PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Item 4
ID #14404

ENERGY DIVISION **RESOLUTION G-3511 (Rev. 1)**
December 3, 2015

R E S O L U T I O N

Resolution G-3511. Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E) propose Tariff changes to implement Low and Emergency Flow Order requirements and explain their forecast model.

PROPOSED OUTCOME:
- Approval of tariff changes subject to modifications.

SAFETY CONSIDERATIONS:
- Low Operational Flow Order and Emergency Flow Order procedures provide a mechanism to timely alert customers of the need to increase flowing supplies into the gas utility pipeline system in order to avoid curtailments, some of which could impact critical services.
- It is the utility's responsibility to adhere to all Commission rules, decisions, General Orders, and statutes including Public Utility Code Section 451 to take all actions "… necessary to promote the safety, health, comfort, and convenience of its patrons, employees and the public."

ESTIMATED COST:
- There is no cost impact.

By Southern California Gas Company Advice Letter 4822 filed on June 29, 2015 and San Diego Gas and Electric Company Advice Letter 2392-G filed on June 29, 2015.

SUMMARY

In Decision (D.) 15-06-004, the Commission approved Low Operational Flow Order (Low OFO) and Emergency Flow Order (EFO) requirements for SoCalGas and SDG&E. That Decision ordered SoCalGas and SDG&E to file advice letters to: 1) implement the Low OFO and EFO tariff modifications, and 2) provide a full description of the model used to forecast Low OFOs and EFOs. SoCalGas and SDG&E filed ALs 4822 and 2392-G, respectively, to comply with D.15-06-004.

This Resolution approves Advice Letter 4822 with two modifications. The first modification applies the Low Operational Flow Order and the Emergency Flow Order requirements to producers after new California Producer Operational Balancing Agreements, Form 6452, have been implemented. As a result, the terms of existing access agreements will be honored until then. The second modification requires that any future modifications of the forecast model will be communicated to stakeholders when those modifications are made.

This Resolution approves Advice Letter 2392-G with one modification. The modification requires, as with AL 4822, that any future modification of the forecast model will be communicated to stakeholders when made.

In addition, in order to facilitate discussion at the 2016 Customer Forum, expected to be held in May 2016, SoCalGas and SDG&E shall file their first quarterly OFO/EFO report (submitted in compliance with D.15-06-004, Ordering Paragraph 2) no later than April 1, 2016. Subsequent quarterly reports shall be filed every three months thereafter, through April 1, 2017. The quarterly reports shall include data and information related to High OFOs as well.

BACKGROUND

On June 11, 2015 the Commission approved Decision 15-06-004 granting the application of Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E)[1] for Low Operational Flow Order (OFO)

[1] Referred to jointly as the utilities.

and Emergency Flow Order (EFO) requirements. The utilities proposed the new procedures to provide a more workable and less expensive way to help ensure that flowing gas supplies reaching the utilities pipeline system more closely match the volumes burned by customers. The OFO and EFO requirements replace the utilities' existing winter gas balancing rules. The balancing rules were determined to be insufficient for addressing the current and future operating environment.

The Decision's Ordering Paragraph (OP) 1 required the utilities to file Tier 2 Advice Letters (AL) to implement the OFO and EFO tariff modifications. Additionally the Decision ordered that the ALs provide: (1) a full description of the forecast model used to call a Low OFO or EFO; (2) a description of the conditions/circumstances under which a modification to the model will be made and the manner in which modifications to the model will be communicated to parties; and (3) a comparison of model results versus actual for the year immediately preceding the decision as well as three examples, one where the model accurately forecast an OFO, one where it failed to forecast an OFO when actual data indicated one was required, and one where the model forecast an OFO when one was not required.[2]

Both SoCalGas and SDG&E filed ALs on June 29, 2015. The utilities state that they have provided, in the form of Attachment A to their ALs, the tariff modifications needed to implement D.15-06-004 as well as a description of the model as required. SoCalGas' AL 4822 notes that it "presents a modification to the language approved for Rule No. 30 in order to adequately implement OP 9, which directs SoCalGas to apply the Low OFO and EFO requirements to California producers upon approval of this filing."[3] SoCalGas states that SDG&E, in its AL 2392-G is implementing substantially the same modifications

[2] The decision also ordered certain reporting requirements and the filing of Tier 2 Advice Letters establishing a memorandum account for recording the cost of implementing the OFO and EFO procedures.

[3] SoCalGas AL 4822, Modification of Tariffs Necessary to Implement Low Operational Flow Order (OFO) and Emergency Flow Order (EFO) Requirements and Description of Forecasting Model in Compliance with D.15-06-004. June 29, 2015, p. 1.

to its tariffs. SDG&E makes the same representation relative to SoCalGas' AL 4822.

NOTICE

SoCalGas AL 4822 was sent to the SoCalGas General Order 96-B service list and the Commission's service list in Application 14-06-021. SDG&E provided, either electronically or by U.S. mail, copies of AL 2392-G to the interested parties shown on the list attached to the AL including parties to Application 14-06-021.

PROTESTS

SoCalGas' AL 4822 was timely protested by Indicated Shippers (IS)[4], the Southern California Generation Coalition (SCGC) and Exxon Mobil Corporation (ExxonMobil). All three protests were filed on July 20, 2015.

The IS protest enumerates four issues regarding the accuracy of the model, transparency, the description of the model and implementation of the tariff requirements as they apply to producers. IS requests that the Commission "facilitate a workshop to permit a more detailed understanding and refinement of the utility's proposal."[5] Alternatively the protest calls for the filing of a supplemental Advice Letter explaining the development elements of the Low OFO/EFO forecast model.

SCGC's Protest challenges the accuracy of the model, proposes a change to certain formulae in the forecast model and calls for greater transparency regarding future changes to the model. The SCGC protest calls for significant improvement in forecast model results and, related to that, the use of stricter criteria for evaluating the accuracy of the model. The protest specifically asserts that formulae used to calculate the imbalances that trigger the need for an OFO should substitute scheduled receipts for confirmed receipts. The protest asserts

[4] The protest notes in its footnote 1 that IS member companies include Chevron U.S.A Inc., ConocoPhillips Corp. and CRC Marketing, Inc. Protest of the Indicated Shippers to Southern California Gas Company Advice Letter No. 4822. July 20, 2015, footnote 1, p. 1.

[5] Op.cit. Protest of Indicated Shippers, p. 1.

that scheduled receipts provide a more reliable and accurate forecast. Finally, the protest challenges SoCalGas/SDG&E's plan to communicate changes to the model when coefficients change by 50% or variables are removed and calls for all changes to be timely communicated.

ExxonMobil characterizes its protest as 'limited' and challenges the single issue of the application of the new Low OFO/EFO protocol to California gas producers with existing access agreements. ExxonMobil asserts that the language in D.15-06-004 does not support the tariff changes proposed by the utilities as they relate to producers with existing agreements and that it conflicts with language in SoCalGas' Rule 30 concerning high OFOs.

SoCalGas replied to all three protests on July 27, 2015. SoCalGas asserts that the model is appropriately accurate and consistent with its statements made during hearings concerning the Low OFO and EFO; and that the tariff changes are being implemented as ordered by D.15-06-004. SoCalGas acknowledges the benefit of greater transparency. SoCalGas comments that, while the model is sufficiently accurate, they anticipate that with use, opportunities to enhance it will be identified and implemented. They state their commitment to making refinements as appropriate. The reply also notes the absence of any viable alternative presented by protesting parties.

The reply acknowledges the value of increased transparency and proposes to implement a process that will provide timely information concerning changes in the forecast model. With regard to the applicability of the new procedures to California gas producers, SoCalGas states that D.15-06-004 clearly intended for California producers to be subject to the Low OFO and EFO protocols at the same time as all other customers, citing OP 9 of D.15-06-004:

> "Upon approval of the Tier 2 Advice Letters, San Diego Gas & Electric Company and Southern California Gas Company shall apply their Low Operational Flow Order and Emergency Flow Order requirements to California Producers."

DISCUSSION

AL 4822 should be approved with two modifications. The first modification applies the new Low OFO and EFO requirements to California gas producers

subject to the terms of existing access agreements. The second modification requires timely notification of changes to the forecast model.

The Low OFO and EFO requirements should be applied to California producers after a new California Producer Operational Balancing Agreement, Form 6452 has been implemented. Tariff Rule No. 30 shall include the original language as presented in the utilities' testimony. The broad interpretation of OP 9 used by SoCalGas concludes that the requirements should be implemented immediately upon approval of AL 4822 and irrespective of the existing producer access agreements. However this interpretation ignores the fact that the requirements as presented by SoCalGas in its testimony specifically noted that the tariff changes needed to implement the requirements would honor existing access agreement. The ExxonMobil protest appropriately identifies this requirement and a similar argument is made in the IS protest. ExxonMobil also notes that the interpretation made by the utilities is "inconsistent with the treatment of California producers in High OFO/EFO conditions."[6] There is nothing that suggests that this inconsistency was intended or necessary. Finally, as practical matters, the significant majority of the existing agreements will expire at the end of 2015, and Energy Division staff discussions with SoCalGas indicate that it does not object to honoring the terms of the existing agreements. In this regard, the redline changes deleting language with regard to California gas producers in the proposed revised Rule No. 30 (Section G.1.f.vi.) as presented in AL 4822 should be eliminated and the original language in the proposed rule maintained.[7] The Decision, in approving the Low OFO and EFO requirements, did not alter this aspect of the requirements as presented by the utilities.

SoCalGas/SDG&E should notify stakeholders of modifications to the forecast model whenever such modifications are made. This modification recognizes the value of greater transparency by all of the parties, and the Commission's endorsement of greater transparency. OP 1(e) of D.15-06-004 required that SoCalGas/SDG&E describe the manner in which modifications to the forecast

[6] ExxonMobil Limited Protest to SoCalGas Advice No. 4822. July 20, 2015, p. 1.

[7] See Advice No. 4822, Modification of Tariffs Necessary to Implement Low Operational Flow Order (OFO) and Emergency Flow Order (EFO) Requirements and Description of Forecasting Model in Compliance with D.15-06-014. June 29, 2015, p. 8.

model would be communicated to parties. In response AL 4822 proposes to communicate modifications if/when "the model coefficients change by more than 50%, or if variables are added or removed from the model…."[8] While this response meets the requirements of OP 1(e) we agree with the protesting parties and with SoCalGas/SDG&E's reply to the protest that greater transparency is desired and valuable. SoCalGas/SDG&E's proposed method to provide that transparency, i.e., posting the complete formula, and noting any changes on its Electronic Bulletin Board, Envoy, whenever such modifications are made, provides the needed transparency in a practical, accessible manner.

Protesting parties' assertions concerning the forecast model and their proposals for changes are rejected. D.15-06-004 required that SoCalGas/SDG&E provide a full description of the forecast model used to call a Low OFO or EFO. The description was required in response to the Commission's need to understand the functioning of the model (not just its results) and to provide a context within which the utilities will make future modifications to further refine the current model. The requirements of OP 1 are also consistent with the request from parties during the proceeding that they have additional information. As such, the underlying reason for OP 1 was informational. It was not primarily intended to provide a forum for evaluation of the model in the context of an advice letter, and model results were already presented and debated in the Low OFO/EFO proceeding. As such, we will not adopt those elements of the protests that seek to challenge the structure of the model.

However, we also make no determination here with regard to the specific model changes that IS and SCGC suggest. Consistent with the commitment of SoCalGas to refine the model and their expressed openness to input regarding its design, it is incumbent on them to review, evaluate and determine whether suggestions provided by parties will enhance the overall accuracy of the model.

D.15-06-004 was very specific regarding the information to be provided in the description of the forecast model. It defined seven elements to be included in the description of the model. AL 4822 substantially provided all of the information required. In addition, with response to an Energy Division (ED)

[8] Op. cit., Advice No. 4822, p. 6.

data request concerning the methodology to define coefficients in the model, OP 1 was met in full. The response to the data request explained the need for the coefficients and how they were determined. The utilities responded that for each cycle they:

> "use the latest available confirmations to estimate both system receipts and net injections and withdrawals into storage accounts. On cycle 2 we use cycle 1 confirmations and on cycle 3 we use cycle 2 confirmations. Unfortunately, cycle 1 and 2 confirmations do not capture any changes that may occur on later cycles, like additional nominations or upstream cuts. Because these changes can be large, we adjust the latest available confirmations by the expected difference between cycle 1 and 2 confirmation and cycle 5 scheduled volumes. To estimate these changes we used regression analysis.
>
> Since we noticed some pattern in the changes made between earlier and later cycles we use lagged variables in the regression. The coefficients were estimated by minimizing the difference between the actual negative imbalance and the estimated negative imbalance. However, while an ordinary regression assigns equal weight to all observations, we assigned greater weight to observations that are more likely to put the system at risk. Thus, an observation associated with a large negative imbalance was given greater weight during the withdrawal season than during the injection season. The coefficients are the result of such regression."[9]

Included among the seven items required in OP 1 of D.15-06-004 were requirements that the operation of the model be demonstrated using historical data under several operating scenarios. The results show that the model predicts a number of Low OFOs close to what were actually called. This result addresses a major concern expressed by parties during the proceeding that resulted in D.15-06-004.

The results show that the model predicts a number of Low OFOs close to what were actually called, i.e., 52 Low OFO events compared to 45 events that actual imbalances would have produced. Importantly this result addresses a major concern expressed by parties during the proceeding that resulted in D.15-06-004, i.e. that the model would grossly over-predict the number of Low OFOs. We disagree with the SCGC comments that the utilities should provide a model of

[9] Email response to ED data request, August 27, 2015.

near perfect accuracy. We agree that the model often predicts an OFO a day ahead of time, and SoCalGas should work to make the model more accurate. But, barring an alternative, none of which has been offered, we endorse the view that the model is evolutionary in nature. The utilities should be committed to refining it with its use. We also note that the utilities should be open to examining and potentially adopting an alternative with greater accuracy should one be proposed.

We also note that D.15-06-004 provides for extensive review of the performance of the forecast model. The Decision requires: 1) quarterly reports by the utilities in the first year following implementation of the Low OFO/EFO requirements that present information describing the actual implementation of the requirements, and how well the forecast model worked, 2) another report is required not later than August 31, 2016, summarizing the performance of the forecast model and any changes made, and 3) SoCalGas and SDG&E are required to report on the performance, modifications already implemented, and any anticipated changes to the forecast model in their scheduled Customer Forums. These reviews provide significant opportunity to examine the effectiveness of the model and provide an incentive for SoCalGas to make changes to enhance its accuracy.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments on October 27, 2015.

The Indicated Shippers (IS) submitted timely comments on November 23, 2015. IS appreciates the draft resolution's recognition of the misapplication of the Low OFO/EFO procedures for California producers with existing access agreements. IS continues to express concerns about the accuracy, transparency, and timeliness of SoCalGas's forecasting methodology, and illustrates its concerns with

information related to a November 3, 2015 High OFO event. IS concludes that SoCalGas's forecasting methodology remains flawed.
IS notes that D.15-06-004 contemplated review of the utility's forecasting methodology, and some of that review process could occur as part of the Customer Forum. IS suggests that Commission require monthly reporting on the results of SoCalGas's OFO forecasting for both High and Low OFOs, until a more comprehensive review can take place in the 2016 Customer Forum.

The Southern California Generation Coalition (SCGC) submitted untimely comments, late in the day on November 24, 2015, a day after comments were due. Although SCGC's comments were submitted late, we will address them. SCGC expressed two concerns about the draft resolution. First, SCGC is concerned that the draft resolution approves the Low OFO/EFO advice letters partly based on the assumption that parties in A.14-06-021 had an opportunity in the proceeding to examine the forecast model. SCGC states that SoCalGas/SDG&E did not reveal the model until the advice letters were filed.

Second, SCGC is concerned that the draft resolution approves the advice letters on the basis that the number of OFOs that were backcasted by the model was reasonably close to the number of days during which an OFO would have been declared if the low OFO procedure would have been in place. However, SCGC states that the forecasts model has a very low probability of predicting the actual day that an OFO would be declared.

The Commission is concerned that customers get transparent, accurate and timely information regarding OFOs and EFOs. As noted above, D.15-06-004 provides for extensive review of the performance of the forecast model. Since D.15-06-004 already provides for quarterly reports in the first year following implementation of the Low OFO/EFO requirements, we will not adopt the IS suggestion for monthly reporting. However, in order to allow ample time for review of the first quarterly report prior to the 2016 Customer Forum (expected to be held in May 2016), we will require the first quarterly report to be submitted on April 1, 2016. Subsequent quarterly reports shall be filed every three months thereafter. In addition, we shall require the quarterly reports to include information and data related to High OFOs as well as Low OFOs and EFOs. Finally, we shall require an additional quarterly report to be filed on April 1, 2017, prior to the 2017 Customer Forum.

With regard to the comments of SCGC, they correctly point out that the model itself was not examined in A.14-06-021. We have changed language in this resolution that stated that the model itself was examined in A.14-06-021. However, the results of the model were presented and debated in A.14-06-021, and both IS and SCGC already expressed concerns about the model results in their protests to SoCalGas AL 4822. The Commission adopted the Low OFO/EFO requirements despite parties' concerns about certain results of the model. We view the model as evolutionary in nature, and there are significant opportunities for review by parties. Further, we are not making any judgment here about the recommendations made by parties for changes to the model.

Finally, SCGC notes that the draft resolution finds that the model predicts a number of low OFOs close to what were actually called, but SCGC asserts that the model has a low level of accuracy with regard to the correct date of the OFO. SCGC contends that the accuracy of the number of low OFOs is less relevant than how often the model would predict the correct date for a low OFO on a backcast basis. The resolution already noted above that "We agree that the model often predicts an OFO a day ahead of time, and SoCalGas should work to make the model more accurate." However, the resolution has been slightly revised to only state that the accuracy of the number of the OFOs was "a" major concern of parties in A.14-06-021, not necessarily "the" major concern.

FINDINGS

1. Ordering Paragraph (OP) 1 of Decision (D.)15-06-004 required that Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E) file Tier 2 advice letters to implement their proposed Low Operational Flow Order (OFO) and Emergency Flow Order (EFO) tariff modifications and provide a full description of the forecast model used to call a Low OFO or EFO.
2. On June 29, 2015, SoCalGas and SDG&E (collectively, the "utilities") filed, respectively, Advice Letters (AL) 4822 and AL 2392-G. The ALs were filed in compliance with Commission Decision D.15-06-004 OP 1. Each of the ALs presented the necessary tariff modifications. SoCalGas AL 4822 presented a description of the forecast model.

3. AL 4822 was timely protested by Indicated Shippers (IS), the Southern California Generation Coalition (SCGC) and Exxon Mobil Corporation (ExxonMobil). Protests by all three parties were filed on July 20, 2015.
4. The IS protest challenges the accuracy of the model, the transparency of future modifications of the forecast model, the description of the model and implementation of the tariff requirements as they apply to producers.
5. SCGC contests the accuracy of the model, proposes a change to certain formulae in the forecast model and calls for greater transparency regarding future changes to the model.
6. ExxonMobil asserts that the SoCalGas incorrectly interprets D.15-06-004 by applying the Low OFO/EFO protocol to producers with existing access agreements upon approval of the ALs filed per the decision.
7. SoCalGas replied to the protests on July 27, 2015. SoCalGas asserts that the protests of SCGC and IS are incorrect in their comments that a Low OFO proposal cannot be adopted lacking a near-perfect forecast model. The reply agrees with the need for greater transparency and proposes to make public all changes to the forecast model when such changes are made. The reply also disputes the contentions of IS and ExxonMobil that the new OFO/EFO protocol is incorrectly being applied to producers with existing access agreements. The utilities cite OP 9 of D.15-06-004 to support the immediate implementation of the Low OFO/EFO protocols for California gas producers.
8. SoCalGas' AL 4822, in conjunction with the utilities' response to an Energy Division data request, provided all of the information required by OP 1 of D.15-06-004. The provided information includes the results of multiple scenarios using historical data. The results of the scenarios demonstrate that the model predicts within reasonable accuracy the total number of OFOs that would have been called and far fewer than those asserted by SCGC.
9. OP 1 was informational in its requirements. As such the evaluations and proposed changes presented in the protests are rejected.
10. SoCalGas incorrectly interprets OP 9 of D.15-06-004. The IS and ExxonMobil protests are correct in their interpretation that the terms of existing producer access agreements will be respected.
11. SoCalGas will need to correct the change to Rule 30 as presented in AL 4822 to reflect that the Low OFO/EFO requirements for California gas producers

will be implemented according to the terms of any existing producer access agreements.

12. The utilities agree with the need for transparency concerning any changes to the forecast model and have proposed a method, posting the change on their Electronic Bulletin Board, Envoy, when such changes are made. The proposed method provides for the appropriate transparency.
13. The utilities should be committed to refining the forecast model with its use.
14. We also note that the utilities should be open to examining and potentially adopting an alternative forecast model with greater accuracy should one be proposed.
15. SCGC and IS submitted comments on the draft of this resolution.
16. The first quarterly OFO/EFO report, filed in compliance with D.15-06-004, OP 2, should be submitted on April 1, 2016. Subsequent quarterly reports shall be filed every three months thereafter.
17. The quarterly OFO/EFO compliance reports should include information and data related to High OFOs as well as Low OFOs and EFOs.
18. An additional quarterly OFO/EFO compliance report should be filed on April 1, 2017, prior to the 2017 Customer Forum.

THEREFORE IT IS ORDERED THAT:

1. The requests of the Southern California Gas Company and San Diego Gas & Electric Company (the utilities) as presented in Advice Letters 4822 and 2392-G, respectively, are approved subject to modification.
2. Southern California Gas Company shall submit a supplemental Tier 1 Advice Letter revising Rule 30, Section G.1.f.vi to clarify that the new Low Operational Flow Order/Emergency Flow Order (OFO/EFO) procedures will be applied to those California gas producers with California Producer Operational Balancing Agreements, Form 6452.
3. The utilities shall post any change to the forecast model used to call a Low OFO/EFO on their Electronic Bulletin Board, Envoy, when such change is implemented.

4. The first quarterly OFO/EFO report, filed in compliance with D.15-06-004, Ordering Paragraph 2, shall be submitted on April 1, 2016. Subsequent quarterly reports shall be filed every three months thereafter.
5. The quarterly OFO/EFO compliance reports shall include information and data related to High OFOs as well as Low OFOs and EFOs.
6. An additional quarterly OFO/EFO compliance report shall be filed on April 1, 2017, prior to the 2017 Customer Forum.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on December 3, 2015; the following Commissioners voting favorably thereon:

TIMOTHY J. SULLIVAN
Executive Director