

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



October 29, 2019

**Advice Letter 5440-A**

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

**SUBJECT: Establishment of Pilot Implementation Plan, Pursuant to Decision  
(D.)18-12-015**

Dear Mr. van der Leeden:

Advice Letter 5440-A is effective as of October 29, 2019.

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)

August 16, 2019

Advice No. 5440-A  
(U 904 G)

Public Utilities Commission of the State of California

**Subject: Supplement - Establishment of Pilot Implementation Plan, Pursuant to Decision (D.) 18-12-015**

Southern California Gas Company (SoCalGas) hereby requests California Public Utilities Commission (Commission or CPUC) approval of modifications to its Tier 2 Advice Letter (AL) of its Pilot Implementation Plan, as shown in Attachment A.

### **Purpose**

Pursuant to Energy Division's request on August 5, 2019, SoCalGas hereby submits a supplemental Advice Letter (AL) to its Establishment of Pilot Implementation Plan, previously submitted on March 19, 2019, pursuant to Decision (D.) 18-12-015. This supplemental AL replaces AL 5440 in its entirety and includes corrections to cost amounts and adds language about propane safety and contractor safety.

### **Background**

On December 19, 2018, the Commission issued D.18-12-015 approving the San Joaquin Valley Disadvantaged Communities pilot projects. Ordering Paragraph (OP) 11 of D.18-12-015 directed Pacific Gas and Electric Company, Southern California Edison Company, and SoCalGas to submit Tier 2 Pilot Implementation Plan Advice Letters, within 90 days of the issuance of D.18-12-015, containing:

- a) Pilot project budgets and specific pilot project plans, timelines, and other pilot components as directed in this decision;
- b) A Safety and Risk Management Plan;
- c) Workforce development and workforce, education and training plans;

- d) A description of the coordination methods that will be used to leverage existing program budgets;
- e) Appliance warranty information, including the specifics of warranties for measures to be installed;
- f) Details on the coordination of their electrification work with the Disadvantaged Communities Solar on Affordable Single-Family Homes Program;
- g) Details on the coordination of pilot implementation with the California Solar Initiative Solar Thermal Program;
- h) Details on approaches to substandard housing; and
- i) Updated pilot project objectives, research questions and metrics, in accordance with this decision.

On August 5, 2019, Energy Division requested SoCalGas submit a supplemental AL to its Establishment of Pilot Implementation Plan, Pursuant to Decision (D.) 18-12-015 to correct the SoCalGas cost amounts for the process evaluation contractor and economic feasibility framework contractor which was submitted with the total vendor cost, rather than SoCalGas' share of the costs. Energy Division also requested that SoCalGas modify its safety plan to specify propane safety training for contractors, safety testing for propane appliances, and minimum safety qualifications for contractor selections.

### **Establishment of Pilot Implementation Plan**

In compliance with OP 11 of D.18-12-015, SoCalGas submits its Pilot Implementation Plan which describes the overall timeline, budget, management and measurement of the natural gas pilot in California City, attached hereto as Attachment A.

### **Protests**

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 received within 20 days of the date of this AL, which is September 5, 2019. The address for mailing or delivering a protest to the Commission is:

CPUC Energy Division  
Attention: 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 shall 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: 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**

SoCalGas asserts this AL is subject to Energy Division disposition and should be classified as a Tier 2 (effective after staff approval) pursuant to General Order (GO) 96-B. It is submitted in accordance with OP 11 of D.18-12-015. Accordingly, SoCalGas respectfully requests that this AL be approved on September 15, 2019, which is 30 calendar days after 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 R.15-03-010. 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).

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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: Zip:  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

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

## **ATTACHMENT A**

**Advice No. 5440-A**

### **San Joaquin Valley Pilot Implementation Plan**

Appendix A – CSI Solar Thermal Attestation  
Appendix B – ESA (WIS) Manual Appendix F  
Appendix C – Customer Journey



## **San Joaquin Valley Pilot Implementation Plan**

**D.18-12-015**

**Submitted: 8/16/19**



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## Overview

### Introduction

This Pilot Implementation Plan will describe the overall timeline, budget, management, and measurement of the natural gas pilot (Pilot) in California City as authorized by the California Public Utilities Commission's (CPUC or Commission) in Decision 18-12-015 (D.18-12-015 or Decision). This Pilot will assist the CPUC in reaching the stated goals of the pilots "to provide cleaner, more affordable energy options to propane and wood burning and gather real time data needed to assess the economic feasibility of extending affordable energy options to all listed SJV DACs."<sup>1</sup> This plan is based on information available at the time and is subject to change given the scope of coordination required between utilities and the level of contracting specified in D.18-12-015.

### California City

California City is in the northern Antelope Valley in Kern County, California with a population of 14,120 at the 2010 census. Covering 203,631 square miles, California City is the third largest city in California by area. In 2016, the median property value in California City was \$93,000 and the homeownership rate was 55.9%. The median household income was \$48,776. Most California City residents self-identify as White, with around 18.1% native Spanish speakers.

California City has only partial natural gas service (currently estimated to be approximately 50% - 70% served). California City representatives have long expressed their desire to extend natural gas service to unserved residences throughout the city. California City has approximately 1,110 households currently using propane for space and water heating. SoCalGas anticipates that participating residents will see a significant reduction in energy burden by using natural gas instead of propane. Natural gas is more affordable than propane and it does not require tanks that need to be monitored constantly and refilled regularly. Based on recent surveys, SoCalGas estimates that the Pilot may be able to convert approximately 224 households from propane to natural gas with a total cost of approximately \$5M and an average cost per household of approximately \$22,000.

### Objectives and Goals

The objectives of the Pilot include bringing safe, affordable energy to California City in a cost-effective manner that will improve the health, comfort, and safety of the residents by replacing household propane and wood use with natural gas. Currently, some residents without natural gas service use alternative fuel sources such as propane or wood to heat their homes, food, and water. These alternative sources are expensive, creating a significant energy burden on the residents, are less environmentally friendly, and expose residents to health and safety issues.

The goals of the Pilot are to:

- Provide access to affordable energy options and reduce the energy burden and insecurity in the community by replacing household propane and wood use with natural gas.
- Provide a baseline reduction in energy burden by replacing household propane and wood use with natural gas to assess cost-effectiveness of natural gas in remaining communities. The baseline reduction will assist the CPUC to analyze economically feasible options to increase access to affordable energy in disadvantaged communities.

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<sup>1</sup> D.18-12-015, at 10.

- Provide quantitative estimates of energy burden reduction using actual post-pilot energy bills and use qualitative surveys to assess energy security, health, comfort, and safety.
- Identify effective approaches to energy usage education and energy management engagement in the community. Assess the impact of customized energy education and usage alerts to help residents with access to natural gas minimize their energy burden and insecurity. Assess the effectiveness of education materials, behavioral messaging about energy conservation, and customer engagement with mobile apps, online tools, and smart thermostats.
- Assess Energy Efficiency (EE) measures from household weatherization efforts during the project to identify those measures having the greatest potential benefit towards reducing energy usage. During weatherization, identify common “barrier” issues preventing implementation of measures and document mitigation approaches along with “best practices.”
- Assess potential scalability of the pilot to additional disadvantaged communities.

## Pilot Construction

### Scope

The Pilot for California City includes both the infrastructure for “to the meter” (TTM) construction and the “beyond the meter” (BTM) household conversion, appliance purchase, and the appliance installation effort required to convert each household to natural gas. In addition, this Pilot includes several customer on-boarding initiatives. SoCalGas will function as the pilot administrator (PA) for the Pilot and will contract with third-party implementors for both “to the meter” and “beyond the meter” work.

Scope of the “to the meter” work may include (but is not limited to):

- Assessments to identify potential environmental and cultural issues related to “to the meter” construction;<sup>2</sup>
- Installation of new gas systems (e.g., service lines, gas meters, Advanced Meter transmission units (MTU), along with the associated trenching, excavation, and substructure work;
- Site restoration work (e.g., paving, hardscape, and landscape); and
- Construction management (e.g., planning of service lines, gas handling, administration of construction bid process, and completion sketches).

Scope of the “beyond the meter” work may include (but is not limited to):

- House and yard line trenching and installation;
- Gas piping to the point of service connection;
- Purchase and installation of energy efficient natural gas appliances;<sup>3</sup>
- Minor repairs required to complete installation of appliances to meet inspection requirements;
- Permitting and inspection;
- Energizing the house line and appliances;

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<sup>2</sup> If environmental or cultural issues are found, costs and timeline may be impacted depending on reviews or permits triggered (e.g., California Environmental Quality Act (CEQA) review, National Environmental Policy Act (NEPA) review, Federal Habitat Conservation Plan, California Department of Fish and Wildlife (CDFW) Incidental Take Permit, Jurisdictional Delineation, Land Use Permits, Air Permits, Water Permits, Hazardous Materials and Waste, etc.).

<sup>3</sup> Gas appliances may include gas range, dryer, water heater, and furnace. Other propane end-uses and/or electric appliances will not be converted to natural gas.

- Gas turn-on services;<sup>4</sup> and
- Installation of Smart Thermostats and Remote Methane Detectors (RMD)s.

Each household in California City will vary in the level of effort required to convert to natural gas and pass inspection. Some households may require significant structural repair and improvement to bring them “up to code” prior to the conversion and installation of appliances.

SoCalGas would acquire neither ownership of, nor responsibility to maintain, the new distribution infrastructure on the customer-side of the meter. The gas meter would continue to be the demarcation point separating utility and customer. The gas meter will be installed at a location determined by SoCalGas, such that SoCalGas will have unfettered access to the meter. In order to maximize energy conservation, bill management and customer engagement, all households will have MTUs installed.

### Pilot Management

To manage the Pilot, a Project Management Office (PMO) will be established to provide overall governance during the conversion of households in each community. The PMO will provide project governance by defining policies and procedures for all management functions, manage project risks and issue resolution, and establish financial controls by providing overall budgeting and accounting functions. The PMO will work to identify potential partnerships with other stakeholders such as public utilities or municipal utilities, water agencies, CBOs, appliance dealers and plumbing contractors.

The PMO will be responsible for overall program management, including:

- Managing the overall schedule;
- Managing the integration of “to the meter” and “beyond the meter” deliverables;
- Tracking and managing risks, issues, and changes;
- Tracking and managing overall budgets, budget reporting;
- Ensuring regulatory compliance and regulatory reporting (both annual and ad-hoc); and
- Managing the customer journey, including outreach activities and coordination efforts with the Community Energy Navigator (CEN) or Community Navigator Project Manager (CPM).

Table 1 below defines the roles and activities for key project team members. The final team composition will be determined after the planning phase.

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<sup>4</sup> Turn-on services will be performed by SoCalGas employees, who will put appliances into service at that time.

Table 1: Roles of project team members

Role	Activities
Program Manager	Overall project management, budget, schedule, and reporting. Environmental and Community issue mitigation. Manages schedule between “to the meter” construction, “beyond the meter” contractors, and customer service technicians. Oversees tracking, controlling, and reporting project costs.
Compliance and Regulatory Advisor	Provides regulatory advice in accordance with mandated reporting.
“To the Meter” Project Manager	Provides coordination with “to the meter” contractors performing installations of services and including gas risers.
“Beyond the Meter” Project Manager	Provides coordination with “beyond the meter” contractors performing household conversions and appliance installations.
Outreach Project Advisor	Collaborates with CEN: outreach plan, coordination with households and construction managers, creation of outreach communication and education materials, and enrollment of new customers in all qualified programs.

### Tasks and Timeline

To implement the approach described above, SoCalGas proposes a series of tasks that are organized into six distinct phases: (1) Pre-Planning, (2) Planning, (3) Construction, (4) Post Construction, (5) House line & Appliance Conversion Phase, and (6) Pilot Analysis Phase as well as on-going project management.

Below is a preliminary listing of each phase of the “to the meter” and the “beyond the meter” construction effort.

- The Pre-Planning Phase includes initial customer contact, community meetings, in-home data surveys, and initial household inspections.
- The Planning Phase includes planning of service lines, ordering materials, preliminary design sketching, construction bid process, and contractor selection.
- The Construction Phase constitutes a majority of the “to the meter” costs and efforts. It includes trenching, excavation, the construction of service lines, setting the new meter, and site restoration work.
- The Post-Construction Phase refers to the necessary system and accounting closure activities for the “to the meter” work. This phase includes work cost and material reconciliations, updates to our Geographical Information System (GIS), and updates to our Service History database.
- House line & Appliance Conversion Phase is “beyond the meter” work where each household will be prepared for natural gas. Work in this phase follows a construction bid process and contractor selection. Work includes a technical “beyond the meter” survey and in-home technical inspections. Installation of a yard line extension and extension to the new gas riser, conversion or upgrades to the existing house line, installation of new appliances, energizing the house line, and installation of smart thermostats and Remote Methane Detectors (RMDs).
- Pilot Analysis Phase is when actual reductions in energy burden and Greenhouse Gas (GHG) are measured. Tests on behavioral messaging will occur to help improve Energy Efficiency messaging and content. Household surveys on appliance performance and changes to health, comfort and safety.

Coordination between meter sets, “beyond the meter” work, and new customer enrollment, including outreach, will be timed to minimize disruptions to community residents. “Beyond the meter” work will not be

performed during cold weather in order to prevent households from not having heating during cold weather. Table 2 below illustrates these phases along with the specific tasks that are included with them. The timeline shown is an estimate and is subject to change with input from third-party vendors. Timing of all the steps outlined below will be finalized once contracts with the CPM, CEN and process evaluator have been completed and those contractors have completed their planning.

*Table 2: Stages, Tasks and Milestones*

Stage	Estimated Time (months)	Tasks	Deliverable/Milestone
Pre-Planning	1	Community Energy Navigator PM coordination	Community resident forum Development of cross-IOU pilot data database Data security policies and procedures documented (use existing cross-IOU)
	1	CEN Survey	In-Home Data Surveys – Identify “Opt Ins” and “Opt Outs”
<b>Major Decision Point (Pilot Team, Community, CPUC)</b>			
Planning	1	Engineering	Finalize system capacity needs
		Field Measurements	Identify location of meter and approximate footage of new service lines.
	2	Land Engagement	Secure land rights in private property (as needed).
		Survey	Construction surveys, determine property boundaries (as needed).
		Environmental Review	Process Environmental Release.
		Encroachment Permits	Secure encroachment permits from governing agencies.
	2	Ordering Material	Order required construction material.
		Construction Bid Process	Determine the Gas Construction Contractors that will install services and perform “to the meter” work throughout the community.
3.5	Construction	Installation of services up to and including gas risers.	
	Environmental Implementation	Implement and monitor environmental review recommendations (as needed).	

		Paving	Repair any asphalt cuts performed during construction (as needed).
Post-Construction	1	Reconciliation	Clerical reconciliation of construction service work performed.
	1	Posting New Services into GIS Database	Upload new service data into SoCalGas GIS database.
House Line & Appliance Conversion	3	Construction Bid Process and BTM Sign Contractor	Secure bid and sign Contractor(s).
	1	Technical BTM Survey	Assess the home for weatherization, CSI Thermal system, create home diagram, evaluate piping system, record appliance data, identify pre-work elements (tankless, venting) and photograph.
	1	Ordering material	Order Appliances.
	3.5 months	Install Yard Line and/or house piping extension	Extend converted/replaced yard line and/or house line to location of new gas riser. Test and inspect piping systems and pre-work elements.
		Convert/Replace Propane Appliances	Convert/Replace appliances of existing residence.
		Set Meters	Install (set) meter, energize customer house line, and check of all appliances.
Solar Thermal Installation		CSI contractor installs Solar Thermal system.	
Installation of Weatherization	Install weatherization and Natural Gas Appliance Testing (NGAT).		
<b>Total Time Estimated</b>	18 months		
<b>Post Pilot Reporting</b>	Quarterly Report Q1 2020	CEN Pilot Administrator	Quarterly Bill Impact Data Remediation Costs
<b>Post Pilot Reporting</b>	Annual Report	Pilot Administrator	Pilot Summary Report

## Substandard Housing

The PMO will be responsible for a formal risk management process including the initial assessment of all aspects of the project, the identification of issues, risks and their owners, estimation of the probability of the risk becoming an issue, the potential impact, and the approval of each mitigation plan.

Each household in California City will vary in the level of effort required to convert to natural gas and pass inspection. Some households may require significant structural repair to bring them “up to code,” before and after installation of appliances. To mitigate risk and control costs, the “beyond the meter” costs for each household will be estimated and compared to a “common case” cost of \$11,300, which is the estimated cost of

\$9,050 plus 25% contingency. It is possible that some households will incur unplanned costs once conversion begins. Remediation activities or structural repairs will be limited to minor or moderately impaired homes and remediation spending for structural repairs will be capped at \$5,000 per household (excluding funds used for electric panel upgrades, rewiring or to address combustion appliance safety requirements).<sup>5</sup>

SoCalGas will perform in-home surveys before the planning phase to count the houses available for natural gas, assess household conditions, and generate a preliminary cost estimate for conversion. SoCalGas will promptly disclose to residents and landlords all information arising from pre-pilot inspections of pre-existing housing conditions inspections that may affect the health and safety of residents. Households will be classified into 3 levels of effort:

- Level 1 would consist of households where the conversion effort is estimated to be below or close to the “common case” amount. Planning for those households would proceed.
- Level 2 would consist of the households where the conversion effort is estimated to be greater than the “common case” amount. Level 2 households would be sorted by estimated cost and prioritized so that lowest cost households would have higher priority. Using the prioritized list, the PMO will proceed with construction for the remaining households until they are all converted while remaining under the overall budget amount.
- Level 3 would represent the households where the conversion effort would be prevented by either unsafe working conditions, significant pre-existing issues or estimated to require more than \$5,000 in remediation. Level 3 households will be estimated and on the bottom of the Level 2 list for possible conversion, but the level of effort and costs would be presumed to be too large for inclusion in the SoCalGas Pilot Project.

## Bulk Purchasing of Appliances

SoCalGas will use best practices to select the contractors and suppliers to the pilot, including bulk purchasing and request for proposals (RFP) when appropriate such that it will reduce costs and will not create a significant impact to pilot construction timelines.<sup>6</sup>

The Decision directs the IOUs to submit a joint Tier 1 Bulk Purchasing Advice Letter 60 days from the approval of this implementation plan advice letter. That Advice Letter will describe:

- Requirements and strategies to leverage existing programs, including pricing and channels for measures currently offered under those programs.
- Coordination with existing distributors and manufacturers regarding pilot measures.
- Development of common measures and specifications to reduce discrepancies in the installation and operation of pilot measures.
- Any purchasing activity that will be shared across IOUs or program administrators, including possibly joint sourcing of CSI Thermal partner(s).
- Activities to engage manufacturers and suppliers in the pilots, including warranty offerings, installation and maintenance training, and owner manuals and support that can be leveraged.
- Specifications and warranties, including ESA warranty requirements as documented in the ESA Program California Installation Standards Manual as provided in Appendix B.

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<sup>5</sup> D.18-012-015, at 98.

<sup>6</sup> Ibid, at 104.



## Appliance Warranties

SoCalGas will provide all the manufacturer's equipment warranty information to the owners of the new natural gas appliances. As natural gas space heating and water heating appliances have manufacturer warranties greater than two years, SoCalGas will need to provide an extended warranty during the duration of the pilot and/or two years after installation for installed natural gas ranges and dryers. SoCalGas is considering two options, 1) purchase extended warranties with the purchase of the appliance or 2) warranty work would be provided by SoCalGas personnel such that customer service field will respond, repair and/or replace appliances as needed.

Option 2 may be the most cost-effective solution depending on the price of extended warranties that can be negotiated in the bulk purchasing agreement. Since SoCalGas would be called and would dispatch a customer service field representative when an appliance issue occurs, instead of then directing the customer to the warranty provider, SoCalGas can either immediately resolve the issue, or resolve the issue with a follow up call. This will prevent the customer from calling and scheduling a maintenance visit a second time.

SoCalGas will determine which option to implement depending on the bulk purchasing agreements and extended warranty costs are negotiated.

Warranties on ESA Program measures will align with the minimum warranty requirements that have been established for the ESA Program and documented in the ESA Program Installation Standards Manual (IS Manual).<sup>7</sup>

## Safety Plan

Working safely is a SoCalGas priority and safety is embedded into all phases of the Pilot by having its employees and vendors follow company safety guidelines while performing their work. SoCalGas regularly performs new pipeline construction projects, pipeline integrity testing and pipeline replacement projects, providing a safe work environment for everyone: employees, contractors, customers, and the public.

Employees, contractors and other third-party vendors will need to follow basic safety tenets at all points along the customer journey. General safety topics and specific topics depending on the tasks will be discussed and reviewed with all personnel working in the pilot. Starting with the initial contact and pre-construction household surveys; employees and contractors in the CEN role will need to be aware of any personal safety issues in the community (e.g., stray dog, loose sidewalk, etc.) and any customer safety issues that may exist in the household such as unsafe propane appliances, or bare electrical wires. Household issues will be reported immediately to the customer and the PMO for immediate review and communication across the pilot to all contractors and third-party vendors. All safety issues will be tracked in an issues log maintained by the PMO.

Program implementers will be required to provide all staff with special training to understand safety issues related to propane, propane systems, and propane appliances. Additional training and licensing may be coordinated for installers and CENs by propane suppliers and/or the agencies that support Combustion Appliance Safety training. CENs will support customers to maintain safety around existing propane systems with visual inspection and questions about how the customer interacts with their propane tank and appliances.

During "to the meter" work; employees and third-party vendors will follow company safety standards for properly identifying and protecting work in the community in order to inform and guard the community from incomplete job sites. During "beyond the meter" work and with post-pilot work; employees, third-party vendors including those in the CEN roles will need to be aware of any personal safety issues in the community and any

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<sup>7</sup> See Appendix B.

customer safety issues that may exist in the household. As before, household issues will be reported immediately to the customer and the PMO for immediate review, inclusion in the issues log, and communication across the pilot to all contractors and third-party vendors.

All “beyond the meter” and “to the meter” work will be performed by a third-party vendor(s) principal contractor who would be subject to the permitting and inspection requirements of the agencies that hold such authority. SoCalGas will select a principal contractor that employs qualified, licensed contractors to perform all necessary “beyond the meter” construction, plumbing, and/or electrical work. SoCalGas will establish guidelines for principal contractor selection so that “beyond the meter” work will meet required safety standards for connection to its distribution system. SoCalGas will select the principal contractor based on selection criteria that includes scoring to consider local employment and capabilities. SoCalGas’ gas construction contractors will be eligible to bid on the “to the meter” work. Similarly, SoCalGas’ ESA contractors will be eligible to bid on the “beyond the meter” work.

If any hazardous materials and/or hazardous waste is discovered, or any construction waste is generated that has the potential to be hazardous waste, it will be characterized properly prior to off-site disposal. This includes spent materials that may contain asbestos (pipe wrap), oil, gasoline, or paint related materials. If these materials are encountered, sampling may be required, as well as an EPA identification number, which can take a month to obtain. If contaminated soil is encountered, soil sampling, analysis and disposal costs will occur as appropriate for the hazardous waste encountered.

SoCalGas will meet the environmental requirements triggered by this project, including, but not limited to, California Environmental Quality Act (CEQA) compliance. SoCalGas’ Environmental Services Department has dedicated resources for environmental compliance, including subject matter experts in CEQA, Natural Resources, Cultural Resources, Water Quality, Air Quality and Hazardous Materials.

Safety will continue as an important consideration of the pilot after the appliances have been installed and energized. Natural Gas Appliance Testing (NGAT) will be performed according to the IS Manual to test for leakage and proper combustion venting air-flow. Also, Pilot Implementors will install commercially available Remote Methane Detectors (RMD) to support the distributed detection of fugitive methane gases. Finally, employees and the CEN will educate households on appliance safety and the use of their new appliances and other new technologies such as Smart Thermostats or RMDs. Appliance safety brochures in English and Spanish will be left at each household.

SoCalGas’ Contractor Safety Program establishes the minimum requirements for contractor safety management, including minimum requirements for contractors, safety plans required prior to commencing work, and SoCalGas’ health and safety expectations for work performed on behalf of SoCalGas. All contractors (both prime and subcontractors) doing work on behalf of SoCalGas are required to meet SoCalGas’ safety requirements and expectations, have the proper tools, resources, work practices, licenses, certificates, qualifications, and appropriate training in compliance with statutes/regulations and Company-specific operating requirements as documented in SoCalGas’ Contractor Safety Manual.

Contractors engaged by the Company to perform work that can reasonably be anticipated to expose the Contractor’s employees, subcontractors, SoCalGas employees, or the general public to one or more hazards that, if not properly mitigated, have the potential to result in Serious Safety Incident are required to have an ISNetwork (ISN) account, where they will be vetted and pre-qualified. In ISN, Contractors are required to complete a safety, health and environment (SHE) questionnaire and provide SHE statistics, written safety programs and a programmatic safety plan. SoCalGas will select contractors that are deemed to be the most qualified to complete the work of the Pilot, and additional training will be conducted for contractor staff as described earlier.

## Permits and Inspections

SoCalGas has communicated with the California City Building and Safety Department the scope of the Pilot and will obtain permits and schedule inspections for any work to be completed as part of the project.

Documentation of the pre-inspection and permit will be submitted to the Pilot Administrator before work is scheduled to begin. It is the responsibility of the BTM Contractor to ensure this is completed for all homes. The contract between the installer and the Pilot Administrator may include provisions for incentives or penalties with compliance (i.e., incentive for 100% compliance or financial penalty for misses caught in audits).

## Budget

Per the decision the following table summarizes the available budget for California City.

Table 3: Budget

	Year 1	Year 2	Total
<b>“To the meter” Construction</b>			
Contract Labor and Materials		\$832,600	\$832,600
Construction Management	\$281,960	\$155,740	\$437,700
Meter Set[1]		\$80,500	\$80,500
Meters		\$25,900	\$25,900
Other Project Costs	\$50,600	\$305,100	\$355,700
<b>“Beyond the meter” Construction</b>			
Contract Labor and Materials		\$2,558,500	\$2,558,500
<b>Program Management Office (PMO)</b>			
PMO – Labor	\$197,150	\$197,150	\$394,300
PMO – Materials and Other	\$28,345	\$28,345	\$56,690
Evaluation, Measurement, and Verification		\$85,854	\$85,854
Marketing, Education, and Outreach	\$94,528	\$94,528	\$189,056
<b>Commission Directed Work</b>			
CEN Program Manager		\$462,300	\$462,300
Process Evaluation Contractor		\$62,500	\$62,500
Economic Feasibility Framework		\$166,000	\$166,000
Bill Protection		\$112,000	\$112,000
<b>Total Pilot Cost</b>	<b>\$652,583</b>	<b>\$5,167,017</b>	<b>\$5,819,600</b>

In addition to the pilot cost estimates, SoCalGas will maintain and report on the Commission directed work, details listed in the Joint Tier 1 Cost Sharing Advice Letter. The third-party vendors will be conducting work for the roles of Community Energy Navigator Program Manager, Process Evaluation Contractor, and Economic Feasibility Framework expert.

In addition, the Commission has approved up to \$500 in costs for each household participating in the Pilot to protect participants from experiencing higher energy bills after Pilot implementation.

## Reporting

SoCalGas will provide the following reports as directed in the Decision:

- Pre- / post-aggregated, anonymized pilot participant bill impact data and information on pilot community remediation costs and needs (Quarterly starting Q1, 2020).
- A Report summarizing efforts to engage SJV DACs and progress on implementation of approved pilots, including leveraged programs (Final Decision + 365 days and annually thereafter).<sup>8</sup>

SoCalGas will provide a written quarterly progress report on construction progress including:

- Number of households connected and new customers;
- The status of each construction phase (including deliverables and milestones);
- Actual costs compared to estimates both for construction and conversion work;
- Actual milestone completion dates against proposed timelines;
- Leveraging of utility or external programs;
- Community outreach, marketing and education efforts and effectiveness; and
- Barriers or issues encountered and their status.

Quarterly calls may be scheduled with Commission staff, parties, and pilot communities to discuss status and share learnings from the quarterly report.

A final report with all elements agreed upon above will be submitted to Commission staff approximately six (6) months after completion of household conversion for the community.

## Leveraging Existing Programs

The Pilot will take advantage of the following existing ratepayer programs during construction and conversion of households, to the extent possible. During the initial survey of each household, interest and feasibility of a CSI thermal water heating installation will be assessed and recorded. Also, any apparent barriers to the installation of Energy Savings Assistance (ESA) Program measures or natural gas appliances will be recorded. To the full extent possible, the following energy efficiency and energy reduction programs will be leveraged in each household. Participation in ESA Program and the Solar Thermal programs is currently limited to utility customers, so the outreach team will pre-qualify residents of California City as utility customers eligible for the ESA Program and Solar Thermal program.

### ESA Program

All allowable measures as provided in the ESA Program California Installation Standards Manual (IS Manual, current version March 2018) for allowable repairs to support weatherization will be installed. These fall into the category of “minor home repairs” and include:

- General envelope repairs including repairing holes in the wall between conditioned and unconditioned space of up to 6 inches;
- Repairs to mitigate catastrophic envelope leaks such as replacement of an entire window or door; and
- Repairs to support attic insulation, weather-stripping and caulking, and attic ventilation.

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<sup>8</sup> D.18-12-015, Appendix B, at 2.

To the extent the condition of the home presents barriers to the installation of any measure that cannot be mitigated through the repairs presented in the IS manual, that measure may not be provided, however other ESA measures may still be performed if possible.

SoCalGas will utilize the limited exception to the existing ESA rule (included in the statewide Policy and Procedures Manual approved in D.17-12-009), which requires that a customer be receiving natural gas water heating prior to receiving ESA weatherization or water heating measures.

### California Solar Initiative Solar Thermal Program

D.18-12-015 authorizes the CSI-Thermal Program to fully subsidize solar thermal water heating systems in SJV DAC pilot communities where eligible and feasible,<sup>9</sup> SoCalGas and PG&E modified the Handbook to address specific budgets, incentive levels and eligibility requirements. SoCalGas, PG&E and third-party PA/PI's will coordinate in the delivery of these systems to eligible homes in the pilot communities and, where applicable, also coordinate with Southern California Edison (SCE).

SoCalGas will allocate 25% of its remaining CSI-Thermal low income/DAC program budget, which is approximately \$1,375,000, for the SJV DAC pilot projects in its service territory. These funds will cover the potential installation costs of approximately 150-200 homes in SJV DAC pilot communities in SoCalGas' service territory, including communities with pilots that may be administered by PG&E and SCE. Should there be a need for additional budget beyond that set aside to install CSI-Thermal systems in eligible homes in the SJV DAC pilot communities, such homes will be considered for any remaining low income/DAC funds in the SoCalGas CSI-Thermal Program based on a first come, first serve basis. Conversely, any remaining funds from the pilot program set aside that are not used will be shifted over to the CSI-Thermal Program general low income/DAC budget. A letter of attestation of the coordination between PG&E and SoCalGas is attached in Appendix A.

Should SCE or PG&E identify a home with an existing natural gas water heater, they will coordinate with SoCalGas to assess the home's eligibility requirements for the potential installation of a solar water heating system. PG&E, SoCalGas, and SCE will utilize the SJV DAC pilot contractors (e.g., Community Energy Navigator Program Manager and third-party PA/PI) to market solar water heating systems, including to multifamily properties in the pilot areas with the understanding that any project would only be eligible under the existing commercial/Multifamily Residential or Multifamily Residential – Low Income budgets.

### Contractor Participation

All contractors installing solar thermal systems through the CSI-Thermal Program must become listed as eligible to participate in the program. Contractors must meet the license, training, and warranty requirements as stated below. Each contractor who meets these requirements will be added to the program's list of eligible contractors. This list is available publicly on the program's [www.csithermal.com](http://www.csithermal.com) website.

### Contractor License Requirements

Eligible contractors must be licensed by the State of California Contractors State License Board (CSLB) and have an active A (Engineer), B (General), C-4 (Boiler, Hot Water Heating and Steam Fitting), C-36 (Plumbing) or C-46 (Solar) contractor's license and be in accordance with rules and regulations adopted by the CSLB. Contractors with an active C-53 (Pools) license will be eligible for solar pool installations only. PAs may request documentation from the contractor proving that they have the minimum insurance requirements mandated by the CSLB. If a contractor's license expires or becomes suspended during the program, the PAs will deactivate their eligible standing as a CSI-Thermal Program contractor until their license becomes active again. See Section 6.4.5 for further details regarding treatment of applications once a contractor license is suspended.

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<sup>9</sup> D.18-12-015, at 114.

All solicitations, sales, negotiations, or executions of home improvement contracts outside of the contractor's normal place of business shall abide with all codes, laws, and other jurisdictional requirements by a Home Improvement Salesperson (HIS) including but not limited to those outlined by the CSLB under the California Contractors License Law.

## Bill Protection Approach

SoCalGas is required to submit a Tier 2 Bill Protection and Affordability Advice Letter by March 18, 2019 that will provide details on the planned approach to ensure bill savings and affordability for participants. At the time of writing this plan, that Advice Letter had not been approved. SoCalGas will follow the methods approved in the resolution to that Advice Letter.

## Tenant Protections

A central objective of the pilot is ensuring that all households, including those occupied by tenants, experience bill savings as a result of the pilot and do not suffer negative unintended consequences.

SoCalGas is required to submit a Tier 2 Split Incentive Advice Letter by March 18, 2019 that will provide details on the planned approach to seek assurances from property owners that they will not significantly increase rents or evict tenants as a result of home improvements for at least five years following completion of pilot appliance installations. At the time of writing this plan, that Advice Letter had not been approved. SoCalGas will follow the methods approved in the resolution to that Advice Letter.

## Customer Journey

First contact with pilot households will be a letter from SoCalGas explaining the pilot, explaining the CEN relationship for the pilot and providing customers a web page and phone number to call where the customers can confirm their interest in pilot participation. SoCalGas will follow up with door-to-door outreach to collect contact information, solicit pilot participation confirmation and leave behind information about the pilot. Customer contact information will be passed to the CEN for invitation to the first community outreach event. The full customer journey flowchart are shown in Appendix C. The CEN will sign up new SoCalGas customers for all qualified programs for both SoCalGas and with SCE after the community outreach events. Those programs would include;

- Low-income or cost-saving programs, such as CARE, Medical Baseline, etc. if qualified;
- My Account to provide households with online access to bill pay, service request, daily usage information and bill comparison tools;
- Enrollment in automatic bill payment plans;
- Enrollment in level-payment plans; and
- Enrollment in any SCE electric rate or bill-reduction programs to which they qualify.

The CEN will serve as the primary source for energy and appliance information for households in the pilot during each phase. SoCalGas will provide households with a single phone number manned during business hours to assist households with any questions or issues that may arise.

## Workforce Education & Training

To the extent feasible, SJV Program Implementer(s), will leverage existing local and regional contractors that have residential energy efficiency experience through other Investor Owned Utilities (IOU) programs. Such contractors are not only familiar with the work that will be part of the Pilot effort but will also have a faster on-ramp for required training. These contractors can bring intricate knowledge of utility-customer programs and

processes that will be valuable in successfully implementing the pilot. SoCalGas will coordinate as appropriate with SCE and PG&E on energy education and outreach activities by:

- Providing Energy Efficiency education and training:
  - Supporting grades K-12 with energy efficiency curriculum and green career awareness
  - Supporting grades K-12 instructors and teachers with energy training materials and green careers information and resources

SoCalGas will coordinate with SJV Program Implementer(s) on workforce development, workforce education, outreach and implementation activities by:

- Leveraging existing schools and workforce development organizations to deliver energy education and employment services
- Engaging local workforce regional workforce investment boards, community-based organizations (collectively workforce development organizations or WDOs) who can deliver a range of services, which include:
  - Identifying employable local and regional contractors to perform Pilot services (appliance and home upgrade installation, repair and maintenance)
  - Identifying local and regional contractors and workers with experience in energy efficiency work for Pilot services (appliance and home upgrade installation, repair and maintenance)
  - Identifying local and regional contractors and workers with specific credentials and licensures for Pilot services (appliance and home upgrade installation, repair and maintenance)
  - Cataloging a pool of contractors and workers that have been trained on energy efficiency and that has worked on residential energy efficiency projects to call upon when the opportunity for additional energy efficiency work arise

SoCalGas will coordinate with SJV Program Implementer(s) on workforce development, workforce education, outreach and implementation activities by providing:

ESA Training:

- Enrollment and Assessment training (initial and refresher)
  - ESA Program policies and procedures relative to customer and home eligibility and paperless enrollment via the online ESA Mobile site.
  - In-Home Energy Education
- Weatherization training (initial and refresher)
  - ESA Program policies and procedures relative to installation of weatherization measures and installation and attic insulation.
  - Natural Gas Appliance Testing (NGAT)
- HVAC Training (initial and refresher)
  - ESA Program policies and procedures relative to the installation of furnaces (FAU, wall and floor) and water heaters.
  - Natural Gas Appliance Testing (NGAT)
- Inspection training
  - ESA Program policies and procedures relative to inspection of weatherization measures and furnace/water heater repair/replacement.
- Back office training

- Training related to documentation of completed ESA Program work and invoicing.

#### CSI Solar Thermal Training:

- CSI Solar Thermal Contractor Training Requirements
  - Contractors are required to participate in a designated CSI-Thermal Program training workshop. Attendance is required by an individual listed on the CSLB Contractor's Personnel List. Attendance is encouraged for other employees involved with the CSI-Thermal application process. Individuals listed as disassociated on a particular license are not eligible to attend on behalf of the company. Only contractors who participate in this workshop will be eligible to apply for incentives from the program. Completing a workshop in any PA territory will allow a contractor to be eligible program-wide.
- CSI-Thermal Program Training Workshop
  - Contractors and self-installers are required to attend a designated no-cost CSI-Thermal Program training workshop or on-demand webinar when available. All PAs conduct training in their respective service territories. Availability of these workshops is publicized on each CSI Program Administrator's website.

## Marketing, Education and Outreach

Because of the size and nature of this Pilot, community support will be crucial for a successful outcome, and outreach activities will be key to maintaining community support, thereby minimizing any impact to residents. SoCalGas will have a bilingual outreach advisor that will work with the selected CPM to develop a Community Engagement Plan that will define the communication and outreach activities among external and internal stakeholders to provide two-way communication of construction timing and pilot objectives throughout the Pilot deployment. The Community Engagement Plan will also describe opportunities for stakeholders to provide input both before and during construction.

The outreach advisor will coordinate with the CPM all community surveys and education activities, coordination with Community Based Organizations (CBOs) and other stakeholders involved in outreach, including customer assessment surveys, a defined stakeholder map for the community and will include local government agencies, CBOs and any economic development agencies. Communication and outreach plans for the community will then be written based on qualitative information gathered by in-home pre-pilot data surveys done in the community.

In order to support households during conversion to natural gas, the advisor will address any issues or concerns, answer questions and assist with program enrollment for pilot participants in California City. The advisor will coordinate with the CPM onboarding of new customers, confirmation customers are comfortable and trained on appliance safety, trained on use of new technologies such as Smart Thermostats and enrolled in all eligible assistance programs for which the customer is eligible and qualified. This would include other utility rate discount programs like CARE or Family Electric Rate Assistance (FERA), Non-utility state and federal programs for home improvements loans or grants, such as Residential Energy Efficiency Loan (REEL), United States Department of Agriculture (USDA) or Low-Income Home Energy Assistance Program (LIHEAP), as well as non-utility state and federal assistance programs like CalFresh, Medicaid, and Social Security.

Communication channels to be utilized for external education and communication may include:

- Community meetings;



- City/County briefings;
- Tailored email communications;
- Outbound automatic dialer-enabled calls;
- Door-to-door canvassing;
- Door hangers;
- Fact Sheets and Frequently Asked Questions;
- Community flyers;
- Ads, newsletters;
- Displays; and
- Videos/Photos/other program information posted on websites or social media.

## Community Energy Navigator Program Manager

Per the Decision, SCE will hire the CPM on behalf of all program administrators across the IOU's territories and Energy Division will make the final vendor decision. The decision also targets contract completion by June 30, 2019. SoCalGas will collaborate with the selected CPM to facilitate the pilot projects' success and work to ensure energy cost savings for households receiving appliance upgrades as part of the pilot program. The CPM duties will include:

- Developing a community engagement plan:
  - Identify engagement techniques, barriers and mitigations; staffing structure; cadence of engagements; partnerships, workforce engagement and coordination with workforce, education and training plans.
  - Including education on the importance of retaining propane and/or wood consumption, cost information, and existing program qualifications for enrollment.
  - Tactics for following up with customers who may be ineligible or decline for any reason that may change over the course of the pilot program.
- Support development of eligibility, surveys and other pilot forms and procedures
- Conduct or facilitate pre-pilot surveys and interviews
- Work with Pilot Administrators to ensure consideration of community concerns, input and outcomes
- Conduct community education and outreach at each stage of the pilot
- Identify and facilitate access to additional local, state, federal and private sources for additional grants and loans, especially for remediation needs
- Identify, train and maintain a network of CEN's and CBO's to:
  - Engage pilot community members in pilot by organizing and leading in-community meetings and home visits and providing assistance with the application process.
  - Collect and facilitate access to program resources such as relevant agencies and programs.
  - Assist and / or enroll customers in existing programs, especially available discount programs and selection of most appropriate rate.
    - Gather information about pilot community households, including propane consumption, cost data and existing appliances.
    - Assist customers whose households requiring significant remediation and support them in identifying resources to be eligible to participate.
  - Support customers' adjustment to new appliances.
- Report to Administrator on CEN activities and metrics, including Monthly reports on remediation funding for quarterly substandard housing report leveraged outside of the pilot budget, assist pilot

participants in understanding and adhering to owner-tenant agreement and monitor tenant protection issues.

The CPM will work collaboratively with city, county, and other governmental officials to inform them about the Pilot, project schedule, including estimated beginning and ending dates, and gather feedback. The CPM will coordinate with local, city, or county entities that have inspection authority over households and provide construction notifications to impacted residents, schools, and businesses within a reasonable distance of the construction. Additionally, the CPM will adhere to any permit conditions requiring public outreach.

## Evaluation, Measurement and Verification

As part of the Evaluation, Measurement and Verification (EM&V) scope, SoCalGas and the CEN will collect pre- and post- implementation data in order to evaluate the effectiveness of the pilot project. SoCalGas will collaborate with the selected CPM and process evaluator to ensure accurate data collection, evaluation and reporting. Timing of all the steps outlined below will be finalized once contracts with the CPM, CEN and process evaluator have been completed and those contractors have completed their planning.

The pre-pilot survey will measure baseline factors such as energy usage, energy sources, energy burden, attitudes and expectations, among others. During construction, customer assessment surveys will collect data on household expectations, readiness, and energy management education challenges. Customer assessment survey results will be used to update the engagement plan, identify unique household needs for energy and energy management, and identify any barriers or other issues.

Community surveys will be performed at the end of construction and end of the pilot term for comparison to the pre-pilot survey and provide a measurement of change in energy burden, reduction in propane and wood used for heating, participant satisfaction, etc. All surveys and data collection will be coordinated with and combined with databases used by the CPM, the proposed Pilot Project Working Group, and the Data Gathering Working Group.

The pre-pilot community surveys will be followed by community resident forums before and during construction that will discuss the following:

- Open forum on concerns of the residents;
- Benefits of the project;
- Anticipated project schedule;
- What to expect during construction (e.g., construction impacts, traffic impacts, site debris, noise, equipment laydown yards);
- Household conversion process and how residents will become a customer of the utility;
- Benefits from being a customer of the utility (e.g., customer service benefits);
- Opportunity to sign up for customer assistance programs (CARE, Energy Savings Assistance Program, etc.); and
- Natural gas safety, technology, and Energy Management System (EMS) tools (e.g., mobile application).

Table 5 below identifies potential data sources and approaches that may be used and is subject to change during the contracting process with the CPM/CEN and program implementers.

Table 5: SJV/DAC Pilot Evaluation Framework

Evaluation Objective	Possible Research Questions	Metric
1. Assess structural condition of homes and customer information	a) What are the household and demographic data for pilot communities?	<ul style="list-style-type: none"> <li>• Home ownership status</li> <li>• House/construction type/condition, build date, square footage, etc.</li> <li>• Appliance data</li> <li>• Number of occupants</li> <li>• Income</li> <li>• Enrollment in energy programs</li> </ul>
2. Ensure equitable access to affordable energy options to communities and households	a) What options were provided? b) How many households (number and percent) chose and participated in options? c) How many households declined or were unwilling to participate? d) What was the effectiveness of outreach and assessments? e) Did customers understand rate and usage changes?	<ul style="list-style-type: none"> <li>• Energy options provided</li> <li>• Count of households agreeing or declining to participate</li> </ul>
3. Identify total participant energy cost impacts	a) Does usage increase/decrease, shift? b) How are participant fuel costs affected by interventions? c) Do treated customers pay more or less (all combined fuel)? d) How much, and which customers, show increases or decreases in burden (as traditionally measured – HH income, total energy bills)? e) Are certain interventions more/less effective in mitigating burden? f) How is household hardship impacted (e.g., consider other ways to measure burden)?	<ul style="list-style-type: none"> <li>• Pre<sup>10</sup> &amp; post bill increases/decreases per HH</li> <li>• Pre &amp; Post comparison between treated and not treated</li> <li>• Pre &amp; Post subpopulation analysis</li> <li>• Magnitude of bill increases/decreases within and across community</li> </ul>
4. Pilot costs and energy cost impacts for non-participating customers	a) What was the cost to ratepayers and total costs to implement pilots? b) What was the cost to participating customers? c) What is the minimum project size to achieve economies of scale and thus to reduce costs? d) What level of cost reductions were achieved with interventions?	<ul style="list-style-type: none"> <li>• Total cost per HH</li> <li>• Costs per measures installed/options</li> <li>• Total cost per pilot</li> <li>• Impact/Need for bill protection</li> <li>• Ratepayer impacts (non-participant in DACs; non-participants outside DAC; participants treated)</li> <li>• Cost reductions as per leveraging other programs</li> <li>• Cost reductions as per bulk purchasing</li> </ul>

<sup>10</sup> Pre-pilot propane and wood bills will be collected to the extent possible.

5. Identify participant health, comfort, and safety (HCS) impacts of pilot	<ul style="list-style-type: none"> <li>a) What are the health, comfort &amp; safety costs and benefits resulting from the interventions?</li> <li>b) What interventions result in greatest impacts and why?</li> <li>c) To what extent do customers value HCS benefits over cost impacts (bill savings vs. higher bills)</li> </ul>	<ul style="list-style-type: none"> <li>• Participant Health: improvements/deteriorations (e.g., resulting from change in air quality, etc.)</li> <li>• Participant Comfort/Convenience: (resulting from change in air temperature, etc.)</li> <li>• Participant Safety: threats mitigated/exacerbated (e.g., resulting from change in fire hazards, faulty circuits etc.)</li> </ul>
6. Identify community impacts of pilot interventions	<ul style="list-style-type: none"> <li>a) How much of the community benefits?</li> <li>b) What are the GHG impacts for the community?</li> <li>c) What is the impact on the local workforce?</li> <li>d) What are benefits and barriers associated with local hiring?</li> <li>e) What are the participants and non-participants preferences/attitudes towards local hiring?</li> <li>f) What are best practices for staffing for implementation?</li> </ul>	<ul style="list-style-type: none"> <li>• Quantified reduction in GHG emissions</li> <li>• Magnitude of reduction in GHG emissions</li> <li>• Percent and number of new jobs in community</li> </ul>
7. Identify Benefits/Limitations of Engagement Strategies	<ul style="list-style-type: none"> <li>a) How do community political and cultural influences impact interests, costs and scalability?</li> <li>b) What are undesirable/negative post-implementation impacts (e.g., rent increases; higher energy bills, increased community conflict, reduced reliability, etc.)?</li> <li>c) What factors/conditions are necessary for participation? How does this impact scalability?</li> <li>d) What is the impact of different interventions on different types of customers?</li> <li>e) What outreach practices are most effective for the pilot communities and why?</li> </ul>	<ul style="list-style-type: none"> <li>• Outreach received</li> <li>• #/% Informed of options</li> <li>• Effectiveness of engagement strategies (customer solicited vs. participated)</li> <li>• Effectiveness of engagement strategies (landlord solicited vs. participated)</li> <li>• Town hall participation per community</li> <li>• Participation facilitated through CEN/CBO</li> <li>• Total Pilot participants (post install / project totals)</li> <li>• Participation facilitated through friend / neighbor</li> </ul>

## Pilot Project Process Evaluation Contractor

As stated in the Decision “the best practice method to measure the effectiveness of a pilot which is to undertake a process evaluation, that will follow the intervention period.”<sup>11</sup> SoCalGas will manage a solicitation<sup>12</sup> on behalf of the Commission for the Commission to select a pilot process evaluator.<sup>13</sup> This process evaluation will determine the overall effectiveness of the processes that will be used during the pilot project and will provide actionable recommendations for improved future program or project design and delivery. The process evaluation will also document barriers and may provide some basis to determine the success of the pilot project in meeting the goals outlined in this Pilot Implementation Plan.

<sup>11</sup> D.18-12-015, at 129.

<sup>12</sup> SoCalGas has sent a request for extension to the Energy Division.

<sup>13</sup> D.18-12-015, at 169.

Key aspects of the process evaluation, including the draft research plan, will be distributed to current service lists for leveraged program proceedings for review and comment. Stakeholder input will be considered, where appropriate. The process evaluation will avoid unnecessary duplication of data gathering, analysis and reporting.

## Appendix A: CSI Solar Thermal Attestation

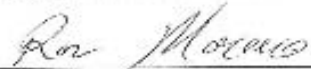
### Appendix A: CSI Thermal Attestation Letter: PG&E and SoCalGas

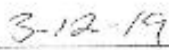
The Commission's "Decision Approving San Joaquin Valley Disadvantaged Communities Pilot Projects," Decision 18-12-015, requires investor-owned utilities coordinate on implementation of CSI Thermal Low-Income Programs. Pacific Gas and Electric Company (PG&E) and Southern California Gas Company (SoCalGas) attest:

1. SoCalGas and PG&E may conduct a joint sourcing activity to identify and select approved solar thermal vendors/installers.
2. In pilot communities that are located in both PG&E's electric service territory and in SoCalGas' service territory:
  - a. If PG&E administers an electric pilot in the community, PG&E, its contractors or Community Energy Navigators may identify pilot participants who are interested in and eligible for solar thermal that may have either electric, gas or propane water heaters. If electric or propane, solar thermal systems would be installed under PG&E's CSI Thermal program; if gas, PG&E or its contractors or Community Energy Navigators will refer the participant(s) to SoCalGas's CSI Thermal program.
  - b. If SoCalGas administers a gas pilot in the community, SoCalGas, its contractors or Community Energy Navigators may identify pilot participants who are interested in and eligible for solar thermal that may have either electric, gas or propane water heaters. If gas or propane, solar thermal systems would be installed under SoCalGas's CSI Thermal program; if electric, SoCalGas or its contractors or Community Energy Navigators will refer the participant(s) to PG&E's CSI Thermal program.

I declare that this letter is accurate and true to the best of my knowledge.

PG&E Representative: Ron Moreno, CSI Thermal Program Manager

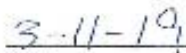
  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Date

I declare that this letter is accurate and true to the best of my knowledge.

SoCalGas Representative: Mike Landau, CSI Thermal Program Manager

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Date

#### MINIMUM WARRANTY REQUIREMENTS

##### 1.0 INTRODUCTION

- 1.1 This appendix lists warranty requirements, in accordance with state-wide policy, for each measure installed in the ESA Program. These are *minimum* requirements. Each individual utility may have more stringent warranty requirements.
- 1.2 Warranty Categories/Types
  1. Warranty requirements are divided into two categories:
    - a. Contractor Warranty and
    - b. Manufacturer Warranty.
  2. Each category is subdivided into two types:
    - a. Materials and
    - b. Labor.
- 1.3 Warranty Time Periods
  1. Time periods are stated in years, unless identified as being in days (e.g., “90 days”).
  2. The appearance of “n/a” in a field indicates that there is no warranty requirement for that category.
  3. The appearance of “---” in a field indicates that, for that type of coverage, there is no warranty requirement.
- 1.4 Repair/Replacement: Within some fields, there is a time period for a unit that is repaired, indicated by “(Repair),” and a different time period for a unit that is replaced, indicated by “(Replacement).”
- 1.5 Component Type: Within some fields, the type of component for which the warranty period applies is indicated in parentheses. For example, for Sec. 12, Window Replacement:
  1. “(IGU)” means the warranty period applies only to the insulated glazing unit (IGU).
  2. “(Other)” means the warranty period applies to all other components of the window.

2.0 MINIMUM WARRANTY REQUIREMENTS PER MEASURE

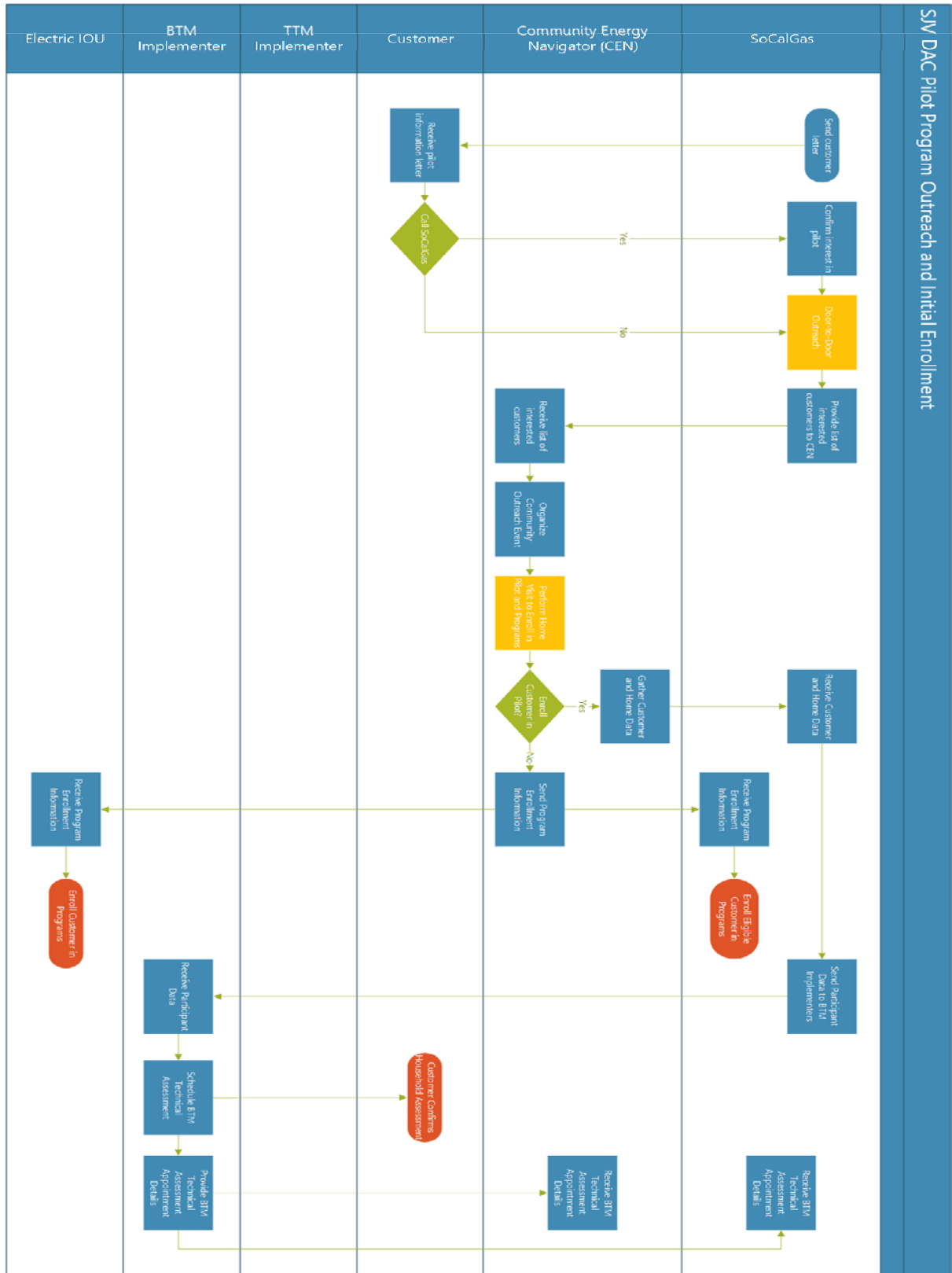
IS Section No.	IS Measure	Contractor Warranty		Manufacturer Warranty	
		Materials	Labor	Materials	Labor
1	Caulking	1	1	10	n/a
2	Weatherstripping	1	1	3	n/a
3	Attic Insulation	1	1	1	n/a
4	Central A/C Tune-Up	1	1	1	n/a
5	Water Heater Tank Insulation	1	1	1	n/a
6	Water Heater Pipe Insulation	1	1	1	n/a
7	Cover Plate Gaskets	1	1	1	n/a
8	Energy-Saver Showerheads and Faucet Aerators	1	1	3 (showerheads) 1 (aerators)	n/a
9	Evaporative Cooler and A/C Vent Covers	1	1	1	n/a
10	Duct Testing and Sealing	1	1	1	n/a
11	Exterior Door Replacement	1	1	1	n/a



IS Section No.	IS Measure	Contractor Warranty		Manufacturer Warranty	
		Materials	Labor	Materials	Labor
12	Window Replacement	1	1	10 (IGU) 3 (Other)	n/a
13	Glass Replacement	1	1	1	n/a
14	LED Screw-Based Bulbs	1	1	1	n/a
15	LED Fixtures	1	1	1	n/a
16	Window/Wall Evaporative Cooler Installation	1	1	5 (Pan) 1 (Other)	n/a
17	Refrigerator Replacement	1	1	1	n/a
18	Natural Gas Central Forced Air Heating System Repair and Replacement	1 (Replacement) 90 days (Repair)	1 (Replacement) 90 days (Repair)	5 (Compressor) 90 days (Other)	n/a
19	Natural Gas Wall and Floor Furnace Repair and Replacement	1 (Replacement) 90 days (Repair)	1 (Replacement) 90 days (Repair)	1 (Replacement) 90 days (Repair)	n/a
20	LED Night Lights	1	1	1	n/a
21	Central High-Efficiency A/C and Heat Pump Replacement	1	1	5 (Compressor) 1 (Other)	n/a
22	Window/Wall A/C and Heat Pump Replacement	1	1	5 (Compressor) 1 (Other)	n/a
23	Natural Gas Storage Water Heater Replacement	1	1	5 (Tank) 1 (Other)	n/a
24	Natural Gas Appliance Testing (NGAT)	n/a	n/a	n/a	n/a
25	Microwave Ovens	1	1	1	n/a
26	Furnace Cleaning and Tune-up	n/a	90 days	n/a	n/a
27	Thermostatic Shower Valves	1	1	1	n/a
28	High-Efficiency Clothes Washers	1	1	1	n/a
29	Forced Air Unit (FAU) Standing Pilot Light Conversion	90 days	90 days	90 days	n/a
30	Energy-Efficient Variable Speed Pool Pump Replacement	1	1	1	n/a
31	Natural Gas Water Heater Repair	90 days	90 days	90 days	n/a
32	Smart Fan Delay/Efficient Fan Controller	1	1	1	n/a
33	Tier 1 Smart Power Strips	1	1	1	n/a
34	Vacancy Sensor Switches	1	1	1	n/a
35	LED Torchiere Replacement	1	1	1	n/a
36	Tier 2 Audio-Visual Advanced Power Strips	1	1	1	n/a
37	LED Downlight Retrofit Kits	1	1	1	n/a

IS Section No.	IS Measure	Contractor Warranty		Manufacturer Warranty	
		Materials	Labor	Materials	Labor
38	Thermostatic Tub Spout/Tub Diverter	1	1	1	n/a
39	Prescriptive Duct Sealing	1	1	1	n/a
40	Heat Pump Water Heaters	1	1	1	n/a
14	Thread-Based CFLs (archived measure)	1	1	1	n/a
15	Hard-Wired CFFs (archived measure)	1	1	1	n/a
35	Fluorescent Torchiere Lamp Replacement (archived measure)	1	1	1	n/a

# Appendix C: Customer Journey



SIV DAC Pilot Program Household Assessment and Implementation

