



California ISO
Your Link to Power

California Independent
System Operator Corporation

Gas-Electric Coordination Issues Stakeholder Meeting

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Agenda

- **Open and Introductions**
- **Description of FERC Order**
- **Summary of actions and responses to the FERC Order by other ISOs and RTOs**
- **Summary of CAISO's discussions with gas transmission operators**
- **Inputs and thoughts on**
 - Do the concerns raised in the FERC Order exist in the West?
 - What actions should the CAISO take to improve gas-electric coordination during contingency?
 - What current procedures are working well?
 - Next Steps

CAISO Gas Communications and Coordination

- **Close coordination between gas transmission, suppliers and the CAISO are imperative to running a reliable Grid for California**
 - We have evolved to potential “Best in Class” communications in the last 8 years
 - Our independence gives us the capability to talk with gas transmission operators, suppliers, and end users
 - Key to these discussions occurring are Non-Disclosure Agreements with Gas Transmission Operators

CAISO Gas Communications and Coordination

- **We meet twice annually to discuss:**
 - Inventories on hand
 - Projected supplies
 - Work updates
 - Additions to the system
 - Outages that could impact power plant capacity
 - Updates on work completed by inspections
 - Weather forecast



CAISO Gas Communications and Coordination

- **Day to Day Communications focus on:**
 - Changes to the electric grid from day ahead load forecast
 - Extreme weather conditions forecast
 - Heat Wave
 - Cold Spell
 - Loss of major facilities that could impact supplies to generators which in turn could impact unit capacity
 - Local supply issues when gas turbine units are started and remain on for extended periods of time

CAISO Gas Communications and Coordination

- **The Market Interface**
 - Initially a challenge
 - We now forecast gas usage with a high degree of accuracy based on:
 - Next day schedules from Scheduling Coordinators
 - Heat rates provided by Generator Owners
 - Forecast is updated twice each day

Estimation Accuracy

The following chart shows CAISO estimate versus readings taken from one of the gas companies.

The largest errors occur in regions where there are large load changes from one hour to the next (HE 07, HE 22, HE 23 & HE24).

