# Stakeholder Comments

## Aliso Canyon Gas Electric Coordination Issue Paper

| Submitted by | Company | Date Submitted |
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Southern California Edison (SCE) presents comments on the California Independent System Operator's (CAISO) March 17, 2016 Issue Paper[1]. SCE stresses the following key points:

1. **The CAISO should be prepared to implement a process conforming to prescribed gas tolerances, by the beginning of June 2016**
2. **Southern California Gas (SoCalGas) is integral to any proposed solutions**
3. **The CAISO needs to define a clear and predictable process from start to finish**
4. **The CAISO needs to define the process when actual load deviates substantially from Day Ahead forecast**

### The CAISO should be prepared to implement a process conforming to prescribed gas tolerances, by the beginning of June 2016

Implementing by the beginning of June 2016 requires the CAISO to promptly inform the Federal Energy Regulatory Commission (FERC) of this issue and obtain any waivers or authority necessary for implementation. In addition, SCE advises extensive engagement of the Department of Market Monitoring to enable any implementation. The CAISO should ensure that it initiates any actions in a timely manner to be able to implement a clearly defined plan by June.

### Southern California Gas (SoCalGas) is integral to any proposed solutions

Gas constraints can only be determined and communicated by SoCalGas, thus, any physically feasible solution cannot be achieved without SoCalGas definition and communication of the constraints to the CAISO – and preferably noncore shippers on the SoCalGas system. While

[1] http://www.caiso.com/Documents/IssuePaper_AlisoCanyonGas_ElectricCoordination.pdf

SCE understands that the scope of this stakeholder process is on CAISO's efforts to minimize gas imbalance or resulting impacts, no solution proposed within this process will be optimal or perhaps even feasible, without clear definition and coordination on the role of SoCalGas. A further prerequisite to any solution is that SoCalGas will have to coordinate with every Balancing Authority (BA), such as LADWP, and not just with the CAISO.

**The CAISO needs to define a clear and predictable process from start to finish that is based on the defined gas tolerances from SoCalGas for the operating day**

SoCalGas should first define the gas tolerances for the operating day[2]. The CAISO and LADWP will then have to be able to model these constraints in their full network model optimizations. The CAISO proposed a two day ahead (TD-2)[3] to inform gas procurement. The CAISO should clearly define how it will provide the TD-2. Specifically, how will the CAISO incorporate SoCalGas provided tolerance constraints into the TD-2?[4]
This should be followed by an explanation of how the TD-2 will be translated into the IFM. Specifically, how will the CAISO maintain gas tolerance constraints within the IFM?[5] Will the TD-2 be a separate process or integrated into the IFM?

Continuing, how will the CAISO constrain deviations in RT to maintain the gas tolerance constraints honored in the IFM?[6] How will the CAISO and stakeholders work with the CAISO tools to constrain deviations within the prescribed gas tolerances?

Whichever methodology is utilized, the CAISO will have to ensure that the gas demand that results from the electric grid optimization outcome is approved by SoCalGas. SCE recommends that this stakeholder process first address such a physical feasibility plan, starting with the DAM and continuing to RTM. The CAISO should determine how it will maintain DAM operating limits in the RTM. The CAISO should also account for how it will deal with deviations in RTM. Only after all details of the physical feasibility are derived with SoCalGas, can any discussion of financial implications be reasonably conducted.

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[2] Daily burn rate, hourly change in burn rate, etc. Only SoCalGas can provide such information and without considering such information, no proposed solution is feasible.
[3] www.caiso.com/Documents/Agenda_Presentation_AlisoCanyonGasElectricCoordination.pdf
[4] How will the TD-2 translate into gas volumes and be incorporated into the IFM? Will the results of the TD-2 be self-scheduled or bid into the IFM?
[5] Will this involve changing the DAM timeline?
[6] Among potential means to meeting the SoCalGas defined limits are usage of outage cards, a global constraint on the CAISO system that can be changed to maintain grid performance, or derating of resource ramp rates. Derating of resource ramp rates may be feasible due to the nature of the gas system. The gas system is an inertial system that is adversely impacted by large changes in hourly gas demand. Derating ramp rates should result in more moderate changes in hourly gas demand, and therefore less stress on the gas system. The challenge with derating ramp rates is that it will result in less flexibility for the electric grid.

**The CAISO needs to define the process when actual load deviates substantially from Day Ahead forecast**

Even given a well designed process, there will be days when forecast error may result in a violation of gas tolerance constraints[7]. The two possible scenarios would be:

1. Actual load much lower than DA forecast – With too much gas burn prescheduled, will the CAISO follow normal overgen protocol? Does the CAISO anticipate designing a new protocol for this exception to accommodate gas tolerance constraints and maintain prescheduled gas burn?
2. Actual load much higher than DA forecast – With insufficient gas for generation, will the CAISO follow normal system emergency procedure as defined in its existing tariff or design a new procedure? Will a SoCalGas declaration of a system emergency automatically define an electric system emergency (as defined by existing CAISO tariff) as well?

[7] Another key concern that should be quickly addressed is the mismatch that exists with the timelines to procure and schedule gas, and the timelines to bid and close CAISO's IFM. U.S. gas markets transact almost all physical gas before the CAISO-connected generators receive their DAM schedules from CAISO. This creates considerable forecast risk in each generator's assessment of the amount of gas that it should procure for the operating day. A process needs to be implemented that provides more certainty to generators on the amount of gas they should procure each day. In the absence of such a process, each Scheduling Coordinator's forecast error will create additional flexibility constraints for the CAISO to manage, and unnecessarily increases the risk to electric grid reliability.