Calpine Comments on
Release Phase 1 – Transmission Constraints.

First and foremost, Calpine appreciates the focused response to this issue that has been developed by the CAISO. Data release is, and has been a substantial point of frustration for Calpine. A phased approach is proper, but Calpine suggests changes to the scoping of the phases.

In a general sense, Calpine believes that the CAISO should adopt a refreshed approach to the release of data that would allow competent third parties to replicate the results of CAISO models. This particular issue was a large focus in the recently completed "Stakeholder Symposium" in which many participants voiced concerns over the "secrecy" of CAISO data and the resultant inability of competent third parties to reproduce the day-ahead and real-time LMP results even with thousands of Monte Carlo variations.

The heart of the frustration is not with the expertise of the external modelers, nor is it with small differences that may exist in the internal workings of the models themselves. Rather, it is based in the non-public and therefore impenetrable data that the CAISO uses as parameters or constraints in its modeling such as:

Transmission Operating Procedures
Generation Operating Procedures
Enforced and Unenforced Constraints
Transmission Outage data
Etc, etc.

With a refreshed view (particularly in the light of the approved and operating LMPM systems) we hope the CAISO can see a path to greater transparency.

In regard to the narrower topics of this phase, we offer the following comments. Overall, we are encouraged by the plan that has been described by the CAISO and encourage CAISO to implement that plan as soon as possible. However, Calpine respectfully suggests that four areas of changes are needed in the plan.

1. Transmission Outage Information

The publication of all transmission outage information within a reasonable time window is critical for market evaluation and simulation. All known outages should be posted to OASIS as soon as available (including the RT posting of real-time outages.) However, Calpine is disappointed that the issue of outage data release is now scheduled to be resolved in Phase 3 – only after consideration of convergence bidding data release.

It seems odd and indeed, in direct conflict with the intention of FERC Orders that the CAISO has staged the release of basic and fundamental data to some indeterminate and unscheduled Phase 3. We would prefer if you didn't.

In previous communications, CAISO stated all transmission outage info that is available to CAISO has been posted on CAISO website (through a secure website). However, many transmission outages apparently known to CAISO are not published. For example, many outages beyond 2 weeks (the current CAISO transmission outage publication window) are incorporated into the monthly auction model. We suggest that CAISO investigate the issue and identify a solution to publish transmission outage info as much further into the future as possible.

2. Constraint Rollout Process

We cannot comment on your paper without reflecting on our most recent rollout of the new SCE constraint. First and foremost, Calpine fully supports the CAISO's intention of building necessary capacity constraints into the IFM. In order to reduce the frequency, and the number of Exceptional Dispatches that occur on the CAISO system, we must recognize these non-energy constraints as we optimize the system.

However, we hope that we never again experience that which occurred the week of November 9. Such structural, market-price discontinuities do nothing to develop market confidence.

Interestingly, however, the rather dramatic price changes that resulted from the operation of the SCE constraint seem to substantiate Calpine's long-standing position that Exceptional Dispatches were muting locational price differences and suppressing market prices.

As such, we encourage the CAISO to continue to incorporate capacity constraints into the IFM. But please, do so in an organized and predictable manner. As such we offer the following procedural steps that should be undertaken before implementation:

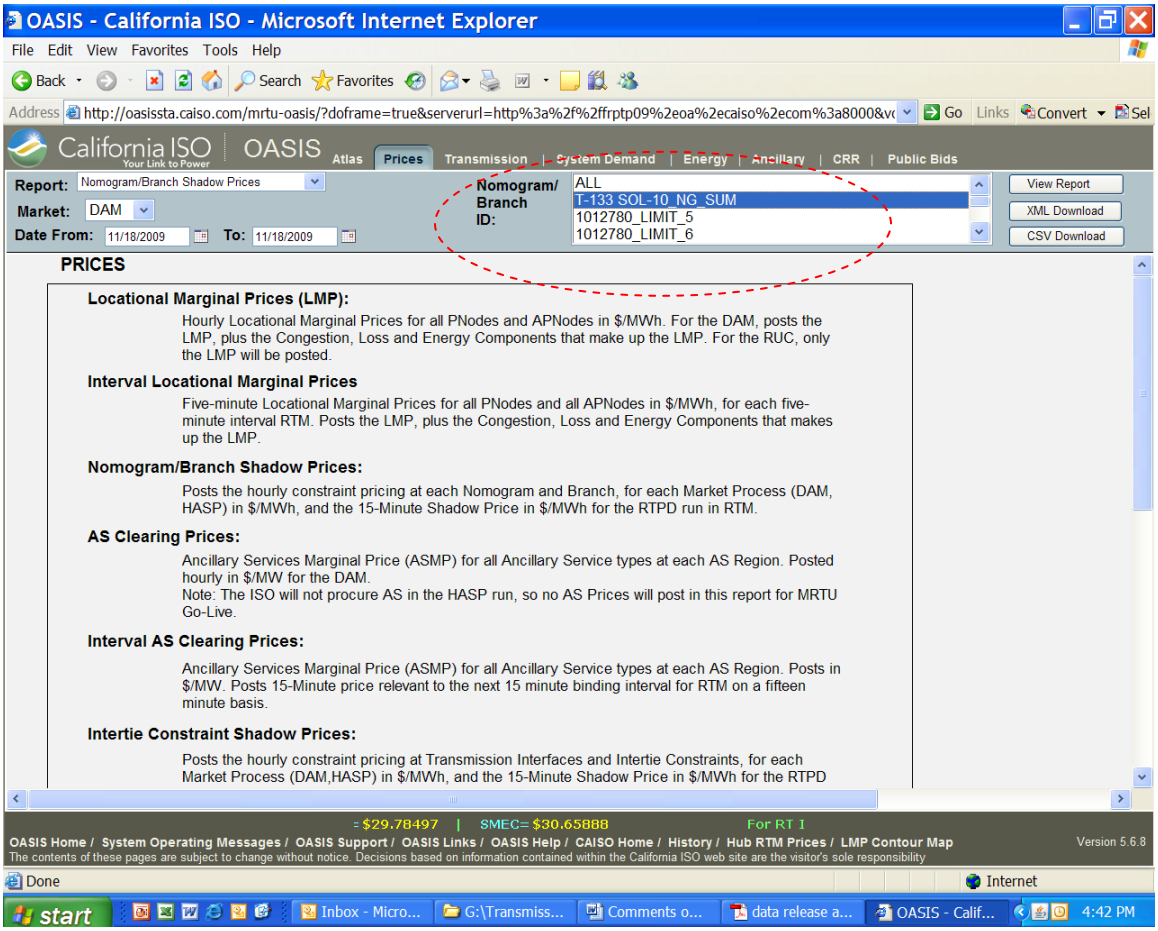
- The CAISO should publish a complete list of capacity constraints that have been implemented in RUC and will be converted into IFM
- The CAISO should publish a definition of any capacity constraints to be included in the IFM
- The CAISO should publish the timeline to incorporate all capacity constraints into IFM.
- The CAISO should release market notices in advance of any future capacity constraints as they are converted into IFM market

3. A True and Complete Catalog AND Description of all Constraints

On page 17 of 25 of the CAISO report " Phase 1: Transmission Constraints", the CAISO stated that "Currently, the ISO provides a complete list of enforced and unenforced constraints and contingencies in the data it provides under non-disclosure agreement in the Congestion Revenue Rights FNM (CRR FNM)." Simply put, we do not find this to be technically or conceptually accurate, and indeed is misleading.

The CAISO has been routinely enforcing constraints, including contingencies, nomograms, flowgates, branch groups, and interfaces that are not part of the FNM. Indeed, the CAISO recognizes that many of them are not in FNM, such as nomograms. In order for market participants to understand and respond to market signals, we request CAISO to publish a complete list of constraints. This listing should include sufficient detail and description to allow a competent modeler to replicate the results of the CAISO.

Moreover, many constraints that have been actively monitored by CAISO for months, and even binding in the past, and currently posted on CAISO oasis are not in the FNM either (e.g., 1012780_limit_5 as shown in the screenshot below.)



4. Real Time Flows on All Enforced or Monitored Constraints

   This is important info for real time market participation. However, it is not covered in the issue paper. We suggest that real time flows on all enforced/monitored constraints should be added to the issue list. This is not an urgent issue and can be resolved in later phase.