

January 2, 2019

The California Public Utilities Commission, Energy Division was notified by Southern California Gas Company of Aliso Canyon withdrawals at approximately 6:57 AM on January 2, 2019. This posting will be updated with a report containing more information as soon as possible.

January 4, 2019 update

The California Public Utilities Commission, Energy Division was notified by Southern California Gas Company that withdrawals from Aliso Canyon ceased at approximately 2:10 PM this afternoon.

January 7, 2019 update

The data request required within 24 hours of the cessation of a withdrawal from Aliso Canyon has been provided by SoCalGas and is attached below.

February 4, 2019 update

The data request required within 30 days of the cessation of a withdrawal from Aliso Canyon has been provided by SoCalGas and is attached below.



A  Sempra Energy utility

Deana M. Ng
Liaison Officer

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DNg@Semprautilities.com

January 2, 2019

Edward Randolph
Director, Energy Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

RE: Aliso Canyon Withdrawal Protocol Notification

Dear Mr. Randolph:

Pursuant to the Aliso Canyon Withdrawal Protocol dated November 2, 2017 (Protocol), I am writing to inform you that SoCalGas initiated withdrawal of natural gas from the Aliso Canyon storage field at approximately 6:57 am on January 2, 2019. Further, pursuant to the Protocol, SoCalGas will provide information regarding the withdrawal event to the Energy Division within 24 hours of the withdrawal event's cessation. SoCalGas will immediately notify you when withdrawal of natural gas from the Aliso Canyon storage field has ceased. SoCalGas will also post a critical notice on its Electronic Bulletin Board, SoCalGas ENVOY[®], notifying market participants of the event.

Please let me know if you have any questions.

Sincerely,

/s/ Deana M. Ng

Deana M. Ng

Liaison Officer - SoCalGas

cc: Maryam Ebke, Deputy Executive Director, CPUC
Dorothy Duda, Energy Division, CPUC
Jean Spencer, Energy Division, CPUC
Renee Guild, Energy Division, CPUC
Christina Ly, Energy Division, CPUC
Judith Ikle, Energy Division, CPUC
Simone Brant, Energy Division, CPUC
Jonathon Bromson, Legal Division, CPUC
Elizaveta Malashenko, Director, Safety and Enforcement Division, CPUC
Kenneth Bruno, Safety and Enforcement Division, CPUC
Matthewson Epuna, Safety and Enforcement Division, CPUC
Lana Tran, Safety and Enforcement Division, CPUC



System-Wide Voluntary Curtailment Issued for Electric Generation

Due to ongoing cold weather conditions and high customer demand for natural gas, a system-wide voluntary curtailment of electric generation demand was issued today at approximately 5:00 PM and is effective 7:00 AM PCT January 3, 2019 thru 7:00 AM PCT January 4, 2019. SoCalGas has issued the system-wide voluntary curtailment order of electric generation demand in accordance with the [Aliso Canyon Withdrawal Protocol](#). The curtailment is a voluntary request coordinated through the Balancing Authorities (CAISO and LADWP) for them to limit and/or reduce electric generation demand on our system, to the extent it does not impact electric system integrity.

In addition, with the current forecasted weather, SoCalGas is asking customers to conserve natural gas where possible.

All noncore customers should continue to monitor ENVOY at www.socalgasenvoy.com/ for further updates.

Please contact your Account Representative or the Gas Scheduling Helpline if you have any questions.



System-Wide Voluntary Curtailment Issued for Electric Generation

Due to ongoing cold weather conditions and high customer demand for natural gas, a system-wide voluntary curtailment of electric generation demand was issued today at approximately 1:00 PM and is effective 7:00 AM PCT January 4, 2019 thru 7:00 AM PCT January 5, 2019. SoCalGas has issued the system-wide voluntary curtailment order of electric generation demand in accordance with the [Aliso Canyon Withdrawal Protocol](#). The curtailment is a voluntary request coordinated through the Balancing Authorities (CAISO and LADWP) for them to limit and/or reduce electric generation demand on our system, to the extent it does not impact electric system integrity.

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System-Wide Voluntary Curtailment Issued for Electric Generation

Due to ongoing cold weather conditions and high customer demand for natural gas, a system-wide voluntary curtailment of electric generation demand was issued today at approximately 1:00 PM and is effective 7:00 AM PCT January 7, 2019 thru 7:00 AM PCT January 8, 2019. SoCalGas has issued the system-wide voluntary curtailment order of electric generation demand in accordance with the [Aliso Canyon Withdrawal Protocol](#). The curtailment is a voluntary request coordinated through the Balancing Authorities (CAISO and LADWP) for them to limit and/or reduce electric generation demand on our system, to the extent it does not impact electric system integrity.

In addition, with the current forecasted weather, SoCalGas is asking customers to conserve natural gas where possible.

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Please contact your Account Representative or the Gas Scheduling Helpline if you have any questions.

SOUTHERN CALIFORNIA GAS COMPANY
ALISO CANYON WITHDRAWAL PROTOCOL (11-2-17)
SOCALGAS RESPONSE TO CPUC-ENERGY DIVISION
DATED JANUARY 5, 2019

PUBLIC VERSION
DATA REQUESTS

Question 1:

Pursuant to the Aliso Canyon Withdrawal Protocol dated November 2, 2017, SoCalGas shall within 24 hours of cessation of a withdrawal from Aliso Canyon, provide the Energy Division of the CPUC:

- a. the total and hourly withdrawals from the field;
- b. the number of wells used for making withdrawals and the SoCalGas identifier for each well used;
- c. the pre- and post-withdrawal Aliso working gas inventory;
- d. the hourly pipeline receipts for the calendar day(s) on which a withdrawal was made and the day immediately preceding the withdrawal;
- e. 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;
- f. information concerning any anomalies experienced during the operation of the field;
- g. 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;
- h. whether the withdrawal was made under conditions identified in 1.B.

Response 1:

SoCalGas provides the following response with respect to the withdrawal of gas from Aliso Canyon that began at approximately 6:57 AM on January 2, 2019 and ceased at approximately 2:10 pm on January 4, 2019.

- a. The total withdrawal from the field was 1.22 Bcf. The hourly withdrawals from the field are provided below. Inventory volumes are based on Gas Control system data and are subject to adjustment based on SoCalGas' routine monthly reconciliation between real-time SCADA system data, and the measurement data recorded by our Measurement Data Operations (MDO) department. SoCalGas will update this response following the reconciliation process, if appropriate.

Date / Time	Hourly Withdrawal (MMCF)
1/2/2019 7:00	
1/2/2019 8:00	
1/2/2019 9:00	

SOUTHERN CALIFORNIA GAS COMPANY
ALISO CANYON WITHDRAWAL PROTOCOL (11-2-17)
SOCALGAS RESPONSE TO CPUC-ENERGY DIVISION
DATED JANUARY 5, 2019

PUBLIC VERSION

1/2/2019 10:00	
1/2/2019 11:00	
1/2/2019 12:00	
1/2/2019 13:00	
1/2/2019 14:00	
1/2/2019 15:00	
1/2/2019 16:00	
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1/3/2019 13:00	
1/3/2019 14:00	
1/3/2019 15:00	
1/3/2019 16:00	
1/3/2019 17:00	REDACTED
1/3/2019 18:00	
1/3/2019 19:00	
1/3/2019 20:00	
1/3/2019 21:00	
1/3/2019 22:00	

SOUTHERN CALIFORNIA GAS COMPANY
ALISO CANYON WITHDRAWAL PROTOCOL (11-2-17)
SOCALGAS RESPONSE TO CPUC-ENERGY DIVISION
DATED JANUARY 5, 2019

PUBLIC VERSION

1/3/2019 23:00	
1/4/2019	
1/4/2019 1:00	
1/4/2019 2:00	
1/4/2019 3:00	
1/4/2019 4:00	
1/4/2019 5:00	
1/4/2019 6:00	
1/4/2019 7:00	
1/4/2019 8:00	
1/4/2019 9:00	
1/4/2019 10:00	
1/4/2019 11:00	
1/4/2019 12:00	
1/4/2019 13:00	
1/4/2019 14:00	

- b. 47 wells were used for making withdrawals. Please see the attached spreadsheet.

REDACTED

- c. The pre- and post-withdrawal Aliso working gas inventory were 33.62 Bcf and 32.51 Bcf, respectively.

Inventory volumes are based on Gas Control system data and are subject to adjustment based on SoCalGas’ routine monthly reconciliation between real-time SCADA system data, and the measurement data recorded by our Measurement Data Operations (MDO) department. SoCalGas will update this response following the reconciliation process, if appropriate.

- d. The hourly pipeline receipts for the calendar days on which a withdrawal was made and the calendar day immediately preceding the withdrawal, is provided in the attached spreadsheet.

REDACTED

Pipeline receipt data is based on Gas Control system data and are subject to adjustment based on SoCalGas’ routine monthly reconciliation between real-time SCADA system

SOUTHERN CALIFORNIA GAS COMPANY

ALISO CANYON WITHDRAWAL PROTOCOL (11-2-17)

**SOCALGAS RESPONSE TO CPUC-ENERGY DIVISION
DATED JANUARY 5, 2019**

PUBLIC VERSION

data, and the measurement data recorded by our Measurement Data Operations (MDO) department. SoCalGas will update this response following the reconciliation process, if appropriate.

- e. The hourly withdrawals by field from non-Aliso storage facilities for the calendar days on which a withdrawal was made and the calendar day immediately preceding the withdrawal are provided in the attached spreadsheet.

REDACTED

Inventory volumes are based on Gas Control system data and are subject to adjustment based on SoCalGas' routine monthly reconciliation between real-time SCADA system data, and the measurement data recorded by our Measurement Data Operations (MDO) department. SoCalGas will update this response following the reconciliation process, if appropriate.

- f. **REDACTED**
- g. Please see Response 1.f.
- h. No.

**SOUTHERN CALIFORNIA GAS COMPANY
30-Day Aliso Canyon Withdrawal Report
Response Dated January 29, 2019**

PUBLIC VERSION

Purpose

On November 2, 2017 the Energy Division of the California Public Utilities Commission (“CPUC-ED”) issued the Aliso Canyon Withdrawal Protocol (“Withdrawal Protocol”). The Withdrawal Protocol specifies the circumstances and conditions when Southern California Gas Company (“SoCalGas”) may execute a withdrawal operation from the Aliso Canyon storage field (“Aliso Canyon”). In addition, the Withdrawal Protocol contains certain noticing and reporting requirements, including the following:

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 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.¹

Pursuant to the Withdrawal Protocol, SoCalGas provides the following 30-day report with respect to the withdrawals from Aliso Canyon that occurred between January 2, 2019 and January 4, 2019.

Background

Withdrawals from Aliso Canyon were 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.

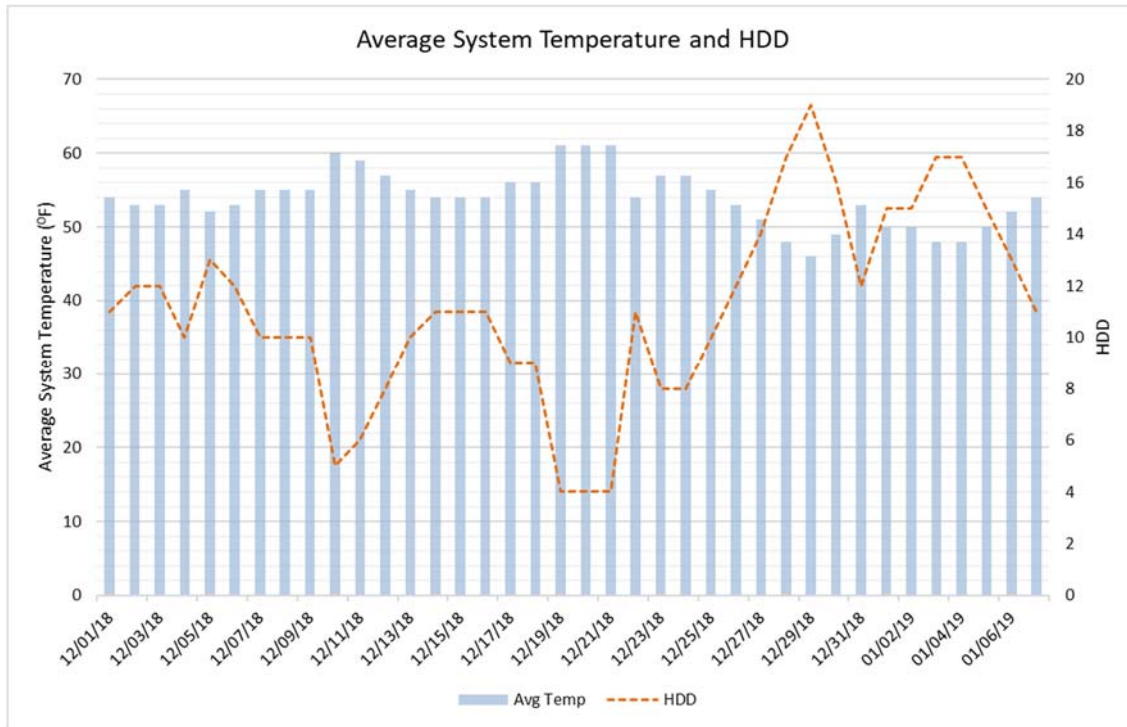
Weather

In late December 2018 and early January 2019, southern California experienced several days of cold weather. The graph below shows how the SoCalGas system average heating degree days (“HDD”) increased significantly during that time.

An HDD is a measurement designed to quantify the demand for energy needed to heat a building. It is the number of degrees that a day's average temperature is below 65° Fahrenheit, which is the temperature below which buildings need to be heated. Additionally, the graph below shows the daily custom system average temperature condition for the SoCalGas and San Diego Gas & Electric Company (“SDG&E”) service territories before and during the period Aliso Canyon was on withdrawal. The custom system average temperature calculation incorporates

¹ CPUC-ED Aliso Canyon Withdrawal Protocol dated 11/2/2017, page 3.

data from 12 weather stations across the SoCalGas and SDG&E service territories and is provided by calendar day.



Status of Storage Fields

In accordance with the Withdrawal Protocol, SoCalGas has placed greater reliance on its non-Aliso storage fields (Honor Rancho, La Goleta, and Playa del Rey) to meet customer demand since the beginning of the winter season on November 1, 2018. This resulted in lower inventory levels at the non-Aliso fields by late December 2018, which in turn led to reduced available withdrawal capacities.

In addition, SoCalGas’ safety enhancements and integrity assessments at the storage fields have reduced SoCalGas’ system-wide withdrawal capacity because wells have been taken offline for mechanical integrity testing and conversion to tubing-only flow. These conditions resulted in decreased storage withdrawal capabilities to respond to this late December/early January cold event.

The following table provides the inventories and approximate withdrawal capacities of each of the storage fields at the beginning of the cold weather event.

Storage Field	Inventory (BCF)	Withdrawal Capacity (MMCFD)
Aliso Canyon	33.62	
Honor Rancho		

La Goleta		
Playa Del Rey		
Total Storage W/O Aliso		995
Total Storage W/ Aliso		

Flowing Pipeline Capacity & Supplies

Several major transmission pipelines on the SoCalGas system were also out of service or operating at a reduced pressure during the cold period, reducing the amount of upstream pipeline supply available by 1,330 million cubic feet per day (MMCFD). The following table shows the receipt point capacity of the SoCalGas system during the cold period and the average scheduled quantities. It can be seen that although SoCalGas declared Low Operational Flow Orders on January 2 and January 3, customers did not schedule gas to fully utilize the pipeline system and storage was needed to mitigate the imbalance between demand and supply.

January 2, 2019 – January 4, 2019		
Transmission Zone	Available Receipt Capacity (MMCFD)	Average Scheduled Quantity (MMCFD)
CP Zone – Line 85	85	37
Southern Zone	900	828
Northern Zone	1,000	854
Wheeler Ridge Zone	800	728
Total System	2,700*	2,473
*Total System Capacity does not include CP (California Production)		

Customers are responsible for scheduling and delivering gas supplies to the SoCalGas and SDG&E system to meet their usage. SoCalGas has few tools besides its storage fields to manage the mismatch between what customers bring onto the system in supplies and their usage. SoCalGas must rely on regulatory tools in place to try to manage the system’s reliability, integrity and safety. These tools include the low operational flow order (“low OFO”), the high operational flow order (“high OFO”), the emergency flow order (“EFO”), and curtailment procedures.

SoCalGas declared Low OFOs on 2 out of the 3 days during the period.

Low OFO Declarations		
January 2	Stage 3	-5%
January 3	Stage 3	-5%

Actions Taken Prior to Withdrawal

Curtailement Actions

Per the Withdrawal Protocol, SoCalGas took actions available to meet demand and to avoid curtailments including (as discussed in additional detail below) working with the Balancing Authorities (the California Independent System Operator [CAISO] and the Los Angeles Department of Water and Power [LADWP]) to reduce or limit electric generation demand through voluntary curtailments. Coordination took place between SoCalGas and the Balancing Authorities during this period, having multiple interactions per day with both management and the real-time control room operators to manage the system reliability of three energy delivery systems (CAISO, LADWP, and SoCalGas) in near real-time.

From January 2, 2019 through January 4, 2019, SoCalGas worked with CAISO and LADWP to reduce their demand. For January 2, 2019, both CAISO and LADWP stated that they could not reduce their demand. For January 3, 2019, January 4, 2019, LADWP stated that it could reduce its demand by 19.09 MMCFD and 0.43 MMCFD, respectively. For those same dates, CAISO stated it could not reduce its demand.

Despite these efforts to reduce gas demand, SoCalGas evaluated its capacity to meet demand and found that available pipeline and storage supplies were insufficient, and reliability was at risk without additional gas supply from Aliso Canyon. In preparation for this cold weather event, all fields were verified to have their withdrawal processes ready and/or on standby.

Envoy Postings

On December 28, 2018, SoCalGas posted a SoCalGas ENVOY® (Envoy) notice providing notification to customers that due to cold weather and increased demand, SoCalGas and SDG&E were issuing a system-wide voluntary curtailment for electric generation customers in accordance with the Aliso Canyon Withdrawal Protocol, effective from 16:00 until 23:00 (from 4:00 PM until 11:00 PM) Pacific Time, on December 28, 2018. Additionally, SoCalGas asked customers to conserve natural gas where possible and asked noncore customers to monitor Envoy for updates.

On January 1, 2019 SoCalGas posted an Envoy notice providing notification to customers that due to ongoing cold weather and high demand, SoCalGas and SDG&E issued a system-wide voluntary curtailment of electric generation in accordance with the Aliso Canyon Withdrawal Protocol, effective from 05:00 until 09:00 and from 18:00 until 22:00 (from 5:00 AM until 9:00 AM and from 6:00 PM until 10:00 PM) Pacific Time, on January 2, 2019.

On January 2, 2019 SoCalGas posted an Envoy notice providing notification to customers that due to ongoing cold weather and high demand, SoCalGas and SDG&E issued a system-wide voluntary curtailment of electric generation in accordance with the Aliso Canyon Withdrawal Protocol, effective from 07:00 January 3, 2019 until 07:00 January 4, 2019 (from 7:00 AM January 3, 2019 until 7:00 AM January 4, 2019) Pacific Time.

On January 3, 2019 SoCalGas posted an Envoy notice discussing the expectation of inclement weather on Friday January 4, 2019 and through the weekend. SoCalGas and SDG&E urged customers and shippers to pay close attention to Envoy throughout this period and schedule their volumes accordingly. SoCalGas also provided notification to customers that due to the cold weather and high demand, SoCalGas storage fields, including Aliso Canyon, were used to provide system reliability. SoCalGas stated that without withdrawals from Aliso Canyon, the increased demand on the system may have resulted in further curtailments to noncore customers.

On January 3, 2019 SoCalGas posted another Envoy notice providing notification to customers that due to ongoing cold weather and high demand, SoCalGas and SDG&E issued a system-wide voluntary curtailment of electric generation in accordance with the Aliso Canyon Withdrawal Protocol, effective from 07:00 January 4, 2019 until 07:00 January 5, 2019 (from 7:00 AM January 4, 2019 until 7:00 AM January 5, 2019) Pacific Time.

On January 3, 2019 SoCalGas posted another Envoy notice providing notification to customers that due to ongoing cold weather and high demand, SoCalGas and SDG&E issued a system-wide voluntary curtailment of electric generation in accordance with the Aliso Canyon Withdrawal Protocol, effective from 07:00 January 7, 2019 until 07:00 January 8, 2019 (from 7:00 AM January 7, 2019 until 7:00 AM January 8, 2019) Pacific Time.

In SoCalGas' system-wide curtailment notices, SoCalGas clarified that these were voluntary requests coordinated through the Balancing Authorities (CAISO and LADWP) to request that the Balancing Authorities limit and/or reduce electric generation demand on the system to the extent it did not impact electric system integrity. Additionally, SoCalGas asked customers to conserve natural gas where possible and asked noncore customers to monitor Envoy for updates.

On January 5, 2019 SoCalGas posted an Envoy notice providing notification to customers of the dates and times of the initiation and cessation of withdrawal operations at Aliso Canyon as well as the withdrawal volumes at Aliso Canyon for each gas day during the withdrawal period. Aliso Canyon withdrawal was initiated on January 2, 2019 at approximately 6:57 AM Pacific Time and ceased on January 4, 2019 at approximately 2:10 PM Pacific Time. The total withdrawal for Gas Day² January 1 was 0.002 BCF. The total withdrawal for Gas Day January 2 was 0.565 BCF. The total withdrawal for Gas Day January 3 was 0.477 BCF. The total withdrawal for Gas Day January 4 was 0.181 BCF. Over the withdrawal period, the hourly withdrawal rate from Aliso Canyon at times exceeded the equivalent of 1.0 BCFD.

On January 6, 2019 SoCalGas posted an Envoy notice to correct a typo in the January 5, 2019 notice. In the January 5, 2019 notice, the withdrawal operations cessation date was stated as "January 4, 2018" – it was revised to "January 4, 2019" in this notice.

² A Gas Day is from 7:00 AM to 7:00 AM.

Restricted Maintenance Operations

On December 26, 2018 at 9:47 AM, SoCalGas' Gas Control declared restricted maintenance operations for gas days December 27, 2018 through January 8, 2019 at transmission pipeline compressor stations, transmission pipelines, and storage facilities, noting anticipated high customer demand due to forecasted low temperatures. This anticipated high system demand combined with pipeline outages increased the risk of jeopardizing system integrity and thus required all other facilities to be ready and available to maintain system integrity. Maintenance personnel were instructed to request clearance before performing any maintenance that could possibly impact station or pipeline operations.

Demand Response

SoCalGas initiated Smart Therm demand response (DR) events on January 2, January 3, and January 4 between the hours of 5:00 AM and 9:00 AM. Customers participating in the Demand Response program received a notice at least nine hours before the events occurred. During the demand response events, thermostats were lowered up to four degrees from their current setpoint. Once the Demand Response event ended, thermostats were returned to their original setpoints.

Dial-It-Down

SoCalGas issued a Dial It Down Alert on Friday December 28, 2018 and it was effective during Aliso Canyon's withdrawal period. Southern Californians were urged to reduce their natural gas use.

Events and Conditions Leading up to the Withdrawal Period

Temperatures throughout a majority of December 2018 had been relatively mild. Towards the last few days of December, cold weather stressed the SoCalGas system to the point where supply was needed from Aliso Canyon in early January, after the holiday weekend, to avoid gas shortages, customer curtailment, and to preserve inventory of the non-Aliso fields. The table below shows the total system receipts and demand by day.

Gas Flow Date	Total Receipts (MMcf)	System Demand (MMcf)
1/2/2019	2,331	3,485
1/3/2019	2,505	3,305
1/4/2019	2,527	3,071

In the Winter 2018-19 Technical Assessment, the capacity of the system was calculated to be 3.75-4.15 BCFD. However, as specified in the assessment, the system capacity calculation was

based on a withdrawal capacity of 1,343 MMCFD for the non-Aliso storage fields, or 348 MMCFD more than the capacity on January 2.

Hourly, intraday changes during the peak hours significantly impacted system integrity. The following table shows the change in demand from the beginning of the peak period to the peak demand and the average flowing supplies during the same period. The peak demand period continues beyond the absolute peak.

Demand Increase During Peak Period and Average Flowing Supplies				
Starting Date	Ramping Period (Hrs)*	Average Pipeline Flowing Supplies During Ramp (MMCFH)	Demand Start of Ramp (MMCFH)	Demand at Peak (MMCFH)
1/2/2019	5	97	125	201
1/3/2019	5	95	124	195
1/4/2019	5	103	118	192

*Ramping period is the duration of time from "start of ramp" to "demand at peak"

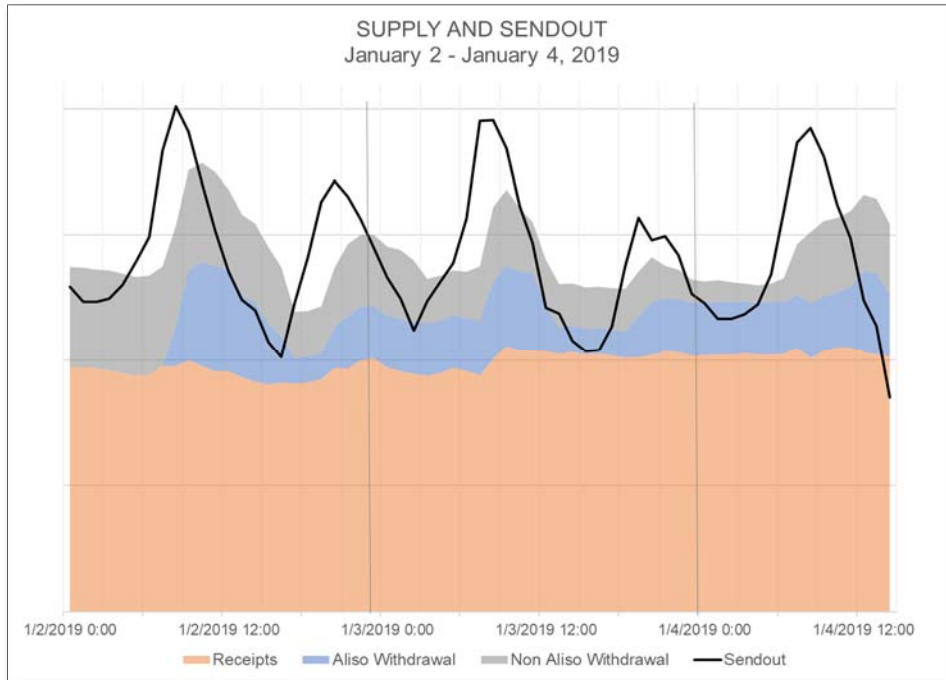
On January 2, 2019, system demand increased from 125 MMCFH to 201 MMCFH (a daily equivalent of 3.0 BCFD to 4.8 BCFD) over the span of five hours due to cold temperature. System stability was deteriorating during this period, even though Honor Rancho, La Goleta, and Playa del Rey storage fields were at maximum withdrawal rates. With pipeline supplies averaging approximately 97 MMCFH, and despite all non-Aliso Canyon storage fields at their maximum withdrawal rates, SoCalGas determined that withdrawal from Aliso Canyon would still be necessary to avoid further curtailment and maintain system reliability. Withdrawal at Aliso Canyon began at 6:44 AM and the peak demand hourly rate of 201 MMCFH occurred at 7:50 AM. By 12:00 PM, Honor Rancho and Playa del Rey already exceeded their allotted inventory levels for the week. SoCalGas contacted CAISO and LADWP at 4:55 PM and 5:01 PM, respectively, and asked them to curtail their demand between the hours of 5:00 AM through 9:00 AM and 6:00 PM through 10:00 PM for January 2, January 3, and January 4. Both Balancing Authorities stated that they could not reduce their demand on January 2.

On January 3, 2019 system demand increased from 124 MMCFH to 195 MMCFH over the span of five hours and pipeline supplies averaged 95 MMCFH. LADWP reduced its demand by 19.09 MMCFD. Playa del Rey stopped withdrawal after 12:00 PM and Aliso Canyon remained on withdrawal from the previous day which helped preserve inventory levels at the non-Aliso storage fields.

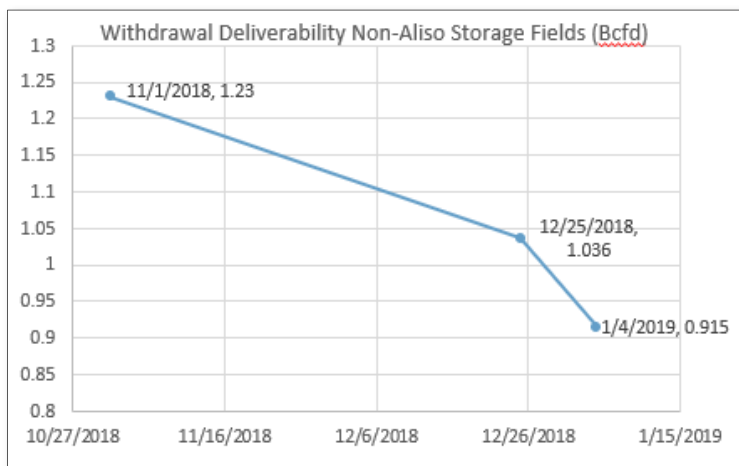
On January 4, 2019 system demand increased from 118 MMCFH to 192 MMCFH over the span of five hours and pipeline supplies averaged 103 MMCFH. LADWP reduced its demand by 0.43 MMCFD. Aliso Canyon remained on withdrawal from the previous days until finally ceasing withdrawal at 2:10 PM, when system conditions stabilized to the extent that Aliso Canyon withdrawals were no longer needed.

Over the January 2 to January 4 Aliso Canyon withdrawal period, SoCalGas withdrew 1.222 BCF from Aliso Canyon and 1.263 BCF from non-Aliso Canyon storage fields. Both Goleta and Aliso Canyon were still found to be sufficiently above their required minimum inventory level.

The graph below shows several instances over the January 2 to January 4 period when Sendout exceeded the sum of pipeline supplies (receipts) and storage withdrawal.



The graph below shows the significant reduction in withdrawal deliverability of non-Aliso Canyon storage fields up to January 4.



Additional Steps or Actions That Could Have Reduced or Eliminated the Need for Withdrawal

As previously stated, SoCalGas proactively worked with the Balancing Authorities each day during the cold weather event to reduce the level on the on-system generation demand prior to withdrawing gas supply from Aliso Canyon. As per the Withdrawal Protocol, SoCalGas withdrew gas from Aliso Canyon when the amount by which the Balancing Authorities could voluntarily curtail demand was insufficient to resolve the shortage of natural gas. SoCalGas could have further curtailed customer demand to reduce or eliminate the need to withdraw gas supply from Aliso Canyon. Per SoCalGas Rule No. 23 and SDG&E Rule No. 14, electric generation demand not necessary to maintain grid reliability is to be curtailed first, followed by other noncore customer demand, and then the remaining electric generation demand. SoCalGas does not consider this to be a reasonable action to reduce or eliminate the need to withdraw gas supply from Aliso Canyon.

Observations and Recommendations

The cold weather event discussed above highlights a number of items or observations regarding SoCalGas' system, assets, and customer demand.

- Comparing non-Aliso Canyon storage inventory levels between now and around this time last year, there is less inventory in those fields this year. In order to manage storage inventory and preserve withdrawal deliverability at the non-Aliso Canyon storage fields, SoCalGas plans to withdraw gas from Aliso Canyon consistent with the Aliso Canyon Withdrawal Protocol. Preserving these storage inventories at the non-Aliso Canyon storage fields is critical in meeting forecasted customer daily and hourly demand and mitigating the risk of extensive gas curtailments this winter. In a letter written to the Commission on January 8, 2019, SoCalGas explains that it may withdraw gas from Aliso Canyon to (1) meet immediate high customer demands; (2) limit withdrawals at Honor Rancho to an average of 90 MMCFD per day for the remainder of January; and (3) restore Playa Del Rey inventory.
- Although SoCalGas' non-Aliso storage fields play a significant role in supporting reliability of the gas system, they cannot always provide the necessary reliability during significant events, especially when an event runs multiple consecutive days. Because of its size, its physical location on SoCalGas' transmission system, and its withdrawal capacity, the Aliso Canyon Storage Field plays a key role in preventing customer curtailments and protecting the integrity of the SoCalGas system. As we head into the 2019 summer, it should be a priority to build storage inventories to near max levels to provide reliability for customers.

- As previously mentioned above, there was coordination between the Balancing Authorities and SoCalGas during the cold weather event. This coordination was not critical due to the already minimal demand by the Balancing Authorities and their resultant lack of flexibility to reduce load. As a threshold matter, no curtailments would have been required if SoCalGas would have been able to more freely use Aliso Canyon as deemed necessary by SoCalGas. The Withdrawal Protocol should be modified or eliminated to allow Aliso Canyon to increase system flexibility and reliability, add to available supplies, and reduce the need for customers to seek additional supplies during periods of market stress and limited supplies elsewhere.