Outage Summary 2010



RMO





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.

NOTE: Effective March 1, 2010: CPS2 compliance waived during ISO participation in the WECC Reliability Based Control (RBC) proof-ofconcept 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., 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 January/February control was monitored under CPS2.

* The CPS2 requirement was reported on the previous page.

Note: The October, November and December upticks in the RBC is directly attributable to field trial where the bands of control have been widened.



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

Frequency Disturbances Inside the ISO



NOTE: This graph now depicts data for "Disturbances Inside 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. Disturbances outside the ISO will not be tracked after 2008. Data provided is current through 12/31/10.

System Unaccounted for Energy (UFE)



*Initial amounts are estimated – there is a 31 business day time lag before actual UFE data becomes available.

High initial UFE numbers is mostly due to the timing of payment acceleration where we calculate statements at five 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 load schedule plus 3%. This can contribute to higher UFE numbers on the initial run and will adjust down when we receive actual meter values which will be reflected in the 38B recalc numbers.



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 Capacity and ICPM

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, were 36,030 MW in November and 37,116 MW in December. The ISO procured no interim capacity procurement mechanism (ICPM) capacity during November and December. The ICPM market notices and monthly reports are 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.

NOTE: Ancillary service no pay total \$ - The rate of spin and non-spin non-compliance from May-July 2010 was 4% of procured operating reserve. This is consistent with the average non-compliance rate for the past 12 months which is an average of 4%. The increase in no pay revenues from May-July 2010 is due to an increase in the cost of procuring spin and non-spin. Market Monitoring's 2nd quarter report, Section 1.4, states that the cost of ancillary services were 57% higher in 2010 2nd quarter when compared to 2010 1st quarter.

Closed Dispute History



In recent months, there has been an overall 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 integrated forward market, real time market and market quality system, 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.