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September 22, 2015

Advice No. 4862
(U 904 G)

Public Utilities Commission of the State of California

Subject: Southern California Gas Company To-Code Pilot Pursuant to Decision 14-10-046

Southern California Gas Company (SoCalGas) hereby submits for approval by the California Public Utilities Commission (Commission) its To-Code Pilot. This filing is made in compliance with Decision (D.) 14-10-046, Ordering Paragraph (OP) 8.

Background

In D.14-10-046, the Commission directed the Investor-Owned Utilities (IOUs) to conduct To-Code Pilots, and specifically, OP 8 states the following:

> We also direct Pacific Gas and Electric Company, San Diego Gas and Electric Company, Southern California Edison Company and Southern California Gas Company (IOUs)[1] each to file with us a Program Implementation Plan[2] for a pilot program to better understand the extent to which there is below-code equipment that is not getting replaced quickly enough through natural turnover or existing programs. The pilots shall be designed to assess whether cost-effective ratepayer-funded programs can be developed to target this equipment when

[1] Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric Company (SDG&E), and Southern California Edison Company (SCE) jointly submitted an Advice Letter on August 14, 2015 seeking approval of a To-Code pilot, to be run simultaneously, and structured in a similar way using the same research team, but focusing on lighting measures.

[2] Energy Division subsequently instructed the IOUs to designate the filing of the Program Implementation Plan as a Tier 2 Advice Letter.

Program Administrators (PAs) receive savings credit and customer incentives are made available based on to-code, in addition to above-code, savings.[3]

In OP 8, the IOUs were further instructed that the To-Code Pilots shall:

a) Be budgeted up to $1 Million per IOU using program funds authorized in D.14-10-046;

b) Find similar cohorts within a service territory, then break them into control and treatment groups, with the treatment group being eligible to receive incentives for "to and through" code, while the control group receives only incentives based on above-code savings.

c) Extend through one full calendar year, so that we see program impacts across seasons.

d) Include program implementation and third-party evaluation, with the evaluation to address, at minimum, program impact on both program uptakes (e.g., Does the program increase replacement rates? Are customers who did not have a particular device at all participating, as well as customers who are replacing a device?) and customer energy usage (aggregate use and load shape).[4]

SoCalGas is working in close coordination with researchers from The E2e Project at the University of California - Berkeley, who have been contracted by the Commission to establish an Evaluation, Measurement, and Verification (EM&V) plan to assess the impact on program uptake, energy savings, and cost-effectiveness. The evaluation will use an experimental design, as described in Attachment A.

Pilot Summary

The To-Code Pilot targets boiler measures and will seek to determine if providing incentives on a calculated basis for existing conditions (“to and above code”) increases energy efficiency program participation and achieves greater identified cost-effective energy savings (both “to-code” and “above code”). SoCalGas will implement its To-Code Pilot for a full calendar year from the effective date of the AL filing (to assess seasonal variation) immediately after Commission approval. The To-Code Pilot will incentivize code-triggering projects to encourage customers to implement retrofits that they would not have completed without the “to-code” incentive. The To-Code Pilot launch is anticipated to be in October 2015.

SoCalGas will work with The E2e Project to select the sample frame for customers eligible to participate in the pilot. A percentage of these customers, selected randomly, will be offered an energy audit (encouraged group). The remainder will be in a control group. All

[3] D.14-10-046, p. 163.
[4] D.14-10-046, p. 163.

customers in the encouraged group will receive invitations through channels such as mail, email, flyer, phone call or a site visit to participate in an audit. Control group customers will not receive encouragement for an audit but will be eligible to receive one upon request. SoCalGas will target a smaller subsample of the encouraged group and offer these customers an in-person visit. After the audit takes place, the customers will be offered one of the two incentives levels available, as described in Attachment A. All eligible customers (encouraged or not) will be randomly assigned to one of the two incentive levels and monitored such that a comparison can be drawn to evaluate the effectiveness of the "to-code" offering.

The To-Code Pilot contains six elements as outlined below:

Element 1.0: Implementation Design
Element 2.0: Incentive Structure
Element 3.0: Business Selection
Element 4.0: Measures Incentivized
Element 5.0: Establishing the Baseline and Incentive Levels
Element 6.0: Downstream Deemed

Schedule and Budget

The efforts of the To-Code Pilot will extend beyond calendar year 2015. The To-Code Pilot is anticipated to launch October 2015 and continue for 12 months to allow for the program to deliver audits, retrofits, and incentives to eligible customers. The evaluation will deliver preliminary results one year after the start of the data collection, in order to inform Phase III of Rulemaking (R.) 13-11-005, and deliver a comprehensive final report by the end of 2017.

Under the model proposed, the general sequence of events is as follows:

1. Evaluation Design Finalized
2. Randomization Conducted
3. Audits Offered
4. Retrofits Concluded
5. Monitoring and Data Collection Completed
6. Data Analyzed

The budget for the To-Code Pilot is approximately $1,000,000. See Attachment B for additional details.

Attachments

This Advice Letter includes the following attachments:

- **Attachment A**: Pilot Scope of Work
- **Attachment B**: Pilot Budgets
- **Attachment C**: Ten Pilot Elements
- **Attachment D**: EM&V Plan
- **Attachment E**: Program Implementation Plan (PIP)
- **Attachment F**: PIP Attachments

Protests

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. Per e-mail communication with Energy Division, SoCalGas has been granted a shortened protest period of 10 days. The protest must be made in writing and must be received within 10 days of this Advice Letter, which is October 2, 2015. There is no restriction on who may file a protest. 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 Energy Division Tariff Unit (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.

Attn: Sid Newsom
Tariff Manager - GT14D6
555 West Fifth Street
Los Angeles, CA 90013-1011
Facsimile No. (213) 244-4957
E-mail: snewsom@SempraUtilities.com

Effective Date

SoCalGas believes this Advice Letter is subject to Commission staff disposition and should be classified as Tier 2 (effective after staff approval), pursuant to General Order (GO) 96-B. Energy Division has acknowledged that requesting 20 days for approval of this Advice Letter is acceptable. Therefore, SoCalGas respectfully requests that this advice letter

become effective for service on and after October 12, 2015, which is 20 calendar days from the date filed.

Notice

A copy of this Advice Letter is being sent to SoCalGas' GO 96-B service list and the Commission's service list in R.13-11-005. Address change requests to the GO 96-B should be directed by electronic mail to tariffs@socalgas.com or call 213-244-3387. For changes to all other service lists, please contact the Commission's Process Office at 415-703-2021 or by electronic mail at Process_Office@cpuc.ca.gov.

_____

Ronald van der Leeden
Director – Regulatory Affairs

Attachments

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY
ENERGY UTILITY

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

Company name/CPUC Utility No. **SOUTHERN CALIFORNIA GAS COMPANY (U 9O4G)**

Utility type:
☐ ELC ☒ GAS
☐ PLC ☐ HEAT ☐ WATER

Contact Person: Sid Newsom
Phone #: (213) 244-2846
E-mail: SNewsom@semprautilities.com

EXPLANATION OF UTILITY TYPE
ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 4862

Subject of AL: Southern California Gas Company To-Code Pilot Pursuant to Decision 14-10-046

Keywords (choose from CPUC listing): Energy Efficiency, Compliance

AL filing type: ☐ Monthly ☐ Quarterly ☐ Annual ☒ One-Time ☐ Other

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:
D.14-10-046

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[1]: N/A

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

Resolution Required? ☐ Yes ☒ No Tier Designation: ☐ 1 ☒ 2 ☐ 3

Requested effective date: 10/12/15 No. of tariff sheets: 0

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: None

Service affected and changes proposed[1]: NA

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 filing, 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

Southern California Gas Company
Attention: Sid Newsom
555 West 5th Street, GT14D6
Los Angeles, CA 90013-1011
SNewsom@semprautilities.com
tariffs@socalgas.com

[1] Discuss in AL if more space is needed.

ATTACHMENT A

Advice No. 4862

To-Code Pilot Scope of Work

PROPOSED PILOT PROGRAM

The Investor Owned Utilities (IOUs) were directed to develop and implement a To-Code Pilot to better understand why below-code equipment is not getting replaced. The IOUs have presented anecdotal evidence that there are cost-effective yet unachieved energy savings due to the significant investment required to meet and/or exceed current energy codes and standards. The To-Code pilots are designed to collect systematic, field experimental evidence to test that hypothesis.

The Southern California Gas Company's (SoCalGas) To-Code Pilot program will determine if providing incentives calculated based on existing conditions ("to and through code") increases energy efficiency program participation and achieves greater identified cost-effective energy savings (both "to-code" and "above code"). The To-Code Pilot is anticipated to launch October 2015 and is expected to be implemented for a 12 month period (to assess seasonal variation) with a to-code incentive budget of $1 million per IOU. The To-Code Pilot will be implemented and evaluated simultaneously, with the evaluation conducted by The E2e Project, with a team of professors from University of California – Berkeley, and will use an experimental design, described below.

SoCalGas To-Code Pilot will incentivize projects from existing conditions to and through code in order to encourage customers to implement retrofits that they may not have completed without the "to-code" incentive. SoCalGas' To-Code Pilot will focus on small commercial boiler retrofits.

The To-Code Pilot is anticipated to launch October 2015 and continue for 12 months to allow for the program to deliver audits, retrofits, and incentives to eligible customers. The evaluation will deliver preliminary results one year after the start of the data collection and deliver a comprehensive final report by the end of 2017. After retrofits are completed, customers will be monitored for an additional two years to evaluate for seasonal effects and evaluate the long-term impact of the retrofits. The research team will be only able to produce final, peer reviewed results after the end of the data collection. However, preliminary results will be presented to the Commission and stakeholders one year after program launch, in order to inform Phase III of R.13-11-005.

SCOPE OF WORK

The first step of the process is to define the study sample. SoCalGas will provide to E2e a list of small and medium commercial customers whose gas usage is below 50,000 therms per year, excluding:

1. Customers assigned to an account representative – to ensure a standard roll-out of the pilot.
2. Accounts associated with meters installed within the past five years – where there are limited retrofit opportunities by definition.

This list will be defined as list of eligible customers, or the study sample.

A percentage of these customers, selected randomly through a randomized encouraged design, will be offered an audit (encouraged group). The randomized encouraged design is described in more detail below.[1] After the audit takes place, the customers will be offered one of the two levels of incentive (described in Section 1.2 Incentive Structure below). All customers (encouraged or not) will be monitored such that a comparison between customers can be drawn.

1.1. Implementation Design

The deployment and evaluation of the To-Code Pilot will happen simultaneously. All customers in the study sample will be randomly assigned to either the control or the encouraged group (see figure in section 1.2). Control group customers will not receive encouragement through an audit. The encouraged group will be offered a boiler audit. Additionally, there will be two levels of encouragement: simple or active.

- All customers in the encouraged group will receive invitations through channels such as mail, email, flyer, phone call as encouragement. This is considered the "simple encouragement level."
- SoCalGas will leverage its knowledge of the market to target the customers that are more likely to take-up the offer. This group will be called "Active Encouraged Group." Customers in this group will receive all materials from the simple encouragement and a door-to-door visit (see section on sources of bias for more details on how this affects the experimental design).

Simultaneously, SoCalGas will coordinate with E2e to randomly divide the entire study sample (not just the encouraged group) across the different rebate regimes (described in Section 1.2 Incentive Structure below). The process to assign customers to the control/encouraged groups and to the different levels of rebate will be "double-blinded" to avoid bias in the experiment. This process is described further below.

After each visit, SoCalGas will recommend gas savings energy efficiency retrofits. The customer can participate in the To-Code Pilot with any one or combination of measures; however, additional "to-code" savings incentives will only be applied to boiler measures identified as part of the To-Code Pilot.

Once the retrofits are proposed to the customer, SoCalGas will gather information and report on customer uptake and estimated savings, providing initial insights into these two policy issues. Actual savings will be calculated as customer installations are completed.

SoCalGas will not approach customers in the control group.

1.2. Incentive Structure

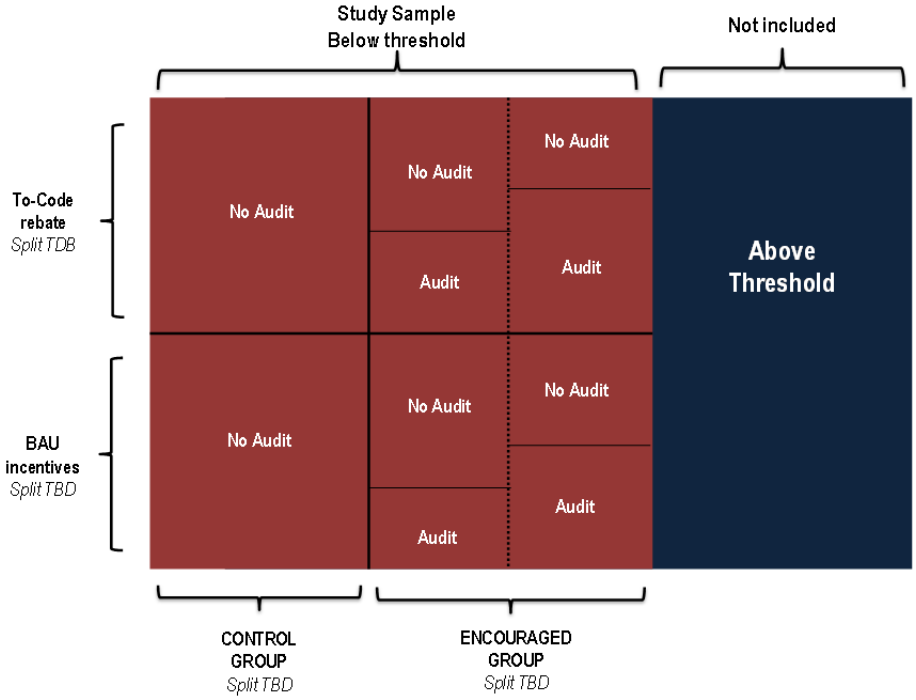
After the audit takes place, customers will be notified of their assigned incentive level (To-Code Rebate or Business-as-Usual Rebate):

[1] The final numbers are yet to be defined and may vary depending on the results from any final power calculations.

- **To-Code Rebate Group** – Receives encouragement and standard incentive levels ($0.50/MBtuh and $4.00/MBtuh) as well as the "to-code" incentive ($0.25/MBtuh per efficiency percentage gained over the customer's original equipment). The intent is to calculate the savings using the customer's site specific existing conditions as a baseline through a Flue-Gas Analysis (FGA) in a manner similar to an early retirement application.

- **Business-as-Usual Rebate Group** – Receives encouragement and standard incentive levels ($0.50/MBtuh and $4.00/MBtuh) for above-code measures currently allowed in the portfolio. The savings are calculated using Replace on Burnout (ROB) and code as a baseline.

SoCalGas will finalize the incentive amounts per group prior to the launch of the pilot. This is summarized in the figure below:



Because participation is voluntary, it is expected that only part of the encouraged group will enroll and receive the audit. This self-selected group of customers will be called the "Audited Group." While all audited customers will receive recommendations, it is anticipated that only a proportion of audited customers will complete the retrofits and receive the incentives.

1.3. Measures Incented

This study will focus on small boiler retrofits. The "to-code" measures identified as part of the pilot are as follows:

- Commercial Hot Water Boilers
- Space Heating Hot Water Boilers

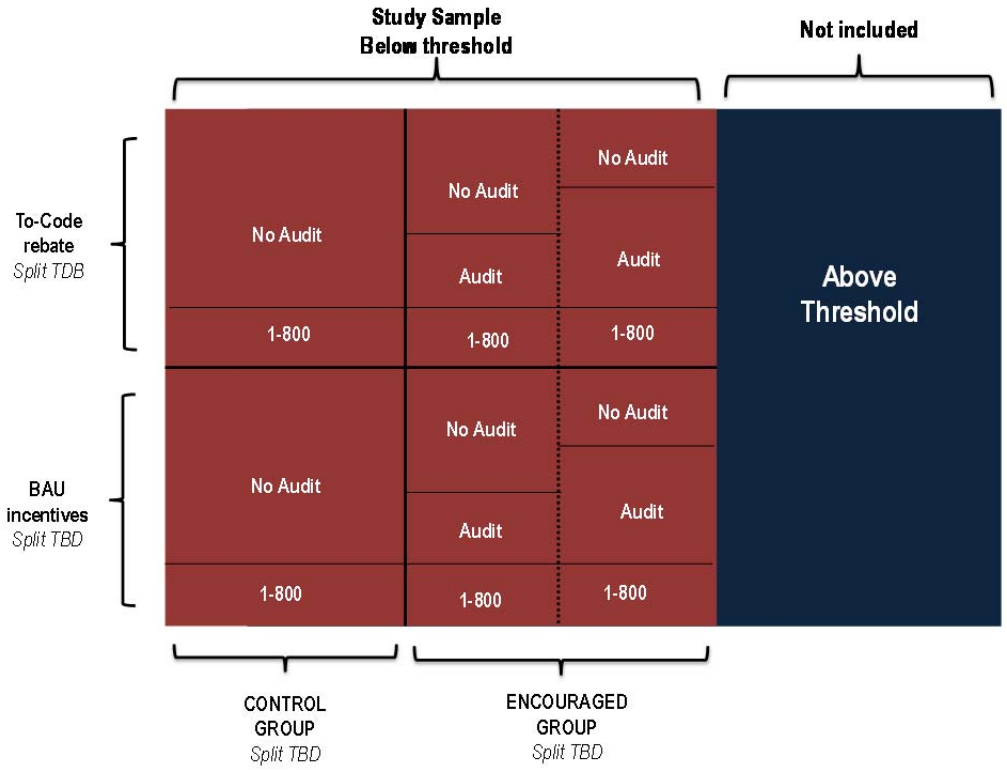
This proposed measure list reflects the measures that will be eligible for a "to code" incentive but is not exhaustive of eligible measures for the pilot.

1.4. Program Design

SoCalGas is implementing the To-Code Pilot to boost uptake and provide a higher level of control for evaluation purposes. The exact details of the implementation process are still being discussed.

1.5. Always-Takers Pilot Customer Category

Customers can continue to call SoCalGas' 1-800 number for assistance – as is SoCalGas' current business practice. Because the study will have access to the whole sample prior to the implementation, all customers will be assigned to one of the rebates.



After interest is received from the customer, SoCalGas will schedule the visit and provide an audit. Similar to the case of the encouraged clients, in order to avoid bias, the customer will not be informed of the rebate level until the audit is finalized.

EVALUATION, MEASUREMENT, AND VERIFICATION (EM&V): EVALUATION OBJECTIVES AND RESEARCHABLE QUESTIONS

Through the To-Code Pilot, SoCalGas seeks to better understand the impact on program uptake and energy savings when incentives are based on existing conditions rather than above code savings. SoCalGas also seeks to understand the levels of incentives that will push a customer to replace rather than repair. In addition, SoCalGas aspires to incorporate the learning from the

pilot into Phase 3 of the R.13-11-005. This pilot will be evaluated by the Commission's consultant, The E2e Project, using a randomized encouragement design (RED).

The Theory behind Randomized Encouragement Designs (REDs)

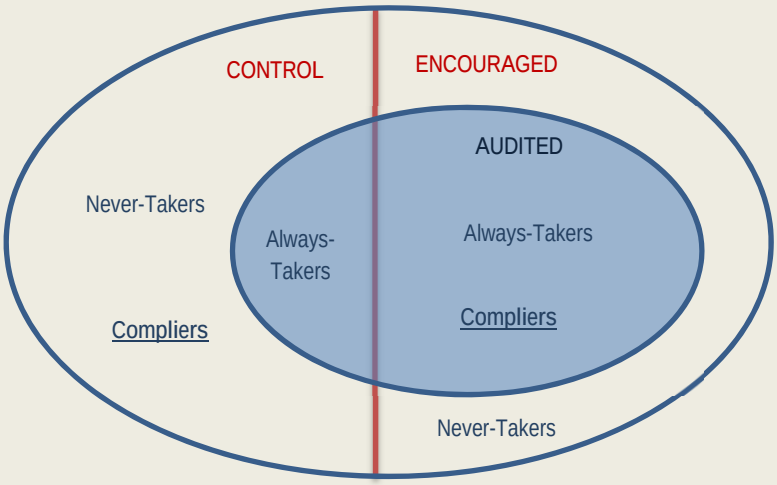
What exactly is a RED? REDs are based on the idea that all customers can be categorized as one of three types:

1. The "**never-taker**" (NT) type will not enroll in the program, regardless of encouragement.
2. The "**always-taker**" (AT) type will enroll in the program, regardless of encouragement. These are the customers in the control group that enroll.
3. The "**complier**" (C) type will be persuaded to enroll in the program when encouraged, but will not enroll without the encouragement.

A useful impact evaluation can distinguish between always-takers and compliers. It also provides insights about how compliers react to an additional amount of incentive.

Table 2: RED underlying assumptions

	Encouraged	Control
Never-takers	Don't enroll	Don't enroll
Always-takers	Enroll	Enroll
Compliers	Enroll	Don't enroll



Randomization is a simple way to create groups that are statistically identical on observable and on non-observable characteristics. When randomizing the sample into encouraged and control groups, one should get the same proportion of never-takers, always-takers, and compliers in both groups. This is crucial in allowing for the ability to estimate the impact of the program, since the only difference between the groups is the treatment. Never-takers and always-takers behave in the same way regardless of their assignment, thereby "cancelling" each other out. When comparing encouraged and treatment groups, taking into consideration the proportion of compliers (revealed by the difference in take-up rates within the groups), one is actually recovering the impact of the program.

SOURCES OF BIAS

As it is the case with any program evaluation, it is important to pay attention to the incentives that the To-Code Pilot will offer to customers – these may create bias on the evaluation. The most significant of these biases is self-selection (e.g. a "greener" business selecting into one of the treatment groups), which will be eliminated by the randomized assignments. SoCalGas will work to correctly anticipate and address these biases, building solutions to them into the design and the implementation of the To-Code Pilot.

1. **How will the pilot customers be identified? Is there a large pool of candidates that have not been approached in the past or will the pilot re-approach candidates that may have already passed previously on the boiler measures included in the pilot?**
   SoCalGas will provide a list of all eligible customers to the E2e team. An "eligible customer" is defined as small and medium business customers with gas usage of less than 50,000 therms per year, excluding the ones assigned to an account representative (to ensure a standard roll-out of the pilot) and accounts associated with meters installed in the past five years (where there are no retrofit opportunities by definition).

2. **Why is SoCalGas deciding who to target who gets the highest (active) incentive level? Wouldn't this bias the experiment given that the ones who are more likely to save are the ones that get the highest incentive level?**
   Door-to-door visits are costly and SoCalGas can only offer them to a limited number of customers. One of the goals of the encouragement design is to reveal the customers more likely to enroll, and given that the targeting only happens within the encouraged group, there is no risk of bias.

   The alternative option to that would be to select a smaller encouraged group (comparable to the number of visits SoCalGas can perform) and have SoCalGas visit all of them. In terms of research design this is an inferior option for two reasons. First because it ignores the reality of the current relationships that SoCalGas has with its customers (which would make the results of the evaluation "artificial"). Second because we are likely to get a much lower take-up (which would affect negatively the power calculations and require a much larger sample).

3. **What do you mean by randomly select?**
   The database of eligible customers provided to E2e will not contain the actual customer names. Instead, unique identifiers will compose the database. This will ensure that neither SoCalGas nor E2e will have the ability to "cherry-pick" a specific list of customers. Using a randomization algorithm, the To-Code Pilot customers (Control Group and Encouraged Group) will be drawn from that list.

   The "random selection" of customers is computer-generated. The E2e team will feed the list of unique identifiers (not customer names or addresses), and the algorithm will select a portion of them to compose the pilot.

4. **How will you assign customers to the rebate groups?**
   This will also be a blind, random process. After the list of participants in the pilot is defined, E2e's team will feed the unique identifiers to a similar algorithm. This algorithm will split the whole sample (controlled and encouraged) to the two levels of rebate.

5. **Does SoCalGas have an incentive to place the biggest savers on the encouraged group?**
   SoCalGas will have no access to the algorithm.

6. **How does the study ensure SoCalGas will not influence enrollment?**
   To avoid bias in the experiment, there will be an additional layer of "blindness" to the rollout. SoCalGas will not know to which treatment group (BAU or To Code Rebate) the customer was assigned to until after the audit is completed. SoCalGas will be notified of the customer treatment group after the audit. In the case of the always-takers, the process will be identical: only after the audit is completed that SoCalGas will be informed of the rebate level the customer was randomized into.

7. **Clients who receive better incentive packages may encourage peers to enroll as well. Would this make it difficult to assign treatment and control group status randomly?**
   Indeed, we cannot control these control group customers that want to (and can) enroll in the program.

8. **The California IOUs/SoCalGas have all been vocal regarding their preference to have savings credit and customer incentives be based on "to-code." How will the pilots be able to eliminate the known bias to ensure the pilot is bias-free and not prejudged given that SoCalGas is running the pilot?**
   The To-Code Pilot was designed such that none of the stakeholders have any control over the placement of a customer in certain group. This ensures that the evaluation will be impartial, credible, and rigorous.

SURVEY OF CURRENT CONDITIONS

SoCalGas will conduct a survey of the current conditions of the customers in each IOU's territory. This survey will be composed by comprehensive audits of the customers in the encouraged group with the goal of collecting additional information about all measures, not limited to boilers. It is expected that this survey will provide evidence on possible savings opportunities and on the feasibility of these retrofits. The exact variables and format of the survey are yet to be determined.

SCHEDULE

The efforts of the program as described above will extend well beyond calendar year 2015. Providing the audits and retrofits under the scope of the pilot will continue for 12 months following the launch. The evaluation will deliver preliminary results one year after the start of the data collection and deliver a final report by the end of 2017.

Under the model proposed, the general sequence of events is as follows:

1. Evaluation Design Finalized
2. Randomization Conducted
3. Audits Offered
4. Retrofits Concluded
5. Monitoring and Data Collection Completed
6. Data Analyzed

ATTACHMENT B

Advice No. 4862

Pilot Budgets

The following tables represent SoCalGas' approximate budget per year for the life of the To-Code Pilot.

Table 1a: SoCalGas Budget Summary Per Year - Pilot Specific

	2015	2016	TOTAL
Budget per IOU			
SoCalGas	$ 100,000	$ 900,000	$ 1,000,000
Total Budget	**$ 100,000**	**$ 900,000**	**$ 1,000,000**

Table 1b: SoCalGas Budget Summary - Existing Programs

Eligible to claim savings on the Above-Code Incentives

	2015	2016	TOTAL
Line Item			
Administration	$ 19,000	$ 171,000	$ 190,000
Marketing	$ 21,500	$ 193,500	$ 215,000
Implementation	$ 67,500	$ 607,500	$ 675,000
Above-Code Incentives	$ 57,500	$ 517,500	$ 575,000
Total	**$ 165,500**	**$ 1,489,500**	**$ 1,655,000**

ATTACHMENT C

Advice No. 4862

Ten Pilot Elements

Below are responses to the required ten pilot elements outlined in Decision (D.) 09-09-047.

a. A specific statement of the concern, gap, or problem that the pilot seeks to address and the likelihood that the issue can be addressed cost-effectively through utility programs

In D.14-10-046, the IOUs are directed to launch "to-code pilots" to capture "to-code" savings. There is anecdotal evidence that there are cost-effective yet unachieved energy savings due to the significant investment required to meet and/or achieve current energy codes and standards.

SoCalGas is directed to use up to $1 million to fund incentives to conduct the pilot program over a 12 month period. In addition, SoCalGas is coordinating with the Commission and the E2e Project to establish an implementation design and EM&V plan to assess the impact on program uptake and energy savings.

b. Whether and how the pilot will address a Strategic Plan goal or strategy and market transformation

The pilot is designed to ascertain the impact that incentives associated with existing conditions will have on customer adoption rates of energy efficiency. The underlying hypothesis is that the increased incentive levels will result in customers implementing energy efficiency that they would not have otherwise, resulting in greater market penetration of energy efficiency. This would aid market transformation as it would help address the segment of the market which may have never implemented the energy efficiency technology or strategy. Although this does not specifically address any single goal or strategy from the California Long-Term Energy Efficiency Strategic Plan, it does contribute to goals associated with increasing efficiency in existing buildings (Commercial Goal 2) and improving code compliance (C&S Goal 2), albeit through incentive-based interventions.

c. Specific goals, objectives and end points for the project

The purpose of the To-Code Pilot is to understand the following:

- The extent to which there is below-code equipment that is not getting replaced quickly enough through natural turnover or existing programs; and
- Assess whether cost-effective ratepayer-funded programs can be developed to target this equipment when program administrators receive savings credit and customer incentives are made available based on to-code, in addition to above-code, savings.

d. New and innovative design, partnerships, concepts or measure mixes that have not yet been tested or employed

The pilot will be implemented and evaluated by CPUC's consultant E2e, using a randomized encouragement design.

The To-Code Pilot will determine if providing incentives calculated based on existing conditions ("to and through code") increases energy efficiency program participation and achieves greater

identified energy savings (both "to-code" and "above-code"). In addition, the pilot will incentivize code-triggering boiler replacements to encourage customers to implement retrofits that they would not have completed without the "to-code" incentive.

The To-Code Pilot considered a number of different end-use technologies and associated energy efficiency measures for inclusion in this pilot. The measure selection was ultimately informed by the constraining factors of the To-Code Pilot budget and the sample size requirements of the randomized encouragement design. Boilers were identified as the best fit for this pilot because of the anecdotal knowledge that customers would most likely repair their broken, existing boilers rather than replace with more efficient, above-code ones. The To-Code Pilot also seeks to understand the level of incentives required to influence a customer to replace rather than repair a boiler. Boilers have also been the subject of many party comments in the current energy efficiency proceeding, R.13-11-005, and therefore the pilot results may be of particular interest for future phases.

Each of the criteria, shown below, was established to align the Pilot design with the decision language and the spirit of a to-code pilot study.

- Pilot Criteria for Measures:
  - To-code and above-code savings
    - The To-Code Pilot is intended to bring customers above code, not simply stop at code. Consideration was also made for the potential below code savings and how much the customer would be influenced by the associated incentive.
  - Measure exceeds a simple modification in place
    - The To-Code Pilot was directed to focus on below-code equipment that is not getting replaced quickly enough. With boilers, it was critical to go beyond repair and generate enough interest to replace with above code efficient equipment, aligning the pilot with the Commission direction. Boilers can have long useful lives and are not always replaced when broken; certain boilers can be repaired indefinitely and can stay in place long past the effective useful life.
  - Measure meets all rebate/eligibility requirements for IOUs
    - Given that these measures will be delivered through an existing program and above code savings will be claimed, these requirements should be maintained in pilot measure selection. Rebates will be calculated on efficiency level and boiler size, as is standard for SoCalGas.

- Proposed List of Measures Eligible for To-Code Pilot Incentive:
  - Commercial Hot Water Boilers
  - Space Heating Hot Water Boilers

To provide a greater level of consistency across customers, the pilot will focus on small and medium commercial business sector (<50,000 yearly therm usage).

e. A clear budget and timeframe to complete the project and obtain results within a portfolio cycle - pilot projects should not be continuations of programs from previous portfolios

Please refer to Attachment B: Pilot Budget.

f. Information on relevant baselines metrics or a plan to develop baseline information against which the project outcomes can be measured

The Treatment Group will use the existing conditions as the baseline (As-Is Baseline) for the selected measures while the Control Group will use the current Commission-approved baselines in a business-as-usual framework as currently employed in the energy efficiency portfolio.

g. Program performance metrics (see Section 4.6.3)

In addition to the impact on achieved savings, the To-Code Pilot will identify and measure the program performance metrics identified below.

PPM	**Goal**
Deeper Retrofits/Adoption of Above-code Measures (count of measures above code)	20%
Spillover (additional measures other than those on the To-Code list)	5%

The goals listed are in terms of percentage greater for treatment group(s) as compared to the control group.

h. Methodologies to test the cost-effectiveness of the project

The To-Code Pilot is a non-resource program as directed by D.14-10-046. The "above code" savings for the To-Code Pilot will be claimed in the existing SoCalGas commercial deemed program. The "to code" savings will not be claimed by SoCalGas; however, the To-Code Pilot will measure these savings as part of the impact evaluation conducted by the Commission.

In addition to typical EM&V, the To-Code Pilot will collect data at the measure and project/customer level. This data will be used under various assumptions to calculate a number of different metrics related to savings and cost-effectiveness to full assess the impact of the to-code offering.

i. A proposed EM&V plan

Please see Attachment D: EM&V Plan.

j. A concrete strategy to identify and disseminate best practices and lessons learned from the pilot to all California IOUs and to transfer those practices to resource programs, as well as a schedule and plan to expand the pilot to utility and hopefully statewide usage.

The results of this pilot will inform the policy discussions to be held in Phase 3 of R.13-11-005. The outcome of those discussions will shape the energy efficiency portfolio at the state level,

informing the design of many different resource programs. Beyond the energy efficiency rulemaking discussions, it is anticipated that the experimental design nature of this pilot will provide opportunities to disseminate the findings through industry conferences and/or publications.

In addition, the second component of the evaluation strategy (as described in Attachment A: To-Code Pilot Scope of Work) is to use the To-Code Pilot as an opportunity to conduct a survey of the current conditions of customers in SoCalGas' territory. This is a low-cost effort to produce more evidence on possible savings opportunities. The survey could be used to broaden the discussion around to-code opportunities and address the potential applicability of to-code savings from other end uses.

ATTACHMENT D

Advice No. 4862

Evaluation, Measurement, and Verification (EM&V) Plan

The California Public Utilities Commission (Commission) will lead the To-Code Pilot impact evaluation and has selected The E2e Project (E2e) as the consultant. E2e will evaluate the program using a randomized encouragement design, which is based on the idea that all customers can be categorized as one of three types:

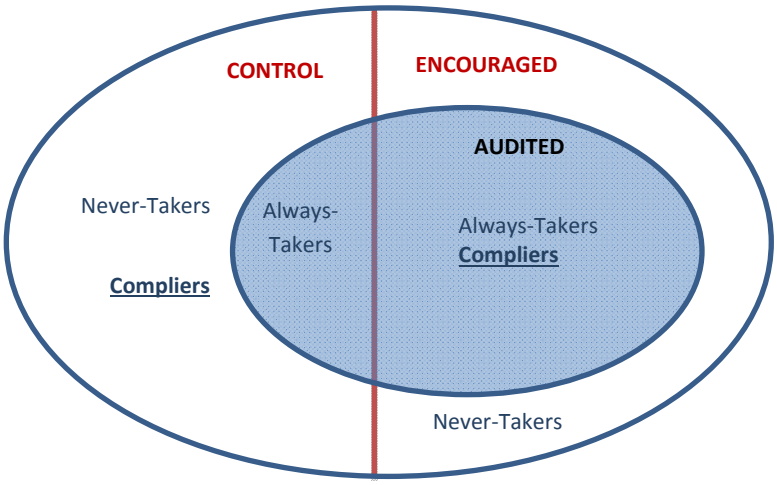
1. The "**never-taker**" (NT) type will not enroll in the program, regardless of encouragement.
2. The "**always-taker**" (AT) type will enroll in the program, regardless of encouragement. These are the "free-riders" and the customers in the control group that enroll.
3. The "**complier**" (C) type will be persuaded to enroll in the program when encouraged, but will not enroll without the encouragement.

Table 2: RED underlying assumptions

	Encouraged	Control
Never-takers	Don't enroll	Don't enroll
Always-takers	Enroll	Enroll
Compliers	Enroll	Don't enroll

Randomization is a simple way to create groups that are statistically identical on observable and on non-observable characteristics. When randomizing the sample into encouraged and control groups, one should get the same proportion of never-takers, always-takers, and compliers in both groups. This is crucial in allowing for the ability to estimate the impact of the program, since the only difference between the groups is the treatment.

Never-takers and always-takers behave in the same way regardless of their assignment, thereby "cancelling" each other out. When comparing encouraged and treatment groups, taking into consideration the proportion of compliers (revealed by the difference in take-up rates within groups), one is actually recovering the impact of the program.



The randomized encouragement design impact evaluation should distinguish between always-takers ("free-riders") and compliers. It also provides insights about the lowest incentive level necessary to persuade compliers to enroll on the program.

The evaluation design and the program design have occurred simultaneously. SoCalGas' To-Code Pilot design is targeted towards small to medium business customers. E2e will randomly assign a percentage of the customers to the encouraged group, and the remaining customers to the Control Group. There will be two levels of encouragement: simple or active. All customers in the Encouraged Group will receive invitations through channels such as mail, email, flyer, and phone call. This is considered the "simple encouragement level." SoCalGas will leverage its knowledge of the market to target customers that are more likely to take-up on the offer. As long as the targeting happens just inside the encouraged group, there is no risk of bias (see Project Scope for more information). This group will be called "Active Encouraged Group." Customers in this group will receive all materials from the simple encouragement and a door-to-door visit. Customers in the Control Group will be monitored but will not be contacted to receive an audit.

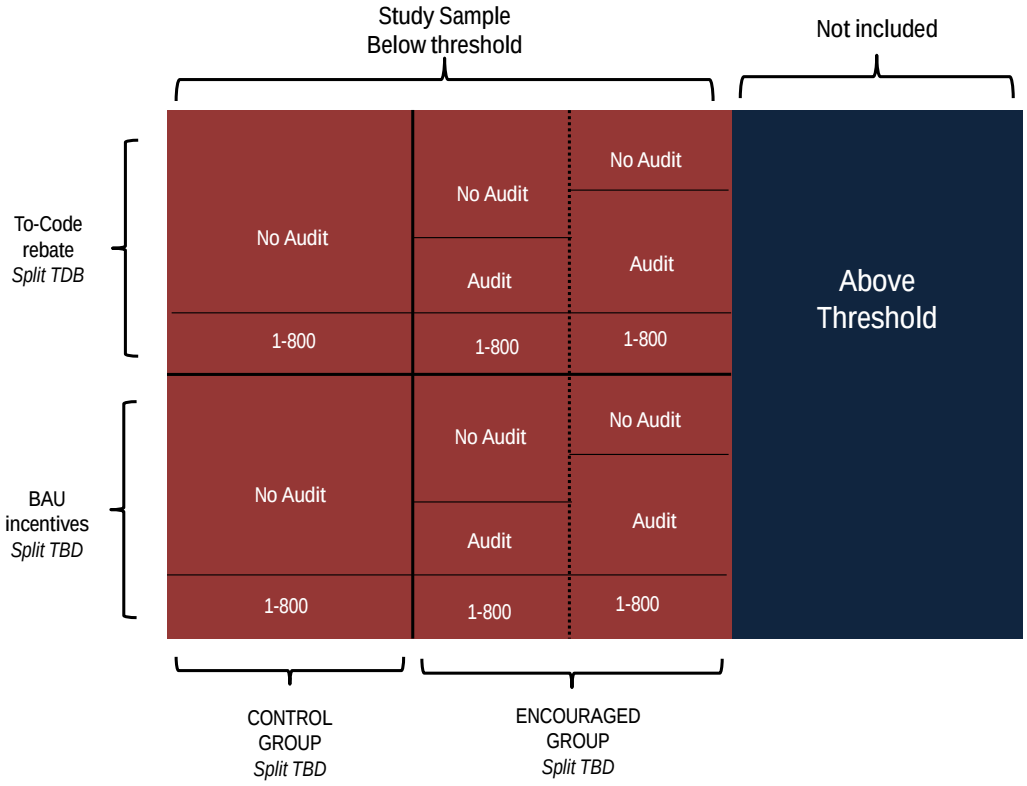
Encouraged group customers will be offered a free audit that they can then choose to participate in. SoCalGas will conduct audits; assessing the landscape of existing conditions. Once the audit is completed for each customer, the Rebate Level assignment will be revealed to SoCalGas, using a double-blind method. E2e will manage this assignment. This method will ensure that all parties involved in the To-Code Pilot have no control over the assignments, thereby preventing bias. More details can be found in Attachment A. The customer can participate in the pilot with any one or with a combination of measures available through the To-Code Pilot. The additional incentive associated with to-code savings will be limited to small boiler measures only. Outside of the small boilers, other rebate opportunities available to the customer as offered in the standard program using the standard incentive rates.

Once the proposal is presented to the customer, SoCalGas will gather information and report on customer uptake and estimated savings, providing initial insights into these two policy issues. Actual savings will be calculated as customer installations are completed.

Customers in the Control Group will not receive any encouragement to get an audit, but will not be denied one if they request it through SoCalGas' 1-800 number. Customers that take up the retrofits after encouragement will be randomly divided into two groups:

- **To Code Rebate Group** – Receives encouragement and standard incentive levels ($0.50/MBtuh and $4.00/MBtuh) as well as the "to-code" incentive ($0.25/MBtuh per efficiency percentage gained over the customer's original equipment). The intent is to calculate the savings using the customer's site specific existing conditions as a baseline through a Flue-Gas Analysis (FGA) in a manner similar to an early retirement application.
- **Business-as-Usual Rebate Group** – Receives encouragement and standard incentive levels ($0.50/MBtuh and $4.00/MBtuh) for above-code measures currently allowed in the portfolio. The savings are calculated using Replace on Burnout (ROB) and code as a baseline.

The figure below summarizes:



Because participation is voluntary, it is expected that only part of the encouraged group will enroll and receive the audit. This self-selected group of customers will be called the "Audited Group." After the audit is completed, each customer will be randomly placed in one of two treatment groups, which vary according to the incentive received. Only a proportion of audited customers will complete the retrofits and receive the incentives.

Through the To-Code Pilot, SoCalGas seeks to better understand the impact on program uptake and energy savings when incentives are based on existing conditions rather than above code savings. SoCalGas also seeks to understand the levels of incentives that will push a customer to replace rather than repair. In addition, SoCalGas aspires to incorporate the knowledge gained from the To-Code Pilot for Phase 3 of R.13-11-005.

ATTACHMENT E

Advice No. 4862

Program Implementation Plan (PIP)

Program Overview[1]

1) Program Name

SoCalGas To-Code Pilot

2) Program Description (general)

The To-Code Pilot will determine if providing incentives based on existing conditions ("to and through code") increases energy efficiency program participation and achieves greater identified energy savings (both "to-code" and "above-code").

The To-Code Pilot is being implemented by Southern California Gas Company (SoCalGas). The To-Code Pilot will be offered on a limited basis to a select group of customers as determined by the To-Code Pilot design.

Although energy savings will be tracked for evaluation purposes, SoCalGas will not be claiming any savings under this pilot, but will claim the normally allowed above-code savings attributable to the Commercial Deemed program.

The To-Code Pilot is being designed on the Randomized Encouragement Design (RED) method.

3) Total Projected Program Budget and Savings

Table 1: Total Projected Program Budget & Savings by Subprogram

Subprogram	PG&E ($)	SCE ($)	SDG&E ($)	SCG ($)	Total ($)	Kwh	KW	Therms
To-Code Pilot				$1,000,000	$1,000,000	0	0	0
Total				$1,000,000	$1,000,000	0	0	0

Table 2: Total Projected Program Savings by IOU

Treatment group includes the to-code portion of a project. This group within the To-Code Pilot is a non-resource program with no associated claimable savings.

4) Short description of each subprogram

There are no sub-programs under the To-Code Pilot.

[1] This cover page "Program Overview Template" shall be completed consistently by all IOUs for statewide programs.

Sub-Program
Program Implementation Plan Template[2][3]

1) **Sub-Program Name:** N/A

2) **Sub-Program ID number:**

3) **Type of Sub-Program: _X_Core __Third Party __Partnership**

4) **Market sector or segment that this sub-program is designed to serve[4]:**

   a. __ Residential
      i. Including Low Income? __ Yes __ No;
      ii. Including Moderate Income? __ Yes __ No.
      iii. Including or specifically Multifamily buildings __ Yes __ No.
      iv. Including or specifically Rental units? __ Yes __ No.
   b. _X_ Commercial (List applicable NAIC codes: all_____)
   c. __ Industrial (List applicable NAIC codes: _____)
   d. __ Agricultural (List applicable NAIC codes: _____)

5) **Is this sub-program primarily a:**

   a. Non-resource program _X_ Yes__ No
   b. Resource acquisition program _X_ Yes ___ No
   c. Market Transformation Program ___ Yes _X_ No

6) **Indicate the primary intervention strategies:**

   a. Upstream ___ Yes _X_ No
   b. Midstream ___ Yes _X_ No
   c. Downstream _X_ Yes ___ No
   d. Direct Install ___ Yes _X_ No
   e. Non Resource ___ Yes _X_ No

7) **Projected Sub-program Total Resource Cost (TRC) and Program Administrator Cost (PAC)** TRC _N/A__ PAC _N/A__

[2] Subprogram descriptions shall be provided for all subprograms, by all IOUs implementing the subprogram. Narrative text shall in general be identical across these submissions. For any unique IOU-specific deviations from the agreed statewide subprogram, each IOU shall indicate narrative text unique to their IOU by bolding or underscoring the relevant text. Unless otherwise indicated, budget and other tables may be unique to each IOU.

[3] Suggested page limit for subprogram PIPs: 15 pages for each resource acquisition and non-resource sub-program, and 20 pages for each market transformation-oriented subprogram. A "sub-program" of a statewide program has: a specific name, targets a specific market sub-segment or uses a unique delivery or marketing approach not used across the entire program; has a specific budget; and, for resource programs, has specific estimated savings and demand impacts.

[4] Check all that apply

8) Projected Sub-Program Budget

Table 1. Projected Sub-Program Budget, by Calendar Year[5]

Sub-Program	Program Year		Total
	2015	2016	
Admin ($)	Leveraging Existing Programs	Leveraging Existing Programs	Leveraging Existing Programs
General overhead ($)	Leveraging Existing Programs	Leveraging Existing Programs	Leveraging Existing Programs
Incentives ($)	$100,000	$900,000	$1,000,000
Direct Install Non-Incentives ($)	Leveraging Existing Programs	Leveraging Existing Programs	Leveraging Existing Programs
Marketing & Outreach ($)	Leveraging Existing Programs	Leveraging Existing Programs	Leveraging Existing Programs
Education & Training ($)	Leveraging Existing Programs	Leveraging Existing Programs	Leveraging Existing Programs
Total Budget	$100,000	$900,000	$1,000,000

9) Sub-Program Description, Objectives and Theory

a) Sub-Program Description and Theory:

The objective of the To-Code Pilot is to determine if providing incentives calculated based on existing conditions ("to and through code") increases energy efficiency program participation and achieves greater identified energy savings (both "to-code" and "above-code").

The To-Code Pilot is designed to address the lost savings potential of real energy savings that are below the current baseline. The market considers these savings "stranded" and the To-Code Pilot is designed to show that to-code incentives can be effective in removing the low incentive barrier that has led to the "stranded" savings.

Baseline versus Treatment Group (TG): The comparison here is designed to test if a "to-code" incentive makes a difference in program uptake and deeper energy savings. To that end, we want to compare program uptake between the Baseline and TG and energy savings between the Baseline and TG.

[5] Individual utility specific information to be provided in this table

b) Sub-Program Energy and Demand Objectives:

The to-code energy savings will not be claimed by SoCalGas, but the "above code" energy savings will be claimed through existing programs.

Table 2. Projected Sub-Program Net Energy and Demand Impacts, by Calendar Year[6]

	Program Years		Total
	2015	2016	
Subprogram Name	To Code Pilot	To Code Pilot	To Code Pilot
GWh	N/A	N/A	N/A
Peak MW	N/A	N/A	N/A
Therms (millions)	N/A	N/A	N/A

c) Program Non-Energy Objectives:

Baseline versus Treatment Group (TG): The comparison here is designed to test if a "to-code" incentive makes a difference in program uptake and deeper energy savings. To that end, we want to compare program uptake between the Baseline and TG and energy savings between the Baseline and TG.

In addition to the impact on achieved savings, the To-Code Pilot will identify and measure the PPMs listed below. Included are associated goals that the SoCalGas hopes the To-Code Pilot can achieve.

PPM	Goal
Deeper Retrofits/Adoption of Above-code Measures (count of measures above code)	20%
Spillover (additional measures other than those on the To-Code list)	5%

The goals listed are in terms of percentage greater for the treatment group as compared to the control group. A primary component of the To-Code Pilot is to determine a To-Code incentive's impact on increasing Deep Energy Retrofits and Spillover. The provided PPM levels are estimates of values that are likely to be considered meaningful increases.

d) Cost Effectiveness/Market Need:

The need for this program is based on the Commission's direction in D.14-10-046.

The To-Code Pilot is a non-resource program as mandated by Decision 14-10-046. The "above code" savings for the To-Code Pilot will be claimed in the existing SoCalGas Commercial Deemed program. The "to code" savings will not be claimed by SoCalGas; however, the To-Code Pilot will measure these savings as part of the impact evaluation conducted by the Commission's consultant.

[6] Individual utility specific information to be provided in this table

In addition to typical EM&V, the To-Code Pilot will collect data at the measure and project/customer level. This data will be used under various assumptions to calculate a number of different metrics related to savings and cost effectiveness to fully assess the impact of the to-code offering. SoCalGas will work collaboratively with the CPUC and The E2e Project to identify the appropriate cost-effectiveness framework in advance of launching the Pilot.

e) Measure Savings/ Work Papers:

Above Code savings will be based on current DEER and workpaper values. The To-Code savings for the same measures will be based on DEER; however, it may be necessary to use previous DEER versions to establish the To-Code savings values. SoCalGas does not intend to claim any to-code savings as a part of this pilot.

Table 4 – Work paper Status

#	Workpaper Number/Measure Name	Approved	Pending Approval	Submitted but Awaiting Review
1	WPSCGNRWH120206C - Commercial Boilers	x		
2	WPSCGNRHC120206A - Space Heating Boilers	x		

10) Program Implementation Details

a) Timelines:

Table 5: Pilot Milestones and Timeline

Milestone	Date
Pilot Approval	Oct 2015
Marketing Materials Completed	Oct 2015
Pilot Launch	Oct 2015
Pilot Implementation Ends	Oct 2016
Preliminary Pilot Report Published	Oct 2016
Updated Pilot Report Published	Mar 2017
Final Pilot Report Published	Dec 2017

b) Geographic Scope:

The geographic area of this Pilot will cover SoCalGas' entire service territory.

Table 6: Geographic Regions Where the Program Will Operate

See Attachment F – Table 6 Geographic Regions

c) Program Administration:

Table 7: Program Administration of Program Components

See Attachment F – Table 7 Program Administration

d) Program Eligibility Requirements:

i. Customers: List any customer eligibility requirements (e.g., annual energy use, peak kW demand):

The To-Code Pilot will only be available to all small and medium commercial customers, whose gas usage is below 50,000 therms per year, excluding:

1. Businesses assigned to an account representative - to ensure a standard roll-out of the pilot
2. Accounts associated with meters installed in the past five years – where there are no retrofit opportunities by definition.

Table 8: Customer Eligibility Requirements (Joint Utility Table)

See Attachment F – Table 8 Customer Eligibility Requirements

ii. Contractors/Participants:

The Pilot is not available to the contractor community at-large.

Table 9: Contractor/Participant Eligibility Requirements (Joint Utility Table)

Not Applicable to this pilot.

e) Program Partners:

i. Manufacturer/Retailer/Distributor partners:

None.

Table 10: Manufacturer/Retailer/Distributor Partners

Not Applicable to this pilot.

ii. Other key program partners: Indicate any research or other key program partners:

As a consultant to the CPUC, The E2e Project has been and will continue to be an active partner with SoCalGas during all phases of the To-Code Pilot. The scope of the evaluation includes, but not limited to, design of the Control and Treatment groups, sample size and incentive assignment, and statistical evaluation, including billing analysis, of To-Code Pilot results.

f) Measures and incentive levels:

The To-Code Pilot will offer installation of commercial hot water boilers and space heating hot water boilers.

Incentive levels will vary for each group:

- Control Group - Will receive a standard incentive based on a core program incentive rate ($0.50/MBtuh or $4.00/MBtuh). This incentive will apply this rate to the above-code equipment.
- Treatment Group - Will receive the same incentive rate as the Control Group for getting above-code as well as $0.25/MBtuh per efficiency percentage gained over the customer's original equipment.

Table 11: Summary Table of Measures, Incentive Levels, and Verification Rates

See Attachment F – Table 11 Summary Table of Measures, Incentive Levels, and Verification Rates

g) Additional Services: List additional services that the sub-program will provide, to which market actors.

None.

Table 12: Additional Services

See Attachment F – Table 12 Additional Services

h) Sub-Program Specific Marketing and Outreach:

To-Code Pilot specific marketing materials will be limited to informational materials developed by SoCalGas. These materials will be developed at the beginning of the To-Code Pilot for use at program launch. Outreach will be performed though direct customer contact by SoCalGas staff.

No general marketing or mass outreach will be performed as the To-Code Pilot is being offered on a limited and controlled basis per program design.

i) Sub-Program Specific Training:

SoCalGas will train its staff jointly with E2e. The aim of this training session is both to fully communicate the To-Code Pilot objectives, procedures, and necessary controls and to do so in a consistent manner to promote consistent implementation.

j) Sub-Program Software and/or Additional Tools:

i. No specific software or similar tools are required for Pilot participation.

ii. Indicate if pre and/or post implementation audits will be required for the sub-program.
Pre-implementation audit required _X_ Yes ___ No
Post-implementation audit required ___ Yes _X_ No

iii. Audits will be performed at no cost to the customer by SoCalGas.

Table 13: Post-implementation Audits

See Attachment – Table 13 Program Related Audits

k) Sub-Program Quality Assurance Provisions: Please list quality assurance, quality control, including accreditations/certification or other credentials

None specific to the To-Code Pilot, but existing QA provisions of SoCalGas' Commercial Deemed program will apply.

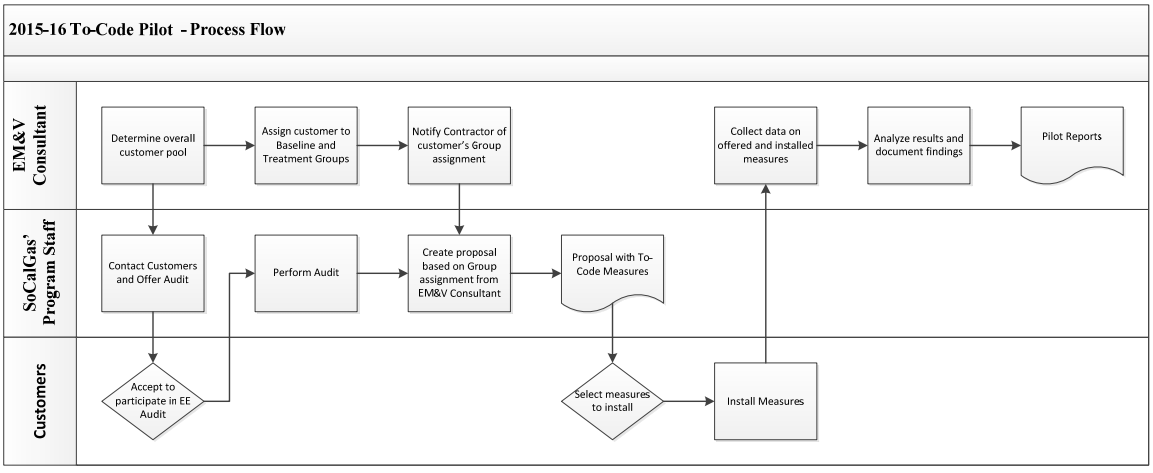
Table 14: Quality Assurance Provisions

Not Applicable to this pilot.

l) Sub-program Delivery Method and Measure Installation /Marketing or Training:

None.

m) Sub-program Process Flow Chart: Provide a sub-program process flow chart that describes the administrative and procedural components of the sub-program. For example, the flow chart might describe a customer's submittal of an application, the screening of the application, the approval/disapproval of an application, verification of purchase or installation, the processing and payment of incentives, and any quality control activities.



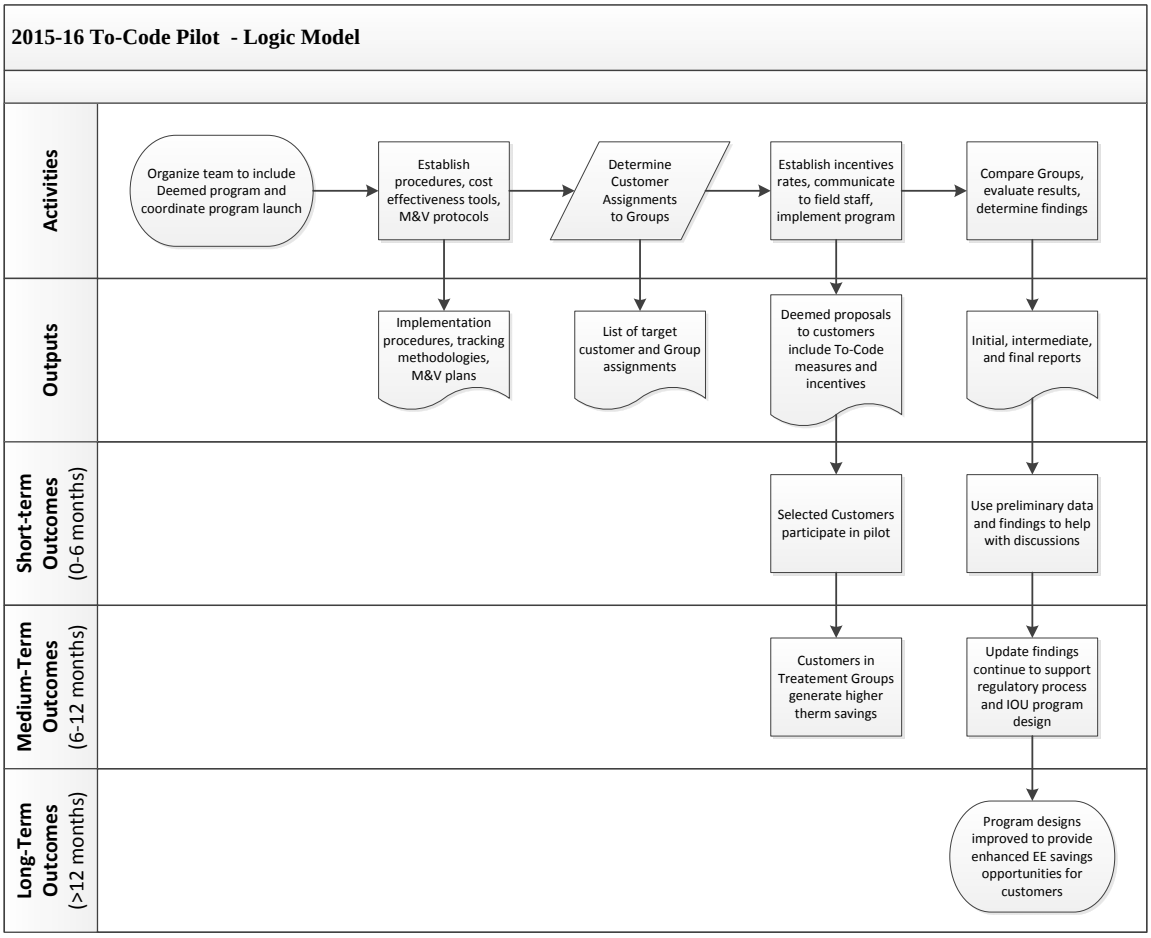
n) Cross-cutting Sub-program and Non-IOU Partner Coordination:

The To-Code Pilot will coordinate with Commission Staff and E2e on design, implementation, data collection, and evaluation topics. This coordination will be provided on an on-going basis for the duration of the To-Code Pilot.

Table 15: Cross-cutting Sub-program and Non-IOU Partner Coordination

See Attachment F – Table 15 Cross-cutting Sub-program and Non-IOU Partner Coordination

o) Logic Model: Please append the logic model for this sub-program to the end of this PIP. Describe here any additional underlying theory supporting the sub-program intervention approach, referring as needed to the relevant literature (e.g., past evaluations, best practices documents, journal articles, books, etc.).



11) Additional Sub-Program Information

a) Advancing Strategic Plan Goals and Objectives:

If the To-Code Pilot does demonstrate that to-code incentives will encourage greater participation and selection of above-code measures, the To-Code Pilot

will then advance Commercial Goal 2 (50% of existing building will be zero net energy by 2030) by helping achieve deep levels of energy efficiency. It will also help improve code compliance (C&S Goal 2).

b) Integration:

i. Integrated/coordinated Demand Side Management

DSM is not part of this pilot; however, customers will receive audits that incorporate DSM objectives under the normal provisions of SoCalGas' audit and deemed programs.

Table 16: Non-EE Sub-Program Information

Not Applicable to this pilot.

ii. Integration across resource types

Not an objective of this pilot.

c) Leveraging of Resources:

The To-Code Pilot will highly leverage SoCalGas' existing infrastructure, including service technicians and auditors.

d) Trials/ Pilots:

The To-Code Pilot is a pilot program.

e) Knowledge Transfer:

Results and lessons learned from the To-Code Pilot will be summarized and described in a report to be completed by SoCalGas and E2e. It is intended that the data and findings of the Pilot will be used in the current CPUC Phase III EE proceeding to inform the applicability of using to-code savings in future EE programs.

12) Market Transformation Information:

Not Applicable to this Pilot.

13) Additional information as required by Commission decision or ruling or as needed:

None.

ATTACHMENT F

Advice No. 4862

PIP Attachments

Table 1: Total Projected Program Budget & Savings by Subprogram

Subprogram	PG&E ($)	SCE ($)	SDG&E ($)	SCG ($)	Kwh	KW	Therms
To-Code Pilot	$ -	$ -	$ -	$ 1,000,000	N/A - To-Code savigns are not claimable	N/A - To-Code savigns are not claimable	N/A - To-Code savigns are not claimable
Total	$ -	$ -	$ -	$ 1,000,000	N/A - To-Code savigns are not claimable	N/A - To-Code savigns are not claimable	N/A - To-Code savigns are not claimable

Table 1: Projected Sub-Program Budget, by Calendar Year

	Program Year		
Sub-Program	2015	2016	Total
Admin ($)	Leverage Existing Programs	Leverage Existing Programs	Leverage Existing Programs
General overhead ($)	Leverage Existing Programs	Leverage Existing Programs	Leverage Existing Programs
Incentives ($)	$ 100,000	$ 900,000	$ 1,000,000
Direct Install Non-Incentives ($)	Leverage Existing Programs	Leverage Existing Programs	Leverage Existing Programs
Marketing & Outreach ($)	Leverage Existing Programs	Leverage Existing Programs	Leverage Existing Programs
Education & Training	Leverage Existing Programs	Leverage Existing Programs	Leverage Existing Programs
Total Budget	$ 100,000	$ 900,000	$ 1,000,000

Table 2: Total Projected Program Savings by IOU - N/A, To Code savings are not claimable under this pilot.

Subprogram	PG&E Kwh	PG&E KW	PG&E Therms	SCE Kwh	SCE KW	SDG&E Kwh	SDG&E KW	SDG&E Therms	SCG Therms	Total
A										
B										
C										
D										
E										
Total										

Table 2: Projected Sub-Program Net Energy and Demand Impacts, by Calendar Year - N/A, To Code savings are not claimable under this pilot.

	Program Years		
	2015	2016	Total
Sub-program Name			
GWh			
Peak MW			
Therms (millions)			

Table 3: Quantitative Program Targets (PPMs)

PPM	Goal
Deeper Retrofits/Adoption of Above-code Measures (count of measures above code)	20%
Spillover (additional measures other than those on the To-Code list)	5%

Table 4: Work paper Status

#	Workpaper Number/Measure Name	Approved	Pending Approval	Submitted but Awaiting Review
1	WPSCGNRWH120206C - Commercial Boilers	x		
2	WPSCGNRHC120206A - Space Heating Boilers	x		

Table 5: Sub-Program Milestones and Timeline

Milestone	Date
Pilot Approval	Oct 2015
Marketing Materials Completed	Oct 2015
Pilot Launch	Oct 2015
Pilot Implementation Ends	Oct 2016
Preliminary Pilot Report Published	Oct 2016
Updated Pilot Report Published	Mar 2017
Final Pilot Report Published	Sep 2017

Table 6: Geographic Regions

Geographic Region	To-Code Pilot
CEC Climate Zone 1	
CEC Climate Zone 2	
CEC Climate Zone 3	
CEC Climate Zone 4	x
CEC Climate Zone 5	x
CEC Climate Zone 6	x
CEC Climate Zone 7	
CEC Climate Zone 8	x
CEC Climate Zone 9	x
CEC Climate Zone 10	x
CEC Climate Zone 11	
CEC Climate Zone 12	
CEC Climate Zone 13	x
CEC Climate Zone 14	x
CEC Climate Zone 15	x
CEC Climate Zone 16	x

Table 7: Program Administration of Program Components

Program Name	Program Component	Implemented by IOU Staff? (X = Yes)	Implemented by contractors to be selected by competitive bid process (if Yes then enter type of contractor/other maket actor possibly used)	Implemented by contractors NOT selected by competitive bid process (list prime contractor and sub-contractor names)	Implemented by local government or other entity (X = Yes)
To-Code Pilot	Audits	X			
To-Code Pilot	Installation Reporting	X			
To-Code Pilot	All other Admin Activities	X			

Table 8: Customer Eligibility Requirements (Joint Utility Table)

Customer Eligibity Requirement (list of requirements)	PGE	SCE	SDGE	SCG
Segment				Com
Annual Usage				< 50,000 Therms
Account Representation				None
Account Age				> 5 years

Table 9: Contractor Eligibility Requirements (Joint Utility Table)

Not Applicable to this Pilot. See PIP.

Contractor Eligibity Requirement (list of requirements)	PGE	SCE	SDGE	SCG

Table 10: Manufacturer/Retailer/Distributor Partners

Not Applicable to this Pilot. See PIP.

Manufacturer/Retailer/Distributor Parnter Information	PGE	SCE	SDGE	SCG

Table 11: Summary Table of Measures, Incentive Levels and Verification Rates

Measure Group	Market Actor Receiving Incentive or Rebate	PGE		SCE		SDGE		SCG	
		Incentive Level	Installation Sampling Rate	Incentive Level	Installation Sampling Rate	Incentive Level	Installation Sampling Rate	Incentive Level	Installation Sampling Rate
Commercial Hot Water Boilers	Customer							Varies by group	Same as existing Deemed Program
Space Heating Hot Water Boilers	Customer							Varies by group	Same as existing Deemed Program

Table 12: Additional Services

Additional Services that the Sub-Program Will Provide	To Which Market Actors	PGE	SCE	SDGE	SCG
Other measures offered by Commercial Deemed Program	Customer				Same as existing Deemed Program

Table 13: Program Related Audits

Levels at Which Program Related Audits Are Rebated or Funded	Who Receives the Rebate/Funding (Customer or Contractor)
Audits are performed at no cost to Customers	Funded through the existing Energy Advisor program

Table 14: Quality Assurance Provisions

Not Applicable to this Pilot. See PIP.

QA Requirements	QA Sampling Rate (Indicate Pre/Post Sample)	QA Personnel Certification Requirements

Table 15: Cross-cutting Sub-program and Non-IOU Partner Coordination

Sub-Program Name		
Other IOU Sub-program Name	Coordination Mechanism	Expected Frequency
Commercial Deemed Program	Implementation	On-going
Commercial Energy Advisor Program	Implementation	On-going
Coordination Partners Outside CPUC		
E2e	Weekly calls; meetings with SoCalGas and ED as needed	Weekly and as-needed but on an on-going basis

Table 16: Non-EE Sub-Program Information

Not Applicable to this Pilot. See PIP.

Sub-Program Name		
Non-EE Sub-Program	**Budget**	**Rationale and General Approach for Integrating Across Resource Types**