

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



July 18, 2018

**Advice Letter 5311**

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

**Subject: SoCalGas Energy Savings Assistance (ESA) Program Smart  
Thermostat Pilot Pursuant to Advice No. 5256-A**

Dear Mr. van der Leeden:

Advice Letter 5311 is effective as of June 18, 2018.

Sincerely,

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

Edward Randolph  
Director, Energy Division



**Ronald van der Leeden**  
Director  
Regulatory Affairs

555 W. Fifth Street, GT14D6  
Los Angeles, CA 90013-1011  
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June 18, 2018

Advice No. 5311  
(U 904 G)

Public Utilities Commission of the State of California

**Subject: Southern California Gas Company Energy Savings Assistance (ESA)  
Program Smart Thermostat Pilot Pursuant to Advice No. 5256-A**

**Purpose**

Southern California Gas Company (SoCalGas) hereby submits for approval by the California Public Utilities Commission (Commission) its proposed Implementation Plan for the Smart Thermostat Pilot pursuant to Advice No. (AL) 5256-A.<sup>1</sup>

**Background**

On February 12, 2018, SoCalGas filed AL 5256 pursuant to Ordering Paragraph (OP) 8 of Resolution G-3532, which directed SoCalGas to file a Tier 2 AL setting forth a clear plan and supplemental budget proposal, if necessary, to treat the remaining untreated low-income population by 2020 and propose new treatment estimates as warranted. On March 14, 2018, SoCalGas filed AL 5256-A to replace AL 5256 in its entirety to correct minor addition errors to the budget and treatment goals. In this AL, SoCalGas requested to implement a pilot to provide smart thermostats to qualifying customers in order to test the uptake of smart thermostats and increase the appeal of the ESA program to first-time customers.

On May 18, 2018, the Commission issued a disposition concluding that SoCalGas' Supplemental AL 5256-A was in compliance with Resolution G-3532. In the disposition, SoCalGas was ordered to submit within 30 days a Tier 1 AL providing the pilot's

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<sup>1</sup> AL 5256-A, Supplement – Low Income ESA Program Clear Plan Pursuant to Resolution G-3534, was submitted on March 14, 2018 and effective and approved on May 18, 2018. AL 5256-A replaced AL 5256 in its entirety.

implementation and evaluation plan referring to Attachment 1, Appendix A of D.17-12-009, to design the pilot plan “within those parameters,” and to “focus this pilot on high energy usage or high energy burden CARE households.” SoCalGas was further instructed to “refer to the three electric utilities’ Programmable Communicating Thermostat ALs as well as the Energy Division’s dispositions of those ALs as guidance.”

The referenced Appendix A requires the three electric Investor Owned Utilities (IOUs)<sup>2</sup> to “develop a pilot to deploy and evaluate the energy savings and demand savings of a ‘package’ of interventions in 100 high energy usage or high energy burden CARE customer households.” The vision of the pilot presented in Appendix A is intended to determine whether smart thermostats are a helpful energy management tool for low-income customers to support their transition to time-of-use (“TOU”) rate plans. TOU rate plans and Critical Peak Pricing (CPP) rates are specific to issues of importance to the Commission relative to electric utilities and do not apply to SoCalGas at this time.

### **Discussion**

As SoCalGas proposed in AL 5256-A to pilot Smart Thermostats as a measure within the ESA program to more effectively appeal to first-time customers, this pilot has been modified based on Commission direction to focus on customers with high energy usage. The pilot will also align with the launch of the Programmable Communicating Thermostat pilots of the electric IOUs. SoCalGas hereby submits its ESA Smart Thermostat Pilot Implementation Plan, as shown in Attachment A.

### **Protest**

Anyone may protest this AL 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 AL, which is July 8, 2018. There is no restriction on who may submit a protest. The address for mailing or delivering a protest to the Commission is given below.

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

A copy 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

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<sup>2</sup> The IOUs are Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company.

sent via both e-mail and facsimile to the address shown below on the same date it is mailed or delivered to the Commission.

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

### **Effective Date**

SoCalGas believes this AL is subject to Energy Division disposition and should be classified as Tier 1 (effective after staff approval) pursuant to General Order (GO) 96-B and AL 5256-A disposition. Therefore, SoCalGas respectfully requests that it be made effective on June 18, 2018, which is the date submitted.

### **Notice**

A copy of this AL is being sent to SoCalGas' GO 96-B service list and the Commission's service list in A.14-11-011. Address change requests to the GO 96-B service list should be directed by 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 by e-mail to [process\\_office@cpuc.ca.gov](mailto:process_office@cpuc.ca.gov).

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Ronald van der Leeden  
Director - Regulatory Affairs

Attachments

# CALIFORNIA PUBLIC UTILITIES COMMISSION

## ADVICE LETTER SUBMITTAL SUMMARY ENERGY UTILITY

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

Company name/CPUC Utility No. **SOUTHERN CALIFORNIA GAS COMPANY (U 904G)**

Utility type:

ELC

GAS

PLC

HEAT

WATER

Contact Person: Ray B. Ortiz

Phone #: (213) 244-3837

E-mail: [ROrtiz@semprautilities.com](mailto:ROrtiz@semprautilities.com)

### EXPLANATION OF UTILITY TYPE

ELC = Electric

GAS = Gas

PLC = Pipeline

HEAT = Heat

WATER = Water

(Date Submitted/ Received Stamp by CPUC)

Advice Letter (AL) #: 5311

Subject of AL: Southern California Gas Company Energy Savings Assistance (ESA) Program Smart Thermostat Pilot Pursuant to Advice No. 5256-A

Keywords (choose from CPUC listing): Energy Efficiency

AL type:  Monthly  Quarterly  Annual  One-Time  Other

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

D.17-12-009

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL No

Summarize differences between the AL and the prior withdrawn or rejected AL<sup>1</sup>: N/A

Does AL request confidential treatment? If so, provide explanation: No

Resolution Required?  Yes  No

Tier Designation:  1  2  3

Requested effective date: 6/18/18

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

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: None

Service affected and changes proposed<sup>1</sup>: See Advice Letter

Pending advice letters that revise the same tariff sheets: None

**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 Ave.,**

**San Francisco, CA 94102**

[EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

**Southern California Gas Company**

**Attention: Ray B. Ortiz**

**555 West 5<sup>th</sup> Street, GT14D6**

**Los Angeles, CA 90013-1011**

[ROrtiz@semprautilities.com](mailto:ROrtiz@semprautilities.com)

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

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

**ATTACHMENT A**

**Advice No. 5311**

**Smart Thermostat Pilot Implementation and Evaluation Plan**

# Smart Thermostat Pilot Implementation and Evaluation Plan

## Attachment A - SoCalGas Energy Savings Assistance (ESA) Program Smart Thermostat Pilot Implementation and Evaluation Plan

### Background

On May 18, 2018, Energy Division (ED) issued a “disposition partially approving Southern California Gas Company’s Low-Income Energy Savings Assistance (ESA) Program Clear Plan and Budget, pursuant to Resolution G-3532.” The disposition included approval of a budget of \$1,000,000 for a two-year smart thermostat pilot, in which SoCalGas would “move forward with piloting this measure consistent with what has been authorized for the three electric utilities in D.16-11-022, and subsequently in D.17-12-009.” SoCalGas was ordered to submit within 30 days a Tier 1 Advice Letter (AL) providing the pilot’s implementation and evaluation plan referring to Attachment 1, Appendix A of D.17-12-009, to design the pilot plan “within those parameters,” and to “focus this pilot on high energy usage or high energy burden CARE households.” SoCalGas was further instructed to “refer to the three electric utilities’ Programmable Communicating Thermostat ALs as well as the ED’s dispositions of those ALs as guidance.”

The referenced Appendix A requires the three electric Investor Owned Utilities (IOUs)<sup>1</sup> to “develop a pilot to deploy and evaluate the energy savings and demand savings of a ‘package’ of interventions in 100 high energy usage or high energy burden California Alternate Rates for Energy (CARE) customer households.” Elements of the “package” are to include enrollment in time variable rates and installation of a Programmable Communicating Thermostat (PCT) with predetermined settings designed to optimize use for customers on time variable rates, such as Time-of-Use (TOU) and Critical Peak Pricing (CPP). “The purpose of this pilot is to examine the potential effects on customer behavior and load impact of deploying mobile (smartphone) applications in the high-usage CARE customer segment, as part of a package with PCT installations and TOU-CPP pricing.”<sup>2</sup>

Although the vision of the pilot presented in Appendix A relates generally to measuring customer behavior relative to smart thermostats, the details provided are specific to issues of importance to the Commission relative to electric utilities and are not applicable to SoCalGas. Time variable rates are not under consideration for gas customers, nor is there existing Commission policy around CARE “high users” for gas customers of a similar nature to the policy for electric customers. Nevertheless, SoCalGas believes the Smart Thermostat is a measure of significant promise to natural gas customers to help manage energy use during peak periods. Therefore, SoCalGas proposes below a pilot geared toward gas customers and toward issues more directly

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<sup>1</sup> The IOUs are Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company.

<sup>2</sup> D.17-12-009 Appendix A, p. 4.

## **Smart Thermostat Pilot Implementation and Evaluation Plan**

related to SoCalGas' ESA program, consistent with the plan presented in AL 5256-A (Clear Plan) to treat all willing and eligible customers by 2020.

### **Pilot Description**

The purpose of SoCalGas' ESA Smart Thermostat Pilot is to test the value of the measure as part of SoCalGas' wider ESA portfolio, and specifically to determine whether the presence of the Smart Thermostat measure in fact increases the appeal of the program and the likelihood of enrollment. This observation is to be performed in the context of SoCalGas' Clear Plan, in which specific customers never enrolled in the ESA program are being targeted for outreach, with careful tracking of the ultimate disposition of each. The Clear Plan process puts SoCalGas in position to record whether customers offered the Smart Thermostat are more likely to enroll in the program than those customers also identified as meeting all eligibility criteria but not offered a Smart Thermostat. Rather than diverting outreach resources from SoCalGas' Clear Plan effort in order to sign up customers for a separate installation of the Smart Thermostat, SoCalGas plans to deliver its Smart Thermostat pilot as part of its ongoing Clear Plan effort to offer ESA service to every willing and eligible customer, in concert with the delivery of all other ESA measures. As SoCalGas has previously reported, enrolling new, first time customers has become increasingly difficult and testing the appeal of the Smart Thermostat in generating incremental enrollments may prove beneficial in supporting SoCalGas' Clear Plan effort.

As discussed in the Clear Plan, SoCalGas has identified roughly 800,000 remaining, untreated customers considered highly likely to be ESA-eligible and is in the process of systematically outreaching to each and "crossing off the list" those that are repeatedly nonresponsive. In the course of reaching and enrolling these customers, SoCalGas will target approximately 4,600 customers, over the two-year period of the pilot, as members of the test or control group. Consistent with Commission directives, SoCalGas will target high energy usage customers for this pilot. For members of the test group, a Smart Thermostat will be installed, if feasible; and both test and control homes will be offered a \$10 gift card as a thank you in recognition of the customer's willingness to participate in the pilot's survey requirements.

### **Projected Pilot Outcomes**

SoCalGas will observe and report for high usage customers: 1) frequencies of enrollment for customers offered the Smart Thermostat as a likely component of home treatment; 2) those feasible but not offered the Smart Thermostat; and 3) those for which enrollment and assessment does not proceed far enough to for the implementing contractor to determine feasibility of the Smart Thermostat.

SoCalGas will also make an effort to observe levels of customer engagement with their energy usage using customer surveys as well as My Account metrics. Any patterns observed will also be reported.



## Smart Thermostat Pilot Implementation and Evaluation Plan

Further, SoCalGas will explore simplifying pilot participant enrollment in SoCalGas' Seasonal Savings program (AL 5204-G and 5204-G-A) and SoCalGas' Smart Thermostat Load Control Demand Response program (AL 5303). The Seasonal Savings program delivers incremental energy savings by utilizing software controls to remotely adjust temperature setpoints based on recurring customer patterns, such as when occupancy drops or during sleep hours. SoCalGas' Smart Thermostat Load Control program reduces natural gas heating by adjusting smart thermostats to a lower temperature during periods of system constraint. Both programs are delivered through the smart thermostat, and encourage energy savings in participating households.

### Eligibility Criteria and Rationale

The following eligibility criteria will be applied for SoCalGas to offer a Smart Thermostat to a customer through the ESA program:

Criteria to be identified prior to contractor visit:

- Active SoCalGas service account for at least one year
- 2020 Outreach customers (never previously treated since 2001), eligible for ESA
- Eligible for or enrolled in CARE
- High energy use (Top 40th Percentile) of CARE customers

Criteria to be identified at the time of contractor visit:

- Functioning Forced Air Unit (FAU) furnace
- Wi-Fi already installed in the home and customer has an email address
- No existing smart thermostat installed
- Willingness to participate in pilot, with gift card provided as thank you, including participating in surveys

Of the 800,000 identified Clear Plan customers, approximately 35% or 280,000 will meet the CARE and usage targeting requirements and will be identified, prior to being enrolled, as potential members of either the test or control group. About 15%, or 42,000 of these remaining 280,000, are likely to meet physical criteria assessable at the time of a contractor visit, including the presence of a functioning FAU furnace. Assuming SoCalGas keeps pace with its target 402,184 first-time customers over 2018-2020, contractors can be expected to encounter approximately 7,000 such potential participants per year. SoCalGas intends to operate the pilot through a subset of its contractor network rather than all contractors in order to allow for a more rapid rollout and closer control of variables, limiting the pilot to contractors making up about one third of capacity. Thus, participating contractors will encounter 2,300 customers eligible to participate as a test or control member each year, or 4,600 over the two-year period of the pilot.

# Smart Thermostat Pilot Implementation and Evaluation Plan

## Evaluation

The primary objective of the pilot is to measure whether the presence of the Smart Thermostat measure increases the likelihood of enrollment in the ESA program. Therefore, the evaluation will leverage the test and control groups to compare ESA program enrollment rates between high usage customers who were and were not offered a Smart Thermostat.

The evaluation will also compare My Account metrics between the two groups to determine whether the Smart Thermostat increases engagement with online tools, such as Bill Tracker Alerts and My Energy Survey. If the pilot achieves sufficient sample sizes, as determined by the evaluator, for estimating energy savings, the evaluation will leverage Advanced Meter usage data to estimate gas usage reductions from the Smart Thermostats.

For the test group specifically, the evaluation will report on uptake of the ESA program, results of the customer engagement survey, and enrollment rates in SoCalGas' Seasonal Savings program and SoCalGas' Smart Thermostat Load Control Demand Response program. The pilot will also gather device-level data on Smart Thermostat operation, smart phone application usage and Wi-Fi connectivity. The evaluation will summarize these metrics to characterize how pilot participants are engaging with their Smart Thermostats, which can help assess whether the measure leads to further customer engagement with their energy usage.

SoCalGas will contract with an Evaluation, Measurement, and Verification consultant to evaluate the pilot. The pilot will begin in July 2018 and last for 24 months. SoCalGas will request a preliminary evaluation report on energy savings over the winter of 2018-2019, consistent with the natural gas peak season. A full evaluation of the pilot will be delivered by October 2020.

## Schedule

The two-year pilot will commence in July 2018, with installation of Smart Thermostats for eligible customers beginning in October 2018. The full pilot timeline is presented below.

<b>Activity</b>	<b>Completion Date</b>
Identify target test and control groups among all qualifying 2020 customers	July 2018
Develop contractor instructions	July-August 2018
Train participating contractors	September 2018
Begin delivery of Smart Thermostats and collect data	October 2018
Preliminary Evaluation Report	June 2019

# Smart Thermostat Pilot Implementation and Evaluation Plan

<b>Activity</b>	<b>Completion Date</b>
Continue to install thermostats and collect data	July 2020
Final Evaluation Report	October 2020

## Budget

SoCalGas presents the budget for this pilot, by activity.

<b>Activity</b>	<b>Budget</b>
Measure installation	\$569,000
Participant rewards	\$46,000
Customer Surveys	\$185,000
Evaluation	\$200,000
<b>TOTAL</b>	<b>\$1,000,000</b>