

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



April 23, 2020

**Advice Letter 5511-G**

Ronald van der Leeden  
Director, Regulatory Affairs  
Southern California Gas  
555 W. Fifth Street, GT14D6  
Los Angeles, CA 90013-1011

**SUBJECT: Advanced Meter Infrastructure Data Aggregation System Roadmap Pursuant to Decision (D.) 19-08-002.**

Dear Mr. van der Leeden:

Advice Letter 5511-G is approved as of March 12, 2020, per resolution G-3563 Ordering Paragraphs.

Sincerely,

A handwritten signature in cursive script that reads "Edward Randolph".

Edward Randolph  
Deputy Executive Director for Energy and Climate Policy/  
Director, Energy Division



**Ronald van der Leeden**  
Director  
Regulatory Affairs

555 W. Fifth Street, GT14D6  
Los Angeles, CA 90013-1011  
Tel: 213.244.2009  
Fax: 213.244.4957

[RvanderLeeden@socalgas.com](mailto:RvanderLeeden@socalgas.com)

September 3, 2019

Advice No. 5511  
(U 904 G)

Public Utilities Commission of the State of California

**Subject: Advanced Meter Infrastructure Data Aggregation System Roadmap**  
**Pursuant to Decision (D.) 19-08-002**

Southern California Gas Company (SoCalGas) hereby submits for approval by the California Public Utilities Commission (Commission) its Advanced Meter Infrastructure (AMI) Data Aggregation System Roadmap.

**Purpose**

This Advice Letter (AL) submission complies with Ordering Paragraph (OP) 9 of D.19-08-002, which provides as follows:

Applicants shall make all reasonable efforts to ensure the Advanced Metering Infrastructure Data Aggregation System is built and transmitting data streams for scheduling and balancing purposes by April 1, 2020, the start of the summer season, when it will have maximum value for the reliability of the system. In support of this deadline, Applicants are directed to file, within 30 days of the effective date of this decision, a Tier 1 Advice Letter to Energy Division with a timetable, roadmap and plan for accomplishing this goal.<sup>1</sup>

---

<sup>1</sup> San Diego Gas & Electric Company (SDG&E) is not submitting a separate Roadmap AL as the necessary steps to incorporate SDG&E data into the AMI Data Aggregation System are described herein.

## **Background**

D.19-08-002 directs SoCalGas to begin incorporating historical AMI data into its Demand Load Forecast Model (DLFM) within seven days of the decision's effective date.<sup>2</sup> The DLFM generates the Daily Forecast Quantity, which is an independent daily forecast used by the SoCalGas Gas Acquisition Department for balancing purposes.<sup>3</sup> While the decision was adopted effective August 1, 2019, and this requirement would have become effective August 8, 2019, SoCalGas began incorporating historical AMI data into the DLFM as of July 1, 2019.

D.19-08-002 further requires SoCalGas and SDG&E to balance core deliveries to estimated actual consumption instead of a forecast, beginning April 1, 2020.<sup>4</sup> In support of this objective, D.19-08-002 directs SoCalGas and SDG&E to begin building an "AMI Data Aggregation System," as described within the decision.<sup>5</sup> SoCalGas and SDG&E were also directed to build a system to automate Scheduled Quantity trading.<sup>6</sup> SoCalGas and SDG&E were ordered to submit Tier 1 Advice Letters to establish Memorandum Accounts for recording the costs of the AMI Data Aggregation System, automation of Scheduled Quantity trading, and other costs associated with requiring Gas Acquisition to balance to estimated actual consumption.<sup>7</sup> Finally, while D.19-08-002 states that SoCalGas and SDG&E shall make all reasonable efforts to ensure the AMI Data Aggregation System is completed by April 1, 2020,<sup>8</sup> the decision also adopts a formula for use in estimating retail core consumption starting April 1, 2020, should the AMI Data Aggregation System not be completed by that date, to be in effect until it is completed.<sup>9</sup>

## **Discussion**

Pursuant to D.19-08-002, SoCalGas provides its AMI Data Aggregation System Roadmap in the following sections. First, SoCalGas describes the AMI Data Aggregation System, and provides an estimated timetable including a planned operational date of August 1, 2020. SoCalGas further describes a preliminary manual

---

<sup>2</sup> D.19-08-002, OP 1.

<sup>3</sup> See SoCalGas Rule No. 1, Definitions, Daily Forecast Quantity: "A forecast of core customer Measurement Day (midnight to midnight Pacific Standard Time) daily usage as provided by the Utility's Demand Forecasting Group (in the Regulatory Affairs department) using a consistent daily load forecast equation. Weather forecasts input into the equation will be from an independent third party and the most current available as of 7:00 a.m. of flow day. The Utility's Demand Forecasting Group will also prepare an initial forecast of core customer daily usage based on the most current weather inputs available as of 5:00 a.m. of flow day, but this initial forecast will not be the Daily Forecast Quantity."

<sup>4</sup> D.19-08-002, OP 2.

<sup>5</sup> D.19-08-002, OP 5.

<sup>6</sup> Id.

<sup>7</sup> D.19-08-002, OP 8. See SoCalGas Advice No. 5506 and SDG&E Advice No. 2793, submitted on August 30, 2019.

<sup>8</sup> D.19-08-002, OP 9.

<sup>9</sup> D.19-08-002, OP 3.

AMI Data Aggregation solution, which will allow for the use of aggregated AMI data for SoCalGas Gas Acquisition's balancing requirements in the interim period from April 1, 2020 until August 1, 2020.

Following the discussion of the AMI Data Aggregation System, SoCalGas describes the estimated timetable for the Scheduled Quantity Trading System. SoCalGas anticipates that this system will become operational on September 1, 2020.

### AMI Data Aggregation System Roadmap

The AMI Data Aggregation System will be developed in three deployment periods:

1. Beginning April 1, 2020, SoCalGas will manually aggregate daily core AMI usage data for the purposes of determining compliance with balancing requirements for the Gas Acquisition Department in lieu of the formula described in OP 3 of the decision until the automated AMI Data Aggregation System is completed.
2. On August 1, 2020, the automated AMI Data Aggregation System is planned to be deployed.
3. Finally, following the rollout of SDG&E's Customer Information System (CIS) replacement program in 2021, the AMI Data Aggregation System will be modified to communicate with SDG&E's new CIS.

These three deployment periods are described in more detail below.

#### *Deployment Period 1 – Preliminary AMI Data Aggregation System (April 1, 2020 to July 31, 2020)*

As described below in *Deployment Period 2*, the automated AMI Data Aggregation System is not estimated to become operational until August 1, 2020. D.19-08-002 contemplated that, despite best efforts, the system may not be completed by April 1, 2020. D.19-08-002, therefore, adopted an interim solution (referred to herein as the "residual formula"), which is described as follows:

If the Advanced Metering Infrastructure Data Aggregation System is not completed by April 1, 2020, Applicants shall use the following formula to balance to actual consumption: "The retail core estimated actual demand for Southern California Gas Company is the physical residual after subtracting noncore and core transport agents physical gas demand from the measured daily total system gas sendout." Immediately upon completion of the Advanced Metering Infrastructure Data Aggregation System, Applicants shall balance to estimated actual consumption using the historical and daily/hourly data available through use of the Advanced Metering Infrastructure Data Aggregation System.<sup>10</sup>

---

<sup>10</sup> D.19-08-002, OP 3.

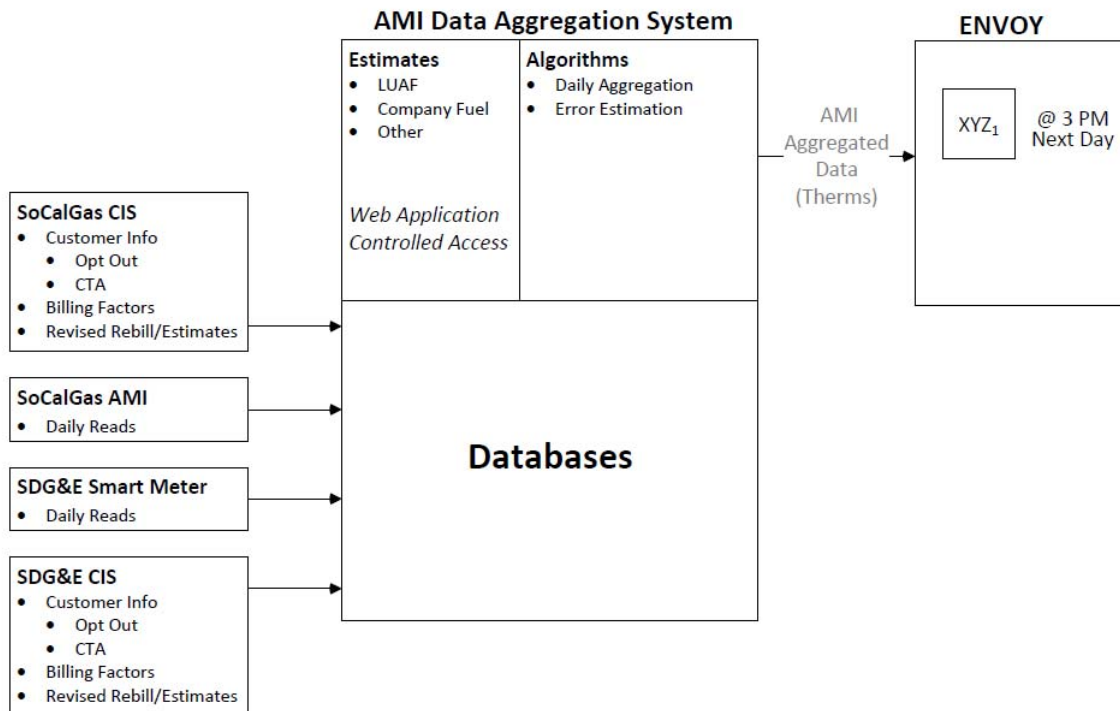
While the automated AMI Data Aggregation System will not be completed by April 1, 2020, SoCalGas intends to implement a preliminary manual system during Deployment Period 1, from April 1, 2020 through July 31, 2020. This system will utilize daily SoCalGas AMI and SDG&E Smart Meter data and incorporate estimates for Lost and Unaccounted For Gas (LUAFF), Company Use Fuel, and non-AMI metered customers, similar to the requirements of the automated AMI Data Aggregation System.

This information will be provided manually to SoCalGas Gas Acquisition as well as to the billing department for determining compliance with balancing requirements. By implementing this preliminary manual system, SoCalGas will not need to rely on the residual formula described in OP 3 while awaiting the completion of the automated AMI Data Aggregation System. SoCalGas believes this preliminary solution complies with the intent of D.19-08-002, which is to require the SoCalGas Gas Acquisition Department to balance to daily AMI usage data rather than a daily forecast starting April 1, 2020, because this manual process of AMI data aggregation will more timely and accurately reflect retail core demand for the Gas Acquisition Department using AMI usage data compared to the residual formula described in OP 3.

*Deployment Period 2 – Automated AMI Data Aggregation System (August 1, 2020)*

D.19-08-002 provides a brief description of the AMI Data Aggregation System. Therefore, SoCalGas will describe some of the AMI Data Aggregation System's larger components to inform its estimated timetable.

The following diagram provides a high-level depiction of the major components of the AMI Data Aggregation System.



At a high level, for each Measurement Day<sup>11</sup> the AMI Data Aggregation System will perform the following tasks:

- 1) Continuously collect and update SoCalGas AMI usage data as the data becomes available throughout the day;
- 2) Once or twice daily, collect and update SDG&E AMI usage data through SDG&E's normal load processes as the data becomes available;
- 3) Query SoCalGas CIS and SDG&E CIS for customer information (including each customer's balancing agent) and billing adjustment factors (including Btu factors); and
- 4) Aggregate SoCalGas Gas Acquisition customer usage data (with estimates for LUAF, Company Use Fuel, and non-AMI metered customers) and send the aggregated AMI usage data to Envoy for posting by 3:00 p.m. the afternoon following the measurement day.

<sup>11</sup> See D.19-08-002 at p. 20, n. 45: "SoCalGas and SDG&E's Measurement Days are different. SoCalGas's Measurement Day is 12:00 a.m. (00:00 hours) to 12:00 a.m. SDG&E's is 10:00 p.m. (or 22:00 hours) to 10:00 p.m. Hence, the testimony proposes that for the AMI Data Aggregation System, the usage data for each SoCalGas Measurement Day would be based on core AMI usage data as of 00:00 hours (12:00 a.m.) while usage for SDG&E would be based on core data recorded as of 22:00 hours, or 10:00 p.m. of the Measurement Day."

At this time, Deployment Period 2 is anticipated to become operational on August 1, 2020. While D.19-08-002 contemplated the system to be effective April 1, 2020, SoCalGas is implementing the AMI Data Aggregation System with “reasonable efforts,” which necessitates the additional time. It is important to note that the current 12-month timeline has been condensed by 6 months from the 18 month timeline SoCalGas initially estimated it would take to complete the system.<sup>12</sup>

The following provides an approximate overview of the major milestones for the AMI Data Aggregation System. Because functional and technical requirements are still being developed, this estimated timeline assumes that the scope of work will not expand to include additional systems.

<u>Project Milestone</u>	<u>Estimated Timeline</u>
Planning	Aug 2019
Requirements	Sep-Oct 2019
Design	Nov-Dec 2019
Build	Jan-May 2020
Test	Jun-Jul 2020
<b>Go Live</b>	<b>August 1, 2020</b>
Storm	Aug 2020

The following provides a description of the major components of each project milestone:

- Planning – Establish scope of the project and develop a project plan, which includes identifying roles and responsibilities, timeline, cost estimates, potential risks and issues.
- Requirements – Analyze users’ needs and develop detailed functional and technical requirements documents.
- Design – Transform detailed requirements into complete and detailed system solutions with a focus on how to deliver the required functionality.
- Build – Convert design into complete information system, including acquiring and installing systems environments, creating and testing databases, preparing test files, coding, compiling, and refining programs, and performing test readiness review.
- Test – The developed code and system are tested to make sure the product is in line with the specified requirements and works the way it is designed.
- Go Live – Implementation of the system into a production environment.
- Storm – A period of monitoring the system to support and provide solutions to any issues encountered while in production.

---

<sup>12</sup> See D.19-08-002 at p. 20.

Along a parallel path will be the development of the ENVOY user interface. This pathway includes minor modifications needed to SoCalGas' Specialized Customer Billing System (SCBS). A dependency for this pathway is receiving completed requirements from the AMI Data Aggregation System. The following provides an estimated timeline of the major milestones for the ENVOY user interface.

<u>Project Milestone</u>	<u>Estimated Timeline</u>
Planning	Aug 2019
Requirements	Sep-Oct 2019
Design	Oct-Nov 2019
Build	Nov 2019-Jan 2020
Test	Jan-Mar 2020
<b>Go Live</b>	<b>March 31, 2020</b>
Storm	April 2020

#### *Deployment Period 3 – SDG&E CIS Interface (est. 2021)*

As the Commission is aware, SDG&E is in the midst of implementing a CIS replacement program as approved in D.18-08-008, which adopted an all-party settlement, including costs and the replacement program's implementation timeline. The new CIS system is expected to become operational in January 2021. The implementation timeline includes a "freeze period" on changes to SDG&E's legacy CIS system during 2020 to reduce the overall risks and customer impact during the transition to the new system. The "freeze period" requires that any new structural rate changes or other similar initiatives be deferred for one year to permit transition from the legacy CIS to the new system.

As noted above, the AMI Data Aggregation System is planned to become operational on August 1, 2020. At this initial release, the AMI Data Aggregation System will receive information from SDG&E's legacy CIS. Following completion of the CIS replacement program, the AMI Data Aggregation System will receive information from SDG&E's new CIS. While the timeline for the CIS replacement program does not make it possible for SDG&E to specify precisely when the AMI Data Aggregation System will receive information from SDG&E's new CIS, it is expected that the modifications will be undertaken in 2021.

#### Scheduled Quantity Trading Roadmap

In addition to developing the AMI Data Aggregation System, SoCalGas was directed to implement an Automated Scheduled Quantity Trading System. In D.19-08-002, the Commission found a 13-month implementation schedule to be reasonable.<sup>13</sup> Scheduled Quantity Trading is currently described as a temporary, manual process in SoCalGas Rule No. 30, Section N. The permanent, automated system will generally

---

<sup>13</sup> See D.19-08-002 at p. 23.



function similarly, except that scheduled quantity trades will be processed through ENVOY rather than by e-mail or fax. Pursuant to D.19-08-002, trading will continue to be limited to OFO days. As with the current manual process, scheduled quantity trades will be limited to End Use contracts.

In accordance with the timeline authorized in D.19-08-002, the projected roadmap to develop this system is as follows. The descriptions of the major components are similar to those provided above for the AMI Data Aggregation System.

<u>Project Milestone</u>	<u>Estimated Timeline</u>
Planning	Aug 2019
Requirements	Sep-Nov 2019
Design	Nov 2019-Jan 2020
Build	Jan-Apr 2020
Test	May-Aug 2020
<b>Go Live</b>	<b>September 1, 2020</b>
Storm	Sep 2020

SoCalGas will submit necessary changes to its tariffs by Advice Letter prior to the operational date of the Automated Scheduled Quantity Trading System. At this time, SoCalGas intends to modify Rule No. 30 to include Scheduled Quantity Trading as a new scheduling cycle (“Cycle 7”) within Section D.7 (Operational Requirements/Timing). SoCalGas will provide preliminary information related to the Automated Scheduled Quantity Trading System at its 2020 Annual Customer Forum.<sup>14</sup> Finally, SoCalGas will hold a webinar with customers prior to release of the system, which will be announced to customers through ENVOY.

### **Protest**

Anyone may protest this Advice Letter to the Commission. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. The protest must be made in writing and must be received within 20 days of the date of this Advice Letter, which is September 23, 2019. The address for mailing or delivering a protest to the Commission is:

CPUC Energy Division  
 Attn: Tariff Unit  
 505 Van Ness Avenue  
 San Francisco, CA 94102

Copies of the protest should also be sent via e-mail to the attention of the Energy Division Tariff Unit ([EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)). A copy of the protest should also be sent via both e-mail and facsimile to the address shown below on the same date it is mailed or delivered to the Commission.

---

<sup>14</sup> See SoCalGas Rule No. 41, Section 22.

Attn: Ray B. Ortiz  
Tariff Manager - GT14D6  
555 West Fifth Street  
Los Angeles, CA 90013-1011  
Facsimile No.: (213) 244-4957  
E-mail: [ROrtiz@socalgas.com](mailto:ROrtiz@socalgas.com)

**Effective Date**

Pursuant to General Order (GO) 96-B and OP 9 of D.19-08-002, SoCalGas submits this Tier 1 Advice Letter (effective pending disposition) subject to Energy Division disposition, for approval with an effective date of September 3, 2019.

**Notice**

A copy of this Advice Letter is being sent to SoCalGas' GO 96-B service list and the Commission's service list in A.17-10-002. Address change requests to the GO 96-B service list should be directed via e-mail to [tariffs@socalgas.com](mailto:tariffs@socalgas.com) or call 213-244-2837. For changes to all other service lists, please contact the Commission's Process Office at 415-703-2021 or via e-mail at [Process\\_Office@cpuc.ca.gov](mailto:Process_Office@cpuc.ca.gov).

---

Ronald van der Leeden  
Director – Regulatory Affairs

Attachments



# ADVICE LETTER SUMMARY

## ENERGY UTILITY



MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.:

Utility type:

ELC       GAS       WATER  
 PLC       HEAT

Contact Person:

Phone #:  
E-mail:  
E-mail Disposition Notice to:

EXPLANATION OF UTILITY TYPE

ELC = Electric      GAS = Gas      WATER = Water  
PLC = Pipeline      HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #:

Tier Designation:

Subject of AL:

Keywords (choose from CPUC listing):

AL Type:  Monthly     Quarterly     Annual     One-Time     Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL:

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested?  Yes     No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required?  Yes     No

Requested effective date:

No. of tariff sheets:

Estimated system annual revenue effect (%):

Estimated system average rate effect (%):

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected:

Service affected and changes proposed<sup>1</sup>:

Pending advice letters that revise the same tariff sheets:

<sup>1</sup>Discuss in AL if more space is needed.

**Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:**

CPUC, Energy Division  
Attention: Tariff Unit  
505 Van Ness Avenue  
San Francisco, CA 94102  
Email: [EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Name:  
Title:  
Utility Name:  
Address:  
City: State:  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

Name:  
Title:  
Utility Name:  
Address:  
City: State:  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email: