Fourteenth Annual Report of System Reliability Issues

2023 Customer Forum

April 26, 2023

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Date Issued: April 26, 2023

Introduction

SoCalGas presents its Fourteenth Annual Report of System Reliability Issues (Report). This Report covers the time period from April 1, 2022, through March 31, 2023. Pursuant to Section 22 of Rule No. 41, this Report includes information on the following subjects:

A. Review of the timing, method, formulas, and all inputs to formulas by which Operational Flow Order (OFO) events are triggered;

B. Review of requests for the System Operator to acquire additional supplies to meet minimum flow requirements;[1]

C. Review of System Operator purchases/actions to meet minimum flow requirements and plans for the coming year by providing information regarding the individual transactions, including transactions executed pursuant to the System Operator contractual arrangements. Transaction-specific information shall identify price, volume, date, delivery/receipt points, and any special terms;

D. Review the need for any additional minimum flow requirements on the Utility system beyond then-current defined requirements; and

E. Review potential additional tools to support system operations and potential system improvements to reduce or eliminate the need for any minimum flowing supply requirements.

This Report also includes information not required by Rule No. 41 that is relevant to discussion of OFO events and system reliability.

F. Review of the impact of the July 23, 2019, Aliso Canyon Withdrawal Protocol (ACWP) on Low OFO events and system operations.

G. Review of regulatory proceedings impacting system operations and OFO events.

[1] Pursuant to Rule No. 41, the activities involved in meeting any physical flowing gas supply requirements as determined by the Gas Control Department, formerly conducted by the Operational Hub, are currently conducted by the System Operator.

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A. Operational Flow Orders

Under SoCalGas Rule No. 41, an OFO may be issued if, on a day prior to this Gas Day, in the sole judgment of Gas Control, the system forecast of storage withdrawal or injection used for balancing exceeds the withdrawal or injection capacity allocated to the balancing function. SoCalGas may elect not to issue an OFO for a Gas Day if the system forecast for the following Gas Day indicates the use of storage withdrawal or injection used for system balancing will return to reasonable levels without the assistance of an OFO.

OFOs are declared only on the Evening and Intraday 1 cycles by 8PM on the day prior to the Gas Day.

Cycle	Quantity Used for High and Low OFO Calculations
2 - Evening	Timely Cycle Scheduled Quantities
3 - Intraday 1	Evening Cycle Scheduled Quantities

Gas Control develops the sendout forecast by using weather data for estimating core demand (wholesale and retail) and market information and historical data for noncore customer demand. Gas Control also makes use of demand forecast data provided directly from the grid operators, including, but not limited to the California Independent System Operator (CAISO), Los Angeles Department of Water & Power (LADWP), and Imperial Irrigation District (IID).

High OFO events are triggered when forecasted storage injection for balancing exceeds the injection capacity allocated for the balancing function.

A total of 96 High OFO events were called from April 1, 2022, through March 31, 2023. This represents a 12% decrease in comparison to the 109 High OFOs called during the previous Report Period. Attachment 1 provides detailed calculations for each High OFO event for the Report Period.

Number of High OFOs from April 1, 2022 through March 31, 2023

Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-22	Feb-23	Mar-23
10	6	14	8	10	13	21	13	1	0	0	0

There were several factors that possibly contributed to the number of High OFO events declared during the Report Period. There was a higher storage inventory at the beginning of the 2022 injection season compared to the beginning of the 2021 injection season, reducing injection capability for the balancing function. Storage inventory was 39% higher at the beginning of April and 8% higher at the end of October year-over-year, 2022 versus 2021. Storage injection capacity was further reduced due to unplanned maintenance such as the Aliso Canyon electric driven compressor electrical repairs from April 4, 2022 to April 17, 2022 and from May 5, 2022 to May 27, 2022. Furthermore, multiple storage fields were filled to maximum authorized capacity relatively sooner during this Report Period.

Low OFO events are triggered when forecasted storage withdrawal used for balancing exceeds the withdrawal capacity allocated for the balancing function.

A total of 67 Low OFO events were called from April 1, 2022, through March 31, 2023. This represents a 116% increase in comparison to the 31 Low OFOs called during the previous Report Period. Attachment 1 provides detailed calculations for each Low OFO event for the Report Period.

Number of Low OFOs from April 1, 2022 through March 31, 2023											
Apr-22	May-22	Jun-22	Jul22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
0	1	2	0	0	0	0	14	10	15	13	12

Lower system average temperatures possibly contributed to the increased number of Low OFOs called during the Report Period. In SoCalGas' and SDG&E's combined service territory, below-normal temperatures were observed during the winter period. System average temperatures were 6˚F colder in November and March, and 4˚F colder in January and February, year-over-year, Winter 2022-2023 versus Winter 2021-2022. These colder temperatures led to higher natural gas demand exceeding the withdrawal capability for the balancing function.

Rule 30 Section G.1.h requires that Low OFO noncompliance charges be waived when nomination cuts are made during scheduling cycles 3, 4 or 5. This condition was implemented during the Report Period on November 1, 2022, November 5, 2022, and November 6, 2022.

Should SoCalGas' implementation of a Low OFO prove to be inadequate to maintain system integrity, SoCalGas may implement other measures including an Emergency Flow Order (EFO). SoCalGas may invoke EFOs when a forecast or an actual supply and/or capacity shortage threatens deliveries to End-Use Customers. An EFO will normally be invoked following an OFO but SoCalGas may invoke an EFO without previously invoking an OFO if, in SoCalGas' judgment, emergency operating conditions exist. There shall be no minimum notice period for EFOs, however, SoCalGas will attempt to provide as much notification to customers as practicable under the circumstances. No EFO events were called from April 1, 2022, through March 31, 2023.

B. Requests for Additional Supplies to Meet Minimum Flow Requirements

A description of the requests from Gas Control to obtain additional supplies to meet Southern System minimum flow requirements from April 1, 2022, through March 31, 2023, can be found in Attachment 2. A total of 56 such requests were made during the Report Period.

The System Operator may ask the Utility Gas Procurement Department per Section 13 of Rule 41 to act on a best-efforts basis to provide gas supplies as a provider of last resort. "Provider of last resort" relates to the circumstance in which the System Operator has attempted to use all other available tools, has entered the open market for gas commodity

purchases, has been unsuccessful in meeting its need to receive a required volume of flowing supplies at a specific location, and system reliability is therefore jeopardized. Pursuant to Section E(4) of Rule 33, the terms of any resulting transactions are to be posted on Envoy within 72 hours after the conclusion of the transaction. No Provider of last resort requests were made during this Report Period.

C. System Operator Transactions to Meet Minimum Flow Requirements and Plans for the Coming Year

SoCalGas, if required, will use spot purchases, baseload agreements,[2] and evaluate the possible use of discounted Backbone Transportation Service (BTS) capacity to meet its Southern System minimum flow requirements.

During the Report Period, SoCalGas purchased and sold approximately 4.124 MMDth of spot market supply at an approximate net cost of $7.52 per Dth or a total approximate net cost of $31 million. No baseload supply was purchased during the Report Period.

Increased purchases and sales of spot market supplies were the result in part of a reduction in upstream capacity caused by an extended constraint on the El Paso Natural Gas (EPNG) South Mainline system that began on August 15, 2021 and ended on February 15, 2023.

During the Report Period, SoCalGas did not offer discounted interruptible transportation rates for gas transported from the El Paso – Ehrenberg receipt point to increase customer delivery of gas into the Southern System.

The Sixth Memorandum In lieu of Contract (MILC) between SoCalGas' System Operator and Gas Acquisition for gas supply to support Southern System minimum flow requirements became effective on November 1, 2021. Its evergreen provision is limited to three one-year terms ending not later than October 31, 2024, unless cancelled in writing by SoCalGas at least 30 days prior to the second or third terms.

D. Additional Minimum Flow Requirements

There is no need for any additional minimum flow requirements outside of the Southern System at this time.

[2] SoCalGas submitted Advice No. (AL) 5971 on April 26, 2022 to continue through March 31, 2025 the prequalification provisions for baseload contracts included in Rule No. 41, Section 19, which expired on March 31, 2022.

E. Potential Additional Tools to Support System Operations and Potential System Improvements to Reduce or Eliminate the Need for Minimum Flowing Supply Requirements

Tools previously identified by SoCalGas to meet this minimum flow requirement include spot purchases, Requests for Offers (RFOs) to gas suppliers to help meet Southern System flowing supply needs, minimum flow obligations (see Decision (D.) 07-12-019, mimeo. at 58-64.), and MILCs between SoCalGas' System Operator and Gas Acquisition.

The Commission recently reviewed the adequacy of these tools in Rulemaking No. 20-01-007 based on the expected construction of the ECA LNG export terminal and North Baja Xpress Project. The Commission determined that:

> SoCalGas currently has reasonable tools available to address Southern System reliability issues including: (a) spot market purchases at Southern Zone receipt points for subsequent sale at the Citygate; (b) memoranda in lieu of contract between its Gas Acquisition Department and System Operator for coverage of the Southern System minimum requirements attributable to bundled core customers; (c) seasonal baseload transactions to secure preset daily delivery to Southern Zone receipt points; (d) discounted backbone transportation service (BTS) contracts applicable to Southern Zone receipt points; and (e) ability to issue a Request for Proposals (RFP) seeking additional tools.[3]

The North Baja Xpress project is scheduled to begin service in 2023.[4] The ECA LNG export terminal is expected to commence commercial operations in the Summer of 2025.[5]

F. Post-Forum Report

Rule No. 41 requires SoCalGas and Forum participants to collaborate in good faith to develop a post-Forum report that includes identifying any tariff changes that are found to be necessary by Forum participants. Tariff changes proposed in the Forum will be submitted to the CPUC by Advice Letter no later than 60 days after the Forum.

[3] Commission Order No. D.22-07-002, Finding of Fact 20.
[4] North Baja Xpress Project Fact Sheet
[5] Sempra 2022 Form 10-K, page 23

G. The Aliso Canyon Withdrawal Protocol

On July 23, 2019, the Commission's Energy Division issued a revised ACWP replacing the November 2, 2017, version in its entirety. The July 23, 2019, ACWP authorizes SoCalGas to withdraw gas from the Aliso Canyon natural gas storage facility only if any of the following conditions are met:

a. Preliminary low Operational Flow Order (OFO) calculations for any cycle result in a Stage 2 low OFO or higher for the applicable gas day (Condition 1);
b. Aliso Canyon is above 70% of its maximum allowable inventory between February 1 and March 31; in such case, SoCalGas may withdraw from Aliso Canyon until inventory declines to 70% of its maximum allowable inventory (Condition 2);
c. The Honor Rancho and/or La Goleta fields decline to 110% of their month-end minimum inventory requirements during the winter season (Condition 3); and/or
d. There is an imminent and identifiable risk of gas curtailments created by an emergency condition that would impact public health and safety or result in curtailments of electric load that could be mitigated by withdrawals from Aliso Canyon (Condition 4).

There was a total of 109 ACWP events during this Report Period.

	ACWP Events	**Low OFOs Declared**
Condition Met (Total)	109	54
Condition 1 – Cycle 1	83	41
Condition 1 – Cycle 2	16	5
Condition 1 – Cycle 3	10	8
There were no ACWP events for Conditions 2, 3, and 4 during this Report Period.		

The ACWP likely helped SoCalGas and SDG&E customers avoid Low OFOs on 55 out of the 109 days when a condition was met. There were 54 ACWP event days when a Low OFO was not avoided. For 7 of these events, a Low OFO had already been declared. For the remaining 47 events, customer imbalances were too high to be fully mitigated by the availability of Aliso Canyon's withdrawal capacity.

H. Regulatory Updates

PLD21FR003 National Transportation Safety Board (NTSB) EPNG Line 2000 Rupture Investigation

On August 15, 2021, EPNG Line 2000 ruptured near Coolidge, Arizona. The NTSB opened Investigation PLD21FR003 into the incident. The incident and subsequent investigation resulted in less available capacity on the EPNG South Mainline system upstream of the SoCalGas EPNG Ehrenberg Receipt Point.

On April 19, 2022, EPNG reported that "the pipeline failure remains under a PHMSA order, and the entire Line 2000 system is under a reduced operating pressure. The reduced operating pressure in effect removes the Line 2000 system from service from Black River compressor station to the California border."[6]

On February 6, 2023, EPNG received approval from PHMSA to fully lift the pressure restriction on Line 2000. The Force Majeure condition was lifted effective February 15, 2023.[7]

[6] EPNG EBB-Notice ID:614606-Force Majeure-Line 2000-Update #12
[7] EPNG EBB-Notice ID:617318-Force Majeure-Line 2000-Update #20