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BY E-MAIL

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California Public Utilities Commission
Energy Division
505 Van Ness Avenue
San Francisco, CA 94102

RE: Southern California Gas Company's Comments on Aliso Canyon OII (I.17-02-002)
Technical Workshop and Modeling Update

Dear Commission Staff:

SoCalGas appreciates the opportunity to offer written comments on the California Public Utilities Commission's (Commission) June 20, 2019 Technical Workshop and Modeling Update (Workshop) for the Senate Bill 380 Aliso Canyon Order Instituting Investigation. SoCalGas thanks Commission staff and the California Independent System Operator (CAISO) for presenting and offers comments on each presentation and certain comments, questions, and statements made by parties to the proceeding.

1. Economic Model – Results of the Implied Market Heat Rate Analysis

SoCalGas looks forward to further analyzing the data that forms the basis for Commission staff's implied market heat rate analysis. It appears, however, that this analysis confirms what SoCalGas has observed in that past: Aliso Canyon is an integral part of the SoCalGas system and the State's ongoing restrictions on the use of Aliso Canyon have contributed to market volatility and increased energy prices.

Underground storage, in particular Aliso Canyon, enables the system to quickly respond to variable hourly and daily demand and supply, to serve as an on-system supply source to maintain service during both peak and prolonged high demand conditions, and to operate as a supply buffer to maintain and operate the system with contingencies to guard against the effects of maintenance and operational outages. Without the ability to fully use our storage assets as they were intended to be used, the recent pipeline outages have had a more noticeable impact on system operations and the market. Commission staff's analysis appears to confirm this point and

indicates that there is a likelihood of continued market volatility if the Commission continues to restrict the use of Aliso Canyon.

Commission staff's analysis also appears to confirm the potential far-reaching impacts of this proceeding as it indicates that the restrictions on Aliso Canyon have impacted (at a minimum) Northern California electricity prices. As a result, this analysis calls into question the usefulness of the proposed Difference in Differences (DID) analysis because a fundamental assumption of the DID analysis is that the control group (PG&E customers) is not impacted by the event.¹ The implied market heat rate analysis appears to show that is not the case and indicates that the DID analysis will underestimate the impacts on SoCalGas customers by comparing them to a control group that is also potentially impacted by restrictions on Aliso Canyon. At a minimum, the Commission should perform historical analysis to understand the relationship between the two groups to determine whether the DID analysis adequately captures the impacts on customers of restrictions on Aliso Canyon.

Next, SoCalGas notes that the analysis does not appear to address power generator behavior and the CAISO pricing mechanism in impacting electric costs. The State's restrictions on Aliso Canyon and the pipeline outages have reduced natural gas supply and forced electric generation into Northern California. The CAISO pricing mechanism, however, sets one statewide clearing price for generation, which means that even one higher-priced bid in Southern California can result in higher electric generation costs statewide. As a result, when even just one electric generator bids at a higher price because of restricted supply or speculation about restricted supply, electric generators statewide realize premiums for their electric generation. In the past, this issue was stifled, and price volatility was mitigated by Aliso Canyon, which provided a supply buffer and enough excess capacity to promote a healthy supply and demand mix.

As one example of the impact of locally-sourced storage supply guarding against these sort of volatility and market effects, during the winter 2013-2014 polar vortex, receipt point utilization (flowing supply) declined sharply as gas was diverted to higher-priced markets outside California.² In Southern California, SoCalGas relied heavily on storage withdrawals to support system reliability, with withdrawals reaching 2.5 billion cubic feet (bcf), which was 73% of daily natural gas sendout. The ability to withdraw gas from local storage allowed SoCalGas' customers to avoid competing for gas supply to maintain reliable service at a time when market prices were spiking. Aliso Canyon has the ability to add such significant supply to the market that, in the past, it has avoided costs for customers. Today, the restrictions on Aliso Canyon reduce available supply and increase costs to customers.

¹ Scenarios Framework at 42-46.

² Hydraulic Model Data Development Presentation at Slide 29.

2. Hydraulic Model Data Development – Receipt Point Utilization Results

a. Updated Receipt Point Utilization Assumption Approach

SoCalGas supports the apparent direction of the hydraulic model assumptions. SoCalGas understands that now, based on further analysis of historical data, the Commission is updating the receipt point utilization assumptions contained in the January 4, 2019 Scenarios Framework (Scenarios Framework). For reference, the Scenarios Framework indicated that it would assume the following receipt point utilizations for both the reliability assessment (peak gas demand condition assessment) and the feasibility assessment (typical demand conditions):³

- Southern Zone – 85%
- Northern Zone – 85%
- Wheeler Ridge Zone – 100%

Commission staff now acknowledge that receipt point utilization is a “highly uncertain quantity and sensitivity analysis on [receipt point utilization] must be an integral part of the investigation and the decision making.”⁴ SoCalGas supports sensitivity analysis to better understand supply assumptions, their achievability, and their impact on system reliability.

Commission staff also acknowledge the need to assume more realistic receipt point utilization assumptions for the reliability assessment (peak gas demand condition assessment) and the feasibility assessment (typical demand conditions). Specifically, Commission staff noted that average historical receipt point utilization was approximately 70% and that this figure was more appropriately used for the feasibility assessment to assess typical conditions.⁵ Commission staff also determined that an “upper bound of [receipt point utilization] is 95% given that 100% requires...perfect forecasting from ALL shippers...ignoring price of gas...interstate supply availability.”⁶ SoCalGas supports these initial steps in achieving reasonable and supportable receipt point utilization assumptions. However, these figures likely remain too high and still should be informed by the proposed sensitivity analysis. For example, it is not clear how an upper bound of 95% is reasonable given that analysis of high sendout days never eclipsed 90%.

The Commission should not reach a decision to limit the use of Aliso Canyon based on assumptions of unachievable and unrealistic flowing supplies. As we have stressed before, when the Commission is considering what inputs or assumptions to make in its scenarios, it should err on the side of caution so that the model and assessment do not, based on faulty assumptions, incorrectly result in limitations to Aliso Canyon that could unnecessarily create a less reliable system and increase costs.

³ See Scenarios Framework at 20 and 30.

⁴ Hydraulic Model Data Development Presentation at Slide 32.

⁵ Webcast discussion starting at approximately 2:16:00.

⁶ Hydraulic Model Data Development Presentation at Slide 33.

b. Safe, Reliable, and Cost-Effective System Operation and Maintenance

SoCalGas and the State's core mission is to provide safe, reliable, and cost-effective gas service. Aliso Canyon provides significant flexibility and resiliency to the system and enables SoCalGas to safely and cost-effectively operate and maintain its transmission system by providing a buffer to protect against transmission line outages,⁷ allowing pipelines to be taken out of service for maintenance and repairs, and allowing pipeline pressure to be reduced to enhance the margin of safety. SoCalGas strongly supports the safety activities mandated for our pipelines and storage fields but acknowledges that they impact system supply and capabilities. The Commission must take these safety requirements, practices, and activities into consideration in its analysis. Specifically, the Commission should:

- Assume reasonable planned and unplanned outages both on the SoCalGas system and upstream of the SoCalGas system (reducing flowing supplies);
- Factor in new storage requirements and practices which have enhanced the safety of all storage fields but also decreased injection and withdrawal capabilities and limited field availability during the injection season (reducing the availability and capabilities of storage facilities); and
- Acknowledge that SoCalGas may reduce the capabilities of its transmission lines (through pressure reductions) to enhance safety.

These assumptions acknowledge and reflect the various safety-focused activities that are undertaken to safely operate and maintain the system. SoCalGas expects that the combination of advanced technologies, enhanced practices, and the continued evolution of the California energy system may lead to additional capacity reductions and outages in the future. As such, if the Commission does not factor in these considerations, it risks reaching conclusions based on unreasonable assumptions about flowing supplies and the capabilities of SoCalGas' system. If, for example, the Commission determines that Aliso Canyon can be reduced based on all transmission pipelines returning to their nominal capacities, it may necessitate costly investment to increase flowing supplies to the levels assumed by the Commission to allow for potential pipeline outages in the future. Such investments could be orders of magnitude more expensive than operating and maintaining Aliso Canyon, a facility that the Division of Oil, Gas, and

⁷ For example, Sandia National Laboratories conducted a 2013 study, "Natural Gas Network Resiliency to a 'Shakeout Scenario' Earthquake" (2013 Sandia Study), which found that under a ShakeOut scenario (magnitude 7.8 earthquake on the southernmost 200 miles of the San Andreas Fault), it is likely that Southern California would have severely limited ability to transport natural gas from the Arizona border into Southern California. The impacts of this limitation could involve greatly reducing the supply of natural gas to the Los Angeles Basin (by 40-50%). Based on these findings, Sandia determined that planning how to prioritize the use of local natural gas resources was essential: "the most important action that could be taken prior to an earthquake such as this is to discuss with stakeholders how the gas in the Aliso Canyon facility, one of the largest NG storage facilities in the U.S., might be used." 2013 Sandia Study at pages 25-26.

Geothermal Resources and the Commission have determined is safe.⁸ To promote safe, reliable, and cost-effective infrastructure use, the modeling assumptions should be realistic and should continue to utilize existing infrastructure, instead of potentially limiting critical assets based on overly optimistic and unrealistic scenarios.

c. Proposals Regarding Zonal Capacities

There appeared to be some suggestion that the Commission should re-examine the assumptions used for the SoCalGas transmission receipt capacity. Dr. Najm suggested that the receipt capacity should be calculated assuming the maximum capabilities of the transmission assets, e.g. using the maximum installed horsepower at mainline compressor stations and the Maximum Allowable Operating Pressure (MAOP) of the transmission pipelines. These are precisely the assumptions that SoCalGas has used when setting the receipt capacities for each individual receipt point and for the transmission zones, which are posted on Envoy and were included in the receipt point utilization presentation. What Dr. Najm may have failed to appreciate, however, is that the individual pipelines on the SoCalGas system must operate as an integrated network, and that the capacity of a single pipeline in that network may be less than its capacity when examined separately. Interactions between receipt points and the networked nature of the transmission system must be considered in any assessment of receipt capacity.

In contrast, Mr. Pedersen for the Southern California Publicly Owned Utilities suggested that the receipt capacities ought to be reduced for the Line 85 Zone and for the Blythe receipt point in the Southern Zone. These suggestions may have some merit since physical changes to the pipeline assets (i.e., derated operating pressure and abandonment) have occurred. The capacity to receive supply on both the Line 85 Zone and the Southern Zone is partially dependent upon the level of customer demand within each zone, which was evident in the summer of 2018 when the Southern System receipt capacity was reduced to 700 MMcfd due to lower electric generation demand in the zone. If these low demand conditions are expected to continue, it may be prudent to establish a firm receipt capacity based on a minimum demand condition, as opposed to one based on the physical properties of the assets.

d. Gas Cost Incentive Mechanism (GCIM)

Commission staff also raised questions regarding how the GCIM may negatively impact scheduling during high sendout days. The GCIM, however, does not have a negative impact on gas scheduling or receipt point utilization. Gas Acquisition's utilization of pipelines is influenced by several factors but is predominantly determined by its requirement to deliver enough supply to meet core customer daily demand, which is highly weather-dependent and not driven by gas markets. In addition, Gas Acquisition is required to meet summer and winter storage targets for core reliability as part of its GCIM. Gas Acquisition meets these storage targets by building inventory, which entails delivering gas into SoCalGas' system for injection

⁸ See, e.g., July 19, 2017, SB 380 Findings and Concurrence Regarding the Safety of the Aliso Canyon Gas Storage Facility, available at: https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/News_Room/News_and_Updates/OpenLettertoSoCalGasandPublic.pdf

into storage, and then managing withdrawal of storage gas such that inventory does not fall below these targets. These targets and requirements incentivize Gas Acquisition to use their available resources and rights to balance their supply and demand and inject gas into storage.

e. Reasonable Rates Remain an Important and Required Consideration

During the presentation on receipt point utilization, Commission staff appeared to indicate that one reason that receipt point utilization was lower than expected was economics⁹ and that it may be necessary to ignore or alter economics and market forces to increase receipt point utilization.¹⁰ More pointedly, it was noted that, because of the economics, the Commission may need to force shippers to ignore the price of gas in order to increase flowing supplies.¹¹

The Commission has made it clear that any determination in this proceeding must promote “just and reasonable rates.”¹² The focus of this proceeding should be on analyzing reliability and rate impacts, not considering how to change economic and market signals – increasing costs – to force shippers to increase flowing supplies regardless of the cost to customers.

3. CAISO Power Flow Results for 2020 Summer Peak

SoCalGas looks forward to further analyzing the data underlying the CAISO Local Capacity Requirement Study. SoCalGas stresses that the generation numbers calculated by CAISO should be sufficient for planning purposes and be able to be used to assess the reliability of the system; including, among other considerations, extreme weather events and the potential for reduced import capabilities. This appears especially true now that planned deenergizing of electric transmission lines will become more regular in response to higher wind and other high fire risk events, which are likely to coincide with periods of high demand and may result in transmission lines being deenergized for significant periods. If it has not already, CAISO should consider what added system contingencies and resiliencies are appropriate to ensure that it is providing an adequate, realistic, and appropriate local generation requirement.

4. Development of Production Cost Modeling Data Set

SoCalGas looks forward to the modeling data set being produced so it can further review and analyze Commission staff’s production cost modeling work.

5. Party Comments

Indicated Shippers noted that there appears to be a gap in the proposed analysis because the analysis does not assess how limits on Aliso Canyon impact noncore, non-electric generation

⁹ Hydraulic Model Data Development Presentation at Slide 33 (“gas prices are higher during multistate events and therefore favoring storage withdrawals rather than scheduling from out of state”).

¹⁰ Hydraulic Model Data Development Presentation at Slide 33 (explaining that 100% receipt point utilization is not feasible because it requires, among other things, “ignoring price of gas”).

¹¹ Webcast discussion starting at approximately 2:12:00.

¹² June 20, 2017 Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge at page 2 and March 29, 2019 Assigned Commissioner’s Phase 2 Scoping Memo and Ruling at page 1.

customers. The Scenarios Framework indicates that the “purpose of the economic modeling is to estimate the impacts of eliminating or minimizing the use of Aliso gas storage on SoCalGas’ core and noncore natural gas ratepayers.”¹³ As such, SoCalGas agrees that there is a current gap because impacts on noncore, non-electric generation customers is not being analyzed. SoCalGas supports analysis to assess the cost and reliability impacts to our core, noncore electric generation, and noncore non-electric generation customers.

6. Conclusion

SoCalGas appreciates the opportunity to submit comments and participate in this ongoing and important Commission effort to promote system reliability and just and reasonable rates.

Sincerely,

/s/ Jason W. Egan

Jason W. Egan
Senior Counsel

SOUTHERN CALIFORNIA GAS COMPANY

¹³ Scenarios Framework at 38.