Bret Lane
President and
Chief Operating Officer

555 W. 5th Street, M.L. GT-21C1
Los Angeles, CA 90013-1011

Tel: 213.244.2100
Fax: 213.244.8293

JLane@SempraUtilities.com

October 30, 2017

Michael Picker, President, California Public Utilities Commission
Robert B. Weisenmiller, Chair, California Energy Commission

Dear President Picker and Chair Weisenmiller:

We have received your October 17, 2017 letter and share your concerns about being able to meet our mutual objective to provide reliable service to Southern California Gas Company (SoCalGas) customers, at just and reasonable rates, this coming winter. We also share the concerns expressed by the Federal Energy Regulatory Commission (FERC) in their "Winter 2017-2018 Energy Market Assessment" that "limitations at Aliso Canyon during periods of the highest winter demand could challenge regional stability and increase natural gas and electricity prices."

State Agencies Have Determined Aliso Canyon is Safe

We are very concerned by your instruction to identify mitigation to these concerns that does not, as described in your letter, include "enhanced reliance on Aliso Canyon." Aliso Canyon is safe and has been safe and available for many months. The leak at Aliso Canyon occurred two years ago. Since that time, Aliso Canyon has been subjected to months of rigorous inspection and analysis, has been tested to stringent review standards, has passed batteries of tests, and is now operated with new safety protocols. **The California Public Utilities Commission (CPUC) and Division of Oil and Gas and Geothermal Resources (DOGGR) formally determined that Aliso Canyon is safe to operate, any risks of failure had been identified and addressed, and well integrity had been verified.**[1] In our view, any decision to not return Aliso Canyon to normal service has no relation to safety, well integrity, or risk of failure.

Despite these determinations, the CPUC has continued to maintain restrictions on the use of Aliso Canyon, including: (1) withdrawal protocols, which treat Aliso Canyon as an "asset of last resort" and only allow withdrawals after all other alternatives – including noncore curtailments (e.g., curtailment of electric generators, refineries, and other large commercial and industrial

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

consumers) – have been exhausted; and (2) inventory limitations, which limit available inventory and restrict our ability to withdraw and inject gas at Aliso Canyon. As the operator, we see no reason why using Aliso Canyon should be more restricted than other storage facilities. **We are not aware of any other facility in the nation that has undergone the same degree of testing to validate its safety and integrity, or one that is operated and maintained pursuant to such strict and comprehensive policies and procedures**. In our opinion, Aliso Canyon should be permitted to be used in the same manner as our other fields, consistent with DOGGR and federal regulations, and consistent with CPUC's and DOGGR's validation of the field's safety. This includes: removal of withdrawal protocols, removal of the current inventory minimum and maximums (allowing SoCalGas to operate within the reservoir pressure approved by DOGGR), and removal of the systemwide withdrawal rate requirements**. Not being able to use Aliso Canyon only heightens concerns raised in your letter, raised by FERC in its assessment, and raised to you and your agencies by SoCalGas**.

California is Faced with Numerous Energy Risks this Winter

We have been raising concerns with you and your agencies since the CPUC and DOGGR completed their comprehensive review of the safety of Aliso Canyon on January 17, 2017 (sample prior communications are attached as Attachment A for your reference, with emphasis added). These concerns continue to escalate as we enter the winter season:

- SoCalGas' "Winter 2017-2018 Technical Assessment" (Attachment B) indicates increased risk of noncore customer curtailments and/or reliance on potentially costlier out-of-state electric generation, which includes natural gas, coal, and nuclear generation resources;

- Southern California has recently seen dramatic increases in natural gas price volatility, with prices at our City Gate that were 350% above the border price on October 23, 2017. Because of our concerns with market price volatility, we are also sending a letter to FERC to inform them of the price differentials and volatility we are seeing in the market (Attachment C).

- SoCalGas' remaining storage fields have seen increased cycling and use to support customer demand. This increases outage risk and requires us to rely on fields that have not undergone the same safety enhancements as Aliso Canyon.

From an engineering, technical, safety, and market perspective, returning Aliso Canyon to normal operation and removing CPUC-mandated systemwide withdrawal requirements is the most effective way to address these issues. Aliso Canyon has been determined to be safe, Aliso Canyon is available, and, because of its size and location, Aliso Canyon is uniquely able to support the natural gas demands of the Los Angeles Basin and mitigate the risks to energy reliability to our region and its consumers.

Without Aliso Canyon, SoCalGas' System is Less Resilient and Flexible, and Energy Reliability is at Risk

Today, in part due to state regulatory and administrative choices, our system is more constrained and less resilient and flexible. SoCalGas is currently managing outages or reductions on four major pipelines in our service territory – Line 235, Line 2000, Line 3000, and Line 4000 – which limits flowing supply into the system. To address unexpected conditions such as these, prudent planning incorporates contingencies to provide sufficient system resiliency and flexibility. For SoCalGas, our system is designed to use our storage assets as part of normal operations and as contingencies to create system resiliency and flexibility. In past years, injections into and withdrawals from storage, primarily Aliso Canyon, have been sufficient to maintain system reliability, even when difficult and unexpected conditions arose. As noted by the FERC, in its Winter 2017-2018 Energy Market Assessment, **SoCalGas currently holds about 65 billion cubic feet (Bcf) of gas, the lowest on record for this time of year since 2001, and far below the 118 Bcf the system has averaged over the past five years**. Further, approximately one-third of this 65 Bcf is Aliso Canyon inventory and only usable as "a last resort," and much of the remaining inventory will be unavailable because of systemwide withdrawal requirements and declining field withdrawal rates.

To better assess the risks to energy reliability and respond to your October 17, 2017 letter, we prepared the attached "Winter 2017-2018 Technical Assessment," which details the energy reliability challenges facing Southern California as we head into the winter and identifies potential mitigation measures. Based on our analysis, the SoCalGas system will likely *not* have sufficient supplies to meet all customer demand during weather events, unplanned supply interruptions, or unexpected hourly, daily, and seasonal demands. Although we cannot identify an option that will fully address the reliability and price volatility risks we now face because of the limited time and opportunities available to fill Aliso Canyon, allowing Aliso Canyon to be utilized in the same manner as our other storage facilities and removing systemwide storage withdrawal requirements are the most effective ways to mitigate these risks. Because of Aliso Canyon's size, location, and operating capabilities, we are aware of no other adequate physical or supply side mitigation, and demand side mitigation is not able to fully replace the flexibility and resiliency provided by Aliso Canyon. **Without adequate storage supplies and the ability to use those supplies this winter, adherence to the CPUC withdrawal protocols and curtailment rules could necessitate noncore customer curtailments and lead to increased price volatility.**

SoCalGas' primary obligation is to its residential and small commercial and industrial customers (core customers), and we are cautious, but optimistic, that we can maintain service to our core customers this winter. Maintaining service to our core customers, however, will likely trigger CPUC-approved Tariff Rule 23, which authorizes SoCalGas to directly reduce load, when needed, by curtailing customers, similar to the electric demand response programs. These CPUC-approved rules authorize SoCalGas to limit or reduce service to noncore customers, starting with electric generators, and including oil refineries and other large industrial and commercial customers.

State Policies Have Created or Increased Winter Risks

As we have indicated to you and your agencies, the current policy decision by the State to use Aliso Canyon as "a last resort," coupled with the potential for planned and unplanned supply and demand conditions, places energy reliability at risk in Southern California. Our concerns are echoed by numerous federal agencies with responsibility for energy reliability and safety, including the Department of Energy, FERC, and the Pipeline and Hazardous Materials Safety Administration (letters and relevant pages from federal assessments are attached as Attachment D for your reference, with emphasis added). We believe current state policy to restrict the use of Aliso Canyon, despite the facility being determined safe to operate, puts energy reliability at risk.

State policy to restrict Aliso Canyon has removed our most important operational contingency. As we have stressed: events occur that can impact natural gas supply. As mentioned, SoCalGas is currently managing outages or reductions on four major pipelines in our service territory. As recognized by FERC, these system risks are potentially "magnified by upstream pipeline issues, like further outages or wellhead freeze-offs." Without Aliso Canyon, our system is less resilient, less flexible, and our customers are at an increased risk of curtailment.

State policy to maintain systemwide withdrawal rates restricts the use of all SoCalGas storage facilities. On March 16, 2017, the CPUC instructed SoCalGas that it "should maintain a system wide storage withdrawal capacity of 2.065 Bcfd beginning June 1, 2017." (*See* March 16, 2017 Letter from CPUC Executive Director Sullivan, Attachment E). This amount was to be "increased as quickly as possible to 2.420 Bcf per day." To maintain the systemwide withdrawal rate, SoCalGas must maintain the maximum withdrawal rate at each field, which significantly limits the usable inventory at each facility. This, in effect, imposes a withdrawal protocol on all SoCalGas storage fields. As a result, SoCalGas has less flexibility in using our storage assets and, to help maintain mandated systemwide withdrawal rates, SoCalGas has proposed deferring non-safety related maintenance work, delayed well testing at Aliso Canyon, and has been instructed to delay full implementation of our Storage Safety Enhancement Plan (SSEP) at La Goleta, Honor Rancho, and Playa del Rey. **This means that several wells at these fields are operating without a dual barrier of safety.**

State policy to require SoCalGas to rely on storage facilities that have not completed safety enhancements, instead of operating Aliso Canyon, has increased the risk of outages. Because restrictions have been imposed on Aliso Canyon, SoCalGas must rely on our other storage facilities – Honor Rancho, Playa del Rey, and La Goleta – to support our customers. These facilities are rapidly moving to and from injection and withdrawal to maintain system reliability for both core and noncore customers. **This type of back-and-forth operation can lead to a greater risk of an outage requiring maintenance and, potentially, the loss of the ability to withdraw gas. The restrictions on Aliso Canyon create stresses and strains that could impact the ability of our other storage fields to fulfill their critical role in supporting energy reliability**. These activities leave little margin for unplanned system outages and increase the probability of challenges to reliability.

No Identified Mitigation Measures Can Fully Mitigate Reliability Risks This Winter, or Replace Aliso Canyon

In your October 17, 2017 letter, you also request measures to enhance SoCalGas' provision of reliable service to core and noncore customers. We are aware of no measures that will fully mitigate risks this winter or replace the lost flexibility and resiliency provided by Aliso Canyon. Already, SoCalGas' Gas Acquisition department, on behalf of our core customers, has increased its delivery of pipeline supply at the Otay Mesa receipt point, and SoCalGas' System Operator has increased receipt point capacity at the Kramer Junction receipt point. Although we have identified additional mitigation measures, in our opinion, resuming operation of Aliso Canyon, consistent with DOGGR and federal regulations, and removing the systemwide withdrawal rate requirement are the most effective ways to mitigate energy reliability risks, reduce price volatility, and begin preparation for next summer and winter. The other identified mitigation measures are ancillary options, which should not be viewed as capable of sufficiently mitigating reliability risks, controlling price volatility, or promoting system flexibility and resiliency.

As discussed in our attached Winter Technical Assessment, we have identified additional potential options to mitigate energy reliability risks. The first would increase supply delivered into the SoCalGas system by having the SoCalGas System Operator purchase incremental supply delivered to the Otay Mesa receipt point. The other three are demand-side programs designed to help manage customer demand this winter: (1) targeted marketing, education, and engagement campaigns; (2) demand response programs; and (3) custom energy efficiency projects and behavior programs. None of the above mitigation measures would be adequate or cost effective in replacing the reliability, resiliency, and flexibility provided by Aliso Canyon or otherwise substantially reducing reliability risk this winter.

First, SoCalGas System Operator purchases of incremental supply at Otay Mesa are dependent on there being available supply to deliver. SoCalGas' understanding is that little to no firm capacity exists this winter season on the pipeline path to transport supply from the El Paso Pipeline system to the Otay Mesa receipt point. If firm capacity on this pipeline path cannot be obtained, then this mitigation measure is only available with the purchase of firm transportation capacity on the Transportadora de Gas Natural Pipeline for liquefied natural gas from the Energía Costa Azul terminal. This purchase would require explicit CPUC authority because of the corporate relationship between SoCalGas, Transportadora de Gas Natural, and Energía Costa Azul.

Second, while we support demand-side programs as part of our normal energy efficiency activities, these demand-side programs have not proven adequate in replacing the level of reliability, resiliency, and flexibility provided by Aliso Canyon.

The State Must Make a Decision on Energy Reliability

The State's previous policy decisions create reliability and price volatility issues this winter that cannot be fully mitigated, even with the full use of Aliso Canyon. As operators, we plan two seasons ahead, which is why we have been regularly communicating our concerns to you and your agencies.

We understand and appreciate that you and your agencies share our reliability concerns and are actively engaged in addressing the energy needs of California and its citizens. We continue to stand ready to implement and support mitigation measures in the near-term, and we hope to work with you on a path forward that will create long-term solutions that provide Californians the safe, reliable, and cost-effective energy they deserve.

In the near term, however, the State must decide, as a matter of policy, whether it is more prudent to risk customer curtailments and price volatility, or use Aliso Canyon, a facility that state agencies deemed safe three-months ago. In our opinion, we believe a decision to authorize SoCalGas to use Aliso Canyon the same as the other fields – consistent with DOGGR and federal regulations – and remove systemwide storage withdrawal requirements is the prudent decision for our State's energy consumers.

We thank you for your continued engagement on these important reliability issues. We hope that the information we have provided helps inform your decision-making as you consider how best to address the energy needs of California.

Sincerely,

Bret Lane
President and Chief Operating Officer

Enclosures

cc: Saul Gomez, California Governor's Office
Drew Bohan, California Energy Commission
Edward Randolph, California Public Utilities Commission
Ken Harris, Division of Oil, Gas & Geothermal Resources
Stephen Berberich, California Independent System Operator
David Wright, Los Angeles Department of Water and Power

ATTACHMENT A

SoCalGas
A Sempra Energy utility

Bret Lane
President and
Chief Operating Officer

555 W. 5th Street, M.L. GT-21C1
Los Angeles, CA 90013-1011

Tel: 213.244.2100
Fax: 213.244.8293

June 16, 2017

Mr. Stephen Berberich, President and CEO, California Independent System Operator
Mr. Michael Picker, President, California Public Utilities Commission
Mr. Robert Weisenmiller, Chair, California Energy Commission

Dear Messrs. Berberich, Picker, and Weisenmiller:

Current forecasts indicate that over the next 5-7 days Southern California will experience this year's first sustained heat wave. In light of this, we want to provide you a brief update on the progress of some of the actions we are taking to support energy reliability for the region.

With the current restrictions imposed on Aliso Canyon, we have been working to maximize injection at our remaining storage fields: Honor Rancho, La Goleta, and Playa del Rey. We have been successful so far in achieving the June 1 inventory targets for these three storage fields, as outlined in the plan submitted to the California Public Utilities (CPUC). We remain hopeful we can achieve the targets for July 1 and August 1, but this remains dependent upon weather and system conditions. Achieving these inventory targets, however, does not fully address the region's energy needs or ease concerns that unplanned events could lead to energy shortages.

As part of preparing for this week's heat wave, we have been in daily discussions with the California Independent System Operator (CAISO) to discuss load forecasts and current or expected system issues or outages. From our perspective, we are cautiously optimistic that, based upon the CAISO forecast, we will be able to meet the demands on our system. Of course, this is dependent on there being *no* unplanned outages on either the electric or gas systems.

The heat wave we will experience is occurring in the middle of June, before summer "officially" begins. As highlighted in our April 28, 2017 letter to you, the National Oceanic and Atmospheric Administration (NOAA) is forecasting a 60 to 70 percent chance for above normal temperatures throughout California this summer. This point was reiterated by the Federal Energy Regulatory Commission (FERC) in their "Summer 2017 Energy Market and Reliability Assessment," in which they state: "[w]estern regions are also likely to see above normal temperatures."

We want to reiterate the concerns we raised in our April 28 letter to you about the region's overall energy reliability as we enter the summer season. Unplanned events do happen. Such events have occurred as recently as May 3rd of this year when CAISO issued its first Stage 1 emergency in over 10 years due to weather and unplanned events. In addition, fire season is still months away and yet we have seen wildfires occur over the last two weeks. Prudent planning incorporates the potential for these types of events.

As you consider how best to support energy reliability in the region, it should be noted that agencies and municipalities have raised similar reliability concerns. These include:

1. FERC – in the report described above, FERC states: "the limited availability of the Aliso Canyon natural gas storage facility in Southern California may pose a risk to gas and electric reliability this summer if hotter than normal weather conditions and unplanned gas pipeline outages materialize."
2. Department of Energy (DOE) – in a letter to CEC Chair Weisenmiller, dated May 19, 2017, the DOE states: "without the availability of Aliso Canyon or some adequate functional equivalent, the region remains vulnerable to energy supply disruptions and possible electricity blackouts triggered by severe weather, unanticipated outages of key facilities, natural or man-made disasters, or a combination of these events."
3. Burbank Water and Power, Pasadena Water and Power, and Vernon Public Utilities – in a letter to California Senator Henry Stern, dated June 13, 2017, the municipalities highlight their concerns on multiple reliability issues, including that restrictions on Aliso Canyon could "constrain[] the transmission of natural gas which could limit local electric supply, resulting in electric outages, which compromises the public safety of millions of Southern Californians." (The letter is attached for your reference.)

As an update on the status of Aliso Canyon, SoCalGas has undertaken actions to enhance the safety of the facility and validate its integrity, in compliance with the relevant sections of Senate Bill 380. On November 1, 2016, SoCalGas requested authorization to resume injections at Aliso Canyon and submitted the required documentation and data to the CPUC and the Division of Oil, Gas, and Geothermal Resources (DOGGR). On January 17, 2017, the CPUC and DOGGR determined that SoCalGas had fully satisfied the requirements necessary to request authorization to resume injection. SoCalGas is currently awaiting final authorization to resume injections.

We continue to stand ready to support you and your agencies' efforts to ensure a reliable supply of energy for California's residents and businesses.

Sincerely,

Bret Lane
President and Chief Operating Officer

cc: Kevin De León, President pro Tempore, California State Senate
Anthony Rendon, Speaker of the Assembly, California State Assembly
Patricia Bates, Senate Minority Leader, California State Senate
Chad Mayes, Minority Floor Leader, California State Assembly
Nancy McFadden, Executive Secretary to California Governor Edmund G. Brown, Jr.
Edward Randolph, Energy Division Director, CPUC
Mark Roethleder, Vice President, Market Quality and Renewable Integration, CAISO

June 13, 2017

The Honorable Henry Stern
State Capitol, Room 3070
Sacramento, CA 95814

RE: CONCERNS Senate Bill 57 – Natural Gas Storage: Moratorium.

Dear Senator Stern:

Burbank Water and Power, Pasadena Water and Power, and Vernon Public Utilities join to express serious concerns regarding Senate Bill 57, which continues the moratorium on the injections at the Aliso Canyon Storage Facility until a root-cause analysis of the methane leak is identified. We recognize the need to better understand the cause of the leak and to provide insight for future protection and prevention. However, the need for a root cause analysis of the outer casing has been alleviated given that the wells have been retrofitted and gas is no longer designed to flow in the outer casings. In addition, we are concerned that the bill constrains the transmission of natural gas which could limit local electric supply, resulting in electric outages, which compromises the public safety of millions of Southern Californians.

While we appreciate the reliability safeguard added in recent amendments, which allows the Governor to order incremental natural gas injections at the facility to avoid or respond to an emergency situation, the bill takes a reactive approach. The bill fails to define a notification process for emergency gas injections, suggesting that a response to prevent a blackout might come too late. The Governor's declaration of an emergency will not suddenly produce gas for local power plants to ensure energy supply reliability for affected customers in the Los Angeles region, as natural gas flows slowly through the pipeline system.

To mitigate the increased risk of power outages resulting from the existing moratorium, we recommend a proactive approach based on the March 16th, 2017 letter from the California Public Utilities Commission to the Southern California Gas Company recommending an increase to the current inventory at Aliso Canyon to allow for emergency withdrawals. This would ensure that gas inventories are available to *prevent* (not *react* to) rolling blackouts and disturbances to both gas and electric power supply. We believe a reaction-based contingency plan that addresses emergencies *after they are already in progress* does not protect our customers and communities, and therefore, must be avoided to the greatest extent possible.

As you know, approximately 60% of electricity in California is generated with the use of natural gas. Aliso Canyon supplies natural gas to 17 power plants that serve 10 million residents and businesses. This includes the Cities of Burbank, Pasadena and Vernon. The ability to continue providing our customers with uninterrupted electric service hinges upon having timely delivery of natural gas necessary to operate the plants. Some electric utilities like Pasadena Water and Power are unable to import all of their electricity power needs during high-use periods due to local electric grid capacity limits. These utilities *must* rely on local natural gas-fueled electric generators during peak conditions to keep the lights on, and there currently are no other feasible and cost-effective options that can be implemented quickly. Large consumers of gas such as electric utilities are categorized as "noncore" customers, and are among

the first consumers required to curtail gas use. Thus, electric utility customers are at risk of experiencing rolling blackouts.

Utilities employ rolling blackout protocols that exempt critical facilities such as hospitals, healthcare facilities, and other essential infrastructure from planned block-by-block service outages. However, general residences, businesses and industries, and public areas such as streets are not afforded these same protections and could be subject to significant safety risks. For example, a lack of home cooling during a multi-day heatwave could prove deadly, particularly for the elderly and infirm while traffic signals that stop functioning during a power outage can result in road fatalities.

Gas curtailments were mitigated during 2016 due to moderate summer temperatures and the extraordinary response by customers to the utilities' calls for conservation. However, as the warm months quickly approach, utilities must again prepare for the extreme temperature swings that occur during a typical Southern California summer. It is imperative that they can rely on adequate resources or, at the very least, a well-defined emergency response process that ensures proactive management of potential electric reliability issues. Until SB 57 is amended to contain these assurances, electric utilities and communities they serve will have ongoing concerns.

We are hopeful that we are able to come to a mutual agreement that will provide your constituents as well as all affected utility customers with the safety assurances and electric reliability they deserve.

Sincerely,

JORGE SOMOANO
General Manager
Burbank Water & Power

GURCHARAN S. BAWA
General Manager
Pasadena Water & Power

KELLY NGUYEN
General Manager
Vernon Public Utilities

Cc: The Honorable Ricardo Lara, California State Senate
The Honorable Anthony Portantino, California State Senate
The Honorable Sabrina Cervantes, California State Assembly
The Honorable Laura Friedman, California State Assembly
The Honorable Chris Holden, California State Assembly
The Honorable Miguel Santiago, California State Assembly
The Honorable Michael Picker, President – California Public Utilities Commission
Timothy J. Sullivan, Executive Director – California Public Utilities Commission
Kenneth A. Harris, Jr., State Oil and Gas Supervisor – Division of Oil, Gas, and Geothermal Resources
Ms. Nancy McFadden, Executive Secretary, Office of the Governor
Ms. Camille Wagner, Legislative Affairs Secretary, Office of the Governor
Mr. Michael Martinez, Deputy Legislative Secretary, Office of the Governor
Mr. Saul Gomez, Deputy Cabinet Secretary, Office of the Governor
Steve Mermell, City Manager – City of Pasadena
Ron Davis, City Manager – City of Burbank
David Jones, Emanuels Jones & Associates

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Bret Lane
President and
Chief Operating Officer

555 W. 5th Street, M.L. GT-21C1
Los Angeles, CA 90013-1011

Tel: 213.244.2100
Fax: 213.244.8293

April 28, 2017

Mr. Stephen Berberich, President and CEO, California Independent System Operator
Mr. Michael Picker, President, California Public Utilities Commission
Mr. Robert Weisenmiller, Chair, California Energy Commission

Dear Messrs. Berberich, Picker, and Weisenmiller:

The California Independent System Operator (CAISO), California Energy Commission (CEC) and California Public Utilities Commission (CPUC) are the critical agencies charged with planning and managing California's energy reliability. Californians depend upon your agencies' expertise and authority to ensure dependable supplies of natural gas and electricity. We continue to stand ready to support your agencies' efforts. To further support you and your agencies' efforts, we want to make you aware of serious concerns we have about our ability to safely and reliably serve our customers this summer and upcoming winter, based upon the current operating status of our system.

The State was lucky this past year to have experienced a mild summer and winter. For the upcoming summer and winter seasons, Californians cannot rely on luck, and energy reliability should not depend upon unusually mild weather conditions. This is particularly true now, as the National Oceanic and Atmospheric Administration is forecasting a 60 to 70 percent chance for above normal temperatures throughout California this summer.

Recently, your agencies directed us to perform an analysis of our system's maximum capabilities using a specified set of assumptions, and we have provided your agencies with that analysis. SoCalGas is concerned, however, that the assumptions we were asked to utilize in our analysis assume perfect operating conditions and optimal market conditions. This could lead your agencies to reach conclusions that produce overly optimistic assessments that could put at risk the dependable supply of natural gas and electricity that Southern Californians will rely on to meet their energy needs this summer and upcoming winter.

Our system's physical ability to provide reliable service on peak demand days and respond to abnormal operating conditions is at risk. As you are aware, currently, the ability of our storage fields to fulfill their critical role in supporting our system is diminished. The La Goleta, Honor Rancho and Playa del Rey storage facilities have 40 percent less inventory than they did at this same time last year. The inventories in these three fields are at reduced levels due to the increased utilization of these fields last winter as a result of the restrictions on the use of Aliso Canyon.

SoCalGas is prohibited from injecting natural gas at Aliso Canyon and is limited to withdrawing gas under certain conditions. In past years, injections into and withdrawals from storage—primarily Aliso Canyon—had been sufficient to maintain system reliability when flowing supplies and customer demand were not in balance. Currently, the depleted inventory levels at La Goleta, Honor Rancho and Playa del Rey and restrictions on our use of Aliso Canyon could result in inadequate injection and withdrawal rates to respond to these imbalances during this summer and into the coming winter. The availability of storage injection capacity also reduces the risk of over pressurization of segments of our pipeline system. Operating close to a pipeline's maximum pressure is a pipeline safety and compliance concern.

Prudent planning promotes safety and incorporates contingencies to provide sufficient system resiliency and flexibility. As part of electric planning assessments, the electric industry plans for upsets under the "N minus 1" condition, which requires electric operators to plan their system to have sufficient resiliency to lose a critical component and continue operating. The gas industry does not have that planning requirement. For SoCalGas, our system was designed to use our storage assets to create system resiliency. Storage acts as "shock absorbers" when we have fluctuations during both supply and demand swings. In effect, having natural gas storage available within our system provides a similar "N minus 1" contingency. Many of the assessment's assumptions, however, do not provide for sufficient contingency in the event of imperfect operating conditions and less than optimal market conditions.

Our experience in these areas raises concerns about planning the region's energy reliability based upon assumptions that require almost perfect conditions. Our concerns with the assumptions can be summarized as follows:

Assumption:	Full receipt point utilization.
Concerns:	Full receipt point utilization only provides the upper bound of our system's ability to serve customer demand. This theoretical maximum is not a reasonable operational planning assumption. As you are aware, receipt point utilization is a market issue and is dependent upon the market participants—from upstream suppliers, shippers, and ultimately the core and non-core customers—to purchase, schedule, and deliver the gas. Full receipt point utilization is primarily dependent upon customer demand and does not reflect actual historical receipts.
Assumption:	1.470 bcf per day storage withdrawal rates.
Concerns:	Storage withdrawal rates of 1.470 bcf per day assumes significantly higher inventory at La Goleta and Honor Rancho, and full inventory at Playa del Rey. We are concerned that the limited injection that has occurred over the last month to restore depleted storage inventories, and limitations and restrictions on the ability to replace gas withdrawn during the summer, will result in lower withdrawal rates. Currently, the combined inventory at La Goleta, Honor Rancho and Playa del Rey is approximately 40 percent lower than it was at this time last year. The inventories in these three fields are at reduced levels due to the

increased utilization of these fields last winter as a result of the restrictions on the use of Aliso Canyon. If depleted storage inventories are not restored, we will be unable to achieve or maintain withdrawal rates of 1.470 bcf per day.

Restrictions on the use of injection at Aliso Canyon have a direct impact on the SoCalGas system operator's ability to optimize storage injection at our other fields, reliably meet the variability of demand this summer, and prepare for this upcoming winter. The daily injection capacity provided by Aliso Canyon adds 2 to 2 ½ times the total available injection capacity for our system, allows the market to have more certainty and flexibility when scheduling gas into our system, and allows the SoCalGas system operator to maximize injection at the other storage fields. It also provides the SoCalGas system operator the ability to better manage the pipeline system from a pressure perspective. Our system has been designed and operated with the injection, withdrawal and storage capacity of all the storage fields as integral parts of the overall system.

Assumption: Aliso Canyon is assumed to not be used this summer, but held in reserve as a planning contingency.

Concerns: It may be reasonable to assume conservatively that Aliso Canyon is unavailable for withdrawal to provide a planning contingency within a modeling exercise. But, given the State's current restrictions on injection, it is not prudent to depend on Aliso Canyon as an operational backstop throughout the summer and winter to fill potential gaps during system upsets or when the perfect assumptions do not materialize. With Aliso Canyon's currently depleted inventory level, new operating configuration of the wells, and the current temporary moratorium on injection, once any withdrawals are made from Aliso Canyon, its withdrawal capacity is anticipated to decline at what could be a dramatic rate.

Assumption: Daily average capacity accurately reflects the system's ability to meet customer demand.

Concerns: Assuming daily average capacities can be used to forecast the system's ability to meet customer demand results in system planning that does not address the critical importance of hourly customer demand fluctuations, especially in supporting natural gas fired electric generation, in assessing system reliability. The availability of natural gas supply from our storage fields provides critical flexibility in managing the differences between relatively uniform flow of supply from our receipt points and the hourly fluctuating demand of our customers.

We continue to review historical data to assess in greater detail how these assumptions match up with our experience. As described in previous reports, disruptions from planned or unplanned outages on our system and interconnecting pipeline systems can result in natural gas supply interruptions. In addition, we highlight two recent examples of how disruptions outside of our system demonstrate the critical role our storage facilities play in supporting gas and electric system

reliability and resiliency. Under current operating conditions, these events could result in significant energy shortages, including electric generator curtailment.

> Weather: In late July 2015, Southern California experienced three consecutive days of intense humidity and monsoonal storms. The heat and humidity drove an increased need for electric generation, and the cloud cover limited solar generation, resulting in fluctuating electric generation and attendant natural gas demand. During the event, use of natural gas fired electric generation increased significantly, with a total demand over a three-day period ranging between 11 and 25 percent above plan. Storage withdrawals were instrumental in managing the variable needs of the electric system and maintaining electric reliability.
>
> Electric Demand: In August 2016, the Blue Cut fire in the Cajon Pass of Southern California, impacted major transmission lines operated by Los Angeles Department of Water and Power and CAISO. Those lines were taken out of service during the fire, which required local natural gas fired electric generation to make up for the loss of electric transmission capacity. Significant storage withdrawals were used to respond to this unexpected 21 percent increase in natural gas demand from electric generation over a five-day period.

These examples demonstrate the importance of assessing our system's capabilities to meet customer demand under multiple scenarios, including scenarios that account for unexpected changes to natural gas supply and customer demand. Experience has shown that failure to address our system's need for resiliency and flexibility risks energy shortages and the attendant safety issues.

We hope that this information is helpful as your agencies perform their critical roles in planning and managing California's energy reliability and resiliency. We continue to stand ready to support you and your agencies' efforts and recognize the importance of continuing to work together as you reach conclusions critical to the State's ability to ensure a reliable supply of energy to fuel California's residents, businesses, and economy.

Sincerely,

Bret Lane
President and Chief Operating Officer

cc: Kevin De León, President pro Tempore, California State Senate
Anthony Rendon, Speaker of the Assembly, California State Assembly
Nancy McFadden, Executive Secretary to California Governor Edmund G. Brown, Jr.
Edward Randolph, Energy Division Director, CPUC
Mark Roethleder, Vice President, Market Quality and Renewable Integration, CAISO

ATTACHMENT B

SOUTHERN CALIFORNIA GAS COMPANY WINTER 2017-18 TECHNICAL ASSESSMENT

October 30, 2017

Executive Summary

The California Public Utilities Commission (CPUC) has mandated that Southern California Gas Company (SoCalGas) maintain a reliability standard such that it can provide service during a 1-in-10 year cold day event for noncore customers and provide service during a 1-in-35 year peak day event for core customers.[1] The supply reductions resulting from the current pipeline outages and pressure limitations, along with the restrictions imposed by the CPUC on both the use of Aliso Canyon and SoCalGas' other storage fields, have negatively impacted SoCalGas' ability to meet these standards.

With the current supply reductions, including the limitations on the use of Aliso Canyon, and the expected level of storage supply available, SoCalGas has performed hydraulic simulations and calculated its winter system capacity to be no greater than 3.7 – 3.9 billion cubic feet per day (BCFD)[2], significantly less than the 4.955 BCFD demand during the 1-in-10 year cold day event. Additionally, under a cold temperature and dry hydro condition, SoCalGas forecasts that its gas in storage will be fully depleted before the end of February 2018, using data provided in the 2016 California Gas Report. SoCalGas therefore expects that noncore service will need to be curtailed pursuant to CPUC approved SoCalGas Rule No. 23 during the 1-in-10 year cold day event in order to preserve service to core customers. In addition, SoCalGas anticipates that noncore service will need to be curtailed even during less extreme and higher temperature conditions than the 1-in-10 year cold day event in order to preserve storage inventory and withdrawal capacity needed during the 1-in-10 year cold day event.

While there is risk to noncore customers, including electric generation, at this time, SoCalGas does not believe that service to core customers is at risk. Sufficient pipeline and storage capacity exists to meet the CPUC-mandated reliability standard of a 1-in-35 year peak day event planning standard for core service. However, this reliability standard includes *the full curtailment of all noncore customers*.

In both instances, SoCalGas' ability to maintain uninterrupted service also depends upon customers delivering sufficient supply to the SoCalGas system. SoCalGas will continue to use all the regulatory tools it has as authorized by the CPUC; however, SoCalGas expects that there may be times during the winter season when gas supply from the interstate pipelines is unavailable due to weather conditions elsewhere in the country or pipeline constraints upstream of SoCalGas' system.

Any additional loss of pipeline or storage capacity will further degrade the ability to provide service to noncore customers, and could impact capacity to maintain continuous service to core customers as well.

[1] See Decision (D.)02-11-073, D.06-09-039, and D.16-07-008.

[2] The system capacity increases from 3.7 to 3.9 Bcf once Line 4000 returns to service at a reduced operating pressure as discussed below.

Supply Outlook

Available Flowing Pipeline Supplies

The SoCalGas system has been designed to receive up to 3.875 BCFD of flowing supply on a firm basis. This means, if customers deliver that much supply to the SoCalGas system, and SoCalGas has a sufficient level of customer demand, SoCalGas can redeliver that gas supply to customers' burners. Supplies delivered to the SoCalGas system, however, do not reach these maximum receipt levels for a variety of reasons, including that customers may choose to use SoCalGas' balancing service rather than deliver supplies, California production has declined over time, system demand frequently does not require maximum delivery of supply, or flowing supplies may not be available due to weather patterns or maintenance impacting the interstate pipelines upstream of the SoCalGas system. Additionally, planned and unplanned pipeline outages can reduce receipt capacity. Currently, the pipeline outages on Lines 235, 4000, 3000, and the pressure reduction to Line 2000 have reduced the receipt capacity of the SoCalGas system to 2.770 BCFD, as detailed below in Table 1.

Table 1
Available Flowing Pipeline Supplies (10/30/2017)

Receipt Point	Supply (million cubic feet per day, MMcfd)
North Needles	0 [1]
Topock	0 [2]
Kramer Junction	700 [3]
Blythe	1010
Otay Mesa	200 [4]
Wheeler Ridge/Kern River Station	800 [5]
California Production	60 [6]
TOTAL	2,770

[1] No receipt capacity due to Line 235 and Line 4000 outage.
[2] No receipt capacity due to Line 3000 outage.
[3] SoCalGas temporarily increased the operational receipt capacity of Kramer Junction from 550 to 700 MMcfd on 10/19/17.
[4] Historically, no supply delivered at Otay Mesa.
[5] The firm capacity of the Wheeler Ridge receipt point is 765 MMcfd. SoCalGas is able to increase the capacity to 800 MMcfd on a seasonal basis in the winter due to increased demand downstream of the receipt point.
[6] Although SoCalGas has firm receipt capacity of 310 MMcfd for local California production, producers are utilizing only approximately 60 MMcfd of that capacity for actual flowing supplies.

The SoCalGas receipt capacity is expected to increase by another 200 MMcfd to 2,970 MMcfd once Line 4000 is restored to service operating at a reduced pressure. SoCalGas currently expects this restoration to occur by December 30, 2017.

SoCalGas is also working diligently to complete maintenance and repairs on Line 235 and Line 3000, so that they can be safely returned to service. As with Line 4000, SoCalGas expects to initially operate Line 235 at a reduced pressure when it is restored to service. When Line 235 is restored, it will provide redundancy, but will not provide incremental firm receipt capacity. There is currently no timetable for

when Line 235 will be restored to service. Line 3000 is expected to be back in service by May 1, 2018, which is after the winter season. Line 3000's return to service, however, possibly could have been accelerated had State of California agencies intervened to expedite the permitting process. [3]

Available Storage Supplies

SoCalGas currently estimates a withdrawal capacity of 1.95 BCFD to be available during the peak winter months of December and January, including storage supplies from Aliso Canyon. This withdrawal capacity is detailed in Table 2 below, and includes both the inventory level at which the projected withdrawal rate is no longer possible and the expected storage field inventory levels at the beginning of the winter season.

Table 2
Projected Storage Withdrawal

Storage field	Projected withdrawal rate during peak demand period (MMcfd)	Minimum field inventory for projected rate (BCF)	Expected field inventory on 12/1/2017 (BCF)
Honor Rancho	850	22	24
La Goleta	300	11	19
Playa del Rey	300	1.5	1.85
Aliso Canyon	500 *	23.6	23.6
TOTAL	1,950	58.1 **	68.45 **

* Estimate as of 10/31/2017, has not been validated with flow tests. After validation and additional well availability, the withdrawal capacity may reach 625 MMcfd.

** These totals do not reflect the actual working inventory available to serve customer demand. SoCalGas is only authorized to use the Aliso Canyon storage field as a last resort in accordance with the most recent withdrawal protocol, however, even then only 8.8 BCF (23.6 – 14.8 BCF) of Aliso inventory can be used.

These withdrawal rates are dependent on having sufficient inventory and the number of wells available to maintain the withdrawal rate for an extended time. As inventories are depleted, the withdrawal rates from the fields decline. As a result, these withdrawal rates are only available when the fields are within a specific range of inventory levels. Operationally, this means that storage inventories must be held (not used) during the winter season in order to maintain the required withdrawal rates necessary for peak day reliability.

[3] SoCalGas operates critical pipeline infrastructure throughout Southern California, encompassing multiple state and federal jurisdictions. When a pipeline is taken out of service for remediation purposes, the permitting process with these jurisdictions can significantly impact the time required to return the pipeline to service. If the CPUC decides it wants to exercise its authority and express the need for expedited permitting treatment with these jurisdictional agencies, critical infrastructure can be returned to service more quickly and avoid reliability risk. For example, SoCalGas contacted the CPUC in the beginning of 2017 for assistance in securing necessary California Fish and Wildlife permits for Line 3000. Had the CPUC exercised its authority and expressed the need for expedited treatment, the permits could have been received and work could have begun as early as May of 2017. Instead, because of permit delays, work on this pipeline is not scheduled to commence until November of 2017.

As seen in Table 2, there is very little inventory capacity (2.5 BCF) between Honor Rancho and Playa del Rey that can be used between the start of the winter season, on November 1st, and the peak demand period of December through January. While more inventory supply (8 BCF) can be used from the La Goleta storage field before its critical inventory level is reached, gas supply from La Goleta primarily serves the demand on the SoCalGas Coastal System, and actual demand on that system will determine how much supply from La Goleta can be utilized. Further, it is unlikely that the Playa del Rey storage field can sustain its withdrawal rate for an entire operating day, let alone multiple days.

Demand Outlook: 1-in-10 Year Cold Day Event

For the upcoming winter season, the forecast level of demand during the 1-in-10 year cold day event is 4.955 BCFD:

Table 3
Forecast Customer Demand During 1-10 Year Cold Day Event

Customer Type	Winter Demand (BCFD)
Core	3.250
Noncore, Non-Electric Generation	0.805
Noncore, Electric Generation	0.900
Total	4.955

Based on the above data, SoCalGas expects that it will have insufficient supplies to meet the 1-in-10-year cold day demand forecast. This cold day event has the potential to occur in December or January, and may also occur more than once per season. To avoid curtailments, this 4.955 BCFD must be supplied through a combination of flowing supply (interstate pipeline supplies and local California produced supplies) and storage withdrawal. As shown in Tables 1 and 2, the expected level of flowing and storage supplies available through the peak demand period is 4.720 BCFD - short of the level of demand even with the use of Aliso Canyon. While the level of flowing pipeline supply is expected to increase by 200 MMcfd by the end of December, it is likely that storage levels will be drawn down below the minimum levels shown in Table 2, offsetting this gain in flowing pipeline supply with a loss of withdrawal capability. This is further discussed below and described in Table 4.

Hydraulic modeling of the transmission system has determined the winter system capacity to be 3.7 BCFD, increasing to 3.9 BCFD with the partial restoration of Line 4000, without the use of Aliso Canyon. Even with the estimated withdrawal supply from Aliso Canyon of 500 MMcfd, SoCalGas still has insufficient capacity and supply to meet the 1-in-10 year cold day demand forecast. Therefore, if the 1-in-10 year cold day event were to occur, as required by SoCalGas' CPUC-approved tariff rules, noncore customers would need to be curtailed, starting with noncore electric generators.

Demand Outlook: 1-in-35 Year Peak Day Event

For the upcoming winter season, the forecast level of demand during the 1-in-35 year peak day event is 3.454 BCFD. This is within SoCalGas' system capacity with the current level of outages, and the ability to meet this level of demand has been confirmed with hydraulic simulation. SoCalGas therefore believe that its ability to maintain continuous service to the core customers is not at risk this winter; however, this entails ***all noncore service being curtailed***, in accordance with the CPUC – approved design standard.

Examination of Seasonal Storage Needs

In addition to the examination of SoCalGas' ability to meet the CPUC's mandated reliability design standards, SoCalGas examined the use of its available storage throughout the winter season. Table 4 below examines this using demand data prepared for the 2016 California Gas Report. This level of demand was then compared to the expected level of flowing supply (interstate pipeline and local California producer supply). It is not realistic to assume that full receipts will be delivered every day throughout the winter season. For the purposes of this assessment, SoCalGas assumed a level of supply equal to 85% of the receipt capacity, a level which CPUC Staff proposed in the SB 380 modeling framework. If this level of flowing supply was insufficient to meet the level of demand, the amount of storage supply (withdrawal) needed was calculated, and that amount was reduced from the system-wide storage field inventory. The beginning (end of month) storage inventory is taken from Table 2 above, and includes the 8.8 Bcf of usable inventory from Aliso Canyon (24 BCF at Honor Rancho, 19 BCF at La Goleta, 1.85 BCF at Playa del Rey, and the 8.8 BCF available to use at Aliso Canyon).

Table 4
Monthly Storage Utilization Assessment

	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
AVG TEMP BASE HYDRO					
CGR demand (MMCF)	78750	97216	87220	96131	80640
Pipeline supply (MMCF), 85%	70635	72990	70686	78260	75735
Storage withdrawal (MMCF)	8115	24227	16534	17872	4905
Month-End Storage inventory (MMCF)	45535	21309	4775	-13097	-18002
COLD TEMP DRY HYDRO					
CGR demand (MMCF)	82860	105338	95788	104656	87270
Pipeline supply (MMCF), 85%	70635	72989.5	70686	78259.5	75735
Storage withdrawal (MMCF)	12225	32349	25102	26397	11535
Month-End Storage inventory (MMCF)	41425	9077	-16026	-42422	-53957

Per Table 2, SoCalGas requires 43.3 BCFD of inventory in storage in order to maintain sufficient withdrawal capacity for peak reliability (22 BCF at Honor Rancho, 11 BCF at La Goleta, 1.5 BCF at Playa del Rey, and the 8.8 BCF available to use at Aliso Canyon). As can be seen in Table 4, the inventory levels in December and January – the peak demand months of the winter season – fall far below what is needed to maintain reliability. Also take note that SoCalGas' storage inventory is fully depleted before the end of the winter season - in February under an average temperature/base hydro ("average/base") scenario and in January under a cold temperature/dry hydro ("cold/dry") scenario.

This will require a significant level of noncore curtailment: 18 BCF in the average/base scenario and 54 BCF in the cold/dry scenario over the season. This results in approximately 202 MMcfd of required curtailment on average from January through March under the average/base scenario and approximately 607 MMcfd on average under the cold/dry scenario for this same period. Under Commission approved SoCalGas Rule No. 23, curtailments based on these volumes would be effectuated first starting with the prescribed percentage of noncore EG demand. If further curtailment is required, noncore/non-EG customers would be curtailed to extent possible, followed by additional curtailment to the noncore EG demand.

The curtailments discussed above are necessary only to balance seasonal demand and supply. Additional curtailment will be required in order to maintain inventory levels to provide the withdrawal rates needed for reliability as shown in Table 2, and to reflect the actual hydraulic capacity of the SoCalGas system.

Aliso Canyon Winter Risk Assessment Technical Report for2017/18

Separate from the above analysis of core and noncore customer reliability, CAISO, the CPUC, LADWP, and the California Energy Commission (CEC) (collectively the "Taskforce") have been developing an update to the 2016/2017 Aliso Canyon Winter Risk Assessment Technical Report, which assesses energy reliability risk in Southern California, with focus on the natural gas demands of electric generators. SoCalGas did not participate in this Aliso Canyon Winter Risk Assessment Technical Report, however the Taskforce has shared a preliminary draft for SoCalGas' review. Within past reports, the Taskforce has identified minimum levels of electric generation demand served from the SoCalGas system necessary to maintain electric system reliability during the winter season, both including and excluding the obligation for the CAISO and LADWP to maintain an "n-1" contingency mandated by FERC for reliability planning.

For the winter of 2017/2018, SoCalGas intends to use the findings of the 2016/2017 Aliso Canyon Winter Risk Assessment Technical Report, which determined that only 22 MMcfd is required to support noncore electric generation. This number increases to 96 MMcfd if a contingency event affecting both CAISO and LADWP were to occur. These numbers are far below the 900 MMcfd that was forecasted to occur in a 1-in-10 year cold day event. Similar to last year, SoCalGas continue to have concerns that these lower levels of electric generation demand can be achieved in practice, and are not a prudent basis for winter planning. Nevertheless, SoCalGas will build these numbers into its curtailment assessments for the coming winter season.

Mitigation Measures

SoCalGas has identified no measures that would fully mitigate this winter's energy reliability risks, even the full use of Aliso Canyon. Although other mitigation measures are identified below, resuming operation of Aliso Canyon, consistent with DOGGR and federal regulations, and removing the systemwide withdrawal rate requirement, is the most effective way to mitigate energy reliability risks and begin preparation for next summer and winter.

Use Aliso Canyon to support energy reliability

DOGGR and the CPUC have formally determined that the Aliso Canyon storage facility is safe to operate. Today, however, restrictions remain on the facility, including: (1) withdrawal protocols, which treat Aliso Canyon as an "asset of last resort" and only allows withdrawals after all other alternatives – including noncore curtailments – have been exhausted; and (2) inventory limitations, which limit available inventory and restrict the ability to withdraw and inject gas at Aliso Canyon. If Aliso Canyon is permitted to be operated in the same manner as SoCalGas' other fields, consistent with DOGGR and federal regulations, and consistent with CPUC's and DOGGR's validation of the field's safety, Aliso Canyon would better be able to support customer demand this winter.

Allow Aliso Canyon to withdraw gas to support energy reliability

Allowing Aliso Canyon to withdraw gas to support operational flexibility, maintain reliability, and meet peak or seasonal needs will improve energy reliability in Southern California. When trying to mitigate outages, time is of the essence, and overly restrictive withdrawal protocols hinder the ability of the facility to support operations and manage reliability. If SoCalGas is allowed to use Aliso Canyon as it uses the other storage fields, it reduces the reliance on the other storage fields, and better enables

SoCalGas to provide safe and reliable service. Not allowing withdrawal from the facility, except as a "last resort" increases energy reliability risk; removes SoCalGas' primary operational contingency; and puts added stress and strain on the remaining storage fields, which can lead to a greater risk of an outage requiring maintenance and, potentially, the loss of the ability to withdraw gas.

Provide Aliso Canyon sufficient usable inventory to support energy reliability

As part of the CPUC's California Public Utilities Code Section 715 Report (715 Report), the CPUC has determined working gas ranges that the Aliso Canyon facility is to be operated within to ensure safety and reliability at just and reasonable rates in California. In the most recent 715 Report, the CPUC determined that "the range of working gas necessary to maintain reliably is 14.8 Bcf at the low end and 23.6 Bcf at the high end."

If SoCalGas is able to withdraw gas from Aliso Canyon below 14.8 Bcf, more natural gas supply will be available to respond to customer demand. Similarly, if SoCalGas is able to increase Aliso Canyon's inventory above 23.6 Bcf, it will increase gas supply in storage for subsequent high demand periods, increase withdrawal rates, extend the time high withdrawal rates can be maintained, better enable SoCalGas to meet reliability needs, and create an additional operating margin to support sufficient inventory at all fields throughout the winter season. At this time, there may only be limited opportunity to increase the inventory at Aliso Canyon or the other storage fields; however, there should not be a restriction on inventory that would preclude any such opportunity. To establish inventory levels that better support energy reliability, the CPUC should expeditiously issue its next 715 Report that either lifts inventory restrictions entirely or includes a greater range of inventory that SoCalGas can maintain at Aliso Canyon.

<u>Remove systemwide storage withdrawal rate requirements</u>

On March 16, 2017, the CPUC instructed SoCalGas to maintain a system wide storage withdrawal capacity of 2.065 Bcfd beginning June 1, 2017. This amount was to be increased as quickly as possible to 2.420 Bcfd. To achieve this mandated systemwide withdrawal rate, SoCalGas must maintain the maximum withdrawal rate at each field, which significantly limits the usable inventory at each facility. The CPUC has essentially imposed a withdrawal protocol on all of SoCalGas' storage fields. As a result, SoCalGas' fields operate with reduced usable inventory and SoCalGas has limited flexibility when using its storage assets. To maintain these withdrawal rates, the CPUC ordered SoCalGas to slow both the pace of well testing at Aliso Canyon and the Storage Safety Enhancement Plan (SSEP) improvements at the remaining storage fields, which has resulted in reliance on wells that have not undergone the same rigorous testing as Aliso Canyon. Removal of the systemwide withdrawal rate requirement would help mitigate reliability risks this winter by increasing system flexibility and increasing usable inventory at each field.

<u>Deliver incremental supply at the Otay Mesa receipt point</u>

The firm receipt capacity of the SoCalGas southern system is 1210 MMcfd; the combined firm deliveries at Ehrenberg and Otay Mesa are limited to 1210 MMcfd. The firm receipt capacity at Ehrenberg is 1010 MMcfd due to the Line 2000 pressure reduction, while the firm receipt capacity at Otay Mesa is 400 MMcfd. The ability to receive supply at Otay Mesa beyond the 400 MMcfd is dependent upon local demand in San Diego or displacing supplies that would otherwise be delivered at Ehrenberg. Historically, little to no supply has been delivered at Otay Mesa.

SoCalGas, as the System Operator, currently has the authority to acquire gas supply for delivery to the Southern System, including at the Otay Mesa receipt point. Supply delivered to the Northern System has traditionally supported the southern system using the Chino and Prado crossovers and Line 6916.

These operations are not feasible given the current reduced receipt capacity on the Northern System. However, if the Southern System is running with full pipeline supply, it no longer needs support from the Northern System, and supplies delivered on the Northern System can be used to serve demand elsewhere. Furthermore, supply delivered to the Southern System in excess of its demand can be used to supply the Los Angeles Basin. This can be achieved through the System Operator purchase of supply delivered to the Otay Mesa receipt point **incremental to** volumes scheduled for delivery at Ehrenberg or Otay Mesa by customers – with a maximum level to either fully utilize the 1210 MMcfd firm receipt capacity of the southern system or more on an as-available basis, depending upon the level of the SDG&E demand.

It is SoCalGas' understanding, however, that little to no firm capacity exists this winter season on the pipeline path to transport supply from the El Paso Pipeline system to the Otay Mesa receipt point (North Baja Pipeline – Gasoducto Rosarito Pipeline – Transportadora de Gas Natural Pipeline). If firm capacity on this pipeline path cannot be obtained, then this mitigation measure is only available with the purchase of liquefied natural gas (LNG) from the Energía Costa de Azul terminal. This purchase would require explicit CPUC authority given the corporate relationship between SoCalGas, Transportadora de Gas Natural, and Energía Costa Azul.

<u>Continue Targeted Marketing, Education, and Engagement (ME&E) Campaign</u>

In 2016, the CPUC directed SoCalGas to fund programs that would encourage conservation in response to anticipated supply shortages during the Aliso Canyon injection moratorium. SoCalGas was authorized to provide up to $6 million for a ME&E conservation campaign for customer awareness activities in the Los Angeles Basin. An evaluation of the ME&E program, found that the ME&E campaign was successful in creating awareness, but did not find measurable energy savings. In 2017, the CPUC again authorized up to $6 million of funding for ME&E. To date, SoCalGas has spent approximately $7.5 million on the ME&E campaign. SoCalGas does not recommend extending ME&E activities into winter 2017-18. SoCalGas already has a traditional conservation campaign running during the winter season, and, in light of the findings on the effectiveness of ME&E campaign, do not believe duplicative messaging efforts are necessary or cost-effective, and may cause customer confusion with disparate messaging.

<u>Continue Demand response programs</u>

During last winter, SoCalGas ran three natural gas demand response programs: SoCalGas Advisory Pilot Rebate Program, Core Notification Campaign, and the Noncore Notification Campaign. All three programs were used to communicate natural gas demand response events called advisory days. SoCalGas issued two advisory days last winter and, according to an impact evaluation, the demand response programs reduced gas usage by only 792 therms, or 0.08 MMcf. Given the findings, SoCalGas do not believe that it is necessary or effective to continue the above demand response programs. SoCalGas is currently assessing alternative demand response programs, such as technology-enabled demand response programs. This approach should enable a more cost-effective delivery strategy with a higher chance of success in reducing natural gas used year-round and allows for a targeted campaign in specific load-constrained areas. Because of timing, however, a technology enabled-enabled demand response program may have a limited reliability impact this winter.

<u>Support Energy efficiency projects and behavior programs</u>

SoCalGas continues to leverage energy efficiency programs to help mitigate reliability issues this winter. SoCalGas is currently working through the Energy Division's *ex ante* review process to complete 10 custom retrofit projects with a combined therms savings potential estimated at 6.5 million therms per year. Additionally, SoCalGas is currently launching a sustained effort to provide Home Energy

Reports, targeting over 800,000 residential customers with the potential to save another 4-6 million therms per year. SoCalGas believes that by focusing on these areas, it will be better positioned to support system reliability. Although not enough to sufficiently mitigate energy reliability risk, accelerating large custom projects and behavior programs has the potential to produce savings and be more cost-effective than the ME&E campaign and demand response programs. The CPUC can support these efforts by partnering with SoCalGas to accelerate custom projects to achieve timely energy savings.

ATTACHMENT C

Bret Lane
President and
Chief Operating Officer

555 W. 5th Street, M.L. GT-21C1
Los Angeles, CA 90013-1011

Tel: 213.244.2100
Fax: 213.244.8293

JLane@SempraUtilities.com

October 30, 2017

Mike Bardee, Director, Office of Electric Reliability
Joe McClelland, Director, Office of Energy Infrastructure Security
Anna Cochrane, Director, Office of Energy Market Regulation
Larry Parkinson, Director, Office of Enforcement
Janel Burdick, Director, Division of Energy Market Oversight
James Danly, General Counsel

Re: Docket Nos. AD06-3-000 and AD16-24-000

Mr. Bardee, Mr. McClelland, Ms. Cochrane, Mr. Parkinson, Ms. Burdick, and Mr. Danly:

The Federal Energy Regulatory Commission (FERC) recently released its "Winter 2017-18 Energy Market Assessment." In this report, FERC highlights concerns for the Southern California region due to limitations at the Aliso Canyon natural gas storage facility and recent planned and unplanned outages on parts of our pipeline system. The report states, "[i]t is conceivable . . . that limitations at Aliso Canyon during periods of the highest winter demand could challenge regional stability and increase natural gas and electricity prices."

We share your concerns. As you are aware, state regulators determined that the Aliso Canyon gas storage facility was safe to resume injection operations in July of this year. The same regulators, however, placed severe limitations on our ability to withdraw gas from the facility. We can only use Aliso for withdrawal purposes as "an asset of last resort." This term is defined in a draft document released last week by the California Public Utilities Commission titled; "Aliso Canyon Withdrawal Protocol" (see attached). As the withdrawal protocol states, withdrawals will only be made after all other alternatives – including noncore curtailments (e.g., curtailment of electric generators, refineries, and other large commercial and industrial consumers) – have been exhausted. To place gas and electric reliability at risk by withholding what state regulators have also stated is probably the most tested and one of the safest storage fields in the country is puzzling.

We have already seen sharp price differentials during the localized heat wave Southern California experienced last week. On October 23, we observed SoCal natural gas border prices that were approximately $4/MMBtu, but SoCal "citygate" prices were trading at approximately $14/MMBtu. This may be an early sign of the types of price differentials and volatility we could see this winter. While there may be those that claim that the price differentials and volatility are due to pipeline outages and not limitations on the use of Aliso Canyon, the two cannot be

separated. As FERC knows, planned and unplanned outages happen, and prudent planning dictates the full utilization of any and all resources that are safe to operate.

We highlight our concerns to you as the federal agency responsible for energy reliability and market oversight. The state-imposed limitations on the use of Aliso Canyon are not based upon a safety, engineering or technical foundation. The state agencies responsible for oversight have determined the field is safe and have allowed injection of gas into the field. This being the case, the state's policy decision to severely limit how and when the storage field is used for gas withdrawal, when its operation would be the most effective mitigation measure to address reliability concerns and dampen market price volatility is very concerning.

As the winter demand season starts, we felt it important and prudent to notify you of our concerns. If you have any questions or would like to discuss this more in person, please let me know.

Sincerely,

Bret Lane

President and Chief Operating Officer

Enclosure

cc: Neil Chatterjee, Chairman
Cheryl LaFleur, Commissioner
Rob Powelson, Commissioner

DRAFT
Aliso Canyon Withdrawal Protocol

10.18.17

Introduction

Southern California Gas Company (SoCalGas) may withdraw gas from the Aliso Canyon natural gas storage facility (Aliso Canyon) consistent with the protocol defined below. The protocol implements the following principles:

- Aliso Canyon will be treated as the "asset of last resort" used for withdrawals after all other alternatives have been exhausted as defined by the protocol;
- The established practice of curtailing electric generation first in the event of a need for curtailment will be followed;
- If curtailments are required, SoCalGas shall consult with the applicable Balancing Authorities (the California Independent System Operator [CAISO] and the Los Angeles Department of Water and Power [LADWP]) before and during any curtailment; and
- Withdrawals will be made in a manner that ensures safety, maintains the integrity of the wells and storage facility, and is consistent with all rules and regulations concerning the safe use of Aliso Canyon.

Aliso Canyon Withdrawal Protocol

1. Withdrawals from Aliso Canyon. Withdrawals from Aliso Canyon will be based on forecasted and known conditions including but not limited to weather, overall gas demand, electric generation gas demand, and the current and anticipated operating condition of the SoCalGas system. Withdrawals will be made when, in coordination with the Balancing Authorities, it is determined that withdrawals are necessary to maintain reliability overall, to respond to the risk to electric system reliability, and to avoid or to limit curtailments to core and noncore customers. In all cases, withdrawals may only be made consistent with safe operation of the field and the system and in compliance with any mandated protocols for production from the field.

Within this context, withdrawals will be made if the circumstances described in A or B, below, occur:

A. The following three conditions exist:

(1) SoCalGas has taken all appropriate actions it deems available and necessary to meet demand and to avoid electric curtailments and/or gas curtailments to core customers. Such actions include the use of operational and emergency flow orders, curtailments of supply, and

coordination with Balancing Authorities to limit and/or reduce demand in effected areas; and

(2) To avoid electric curtailments, the CAISO and/or LADWP, in coordination with SoCalGas, have activated their appropriate capacity emergency plans based on the existing and forecast conditions; and

(3) There remains an imminent risk that electric curtailments will occur without additional gas supply.

B. Service to core customers is at risk due to emergencies on the gas pipeline system or because conditions require additional supply otherwise not available. Such emergencies include pipeline shutdowns, unplanned outages, or equipment failure. Under such circumstances, when reliability to core customers is at risk and curtailment is imminent, SoCalGas may, at its sole discretion, execute a withdrawal from Aliso Canyon.

2. Readiness of the Aliso Canyon Field. SoCalGas shall take all actions necessary to allow for timely withdrawals and shall maintain the Aliso Canyon field on a standby basis as warranted by forecasted conditions/ risks to system reliability. Further, if at any time the CAISO declares a Flex Alert, SoCalGas shall coordinate with the CAISO and LADWP and make any preparations necessary to allow for a timely withdrawal.

3. Executing a Withdrawal. As operator of the Aliso Canyon storage facility, SoCalGas has the obligation to make an informed decision to withdraw gas from Aliso Canyon under the conditions defined in 1.A., above. In confirmation that those conditions have been met, SoCalGas shall contact the Balancing Authorities and confirm that they (the Balancing Authorities) have met the conditions in number 1.A. For information purposes, the California Public Utilities Commission (CPUC) shall be included in such contacts and may participate as appropriate.

Communications may be made using any method acceptable to SoCalGas, the CPUC and the Balancing Authorities. SoCalGas, the Balancing Authorities, and the CPUC shall make all arrangements for the required communications and confirmations necessary with executing a withdrawal.

4. Noticing and Reporting. SoCalGas shall immediately notify the CPUC Energy Division (Energy Division) of the following: issuance of a Stage 4 or 5 Operational Flow Order or an Emergency Flow Order; in the event of an emergency that threatens system reliability and may require electric curtailments; and at the initiation of withdrawals from Aliso Canyon.

Within 24 hours of the cessation of a withdrawal from Aliso Canyon, SoCalGas shall provide the Energy Division with the following:

- the total and hourly withdrawals from the field;

- the number of wells used for making withdrawals and the SoCalGas identifier for each well used;
- the pre- and post-withdrawal Aliso working gas inventory;
- the hourly pipeline receipts for the calendar day(s) on which a withdrawal was made and the day immediately preceding the withdrawal;
- the hourly withdrawals by field from non-Aliso storage facilities for the calendar day(s) on which a withdrawal was made and the day immediately preceding the withdrawal;
- information concerning any anomalies experienced during the operation of the field; and
- any repairs or mitigation required as a result of the withdrawal, including the time necessary to make them before another withdrawal could be made and the impact on the field's injection and withdrawal capacity.

Within 30 days after a withdrawal, SoCalGas shall provide the Energy Division with a full description of the events and conditions leading up to the withdrawal, all actions taken prior to the withdrawal, and any observations and/or recommendations concerning the execution of future withdrawals. Further, SoCalGas shall identify and describe any steps or actions not taken that could have diminished or eliminated the need for a withdrawal and make comments and/or recommendations for future consideration.

If a withdrawal from Aliso Canyon was due to an activation of the CAISO or LADWP emergency plans as described in Section 1.A., the Balancing Authorities agree to submit a description of the event that includes forecast demand, operating reserve requirements, and anticipated capacity deficiencies based on the requested gas curtailments for the impacted hours. The CAISO and/or LADWP may also:
a) identify and describe any steps or actions not taken that could have diminished or eliminated the need for a withdrawal, and
b) make comments and/or recommendations for future consideration.

5. Effective Date. This protocol shall become effective November 1, 2017. The protocol shall remain in effect through the completion of the CPUC Investigation (I.)17-02-002, or such time as determined based on conditions.

ATTACHMENT D

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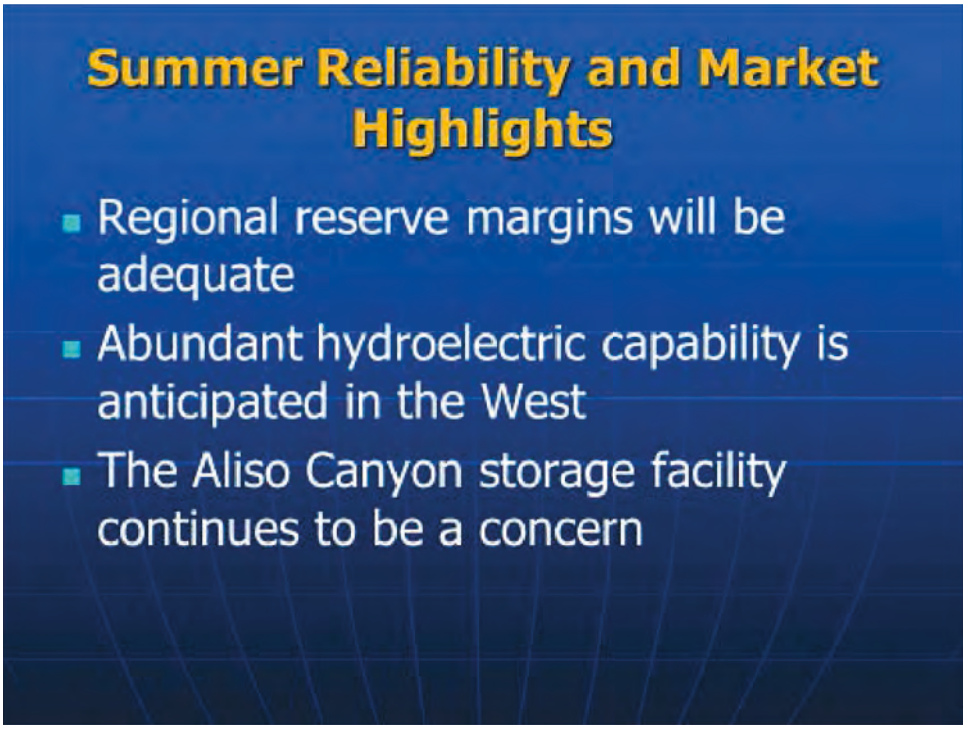
SLIDE 2 Summer Reliability and Market Highlights



The Office of Electric Reliability and the Office of Enforcement are pleased to present the 2017 Summer Seasonal Assessment. This is staff's annual opportunity to share our summer outlook on the electricity and natural gas markets and reliability matters to better inform the Commission's understanding of current and future trends.

NERC anticipates that power resources will be able to meet the reference margin levels in most Assessment Areas this summer. The anticipated reserve margin in ISO-NE is projected to be at 14.88 percent, which is slightly below their Reference Margin Level of 15.1 percent.

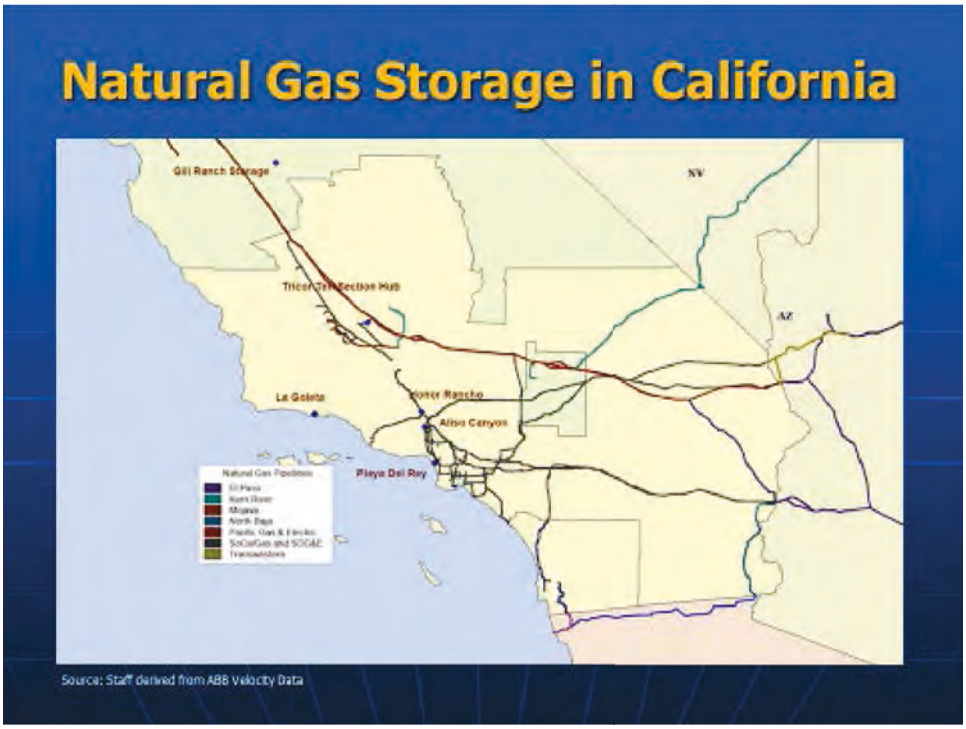
Snowpack in the West, measured by snow water equivalents, reached levels well above average. The snow water equivalent in the West, particularly in California, had been tracking near the record-high levels that were set in 1982-1983. However, the statewide levels have started to shift downwards since February and are now at approximately 65 percent of the April 1st average. Given the abundance of accumulated snow water, high hydro generation is likely to continue into the early part of the summer, which could be leveraged to reduce natural gas constraints in Southern California.

FERC and other agencies continue to monitor the situation at the Aliso Canyon natural gas storage facility. This year marks the second summer that Aliso Canyon will be restricted. While the restrictions on Aliso Canyon did not pose any major issues during the 2016 summer, the limited availability of the Aliso Canyon natural gas storage facility in Southern California may pose a risk to gas and electric reliability this summer if hotter than normal weather conditions and unplanned gas pipeline outages materialize. This resource had been used to help maintain natural gas pipeline pressures, which are

necessary for supporting gas-fired generation during swings in power plant demand. Currently, Aliso Canyon has less working gas than last summer because of withdrawals this past January, and current physical and regulatory limitations may affect the amount of stored gas that could be used this summer. Finally, the State of California has imposed new restrictions on all natural gas storage facilities, requiring facilities to inject and withdraw only through the well pipe, not through the casings, as has been done in the past. These limitations will reduce the rate at which injections and withdrawals can occur.

Pages 5-19 omitted

SLIDE 17 Natural Gas Storage in California



The summer season is when electric generation demand for natural gas typically peaks. Although overall natural gas demand is lower in the summer, generator demand for natural gas requires natural gas pipeline operators to balance their pressures as generator demand surges and subsides to serve load and balance rapid daily ramps and intra-hour fluctuations, which result from unexpected swings in renewable generation and load, unexpected generator and transmission outages, and other factors. California state regulators continue to review whether Aliso Canyon should resume operations, and if so, at what levels. Consequently, Aliso Canyon is not expected to be available this summer except in cases of emergency. Further, Aliso Canyon has 14.77 Bcf of working gas this summer, slightly less working gas than last summer. This reduction may affect whether the state would use the remaining inventory to aid electric generation, if necessary this summer, since it may need it to support winter demand.

As mentioned earlier, California state regulators have required natural gas storage fields to limit their injections and withdrawals to the pipes, and not use the casings. This will further reduce the rate at which gas companies can inject and withdraw, reducing their ability to quickly inject gas from storage into their systems to support pressure.

However, the construction of additional electric transmission into Southern California will help ease the stress on natural gas-fired generation in the region and the associated natural gas systems. SoCal Edison has completed construction of the 173 mile Tehachapi Renewable Transmission Project, which will bring non-local generation into Southern California.

Finally, other measures implemented to address the loss of Aliso Canyon will remain in place, including CAISO's ability to implement a natural gas constraint and the ability of the natural gas pipelines to require that shippers balance their supplies. Staff also expects that the Los Angeles Department of

Water and Power will continue to have dual fuel capability at most of its LA Basin gas units, which allow these units to continue generating in the event of natural gas curtailments.

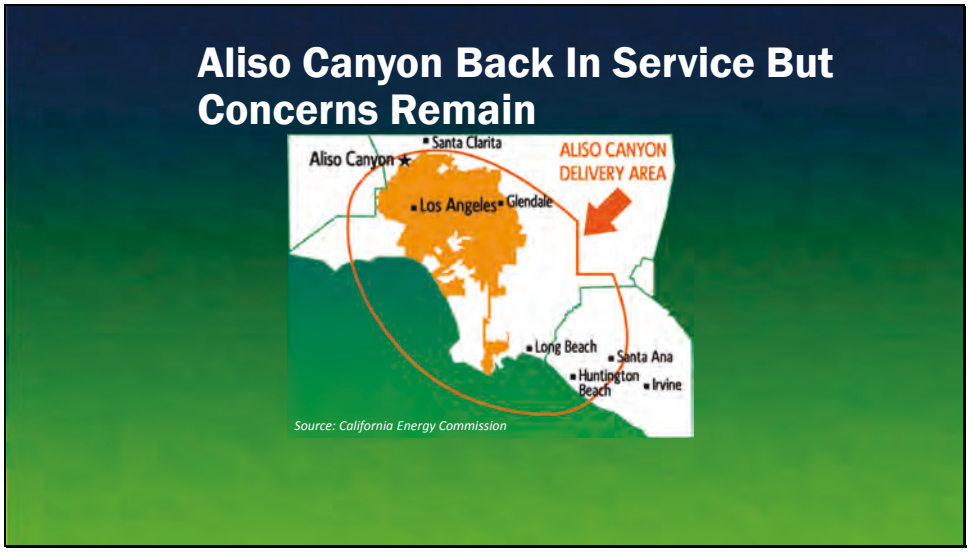
Page 22 omitted

Slide 1


1977-2017
CELEBRATING 40 YEARS
Winter 2017-18
Energy Market Assessment
Docket No. AD06-3 | Item No. A-3 | October 19, 2017

Pages 1-11 omitted

Slide 12



Operational constraints at the Aliso Canyon gas storage facility may continue to pose risks to the functioning of natural gas and electric markets in Southern California during peak winter conditions. Though the facility has returned to service after an extended outage following the 2015 leak, 62 of the facility's 114 wells were taken out of permanent operation, limiting injection and withdrawal capabilities. Currently, the Southern California Gas system holds 65 Bcf in storage, the lowest on record for this time of year since at least 2001 and far below the 118 Bcf the system has averaged over the past 5 years. This low inventory did not disrupt the gas system during the summer with an electric peak near record levels and some periods of stressed conditions. It is conceivable, however, that limitations at Aliso Canyon during periods of the highest winter demand could challenge regional stability and increase natural gas and electricity prices. The recent outages of SoCal Gas Line 235-2 and Line 3000 may also limit flexibility in the region. This risk could also be magnified by upstream pipeline issues, like further outages or wellhead freeze-offs.

Pages 13-19 omitted

Department of Energy
Washington, DC 20585

May 19, 2017

Dr. Robert Weisenmiller, Chair
California Energy Commission
1516 9th Street
Sacramento, California 95814-5512

Dear Dr. Weisenmiller:

I am writing to you to express my concern about the heightened and continuing energy reliability risks in Southern California induced by the closure of the regionally-important natural gas underground storage facility at Aliso Canyon. With a warmer than average summer predicted, the Department is concerned with regional reliability, in addition to longer-term concerns about overall grid stability.

I recognize that since the shutdown of Aliso Canyon, you and your colleagues at other agencies and utilities (in California and in neighboring states), have shown extraordinary dedication in seeking new ways to use the existing electric and gas infrastructure more effectively to meet regional requirements; such as the addition of strategically sited new assets, including renewable generation facilities and energy storage devices. Concurrently, we are encouraged by last winter's rain and snowpack which underpin California's hydro-power capacity.

Nevertheless, it appears that despite these efforts, without the availability of Aliso Canyon or some adequate functional equivalent, the region remains vulnerable to energy supply disruptions and possible electricity blackouts triggered by severe weather, unanticipated outages of key facilities, natural or man-made disasters, or a combination of these events. The reality is there are many constraints to the transmission of electricity and natural gas in California that are only exacerbated by Aliso Canyon being unavailable in its full capacity.

I note that under your direction, many of the injection/withdrawal wells serving Aliso Canyon have successfully undergone a battery of rigorous safety tests. With this in mind, I urge you to seriously consider and if possible approve the near-term reopening of Aliso Canyon.

At the same time I want to be clear that I am not suggesting a simple return to the *status quo ante*. Many lessons have been learned from the Aliso Canyon experience, one of the most important of which is that as our reliance on natural gas for the generation of electricity increases, we must identify potential fuel supply risks and take appropriate actions to mitigate them.

Reopening Aliso Canyon would help to ease near-term reliability risks, while providing an umbrella of protection under which appropriate longer-term actions can be planned and

brought to reality. If Aliso Canyon is reopened, recharging it to its full capacity (86 Bcf) will be a slow process. This means that whether Aliso Canyon could make a significant contribution to easing reliability challenges this summer is questionable, but reopening it soon is required for recharging and ensuring access for the winter of 2017-18.

If the Department can be of assistance to you in dealing with this challenge, whether through our able staff or through the expertise at our national laboratories, please let me know. I look forward to further dialogue with you on this subject and others of mutual interest as they arise.

Sincerely,

Patricia A. Hoffman

Patricia A. Hoffman
Acting Under Secretary for Science and Energy
Office of the Under Secretary for Science and Energy

U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration

1200 New Jersey Ave, S.E.
Washington, D.C. 20590

July 14, 2017

Mr. Bret Lane
President and Chief Operating Officer
Southern California Gas Company
555 W. 5th St., M.L. GT-21C1
Los Angeles, CA 90013-1011

Dear Mr. Lane:

Thank you for your June 16, 2017, letter summarizing the safety and restoration efforts by Southern California Gas Company (SoCal) at the Aliso Canyon natural gas storage facility, in coordination with multiple state and federal regulatory agencies. Safety is the U.S. Department of Transportation's top priority, so we appreciate your efforts to restore the safety and integrity of the facility in preparation for its return to service.

We understand SoCal is making considerable progress to validate the integrity of each well and deploying many new facility-wide monitoring and operating practices to enhance safety. We also understand the critical role played by the Aliso Canyon facility to the energy supply in California, and the need to address the safety impacts of potential disruptions to regional energy reliability in a timely manner.

We share the U.S. Department of Energy's concern for the risk of energy disruptions without the broader use of Aliso Canyon's storage capabilities. That is why we hope that the Aliso Canyon facility receives all the necessary approvals to begin service again as soon as possible, once it has been verified that all mandated safety conditions have been met. We understand you will continue to focus on those actions that will result in the greatest safety impact and to communicate and coordinate with the California Public Utilities Commission (CPUC), the Division of Oil, Gas, and Geothermal Resources (DOGGR), and the broader public interest.

All of this effort is clearly aligned with restoring and enhancing the safety and integrity of the Aliso Canyon facilities, and has spurred a broader national safety agenda for underground natural gas storage. As you are aware, the Pipeline and Hazardous Materials Safety Administration (PHMSA) issued an Interim Final Rule (IFR) for Underground Natural Gas Storage regulations on December 18, 2016.

On June 20, 2017, we published a response to a petition for reconsideration from the Interstate Natural Gas Association of America (INGAA), the American Gas Association (AGA), and the American Petroleum Institute (API) to reconsider certain provisions in the rule. We have been

aggressively building the inspection, compliance, and state agency certification programs keyed on the IFR's primary effective date of January 18, 2018. We are also preparing a Final Rule for the IFR, which is forecast to publish in January 2018.

If you have any questions or would like to discuss how PHMSA can further promote the safety of the Aliso, and all other underground natural gas storage facilities, please contact Byron Coy by email at Byron.Coy@dot.gov or by phone at 609-771-7810, or me, at 202-366-5124.

Sincerely,

Alan K. Mayberry
Associate Administrator for Pipeline Safety

cc: Mr. Ken Harris, State Oil and Gas Supervisor, State of California Department of Oil, Gas, and Geothermal Resources
Mr. Michael Picker, President, California Public Utilities Commission

ATTACHMENT E

STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

March 16, 2017

Rodger Schwecke, Vice President
Transmission and Storage
Southern California Gas Company
555 West 5th Street, GT21C3
Los Angeles, CA 90013
RSchwecke@semprautilities.com

Re: Aliso Canyon Natural Gas Storage Facility

Dear Mr. Schwecke:

Your letter of February 15, 2017, updated as of February 17, indicated Southern California Gas Company's (SoCalGas) intent to implement its Storage Safety Enhancement Plan. After review of this plan and consultation with the California Energy Commission, the California Independent System Operator and the Los Angeles Department of Water and Power, the Commission has determined that the plan, as presented, will limit the withdrawal capacity of SoCalGas storage facilities to a level that is demonstrably insufficient to meet the expected energy needs of SoCalGas customers this summer, and fails to minimize energy reliability risks and, in turn, the safety-related risks associated with curtailment of electricity supply.

The Storage Safety Enhancement Plan initiates changes at SoCalGas storage facilities that include reconfiguring wells at its's La Goleta, Honor Rancho and Playa Del Rey storage fields to tubing flow-only. The plan indicates that work will begin on March 1, 2017. By April 1, any well that has not been converted will have been temporarily plugged and isolated from the storage reservoir. As indicated in the letter and update of February 17, the plan will reduce the injection capacity and withdrawal capacity of each gas storage field. The letter notes that the reductions will be most significant during the conversion process, and that although capacity will recover some as wells are returned to service, the transition to tubing flow-only will have a significant permanent impact on withdrawal capacity.

The reduced withdrawal capacity is significantly below the withdrawal capacity needed to address the risks identified in the Aliso Canyon Action Plan to Preserve Gas and Electric Reliability for the Los Angeles Basin and further detailed in the Aliso Canyon Risk Assessment Technical Report, including after incorporating the impact of mitigation measures that have been undertaken to better match supply to demand and improvements on the electric system reducing potential gas demand for electric generation.[1] Importantly, the plan as presented does not address how these energy reliability and safety risks will be managed during the implementation of the plan nor after its completion.

[1] As documented in the Aliso Canyon Action Plan to Preserve Gas and Electric Reliability for the Los Angeles Basin for the Summer of 2016.

To minimize the risk of energy vulnerabilities this summer and provide for sufficient winter inventory levels, SoCalGas should maintain a system wide storage withdrawal capacity level of 2.065 Bcf per day beginning June 1, 2017, and throughout the balance of the safety enhancement project. That amount should be increased as quickly as possible to 2.420 Bcf per day using improvements to withdrawal capacity at each of the fields, including the management of inventory levels and increases to wells in service at all fields. The allocation of the withdrawal capacity across the fields must consider the relative reliability role and impact of each of the fields.

Further, the limitations on inventory level and injections and any protocols currently in place or developed to manage withdrawals from Aliso Canyon must be maintained. The Storage Safety Enhancement Plan needs to be modified to assure that this level is maintained throughout the summer season. Concurrently, SoCalGas should implement actions consistent with its plan that prioritize the conversion of wells based on safety tests.

SoCalGas should submit a revised plan no later than March 30, 2017, indicating the actions it will take and modifications to the current plan in order to meet the specified minimum withdrawal capacity levels.

Thank you for your continued efforts to provide safe, reliable energy service.

Sincerely,

Timothy J. Sullivan
Executive Director

Cc: Edward Randolph
Dan Skopec