MSG Retrospective
Experience and Reactions
March 14, 2011
Experience with MSG

- Entered MSG with Eyes-Wide-Open
  - Early Adopter
  - Knew about design limitations
    - Exhaust MRT before allowing upward transitions
  - Simulations signaled certain problems
    - SLIC incorporation
    - ADS signaling chin-scratchers

- Fears and limitations quickly came to roost in RT Market
  - Hopefully many of the issues have been resolved
  - We hope to rejoin

- IFM dispatch was rational and reasonable.
  - Starts, stops MRT, MDT reasonable
  - Transitions reasonable
  - Dispatch profile was non-traditional, but rational
    - Christmas-light dispatch, rather than 6X16.
MSG Surprises

- Unexpected and incredible level of RT hand-holding
  - Distractions for RT operators became intolerable
  - Continuous process of discovery
    - Highlight flaw / nonsense / goofy issue
    - Identify a fix
    - Promote fix to operations

- Daily hour-long phone calls with CAISO designers and Calpine operators
  - Many issues arose that were never revealed in sims
  - Reviewed Calpine logs
  - Discussed interworking of software
  - Very productive, but continuous modifications

- Calpine under-appreciated intra- and inter-plant interactions
  - The complex bid relationships within a set of configurations
  - Complexity was multiplied with 4 CCGTs in operation
  - Eventually dropped all but one unit
Most Significant Problems

- Inability to economically cycle units
  - Merchant CCGTs regularly cycle off from ~HE 0 to HE 7 (MDT 6 hours)
  - Economic dispatch held them on line HE 1 or 2
  - RTPD 5-hour look ahead insufficient to “see” next start
  - SLIC Normal cards were ineffective at shut down
  - Vast majority of our problems were from HE 22 - HE 2

- Losses from inability to meet next-day IFM schedules
  - HE 1 or HE 2 Dispatch and MDT prohibit morning starts
  - RT energy exposure in HE 7/8 significant compared with revenues from HE 1/2.

- ADS / Communications / Instruction Anarchy
  - ADS dispatches mismatched state
  - Incorrect or missing shutdown, transition or start instructions
Other Problems

• Price dislocations
  - RTPD is source of transition instructions
  - RTD is the source of settlement
  - Transitions into low prices were often due to RTPD/RTD differences
  - Only know that because we were told, RTPD is not released

• Confusion on BCR
  - MSG and non-MSG units handled differently
  - Substantial claw-backs after mistaken CAISO settlements
  - Proposal to separate BCR in sequential markets will help

• Other stuff
  - SIBR data input snafus
  - SIBR validation issues
  - Unexpected early starts (icing issues)
Summary

- Calpine still committed to MSG
  - Turning over dispatch to CAISO is our objective
  - Eliminating ALL self-scheduling is feasible

- Anxious to hear that issues have been addressed and resolved

- When we return, it will be gradual

- Thanks!