33	67.61	73.8	80.87
2010 Cumulative Cost Gross	7.28	13.08	18.79	25.15	32.94							

RMR decreased in 2010 to 4 facilities; down from 6 facilities in 2009.

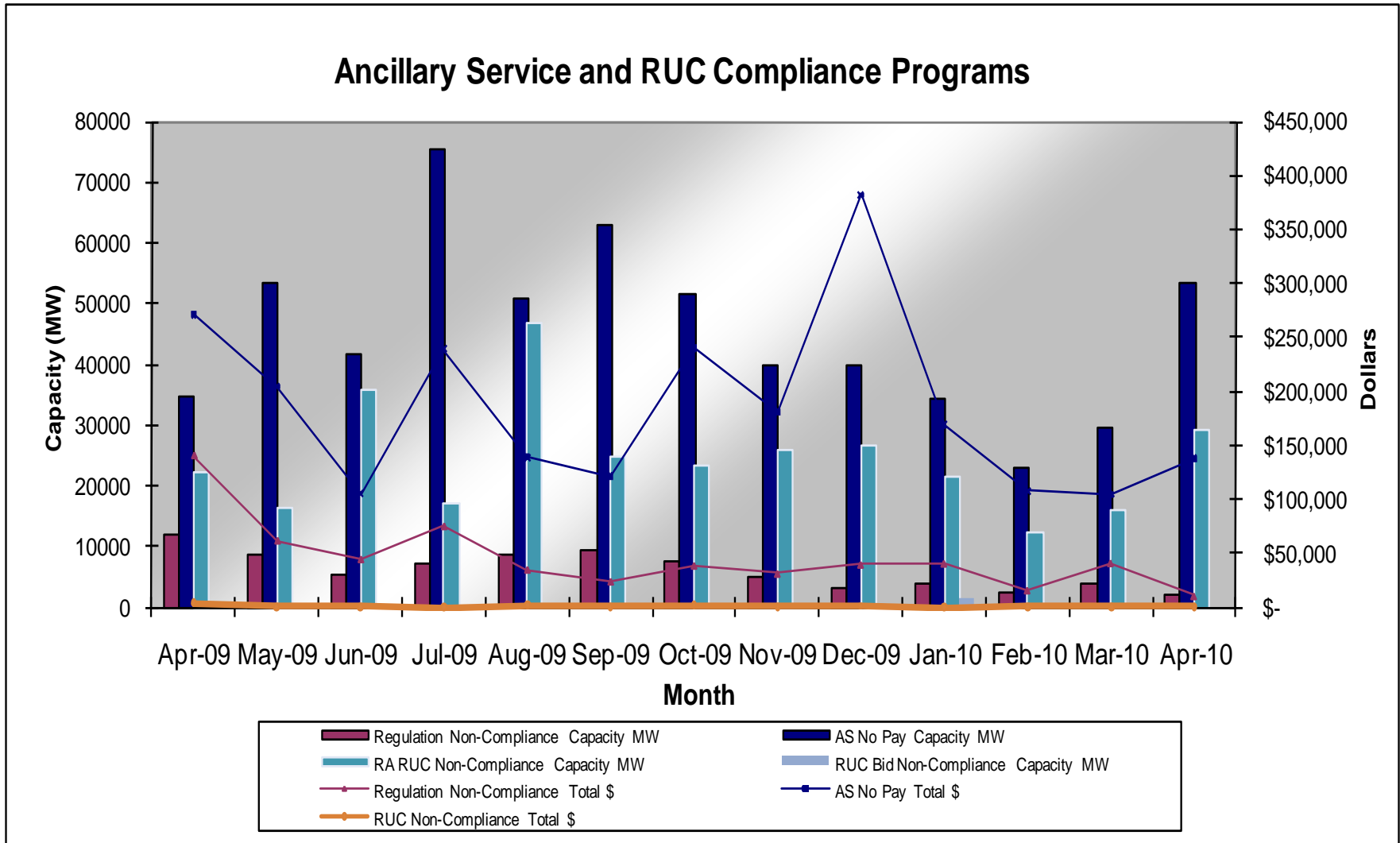
Note: There is a 120 day lag time before final actual RMR data becomes available.



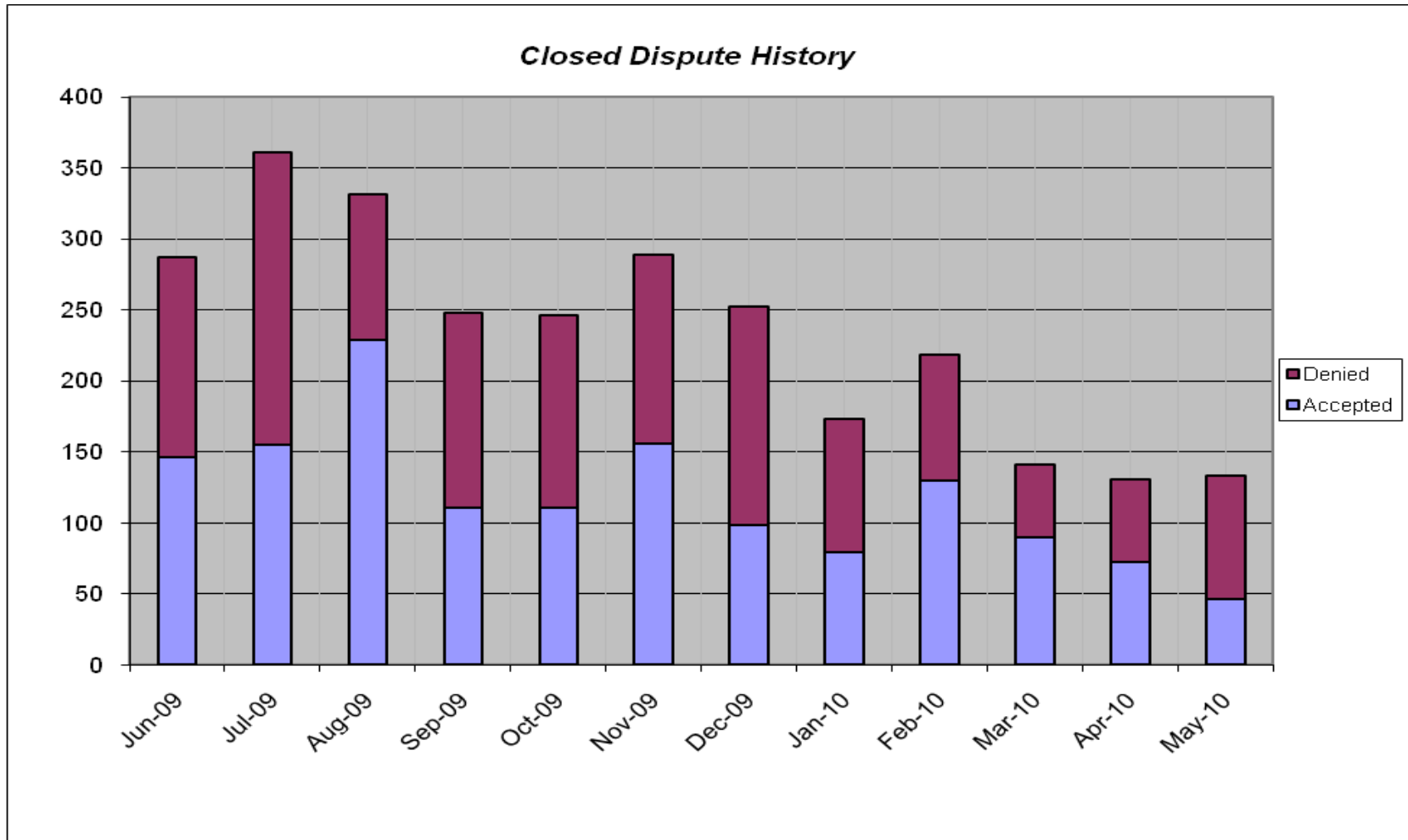
**Resource Adequacy Volume and ICPM Procurement**

The total amount of resource adequacy capacity from generators and system resources, provided to meet local and system requirements as demonstrated in submitted supply plans, was 39,513 MW in May 2010; and 42,469 MW in June 2010. The ISO procured 127 MW of interim capacity procurement mechanism (ICPM) capacity during April for local transmission reliability. The ICPM monthly report is located at: <http://www.caiso.com/237a/237ac93c2a6c0.html>





**Ancillary Services and Residual Unit commitment (RUC) Compliance Program:** shows the monthly totals of non-compliant ancillary service capacity (MW) and non-compliant RUC capacity (MW). Market Services monitors suppliers of ancillary services and RUC to ensure that ancillary service and RUC capacity awarded in the ISO markets is available in real-time.



In recent months, there has been an overall noticeable decline in the number of disputes submitted since the peak after implementation of the new market. The decline can be attributed to several different factors, including the implementation of variance fixes in IFM, RTM and MQS, the refinement of post-process data capture, fill and transfer efforts, and the continued education of scheduling coordinators and settlements personnel about the new market. The largest sources of disputes received since the beginning of 2010 relate to data pull issues and recently implemented functionality.

**Definitions** The following are definitions of the items and or systems covered in the operations performance scorecard section of this report:

**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. CPS2 is no longer a compliance measure: the ISO received a written release from WECC.

**Reliability Based Control (RBC) Field Trial - Reliability Based Control (RBC)** is an Eastern and Western Field Trial that supports the interconnection frequency by requiring balancing areas to take action to limit the duration of operating outside a variable area control error (ACE) bound that gets "tighter" as actual frequency deviates further from 60 Hz. The following actions are taken when exceeding balancing area ace limit (BAAL)-*high* or *low* for:

- **10 Consecutive Minutes** – Identify any period that exceeded BAAL high or BAAL low for 10 consecutive clock minutes.
- **20 Consecutive Minutes** – Provide a brief explanation of the circumstances related to any period that exceeded BAAL high or BAAL low for 20 consecutive clock minutes.
- **30 Consecutive Minutes** – Provide a detailed account of the event related to any period that s exceeded BAAL high or BAAL low for 30 consecutive clock minutes.

**Operating Transfer Capability Reportable Events - OTC Reportable Events** 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 reportable events 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.

**Residual Unit Commitment (RUC) Rescission Payments** – The rescission charge for a RUC award rescinds the RUC capacity payments to the extent that the resource with a RUC award does not fulfill the requirements associated with the award. The rescission charge rescinds RUC capacity payment for generating units, dynamic system resources, and non-dynamic system resources when one of the following occurs:

- Generating unit and dynamic system resource – RUC capacity is availability-limited undispachable due to an outage or rerate, is undelivered outside of a tolerance band, or ineligible for a RUC award because it is a resource adequacy resource
- Non-dynamic system resource – RUC award is adjusted due to differences between RUC award amount and E-tag amount

Additional information and examples can be found in the business practice manual for compliance monitoring.