



Agenda for the CAISO Aliso Canyon Technical Conference September 16, 2016

Opening Remarks

- 10:00 am – 10:15 am Greeting and Opening Remarks
- 10:15 am – 10:45 am Opening presentation by CAISO and its Department of Market Monitoring

Discussion

Each of the following discussions will be led by Commission staff, with questions on each topic to be raised by staff and interested attendees. No attendee should expect to make any formal presentation during these discussions; however, attendees may participate in topics of specific interest, including commenting on what others have said or responding to questions from staff, time permitting. The morning's discussion will focus on lessons learned regarding the efficacy of and the need for retention of any of the tariff provisions accepted in the June 1 Order. Attendees will have an opportunity to discuss other, longer-term solutions that may be necessary during the afternoon session.

10:45 am – 12:45 pm Discussion on the measures accepted in the June 1 Order

- 1) How successful, overall, have CAISO's efforts been to address the limited availability of Aliso Canyon?
- 2) Of the measures accepted by the Commission, have any not worked out as planned and why? Has CAISO used all the measures approved by the Commission to date and if not, why?
- 3) What has been the greatest challenge to maintaining reliability given the limited availability of Aliso Canyon? Please comment on the adequacy of the measures accepted in the June 1 Order in addressing that challenge.
- 4) What has been the overall impact of the limited availability of Aliso Canyon on electricity markets? How has it affected the level and volatility of prices in the

various CAISO markets?

- 5) How have the increased gas cost adders for commitment costs, generated and default energy bids affected a resource's ability to recover natural gas costs? Has CAISO observed any change in generator bidding behavior or market volatility that may be a result of permitting these adders? In particular, are resources including the higher gas cost adders in their bids and does this behavior reflect periods of higher natural gas prices or natural gas price volatility?
- 6) Have resources received any gas cost relief through non-CAISO mechanisms, such as the Southern California Gas Company (SoCal Gas) settlement, which allows SoCal Gas to forego imbalance penalties in certain situations?
- 7) Has the limited availability of Aliso Canyon and/or the increased gas adders affected natural gas prices on the SoCal Gas and San Diego Gas & Electric Company (SDG&E) systems? Has the limited availability of Aliso Canyon and/or the increased gas adders affected natural gas prices beyond the SoCal Gas and SDG&E systems?
- 8) Has CAISO observed any impact on the ability of neighboring electric systems to participate in CAISO's various markets as a result of the measures accepted in the June 1 Order?
- 9) Has CAISO used its tariff authority to implement the gas constraint or reserve internal transfer capability? If so, what were the reliability and market impacts of these actions, *e.g.*, uplift? Has CAISO developed a process for determining how much internal transfer capability to reserve and when to do so? In addition, please describe the market impact associated with reserving internal transfer capability on the monthly congestion revenue rights auction and allocation process.
- 10) Has CAISO used its tariff authority to deem certain transmission paths to be noncompetitive based upon system conditions? If so, please detail how many times, which transmission paths, the duration and the market impact.
- 11) Has the use of the connectivity node (CNode) locational marginal prices led to any settlement disputes with affected generators or problems with congestion revenue right holders or virtual bidders?
- 12) Has CAISO suspended virtual bidding for economic efficiency purposes in relation to its reservation of internal transfer capacity or enforcement of the gas constraint? If so, please explain the observed behavior and whether virtual bidding has been reinstated.

- 13) What steps has CAISO taken to revise its Business Practice Manuals to provide implementation details for suspension of virtual bidding, reservations of internal transfer capacity, or any other tariff revisions approved in the June 1 Order?
- 14) How have changes in gas operations, especially low and high operational flow orders (OFOs), affected CAISO's operations, resources' operations and availability, and the need to use any of the measures accepted in the June 1 Order?
- 15) Without disclosing the identity of any market participant, have any scheduling coordinators sought after-the-fact recovery of natural gas costs from CAISO? In addition, have any scheduling coordinators sought to recover gas imbalance penalties from CAISO, and if so, what is the status of that effort?
- 16) Has CAISO used any measures other than those accepted in the June 1 Order to manage reliability in the Southern California region, e.g., exceptional dispatch or coordination with interstate pipelines? If so, please explain those measures, how often they have been used and the impact of those actions on CAISO's markets.

12:45 pm – 1:30 pm *Lunch break*

1:30 pm – 3:30 pm Discussion on measures that may be needed beyond
November 30, 2016

- 1) Please discuss the current status of the Aliso Canyon facility, including the number of wells that have passed final inspection, and any other gas storage and transportation facilities and how limited availability at those facilities may affect winter operations. What is the latest projection for when, or if, Aliso Canyon and/or any other gas storage facilities will be returned to full service?
- 2) At what point (e.g., how much injection/withdrawal capability, gas in storage, number of operating wells) would CAISO consider Aliso Canyon to be sufficiently available to supply an adequate amount of gas to electric generators in Southern California?
- 3) How will the winter's increased demand for natural gas from residential, commercial and industrial customers affect the amount of gas supply that is expected to be available to electric generators?
- 4) Please describe CAISO's current operational plan for the winter.
- 5) What other contingencies could impact this winter's operations (e.g., upstream pipeline pressures and outages, state pipeline outages, electric transmission and generation outages, power import availability, or outages at other natural gas

facilities)? What measures does CAISO plan to mitigate the potential impact from such contingencies?

- 6) What measures beyond those accepted in the June 1 Order has CAISO considered to enhance generators' ability to recover natural gas costs through the market, e.g., actual gas costs?
- 7) Given the dependency of the power grid on natural gas supply, is CAISO considering long-term actions to make its transmission system more robust?
- 8) Has CAISO made any specific changes in communicating and coordinating with SoCal Gas, Pacific Gas and Electric Company, Los Angeles Department of Water and Power, generators, load serving entities, and other affected parties in response to the effects of the limited availability of Aliso Canyon? Are there any lessons learned with respect to coordination and communication from your experience over the summer, or any plans to institute new coordination/communication practices with relevant entities?
- 9) If Aliso Canyon fails to return to service or its use is permanently curtailed, is there a potential benefit to aligning the day-ahead electric market results with the gas nomination timelines?
- 10) Does CAISO believe that any of the provisions accepted in the June 1 Order might still be necessary after November 30, 2016? What modifications to these tariff provisions or new provisions, if any, does CAISO expect to need, and why? Does CAISO anticipate that any such changes would be narrowly tailored to address challenges presented by the Aliso Canyon situation, or would they be more general market enhancements?
- 11) Does CAISO plan to reflect the potential long-term reduction in the availability of Aliso Canyon or other natural gas delivery/storage facilities in its transmission planning studies, including local reliability requirements assessment?
- 12) Is CAISO working with stakeholders on any near-term or long-term alternatives for increasing non-gas electric supply or reducing electric demand in the areas affected by the reduced availability of Aliso Canyon? If so, what are those alternatives?
- 13) Has the Energy Imbalance Market helped CAISO to manage operational impacts associated with the Aliso Canyon outage?