

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE



September 6, 2019

**Advice Letter 4129-G/5612-E**

Erik Jacobson  
Director, Regulatory Relations  
Pacific Gas and Electric Company  
77 Beale Street, Mail Code B10C  
P.O. Box 770000  
San Francisco, CA 94177

**SUBJECT: Energy Saving Assistance Multifamily Common Area Measure Initiative  
Advice Letter per Decision (D.) 17-12-009**

Dear Mr. Jacobson:

Advice Letter 4129-G/5612-E is effective as of August 6, 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



**Erik Jacobson**  
Director  
Regulatory Relations

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San Francisco, CA 94177

Fax: 415-973-3582

August 6, 2019

**Advice 4129-G /5612-E**

(Pacific Gas and Electric Company ID U 39 M)

Public Utilities Commission of the State of California

**Subject: Energy Saving Assistance Multifamily Common Area Measure Initiative Advice Letter per Decision (D.) 17-12-009**

**Purpose**

Pacific Gas and Electric Company (PG&E) submit this Tier 1 supplemental advice letter in compliance with Decision (D.) 17-12-009 (Attachment 1, Ordering Paragraph 66) that directed the investor-owned utilities (IOUs) to submit an Energy Savings Assistance (ESA) Program Multifamily (MF) Common Area Measure Initiative implementation plan by Tier 2 Advice Letter on March 1, 2018. The Commission approved Advice Letter 3943-G /5241-E effective March 31, 2018.

This supplemental advice letter is submitted to provide notice of a change to the design and approach to PG&E's MF Common Area Measure Initiative implementation plan since the effective date of Advice 3943-G/5241-E. The changes to the multifamily implementation plan are consistent with direction and options provided by the Energy Division of the California Public Utilities Commission (Commission or CPUC).

**Background**

In D.16-11-22, the Commission issued a decision approving energy utilities' applications for continuance of two primary low-income programs, California Alternate Rates for Energy (CARE) and ESA. D.17-12-099, Attachment 1, modified D. 16-11-022, and directed the IOUs to file Multifamily Common Area Measure Initiative implementation plans:

*Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company and Southern California Gas Company (IOUs) shall file a Tier 2 Advice Letter outlining their respective*

*implementation plans for their multi-family (MF) common area activities by March 1, 2018.<sup>1</sup>*

PG&E submitted its MF Common Area Measure Initiative Advice Letter on March 1, 2018. Prior to submittal of this Advice Letter, PG&E worked with the MF Working Group (MFWG) to discuss and refine its MF Common Area Measure Initiative design, and then submitted its draft implementation plan to the MFWG on January 16, 2018.<sup>2</sup> PG&E presented its plan to the MFWG at its quarterly meeting on January 26, 2018, where the working group identified and discussed areas of consensus and non-consensus. These discussions were summarized by the MFWG facilitator, and circulated to the MFWG on January 30, 2018.

On February 13, 2018, the California Housing Partnership Corporation, the Natural Resources Defense Council, and the National Consumer Law Center jointly submitted recommendations to the MFWG to further address areas of disagreement. PG&E reviewed and addressed these recommendations as appropriate for inclusion in this implementation plan. PG&E's Tier 2 Advice Letter (Advice 3943-G/5241-E) was approved by the CPUC on March 31, 2018 without modification. Shortly thereafter, PG&E began implementing the MF Common Area Measure Initiative as detailed in the implementation plan.

PG&E's MF Common Area Measure Initiative implementation plan leverages PG&E's Energy Efficiency Multifamily Upgrade Program (EE MUP), including the methodology for claiming energy savings, as described in its advice letter:

*PG&E is utilizing the existing MUP program to offer CAM [Common Area Measures]. Aspects of MUP that will be adopted by CAM include: MUP's operational framework (policies and procedures, contractor database, savings calculation methodology) and database of projects and customer relationships in the multifamily space. CAM will leverage MUP savings claim methodology including approved modeling software for customized projects and work papers for deemed measures. PG&E will use the existing MUP framework to target deed-restricted, low income multifamily property owners through CAM.<sup>3</sup>*

In 2018, EE's MUP project savings were determined using a modeled<sup>4</sup> approach and were not subject to rules with other EE Custom Projects (D.11-07-030, Attachment B).

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<sup>1</sup> D. 17-12-009, Attachment 1, Ordering Paragraph 66.

<sup>2</sup> January 15, 2018 was a legal holiday.

<sup>3</sup> Advice 3943-G /5241-E, Attachment 1, page 4.

<sup>4</sup> A modeled approach uses industry standard software to simulate a building's energy use before and after measures are install for the purpose of determining energy savings. CAM intended to use EnergyPro non-residential version 7, consistent with MUP.

PG&E's CAM program adopted this custom approach. As PG&E stated in the approved Advice 3943-G /5241-E:

*PG&E is leveraging the MUP model, design and infrastructure including policies and procedures, contractor database, savings calculation methodology, and existing, historic market relationships and expertise in the multifamily space. MUP has supported multifamily building owners, contractors and their energy consultants on completing whole property energy efficiency improvements (including residential units, common areas, and exterior facilities) since 2014. Based on PG&E's Multifamily Upgrade Program (MUP), CAM will leverage:*

- *Outreach to and relationships with affordable housing owners. Since inception, over half of the properties that participated in MUP are deed-restricted multifamily, including publicly owned housing authority properties and private housing managed by non-profit and for-profit entities.*
- *Contractor and consultant partnerships already solidified in the multifamily market and with PG&E Residential Energy Efficiency Programs*
- *Lead nurturing and project tracking capabilities*
- *Approved savings methodology for deep energy retrofits through the use of building energy simulation.*
- *Vetted policies and procedures applicable to project intake, analysis, modeling, quality assurance, etc. for multifamily retrofit projects.<sup>5</sup>*

*The program will report **modeled savings** from EnergyPro non-residential version 7, consistent with MUP, and factoring in work paper savings when applicable, to model common area energy savings, comparing upgraded conditions to existing conditions to determine overall savings.<sup>6</sup>*

PG&E shared progress on implementation with stakeholders in regularly scheduled MFWG meetings. Beginning in January 2019, Energy Division began communicating with PG&E regarding its approach in measuring (1) cost effectiveness for CAM and (2) energy savings. PG&E indicated that it believed it was bound to the approach of modeled savings because that measurement method comports with D.17-12-009 and Commission approval of Advice 3943-G/5241-E.

In April 2019, Energy Division requested a pause on installing measures until it conducted further investigation. PG&E was allowed to continue performing audits

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<sup>5</sup> Advice 3943-G /5241-E, Attachment 1, page 8

<sup>6</sup> Advice 3943-G /5241-E, Attachment 1, page 13 (emphasis added).

during this period. On May 14, 2019, Energy Division provided PG&E with two program options based on the energy savings claim methodology to be used for ESA common area measures.

1. Custom Projects Program Option

A custom project program requires all ESA common area measure projects to be subjected to the rules consistent with EE Custom Projects (CPUC D.11-07-030, Attachment B), including meet all CPUC custom project guidelines and rules, and possible selection for CPUC ED ex-ante custom project review.

2. Deemed Measures Program Option

A deemed measures program requires all ESA installed common area measures to be deemed measures with determined values from Impact Evaluations, non-DEER workpapers, or DEER measures.

After careful review, PG&E decided to proceed with Option 2, Deemed Measures Program Option, as it presents the least risk of the two options and communicated this decision to ED on May 24, 2019. In support of Option 2, PG&E is in the process of modifying existing deemed workpapers to support over 30 Common Area Measures; workpaper revisions include multifamily as the building type, PG&E's climate zones, additional energy efficiency tiers for measures, and full implementation cost. Energy savings for ESA Common Area Measures projects will be reported based on these revised deemed workpapers. PG&E has identified approximately 14 measures without existing workpapers and that may be and will look to create new workpapers as appropriate to meet customer need.

Based on PG&E's workpaper analysis, PG&E is proposing a significant increase in the number of buildings served by ESA CAM to meet the overarching program goals in this program cycle. Even though the increase in the number of buildings to be served as a result of moving to a deemed measures program increases the risk of meeting the goals by the end of cycle, PG&E and its CAM implementer remain committed to achieving them. The associated savings have decreased while the number of buildings has increased as the savings calculated using a deemed based approach are typically significantly lower than a model based approach.

Additionally, the anticipated timing on goals has been delayed by one quarter to accommodate the Energy Division-mandated changes. This delay results in 2019 Common Area Measure goals moving into 2020 as illustrated in the table below. PG&E intends to meet the 10 percent Administrative and 20 percent Direct Install Non Incentive (DINI) budget caps as directed by the D.16-11-22 even though pivoting from using model-based savings to deemed-based savings requires redesign and additional costs associated with increasing the number of buildings that will need to be treated to meet the program goals. The changes in goals are reflected in the table below.

ESA CAM Annual Goals	Original Goals (Custom)				New Proposed Goals (Deemed)			
	2018 (Actual)	2019 (Goal)	2020 (Goal)	Total	2018 (Actual)	2019 (Goal)	2020 (Goal)	Total
<i>No. buildings audited</i>	20	1,090	60	<b>1,170</b>	43	1,297	530	<b>1,870</b>
<i>No. buildings treated</i>	0	230	735	<b>965</b>	0	30	1510	<b>1,540</b>
<i>No. properties treated</i>	0	29	91.875	<b>121</b>	0	3	151	<b>154</b>
<i>kWh savings</i>	0	805,000	2,572,500	<b>3,377,500</b>	0	52,500	2,642,500	<b>2,695,000</b>
<i>kW savings</i>	0	460	1,470	<b>1,930</b>	0	33	1,536	<b>1,593</b>
<i>Therm savings</i>	0	34,500	110,250	<b>144,750</b>	0	2,250	113,250	<b>115,500</b>

## Discussion

PG&E submits its revised MF Common Area Measure Initiative implementation plan transitioning MF Common Area Measure to a deemed measures program.

Prior to submittal of this Advice Letter, PG&E weighed the requirements and potential impacts of CAM being Custom Projects Program versus a Deemed Measures Program, including a review of measures for CAM projects in the pipeline and a review of supporting deemed workpapers. Because PG&E believes the new deemed saving approach is not similar to the measurement approach approved Commission in Advice 3943-G /5241-E, PG&E submits this supplemental letter.

PG&E is committed to providing energy savings opportunities to help improve the quality of life for its low income customers residing in MF housing. PG&E will continue to work closely with Energy Division, the MFWG, and other interested stakeholders to refine its approach and to incorporate learnings and successful strategies based PG&E's MF Common Area Measure Initiative moving to a deemed measures program.

PG&E's revised MF Common Area Measure Initiative implementation plan is filed as Attachment 1. Other than the revision detailed and explained in this letter, the implementation plan is unchanged from the version approved in Advice 3943-G /5241-E.

## Protest

Anyone wishing to protest this submittal may do so by letter sent via U.S. mail, facsimile or E-mail, no later than August 26, 2019, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division  
ED Tariff Unit  
505 Van Ness Avenue, 4<sup>th</sup> Floor  
San Francisco, California 94102

Facsimile: (415) 703-2200  
E-mail: EDTariffUnit@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest shall also be sent to PG&E either via E-mail or U.S. mail (and by facsimile, if possible) at the address shown below on the same date it is mailed or delivered to the Commission:

Erik Jacobson  
Director, Regulatory Relations  
c/o Megan Lawson  
Pacific Gas and Electric Company  
77 Beale Street, Mail Code B13U  
P.O. Box 770000  
San Francisco, California 94177

Facsimile: (415) 973-3582  
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

### **Effective Date**

PG&E requests that this Tier 1 advice letter become effective upon date of submittal, which is August 6, 2019.

### **Notice**

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and the





# ADVICE LETTER SUMMARY

## ENERGY UTILITY



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

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39M)

Utility type:

- ELC       GAS       WATER  
 PLC       HEAT

Contact Person: Yvonne Yang

Phone #: (415)973-2094

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: Yvonne.Yang@pge.com

EXPLANATION OF UTILITY TYPE

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 4129-G/5612-E

Tier Designation: 1

Subject of AL: Energy Saving Assistance Multifamily Common Area Measure Initiative Advice Letter per Decision (D.) 17-12-009

Keywords (choose from CPUC listing): Compliance

AL Type:  Monthly  Quarterly  Annual  One-Time  Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.17-12-009

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

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

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: 8/6/19

No. of tariff sheets: N/A

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

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

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

Tariff schedules affected: N/A

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

Pending advice letters that revise the same tariff sheets: N/A

<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: Erik Jacobson, c/o Megan Lawson  
Title: Director, Regulatory Relations  
Utility Name: Pacific Gas and Electric Company  
Address: 77 Beale Street, Mail Code B13U  
City: San Francisco, CA 94177  
State: California Zip: 94177  
Telephone (xxx) xxx-xxxx: (415)973-2093  
Facsimile (xxx) xxx-xxxx: (415)973-3582  
Email: PGETariffs@pge.com

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

Advice 4129-G/5612-E  
August 6, 2019

**Attachment 1**

Pacific Gas and Electric Company, Energy Savings Assistance (ESA) ,  
Multifamily Common Area Measures (CAM), Initiative Implementation  
Plan (Adopted for ESA Initiative) – Clean Version

# Pacific Gas and Electric Company Energy Savings Assistance (ESA) Multifamily Common Area Measures (CAM) Initiative<sup>1</sup> Implementation Plan (Adopted for ESA Initiative) Revision 2

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<sup>1</sup> This document describes only PG&E's plans for Common Area Measures as set forth in requirements from D. 16-11-022 and D. 17-12-009 as revised per guidance from Energy Division. Other Utility Programs such as PG&E's Multifamily Upgrade Program (MUP) or resident-focused treatment programs such as Energy Savings Assistance (ESA) will not be described in this document.

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The following information will be uploaded to EEstats, to create a separate webpage for this initiative through an online database platform.

## 1. Program Budget and Savings Information

EE Stats implementation plan platform will generate summary views of the following information, based on application tables that the PAs upload to EE Stats.

### 1. Initiative Name:

PG&E Energy Savings Assistance (ESA) Multifamily Common Areas Measures (CAM) Initiative

### 2. Budget Table:

**TABLE 1: TOTAL EXPENDITURES OVER THREE YEARS (2018 through 2020)\***

Activity	Total Administrative Cost	Total Direct Implementation (non-incentive Customer Services)	Direct Implementation (Incentives and Rebates)	Total Compliance Budget
Spend	\$3,600,000	\$7,200,000	\$25,200,000	\$36,000,000

Year	2017	2018 (actual)	2019 (budget)	2020 (budget)
Total Spend	\$45,323	\$188,604	\$5,766,073	\$30,000,000

\*Cost estimates are based on historical data from PG&E Energy Efficiency Residential Multifamily Upgrade Program (MUP) along with estimates to implement a Deemed Measures Program and are subject to change. The budget details included in this PIP are within the requirements as set forth by D16-11-02 and no additional funds are being requested.

### 3. Cost Effectiveness (TRC) Approach:

To Be Determined

### 4. Type of Implementer (Core, third party or Partnership):

Third party

### 5. Market Sector (including multi-family, low income, etc.):

Low Income Multifamily

### 6. Intervention Strategies (Upstream, downstream, midstream, direct install, non-resource, finance, etc.):

Downstream with a Deemed Measures Program

## 2. Implementation Plan Narrative

*Provide the following narrative description:*

### 1. Program Description:

*Describe the program, its rationale, and objectives*

The Energy Savings Assistance (ESA) Multifamily Common Area Measures (CAM) is a new initiative serving deed-restricted, multifamily, affordable housing properties. The CAM initiative within the established ESA program will allow multifamily property owners to improve the energy efficiency of their existing multifamily properties, while bringing these same benefits to their low-income residents (also known as tenants). The intent of CAM is to serve the existing multifamily property common area facilities by assessing opportunities throughout the whole building, including all energy end-uses at the property such as exterior envelope, domestic hot water, heating and cooling, lighting, appliances, plug loads, and miscellaneous loads.

Specifically, CAM will focus on deed restricted property facilities such as community and laundry rooms, hallways and corridors, exterior envelope, central heating, cooling, and water heating systems, and outdoor amenities (e.g., pools and outdoor, landscaping, and parking). Common area measures will be covered at 100% of the cost by ESA 2009-2016 authorized unspent funds. CAM will serve small, medium, and large multifamily properties across the PG&E territory. The cost-coverage and targeting structure will be assessed as part of on-going continuous program improvement efforts.

To identify energy savings opportunities and confirm existing conditions, CAM will conduct an energy assessment of each property participating in the program. The level of assessment will vary based on property type, upgrades desired by property owner, and potential energy savings opportunities.

Existing assessments or audits may be leveraged if they were conducted by a different program with comparable auditing criteria such as PG&E's EE Residential Program Multifamily Upgrade Program (MUP) or California Department of Community Services and Development Low Income Weatherization Program for Multifamily Properties (CSD LIWP-LMF). Other audits will be evaluated on a case-by-case basis. At a minimum, the existing assessment must meet broader ESA program requirements and must be no more than three years old.

CAM will provide comprehensive technical assistance to property owners and their contractors. The level of technical assistance will depend on the savings opportunity and property needs. It may include energy assessments, scope of work and measure specification development, installation performance guidelines, utility benchmarking assistance, contractor selection services, and field verification. The technical assistance support will be detailed in the CAM manual.

### 2. Integration

The success of CAM relies on integration with PG&E's EE Residential Multifamily Upgrade Program (MUP), ESA in-unit, and Multifamily Single Point of Contact (MF SPOC). Information on how these initiatives will be leveraged by CAM is provided below.

### A. Integration with PG&E's Multifamily Upgrade Program (MUP):

PG&E is collaborating with the existing MUP program to offer CAM. Aspects of MUP that will be adopted by CAM include: MUP's operational framework (including; building benchmarking, audits, similar policies and procedures), database of projects, and customer relationships in the multifamily space. PG&E will use the existing MUP framework to target deed-restricted, low income multifamily property owners through CAM.

A few key differences between CAM and MUP is the CAM implementer will conduct audits and provide technical assistance with in-house staff for initial implementation to ensure quality and consistency. The implementer may consider delegating these tasks to an approved list of auditors as MUP currently does once CAM is considered a fully operational initiative. In addition, CAM will be a Deemed Measures Program while MUP is a Custom Project Program.

### B. Integration with ESA In-Unit:

CAM will be offered to deed restricted property owners for common areas in tandem with ESA in-unit services for all eligible tenants to promote whole building treatment.

For improvements within the residents' living spaces (such as in-unit appliances and lighting), the CAM implementer will coordinate with the ESA in-unit direct install program implementer(s) to offer ESA measures and services including enhanced energy education to all eligible tenants wanting to participate. The CAM implementer and the ESA implementer will coordinate to ensure a seamless delivery of services and minimal tenant disruption. For all in-unit services including measure installations, the existing ESA model will be utilized, whereby treatment is exclusively provided by ESA-certified contractors.

In order to be eligible to receive common area treatment, the property owner must agree to ESA in-unit treatment for all willing tenants that are eligible to participate. This requirement will be deemed as being met if the tenant was treated with ESA (or a similar weatherization program, such as LIWP) within the last five years. PG&E will request property owners to provide insight as to why eligible units opted-out. PG&E will assess this requirement during implementation and consider additional requirements or exceptions in future program changes. While an owner may not waive tenant treatment and qualify for CAM, the owner may initiate or commit to work for both units and common areas at the same time.

### C. Integration with Multifamily Single Point of Contact (SPOC):

The SPOC is available to facilitate the multifamily property owners' participation in other qualifying, program resources and funding opportunities as applicable, including: PG&E energy efficiency programs such as MUP, On-Bill Financing (OBF), Middle Income Direct Install (MIDI), other regional programs such as CSD's LIWP program.

SPOC will direct property owners to qualifying programs to access IOU and other state and regional funding sources. In addition, the SPOC may assist as needed with coordination between the programs and contractors serving the property to support as seamless and efficient of a process for the property owner and residents, as possible.

SPOC contact information will be made publicly available on PG&E's MUP website, as well as a PG&E-endorsed, SPOC-specific webpage.

### 3. Program Delivery and Customer Services:

*Describe how the energy efficiency program will deliver savings (upstream, downstream, direct install, etc.) how it will reach customers and the services that the program will provide. Describe all services and tools that are provided.*

To deliver downstream energy savings in multifamily common areas, CAM will conduct the following program delivery and customer services:

**Outreach:** CAM will educate the multifamily affordable housing market on common area measures through regular communications, newsletters, webinars, industry event sponsorship and attendance, industry partnerships, and direct outreach. CAM will conduct outreach to publicly available lists of low-income deed-restricted properties through federal, state, and regional sources such as: projects that applied for four percent and nine percent TCAC funding<sup>2</sup>, the Housing and Community Development (HCD) Affordable Housing Rental Directory, California Housing Finance Agency (CalHFA) Apartment Rental Information lists, U.S. Department of Housing and Urban Development (HUD) Affordable Apartment Search, and U.S. Department of Agriculture (USDA) Rural Development Multi-Family Housing Rentals list. CAM will outreach to TCAC, and the CSD LIWP-Large Multifamily (LMF) program, among other entities. In addition, the CAM implementer will participate in TCAC workshops and other affordable housing workshops and conferences to identify potential participants for CAM.

**Affordability Qualification and Screening:** Appropriate affordability documentation will be collected by the CAM implementer to verify that at least 65 percent of residents qualify under the ESA affordability definition (200 percent of Federal Poverty Line, FPL). Documentation will be coordinated with other programs (such as CSD LIWP-LMF) where applicable. Receipt of the agreements, percent of qualifying residents, and number of years left of affordability restrictions on the regulatory agreement or deed will be documented.

**Energy Audit Delivery, Technical Assistance, and Benchmarking:** Energy audits, technical assistance, and benchmarking will be tailored to individual property needs and will be delivered by the CAM implementer. CAM will leverage infrastructure from PG&E's existing Multifamily Upgrade Program (MUP) including audits, verification, and benchmarking procedures.

The CAM implementer will provide comprehensive technical assistance to property owners and their contractors throughout the project lifecycle from start to finish. The level of technical assistance will depend on the savings opportunity and property needs and could include energy assessments, scope of work and

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<sup>2</sup> Congress created the federal Low Income Housing Tax Credit Program in 1986. It replaced traditional housing tax incentives, such as accelerated depreciation, with a tax credit that enables low-income housing sponsors and developers to raise project equity through the sale of tax benefits to investors. Two types of federal tax credits are available and are generally referred to as nine percent (9%) and four percent (4%) credits. These terms refer to the approximate percentage of a project's "qualified basis" a taxpayer may deduct from their annual federal tax liability in each of ten years. (See "How Credit Amounts are Calculated below). <http://www.treasurer.ca.gov/ctcac/program.pdf>

measure specification development, installation performance guidelines, utility building benchmarking assistance, contractor selection services, and field verification.

After prospective properties have passed initial qualification screening for eligibility, the level of audit will be tailored to the property and owner needs (from basic assessments to comprehensive audits). For example, if the property is considering substantial exterior envelope and central system replacement or is undergoing a tax credit resyndication, the property could receive an in-depth ASHRAE Level II energy audit of common areas (i.e. to align with TCAC requirements). The CAM initiative will engage property owners during tax credit resyndication or at other points of financial exchange such as buying or selling, as this is an ideal time to execute comprehensive whole property improvements. By contrast, if the property is primarily interested in lighter touch measures such as lighting and small appliance replacements and has already replaced major central systems in recent years, the property could receive a more basic audit.

All projects will only include deemed measures with associated workpapers. Where feasible, the CAM implementer will verify pre- and post-installation energy usage using utility benchmarking and the EPA's Energy Star Portfolio Manager benchmarking tool as this is currently the process in MUP. To obtain this data, the CAM implementer will coordinate with the property owner to register the participating property through PG&E's AB-802 compliant benchmarking portal, which provides aggregated utility usage data to eligible multifamily properties with five or more meters.

For TCAC or CSD LIWP-LMF participants, the implementer will coordinate audit efforts where possible to minimize duplicate effort.

**Measure Installation Oversight:** The CAM implementer will coordinate with contractors performing measure installation in multifamily common areas.<sup>3</sup> Additionally, the implementer will schedule regular progress meetings with the project team (including contractors) at key project milestones (project kick-off, pre-construction meeting, mid-construction meeting, etc.) to review program requirements, approved measure specifications and installation progress. As the program develops, performance specifications and installation best practice guidance for common area measures will be identified by leveraging tools already created through the PG&E Multifamily Upgrade Program, as appropriate.

For all installation work, owners will select their own contractor. Owners are responsible for ensuring their selected contractor has necessary insurance, certifications, and professional licenses to perform the agreed upon work.

For all in-unit work, PG&E will utilize the existing ESA model for measure installation and oversight. In addition, only ESA-certified contractors will be permitted to perform in-unit treatment (i.e. in-unit installations).

**Scope of Work and Field Quality Control:** The implementer will work with the property owner and contractor (and energy consultant, where applicable) to refine the common area measures scope of work for each property. Measure refinement will include defining the deemed measures to be installed including quantity, specification, installation schedule, and post-installation field verification. The CAM implementer

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<sup>3</sup> All in-unit work will be conducted by the general ESA program under standard ESA operating procedures and sponsored with ESA funds.

will select recommended deemed measures as a result of opportunities defined through the field audit as well as based on property owner or contractor/consultant identified desired upgrades.

The implementer will work with the building owner to adopt the greatest scope of the recommended audit as possible with the building owner. If for any reason the building owner chooses to forego part of the audit recommendations, the implementer will document the deemed measures not selected by property owner and why the owner opted not to install the measures (i.e., missed opportunities). The implementer will conduct field quality control on a defined portion of projects (defined in the CAM manual); field quality control is a site inspection that verifies that the measures agreed upon by the owner and contractor were installed at or above the agreed upon efficiency specifications and that the appropriate permits were pulled. The implementer will adjust the field quality control percentages based on the complexity of the project and the inspection results of each contractor. All projects will be required to submit close-out documentation prior to receiving payment from PG&E. Close-out documentation will include detailed, itemized invoices, permits, measure specification sheets, photos, as well as other documentation as communicated by PG&E and the implementer.

#### 4. Program Design and Best Practices:

*Describe how the program meets the market barriers in the relevant market sector/end use. Describe why the program approach constitutes “best practices” or reflects “lessons learned”. Provide references where available.*

PG&E is leveraging the MUP model infrastructure (including policies and procedures), and existing, historic market relationships and expertise in the multifamily space. MUP has supported multifamily building owners, contractors and their energy consultants on completing whole property energy efficiency improvements (including residential units, common areas, and exterior facilities) since 2014. CAM will leverage PG&E's Multifamily Upgrade Program (MUP) as appropriate, including:

- Outreach to and relationships with affordable housing owners. Since inception, over half of the properties that participated in MUP are deed-restricted multifamily, including publicly owned housing authority properties and private housing managed by non-profit and for-profit entities.
- Contractor and consultant partnerships already solidified in the multifamily market and with PG&E Residential Energy Efficiency Programs
- Lead nurturing and project tracking capabilities
- Vetted policies and procedures applicable to project intake, analysis, quality assurance, etc. for multifamily retrofit projects.
- Program design based on:
  - Alignment with market procedures for comprehensive retrofits, including coordination with LIWP and TCAC, to maximize project resources and achieve deeper savings
  - Best practices and lessons learned from multifamily stakeholder groups including Tax Credit Allocation Committee (TCAC) Sustainable Building Method committee, Energy Upgrade California multifamily statewide IOU and Regional Energy Network program stakeholders, the Home Energy Retrofit Coordinating Committee (HERCC), ACEEE multifamily program design best practices, and the Energy Efficiency for All affordable multifamily coalition

PG&E's common area measures initiative was designed leveraging components of affordable multifamily market program best practices<sup>4</sup>. The initiative will continually evolve, assess effectiveness of program design, eligibility criteria, and participation process, and take market feedback and lessons learned into consideration. To encourage this feedback loop to occur formally through the Multifamily Working Group and informally from the multifamily stakeholders through PG&E, the funding for CAM will be broken up into phases. After each phase, the program will assess results allowing the program to revisit requirements and design. For a more detailed description of phases, see **Section 3.4 Supporting Documents: Quantitative Program Targets**.

Key design elements of PG&E's Common Area Measures are highlighted below:

- A. Operate CAM in an iterative fashion to collect & analyze data, integrate feedback, and evolve:** CAM will aim to serve a diverse set of customers to gather data on all types of properties (ranging in small, medium, and large multifamily properties, # of units, age, end uses, region, demographics etc.). For example, to reach rural properties, CAM will coordinate with USDA's list of rural housing rentals. PG&E will collect data on property ownership, energy savings, costs, cost effectiveness, stakeholder (including Multifamily Working Group Participant) feedback, and participant satisfaction to inform future program iterations.
- B. Focus value to directly benefit low income residents:** Residents will benefit from safer living conditions, improved common area spaces and amenities, and potential cost-savings from property owners' operating cost reductions. Through property owners' participation in CAM, residents will be provided the opportunity and encouraged to participate in ESA, thereby extending the ESA benefits to as many low income residents as possible.
- C. Capturing all energy efficiency savings:** With the exception of routine maintenance and replacement upon failure, most deed-restricted multifamily properties undergo a major retrofit only once every 15-30 years (for example, at time of tax credit refinance through the Tax Credit Allocation Committee).<sup>5</sup> If all end-uses at the site are not addressed at that time, it is unlikely they will be addressed for many years (if at all). Therefore, it is important that when a deed-restricted owner seeks to undergo a refinance that all possible energy improvements are explored. To facilitate informing deed-restricted owners that apply for financing about ESA and specifically CAM, the CAM implementer will actively participate in select TCAC workshops and conduct direct outreach to TCAC applicants. The CAM implementer will continuously strive to align its requirements with those of TCAC and other affordable housing financing programs, advocating for alignment and process streamlining, wherever possible. CAM will address a wide range of improvement measures, ranging from exterior building envelope improvement to appliance replacement, leveraging ESA in-unit, LIWP, and other programs within PG&E's portfolio to allow for improvements across the whole property (i.e. a whole-building approach). CAM will strive to serve all eligible property owners regardless of the size of project scope.

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<sup>4</sup> CAM design took into consideration best practices from PG&E's experience running multifamily programs such as PG&E Multifamily Upgrade Program as well as best practices identified by NRDC (NRDC, Program Design Guide: Energy Efficiency Programs in Multifamily Affordable Housing, 2015), ACEEE and other stakeholders.

<sup>5</sup> Multifamily Home Energy Retrofit Coordinating Committee (HERCC), HERCC Recommendations Report, 2015, page 11 ([www.multifamilygreen.org/wp-content/uploads/2011/02/MF-HERCC-Report\\_January2015\\_FINAL.pdf](http://www.multifamilygreen.org/wp-content/uploads/2011/02/MF-HERCC-Report_January2015_FINAL.pdf))

- D. Improve access to energy usage information:** CAM will connect property owners to energy usage data, benchmarking properties through PG&E's AB 802 utility benchmarking portal, where feasible. The benchmarking report will also connect property owners to a wide range of program incentives and services, both within PG&E's portfolio of programs as well as other regional programs such as the Low Income Weatherization Program (LIWP), regional local government programs, and regional water district programs.
- E. Build partnerships with key local market participants:** The multifamily deed-restricted sector is a tight-knit community that places a high level of value on collaboration, advocacy, and best practice exchange. Therefore, the CAM implementer will frequently engage directly with funders, membership organizations that advocate on low-income property owners' behalf, and from peers (other deed-restricted property owners) in order to be most effective in running and continually improving CAM. It is also important that the programs dedicated to the deed-restricted sector align their requirements to prevent duplicated efforts or missed opportunities. The CAM implementer will collaborate with programs such as TCAC and CSD LIWP with the goal of streamlining participation between multiple programs wherever possible, and allowing property owners to leverage funding from multiple funding sources. The CAM implementer will attend affordable housing conferences and events where deed-restricted owners, managers, and contractors converge to discuss affordable housing advocacy and policy issues. The intent of engagement with key local market participants is to educate the affordable housing stakeholders on CAM and present results and benefits to-date.
- F. Help owners finance efficiency projects:** Deed-restricted properties typically have a number of funding sources embedded in each property, this makes it challenging to take on additional debt at a property for improvements that are not considered routine maintenance or identified as high priority through a federally mandated property needs assessment. In instances where sufficient operating budget is available to make important improvements, it is not always possible to access these operating reserves without explicit approval from the regulatory agency (such as HUD) as well as the multiple private investors associated with the property. Therefore, gap-funding is often needed to complete all desired improvements. CAM will cover qualified measures at 100% and pass projects to SPOC if they don't qualify for CAM or ESA in unit. SPOC will work with On-Bill Financing (OBF), On-Bill Repayment, and other IOU programs to bridge the gap for improvements not covered through CAM or ESA in-unit programs.
- G. Provide robust quality assurance and technical assistance:** Many deed-restricted multifamily property owners are staff and resource constrained and cannot always afford to have an in-house technical expert or energy manager, therefore, the more that programs can provide turn-key support and technical assistance to overcome this challenge, the more successful the program can be in realizing deep energy savings. As much as possible, CAM will tailor the technical assistance activity to the owner needs, providing varying levels of technical support depending on the technical expertise of the project team and the availability of existing energy audit reports. At a minimum, CAM will work with the project team to document common area improvement opportunities, completing a site visit to assess existing conditions and upgrade opportunities, as needed. For properties that need additional assistance such as an investment grade audit, contractor selection, or measure specification development, CAM will work with the property owner to help define these needs and to determine the level of service the CAM implementer may provide in these areas. PG&E will monitor spending in

technical assistance at the end of each funding phase as described in **Section 3.4 Quantitative Program Targets** and communicate with owners prior to making any changes to technical service offerings. CAM will conduct quality assurance activities on all projects including: verifying existing conditions through an energy audit, completing a desktop review of the proposed scope of work and recommending improvements to this scope.

- H. Allow owners to select installation contractors:** Multifamily properties operate like a traditional business, meaning that owners frequently have a preferred list of contractors that are on-call to support their ongoing maintenance needs or are competitively selected to implement a more comprehensive retrofit. These same contractors are trusted by the owner to deliver quality installations and to know the owners preferred make, model, and efficiency of the commonly replaced appliances. In public housing, the Public Housing Authorities are required to complete a lengthy procurement process prior to completing improvements and often are required to complete work following fair labor practices. As such, CAM will allow the owner to select their own contractor. Owners are responsible for ensuring their selected contractor has necessary insurance, certifications, and professional licenses to perform the agreed upon work.

#### 5. Cost Effectiveness (Total Resource Cost - TRC) Approach:

PG&E intends to use CAM funds for deep energy savings, while stretching benefits across as many properties and customers as possible. PG&E will monitor the cost effectiveness of the initial, full-cost coverage initiative, at the project and CAM portfolio levels, in order to inform potential future program design and customer eligibility criteria. If certain cost effectiveness criteria becomes a clear mandate for the program, then, PG&E may modify customer and measure eligibility criteria to include:

1. **Existing condition minimums.** These requirements may be defined by equipment type, fuel type, and/or vintage. Examples include a building with central water heating system or incandescent lighting.
2. **Customer-type.** For example, CAM participation may be limited to common area meters using significant kWh/month prior to program participation, or to deed-restricted properties with specific common area onsite support services (such as commercial kitchens, computer labs, etc.)
3. **Minimum energy savings or cost effectiveness.** For each project, the CAM implementer will use energy assessment tools to maximize the upgrade scope of work while remaining above the energy savings or cost effectiveness threshold set for each participating project. This could also include reevaluating the eligible measure list to only include measures that meet new criteria.
4. **Owner-copay.** For individual measures or a package of measures which do not meet cost-effectiveness criteria, CAM will consider requiring a co-pay. This would allow a project to be bought down in order to stay within the cost-effectiveness limits set for the program. PG&E understands that the current ESA decision requires that CAM cover the full cost of improvements and that therefore a co-pay is a longer-term consideration.

#### 6. EM&V Approach:

*Describe any process evaluation or other evaluation efforts that the Program Administrator (PA) will undertake. Identify the evaluation needs that the PA must build.*

The evaluation process that all the IOUs will follow has yet to be determined. However, the CAM implementer will coordinate early and often with the PG&E and CPUC evaluation teams to ensure that the program is well prepared for future evaluation requirements and efforts.

### 7. Pilot/s:

(not applicable at this time)

### 8. Additional information:

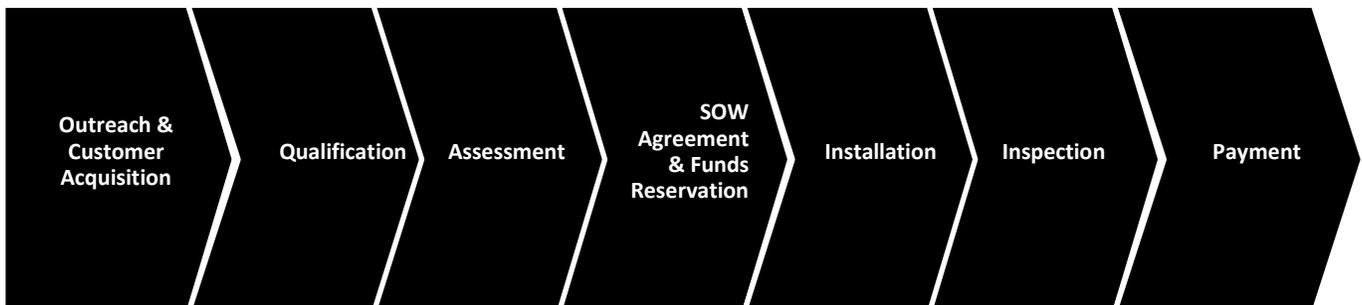
*Include here additional information as required by Commission decision or ruling (As applicable. Indicate decision or ruling and page numbers)*

N/A

### 3. Supporting Sections:

#### 1. 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.*



#### 2. Program Aspects (i.e., a description of various program elements/aspects):

See "Program Aspects" section, page 16, below

#### 3. Incentive Tables, Workpapers, Software Tools:

*Provide a summary table of measures and incentive levels, along with links to the associated workpapers. Templates are available at <http://eestats.cpuc.ca.gov/StandardTables/GuidanceDocument.aspx>.*

Eligible common area measures will be covered at full cost initially. Measure incentive caps or changes to the program may be made to manage funding should full cost coverage change.

CAM will revise existing workpapers as appropriate to report energy savings. All ESA installed common area measures will be deemed measures with determined values from Impact Evaluations, non-DEER workpapers, or DEER measures.

#### 4. Quantitative Program Targets:

*Provide estimated quantitative information on number of projects, companies, non-incentive customer services and/or incentives that program aims to deliver and/or complete annually. Provide references where available.*

**Table 2: Common Area Measure Goals and Budget**

	2018 (actual)	2019 (forecast)	2020 (forecast)	Total (forecast)
<b>Number of buildings audited<sup>6</sup></b>	43	1,297	530	1,870
<b>Number of buildings treated</b>	0	30	1,510	1,540
<b>kWh Savings</b>	0	52,500	2,642,500	2,695,000
<b>kW Savings</b>	0	33	1,536	1,593
<b>Therms Savings</b>	0	2,250	113,250	115,500
<b>Total Program Budget</b>	\$233,927	\$5,766,073	\$30,000,000	\$36,000,000

Table 2 summarizes audit, buildings treated, savings and payment goals by year.

PG&E will use a phased approach focusing on research, limited launch, and full launch in five main phases: 1- Market Assessment, 2- Program Design and Ramp-Up, 3- Common Area Installation Initial Roll-Out, 4 – Full Scale Roll Out, 5- Project Completion and Ramp Down. This approach will allow PG&E to be most effective in reaching budget, treatment, and savings goals within the shortened timeframe, while using real project data to inform improvements to processes, policies, and procedures. These phases are sequential and each is dependent on the phase prior. Proposed phases are as follows:

**Phase 1 – Market Assessment (Research).** The CAM implementer will conduct a market assessment to characterize the types of multifamily properties in the PG&E territory to identify the largest energy savings opportunities. Results will be used to inform any changes needed to make the MUP model most applicable to the deed-restricted, low income multifamily market. Results will influence Phase 2.

**Phase 2 – Program Design and Ramp-Up (Research).** The CAM implementer will finalize the program design and deemed measure mix based on the results from Phase I. During this phase, the implementer will create the program policies and procedures manual, create a customer acquisition plan, develop collateral, set up data tracking and reporting, begin project intake, conduct limited audits, and provide technical assistance. The implementer will benchmark properties and initiate coordination with the CSD and ESA in-unit in preparation for Phase 3.

<sup>6</sup> Assumes 1,170 buildings will be audited total (10 buildings per project on average)

**Phase 3 – Common Area Installation Initial Roll-Out (Limited Launch).** The implementer will continue technical assistance and audits, and will issue the first project reservations, up to a \$5 million program cap in total reservations. Interested projects that do not make the first \$5M cap allocation will be queued in order of those who complete all required steps to become a committed project. Steps may entail the property being confirmed by the implementer as eligible and the property owner signing an application agreeing to a CAM scope of work as outlined in **Section 3.1 Flow Chart** above. During this phase, the implementer will identify required workpapers, validate the program process, technical requirements, and policies. Workpapers requiring revisions to support CAM will be prioritized based on property/project need. During this phase, the implementer will assess how each component of the program is functioning and recommend appropriate adjustments prior to full-scale roll-out in Phase 4. In order to move to Phase 4, all processes, including; audits, technical assistance, scope of work refinement, and installations, need to be defined and working as expected, stable and able to scale up.

**Phase 4 – Full Scale Roll-Out.** This phase provides additional funds and will scale up audits and reservations. Projects started in Phase 3 will continue to be supported through measure installation and payment. Reservations in this phase will fill the pipeline to meet overall goals during Phase 5.

**Phase 5 – Project Completion and Ramp Down.** Phase 5 will include completion and payment of projects started in Phase 4 as well as the reservation of a small set of projects (only projects that can be fully completed by 2020). The majority of activity in this phase will focus on installation support, installation verification, and project close-out (and payment). Once all phases have completed, the CAM implementer will propose recommendations to fine tune these aspects of program design.

Table 3 summarizes planned activity forecast to be completed within each phase to meet the Common Area Measure goals defined in Table 2 above. Dates are subject to change.

**Table 3: Phasing Structure**

Activities	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
<b>Goal Completion Date</b> (subject to change)	<b>Q3 2018</b>	<b>Q4 2018</b> Custom Project Program (Original Approach)	<b>Q3 2019</b> Deemed Measures Program (Revised Approach)	<b>Q4 2019</b>	<b>Q4 2020</b>
<b>Phase Name</b>	<b>Market Assessment</b>	<b>Program Design and Ramp Up</b>	<b>Common Area Installations Initial Roll Out</b>	<b>Full-Scale Roll Out</b>	<b>Project Completion and Ramp Down</b>
<b>Initiation and reporting set up</b>	N/A	<ul style="list-style-type: none"> <li>Common Area plan</li> <li>Project initiation</li> <li>Data tracking plan and set-up</li> </ul>	<ul style="list-style-type: none"> <li>Common Area plan revised</li> <li>Update data tracking plan and set-up</li> <li></li> </ul>	N/A	N/A
<b>Inputs to Program design</b>	<ul style="list-style-type: none"> <li>Market assessment</li> </ul>	<ul style="list-style-type: none"> <li>Measure mix and strategy</li> <li>Program goals, targets,</li> </ul>	<ul style="list-style-type: none"> <li>Measure mix strategy updated</li> <li>Program goals, targets,</li> </ul>	<ul style="list-style-type: none"> <li>Assess and modify as needed</li> </ul>	<ul style="list-style-type: none"> <li>Assess and modify as needed</li> </ul>

	<ul style="list-style-type: none"> <li>Procedures manual outline</li> </ul>	<ul style="list-style-type: none"> <li>milestones (updates to Table 2)</li> <li>Procedures manual finalized</li> </ul>	<ul style="list-style-type: none"> <li>milestones (updates to Table 2)</li> <li>Procedures manual revised</li> </ul>		
<b>Customer acquisition</b>	N/A	<ul style="list-style-type: none"> <li>Customer acquisition plan</li> <li>Collateral</li> </ul>	<ul style="list-style-type: none"> <li>Customer acquisition plan revised</li> <li>Collateral revised</li> </ul>	<ul style="list-style-type: none"> <li>Customer acquisition</li> </ul>	N/A
<b>Implementation</b>	N/A	<ul style="list-style-type: none"> <li>Eligibility and intake</li> <li>Audits and technical assistance</li> <li>Project &amp; Pipeline management</li> <li>Benchmarking support</li> <li>CSD coordination</li> <li>ESA in-unit coordination</li> <li>Application processing</li> </ul>	<ul style="list-style-type: none"> <li>Eligibility and intake</li> <li>Audits and technical assistance</li> <li>Workpaper revision</li> <li>Measure installation oversight</li> <li>Project &amp; Pipeline management</li> <li>Benchmarking support</li> <li>CSD &amp; ESA coordination</li> <li>Application processing</li> <li>Post inspection</li> <li>Technology changes to Energy Insight (Program database) for regulatory reporting and payment processing<sup>(a)</sup></li> </ul>	<ul style="list-style-type: none"> <li>Eligibility and intake</li> <li>Audits and technical assistance</li> <li>Workpaper revision</li> <li>Measure installation oversight</li> <li>Project &amp; Pipeline management</li> <li>Benchmarking support</li> <li>CSD &amp; ESA coordination</li> <li>Application processing</li> <li>Post inspection</li> </ul>	<ul style="list-style-type: none"> <li>Project &amp; Pipeline management</li> <li>Benchmarking support</li> <li>Limited audits and technical assistance</li> <li>Application processing</li> <li>Measure installation oversight</li> <li>Post inspection</li> </ul>

(a) Identifies a critical path item; delays in technology updates may delay project payments and buildings counted as treated.

#### 4. Program Aspects:

All programs must have manuals to clarify for implementers and customers the eligibility requirements and rules of the program. Note that program rules must comply with CPUC policies and rules. Table templates are available at <http://eestats.cpuc.ca.gov/StandardTables/GuidanceDocument.aspx>. At minimum, manuals should include:

## 1. Eligible Measures or Measure Eligibility:

*Provide requirements for measure eligibility or a list of eligible measures.*

CAM will take a whole-building audit approach to assess eligible measures. CAM will utilize supported workpapers to determine energy savings. These include common area water heating, exterior building shell (envelope), heating, lighting, and appliances. A list of prioritized deemed measures was developed and includes the most common systems and equipment requiring upgrades, based on CAM audits and MUP projects. PG&E will revise workpapers for these priority measures prior to revising workpapers in support of non-priority deemed measures. PG&E will develop or modify existing workpapers to offer additional deemed measures not included in the priority measures based upon property/project need.

. The program may explore incentive caps for certain measures, co-pays, or per property funding caps as a way to manage program funding if required. The initial list of deemed measures will include the following priority measures:

### Priority Deemed Measures

- Appliances
  - Clothes Washer - Commercial
  - Residential Refrigerator
  - Commercial Refrigerator, Freezer
- Domestic Hot Water
  - Central System Gas Boiler
  - Hot Water Demand Control
  - Faucet aerator
  - Low Flow Shower Head
  - Heat Pump Water Heater
  - Tankless Water Heater
  - Storage Water Heater
- Envelope
  - Windows
  - Attic Insulation
  - Wall Insulation
  - Window Film
- HVAC
  - Common Area Air Conditioning
  - Central System Gas Water Heater/Space Heating
  - Common Area Forced Air Furnace
  - Common Area Heat Pump
  - Air Cooled Package Units
  - Central Cooling System, Central Heating System
  - Programmable Thermostat
  - Demand Control Ventilation
- Lighting
  - LED Exit Sign (2W)
  - LED Lamp

- LED T8
- Exterior LED Wall Mount (14 - 60W)
- Occupancy Sensor
- Exterior LED Pole Mount (70 - 260W)
- Exterior LED Architectural Flood/Spot (25 - 150W)
- LED Parking Garage Fixture (35 - 150W)
- Plug Load
  - Power Strip
- Other
  - Variable Speed Pool Pump and Motor

Additional deemed measures may be included based on property/project need. These measures will require workpaper development and may include:

- Clothes Dryer - Commercial
- Commercial Griddle
- Commercial Oven
- Kitchen Exhaust Fan
- Residential Dishwasher
- Pipe Insulation
- Tank Wrap
- Air sealing
- Cool roof
- Window shading
- Ceiling Fans
- Vending Machine Control
- Commercial Pool Heater
- Pool Cover

## 2. Customer Eligibility Requirements:

*Provide requirements for program participation (e.g., annual energy use, peak kW demand)*

To be eligible for CAM, properties must meet affordability requirements, which include; property must be deed-restricted, government or non-profit owned, or federally-recognized tribally owned and demonstrate that at least 65% residents are at or below 200 percent of the Federal Poverty Line (FPL) as defined by the CPUC. To demonstrate affordability, applicants will be asked to sign the ESA Property Owner Affidavit. This intake form will allow property owners to register all properties in their portfolio with ESA, self-certify the percentage of residents that qualify for ESA, and grant site access to these properties. Applicants will also supply the regulatory agreement or deed attached to the multifamily property, which demonstrates the property's affordability restriction.

The program can serve existing multifamily properties with five or more units and will serve both low-rise (three stories and less) and high-rise multifamily buildings (four stories or more). CAM will evaluate

campuses of multiple two-to-four-unit properties on a case-by-case basis. Properties must be located in PG&E service territory and receive gas and/or electric service from PG&E.

Eligible applicants include non-profit organizations; for-profit businesses; and local government entities including, but not limited to cities, counties, housing authorities; non-profit community organizations; regional or statewide nonprofit entities; federally-recognized tribes; and private individuals or corporations.

Participants in CAM must certify all work completed meets all state and local building code, inspection, and permitting requirements. A licensed contractor must complete the installation work.

### 3. Contractor Eligibility Requirements:

*List any contractor (and/or developer, manufacturer, retailer or other “participant”) eligibility requirements (e.g. specific IOU required trainings; specific contractor accreditations; and/or, specific technician certifications required).*

For all eligible common area installation work, owners will select their own contractor for the common area measures. For property owners that do not have a preferred contractor already selected to perform the work, CAM staff will provide the owner with a list of participating MUP contractors, and ESA in-unit qualified contractors.

### 4. Participating Contractors, Manufacturers, Retailers, Distributors:

*For upstream or midstream incentive and/or buy down programs indicate*

N/A

### 5. Additional Services:

*Briefly describe any additional sub-program delivery and measure installation and/or marketing & outreach, training and/or other services provided, if not yet described above.*

N/A

### 6. Audits:

*Indicate whether pre and post audits are required, if there is funding or incentive levels set for audits, eligibility requirements for audit incentives*

CAM will provide an audit, or energy assessment tailored to property owner needs, of common area equipment on each participating property (an audit may not be required if one was completed in the last 3-5 years). An analyst will record existing building conditions, interview maintenance staff, conduct combustion safety testing (where appropriate), and identify upgrade opportunities through a site visit coordinated with the property staff. This visit may also be coordinated with ESA program staff that can assess for eligibility for in-unit upgrades.

The property owner will receive an energy assessment report outlining eligible common area measures, specifications, and estimated energy savings. In consultation with the owner and team, the CAM implementer will finalize the upgrade scope of work prior to reservation of upgrade funds.

#### 7. Sub-Program Quality Assurance Provisions:

*Please list quality assurance, quality control, including accreditations/certification or other credentials*

CAM will provide a pre-retrofit energy assessment and verification of existing conditions, negating the need for a pre-retrofit quality assurance site visit. Analysis conducted through the energy assessment to determine the scope of work, energy savings, and cost-effectiveness will receive desktop quality assurance review prior to reservation of funds.

A minimum percentage of CAM projects will undergo post-retrofit site inspection. Inspectors will verify specifications, locations, and installations of the scope of work funded through CAM.

(End of Attachment)

Advice 4129-G/5612-E  
August 6, 2019

**Attachment 2**

Pacific Gas and Electric Company, Energy Savings Assistance (ESA),  
Multifamily Common Area Measures (CAM), Initiative Implementation  
Plan (Adopted for ESA Initiative) – Redlined Version

# Pacific Gas and Electric Company Energy Savings Assistance (ESA) Multifamily Common Area Measures (CAM) Initiative<sup>1</sup> Implementation Plan (Adopted for ESA Initiative) Revision 2

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4. Program Aspects: .....	<u>161516</u>
1. Eligible Measures or Measure Eligibility: .....	<u>161516</u>

<sup>1</sup> This document describes only PG&E's plans for Common Area Measures as set forth in requirements from D. 16-11-022 and D. 17-12-009 as revised per guidance from Energy Division. Other Utility Programs such as PG&E's Multifamily Upgrade Program (MUP) or resident-focused treatment programs such as Energy Savings Assistance (ESA) will not be described in this document.

2. Customer Eligibility Requirements:.....	<u>191718</u>
3. Contractor Eligibility Requirements:.....	<u>191819</u>
4. Participating Contractors, Manufacturers, Retailers, Distributors: .....	<u>201819</u>
5. Additional Services:.....	<u>201819</u>
6. Audits: .....	<u>201820</u>
7. Sub-Program Quality Assurance Provisions: .....	<u>211820</u>

The following information will be uploaded to EEstats, to create a separate webpage for this initiative through an online database platform.

## 1. Program Budget and Savings Information

EE Stats implementation plan platform will generate summary views of the following information, based on application tables that the PAs upload to EE Stats.

### 1. Initiative Name:

PG&E Energy Savings Assistance (ESA) Multifamily Common Areas Measures (CAM) Initiative

### 2. Budget Table:

**TABLE 1: TOTAL EXPENDITURES OVER THREE YEARS (2018 through 2020)\***

Activity	Total Administrative Cost	Total Direct Implementation (non-incentive Customer Services)	Direct Implementation (Incentives and Rebates)	Total Compliance Budget
Spend	\$3,600,000	\$7,200,000	\$25,200,000	\$36,000,000

Year	2017	2018 <u>(actual)</u>	2019 <u>(budget)</u>	2020 <u>(budget)</u>
Total Spend	<del>N/A</del> <u>\$45,323</u>	<del>\$1,650,000</del> <u>188,604</u>	<del>\$11,350,000</del> <u>5,766,073</u>	<del>\$23,000,000</del> <u>30,000,000</u>

\*Cost estimates are based on historical data from PG&E Energy Efficiency Residential Multifamily Upgrade Program (MUP) along with estimates to implement a Deemed Measures Program and are subject to change. The budget details included in this PIP are within the requirements as set forth by D16-11-02 and no additional funds are being requested.

### 3. Cost Effectiveness (TRC) Approach:

To Be Determined

### 4. Type of Implementer (Core, third party or Partnership):

Third party

### 5. Market Sector (including multi-family, low income, etc.):

Low Income Multifamily

### 6. Intervention Strategies (Upstream, downstream, midstream, direct install, non-resource, finance, etc.):

Downstream Hybrid: Customized and Deemed Approaches for savings claims Downstream with a Deemed Measures Program

## 2. Implementation Plan Narrative

Provide the following narrative description:

### 1. Program Description:

*Describe the program, its rationale, and objectives*

The Energy Savings Assistance (ESA) Multifamily Common Area Measures (CAM) is a new initiative serving deed-restricted, multifamily, affordable housing properties. The CAM initiative within the established ESA program will allow multifamily property owners to improve the energy efficiency of their existing multifamily properties, while bringing these same benefits to their low-income residents (also known as tenants). The intent of CAM is to serve the existing multifamily property common area facilities by assessing opportunities throughout the whole building, including all energy end-uses at the property such as exterior envelope, domestic hot water, heating and cooling, lighting, appliances, plug loads, and miscellaneous loads.

Specifically, CAM will focus on deed restricted property facilities such as community and laundry rooms, hallways and corridors, building shellexterior envelope, central heating, cooling, and water heating systems, and outdoor amenities (e.g., pools and outdoor, landscaping, and parking). Common area measures will be covered at 100% of the cost by ESA 2009-2016 authorized unspent funds. CAM will serve small, medium, and large multifamily properties across the PG&E territory. The cost-coverage and targeting structure will be assessed as part of on-going continuous program improvement efforts.

To identify energy savings opportunities and confirm existing conditions, CAM will conduct an energy assessment of each property participating in the program. The level of assessment will vary based on property type, upgrades desired by property owner, and potential energy savings opportunities.

Existing assessments or audits may be leveraged if they were conducted by a different program with comparable auditing criteria such as PG&E's EE Residential Program Multifamily Upgrade Program (MUP) or California Department of Community Services and Development Low Income Weatherization Program for Multifamily Properties (CSD LIWP-LMF). Other audits will be evaluated on a case-by-case basis. At a minimum, the existing assessment must meet broader ESA program requirements and must be no more than three years old.

CAM will provide comprehensive technical assistance to property owners and their contractors. The level of technical assistance will depend on the savings opportunity and property needs. It may include energy assessments, ~~energy modeling~~, scope of work and measure specification development, installation performance guidelines, utility benchmarking assistance, contractor selection services, and field verification. The ~~exact level of~~ technical assistance support will be detailed in ~~a final~~the CAM manual ~~upon launch~~.

### 2. Integration

The success of CAM relies on integration with PG&E's EE Residential Multifamily Upgrade Program (MUP), ESA in-unit, and Multifamily Single Point of Contact (MF SPOC). Information on how these initiatives will be leveraged by CAM is provided below.

## A. Integration with PG&E's Multifamily Upgrade Program (MUP):

PG&E is utilizing collaborating with the existing MUP program to offer CAM. Aspects of MUP that will be adopted by CAM include: MUP's operational framework (including; building benchmarking, audits, similar policies and procedures), policies and procedures, contractor database, savings calculation methodology) and database of projects, and customer relationships in the multifamily space. ~~CAM will leverage MUP savings claim methodology including approved modeling software for customized projects and work papers for deemed measures.~~ PG&E will use the existing MUP framework to target deed-restricted, low income multifamily property owners through CAM.

One A few key differences s between CAM and MUP is the CAM implementer will conduct audits and provide technical assistance with in-house staff for initial implementation to ensure quality and consistency. The implementer may consider delegating these tasks to an approved list of auditors as MUP currently does once CAM is considered a fully operational initiative. In addition, CAM will be a Deemed Measures Program while MUP is a Custom Project Program.

## B. Integration with ESA In-Unit:

CAM will be offered to deed restricted property owners for common areas in tandem with ESA in-unit services for all eligible tenants to promote whole building treatment.

For improvements within the residents' living spaces (such as in-unit appliances and lighting), the CAM implementer will coordinate with the ESA in-unit direct install program implementer(s) to offer ESA measures and services including enhanced energy education to all eligible tenants wanting to participate. The CAM implementer and the ESA implementer will coordinate to ensure a seamless delivery of services and minimal tenant disruption. For all in-unit services including measure installations, the existing ESA model will be utilized, whereby treatment is exclusively provided by ESA-certified contractors.

In order to be eligible to receive common area treatment, the property owner must agree to ESA in-unit treatment for all willing tenants that are eligible to participate. This requirement will be deemed as being met if the tenant was treated with ESA (or a similar weatherization program, such as LIWP) within the last five years. PG&E will request property owners to provide insight as to why eligible units opted-out. PG&E will assess this requirement during implementation and consider additional requirements or exceptions in future program changes. While an owner may not waive tenant treatment and qualify for CAM, the owner may initiate or commit to work for both units and common areas at the same time.

## C. Integration with Multifamily Single Point of Contact (SPOC):

The SPOC is available to facilitate the multifamily property owners' participation in other qualifying, program resources and funding opportunities as applicable, including: PG&E energy efficiency programs such as MUP, On-Bill Financing (OBF), Middle Income Direct Install (MIDI), other regional programs such as CSD's LIWP program.

SPOC will direct property owners to qualifying programs to access IOU and other state and regional funding sources. In addition, the SPOC may assist as needed with coordination between the programs and contractors serving the property to support as seamless and efficient of a process for the property owner and residents, as possible.

SPOC contact information will be made publicly available on PG&E's MUP website, as well as a PG&E-endorsed, SPOC-specific webpage.

### 3. Program Delivery and Customer Services:

*Describe how the energy efficiency program will deliver savings (upstream, downstream, direct install, etc.) how it will reach customers and the services that the program will provide. Describe all services and tools that are provided.*

To deliver downstream energy savings in multifamily common areas, CAM will conduct the following program delivery and customer services:

**Outreach:** CAM will educate the multifamily affordable housing market on common area measures through regular communications, newsletters, webinars, industry event sponsorship and attendance, industry partnerships, and direct outreach. CAM will conduct outreach to publicly available lists of low-income deed-restricted properties through federal, state, and regional sources such as: projects that applied for four percent and nine percent TCAC funding<sup>2</sup>, the Housing and Community Development (HCD) Affordable Housing Rental Directory, California Housing Finance Agency (CalHFA) Apartment Rental Information lists, U.S. Department of Housing and Urban Development (HUD) Affordable Apartment Search, and U.S. Department of Agriculture (USDA) Rural Development Multi-Family Housing Rentals list. CAM will outreach to TCAC, and the CSD LIWP-Large Multifamily (LMF) program, among other entities. In addition, the CAM implementer will participate in TCAC workshops and other affordable housing workshops and conferences to identify potential participants for CAM.

**Affordability Qualification and Screening:** Appropriate affordability documentation will be collected by the CAM implementer to verify that at least 65 percent of residents qualify under the ESA affordability definition (200 percent of Federal Poverty Line, FPL). Documentation will be coordinated with other programs (such as CSD LIWP-LMF) where applicable. Receipt of the agreements, percent of qualifying residents, and number of years left of affordability restrictions on the regulatory agreement or deed will be documented.

**Energy Audit Delivery, Technical Assistance, and Benchmarking:** Energy audits, technical assistance, and benchmarking will be tailored to individual property needs and will be delivered by the CAM implementer. CAM will leverage infrastructure from PG&E's existing Multifamily Upgrade Program (MUP) including ~~its participating installation contractors (unless the property owner has a preferred contractor that meets~~

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<sup>2</sup> Congress created the federal Low Income Housing Tax Credit Program in 1986. It replaced traditional housing tax incentives, such as accelerated depreciation, with a tax credit that enables low-income housing sponsors and developers to raise project equity through the sale of tax benefits to investors. Two types of federal tax credits are available and are generally referred to as nine percent (9%) and four percent (4%) credits. These terms refer to the approximate percentage of a project's "qualified basis" a taxpayer may deduct from their annual federal tax liability in each of ten years. (See "How Credit Amounts are Calculated below). <http://www.treasurer.ca.gov/ctcac/program.pdf>

~~program qualifications, which the CAM implementer will add to the participating contractor list on a rolling basis if requirements are met), technical guidelines (audits, modeling, verification), and benchmarking procedures.~~

The CAM implementer will provide comprehensive technical assistance to property owners and their contractors throughout the project lifecycle from start to finish. The level of technical assistance will depend on the savings opportunity and property needs and could include energy assessments, ~~energy modeling,~~ scope of work and measure specification development, installation performance guidelines, utility ~~building~~ benchmarking assistance, contractor selection services, and field verification. ~~The scope of technical assistance that will be provided will be finalized in a manual upon launch of CAM.~~

After prospective properties have passed initial qualification screening for eligibility, the level of audit will be tailored to the property and owner needs (from basic assessments to comprehensive audits). For example, if the property is considering substantial ~~exterior~~ envelope and central system replacement or is undergoing a tax credit resyndication, the property could receive an in-depth ASHRAE Level II energy audit of common areas (i.e. to align with TCAC requirements). The CAM initiative will engage property owners during tax credit resyndication or at other points of financial exchange such as buying or selling, as this is an ideal time to execute comprehensive whole property improvements. By contrast, if the property is primarily interested in lighter touch measures such as lighting and small appliance replacements and has already replaced major central systems in recent years, the property could receive a more basic audit.

~~For large-scale All projects and will only include deemed measures without associated with associated work papers, CAM will utilize whole building energy modeling (using EnergyPro's Non-Residential module) to determine the energy savings potential above existing conditions.~~ Where feasible, the CAM implementer will verify pre- and post-installation energy usage using utility benchmarking and the EPA's Energy Star Portfolio Manager benchmarking tool as this is currently the process in MUP. ~~To validate energy savings using benchmarking, the implementer will collect at least 12 months of utility usage data before and after the CAM improvements have occurred.~~ To obtain this data, the CAM implementer will coordinate with the property owner to register the participating property through PG&E's AB-802 compliant benchmarking portal, which provides aggregated utility usage data to eligible multifamily properties with five or more meters.

For TCAC or CSD LIWP-LMF participants, the implementer will coordinate audit efforts where possible to minimize duplicate effort.

**Measure Installation Oversight:** The CAM implementer will coordinate with contractors performing measure installation in multifamily common areas.<sup>3</sup> ~~The implementer will regularly screen contractors' insurance, certifications, and licenses for listing on an online program directory.~~ Additionally, the implementer will schedule regular progress meetings with the project team (including contractors) at key project milestones (project kick-off, pre-construction meeting, mid-construction meeting, etc.) to review program requirements, approved measure specifications and installation progress. As the program develops, performance specifications and installation best practice guidance for common area measures will be

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<sup>3</sup> All in-unit work will be conducted by the general ESA program under standard ESA operating procedures and sponsored with ESA funds.

identified by leveraging tools already created through the PG&E Multifamily Upgrade Program, as appropriate.

~~For all installation work, owners may will select a participating contractor from a program provided list including MUP contractors as well as ESA contractors that have undergone MUP certification, or may select their own contractor. Owners are responsible for ensuring their selected contractor has necessary insurance, certifications, and professional licenses to perform the agreed upon work. If an owner selects their own contractor to complete the installation, this contractor will need to agree to applicable program terms and conditions, including: demonstrate they have necessary professional licenses to perform the agreed upon work, supply proof of appropriate insurance, among other requirements identified in the CAM manual.~~

For all in-unit work, PG&E will utilize the existing ESA model for measure installation and oversight. In addition, only ESA-certified contractors will be permitted to perform in-unit treatment (i.e. in-unit installations).

**Scope of Work and Field Quality Control:** The implementer will work with the property owner and contractor (and energy consultant, where applicable) to refine the common area measures scope of work for each property. Measure refinement will include defining the deemed measures to be installed including quantity, specification, installation schedule, and post-installation field verification. The CAM implementer will select recommended deemed measures as a result of opportunities defined through the field audit as well as based on property owner or contractor/consultant identified desired upgrades.

~~The final set of measures identified to be funded through the CAM offering will depend on cost-effectiveness due to the CAM offering covering 100 percent of installation costs. The CAM implementer will define these cost-effectiveness criteria prior to public launch and will refine these criteria based on lessons learned from actual CAM participants.~~ The implementer will work with the building owner to adopt the greatest scope of the recommended audit as possible with the building owner. If for any reason the building owner chooses to forego part of the audit recommendations, the implementer will document ~~in~~ the CAM database deemed measures not selected by property owner and why the owner opted not to install the measures (i.e., missed opportunities). The implementer will conduct field quality control on a defined portion of projects (~~to be~~ defined in the CAM manual); field quality control is a site inspection that verifies that the measures agreed upon by the owner and contractor were installed at or above the agreed upon efficiency specifications and that the appropriate permits were pulled. The implementer will adjust the field quality control percentages based on the complexity of the project and the inspection results of each contractor. All projects will be required to submit close-out documentation prior to receiving payment from PG&E. Close-out documentation will include detailed, itemized invoices, permits, measure specification sheets, photos, as well as other documentation as communicated by PG&E and the implementer.

#### 4. Program Design and Best Practices:

*Describe how the program meets the market barriers in the relevant market sector/end use. Describe why the program approach constitutes “best practices” or reflects “lessons learned”. Provide references where available.*

PG&E is leveraging the MUP model, ~~design and~~ infrastructure (including policies and procedures), ~~contractor database, savings calculation methodology,~~ and existing, historic market relationships and expertise in the multifamily space. MUP has supported multifamily building owners, contractors and their energy consultants on completing whole property energy efficiency improvements (including residential units, common areas, and exterior facilities) since 2014. Based on CAM will leverage PG&E's Multifamily Upgrade Program (-MUP) as appropriate, including: ~~CAM will leverage:~~

- Outreach to and relationships with affordable housing owners. Since inception, over half of the properties that participated in MUP are deed-restricted multifamily, including publicly owned housing authority properties and private housing managed by non-profit and for-profit entities.
- Contractor and consultant partnerships already solidified in the multifamily market and with PG&E Residential Energy Efficiency Programs
- Lead nurturing and project tracking capabilities
- ~~Approved savings methodology for deep energy retrofits through the use of building energy simulation.~~
- Vetted policies and procedures applicable to project intake, analysis, ~~modeling,~~ quality assurance, etc. for multifamily retrofit projects.
- Program design based on:
  - Alignment with market procedures for comprehensive retrofits, including coordination with LIWP and TCAC, to maximize project resources and achieve deeper savings
  - Best practices and lessons learned from multifamily stakeholder groups including Tax Credit Allocation Committee (TCAC) Sustainable Building Method committee, Energy Upgrade California multifamily statewide IOU and Regional Energy Network program stakeholders, the Home Energy Retrofit Coordinating Committee (HERCC), ACEEE multifamily program design best practices, and the Energy Efficiency for All affordable multifamily coalition

PG&E's common area measures initiative was designed leveraging components of affordable multifamily market program best practices<sup>4</sup>. The initiative will continually evolve, assess effectiveness of program design, eligibility criteria, and participation process, and take market feedback and lessons learned into consideration. To encourage this feedback loop to occur formally through the Multifamily Working Group and informally from the multifamily stakeholders through PG&E, the funding for CAM will be broken up into phases. After each phase, the program will assess results allowing the program to revisit requirements and design. For a more detailed description of phases, see **Section 3.4 Supporting Documents: Quantitative Program Targets**.

Key design elements of PG&E's Common Area Measures are highlighted below:

- A. Operate CAM in an iterative fashion to collect & analyze data, integrate feedback, and evolve:**  
CAM will aim to serve a diverse set of customers to gather data on all types of properties (ranging in small, medium, and large multifamily properties, # of units, age, end uses, region, demographics etc.). For example, to reach rural properties, CAM will coordinate with USDA's list of rural housing rentals. PG&E will collect data on property ownership, energy savings, costs, cost effectiveness, stakeholder

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<sup>4</sup> CAM design took into consideration best practices from PG&E's experience running multifamily programs such as PG&E Multifamily Upgrade Program as well as best practices identified by NRDC (NRDC, Program Design Guide: Energy Efficiency Programs in Multifamily Affordable Housing, 2015), ACEEE and other stakeholders.

(including Multifamily Working Group Participant) feedback, and participant satisfaction to inform future program iterations.

- B. Focus value to directly benefit low income residents:** Residents will benefit from safer living conditions, improved common area spaces and amenities, and potential cost-savings from property owners' operating cost reductions. Through property owners' participation in CAM, residents will be provided the opportunity and encouraged to participate in ESA, thereby extending the ESA benefits to as many low income residents as possible.
- C. Capturing all ~~cost-effective~~ energy efficiency savings:** With the exception of routine maintenance and replacement upon failure, most deed-restricted multifamily properties undergo a major retrofit only once every 15-30 years (for example, at time of tax credit refinance through the Tax Credit Allocation Committee).<sup>5</sup> If all end-uses at the site are not addressed at that time, it is unlikely they will be addressed for many years (if at all). Therefore, it is important that when a deed-restricted owner seeks to undergo a refinance that all possible energy improvements are explored. To facilitate informing deed-restricted owners that apply for financing about ESA and specifically CAM, the CAM implementer will actively participate in select TCAC workshops and conduct direct outreach to TCAC applicants. The CAM implementer will continuously strive to align its requirements with those of TCAC and other affordable housing financing programs, advocating for alignment and process streamlining, wherever possible. CAM will address a wide range of improvement measures, ranging from exterior building envelope improvement to appliance replacement, leveraging ESA in-unit, LIWP, and other programs within PG&E's portfolio to allow for improvements across the whole property (i.e. a whole-building approach). CAM will strive to serve all eligible property owners regardless of the size of project scope.
- D. Improve access to energy usage information:** CAM will connect property owners to energy usage data, benchmarking properties through PG&E's AB 802 utility benchmarking portal, where feasible. The benchmarking report will also connect property owners to a wide range of program incentives and services, both within PG&E's portfolio of programs as well as other regional programs such as the Low Income Weatherization Program (LIWP), regional local government programs, and regional water district programs.
- E. Build partnerships with key local market participants:** The multifamily deed-restricted sector is a tight-knit community that places a high level of value on collaboration, advocacy, and best practice exchange. Therefore, the CAM implementer will frequently engage directly with funders, membership organizations that advocate on low-income property owners' behalf, and from peers (other deed-restricted property owners) in order to be most effective in running and continually improving CAM. It is also important that the programs dedicated to the deed-restricted sector align their requirements to prevent duplicated efforts or missed opportunities. The CAM implementer will collaborate with programs such as TCAC and CSD LIWP with the goal of streamlining participation between multiple programs wherever possible, and allowing property owners to leverage funding from multiple funding sources. The CAM implementer will attend affordable housing conferences and events where deed-restricted owners, managers, and contractors converge to discuss affordable housing advocacy and policy

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<sup>5</sup> Multifamily Home Energy Retrofit Coordinating Committee (HERCC), HERCC Recommendations Report, 2015, page 11 ([www.multifamilygreen.org/wp-content/uploads/2011/02/MF-HERCC-Report\\_January2015\\_FINAL.pdf](http://www.multifamilygreen.org/wp-content/uploads/2011/02/MF-HERCC-Report_January2015_FINAL.pdf))

issues. The intent of engagement with key local market participants is to educate the affordable housing stakeholders on CAM and present results and benefits to-date.

- F. Help owners finance efficiency projects:** Deed-restricted properties typically have a number of funding sources embedded in each property, this makes it challenging to take on additional debt at a property for improvements that are not considered routine maintenance or identified as high priority through a federally mandated property needs assessment. In instances where sufficient operating budget is available to make important improvements, it is not always possible to access these operating reserves without explicit approval from the regulatory agency (such as HUD) as well as the multiple private investors associated with the property. Therefore, gap-funding is often needed to complete all desired improvements. CAM will cover qualified measures projects at 100% and pass projects to SPOC if they don't qualify for CAM or ESA in unit. SPOC will work with On-Bill Financing (OBF), On-Bill Repayment, and other IOU programs to bridge the gap for improvements not covered through CAM or ESA in-unit programs.
- G. Provide robust quality assurance and technical assistance:** Many deed-restricted multifamily property owners are staff and resource constrained and cannot always afford to have an in-house technical expert or energy manager, therefore, the more that programs can provide turn-key support and technical assistance to overcome this challenge, the more successful the program can be in realizing deep energy savings. As much as possible, CAM will tailor the technical assistance activity to the owner needs, providing varying levels of technical support depending on the technical expertise of the project team and the availability of existing energy audit reports. At a minimum, CAM will work with the project team to document common area improvement opportunities, completing a site visit to assess existing conditions and upgrade opportunities, as needed. For properties that need additional assistance such as an investment grade audit, contractor selection, or measure specification development, CAM will work with the property owner to help define these needs and to determine the level of service the CAM implementer may provide in these areas. PG&E will monitor spending in technical assistance at the end of each funding phase as described in **Section 3.4 Quantitative Program Targets** and communicate with owners prior to making any changes to technical service offerings. CAM will conduct quality assurance activities on all projects including: verifying existing conditions through an energy audit, completing a desktop review of the proposed scope of work and recommending improvements to this scope.
- H. Allow owners to select installation contractors:** Multifamily properties operate like a traditional business, meaning that owners frequently have a preferred list of contractors that are on-call to support their ongoing maintenance needs or are competitively selected to implement a more comprehensive retrofit. These same contractors are trusted by the owner to deliver quality installations and to know the owners preferred make, model, and efficiency of the commonly replaced appliances. In public housing, the Public Housing Authorities are required to complete a lengthy procurement process prior to completing improvements and often are required to complete work following fair labor practices. As such, CAM will allow the owner to select their own contractor. Owners are responsible for ensuring their selected contractor has necessary insurance, certifications, and professional licenses to perform the agreed upon work. who meets MUP requirements, select a contractor from a program approved list for common area measures, and/or engage the ESA in-unit contractor who meets MUP requirements, providing flexibility depending on the owner needs and scope.

## 5. Cost Effectiveness (Total Resource Cost - TRC) Approach:

PG&E intends to use CAM funds for deep energy savings, while stretching benefits across as many properties and customers as possible. PG&E will monitor the cost effectiveness of the initial, full-cost coverage initiative, at the project and CAM portfolio levels, in order to inform potential future program design and customer eligibility criteria. If certain cost effectiveness criteria becomes a clear mandate for the program, then, PG&E may modify customer and measure eligibility criteria to include:

1. **Existing condition minimums.** These requirements may be defined by equipment type, fuel type, and/or vintage. Examples include a building with central water heating system or incandescent lighting.
2. **Customer-type.** For example, CAM participation may be limited to common area meters using significant kWh/month prior to program participation, or to deed-restricted properties with specific common area onsite support services (such as commercial kitchens, computer labs, etc.)
3. **Minimum energy savings or cost effectiveness TRC.** For each project, the CAM implementer will use energy assessment tools and building energy simulation tools (such as EnergyPro non-residential module) to maximize the upgrade scope of work while remaining above the energy savings or cost effectiveness TRC threshold set for each participating project. This could also include reevaluating the eligible measure list to only include measures that meet new criteria. Where possible, the CAM implementer will validate simulated savings through actual usage monitoring (using the EPA Portfolio Manager tool). CAM will define which tool(s) are approved for building simulation as well as the version of the tool in the manual.
4. **Owner-copay.** For individual measures or a package of measures which do not meet cost-effectiveness criteria, CAM will consider requiring a co-pay. This would allow a project to be bought down in order to stay within the cost-effectiveness limits set for the program. PG&E understands that the current ESA decision requires that CAM cover the full cost of improvements and that therefore a co-pay is a longer-term consideration.

## 6. EM&V Approach:

*Describe any process evaluation or other evaluation efforts that the Program Administrator (PA) will undertake. Identify the evaluation needs that the PA must build.*

The evaluation process that all the IOUs will follow has yet to be determined. However, the CAM implementer will coordinate early and often with the PG&E and CPUC evaluation teams to ensure that the program is well prepared for future evaluation requirements and efforts.

## 7. Pilot/s:

(not applicable at this time)

## 8. Additional information:

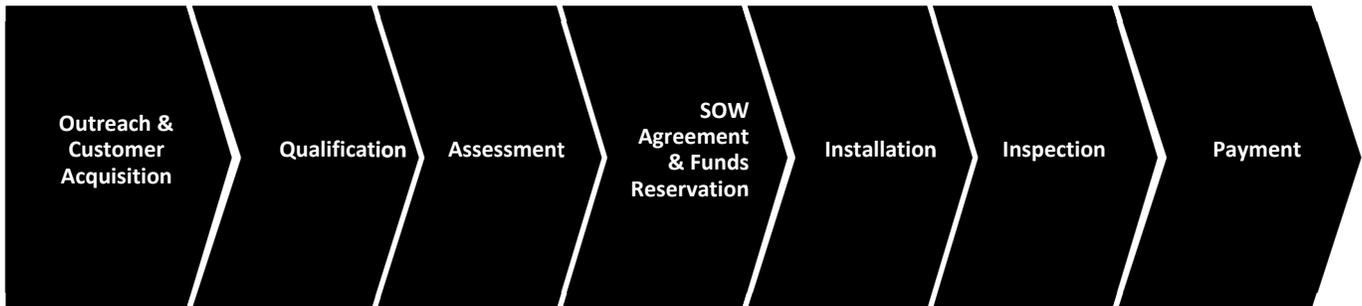
*Include here additional information as required by Commission decision or ruling (As applicable. Indicate decision or ruling and page numbers)*

N/A

### 3. Supporting Sections:

#### 1. 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.



#### 2. Program Aspects (i.e., a description of various program elements/aspects):

See "Program Aspects" section, page 16, below

#### 3. Incentive Tables, Workpapers, Software Tools:

Provide a summary table of measures and incentive levels, along with links to the associated workpapers. Templates are available at <http://eestats.cpuc.ca.gov/StandardTables/GuidanceDocument.aspx>.

Eligible common area measures will be covered at full cost initially. Measure incentive caps or changes to the program may be made to manage funding should full cost coverage change.

~~The CAM program will revise existing workpapers as appropriate to report energy savings. All ESA installed common area measures will be deemed measures with determined values from Impact Evaluations, non-DEER workpapers, or DEER measures. modeled savings from EnergyPro non-residential version 7, consistent with MUP, and factoring in work paper savings when applicable, to model common area energy savings, comparing upgraded conditions to existing conditions to determine overall savings. CAM may move to other software modules, versions, or tools, if PG&E determines that the updated software is appropriately capturing savings. To supplement the measure modeling possibilities in EnergyPro, CAM will consider additional measures whose savings are supported by IOU workpapers.~~

#### 4. Quantitative Program Targets:

Provide estimated quantitative information on number of projects, companies, non-incentive customer services and/or incentives that program aims to deliver and/or complete annually. Provide references where available.

**Table 2: Common Area Measure Goals and Budget**

	2018 <u>(actual)</u>	2019 <u>(forecast)</u>	2020 <u>(forecast)</u>	Total <u>(forecast)</u>
Number of buildings audited <sup>6</sup>	<u>5043</u>	<u>8501,297</u>	<u>270530</u>	<u>1,1701,870</u>
Number of buildings treated	<u>30</u>	<u>23730</u>	<u>7251,510</u>	<u>9651,540</u>
kWh Savings	<u>10,5000</u>	<u>829,50052,500</u>	<u>2,537,5002,642,500</u>	<u>3,377,5002,695,000</u>
kW Savings	<u>60</u>	<u>49533</u>	<u>1,4951,536</u>	<u>1,9901,593</u>
Therms Savings	<u>4500</u>	<u>35,5502,250</u>	<u>108,750113,250</u>	<u>144,750115,500</u>
Total Program Budget	<u>\$1,650,000233,927</u>	<u>\$11,350,0005,766,073</u>	<u>\$23,000,00030,000,000</u>	\$36,000,000

Table 2 summarizes audit, ~~reservation, treatment~~ buildings treated, savings and payment goals by planned phase year. The timing displayed in the table assumes this PIP will be approved by May 31, 2018. The data forecasted in Table 2 may change as a result of information gathered during the phases identified above. The data is also subject to change based on when the Advice Letter is approved and what content is approved.

PG&E will use a phased approach focusing on research, limited launch, and full launch in five main phases: 1- Market Assessment, 2- Program Design and Ramp-Up, 3- Common Area Installation Initial Roll-Out, 4 – Full Scale Roll Out, 5- Project Completion and Ramp Down. This approach will allow PG&E to be most effective in reaching budget, treatment, and savings goals within the shortened timeframe, while using real project data to inform improvements to processes, policies, and procedures. These phases are sequential and each is dependent on the phase prior. Proposed phases are as follows:

**Phase 1 – Market Assessment (Research).** The CAM implementer will conduct a market assessment to characterize the types of multifamily properties in the PG&E territory to identify the largest energy savings opportunities. Results will be used to inform any changes needed to make the MUP model most applicable to the deed-restricted, low income multifamily market. Results will influence Phase 2.

**Phase 2 – Program Design and Ramp-Up (Research).** The CAM implementer will finalize the program design and deemed measure mix based on the results from Phase I. During this phase, the implementer will create the program policies and procedures manual, create a customer acquisition plan, develop collateral, set up data tracking and reporting, begin project intake, conduct limited audits, and provide technical assistance. The implementer will benchmark properties and initiate coordination with the CSD and ESA in-unit in preparation for Phase 3.

**Phase 3 – Common Area Installation Initial Roll-Out (Limited Launch).** The implementer will continue technical assistance and audits, and will issue the first project reservations, up to a \$5 million program cap in total reservations. Interested projects that do not make the first \$5M cap allocation will be queued in order of those who complete all required steps to become a committed project. Steps may entail the property being confirmed by the implementer as eligible and the property owner signing an application agreeing to a CAM

<sup>6</sup> Assumes 1,170 buildings will be audited total (10 buildings per project on average)

scope of work as outlined in **Section 3.1 Flow Chart** above. During this phase, the implementer will identify required workpapers, validate the program process, technical requirements, and policies. Workpapers requiring revisions to support CAM will be prioritized based on property/project need. During this phase, the implementer will assess how each component of the program is functioning and recommend appropriate adjustments prior to full-scale roll-out in Phase 4. In order to move to Phase 4, all processes, including; audits, technical assistance, scope of work refinement, and installations, need to be defined and working as expected, stable and able to scale up.

**Phase 4 – Full Scale Roll-Out.** This phase provides additional funds and will scale up audits and reservations. Projects started in Phase 3 will continue to be supported through measure installation and payment. Reservations in this phase will fill the pipeline to meet overall goals during Phase 5.

**Phase 5 – Project Completion and Ramp Down.** Phase 5 will include completion and payment of projects started in Phase 4 as well as the reservation of a small set of projects (only projects that can be fully completed by 2020). The majority of activity in this phase will focus on installation support, installation verification, and project close-out (and payment). Once all phases have completed, the CAM implementer will propose recommendations to fine tune these aspects of program design.

Table 3 summarizes planned activity forecasted to be completed within each phase to meet the Common Area Measure goals defined in Table 2 above. Dates are subject to change. ~~based on the actual approval of the Advice Letter.~~

**Table 3: Phasing Structure**

Activities	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
<b>Goal Completion Date</b> (subject to change)	Q3 2018	Q4 2018 <u>Custom Project Program (Original Approach)</u>	Q3 <del>2</del> 2019 <u>Deemed Measures Program (Revised Approach)</u>	Q4 2019	Q4 2020
<b>Phase Name</b>	Market Assessment	Program Design and Ramp Up	Common Area Installations Initial Roll Out	Full-Scale Roll Out	Project Completion and Ramp Down
<b>Initiation and reporting set up</b>	N/A	<ul style="list-style-type: none"> <li>Common Area plan</li> <li>Project initiation</li> <li>Data tracking plan and set-up</li> </ul>	<ul style="list-style-type: none"> <li><u>Common Area plan revised</u></li> <li><u>Update data tracking plan and set-up</u></li> <li><del>N/A</del></li> </ul>	N/A	N/A
<b>Inputs to Program design</b>	<ul style="list-style-type: none"> <li>Market assessment</li> <li>Procedures manual outline</li> </ul>	<ul style="list-style-type: none"> <li>Measure mix and strategy</li> <li>Program goals, targets, milestones (updates to Table 2)</li> <li>Procedures manual finalized</li> </ul>	<ul style="list-style-type: none"> <li><u>Measure mix strategy updated</u></li> <li><u>Program goals, targets, milestones (updates to Table 2)</u></li> <li><u>Procedures manual revised</u></li> </ul>	<ul style="list-style-type: none"> <li>Assess and modify as needed</li> </ul>	<ul style="list-style-type: none"> <li>Assess and modify as needed</li> </ul>

			<b>Assess and modify as needed</b>		
<b>Customer acquisition</b>	N/A	<ul style="list-style-type: none"> <li>• Customer acquisition plan</li> <li>• Collateral</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Customer acquisition plan revised</u></li> <li>• <u>Collateral revised</u></li> </ul>	<ul style="list-style-type: none"> <li>• Customer acquisition</li> </ul>	N/A
<b>Implementation</b>	N/A	<ul style="list-style-type: none"> <li>• Eligibility and intake</li> <li>• Audits and technical assistance</li> <li>• Project &amp; Pipeline management</li> <li>• Benchmarking support</li> <li>• CSD coordination</li> <li>• ESA in-unit coordination</li> <li>• Application processing</li> </ul>	<ul style="list-style-type: none"> <li>• Eligibility and intake</li> <li>• Audits and technical assistance</li> <li>• <u>Workpaper revision</u></li> <li>• Measure installation oversight</li> <li>• Project &amp; Pipeline management</li> <li>• Benchmarking support</li> <li>• CSD &amp; ESA coordination</li> <li>• Application processing</li> <li>• Post inspection</li> <li>• <u>Technology changes to Energy Insight (Program database) for regulatory reporting and payment processing<sup>*(a)</sup></u></li> </ul>	<ul style="list-style-type: none"> <li>• Eligibility and intake</li> <li>• Audits and technical assistance</li> <li>• <u>Workpaper revision</u></li> <li>• Measure installation oversight</li> <li>• Project &amp; Pipeline management</li> <li>• Benchmarking support</li> <li>• CSD &amp; ESA coordination</li> <li>• Application processing</li> <li>• Post inspection</li> </ul>	<ul style="list-style-type: none"> <li>• Project &amp; Pipeline management</li> <li>• Benchmarking support</li> <li>• Limited audits and technical assistance</li> <li>• Application processing</li> <li>• Measure installation oversight</li> <li>• Post inspection</li> </ul>

\*(a) Identifies a critical path item; delays in technology updates may delay project payments and buildings counted as treated.

#### 4. Program Aspects:

All programs must have manuals to clarify for implementers and customers the eligibility requirements and rules of the program. Note that program rules must comply with CPUC policies and rules. Table templates are available at <http://eestats.cpuc.ca.gov/StandardTables/GuidanceDocument.aspx>. At minimum, manuals should include:

##### 1. Eligible Measures or Measure Eligibility:

Provide requirements for measure eligibility or a list of eligible measures.

~~Leveraging MUP, CAM will take a whole-building audit, modeling approach to assess eligible measures. CAM will allow common area measures that can be modeled in EnergyPro non-residential module, as well as utilize supported workpapers as needed to determine energy savings. These include common area water heating, exterior building shell (envelope), heating, lighting, and appliances. The following list is a preliminary list of a list of prioritized deemed measures was developed and that includes the most common systems and equipment known requiring upgrades, based on CAM audits and through MUP projects, to exist in multifamily common areas in PG&E service territory. PG&E will assess opportunities to integrate water/energy nexus measures where PG&E deems appropriate for common area measures. PG&E will revise workpapers for these priority measures prior to revising workpapers in support of non-priority deemed measures. PG&E will develop or modify existing workpapers to offer additional deemed measures not included in the priority measures based upon property/project need. confirm the final eligible measure mix for CAM during design phases and may add or remove measures at any time as program data suggests.~~

~~Not all measures recommended from audit results may be covered at full cost by the program. The program may explore incentive caps for certain measures, co-pays, or per property funding caps as a way to manage program funding if required. A final list of measures and requirements will be published with the final CAM manual upon launch. This The initial list may of deemed measures will include all or some of the following priority measures:~~

### Priority Deemed Measures

- Appliances
  - ~~○ Clothes Dryer - Commercial~~
  - Clothes Washer - Commercial
  - Residential Refrigerator
  - Commercial Refrigerator, Freezer
  - ~~○ Commercial Griddle, Oven~~
  - ~~○ Kitchen Exhaust Fan~~
  - ~~○ Residential Dishwasher~~
- Domestic Hot Water
  - Central System Gas Boiler
  - Hot Water Demand Control
  - Faucet aerator
  - Low Flow Shower Head
  - Heat Pump Water Heater
  - Tankless Water Heater
  - ~~Small Storage Water Heater~~
  - ~~○ Pipe Insulation, Tank Wrap~~
- Envelope
  - ~~○ Air Sealing~~
  - Windows
  - Attic Insulation, ~~Cool Roof~~
  - Wall Insulation
  - Window Film, ~~Shading~~
- HVAC

- Common Area Air Conditioning
- Central System Gas Water Heater/Space Heating
- Common Area Forced Air Furnace
- Common Area Heat Pump
- ~~○ Common Area Fans (downsize cooling system)~~
- Air Cooled Package Units
- Central Cooling System, Central Heating System
- Programmable Thermostat
- Demand Control Ventilation
- Lighting
  - LED Exit Sign (2W)
  - LED Lamp
  - LED T8
  - Exterior LED Wall Mount (14 - 60W)
  - Occupancy Sensor
  - Exterior LED Pole Mount (70 - 260W)
  - Exterior LED Architectural Flood/Spot (25 - 150W)
  - LED Parking Garage Fixture (35 - 150W)
- Plug Load
  - Power Strip
  - ~~○ Ceiling Fans, Computer, Monitor, Printer~~
  - ~~○ Property Wide Wi-Fi~~
  - ~~○ Vending Machine Control~~
- Other
  - Variable Speed Pool Pump and Motor
  - ~~○ Commercial Pool Heater, Pool Cover~~
- ~~● Other~~
  - ~~○ Elevators~~
  - ~~○ Custom (commissioning, controls, and other measures not identified above)~~

Additional deemed measures may be included based on property/project need. These measures will require workpaper development and may include:

- Clothes Dryer - Commercial
- Commercial Griddle
- Commercial Oven
- Kitchen Exhaust Fan
- Residential Dishwasher
- Pipe Insulation
- Tank Wrap
- Air sealing
- Cool roof
- Window shading
- Ceiling Fans

- Vending Machine Control
- Commercial Pool Heater
- Pool Cover

## 2. Customer Eligibility Requirements:

*Provide requirements for program participation (e.g., annual energy use, peak kW demand)*

To be eligible for CAM, properties must meet affordability requirements, which include; property must be deed-restricted, government or non-profit owned, or federally-recognized tribally owned and demonstrate that at least 65% residents are at or below 200 percent of the Federal Poverty Line (FPL) as defined by the CPUC. To demonstrate affordability, applicants will be asked to sign the ESA Property Owner Affidavit. This intake form will allow property owners to register all properties in their portfolio with ESA, self-certify the percentage of residents that qualify for ESA, and grant site access to these properties. Applicants will also supply the regulatory agreement or deed attached to the multifamily property, which demonstrates the property's affordability restriction.

The program can serve existing multifamily properties with five or more units and will serve both low-rise (three stories and less) and high-rise multifamily buildings (four stories or more). CAM will evaluate campuses of multiple two-to-four-unit properties on a case-by-case basis. Properties must be located in PG&E service territory and receive gas and/or electric service from PG&E.

Eligible applicants include non-profit organizations; for-profit businesses; and local government entities including, but not limited to cities, counties, housing authorities; non-profit community organizations; regional or statewide nonprofit entities; federally-recognized tribes; and private individuals or corporations.

Participants in CAM must certify all work completed meets all state and local building code, inspection, and permitting requirements. A licensed contractor must complete the installation work.

## 3. Contractor Eligibility Requirements:

*List any contractor (and/or developer, manufacturer, retailer or other "participant") eligibility requirements (e.g. specific IOU required trainings; specific contractor accreditations; and/or, specific technician certifications required).*

~~Contractors installing CAM measures must meet minimum criteria consistent with PG&E's Multifamily Upgrade Program (MUP). Preliminary requirements include (final requirements will be included in the CAM manual):~~

- ~~• Hold a California A, B, or C license, and ensure that all subcontractors are appropriately licensed and insured.~~
- ~~• Maintain the following minimum insurance requirements~~
  - ~~○ Commercial general liability—\$1,000,000 each occurrence, \$2,000,000 in aggregate~~
  - ~~○ Business automobile liability—\$1,000,000, and personal automobile liability—\$500,000~~
  - ~~○ Worker's compensation and employer's liability—\$1,000,000 (except for sole proprietors)~~

~~Each contractor must take part in a program orientation meeting prior to CAM participation. Meet project quality and customer satisfaction metrics to which contractors will be held accountable. If contractors do not meet these established quality and satisfactions metrics they will be placed on probation (prohibiting new project participation until the aforementioned quality and/or satisfaction issues are remedied). If contractors are unable to remedy these issues, they will be removed from the participating contractor list. CAM will leverage the contractor disciplinary procedures already in place through the PG&E Multifamily Upgrade Program.~~

For all eligible common area installation work, owners may will select ~~a participating contractor from a program provided list, or may select~~ their own contractor for the common area measures. For property owners that do not have a preferred contractor already selected to perform the work, CAM staff will provide the owner with a list of participating CAM-MUP contractors, and. ~~Contractors will be added to the participating contractor list on a rolling basis, with updates made at a minimum once per quarter.~~

~~The list will also highlight those contractors who are~~ ESA in-unit qualified contractors, and PG&E's Trade Professional Directory ~~and common-area qualified, meaning they are eligible to treat the entire property. It is important to note ESA common area approved contractors cannot treat units, unless they are certified in-unit contractors.~~

#### 4. Participating Contractors, Manufacturers, Retailers, Distributors:

*For upstream or midstream incentive and/or buy down programs indicate*

N/A

#### 5. Additional Services:

*Briefly describe any additional sub-program delivery and measure installation and/or marketing & outreach, training and/or other services provided, if not yet described above.*

N/A

#### 6. Audits:

*Indicate whether pre and post audits are required, if there is funding or incentive levels set for audits, eligibility requirements for audit incentives*

CAM will provide an audit, or energy assessment tailored to property owner needs, of common area equipment on each participating property (an audit may not be required if one was completed in the last 3-5 years). An analyst will record existing building conditions, interview maintenance staff, conduct combustion safety testing (where appropriate), and identify upgrade opportunities through a site visit coordinated with the property staff. This visit may also be coordinated with ESA program staff that can assess for eligibility for in-unit upgrades. ~~Following the site visit, the energy assessor will complete building energy simulation with EnergyPro nonresidential module to analyze upgrade measure possibilities. Where feasible, CAM implementer technical personnel will calibrate the model to actual energy use (documented through benchmarking).~~

The property owner will receive an energy assessment report outlining eligible common area measures, specifications, and estimated energy savings. In consultation with the owner and team, the CAM implementer will finalize the upgrade scope of work ~~and update building simulation files~~ prior to reservation of upgrade funds.

#### 7. Sub-Program Quality Assurance Provisions:

*Please list quality assurance, quality control, including accreditations/certification or other credentials*

CAM will provide a pre-retrofit energy assessment and verification of existing conditions, negating the need for a pre-retrofit quality assurance site visit. Analysis conducted through the energy assessment to determine the scope of work, energy savings, and cost-effectiveness will receive desktop quality assurance review prior to reservation of funds.

A minimum percentage of CAM projects will undergo post-retrofit site inspection. Inspectors will verify specifications, locations, and installations of the scope of work funded through CAM.

(End of Attachment)

Advice 4129-G/5612-E  
August 6, 2019

**Attachment 3**

Advice Letter 3943-G/5241-E Approval  
from Energy Division dated March 28, 2018

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



March 28, 2018

**Advice Letter 3943-G/5241-E**

Erik Jacobson  
Director, Regulatory Relations  
Pacific Gas and Electric Company  
77 Beale Street, Mail Code B13C  
P.O. Box 770000  
San Francisco, CA 94177

**SUBJECT: Energy Savings Assistance Multifamily Common Area Measure Initiative  
Advice Letter per Decision (D.) 17-12-009**

Dear Mr. Jacobson:

Advice Letter 3943-G/5241-E is effective as of March 31, 2018.

Sincerely,

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

Edward Randolph  
Director, Energy Division

**PG&E Gas and Electric  
Advice Submittal List  
General Order 96-B, Section IV**

AT&T	Downey & Brand	Pioneer Community Energy
Albion Power Company	East Bay Community Energy	Praxair
Alcantar & Kahl LLP	Ellison Schneider & Harris LLP	
	Energy Management Service	
Alta Power Group, LLC	Engineers and Scientists of California	Redwood Coast Energy Authority
Anderson & Poole	Evaluation + Strategy for Social Innovation	Regulatory & Cogeneration Service, Inc.
	GenOn Energy, Inc.	SCD Energy Solutions
Atlas ReFuel	Goodin, MacBride, Squeri, Schlotz & Ritchie	
BART	Green Charge Networks	SCE
	Green Power Institute	SDG&E and SoCalGas
Barkovich & Yap, Inc.	Hanna & Morton	
P.C. CalCom Solar	ICF	SPURR
California Cotton Ginners & Growers Assn	International Power Technology	San Francisco Water Power and Sewer
California Energy Commission	Intestate Gas Services, Inc.	Seattle City Light
California Public Utilities Commission	Kelly Group	Sempra Utilities
California State Association of Counties	Ken Bohn Consulting	Southern California Edison Company
Calpine	Keyes & Fox LLP	Southern California Gas Company
	Leviton Manufacturing Co., Inc. Linde	Spark Energy
Cameron-Daniel, P.C.	Los Angeles County Integrated Waste Management Task Force	Sun Light & Power
Casner, Steve	Los Angeles Dept of Water & Power	Sunshine Design
Cenergy Power	MRW & Associates	Tecogen, Inc.
Center for Biological Diversity	Manatt Phelps Phillips	TerraVerde Renewable Partners
City of Palo Alto	Marin Energy Authority	Tiger Natural Gas, Inc.
	McKenzie & Associates	
City of San Jose	Modesto Irrigation District	TransCanada
Clean Power Research	Morgan Stanley	Troutman Sanders LLP
Coast Economic Consulting	NLine Energy, Inc.	Utility Cost Management
Commercial Energy	NRG Solar	Utility Power Solutions
County of Tehama - Department of Public Works		Utility Specialists
Crossborder Energy	Office of Ratepayer Advocates	
Crown Road Energy, LLC	OnGrid Solar	Verizon
Davis Wright Tremaine LLP	Pacific Gas and Electric Company	Water and Energy Consulting Wellhead Electric Company
Day Carter Murphy	Peninsula Clean Energy	Western Manufactured Housing Communities Association (WMA)
		Yep Energy
Dept of General Services		
Don Pickett & Associates, Inc.		
Douglass & Liddell		