BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA

Order Instituting Investigation pursuant to Senate Bill 380 to determine the feasibility of minimizing or eliminating the use of the Aliso Canyon natural gas storage facility located in the County of Los Angeles while still maintaining energy and electric reliability for the region.

INFORMAL COMMENTS OF
SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) ON ENERGY DIVISION'S INITIAL PROPOSED PHASE 1 SCENARIOS

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I.
INTRODUCTION

Southern California Edison Company (SCE) supports the California Public Utilities Commission’s (Commission’s or CPUC’s) efforts to evaluate if the use of the Aliso Canyon gas storage facility (Aliso) can be eliminated or minimized. SCE particularly appreciates the Commission’s obvious hard work creating detailed proposed models, scenarios and inputs. SCE’s specific comments in response to the Energy Division's questions are set forth below.

Before addressing those questions, however, it is important to note recent developments. On July 19, 2017, the CPUC and the Department of Conservation’s Division of Oil Gas and Geothermal Resources (DOGGR) issued a statement that it determined it is safe to resume injections of natural gas at the Aliso, but restricted the operating pressure of the facility. The same day, however, California Energy Commission (CEC) Chair Robert B. Weisenmiller issued a press release stating the CEC plans to phase out the use of Aliso within ten years and implored the CPUC to do the same.
In light of these developments, it appears the question may no longer be whether use of Aliso can be reduced or eliminated and at what cost, but rather how we reduce dependence on Aliso in anticipation of its potential closure by 2027.

In anticipation of phasing out the use of Aliso, SCE recommends the Commission’s modeling scenarios include cases prioritizing gas storage facilities as reliability assets with economic or financial operations a secondary use, provided surplus storage is available for such purposes. These cases will allow the Commission to better ascertain the amount of gas storage needed solely for the purpose of maintaining reliability of southern California’s natural gas and electric grid systems, and the propriety of costs associated with minimizing and ultimately eliminating the use of the Aliso in the future.

II.

QUESTIONS

A. Hydraulic Modeling Questions

1. **Are the proposed modeling dates reasonable, i.e., 2018, 2022, and 2027?**

   Yes. SCE finds the proposed dates reasonable.

2. **Is the proposed process for determining the minimum Aliso inventory level reasonable?**

   SCE does not support using the approach set forth in the Commission’s January 17, 2017 Section 715 Report (the Report)\(^1\) to determine the minimum Aliso Inventory. The Report\(^2\) presupposes SoCalGas will make injections into and perform withdrawals from Aliso. Because the point of the exercise is to determine the degree to which reliability will be

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\(^2\) *Id.*, Table 2, at p. 13.
impacted without Aliso’s full restoration and even elimination, SCE recommends the Commission consider scenarios that first exhaust injections and withdrawals at non-Aliso facilities before considering scenarios that assume a certain level of injections and withdrawals at Aliso.

For scenarios that presuppose use of Aliso, SCE proposes that the Commission provide an explanation of why the Aliso Inventory Requirement for Winter Peak Day Demand\(^3\) lists January as the peak demand month when the average daily withdrawals and sendout in the Winter Balance Analysis are largest in December.

3. **Is the California Gas Report the appropriate source for summer and winter peak day gas demand?**

The 2016 California Gas Report Winter Peak Day Demand\(^4\) forecast gas sendout for core customers bases daily peak demand on an extreme and unlikely 1-in-35 year temperature cold day, 1-in-10 year for non-electricity generation (EG) noncore, and normal hydro conditions for EG. SCE recommends the Commission model the more likely to occur 1-in-10 year temperature cold day to determine the impact of Aliso’s limited availability on supply reliability to serve all customers for the next ten years, and the impact without Aliso. If the Commission uses 1-in-35, SCE recommends it should only do so to model SoCalGas’ ability to serve core customers and a minimum amount of EG to keep the electric system available to continue servicing core household heating needs (e.g., many gas-fueled heating systems require electricity to operate). In an extreme event such as a 1-in-35 year temperature cold day, some level of non-core customers will likely be curtailed and the model should take those curtailment rules into account. In this manner, the Commission will be able to determine the level of gas storage

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\(^3\) *Id.*, Table 1, at p. 10.  
necessary to reliably serve core customers, including minimum levels of gas (including necessary pipeline pressures) to maintain the electric system.

SCE supports the use of the Summer High Sendout Day Demand\textsuperscript{5} based on 1-in-10 dry hydro conditions.

4. **Is it reasonable to estimate 2027 gas demand by reducing the 2022 peak day forecast by 0.6% per year?**

   a) **If additional mitigation measures are put in place, would they result in a greater than 0.6% annual decline in gas demand?**

   SCE has no comment on this assumption.

   b) **If so, what would be an appropriate method for forecasting future gas demand?**

   SCE has no suggested alternative method.

5. **Should historical gas days be modeled?**

   a) **If so, which days?**

   Extreme historical gas days adjusted for the new restrictions on Aliso and the minimum level of gas required to maintain the electric system is reasonable. Depending on the day(s) selected, further stress scenarios may be appropriate to account for pipeline outages/maintenance and/or upstream gas supply interruptions. Additionally, further consultation with CAISO on California’s RPS fleet performance during extreme multi-day low temperature events would be appropriate to determine if electric supply may be impacted.

\textsuperscript{5} Id.
b) **How should they be adapted for a medium- and long-term scenarios?**

Minimum gas levels required to maintain the electric system should decline over time as California increases its reliance on energy efficiency, demand-side management, renewables, distributed resources, and energy storage.

6. **Is 85% gas receipt point utilization a reasonable assumption?**

   Under normal conditions, 85% is conservative and a reasonable assumption. But under periods of high demand for gas supplies – nationally or regionally – competition for supplies will increase and potentially reduce availability. Under such periods of high demand, it may be difficult to meet 85%. Accordingly, SCE recommends the Commission look to past periods of high gas demand to determine if the 85% assumption is reasonable. SCE does not have the data to make this determination.

7. **Is it reasonable to assume that SoCalGas will be restricted to tubing-only flow?**

   Yes.

8. **Are there any inputs or assumptions that should be considered?**

   The Commission should utilize an input that assumes SoCalGas’ gas storage is primarily used for system reliability and secondarily, if surplus capacity is available, for other economic or financial purposes. It is important to have at least one case utilizing this approach because doing so will allow the Commission to ascertain the amount of gas storage needed to solely maintain reliability, as opposed to support other objectives.

9. **Are there other questions that should be considered?**

   SCE has no other recommended questions at this time.
B. Production Modeling Costs

1. Are the inputs above appropriate for use in the model as described?

   It is not clear the above inputs appropriately consider SoCalGas’ actual gas curtailment rules. If they do not, they should.

2. Is SERVM an appropriate modeling tool?

   SCE does not use SERVM and does not think it is an appropriate modeling tool because its optimization is too simplistic. SCE recommends the CPUC use the Plexos modeling tool instead.

3. Is the proposed time horizon appropriate?

   SCE recommends considering modeling to 2030, which is the current date that California minimum RPS requirements must be met for electric retailers. Note that Senate Bill 100 would increase the current 50% RPS requirement to 60% by 2030. The reduced reliance on gas by the electric sector will reduce annual gas demand, but may increase the volatility of daily or intra-day gas demand.

4. Are both the LOLE and LOLH appropriate metrics for reliability?

   SCE believes that LOLE and LOLH are appropriate measures for reliability.

5. What is the best way to simulate the output of 17 plants with reduced gas flow?

   SCE recommends Electric Grid Operators provide a loading scheme for the power plants that estimate the loading order of the plants.
6. **What is the best methodology to translate inventory to Aliso, Playa del Rey, and Honor Ranch to withdrawal rates/rate of delivery to the 17 power plants?**

SCE recommends the Commission use the loading order provided by Electric Grid Operators as the basis for how gas receipts from plants would be modeled when gas supplies, including supplies from gas storage, are limited.

7. **Are there other questions that should be considered?**

Imbalance management may be exacerbated unless core balances to actual load. It is not clear if the model assumes core is balancing to load. Likewise, it is also unclear how the model addresses uncertainties or forecasting error between day-ahead (pre-scheduled) and real-time (actual usage). It may therefore be appropriate for the Commission to include core balancing to actuals as an input and for the Commission’s model to take into account forecasting uncertainties and errors.

C. **Economic Modeling**

1. **Are the proposed modeling dates reasonable?**

SCE finds the proposed dates reasonable.

2. **Are the proposed Aliso inventory levels appropriate?**

SCE has no comment on the proposed Aliso inventory levels.

3. **Is it reasonable to model low, mid, and high forecasts of natural gas prices?**

SCE recommends against multiple price forecasts because they create complexity that will not enhance the inherent limitations of modeling forecasts. Additionally, price forecasts should have a minimal, at most, impact on physical supply. The impact of potential under-
scheduling by gas shippers due to high price forecasts can be more easily addressed by utilizing an assumption of a daily gas imbalance informed by input by SoCalGas.

4. **Is there an existing gas price forecast dataset that would be appropriate to use in this model?**

The Commission can either buy a gas price forecast from an entity like PIRA or ask the company performing the modeling to develop its own gas price forecast. SCE has no preference or opinion as to which option the Commission should exercise.

5. **Are there any other inputs or assumptions that should be considered?**

As mentioned above, SCE believes cases should be run that first prioritize gas storage as a reliability asset with other economic and financial purposes secondary, provided excess storage is available.

6. **Are there any other questions that should be considered?**

The modeling effort should include the cost or value of mitigation measures that can potentially be deployed to replace at least some of Aliso’s contribution to the system, particularly given the potential need to replace all of Aliso by 2027.