

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



May 26, 2010

**Advice Letter 3081-G-B/3597-E-B**

Jane K. Yura  
Vice President, Regulation and Rates  
Pacific Gas and Electric Company  
77 Beale Street, Mail Code B10B  
P.O. Box 770000  
San Francisco, CA 94177

**Subject: Second Supplement to Innovator Pilots Program Pilot Advice  
Letter Pursuant to D.09-09-047**

Dear Ms. Yura:

Advice Letter 3081-G-B/3597-E-B is effective June 1, 2010.

Sincerely,

A handwritten signature in blue ink that reads "Julie A. Fitch".

Julie A. Fitch, Director  
Energy Division



May 20, 2010

**Advice 3081-G-B/3597-E-B**  
(Pacific Gas and Electric Company ID U 39 M)

Public Utilities Commission of the State of California

**Subject: Second Supplement to Innovator Pilots Program Pilot Advice  
Letter Pursuant to D.09-09-047**

Pacific Gas and Electric Company (PG&E) hereby submits its supplemental Innovator Pilots Program Pilot Advice Letter for its 2010-2012 Energy Efficiency (EE) Portfolio in compliance with Decision (D.) 09-09-047, Ordering Paragraph (OP) 20 and other directives of the Decision. This supplemental advice letter is being filed at the request of Energy Division and replaces in its entirety Advice 3081-G/G-A/3597-E/E-A. In addition to the Attachments discussed below, PG&E has revised the Innovator Pilot Program portion of its Local Government Partnership Program Implementation Plan consistent with this supplemental advice letter and it is provided in Attachment E.

**Purpose**

OP 20 of the EE Decision directed the investor-owned utilities (IOUs) to file an advice letter for all approved pilot programs within 120 days after the Decision's effective date. Submitted for approval, this advice letter (AL) provides details for PG&E's Innovator Pilots Program.

**Background**

On July 21, 2008, PG&E and the other IOUs filed their 2009-2011 EE portfolio applications. On September 18, 2008, the California Public Utilities Commission (Commission) adopted the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan) in D.08-09-040. Following Energy Division (ED) review of the portfolio applications, PG&E and the other IOUs amended their applications on March 2, 2009 in compliance with the Strategic Plan and as directed through a series of Commission rulings. Per D.09-05-037 issued May 21, 2009, PG&E and the other IOUs supplemented their portfolio requests on July 2, 2009. On September 24, 2009, the Commission issued D.09-09-047 adopting three-year portfolio budgets for 2010-2012 for each IOU. The adopted budget for PG&E is \$295 million less than the requested budget in its July 2, 2009 filing.

In accordance with OP 15 of the EE Decision, PG&E filed its Compliance AL 3065-G/3562-E, which proposed, in part, detailed program budgets for the 2010-2012 EE portfolio. The total budget for Government Partnerships, including for Innovator Pilots, proposed in the Compliance AL is \$167.5 million, a \$32 million reduction from PG&E's July 2, 2009 filing. As part of this reduction, PG&E proposed an Innovator Pilot budget of \$4.3 million. On December 18, 2009, the Energy Division suspended the Compliance AL and stated that the suspension should not delay the implementation of programs effective January 1, 2010.

On April 21, 2010, the Energy Division provided direction to PG&E to increase the Innovator Pilot funding level to assure sufficient funding to implement the scope of the program approved in D. 09-09-047 and to update the Innovator Pilot PIP. In this supplemental AL PG&E proposes to increase the total Government Partnership funding by \$4.5 million to a total of \$172 million in order to provide a total budget of \$8.8 million for the Innovator Pilots program. PG&E also intends to supplement its Compliance AL to reflect this change in the detailed program budgets for the 2010-2012 EE portfolio.

Ordering Paragraph 20 of the EE Decision directed the IOUs to file Pilot Program Advice Letters for each approved Pilot Program and specified the content required for these Advice Letters. The table below outlines the compliance items for this Innovator Pilots Pilot Program AL and indicates the AL section that covers each compliance item.

Cite	Compliance Item	AL Section
OP 19	The following energy efficiency pilot program of [PG&E] are approved, subject to the requirements listed in ordering Paragraph 20: PG&E's ZNE Pilot Program, PG&E's Innovator Pilots, PG&E's Green Communities program...and WE&T Pilot Programs (Building Commissioning Workshop Series, Residential HVAC Seminars, Comprehensive Evaluation of Food Svc. Center, Green Pathways...)	
OP 20, Section 4.3	The utilities shall file an Advice Letter for each approved "Pilot Program" containing the following elements:	
	1. A specific statement of the concern, gap, or problem that the pilot seeks to address and the likelihood that the issue can be addressed cost-effectively through utility programs	Program Description
	2. Whether and how the pilot will address a Strategic Plan goal or strategy and market transformation	Program Description
	3. Specific goals, objectives and end points for the project	Goals and Objectives

Cite	Compliance Item	AL Section
	4. New and innovative design, partnerships, concepts or measure mixes that have not yet been tested or employed	Program Description
	5. A clear budget and timeframe to complete the project and obtain results within a portfolio cycle-pilot projects should not be continuations of programs from previous portfolios	Budget
	6. Information on relevant baselines metrics or a plan to develop baseline information against which the project outcomes be measured	Attachment C
	7. Program performance metrics following the methodology outlines in OP11:	See OP 11
	8. Methodologies to test the cost-effectiveness of the project	Program Description
	9. A proposed EM&V plan	EM&V Plan
	10. A concrete strategy to identify and disseminate best practices and lessons learned from the pilot to all CA utilities and to transfer those practices to resource programs, as well as a schedule and plan to expand the pilot to utility and hopefully statewide usage	Program Description Attachment C Attachment E
OP 11	<p>“[IOUs] shall jointly file a “Program Performance Metrics” Advice Letter requesting approval for their proposed logic models and metrics, with sections for each statewide program (and associated sub-programs) within 120 days of the effective date of this decision. In their filing, [IOUs] shall include a completed Program Performance Indicator Worksheet for each energy efficiency statewide program and associated sub-program (see Appendix 2). In addition, the Advice Letter filing shall include for each statewide program (and associated subprograms):</p> <ol style="list-style-type: none"> <li>completed Program Performance Indicator Table as depicted in Appendix 2;</li> <li>An updated program logic model as indicated in the Program Performance Indicator Worksheet;</li> <li>A discussion to specifically address the extent to which each program and sub-program plan included an end game for each technology or practice that transforms building, purchasing, and use decisions to become either standard practice, or incorporated into minimum codes and standards;</li> </ol>	Attachment B Attachment C Attachment D
OP 39	<p>The proposed energy efficiency Local Government Partnership programs of [IOUs] are approved, subject to the following modifications:</p> <ul style="list-style-type: none"> <li>- Pacific Gas and Electric Company shall submit an advice letter demonstrating compliance of its proposed Innovator Pilot and the Green Communities program to pilot project criteria outlined in Section 4.3 of this decision;</li> </ul>	

Cite	Compliance Item	AL Section
Section 6.1.4	In order to ensure accountability and transparency for this pilot, we therefore direct PG&E to file an advice letter detailing how its Innovator Pilots complies with the criteria for pilot programs outlined in Section 4.3 and Ordering Paragraph 20. This advice letter should also name the selected pilot partners, the budgets for each partner, and the specific activities that each partner in the pilot project will take in order to advance and measure progress towards pilot goals and objectives. No contract may be awarded prior to the approval of this advice letter. Provision of program performance metrics for the pilot shall adhere to the methodologies outlined in Appendix 2. With these modification we approve PG&E's Innovator Pilot Program.	<ul style="list-style-type: none"> <li>▪ Program Description</li> <li>▪ Budget</li> <li>▪ Attachment B</li>   <li>▪ Attachment C</li> </ul>

### **Program Description**

Half of the cities and counties in PG&E's service area are engaged in climate action activities. Further, many progressive local communities have an innovative vision for meeting new energy savings, greenhouse gas (GHG) reduction, and renewable energy goals that align with the Strategic Plan.<sup>1</sup> However, these communities may lack the financing and technical knowledge to transform their vision into successful projects that provide the desired benefits. Moreover, even the most successful project or initiative cannot serve as a model for other communities without a mechanism in place for sharing best practices and lessons learned.

The Innovator Pilots Program is designed to allow communities who are leaders in energy and GHG reduction activities to test creative approaches to address energy efficiency. The Program will provide funding for selected projects that will test, demonstrate, and measure innovative ways to deliver energy savings and will be available on a competitive basis to local, regional, or sub-regional governments or associations of governments.

Given their significant experience managing energy efficiency programs and local government partnerships, the IOUs are uniquely qualified to cost-effectively administer programs that will help California advance its energy efficiency and GHG-reduction goals. PG&E will draw on this experience to select projects that score highly against the project criteria, minimize administrative costs, and encourage partners to adopt cost-effective management processes. To improve future cost-effectiveness, PG&E will only encourage and facilitate replication of the most successful pilots in future program cycles.

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<sup>1</sup> See <http://californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>.

In order to fund projects throughout the 2010-2012 EE portfolio cycle, PG&E requests a total budget of \$8.8 million for the Innovator Pilots program. Approximately \$4.3 million will provide program support and fund projects selected through the competitive solicitation that was conducted prior to submittal of this advice letter, including program support.

After reviewing the submittals, PG&E believes that this level of funding is sufficient to fund those proposals that are truly innovative and that are highly likely to be replicated by other communities throughout the PG&E service area in future program cycles.

PG&E will execute a written agreement with each selected applicant; subject to approval of this AL. Selected communities will receive full or partial funding to implement their ideas.

Approximately \$3.8 million, including program support, will be reserved for a second solicitation targeted to support additional projects for the 2010 -2012 program cycle that are consistent with the Menu of Local Government Strategies for the Strategic Plan adopted in PG&E Advice 3099-G-A/3624-E-A.<sup>2</sup> This second solicitation will be issued by January 30, 2011 in order to complete the selection process by May 30, 2011.

The remaining funds, currently estimated at \$0.7 million, but not to exceed \$1 million will be set aside for “mini projects” as described below.

#### Initial Request for Ideas Process

On October 14, 2009, PG&E issued a Request for Ideas (RFI), attached at Attachment A. On December 14, 2009, nineteen applicants submitted twenty-nine proposals totaling \$16.5 million. PG&E appreciated the applicants' interest and their efforts to submit proposals in a relatively short timeframe. A multidisciplinary team at PG&E reviewed each proposal based on how well they addressed the following evaluation elements that are described on page 15 of Attachment A:

- Innovation;
- Broad Applicability and Transferability;
- Feasibility;
- Skill and Experience;
- Fills Gaps;
- Leveraging;
- Demonstrated Commitment to Climate Action Planning; and
- Diversity.

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<sup>2</sup> This advice letter was filed by Southern California Edison on behalf of PG&E and the other IOUs. A copy is available at: [http://www.pge.com/nots/rates/tariffs/tm2/pdf/GAS\\_3099-G-A.pdf](http://www.pge.com/nots/rates/tariffs/tm2/pdf/GAS_3099-G-A.pdf)

While the review team appreciated elements of every proposal, the team recommended only those that were innovative, did not duplicate existing programs, were likely to achieve real and measurable results associated with GHG reduction strategies, and would be expected to be easily adopted by other communities in California in order to reach our shared goal of GHG reduction across the state.

Many applicants proposed activities that duplicate programs that PG&E currently offers, will be introduced in its 2010-2012 portfolio, or will be offered through new state programs. Several proposed projects were also very similar to one another. For example, six proposals totaling over \$4 million proposed residential retrofit projects included two nearly identical projects that were prepared in cooperation with the same vendor and were very similar. Proposals falling into these categories accounted for approximately \$8.8 million of the total \$16.5 million. They were eliminated from final consideration since their efforts would be duplicated by existing energy programs or duplicated by other more complete proposals.

Applicants requested another \$2.8 million for projects that were eliminated from final consideration due to a variety of reasons including: applicant ineligibility, limited opportunity for broad replication of successful project throughout the state, or proposed scope of work which could not be defined before completing other proposed projects.

The seven remaining proposals achieved the highest scores against PG&E's evaluation criteria and will help California advance Strategic Plan goals. PG&E believes that some of these proposals can be scaled downward and that all seven of these proposals can be accommodated within the proposed Innovator Pilots budget. PG&E recommends that the seven proposals summarized below be approved subject to successful negotiation of each contract.

In addition to these seven proposals, there were limited components of other proposals that may merit further consideration for "mini-projects" pending detailed discussions with the applicants. Upon approval of this AL, PG&E requests authority to award contracts for the seven selected proposals and to award, as appropriate, "mini-projects" not to exceed \$1 million. PG&E will use the same criteria for selecting the "mini-projects" as for the seven proposals presented in this AL.

The Innovator Pilot PIP has been revised as provided in Attachment E, incorporating the discussion herein and to reflect more current information. For example, the revised PIP reflects the solicitation for the first RFI; no longer includes financing efforts as eligible projects consistent with the EE Decision; and revises the EM&V section to indicate that each applicant will need to include an evaluation plan as part of their proposal.

### Proposal Summaries

The following proposals are recommended for full or partial funding, subject to negotiation between PG&E and each applicant. Please refer to Attachment B for each selected applicant's response to the Commission's pilot project criteria.

#### **Alameda County Office of Education Leadership in Energy Efficiency Program (LEEP) (Attachment B-1)**

The Alameda County Office of Education (ACOE) proposes a countywide energy management program in public schools that will provide financially constrained local school districts access to a centralized resource for energy efficiency expertise and energy management assistance.

The program's energy managers will develop facility energy use benchmarks for school districts in Alameda County, identify potential energy savings opportunities in participating districts, coordinate technical services including energy audits, and guidance on financial incentives to facilitate program implementation. Energy efficiency practices and policies will be adopted and implemented, and district facilities managers will build internal capabilities and energy efficiency knowledge.

#### **City of Chico Residential Retrofit Program (Attachment B-2)**

The City of Chico proposes to develop a consumer energy program that serves to improve the efficiency of existing housing stock and encourage habit changing conservation by the occupants, thereby directly impacting municipal green house gas emission reduction goals through education.

#### **Quantum Energy Services & Technologies, Inc. (QuEST) and the Cities of Oakland, Berkeley and Emeryville**

QuEST, on behalf of the cities of Oakland, Berkeley, and Emeryville (OBE) submitted several proposals, two of which are being recommended for funding. The three cities already work together in the East Bay Energy Watch (EBEW) program, which has consistently met or beat its targets and has been recognized as successfully providing a very comprehensive set of savings.

#### **Integrated Services Program (Attachment B-3)**

Integrate energy efficiency services to clients. Combine audits for lighting efficiency, space conditioning improvements, renewable energy and demand management strategies in a single transaction will maximize reductions and minimize client costs and maximize client satisfaction with PG&E and its partners.

**Residential Tenant Landlord Policy Solutions (Attachment B-4)**

Collaborate with tenant and landlord groups to identify and pilot technical, informational and policy solutions to address the split incentive problem.

**Sierra Business Council Green Prosperity Workforce Development Program (Attachment B-5)**

As a regional multi-sectoral program, Sierra Business Council's (SBC) Green Prosperity Initiative approaches climate and economic solutions through four intersecting areas: sustainable tourism, forest carbon sequestration, renewable energy, and energy efficiency. SBC partners with a variety of state and national partners and funders on different components of the Green Prosperity Initiative. The proposed Innovator Pilot project supports the energy efficiency quadrant of the Initiative and includes three targeted approaches that are measurable in the short term and replicable over a wider geographic area. These include: (1) Establish Energy and Climate Leadership Institute to develop grassroots leadership in Latino and Native communities, (2) Provide Green Workforce Training and Development across the jobs spectrum, and (3) Enhance Energy Use Information and Management for small businesses and municipalities.

**Silicon Valley Energy Watch (SVEW)**

The City of San José administers the Silicon Valley Energy Watch program, which proposed two projects.

**Community Energy Championship Fund Social Marketing Program (Attachment B-6)**

The Community Energy Championship Fund is a mini-grant program that will support small, local, and innovative social marketing campaigns designed to achieve significant and lasting behavior change surrounding energy efficiency.

**Municipal Whole House Rehab Pilot (Attachment B-7)**

The Municipal Whole House Rehab Pilot will expand the ability of municipal housing departments to incorporate Whole House energy efficiency into standard rehabilitation work. The project will allow a limited number of units undergoing standard retrofits through the City's Single Family Housing Rehab program to receive comprehensive energy efficiency retrofits, traditionally absent from these programs.

## **Goals and Objectives**

The goals and objectives identified by the applicants for each proposal are described in Attachments B1 through B7.

## **Budget**

Budgets for individual projects are subject to negotiation with each applicant and cannot be included in this advice letter. The total proposed program budget is \$8,826,248, which covers the costs of the selected participants and PG&E's program support costs. PG&E proposes the following breakout by program area.

Table 1 – Program Budget

	<b>Admin</b>	<b>Marketing</b>	<b>Direct Implementation</b>	<b>Total</b>
Initial Request	\$312,388	\$0	\$4,013,860	\$4,326,248
Supplemental Request	\$324,934	\$0	\$4,175,066	\$4,500,000
<b>Total</b>	<b>\$637,322</b>	<b>\$0</b>	<b>\$8,188,926</b>	<b>\$8,826,248</b>

## **Metrics**

The metrics identified by the applicants for each proposal are described in Attachments B1 through B7 and are subject to negotiation of the final scope of work for each individual pilot project. Overall program metrics are provided in Attachment C.

## **Logic Model**

An overall logic model for this program is provided as Attachment D. Since each project will have different activities and outputs, the program logic model is provided at a very high level.

## **EM&V Plan**

Attachments B1 through B7 include the EM&V plan discussions, which were submitted by the applicants for each proposal. PG&E proposes to work with each project applicant to develop final evaluation plans as part of the contract negotiation process. Innovator Pilot projects are non-resource; therefore, PG&E anticipates that the EM&V effort will focus on process evaluations.

## **Protests**

The Energy Division has clarified that there will be no protest period for this second supplemental advice letter. Parties to this advice letter have had two

opportunities to comment and there were no comments and/or protests in response to the first supplemental filing submitted on April 30, 2010.

### **Effective Date**

PG&E is filing this second supplemental advice letter to be approved as soon as possible but not later than **June 1, 2010**, which is 12 days after the filing date. This date is unchanged from the requested effective date for Advice 3081-G-A/3597-E-A as this second supplemental advice letter clarifies certain program information per Energy Division's request.

### **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. Address changes to the General Order 96-B service list and all electronic approvals should be directed to email [PGETariffs@pge.com](mailto:PGETariffs@pge.com). Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs>.

Handwritten signature of Jane Yura-OB in cursive script.

Vice President – Regulation and Rates

#### Attachments:

Attachment A: Request for Ideas

Attachment B: Applicant Proposals

Attachment C: Program Performance Metrics

Attachment D: Logic Diagram

Attachment E: Revision to Innovator Pilot Program Portion of PG&E's Local Government Partnership Master Program Implementation Plan

cc: Service List A.08-07-021

# CALIFORNIA PUBLIC UTILITIES COMMISSION

## ADVICE LETTER FILING SUMMARY ENERGY UTILITY

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

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 M)**

Utility type:

ELC

GAS

PLC

HEAT

WATER

Contact Person: Olivia Brown

Phone #: 415.973.9312

E-mail: oxb4@pge.com

### EXPLANATION OF UTILITY TYPE

ELC = Electric

GAS = Gas

PLC = Pipeline

HEAT = Heat

WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 3081-G-B/3597-E-B

**Tier:** 2

Subject of AL: Second Supplement to Innovator Pilot Program Advice Letter Pursuant to D.09-09-047

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

AL filing type:  Monthly  Quarterly  Annual  One-Time  Other \_\_\_\_\_

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: D.09-9-047

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: No

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: No

Confidential information will be made available to those who have executed a nondisclosure agreement: N/A

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: N/A

Resolution Required?  Yes  No

Requested effective date: June 1, 2010

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). N/A

Tariff schedules affected: N/A

Service affected and changes proposed: N/A

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

**CPUC, Energy Division**

**Tariff Files, Room 4005**

**DMS Branch**

**505 Van Ness Ave., San Francisco, CA 94102**

**jn@cpuc.ca.gov and mas@cpuc.ca.gov**

**Pacific Gas and Electric Company**

**Attn: Jane K. Yura, Vice President, Regulation and Rates**

**77 Beale Street, Mail Code B10B**

**P.O. Box 770000**

**San Francisco, CA 94177**

**E-mail: PGETariffs@pge.com**

**ADVICE 3081-G-B/3597-E-B**

**Attachment A:  
Request for Ideas**

## ATTACHMENT A

### INNOVATOR PILOTS REQUEST FOR IDEAS

October 14, 2009

REQUEST FOR IDEAS

PACIFIC GAS AND ELECTRIC COMPANY'S INNOVATOR PILOTS PROGRAM

#### Overview

Half of the cities and counties in Pacific Gas and Electric Company's (PG&E) service area are engaged in climate action, and many progressive local communities have an innovative vision for meeting new energy savings, greenhouse gas (GHG) reduction and renewable energy goals that align with the California Energy Efficiency Strategic Plan (Strategic Plan), which can be found at the following website:

<http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>. However, these communities may lack the financing and technical know-how to transform their vision into successful projects that provide the desired benefits. Moreover, even the most successful project or initiative cannot serve as a model for other communities without a mechanism in place for sharing best practices and lessons learned.

PG&E's new Innovator Pilots program ("Program") is intended to help communities achieve real and measurable results associated with their GHG reduction strategies. The Program will help progressive communities overcome existing barriers by empowering their creativity to demonstrate new approaches to energy use that align with the longer-term elements of the Strategic Plan and Assembly Bill 32 (AB32). Ultimately, the goal is to share these approaches with other communities in California in order to reach our shared goal of GHG reduction across the state.

#### Innovator Pilots Program Approval by the California Public Utilities Commission

The California Public Utilities Commission (CPUC) issued Decision 09-09-047 ("Decision") on September 24, 2009, which approved PG&E's Energy Efficiency program portfolio for the 2010 to 2012 program cycle and is made available for viewing at [http://docs.cpuc.ca.gov/PUBLISHED/FINAL\\_DECISION/107829.htm](http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/107829.htm)

The Decision conditionally approves PG&E's Innovator Pilots program. The CPUC has directed PG&E to file an advice letter within 120 days of the release of the decision detailing how the selected pilot partners will comply with the criteria for pilot programs outlined in Section 4.3 and Ordering Paragraph 20 of the Decision. This advice letter will identify the selected pilot partners, the proposed budget for

each partner, and the specific activities to be implemented by each partner that will advance and measure progress towards meeting or exceeding pilot goals and objectives. No contracts may be awarded by PG&E prior to the approval of this advice letter.

PG&E is seeking projects that can be fully executed for \$1 million or less, excluding any supplemental funding provided by others. For funding requests that exceed \$1 million, applicants will be required to describe how each \$500,000 increment would be spent and the associated benefits.

### Objectives

The Program will provide funding for projects that will test, demonstrate and measure innovative ways to deliver energy savings. These projects may include, but will not be limited to, strategic resource management planning, social marketing and community outreach programs, a network of regional experts, behavior-based energy demand-side management, bundled incentives to promote integration of demand-side management incentives, integrated audits, cooperative green procurement initiatives, and green energy careers.

PG&E, in collaboration with the selected Innovator Pilot partners, will monitor and document best practices and lessons learned from the selected projects and will disseminate this information in fact sheets available on PG&E's web site. Applicants that are selected by PG&E will be required to share their project results with entities such as the League of California Cities, the Local Government Commission, ICLEI -Local Governments for Sustainability, Councils of Governments, and other public sector entities to enable replication and/or modification by other governments.

### Who May Apply

Applications will be accepted from local government customers, including PG&E Local Government Partners, city and county governments, groups of local governments, local government associations, and quasi-government groups (including non-profit multi-stakeholder organizations that support energy efficiency programs and/or GHG reduction efforts at the local government level). PG&E will consider project proposals that involve public sector partnerships with private entities; however, the submission of the project proposal must clearly come from or be supported by a local government or similar organization as described above. Once project proposals are selected by PG&E to participate in the Program, PG&E will execute a written agreement with each selected applicant. If an applicant chooses to partner with a private entity or entities that will be responsible for implementing the proposed projects on the applicant's behalf, PG&E will execute a written agreement with the applicable private entity or entities.

This solicitation process is intended to generate innovative ideas; therefore, proposals may be selected that include activities and/or technologies that are not specifically stated in this document.

### Required Elements of the Project Proposal Submission

Project proposals shall not exceed fifteen (15) pages in length, excluding the metrics discussion. Each proposal should contain the following elements:

1. A specific statement of the concern, gap, or problem that the applicant seeks to address and the likelihood that the issue can be addressed cost-effectively through future utility programs that would be developed as a result of the Innovator Pilot program;
2. Whether and how the project will address a Strategic Plan goal or strategy and market transformation;
3. Specific goals, objectives and end points for the proposed project;
4. New and innovative design, partnerships, concepts or measure mixes that have not yet been tested or employed;
5. A clear budget and timeframe (including milestones) to complete the project and obtain results before December 2012;
6. Information on relevant baseline metrics or a plan to develop baseline information against which the project outcomes can be measured. Project performance metrics shall be described in accordance with Appendix 2 of the CPUC's Decision, provided below as Attachment A, which provides direction to the investor owned utilities (IOUs) regarding program performance metrics;
7. Methodologies to test the cost-effectiveness of the project;
8. A proposed evaluation, measurement and verification (EM&V) plan;
9. A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities.

### Evaluation Elements for Project Proposal Consideration

All proposals will be evaluated based on the following criteria:

- **Innovation:** The project addresses the Strategic Plan, is innovative, comprehensive and integrated, addresses lost opportunities and is expected to catalyze change. Projects address priority early actions for affected market segments (including government buildings, agriculture, commercial, residential, multifamily) or big bold strategies or integrated solutions.
- **Broad Applicability and Transferability:** The proposed project will create a model that can be replicated by, or transferred to, other parties. In other words, applicants selected will not ultimately be unique in their ability to implement this type of project.  
Applicants must agree to assist PG&E in documenting pre- and post-Pilot knowledge, behaviors, and activities.
- **Feasibility:** The project has a high likelihood of success.
- **Skill and Experience:** The applicant has adequate infrastructure and ability to implement the proposed scope.
- **Fills Gaps:** The project addresses areas that are not currently being addressed by identifying and resolving barriers to energy efficiency; developing long-term relationships in the community; creating regional approaches; focusing on long-term solutions and savings; and/or piloting effective project evaluation that is in sync with Strategic Plan goals.
- **Leveraging:** Innovator Pilot funds should be used as a source of matching funds to leverage California Energy Commission (CEC) and/or other funding sources, where possible.
- **Demonstrated Commitment to Climate Action Planning:** Applicants must demonstrate commitment to energy management and/or climate action planning through previous participation in utility energy programs; partnerships with PG&E or other entities enabling resource management or climate planning; an established energy reduction plan; establishment of GHG targets; or other similar actions. Proposals should address statewide GHG reduction goals and be coordinated with the objectives of the Strategic Plan and AB32.
- **Diversity:** If sufficient applications are submitted, and as funding permits, the Program will fund a variety of geographic areas and community types (urban, suburban, rural, low income) in order to inspire all governments in California to engage in energy efficiency.

### Questions

PG&E has set up the following email address to receive all proposals and questions related to this program: **innovation@pge.com**. PG&E will routinely monitor this mailbox and send interested parties a list of the questions and

answers on a periodic basis. Please submit all questions to **innovation@pge.com** no later than December 1, 2009.

### Schedule

**1 December: Deadline for Submittal of Questions**

**14 December: Deadline for Application Submittals**

Late January: Estimated timeframe for PG&E to file advice letter with the CPUC

Late February: Estimated timeframe for CPUC approval of advice letter

March: Estimated timeframe to execute contracts with approved program participants, pending CPUC approval of advice letter

An electronic copy must be submitted to **innovation@pge.com** and be received by **Monday, December 14, 2010 5:00 PM Pacific Time.**

**Attachment A**  
**Appendix 2 (of CPUC Decision 09-09-047)**  
**Program Performance Metrics**

**Appendix 2.1**

**ED (Energy Division) Recommended Process for IOU Development of Program Performance Metrics**

There are different kinds of performance indicators:

- Metrics that trend against known standards that come from internal and external sources and may include benchmarks.
- Metrics that trend with standards to be established when establishing a baseline.
- Metrics that track how close milestones are to being achieved
- Yes/No Metrics track whether short-term objectives are being met (ex: establishing and implementing a system, completing an analysis, etc.)

These metrics should be based on program activities, program outcomes and the program's contribution to market transformation as applicable. They should also be identified with program outputs (what a program does such as volume of widgets installed) and / or program outcomes (the results a program produces such as external influences). While there are different kinds of metrics that measure different kinds of data, they should have common success criteria such as being:

- Valid and Reliable
- Meaningful and Understandable
- Balanced and Comprehensive
- Clear regarding preferred direction of movement
- Timely and Actionable
- Resistant to goal displacement
- Cost-Sensitive and non-redundant

**Developing Program Performance Metrics**

**Step 1:** The first step the IOUs should undertake when developing performance metrics is to involve the people who are responsible for the work to be measured because they are the most knowledgeable about the work including upper management who will need to buy-in to the finished outcome. Once these people are involved:

- identify critical work processes and program requirements
- Identify critical results desired and align them to program design and requirements and define the program mission.

- The program mission is the basic purpose of a program, its reason for being, and the general means through which it will accomplish its purpose in view of overarching goals and objectives (CEESP, BBES, CPUC EE Goals).
- Establish performance goals, standards, or benchmarks.
  - Program goals should be developed to support the Program's mission. Program goals are general statements about the results to be produced by the program.
- Develop measurements for the critical work processes or critical results
  - Program Objectives are the specific milestones / targets to be achieved in order to accomplish the program goals. These objectives should be specific, measurable, ambitious, realistic, and time-bound.

**Step 2:** Once program mission, goals, and objectives, are clearly defined the IOUs will need to develop program logic models that support the outcome of Step 1 above. The logic models will need to show the flow between program activities, their outputs, and subsequent short-term, intermediate, and long-term outcomes as well as how program elements are linked and the influence of external influences. See below for an example of a logic model.

**Step 3:** Once initial program logic models are developed identification of appropriate program performance indicators will need to be overlaid within the program logic model showing what program activities and outcomes will be measured both internal and external to the program.

The IOUs should follow these guidelines for defining program performance indicators:

- Work directly from PT/LM, goals, objectives, program activities, outputs, outcomes to define performance indicators
- Attempt to develop a balanced set of performance indicators per program while avoiding redundancy or only tangentially related measures
- Reject proposed indicators that will not be meaningful to managers, policy makers and other relevant stakeholders
- Define indicators with high degree of face validity to intended users and external audience
- Examine the validity and reliability of proposed measures
- Define indicators for which a clear “data trail” will be available in order to allow for effective quality assurance procedures
- Provide clear definition of data sources and data collection procedures to facilitate uniform reporting from decentralized procedures

- Consider the trade-offs between the quality of performance indicators versus the cost of collecting the data

**Step 4:** Develop a system to implement collection, tracking, and reporting of program performance metrics.

- Organize and Clarify the system development process
- Define, evaluate, and select indicators
- Develop data collection procedure and tracking tools to be incorporated into EEGA.
- Provide quality assurance
- Specify the system design
- Identify reporting frequency and channels
- Determine the analytical and reporting formats
- Develop software applications
- Assign responsibilities for maintaining the system
- Implement full-scale system
- Use, evaluate, and modify the system as appropriate

### **Program Performance Indicator Worksheet**

1. Include a list of the utility and program administrator staff directly involved in deriving the program performance indicator metric. Include their title and contact information.

2. Describe each program performance indicator being proposed for this program. Indicate in a description for each, what type of performance indicator it is (see attached above). If the program indicator is being changed from an already approved program indicator indicate why the change is necessary. Provide additional analysis that adequately justifies the need to revise the metric as an attachment to this worksheet.

3. For each program performance metric being proposed indicate why you have selected them including how the metric meets the SMART convention (Specific, Measurable, Ambitious, Realistic, Time-bound)

4. State the program mission. The program mission is the basic purpose of a program, its reason for existing, and the general means through which it will accomplish its purpose in view of overarching goals and objectives (CEESP, BBEES, CPUC EE Goals).

5. Describe the program performance goals (both internal and external), standards, and / or benchmarks. Program goals should support the programs' overall mission and are general statements about the results to be produced by the program. If program goals are being revised from previous program goals indicate why the change is necessary providing additional analysis to justify the change.

6. Describe the critical work processes, program requirements, and critical results desired (both internal and external) linked to promotion of the program mission and goals above.

7. Describe how the proposed program performance metrics are a measure of the critical work processes or critical results identified above.

8. Describe what the program objectives are. Program objectives are the specific milestones and targets to be achieved to which the proposed program performance metrics seek to measure. Program objectives should be chosen that promote accomplishment of the program goals and should meet the SMART convention described above. If the program objectives are being revised from previous program objectives indicate why the change is necessary. Provide additional analysis to justify this change.

9. Describe how the metrics will be collected, what data source they will come from, and how they will be tracked and reported.

10. Attach a program logic model that graphically represents what has been described in this worksheet. Logic models should depict the flow between program activities, their outputs, and subsequent short-term, intermediate, and long-term outcomes as well as how program elements are linked and the influence of external influences. Proposed program performance indicators should be incorporated at the appropriate locations within the logic model indicating what program activities and outcomes within the model will be measured both internal and external to the program (see example above).

11. Include a completed Program Performance Indicator Table as an attachment to this worksheet (see example below).

**ADVICE 3081-G-B/3597-E-B**

**Attachment B:  
Applicant Proposals**

## ATTACHMENT B

### ATTACHMENT B-1

#### ALAMEDA COUNTY OFFICE OF EDUCATION LEADERSHIP IN ENERGY EFFICIENCY PROGRAM (LEEP) RESPONSES TO COMMISSION'S PILOT PROJECT CRITERIA

The Alameda County Office of Education (ACOE) submitted a Leadership in Energy Efficiency Program (LEEP) proposal for a countywide energy management program in public schools.

**1. A specific statement of the concern, gap, or problem that the applicant seeks to address and the likelihood that the issue can be addressed cost-effectively through future utility programs that would be developed as a result of the Innovator Pilot program**

Public school facilities are an often overlooked target for energy savings, as well as for marketing, outreach, and education on energy efficiency and broader sustainability issues. Schools are generally considered hard to reach, in large part because their core mission – educating children – creates more immediate priorities on a day-to-day basis than energy efficiency.

Even when school district budgets are not financially compromised, school districts as a rule do not have the resources or ability in-house to perform energy management services.<sup>1</sup> Most districts are too small to justify hiring their own energy manager and energy management is not a core component of a school district's mission.

ACOE is uniquely positioned to transform school district energy management, serve as a statewide model, and provide statewide leadership. It is also positioned to connect energy management to the core educational mission of school districts through green jobs field learning opportunities. Its proposed LEEP will pilot the transformation of energy management in Alameda County's 18 school districts and

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<sup>1</sup> Energy management activities may include: Administrative functions such as establishing utilities budgets, aggregating accounts, verifying bill accuracy, preparing periodic consumption and utility spending report, automating collection and use of utility consumption and billing information, providing reports to local districts; Technical Analysis such as analyzing utility rates, hiring energy-related consultants, providing energy reports to management and elected officials, performing energy audits, performing energy efficiency project cost-benefit analysis, developing energy project proposals; Energy Project management such as obtaining energy project funding, contracting to implement energy projects, administering energy project contracts, conducting monitoring and verification of project results, creating and/or keeping energy project cost/savings history, applying for energy efficiency project funding from various sources; Facilities Management such as analyzing facility operations from an energy viewpoint, proposing and implementing facility operational changes, directly installing energy projects, interacting with facilities maintenance organizations; Energy Policy issues such as developing and/or promoting a formal energy policy, directly interfacing with other public agency officials, providing energy policy input on new building and remodel designs.

beyond, and reach diverse populations and many ethnic communities that are considered difficult to access.

## **2. Whether and how the project will address a Strategic Plan goal or strategy and market transformation**

LEEP will offer the following services and benefits to participating districts:

- a) Baseline inventory of energy usage in facilities,
- b) Provide and facilitate audits to identify specific strategies to reduce energy-related costs in both new and existing buildings,
- c) Ongoing training and technical assistance for district facilities managers,
- d) Increased school district capacity to manage energy usage in their facilities supported by district energy management policies, and
- e) Initial district contributions are limited to modest time commitments from current staff.

LEEP aligns directly with the following five goals of California's *Energy Efficiency Strategic Plan*<sup>2</sup> (hereinafter referred to as EESP 1-5):

- EESP 1:** Local governments lead adoption and implementation of "reach" codes stronger than Title 24, on both mandatory basis and voluntary basis.
- EESP 2:** Strong support from local governments for energy code compliance enforcement.
- EESP 3:** Local governments lead by example with their own facilities and energy usage practices.
- EESP 4:** Local governments lead their communities with innovative programs for energy efficiency, sustainability, and climate change.
- EESP 5:** Local government energy efficiency expertise becomes widespread and typical.

## **3. Specific goals, objectives and end points for the proposed project;**

*This section describes how LEEP goals align with the Strategic Plan goals.*

### **LEEP Goal 1**

**Develop a baseline district building energy usage inventory including a benchmarking analysis and, possibly, a baseline water usage inventory**

**Objective 1.1** Students from green jobs training programs at local colleges and high schools are trained to analyze energy usage data, develop a database of school district energy usage, and benchmark the facilities' energy usage in the U.S. EPA Portfolio Manager program (This is a valuable job skill that will help prepare the energy managers and analysts of the future). [EESP 3, 4, 5]

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<sup>2</sup> California Public Utilities Commission, *California Long Term Energy Efficiency Strategic Plan*, September 2008.

Endpoint 1.a: Baseline inventory and benchmarking completed.

**LEEP Goal 2**

**Build energy management expertise and institutional knowledge in school districts in Alameda County.**

**Objective 2.1** Develop web-based database to manage LEEP activities and end points (will ultimately serve as a model application for other COEs when LEEP is scaled).

**Objective 2.2** ACOE provides technical assistance to districts. [EESP 2]

**Objective 2.3** ACOE leads by example with own facilities and energy usage practices. [EESP 3]

**Objective 2.4** ACOE provides on-going education and training to District Superintendents, Business Officers, Finance Directors, Facilities Directors, teachers, custodians on topics including the value of energy efficiency, the benefits to school districts of comprehensive energy management, the low-interest loan program operated by the California Energy Commission, incentive programs offered by PG&E, and best practices for energy conservation in facilities management. [EESP 1, 2, 3, 4, 5]

**Objective 2.5** Districts encourage school site-based energy efficiency campaigns supported by curriculum-aligned educational activities. [EESP 4, 5]

**Objective 2.6** ACOE creates new energy management jobs and internships for community college and high school green jobs graduates and trainees. On-the-job training builds local skill base by offering hands-on learning and resume building opportunities to interns. [EESP 5]

**Objective 2.7** Collaboration with ACE (Architecture, Construction and Engineering) Mentor Program of America for high school students, to encourage young people to consider related careers. [EESP 4, 5].

Endpoint 2.a: School districts develop baseline understandings of energy usage, and develop strategies to better manage energy use. [EESP 4, 5]

Endpoint 2.b: Districts adopt policies on energy conservation and green buildings. [EESP 1, 2]

Endpoint 2.c: District energy efficiency expertise is widespread and typical. [EESP 5]

Endpoint 2.d: School-based energy efficiency messages are delivered through public communications campaigns supported by curricula-aligned educational activities. [EESP 4, 5]

Endpoint 2.e: Schools become laboratories for students on energy usage and efficiency supported by curriculum. [EESP 4, 5]

**LEEP Goal 3**

**Provide District facility management staff training and technical support for on-going energy usage monitoring and maintenance using low- or no-cost tools and to build district capacity.**

**Objective 3.1** School district staff understand value of energy usage monitoring.

Endpoint 3.a: Districts designate staff who regularly monitor energy usage.

Endpoint 3.b: Districts incorporate energy efficiency into maintenance protocols.

**LEEP Goal 4**

**Provide 38 energy audits over program duration.**

**Objective 4.1:** Districts will incorporate energy audits into their best practices.

Endpoint 4.a: Each participating district will conduct at least two energy audits through PG&E or California Energy Commission programs (size permitting).

**LEEP Goal 5**

**Identify cost-effective energy efficiency projects representing a minimum of 4.0 million kWh and 43,000 therms of energy savings, and reducing peak demand by 840 kW and greenhouse gas (GHG) emissions by 3.6 million lbs of CO<sub>2</sub>e annually (based on first year savings.)**

**Objective 5.1:** Districts will analyze facility operations from an energy viewpoint.

Endpoint 5.a: Districts incorporate data from energy audits into deferred maintenance planning.

**LEEP Goal 6**

**Facilitate implementation of energy efficiency projects representing a minimum of 400,000 kilowatt-hours (kWh) and 4,300 therms of annual energy savings, and reducing peak demand by 85 kW and greenhouse gas (GHG) emissions by 364,000 lbs CO<sub>2</sub>e annually (based on first year savings).**

**Objective 6.1:** Districts implement energy audit findings.

Endpoint 6.a: ACOE helps districts identify funding sources to act on energy audits.

Endpoint 6.b: ACOE helps districts apply for rebates and low-interest loans and identify contractors.

Endpoint 6.c: Districts install energy efficient equipment.

**LEEP Goal 7**

**Develop a model for energy management in school districts that can be widely replicated throughout**

**California.**

**Objective 7.1** Best practices identified and lessons learned from LEEP are distributed by presenting at regional and statewide conferences for county and district superintendents, chief business officials, and facilities directors, and school boards. [EESP 3, 4, 5].

**Objective 7.2** Interactive website is developed. [EESP 1, 2, 3, 4, 5].

**Objective 7.3** ACOE provides on-going training and technical assistance to County Offices of Education throughout California to serve as facilitators of district energy efficiency within their respective county. [EESP 1, 2, 3, 4, 5]

Endpoint 7.a: Interactive website serves as a platform to facilitate communications and mentoring, to serve as a centralized repository for templates and other important documents, and to provide links to online training programs [EESP 1, 2, 3, 4, 5].

Endpoint 7.b: County Offices of Education throughout the State of California lead by example with own facilities and energy usage practices, following LEEP model. [EESP 1, 2, 3, 4, 5]

Endpoint 7.c: Dissemination through county offices of education statewide provides a good base from which to develop broader sustainability initiatives that help districts. [EESP 1, 4, 5]

Endpoint 7.d: Best Practices are transferred to energy savings programs offered by energy utilities. [EESP 1, 4, 5]

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

Energy efficiency programs designed for schools historically have focused on changing out equipment, but they have not taken a systems approach that uses an established organizing entity such as ACOE to build knowledge and the capacity of school districts in the area of energy management. LEEP will show how County Offices of Education can provide that clearinghouse and capacity building function, both for actual energy management work and educating school district managers. Schools are generally considered hard to reach, in large part because their core mission – educating children – creates more immediate priorities on a day-to-day basis than energy efficiency. Utility bills typically are viewed as a fixed cost. LEEP will emphasize the contribution good energy efficiency and energy management can make to reducing operating and maintenance costs and help institutionalize good energy management practices within ACOE and the districts it serves.

It will provide on-the-ground workforce training in the more “white collar” area of the energy field: energy management. LEEP will be unique in providing green jobs trainees with the opportunity to analyze energy bills, use Portfolio Manager, and assist in designing energy management programs for school districts.

LEEP will test the model of a County Office of Education setting the pace and expectation for local districts in terms of adopting and then implementing energy conservation and green building policies. Currently, very few of the 1000 school districts in California have green building policies (one of those, Oakland, is located in Alameda County).

It will include an outside technical advisor to assist in setting up the energy management function, LEEP design, and LEEP implementation. ACOE will be working with Energy Solutions, an Alameda County-based energy efficiency company that over the past five years has worked with almost a hundred municipalities to identify and implement over 300 cost-effective energy efficiency projects and policies.

Additionally, LEEP will leverage ongoing school energy efficiency programs. In addition to using students from the Laney College Green Jobs Programs, and where available high school students in participating districts, ACOE will coordinate with the Campus Housing Program operated by Resource Solutions Group (another program funded through the public goods charge) to identify other students who may be able to assist in various aspects of LEEP.

**5. A clear budget and timeframe (including milestones) to complete the project and obtain results before December 2012**

Budget information was provided by the applicant but has been excluded by PG&E in this advice letter subject to negotiation between PG&E and the applicant.

Advisory Board meets to review implementation plan, secure critical linkages to resources, and identify additional resources for LEEP scaling and sustainability beyond the term of this funding.	Quarterly
ACOE hires 2 energy managers, possibly from the Laney College advanced green jobs programs, if qualified candidates are identified. Energy managers will be trained by Energy Solutions and supervised by ACOE Director of Facilities to implement LEEP elements and ensure each Alameda County school district participates in each aspect as LEEP develops.	Q2 2010
ACOE energy managers work with student interns to develop baseline inventory that includes every school in every district. Energy Solutions provides technical oversight.	2010 – 2011

Students at Laney College and Oakland Technical High School (to be mentored by experienced Laney interns) provide initial data analysis and benchmarking for all districts in the County, with data provided by PG&E. Oversight from ACOE energy managers and Energy Solutions.	2010 – 2011
County Superintendent of Schools and County Director of Facilities convene meetings with district superintendents and district facilities managers, and make presentations to district boards of education to encourage adopting green building and energy and water conservation policies.	Ongoing, starting Q3 2010
Training is provided to different functional groups, i.e., CFOs, district superintendents, district facilities directors, custodians, and food service managers (Training will be coordinated with the PG&E Energy Center).	Ongoing and sequential
ACOE initiates audit schedule for participating districts.	Starts Q4 2010
Participating districts adopt policies on energy conservation and green building (after baseline inventories are completed).	Starts Q1 2011
Districts begin targeted retrofits, funding permitting.	Starts Q2 2011.
ACOE establishes ongoing energy management suite of activities for participating districts	Q1 2011
Collaborate with Architecture, Construction and Engineering (ACE) Mentor Program of America for high school students, to provide role models and encourage high school students to consider related careers.	Q2 2011 for Q3 2011 rollout
School-based energy efficiency messages are delivered through public communications campaigns supported by curricula-aligned educational activities.	Starts 2011 – 2012
Schools become laboratories for students on energy usage and efficiency supported by curriculum	Ongoing
High school students in participating districts are exposed to careers in energy efficiency and provided the information necessary to pursue related post-secondary training and college opportunities.	Ongoing
LEEP Pilot evaluation completed, best practices and lessons learned are identified.	2012

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

performance metrics shall be described in accordance with Appendix 2 of the CPUC's Decision, provided below as Attachment A, which provides direction to the investor owned utilities (IOUs) regarding program performance metrics;

We will evaluate the effectiveness of LEEP by several metrics:

**LEEP Goal 1**

**Develop a baseline district building energy usage inventory including a benchmarking analysis and, possibly, a baseline water usage inventory** (*This will assist PG&E as it moves to implement AB 1103, which calls for benchmarking of all commercial buildings in its service territory, as well as comply with directions from the California Public Utilities Commission in Decision 09-09-047*).

**Metric 1:** Number of school baseline / benchmarking analyses completed.

- Baseline metric is assumed to be zero for this LEEP.
- Metric will be measured by documenting and retaining electronic copies of the completed analyses.

**LEEP Goal 2**

**Build energy management expertise and institutional knowledge in school districts in Alameda County.**

**Metric 2:** Number of District Superintendents, Business Officers, Finance Directors, Facilities Directors, teachers, custodians with improved understanding of the value of energy efficiency and energy efficiency practices and measures due to participation in this LEEP.

- Baseline metric is zero because LEEP has not yet commenced.
- Metric will be measured by documenting in the LEEP database, every district contact that participates in the LEEP project work or training activities.

**Metric 3:** Number of districts that adopt energy and water conservation and green building policies.

- Baseline metric will be determined by surveying participating districts to determine pre-existing energy/water conservation/green building policies.
- Metric will be measured by documenting in the LEEP database, every new energy/water/green building policy developed/adopted with the assistance of this LEEP.

**Metric 4:** Number of community college and high school green jobs graduates and trainees trained through this LEEP.

- Baseline metric is zero because LEEP has not yet commenced.

- Metric will be measured by documenting in the LEEP database, every trainee that participates in this LEEP.

**Metric 5:** Number of green jobs created

- Baseline metric is zero because LEEP has not yet commenced.
- Metric will measure number of full-time ACOE staff and interns
- Metric will be measured by number of districts that designate energy management responsibilities and positions, and by number of projects implemented (attendant jobs)

**LEEP Goal 3**

**Provide District facility management staff training and technical support for on-going energy usage monitoring and maintenance using low- or no-cost tools and to build district capacity.**

**Metric 6:** Number of district staff trained to update their baseline / benchmarking analyses.

- Baseline metric is assumed to be zero for this LEEP.
- Metric will be measured by documenting in the LEEP database the names, titles, contact information, and dates that benchmarking training was completed.

**LEEP Goal 4**

**Provide 38 energy audits over duration of the PG&E investment.**

**Metric 7:** Number of audits completed.

- Baseline metric is zero for LEEP because LEEP has not commenced.
- Metric will be measured by documenting and retaining electronic copies of the completed audits.

**LEEP Goal 5**

**Identify cost-effective energy efficiency projects representing a minimum of 4.0 million kilowatt-hours (kWh) and 43,000 therms of annual energy savings, and reducing peak demand by 840 kW and greenhouse gas (GHG) emissions by 3.6 million lbs of CO<sub>2</sub>e annually (based on first year).**

**Metric 8:** Annual energy savings and GHG reductions identified.

- Baseline metric will be established with the baseline energy usage inventory for each participating school or district.
- Metric will be measured based on engineering calculations using industry-accepted engineering principals and models and pre-existing documented savings from industry and investor-owned utility studies of

the recommended measures. Achievements on this metric will be recorded in the LEEP database.

**LEEP Goal 6**

**Facilitate implementation of energy efficiency projects representing a minimum of 400,000 kilowatt-hours (kWh) and 4,300 therms of annual energy savings, and reducing peak demand by 85 kW and greenhouse gas (GHG) emissions by 364,000 lbs CO<sub>2</sub>e annually (based on first year savings).**

**Metric 9:** Annual energy savings, energy cost savings, and GHG reductions implemented.

- Baseline metric will be established with the baseline energy usage inventory for each participating school or district.
- Metric will be measured based on engineering calculations using industry-accepted engineering principals and models and pre-existing documented savings from industry and investor-owned utility studies of the recommended measures. Achievements on this metric will be recorded in the LEEP database, and LEEP’s role in facilitating the project implementation will be substantiated through database records indicated on-going engagement with the project owner.

**LEEP Goal 7**

**Develop a model for energy management in school districts that can be widely disseminated throughout California.**

**Metric 10:** Number of conferences where LEEP representatives speak or present information.

- Baseline metric is zero.
- Metric will be measured based on number of conferences attended as documented by official conference or meeting agendas or programs specifying presenters.

In addition to the table below, the applicant provided logic models that can be provided to the Commission upon request.

**Program Performance Indicator Table**

<b>LEEP Goals</b>	<b>Objectives</b>	<b>Endpoints</b>	<b>Proposed Metrics</b>
<b>Goal 1:</b> Develop a baseline district building energy usage inventory and, possibly, a baseline	<p><b>1.1:</b> Collaborate with PE &amp; E regarding archived district data.</p> <p><b>1.2:</b> Students from local colleges are trained to</p>	<b>1.a:</b> Baseline inventory completed.	<b>Metric 1:</b> Number of school baseline / benchmarking analyses completed.

LEEP Goals	Objectives	Endpoints	Proposed Metrics
<p>water usage inventory.</p>	<p>analyze energy bills and develop a database of school district energy usage in the U.S. EPA Portfolio Manager program (This will help train the energy managers and analysts of the future) [EESP 3, 4, 5].</p> <p><b>1.3:</b> Collaborate with Oakland Technical High Schools Green Technology Academy to develop model for high schools to assist with benchmarking, analysis input into Portfolio Manager.</p>		
<p><b>Goal 2:</b> Help school districts in Alameda County build greater energy management expertise.</p>	<p><b>2.1:</b> Develop database to manage strategic plan activities, end points for county as a model.</p> <p><b>2.2:</b> ACOE provides technical assistance to districts [EESP 2]</p> <p><b>2.3:</b> ACOE leads by example with own facilities and energy usage practices [EESP 3].</p> <p><b>2.4:</b> ACOE provides on-going education and training to site and district at all levels.</p> <p><b>2.5:</b> Districts provide incentives for school site-based energy efficiency campaigns supported by curriculum-aligned educational activities [EESP 4, 5].</p> <p><b>2.6:</b> Laney College Green Jobs Program for interns to assist with benchmarking.</p> <p><b>2.7:</b> Collaborate with ACE Mentor Program for high school students</p>	<p><b>2.a:</b> Model Strategic Plan database developed</p> <p><b>2.b:</b> School districts develop baseline understanding of energy usage, and develop strategies to better manage energy use [EESP 4, 5].</p> <p><b>2.c:</b> Districts adopt policies on energy conservation and green buildings [EESP 1, 2].</p> <p><b>2.d:</b> District energy efficiency expertise is widespread and typical [EESP 5]</p> <p><b>2.e:</b> School-based energy efficiency messages are delivered through public communications campaigns supported by curricula-aligned educational activities [EESP 4, 5].</p> <p><b>2.f:</b> Schools become laboratories for students on energy usage and efficiency supported by</p>	<p><b>Metric 2:</b> Number of District Superintendents, Business Officers, Finance Directors, Facilities Directors, teachers, custodians with improved understanding of the value of energy efficiency and energy efficiency practices and measures due to participation in this program.</p> <p><b>Metric 3:</b> Number of districts that adopt energy and water conservation and green building policies.</p> <p><b>Metric 4:</b> Number of community college and high school green jobs graduates and trainees trained through this program.</p> <p><b>Metric 5:</b> Number of green jobs created.</p>

LEEP Goals	Objectives	Endpoints	Proposed Metrics
		<p>curriculum [EESP 4, 5].</p> <p><b>2.g:</b> High school students in participating districts are exposed to careers in energy efficiency, and some are motivated and have the information necessary to pursue related post-secondary training and college opportunities [EESP 4, 5].</p>	
<p><b>Goal 3:</b> Provide District facility staff training/ technical support for on-going energy usage monitoring/maintenance using low- or no-cost tools to build district capacity.</p>	<p><b>3.1:</b> School district staff understand value of energy usage monitoring.</p>	<p><b>3.a:</b> Districts designate staff who regularly monitor energy usage.</p> <p><b>3.b.</b> Districts incorporate energy efficiency into maintenance protocols</p>	<p><b>Metric 6:</b> Number of district staff trained to update their baseline / benchmarking analyses.</p>
<p><b>Goal 4:</b> Provide 38 energy audits over program duration.</p>	<p><b>4.1:</b> Districts will incorporate energy audits into their best practices.</p>	<p><b>4.a:</b> Each participating district will conduct at least two energy audits through PG&amp;E or California Energy Commission programs.</p>	<p><b>Metric 7:</b> Number of audits completed.</p>
<p><b>Goal 5:</b> ID cost-effective EE projects representing a min. of 4.0 million kilowatt-hours (kWh) and 43,000 therms of annual energy savings, reducing peak demand by 840 kW and greenhouse gas (GHG) emissions by 3.6 million lbs of CO<sub>2</sub>e annually (based on first year savings).</p>	<p><b>5.1:</b> Districts will analyze facility operations from an energy viewpoint.</p>	<p><b>5.a:</b> Districts incorporate data from energy audits into deferred maintenance planning.</p>	<p><b>Metric 8:</b> Annual energy savings and GHG reductions identified.</p>
<p><b>Goal 6:</b> Facilitate implementation of EE projects representing a min. of 400,000 kilowatt-hours (kWh) and 4,300 therms of annual energy savings, reducing peak demand by X85</p>	<p><b>6.1:</b> Districts implement energy audit findings.</p>	<p><b>6.a.:</b> ACOE helps districts identify funding sources to act on energy audits.</p> <p><b>6.b:</b> ACOE helps districts apply for rebates and low-interest loans and</p>	<p><b>Metric 9:</b> Annual energy savings, energy cost savings, and GHG reductions implemented.</p>

LEEP Goals	Objectives	Endpoints	Proposed Metrics
kW and greenhouse gas (GHG) emissions by X364,000 lbs CO2e annually (based on first year savings).		identify contractors. <b>6.c:</b> Districts install energy efficiency equipment.	
<b>Goal 7:</b> Develop a model for energy management in school districts that can be widely disseminated throughout California.	<p><b>7.1:</b> Best practices identified and lessons learned are distributed by presenting at regional and statewide conferences for county and district superintendents, chief business officials, and facilities directors, and school boards. [EESP 3, 4, 5].</p> <p><b>7.2:</b> Interactive website is developed. [EESP 1, 2, 3, 4, 5].</p> <p><b>7.3:</b> ACOE provides on-going training and technical assistance to County Offices of Education throughout California to serve as facilitators of district energy efficiency within their respective counties [EESP 1, 2, 3, 4, 5].</p>	<p><b>7.a:</b> Interactive website serves as a platform to facilitate communications/mentoring, to serve as centralized repository for templates and important documents, and to provide links to online training programs [EESP 1, 2, 3, 4, 5].</p> <p><b>7.b:</b> COEs throughout State lead EE by example [EESP 1, 2, 3, 4, 5].</p> <p><b>7.c:</b> Dissemination thru COEs statewide provides a good base from which to develop broader sustainability initiatives that help districts [EESP 1, 4, 5].</p> <p><b>7.d:</b> Best Practices are transferred to energy savings programs offered by energy utilities [EESP 1, 4, 5].</p>	<b>Metric 10:</b> Number of conferences where Program representatives speak or present information.

## 7. Methodologies to test the cost-effectiveness of the project;

The focus of LEEP is to develop the infrastructure to sustain and scale a countywide energy management program that provides financially constrained local school districts access to a centralized resource for energy efficiency expertise and energy management assistance. Objectives include developing a web-based database to manage LEEP activities and capture end points and relevant data (this database will ultimately serve as a model application for other COEs when LEEP is scaled). It will serve as a repository for documentation of a number of LEEP metrics including the number of districts and their staff participating in LEEP (and the associated costs LEEP expends per district), the number of audits completed, and annual savings and GHG reductions. Cost-effectiveness will be calculated on the basis of LEEP dollars spent per kWh and per therm of energy savings identified. LEEP dollars spent per

kWh and per therm of energy savings implemented may also be calculated if appropriate (the majority of implemented savings resulting from LEEP will not be realized until beyond the term of this initial LEEP funding cycle and will be a function of how quickly participating districts are able to implement new energy policies).

#### **8. A proposed evaluation, measurement and verification (EM&V) plan;**

Currently, some of the local school districts in Alameda County have or are in the process of developing an inventory of energy usage. Berkeley and Oakland are doing some of this work as part of a \$500,000 grant from Solar America (U.S. Department of Energy), under which these districts and West Contra Costa USD are identifying solar potential within their building stock. Districts with capital improvement bonds are installing two-way meters as they construct new buildings or retrofit older buildings. However, no district has an established function dedicated to energy management, including regular analysis of utility bills and energy usage, an ongoing audit and retrofit program, established energy conservation and green building policies, and so on. This is the role that ACOE will fulfill.

A key part of implementing a program is properly documenting goal achievements, energy savings claims, and other performance metrics. Baseline data will be collected and stored as part of the benchmarking analysis, and additional baseline information will be collected and documented during the audits. Energy savings associated with projects identified in audits and implemented projects will be estimated based on engineering calculations using industry-accepted engineering principals and models, and pre-existing documented savings from industry and investor-owned utility studies of the recommended measures.

To document and verify LEEP achievements for these and additional performance metrics, ACOE will also rely on an activity tracking database that will track the status of LEEP services delivered, participating district contacts and communications, and estimated savings and GHG reductions associated with LEEP activities. We will work with PG&E to determine additional required data tracking requirements. This database will manage each activity with reporting at LEEP, facility, school, and district levels. A robust, web-based database with LEEP status tracking enables timely and accurate status reporting to PG&E as well as to our LEEP team and LEEP participants. Data will be provided in periodic reports to PG&E, and all data will be provided at the conclusion of LEEP. ACOE will also explain to district participants the need for LEEP evaluation and request their cooperation in working with PG&E evaluators after the conclusion of this funding.

#### **9. A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to**

**transfer those practices to energy savings programs to be offered by energy utilities**

ACOE staff and Advisory Committee members will actively present at relevant state and regional conferences and leverage their pre-existing relationships and standing meetings with county office Superintendents, financial officers, and facility directors throughout PG&E service territory and the State to implement the Dissemination Plan as follows:

Best practices and lessons learned are distributed by presenting at regional and statewide standing meetings and conferences for county and district superintendents, chief business officials, facilities directors, and school boards.	Starting Q2 2011
Interactive website is developed and supported to serve as a platform to facilitate communications and mentoring, to serve as a centralized repository for templates and other important documents, and to provide links to online training programs.	Online Q3 2011
ACOE provides ongoing training and technical assistance to County Offices of Education throughout California to serve as facilitators of district energy efficiency within their respective counties.	Starting Q1 2012

**ATTACHMENT B-2**  
**CITY OF CHICO**  
**RESIDENTIAL RETROFIT PROGRAM**  
**RESPONSES TO COMMISSION'S PILOT PROJECT CRITERIA**

The City of Chico, CA proposes to develop a consumer energy program that serves to improve the efficiency of existing housing stock and encourage habit changing conservation by the occupants, there by directly impacting municipal green house gas emission reduction goals through education.

**1. Statement of purpose and what gap, problem, concern, the project seeks to address**

In 2007, the City of Chico established the Sustainability Task Force (STF), a committee of sixteen community stakeholders who advise the City Council on educating green house gas (GHG) emissions and other sustainability programs.

The existing housing stock has emerged as a significant area of opportunity to achieve GHG reductions. In 1991, the City of Chico established a point-of sale Residential Energy Conservation Ordinance (RECO). The STF was recently tasked with updating the RECO. Through meetings with the local real estate community, members of the STF discovered that implementation of this well intentioned ordinance has not been fully realized because of a lack of awareness and full accountability. Upon completion of the task force analysis, the RECO ordinance was updated to current energy and conservation standards and an enforcement mechanism was created for compliance.

Part A of the proposed program seeks to address that knowledge gap in the real estate and building industries. The program also seeks to motivate homeowners to retrofit their dwelling by informing them of the benefits of coming into 'compliance' with the ordinance prior to selling. In order for these residents to make informed decisions regarding their dwelling improvements, a baseline energy efficiency measure must be established resulting in recommended improvements to the dwelling. One hundred (100) interested homeowners will be provided with a CalHERS energy audit, an energy consumption consultation, and installation of a variety of efficiency measures according to the RECO priority list, including ceiling insulation, insulation for hot and cold water lines, weather stripping, and programmable thermostats. Target groups will be engaged through a series of workshops.

Part B of the proposal seeks to determine if energy usage behaviors can be curbed by providing consumers with on-demand consumption data through real-time energy monitoring systems. This portion of our program will focus on changing occupant behavior and represents a new strategy to reduce energy consumption.

There is substantial research on which to build, concerning behavioral change. Hunt Allcott of MIT (2009) evaluated a program run by Positive Energy that relied on monthly reports to home energy users that let them compare their energy use to that of their neighbors. The savings from this approach amounted to about 1.9% of baseline but these savings were not durable; they faded over time. Allcott's conclusion, after reviewing an extensive body of literature on energy use and behavioral change, was that substantial and permanent savings could be achieved by providing information to consumers that was tailored to meet their needs and their life styles. The City of Chico will provide this information to the occupants via the real time energy monitoring systems coupled with an interpreted educational presentation of their energy use or energy consultation.

One other comprehensive study, commissioned by the Minnesota Department of Commerce and the Office of Energy Security, deserves mention. Ed Carroll and Eric Hatton (Franklin Energy) and Mark Brown (Greenway Insights) concluded there were three ways to change consumption behavior:

1. In-home devices that provide real-time feedback.
2. Customized, regular feedback delivered to customers.
3. Dynamic pricing. (Of course, to take advantage of dynamic pricing consumers need real-time information.)

With the passage of AB 758 (2009), the legislature has directed the CEC to develop a statewide energy efficiency program for existing buildings and the CPUC to develop a financing mechanism for implementation. With a residential energy conservation ordinance in place, the City of Chico will demonstrate how a municipality can leverage its authority through the implementation of a RECO and successful use of public funds to raise awareness of energy consumption and GHG emissions in existing housing stock and implement a program for homeowners and multifamily property owners to begin to lower that consumption and global warming impact.

The program also seeks to serve moderate-income households, a group that is not eligible to be served by low-income programs but also lack expendable income to install such measures without assistance.

## **2. Whether and how the project will address a Strategic Plan goal or strategy and market transformation;**

The proposed project demonstrates the utilization of local government authority for the purposes of energy efficiency, a key strategy outlined in the strategic plan section 12.4. The project also helps achieve goal 4 in section 12.3, providing the City with the resources to lead our community with an innovative program in

energy efficiency and sustainability while helping the City achieve its GHG reduction target.

As described above, customized minute-by-minute energy use feedback has not yet been available to consumers. We propose to close this gap and to develop a data source that could be used by PG&E and other communities across the country.

Here is how we intend to do so:

#### Outline of the Plan

##### Part A- Existing Housing Stock Energy Efficiency- RECO:

1. Where applicable, all participants will receive direct installation of the energy efficient measures identified in the RECO ordinance and discussed above.
2. All (100) residents will be provided with a Cal-HERS *energy audit* to be performed by Cal-HERS certified professionals or by students training for the Cal-HERS certification through an accredited trade school.
3. Fifty (50) of the residents NOT receiving energy monitoring equipment (described in Part B), will receive an *Energy Consultation* educating the occupants regarding plug load and interior conservation strategies by Green Campus.

##### Part B- Occupancy Behavior Conservation Education Research:

A 100+ unit multi-family complex will be identified within the city of Chico; one that reflects a relatively uniform composition in terms of the makeup of the individual households and is in need of energy upgrades.

1. Where applicable, all units in the multi-family complex will receive direct installation of the energy efficient measures identified in the RECO ordinance.
2. Fifty (50) real-time meters will be installed for individual residences in the multi-family complex. The remaining 50 units will be the control group (demographically similar units will be identified).
3. 25 residents, receiving energy monitors, will be provided with an initial energy consultation (This energy consultation will be conducted by Green Campus of California State University, Chico. The consultation will be an elaborated version of one already used on the Chico State campus which provides plug load and occupant performance information).
4. We will conduct two follow-up visits with those receiving the real-time meters in the first six months after the implementation and installation of the program. Twenty-five (25) of those who receive real-time meters will not receive an energy consultation.
5. We will provide post energy consultations and Cal-HERS energy audits and compare energy efficiency and conservation results in all units.

Resulting Test Groups:

A- 50 residences with RECO workshop, Cal-HERS Energy Audits, and Energy Consultation.

B- 25 Residences with RECO workshop, Energy Consultation, Cal-HERS Energy Audit, and Energy Monitors

C- 25 Residences with Cal-HERS Energy Audit and Energy Monitors

### **3. Specific goals, objectives and end points for the proposed project**

**Goal #1:** engage the public in climate action activities and raise the level of awareness regarding the City of Chico's Residential Energy Conservation Ordinance.

#### **Objectives:**

1. Design, develop website & outreach materials for RECO workshop and program promotion.

2. Conduct workshop series for target groups including the Chico Association of Realtors, building industry, and homeowners.

Outcome: completed website, 100 moderate income homeowners enrolled in audit/retrofit program.

Estimated completion date: Fall 2010

**Goal #2:** provide audit and retrofit service aligned with RECO compliance to help 100 homeowners of moderate income achieve energy savings and greenhouse gas emissions reductions.

**Goal #3:** provide audit and retrofit service aligned with RECO compliance to help 100 homeowners of moderate income achieve energy savings and greenhouse gas emissions reductions.

#### **Objectives:**

1. Butte College students perform energy audits of 100 single-family homes of moderate income level. Conduct workshop series for target groups including the Chico Association of Realtors, building industry, and homeowners.

2. Installation of RECO measures including: ceiling insulation (R-30), hot & cold water line insulation, water heater insulation, weather stripping, caulking & sealing of all cracks, doors, windows, & programmable thermostat.

3. Butte College students perform energy audits of a multi-family property (goal 100 units).

4. Multi-family property installation of RECO measures including: ceiling insulation (R-30), hot & cold water line insulation, water heater insulation, weather stripping, caulking & sealing of all cracks, doors, windows, & programmable thermostat (goal 100 units).

5. Measure energy savings and GHG reduction associated with retrofit.

6. Demonstrate cost-effectiveness of RECO ordinance by highlighting case studies on website.

Outcome: 100 single-family audits and retrofits completed; 100 unit multifamily property audits and retrofits completed.  
Estimated completion date: Fall 2011

**Goal #4:** determine whether real-time monitoring helps achieve energy savings in addition to efficiency upgrades and if energy consultations with inhabitants help achieve even greater savings.

**Objectives:**

1. Installation of real time monitoring system installed in half of units of multi-family property (goal 50 units).
2. Energy consultations provided by CSUC Green Campus Program to half of the recipients of the real-time meters (goal 25 units).
3. Track energy consumption real-time meter dwellings (all units).
4. Analyze usage data to determine effectiveness of real-time feedback as a vehicle to achieve energy savings. Also determine if additional savings are achieved in dwellings where inhabitants receive consultations.

Outcome: real time meters installed in half of the multi-family property units, energy consultations completed with each unit.

Estimated completion date: Fall 2011

Outcome: energy consumption data analyzed.

Estimated completion date: Fall 2012

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

Regional partners are an integral piece of our proposed program including; Community College, University, private industry, and public sector expertise.

1. Community College- Butte College has a track record as a leader in sustainability and has demonstrated its commitment by creating programs to support the green workforce. Butte College has recently been rewarded a grant to create training program in energy auditing and weatherization. Outgoing students will be tapped as subcontractors to conduct audit and retrofits for our program

2. University- Chico State is nationally known as a leader in sustainability and was one of the first universities to participate the Green Campus program created by the Alliance to Save Energy.

Green Campus members perform energy consultations on campus related to plug load and behavior. Our program intends to utilize Green Campus members to provide energy consultations to participants of the multi-family retrofit and real-time monitoring program.

3. Private Industry- Richard Health & Associates (RHA) is a California based project design and management firm with an office located in Chico. RHA has a long history with PG&E as an energy partner since 2001. RHA will work with Butte

College and Chico State students using an apprenticeship model to ensure quality delivery, installation, and customer service.

4. Public- The Northern Rural Training Employment Consortium (NORTEC) is an agency representing one-stop shops and work investment organizations in the 18 county area of Northeastern California. NORTEC has been awarded a grant through the Governors Green Job Corps and is the lead applicant for a neighborhood whole house retrofit program through the California Energy Commission’s State Energy Program. Our proposal intends to leverage their resources for training and coordination purposes.

**5. A clear budget and timeframe (including milestones) to complete the project and obtain results before December 2012**

Budget information was provided by the applicant but has been excluded by PG&E in this advice letter subject to negotiation between PG&E and the applicant.

The milestones are as follows:

<b>MILESTONE</b>	<b>START DATE</b>	<b>COMPLETION DATE</b>
Website designed & developed	03/2010	06/2010
RECO workshop implementation	06/2010	01/2011
Energy audits performed	01/2011	06/2012
Efficiency upgrades installed	01/2011	06/2012
Real time meters installed	01/2011	06/2012
Energy consultations performed	01/2011	06/2012
Energy consumption analysis	01/2011	12/2012

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

- A. Number of hits to website
- B. Number of RECO workshops held
- C. Number of workshop participants
- D. Number of homeowners participating in audit and RECO upgrade program
- E. Number of units in multi-family dwelling
- F. Number of energy audits performed
- G. Total square footage of insulation installed
- H. Number of dwellings weather stripped, caulked & sealed
- I. Number of programmable thermostats installed
- J. Number of real-time meters installed

- K. kWh reductions achieved through audit and RECO upgrade program participation
- L. kWh reductions achieved through audit and RECO upgrade program participation and energy consultation with energy monitor usage.
- M. kWh reductions achieved through audit and RECO upgrade program participation and energy monitor usage.
- N. Number of energy consultations performed
- O. Greenhouse gas (GHG) emission reductions

In addition to the list above, the applicant provided logic models that can be provided to the Commission upon request.

**7. Methodologies to test the cost-effectiveness of the project;**

- 1. Program cost minus program benefits (energy savings[\$] \*10)= cost effectiveness
  - i. Energy savings will be measured and quantified into dollar savings according to utility fee schedule
  - ii. Savings will be multiplied by 10 (years between RECO inspections)
  - iii. Benefits will be subtracted from overall program cost and output with a return on investment ratio that will determine overall cost effectiveness.
- 1. Intangible benefits of equal importance including; increased civic engagement, increased understanding of the benefits of the City’s RECO, general energy conservation and efficiency awareness, etc will be qualified with workshop participant surveys.

**8. A proposed evaluation, measurement and verification (EM&V) plan**

METRIC	DATA SOURCE	COLLECTION METHOD
Number of hits to website	City of Chico	Monthly total hits to be collected on a bi-annual basis to track trends
Number of RECO workshops held	City of Chico	City staff will track total number of workshops held during grant duration
Number of workshop participants	City of Chico	Staff will have participants sign in and track number of participants
Number of homeowners participating in audit and RECO upgrade program	City of Chico	Staff will select program participants
Number of units in multifamily dwelling	Property manager	Property management will provide staff with total property units
Number of energy audits performed	RHA & Butte College	Butte College students to complete audits for program

		participants under RHA's supervision. Each dwelling will have corresponding paperwork to track implementation.
Total square footage of insulation installed	RHA & Butte College	Butte College students to complete installation for program participants under RHA's supervision. Each dwelling will have corresponding paperwork to track implementation.
Number of programmable thermostats installed	RHA & Butte College	Butte College students to complete installation for program participants under RHA's supervision. Each dwelling will have corresponding paperwork to track implementation.
Number of real-time meters installed	RHA	RHA to complete installation for program participants. Each dwelling will have corresponding paperwork to track implementation.
Number of energy consultations performed	CSUC Green Campus	Green Campus to complete consultations for program participants. Each dwelling will have corresponding paperwork to track implementation.
kWh reductions achieved through audit and RECO upgrade program participation	Utility bills	As a stipulation for participation, program participants will be required to provide utility bills pre and post audit as a means of analysis.
Additional kWh reductions achieved through real-time metering program	Utility bills	As a stipulation for participation, program participants will be required to provide utility bills pre and post audit as a means of analysis.
Greenhouse gas emissions reduced from the project.	Utility bills City of Chico	The City will use ICLEI software to determine the estimated GHG (metric tons of

		CO2E) reduced.
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**9. A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities.**

Our program will leverage web and multimedia technologies as a means of disseminating best practices and lessons learned. The table below details communications products, completion dates, delivery method, and product components.

<b>Completion Date</b>	<b>Product</b>	<b>Delivery Method</b>	<b>Components</b>
Ongoing 2011-2012	Website case studies of program participants	Web based	Including structure, history, energy consumption pre and post retrofit, and homeowner testimonials
Ongoing 2011-2012	Informational videos	Web based available on City website and YouTube	Interviews with program partners and city staff regarding their role in the program Testimonials with program participants Vignettes describing students roles and experience working with RHA How-to's following student workers as retrofits are completed
December 2012	Final Report	Web based .pdf available for download on City website	Background information Overall description of program components and partners Energy savings achieved Case studies & participant testimonials Best practices Lessons learned Copy of RECO ordinance
December 2012	Power point	Available for	Background information

	Presentation	<p>download on City website.</p> <p>Also to be used during information sharing webinars at the request of PG&amp;E, the LGC, ILG, or ICLEI.</p>	<p>Overall description of program components and partners</p> <p>Energy savings achieved</p> <p>Case studies &amp; participant testimonials</p> <p>Best practices</p> <p>Lessons learned</p> <p>Copy of RECO ordinance</p>
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**ATTACHMENT B-3**  
**QUANTUM ENERGY SERVICES & TECHNOLOGIES, INC. (QUEST)**  
**THE CITIES OF OAKLAND, BERKELEY AND EMERYVILLE**  
**INTEGRATED SERVICES**  
**RESPONSES TO COMMISSION'S PILOT PROJECT CRITERIA**

QuEST, on behalf of the cities of Oakland, Berkeley, and Emeryville (OBE) submitted a proposal to offer integrated energy efficiency services to clients. Combining audits for lighting efficiency, space conditioning improvements, renewable energy and demand management strategies in a single transaction will maximize reductions and minimize client costs and maximize client satisfaction with PG&E and its partners.

**1. Concern, gap, or problem that the applicant seeks to address and the likelihood that the issue can be addressed cost-effectively through future utility programs that would be developed as a result of the Innovator Pilot program**

The project seeks to address the following:

- Lack of active referral database and project management to ensure that all possible measures are identified for implementation at the optimal time, and all near-term measures are completed for all East Bay Energy Watch (EBEW) participants in the OBE territory. This proposal element is driven by our focus on comprehensiveness which has been a hallmark of EBEW since its inception. Also, rather than developing our own programs, EBEW seeks to bring existing cost-effective programs to participants to ensure that all of their energy efficiency needs are met.
- Lack of saturation marketing for **all** available energy efficiency programs in EBEW OBE neighborhoods. Saturation will deliver much more cost-effective energy efficiency.
- Lack of financial motivation for customers to implement more in-depth measures with longer paybacks. The OBE Innovator Pilot proposal (IP) would like to be able to offer tiered incentives to customers who are willing to go deeper (implement measures with longer pay back periods) into energy efficiency. These incentives would help buy down the costs of doing more than just the most low-cost, no-cost measures and would help reduce the amount of savings that are commonly left behind.

**2. How the project will address a Strategic Plan goal or strategy and market transformation**

The Integration Services program addresses the following Strategic Plan goals:

- 50 percent of existing buildings, comprising 250 million sq. ft., at zero net energy by 2030 through achievement of deep levels of energy efficiency.

- Facilitating the availability of knowledgeable energy management service providers who arrange comprehensive improvements. This may require experimentation with incentives or new business model incubation to attract and reward those businesses willing to offer and arrange **one-stop comprehensive energy management solutions** that achieve deeper levels of savings

### **3. Specific goals, objectives and end points**

The OBE Integration Services Pilot seeks to address the Strategic Plan goals by:

- Creating a referral database that pays and credits energy auditors for bringing all potential energy efficiency measures to the attention of decision makers
- Training auditors in the existing EBEW Smartlights and MIT programs to conduct comprehensive audits that address all possible opportunities, not just measures offered by their programs.
- Offering project management services that allow customers easy access to programs and measures identified in audits.
- Organizing and conducting one saturation campaign per quarter, in conjunction with OBE community leaders and PG&E sales and service staff, in the OBE territory that includes all possible players based on an analysis of the targeted neighborhood.
- Investigating the additional savings potential that could be tapped through the use of tiered incentives for small commercial and municipal customers and the best uses for these additional incentives.

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

- Training program auditors to audit a site for all potential energy efficiency opportunities is an innovative concept that is essential to comprehensiveness.
- Working with PG&E sales and service staff to analyze neighborhood residential and non-residential characteristics when planning saturation campaigns will create very effective campaigns that provide added value to PG&E's existing teams.
- Tiered incentives that offer more financial assistance to do more in-depth measures

### **5. A clear budget and timeframe (including milestones) to complete the project and obtain results before December 2012**

Budget information was provided by the applicant but has been excluded by PG&E in this advice letter subject to negotiation between PG&E and the applicant.

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

The OBE IP plans to collect baseline usage data for all sites that receive a comprehensive audit. The program will track the implementation of all measures at these sites including project management and coordination time spent by the OBE IP staff on getting measures implemented.

#### **7. Methodologies to test the cost-effectiveness of the project**

The model policies and procedures will include prospective costs and benefits for each policy. These will be analyzed using various cost/benefit tests (TRC, PAC etc.). An E3 calculator will be populated over the course of the program to measure cost effectiveness.

#### **8. A proposed evaluation, measurement and verification (EM&V) plan**

Measures identified and installed as a result of comprehensive audits will be verified according to the procedures of the appropriate program. QuEST's QPM will be used to track all sites that receive a comprehensive audit including identified measures, referrals to other programs, project management efforts, installation and verification of measures and payment of incentives.

#### **9. A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities**

The program will produce a final report outlining lessons learned and best practices for providing integrated services through existing energy efficiency programs, including analytical methods and details of the economic considerations. A final report will be delivered on or before March 1, 2013. A presentation of these results will be made available to PG&E sales and service to include in their discussions with other cities and will be presented at a Local Government Commission Energy Net Work Meeting or similar venue.

**ATTACHMENT B-4**  
**QUANTUM ENERGY SERVICES & TECHNOLOGIES, INC. (QUEST)**  
**THE CITIES OF OAKLAND, BERKELEY AND EMERYVILLE**  
**RESIDENTIAL TENANT LANDLORD POLICY SOLUTIONS**  
**RESPONSES TO COMMISSION’S PILOT PROJECT CRITERIA**

QuEST, on behalf of the cities of Oakland, Berkeley, and Emeryville (OBE) submitted a proposal to collaborate with tenant and landlord groups to identify and pilot technical, informational and policy solutions to address the split incentive problem.

**1. A specific statement of the concern, gap, or problem that the applicant seeks to address and the likelihood that the issue can be addressed cost-effectively through future utility programs that would be developed as a result of the Innovator Pilot program.**

According to McKinsey and Company<sup>3</sup>, 9% of nation's energy efficiency potential is “locked up” in tenant/owner split incentives. Residential rental units account for 40% of California’s housing stock and 23% of the units are in buildings with five units or more.

In most cases, split incentives present a persistent barrier to significant energy efficiency improvements to existing housing stock. In Berkeley, for example, tenants are responsible for energy utilities in over 85% of the rental units (89% for electricity, 86% for natural gas/space heat). Owners of these properties do not reap a direct financial benefit from energy improvements and tenants have no equity interest in making investments. And in the case of master metered buildings, tenants have little direct benefit to conserve.

<b>Market<sup>4</sup></b>	<b>Berkeley</b>	<b>Oakland</b>	<b>Emeryville</b>	<b>3-Cities</b>	<b>California</b>
<b>Total Units</b>	46,630	163,871	4,274	214,775	12,214,549
<b>Rental Units</b>	22,900	81,766	2,499	107,165	4,921,581
<b>Units in bldgs with more than 4 units</b>	14,685	51,876	3,211	69,772	2,804,712

This project proposes to develop policies and programs that the utility and local governments can deploy to correct these persistent market failures. Several core approaches will be pursued, including:

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<sup>3</sup> McKinsey Global Energy and Materials, Unlocking Energy Efficiency in the U.S. Economy, July 2009.

<sup>4</sup> US Census

- Applying an energy rating system or other disclosures to units at the point of lease so as to capture energy/water savings and disclose utility costs and relative energy/water efficiency to incoming tenant;
- Developing mechanisms to evaluate and allocate costs and benefits between tenants and property owners;
- Facilitating the development of an appliance replacement program with appliance distributors and multi-family property owners;
- Developing model lease provisions;
- Direct outreach and engagement to property owners and tenants; and
- Workshops and a conference paper to promote replicability.

These policies and programs will be designed to align and support state and local policy goals. These include Berkeley's Residential Energy Conservation Ordinance at the local level, and the CPUC goal of achieving 20% energy savings by 2015 and 40% by 2020 in every existing California home. In addition, the program will be designed to leverage several incentives and financing mechanisms in existence or under development, including:

- Property-based clean energy financing programs
  - CPUC investment in Prescriptive Whole House Retrofit and Whole House Performance Programs
  - Energy Efficiency Conservation Block Grant funding
  - Low-income weatherization program funding
- 2 US Census

Core components of developing policies and programs for the multi-family market will include:

- Research into existing efforts with similar goals in other parts of the U.S. and world
- Developing case studies that provide concrete examples of how both property owners and tenants can benefit from energy efficiency investments
- Market analysis to determine energy consumption patterns in various building types and vintages
- A stakeholder input and engagement process that includes outreach to building owners, tenants, and others
- Close collaboration with Rent Boards in order to build on existing institutional knowledge and policies

To ensure that lessons learned here are able to be leveraged on other cities and regions, a summary report will be prepared, a paper developed for submission to a conference(s) such as Affordable Comfort, and workshops will be offered in such venues as the PG&E Training Center and the Pacific Energy Center.

***2. Whether and how the project will address a Strategic Plan goal or strategy and market transformation***

Achieving significant energy savings in the multi-family sector is essential to meeting the CPUC's goal of reducing energy consumption in existing homes by 20% by 2015 and 40% by 2020. It is also essential to Berkeley's local GHG reduction target – 35% reduction below 2000 levels by 2020 (2% per year).

Overcoming the barriers in the multi-family market requires an integrated and comprehensive market transformation program that aligns government policy, private sector investment, and consumer demand. Government policy, such as the development of financing and incentive programs, can lead to increased private sector engagement and program participation.

Private sector investment would be stimulated due to increased demand for services and energy efficient appliances.

Consumer demand will increase through targeted marketing and education to tenants and landlords.

The goal is to develop, pilot and institute mechanisms that create sustained change and increase adoption of energy services and measures in the multi-family market.

The project also supports the Strategic Plan's Local Government Goal 4: Local governments lead their communities with innovative programs for energy efficiency, sustainability, and climate change. Cities can use their relationships with and authorities over property owners and tenant organizations to forge a set of solutions that address the communities' climate action goals."

### **3. Specific goals, objectives and end points for the proposed project**

The goal of the project is to develop a replicable model that significantly increases the efficiency of rental units by correcting market failures due to the split incentive problem.

Specific objectives include:

- A model policy and sample procedure for mechanisms to share the costs and benefits of energy improvements amongst property owners and tenants
- Increased tenant and property owner awareness and demand for high efficiency rental units.
- Increased accountability for property owners to provide efficient units.
- A model policy to promote disclosure and transparency in residential leasing
- Stakeholder meetings
- Workshops for transferability to other local governments
- A conference paper
- A set of additional policy and program ideas that could be deployed in the future, such as a green property owner database and a multi-family appliance

replacement program for bulk purchase agreements between property owners and property owners for replacement upon appliance failure

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

Traditional energy efficiency programs have tended to focus on markets with few barriers and high benefit-to-cost ratios. This approach has successfully procured a great quantity of energy efficiency but left the more difficult markets largely untapped. Like the EBEW’s pioneering work in the small commercial market, the rental housing project proposes to use our communities’ commitment to climate action and the cities’ close relationships with key stakeholders to forge a set of solutions to the residential split incentive problem that has, until now, has been dismissed as too hard to tackle.

**5. A clear budget and timeframe (including milestones) to complete the project and obtain results before December 2012**

Budget information was provided by the applicant but has been excluded by PG&E in this advice letter subject to negotiation between PG&E and the applicant.

<b>Milestone</b>	<b>Deliverable</b>	<b>Month</b>
Hire/assign staff		2
Convene stakeholder group	Meeting	3, 6, 9, 16
Initial stakeholder survey	Survey results	3
Research law and best practices	Findings memo	5
Compile and analyze market data	Market analysis	5
Conduct community workshops	(3 Oakland, 2 Berkeley, 1 Emeryville)	6
Develop policy/program options	Options memo	6
Identify pilot sites	Letters of interest	4
Pilot solutions with leaders	Installed projects	12
Case studies	Case studies	13
Prepare model policies and procedures	Report	15
Post stakeholder survey	Survey results	16
Final report/guidebook	Report	17
Conference paper		18
Local government workshop presentation	Presentation	18

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

Two sets of metrics will be used for this project: 1) metrics that track how close milestones are to being achieved; and 2) metrics track whether short-term objectives are being met.

### Short term Objectives

- Measurement of the change in awareness of and demand for energy efficiency rental units from initial and post project surveys.
- Quantification of the costs and benefits of the pilot projects, including how they were allocated between property owner and tenants.
- Number of local governments that are considering adopting the model policies.

## **7. Methodologies to test the cost-effectiveness of the project**

The model policies and procedures will include prospective costs and benefits for each policy. These will be analyzed using various cost/benefit tests.

## **8. A proposed evaluation, measurement and verification (EM&V) plan**

As part of this project, we will compare the original scope of the proposal against what was actually accomplished and include this analysis in the final report. The analysis will address the metrics noted above.

## **9. A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities**

The project will produce a guidebook, including best practices, recommended practices and case studies that will be made available on an EBEW partner's website. The results of the project will be presented at a Local Government Commission Energy Net Work Meeting or similar venue. A conference paper will be prepared and submitted to Affordable Comfort and/or ACEEE.

## ATTACHMENT B-5

### SIERRA BUSINESS COUNCIL

#### GREEN PROSPERITY WORKFORCE DEVELOPMENT PROGRAM RESPONSES TO COMMISSION'S PILOT PROJECT CRITERIA

As a regional multi-sectoral program, Sierra Business Council's (SBC's) Green Prosperity initiative approaches climate and economic solutions through four intersecting areas, including sustainable tourism, forest carbon sequestration, renewable energy, and energy efficiency. SBC partners with a variety of state and national partners and funders on different components of the Green Prosperity initiative. The proposed Innovator Pilot project supports the energy efficiency quadrant of the initiative, and includes three targeted approaches that are measurable in the short term and replicable over a wider geographic area. These include: (1) Establish Energy and Climate Leadership Institute to develop grassroots leadership in Latino and Native communities, (2) Provide Green Workforce Training and Development across the jobs spectrum, (3) Enhance Energy Use Information and Management for small businesses and municipalities.

**1. A specific statement of the concern, gap, or problem that the applicant seeks to address and the likelihood that the issue can be addressed cost-effectively through future utility programs that would be developed as a result of the Innovator Pilot program**

The proposed Innovator Pilot project includes three targeted approaches that are measurable in the short term and replicable over a wider geographic area. These include: (1) Establish Energy and Climate Leadership Institute to develop grassroots leadership in Latino and Native communities, (2) Provide Green Workforce Training and Development across the jobs spectrum, (3) Enhance Energy Use Information and Management for small businesses and municipalities.

These components are the necessary bridges between five significant gaps that need to be addressed before energy transformation and subsequent climate prosperity can be a reality.

First, energy efficiency technology is constantly improving, yet adoption of energy efficiency technology remains limited. One common challenge with the diffusion of innovation is the lagging diffusion of a co-dependent innovation. For example, without a highway system, the functionality of automobiles is limited. Many new innovations, such as smart phones, require the Internet. Innovations are not able to transform markets until the demand is created, and sometimes this demand is created by another innovation or technology. Our hypothesis is that easy tools to understand energy usage are lagging behind the availability of energy efficiency

products. Because people don't have a deep understanding (that comes from personal experience rather than marketing campaigns) of their energy usage or the alternatives, they don't demand energy efficiency products. The danger with this is that energy efficiency products will become so strongly identified with middle to upper class environmentalists that it will become harder and harder to brand energy efficiency with non-environmental values (financial, quality of life, etc.).

Second, workforce capacity to provide energy solutions is limited. We need local electrical contractors to increase the suite of services they offer to potential customers to include energy audits, solar plumbing, energy retrofits, and other installations. For decades, it has been difficult to find contractors in the Sierra Nevada willing to perform maintenance, retrofits, or renovations because the financial opportunity has centered around new construction. We need to elevate customers' interests in energy efficiency and self-generation, but then they need to be able to find skilled workers to perform the required services without waiting in a queue for two years or paying someone to travel hundreds of miles from the San Francisco Bay area. Generating demand for energy services while increasing the supply of qualified providers need to be simultaneous efforts.

A third need related to workforce capacity is to train technical workers and building operators in the communications and leadership skills to effectively convince and support decision-makers to invest in energy efficiency retrofits. This requires bridging the gap between white-collar and blue-collar workers to develop collaborative energy plans for facilities. Technical workers and building operators need to understand the political and financial constraints of the key decision-makers, while key decision-makers need to comprehend the energy, savings, and non-energy benefits of upgrading facility equipment.

The fourth challenge is that energy efficiency is still seen as an environmental issue rather than an economic opportunity. We need to reframe energy efficiency and make it relevant for under-represented communities in our rural area, including the Latino, Native, and low-income populations. Rural populations are considered "hard-to-reach" and as such, energy efficiency has not penetrated the region as effectively as it has in larger urban centers. This means there is an opportunity to democratize energy efficiency investments from the beginning and avoid the racial and socio-economic polarization around energy efficiency that has emerged in other communities.

The fifth gap that we seek to address is low energy literacy and a lack of useful energy information to monitor and manage energy usage. Most people have only a vague understanding of how much energy they use for what purposes and how much they would save by making day-to-day changes or investing in efficiency measures. Literature since the 1970s has established that feedback is a necessary element of learning to control energy use more effectively over a long time period. The norm for savings resulting from direct feedback from a meter is 5-

15%, whereas feedback posted on a utility bill have resulted in savings of 0-10% depending on the quality of information presented (Darby 2006). The EU Energy End-Use Efficiency and Energy Services Directive in 2005 encourages the widespread use of cost-effective innovations and recommends that consumers be provided with a reasonable amount of information and encouraged to check their meter readings regularly. The simple practice of regularly checking a meter has in itself resulted in savings of 10%. After three months of meter reading the behavior change leading to the energy use reductions has become habit and the savings stick. Information alone has a poor track record in achieving energy conservation. Large-scale information campaigns have problems both being relevant and encouraging action. People may appreciate the message, but the consumer has to develop awareness through experimentation with their energy system in order to effectively reduce energy.

Smart metering and other innovations like Google’s PowerMeter™ help address this challenge, but geographical constraints delay the widespread application of such technologies in rural areas. Furthermore, many rural areas in California still lack broadband access. Internet-intensive, real time energy management tools are not a viable option for communities without broadband. Additionally, many energy management tools are tailored for either very large facilities or residential use. There are no effective and affordable tools in the U.S. designed to overcome the constraints of small and medium enterprises. SMEasure™ is a free software program designed specifically for small and medium commercial spaces. It has been piloted throughout the UK and is undergoing beta testing in Germany and Spain. We seek to partner with SMEasure™ to offer the first pilot of this program in the U.S. If successful with helping small businesses reduce their energy usage, the software can be customized at very low cost for communities throughout California and beyond.

**2. Whether and how the project will address a Strategic Plan goal or strategy and market transformation;**

<i>Strategic Plan Goals</i>	<i>How Program Addresses</i>
The overarching goal of the California Energy Efficiency Strategic plan is Market Transformation, when adoption of efficiency measures and behavioral shifts are so mainstream that no subsidies and no codes and standards are needed to achieve continuous savings	Reducing energy consumption is both a social and a technical challenge. Our program addresses both aspects in a demographically inclusive manner, giving people both the tools and information to reduce energy consumption. Simultaneously, we improve technical and informational skills to build workforce capacity to increase energy service offerings to keep pace with the growing consumer demand.
Education and Information:	The energy management software we seek to pilot

labeling, benchmarking, internet-based comparisons, professional and trade materials	introduces benchmarking, internet-based comparisons, and labeling to the typical small and medium enterprise. Ultimately these goals will be addressed by regulation, but the pilot will demonstrate the usefulness of this type of information in helping small business and municipal customers reduce energy usage.
Technical Assistance: ensure that knowledge barriers do not hamper progress of efficiency initiatives; building labeling	Small business energy management software is a tool that has emerged from mandatory building labeling. The software we seek to pilot here allows building operators to experiment with and adaptively manage energy reductions. It is easy to use and provide feedback in a format that gives users the information they need to reduce consumption.
Commercial Building Goal 2: 50% of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation; 100 local governments commit to benchmarking their owned and leased buildings; quantify and communicate business case for DSM and GHG reduction	Study after study has shown that when people are given the information to experiment with energy usage and receive reliable and easy to understand feedback on their energy usage, they are more likely to invest in efficiency measures and implement behavioral changes that remain habitual. The energy management software we propose to pilot is designed for small and medium commercial facilities. The pilot software interfaces with local weather data and allowing us to benchmark the facilities piloting the software. Additionally working with the pilot group of 200 facilities will provide us valuable information on how to tailor energy efficiency messaging for small and medium enterprises.
Integration of Demand Side Management	How feedback of energy information is relayed to customers affects the ways in which consumers invest in energy use transformation. Real time data is critical to demand reduction. Google has developed free software for residential energy management, wherein energy usage data is tracked for the customer at 15-minute intervals and displayed on their iGoogle page. When such a product comes out for commercial facilities, it will be easier to pilot with customers that already have some familiarity with energy management software. Although not in the scope of this proposal, we hope target small and medium enterprise demand reduction as a follow up to the initial pilot.
Workforce Education and	Our workforce capacity building program seeks to

<p>Training: establish energy efficiency education and training at all levels of CA's educational systems (support CC and adult education efforts to support students in career paths in EE and related fields; BOC certification, linkages with K-12 programs (support outreach on energy, water, and environment issues); career laddering with CCs; 2. Incorporate EE and DSM into traditional contractor and technician training (plumbers, electricians, partnerships for employment placement)</p>	<p>build technical and soft skills at multiple levels of the career ladder, from entry-level to senior-level positions. We are already partnering with Golden Sierra Workforce Investment Board, Sierra College, and Folsom Lake Community College. Our internship program can expand that partnership to a wider geographical area with a more targeted focus on energy efficiency training.</p> <p>Our Energy and Climate Leadership program focuses on technical and leadership skill building for mid- to senior-level facility staff in order to work with decision makers move energy projects forward in their facilities.</p>
<p>Workforce Education and Training: Ensure the minority, low-income, and disadvantaged communities participate at all levels of the DSM and EE industry (targeted outreach on employment opportunities with EE, develop low-income WE&amp;T plan; train qualified diverse business enterprises from minority, low-income and disadvantaged communities to undertake or expand efficiency services)</p>	<p>Our workforce capacity program targets under-represented and disadvantaged communities specifically. By partnering with urban Latino organizations, labor unions, and Native communities, we hope to pilot energy leadership training modules that are culturally and linguistically relevant to make energy efficiency resources accessible to these communities. Additionally, we are in preliminary conversations with SMEasure and a group in Spain to pilot a Spanish version of the energy management software for small businesses.</p> <p>Our current energy efficiency internship targets “at-risk” youth exclusively. This is an important part of the program and the pilot we propose will also be open to non-native English speakers and economically disadvantaged participants.</p>
<p>Local Governments: Lead by example (benchmark all local government owned or leased facilities)</p>	<p>For local government to lead in the Sierra, we need to give them the tools to do so. Through workforce development and easy to use energy management software, we can build the scaffolding around which local government can change their energy use patterns and promote additional investments in their jurisdictions.</p>

### 3. Specific goals, objectives and end points for the proposed project

<i>Goals</i>	<i>Objectives</i>	<i>End Points</i>
Develop and offer workforce training to augment skills required for energy transformation and to diversify and promote leadership for energy efficiency	Develop Sierra Leadership Institute week-long Module on Energy and Climate Leadership	Pilot Energy and Climate Leadership Module with “non-traditional” participants (non-native English speakers, Native Americans, building operators, etc.)
	Expand outreach between urban Latino organizations and rural business and community organizations; expand outreach to native populations	Recruit 20 Latino and Native representatives for Sierra Leadership Institute to focus on Energy and Climate Leadership and Communication Skills
	Train building operators in communication and leadership skills to make the case for energy improvements to decision makers	Recruit 20 trades people (building operators, electrical technicians, contractors, etc.) for Sierra Leadership Institute to focus on Energy and Climate Leadership and Communication Skills
	Provide workforce training for entry-level workers to improve suite of energy efficiency and sustainability skills	Pilot Energy Efficiency Internship to entry-level workers in the SNEW region (hands-on audit training focusing on technical and soft skills)
Give decision makers and users practical tools and economic imperative to transform small and medium commercial building energy usage	Pilot SMEasure, an energy management and benchmarking tool for small and medium businesses in U.S. market	Work with SMEasure team to develop software version for the U.S. with Sierra Nevada weather station data.
	Pilot program to label commercial buildings according to the building’s energy rating (based on SMEasure)	Recruit 200 businesses and municipal facilities and 100 active users to use SMEasure (free energy management software for small and medium enterprises)
		Make municipal facility energy use information through SMEasure available to facility users and the general public.
	Benchmark facilities of SMEasure users against state	

		benchmarks
		Make commercial building usage transparent to customers, users, and future tenants

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

Workforce Training and Development – Energy and Climate Leadership Institute  
 Sierra Business Council has been running the Sierra Leadership Institute for over a decade and has graduated nearly 300 participants. The program has traditionally focused on recruiting elected officials, public administrators, non-profit and business leaders in order to build facilitative and collaborative leadership skills among the established leaders of the Sierra Nevada region.

The standard curriculum of Sierra Leadership Institute focuses on skills in collaboration, facilitation, hosting and running meetings, communication, conflict resolution, stakeholder coordination, and general sustainability principles. Dozens of effective partnerships and community programs have emerged out of Sierra Leadership Institute, and the alumni have a tight network for on-going support and collaboration.

There are two elements of the proposed pilot, Energy and Climate Leadership Institute (ECL) that are innovative and untested. The first is designing the curriculum around a particular issue—in this case, energy and climate leadership. We will develop case studies and exercises specifically designed to deal with challenges in implementing energy projects or climate plans and to develop the skills and tools to move such projects forward. Although it continues to be important to build such leadership skills among established decision makers, it is equally, if not more important to develop these skills among the building operators and other people working in the trades. The people with the technical knowledge of energy systems need the leadership skills to work with people both with decision-making authority and those whose day-to-day responsibilities affect the ability of the facility manager or building operator to reduce energy usage.

The second element of the proposed pilot that is innovative is focusing on under-represented minority groups. For energy climate leadership to take root, it needs to move beyond the fringe of environmental leaders and into the mainstream. This means that energy and climate issues need to be relevant to communities of color, low-income, and non-native English speakers. The business, government, and community leaders of these communities will benefit from gaining the facilitative leadership skills to effectively engage their constituents and the energy community

in California in order to bring information and resources deeper into their communities.

#### *Workforce Training and Development – Energy Efficiency Internship*

The proposed pilot of the Energy Efficiency internship is a partnership between the PG&E Sierra Nevada Energy Watch (SNEW) Local Government Partnership, Fourth Sector Strategies, and local Workforce Investment Boards. The goal is to provide hands-on energy audit training to entry-level workers, focusing on both the technical and soft skills. After the internships, these interns would be placed with local contractors, with on-the-job training support from the Workforce Investment Boards, Employment Training Panel, and California Energy Commission Clean Energy Training funding. Over the course of the SNEW program, these participants would move into unsubsidized work with local energy service providers and local electrical, refrigeration, and plumbing contractors. This allows local firms to build the suite of energy efficiency and green energy services they can provide with low risk and low investment. This type of partnership is a new approach that is able to maximize outcomes by leveraging available funding and network from the available sources. The proposed program will demonstrate and model how partnerships between green job training, development, and placement programs can achieve synergistic results that lead to energy transformation in a way that no individual effort can.

#### *Energy Use Information and Transparency*

Energy Management Software is not a tool that is widely used among small and medium facilities. Many studies demonstrate that access to energy use information reduces energy consumption, yet the cost in dollars and time to utilize most energy management software prohibits all but the most energy-intensive industries and facilities from making the investment. A product developed by the Environmental Change Institute at Oxford University is designed for small and medium enterprises (business and government). Laws and regulations in the U.K. require a higher level of transparency of building energy use—energy rating labels are required to be posted in all public facilities for customers to see, thus small and medium businesses require tools that are simple and affordable to monitor their energy use. SMEasure™ is designed to provide maximum value to such customers. Customers create accounts on the web-based software, and input weekly or bi-weekly meter readings for electricity and natural gas usage. It plots this against local weather data and compares the facility's energy usage to other similar building types in the same weather station area. SMEasure™ has been piloted in the UK, and pilots are launching in Germany and Spain. We have developed a partnership with SMEasure™ to pilot the software with small and medium enterprises in the SNEW region. SMEasure™ will customize the software for the American consumer and develop a version using weather data for the Sierra Nevada region. It is an ideal target region for such a pilot because the region has all possible weather types and patterns from cold long winters with high heating demands to hot dry summers with high cooling demands. If the software

works to help small and medium customers reduce their energy use in the Sierra Nevada region, it could easily be expanded to all of California and beyond. The partnership leverages investment and in-kind support from a grant secured by SMEasure™, and provides an opportunity to pilot a potentially transformative tool for very low cost.

**5. A clear budget and timeframe (including milestones) to complete the project and obtain results before December 2012**

Budget information was provided by the applicant but has been excluded by PG&E in this advice letter subject to negotiation between PG&E and the applicant.

<i>Task</i>	<i>Milestone</i>	<i>Timeframe</i>	<i>Task Lead</i>
Workforce Development: Energy and Climate Leadership Program	Develop Pilot Energy and Climate Leadership Module with “non-traditional” participants (non-native English speakers, Native Americans, building operators, etc.)	Oct - Dec 2010	SBC, FSS
	Recruit 20 Latino and Native representatives for Sierra Leadership Institute to focus on Energy and Climate Leadership and Communication Skills	May - Aug 2011	SBC
	Recruit 20 trades people (building operators, electrical technicians, contractors, etc.) for Sierra Leadership Institute to focus on Energy and Climate Leadership and Communication Skills	Jan - Apr 2011	SBC
Workforce Development: Energy Efficiency Internship	Recruit 25 entry- and mid-level workers in the SNEW region (hands on audit training focusing on technical and soft skills)	Apr 2010 – Aug 2011	FSS
	60 hours per participant in the field	Jun 2010 – Aug 2011	FSS
	40 hours per participant in the classroom	Jun 2010 – Aug 2011	FSS

	Participant support and administration	Aug 2010 – Sep 2011	FSS
Energy Use Information and Transparency	Work with SMEasure team to develop software version for the U.S. with Sierra Nevada weather station data.	Apr - Jun 2010	FSS
	Recruit 200 businesses and municipal facilities and 100 active users to use SMEasure (free energy management software for small and medium enterprises)	Jul 2010 – Jul 2011	SBC
	Make municipal facility energy use information through SMEasure available to facility users and the general public via web portal.	Aug – Sep 2011	SBC
	Make commercial building usage transparent to customers, users, and future tenants, in coordination with other business branding programs (Local First) and post case studies focusing on the business case for energy use reduction on searchable Google map	Apr – Jul 2011	SBC
Monitoring and Evaluation	Baseline and EM&V		SBC, FSS
Statewide Dissemination	Dissemination		SBC, FSS

**6. Information on relevant baseline metrics or a plan to develop baseline information against which the project outcomes can be measured. Project performance metrics shall be described in accordance with Appendix 2 of the CPUC’s Decision, provided below as Attachment A, which provides direction to the investor owned utilities (IOUs) regarding program performance metrics**

Our overarching goal is to promote market transformation through innovative methods of workforce training and small and commercial energy management. Essentially, we seek to offer, pilot, and disseminate basic tools that create the demand for energy efficiency products. To know if our tools (communication and

technical training, and energy use software) are effective in ushering market transformation into California generally and with underserved communities, populations, and sectors specifically, we need to be able to answer two key questions: 1) Does our pilot program lead to measurable energy reduction projects? And 2) What is the specific effect of our pilot program on reducing energy use? To answer these questions, we need a measurable baseline and measurable outcomes. We have two baselines: temporal and comparative. Because our innovative projects have not yet been piloted, we have a “before” scenario baseline. Because we are piloting our projects with a subset of the target population, we also have comparative baseline or “control groups”. The development and deployment of these baselines is described below.

*Workforce Training and Development – Energy and Climate Leadership Institute (ECL)*

There has been limited outreach to the Latino, Native, low-income, and other under-represented communities of California. Our hypothesis is that building leadership skills around energy and climate issues will lead to more effective and culturally relevant outreach and messaging with these hard-to-reach populations. There exists baseline information on the adoption of energy efficiency technologies among these populations. To determine the effectiveness of our program, we will compare energy reduction in our pilot communities with the average.

Program Metrics: Number of under-represented participants graduating from Energy and Climate Leadership Institute; Number of collaborative energy efficiency projects completed by ECL graduates; Energy savings from projects completed by ECL graduates; Percent of ECL graduates reporting ECL program as primary factor in completing EE retrofit projects

*Workforce Training and Development – Energy Efficiency Internship (EEI)*

To our knowledge there have been no comprehensive training programs for entry and mid-level energy efficiency skills in the Sierra Nevada (beyond individual course offerings by PG&E and others). Does increasing the skills of local entry and mid-level workers, thereby increasing the availability of local energy services lead to increased remote rural community-level investment in energy efficiency? We propose using before and after surveys in our targeted communities to determine the effect of this approach.

Program Metrics: Number of participants graduating from Energy Efficiency Internship; Percent of participants from communities with fewer than 15,000 people; Number of energy audits completed by EEI interns; Percent of projects completed by program with intern involvement vs. without intern involvement; Average kWh and kW savings by projects with intern involvement vs. without intern involvement; Percent of customers reporting intern program as top reason for implementing energy efficiency

### Energy Use Information and Transparency

Energy management software has been shown to improve energy efficiency in users' facilities in Europe. Does SMEasure™ increase the financial investment that small and medium facility managers are willing to make in energy efficiency retrofits? Through our SNEW program, we are offering a comprehensive set of measures to small and medium commercial facilities. To achieve the comprehensiveness and cost-effectiveness of our program, we require a customer co-pay for our Direct Install program. To establish a baseline on which to base SMEasure™ effectiveness, we have a control group of business and municipal facility managers that are not using the software. We can track, in our SNEW software, the co-pay amount for each customer with and without the software, and calculate the market transformation effect of the software alone, with all other program offerings to the customer remaining the same.

<p><u>Program Metrics</u>: Number of customers registering with SMEasure™; Number of SMEasure™ active users over 3+ month period; Average co-pay of customers using SMEasure™ vs. non-users; Percent of customers using SMEasure™ investing in energy reduction activities vs. non-users; Percent of customers using SMEasure™ identifying the software as top reason for investing in energy efficiency</p>
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## **7. Methodologies to Test the Cost-Effectiveness of the Project**

In order to evaluate the scale-up potential of the pilot projects, we need to measure how effective the pilot model is in reducing energy usage and transforming the market relative to other efforts. A project will generally be considered cost-effective if the financial investment for implementation is less than the savings generated as a result of the project. We are essentially piloting two tools that would, if implemented widely, transform the energy efficiency market in California so that regulations and incentives are no longer needed. There is abundant information and technology available to California consumers, yet still commitment to energy efficiency is not commonplace or widespread across all California's communities and demographics.

Our proposed pilot projects involved both targeted and mass-market strategies. The workforce development projects we proposed involve relatively high investments in a relatively small group of decision makers. The Climate and Energy Leadership Institute can be offered to 40 participants for about \$2,800 per person. To evaluate the cost-effectiveness of this approach, we need to track the energy savings of the projects graduates initiate and complete. With current programs used to target hard-to-reach populations, \$2,800 would save about 11,200 kWh or less. The pilot ECL projects are NRR projects with minimal IOU

incentives of \$0.05-0.10/kWh. We anticipate the average savings for ECL graduate projects to be 28,000 – 56,000 kWh, thus making this approach 2.5 - 5 times more cost-effective than the standard approach. Our methodology will calculate the \$/kWh for energy efficiency projects completed by graduates of the ECL Institute in order to calculate cost-effectiveness relative to other efforts.

Our intern program is about \$3,600 per participant. For field-based and personalized training program in hard-to-reach communities that fully prepares participants to enter the workforce by focusing on technical, customer service, and sales skills, we know this is a relatively low-cost approach. To measure the cost-effectiveness of this approach in terms of energy transformation, we need to calculate and compare energy savings among municipal and commercial customers who worked with an intern with those who didn't. We also will evaluate through survey data how instrumental the intern program was in helping customers in hard-to-reach communities secure energy savings.

Our Energy Management Software program is designed for the downstream customer (rather than the service provider or community opinion-leader like the workforce programs). Our pilot will involve at least 200 customers. The software is free of charge to customers, and the only costs associated with this pilot are the software customization and integration with local weather data and the recruitment of pilot participants. With all other energy efficiency offerings held constant, we will measure the effect of the software on customer decision-making, investment in energy efficiency, and ultimate energy savings. Because this element of our proposed project pilots a mass market, end-user approach, the cost-effectiveness threshold is very low. We will evaluate the cost-effectiveness based on the percent reduction in energy usage and average investment in energy efficient technology by customers using the software compared with customers who did not use the software.

## 8. A Proposed Evaluation, Measurement and Verification (EM&V) Plan

In addition to the table below, the applicant provided logic models that can be provided to the Commission upon request.

<i>Program Element</i>	<i>Performance Goals and Metrics</i>
Workforce Development— Energy and Climate Leadership Institute (ECL)	Enroll 40 under-represented participants including non-native English speakers
	Develop and support energy projects for at least 25 of the ECL graduates
	Track energy savings (kWh and kW) for ECL graduate projects (for comparison to control)
	Collect evaluation surveys from 100% of participants (for results analysis)
Workforce	Enroll 25 participants in internship program, including at

Development— Energy Efficiency Internship (EEI)	least 13 from communities of 15,000 people or less
	Ensure at least 2/3 of participants complete PG&E Audit training
	Ensure participants complete 80% of classroom hours
	Ensure participants complete 75% of field hours
	Measure energy savings (kWh and kW) for customers with intern program (for comparison to control)
	Conduct 50 surveys from customers (for results analysis)
	Collect evaluation surveys from at least 20 intern participants (for results analysis)
Energy Use Information and Transparency	Enroll 200 small commercial and municipal facilities for SMEasure registration
	Ensure active SMEasure use for 100 small commercial and municipal facilities for at least 3 months
	Collect energy usage for 100 SMEasure participants and 100 control participants
	Conduct 100 surveys for results analysis to identify effect of SMEasure in energy use reduction
	Develop materials for posting building energy use and facility branding for small commercial and municipal buildings

**9. A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities**

Activity	Strategy	Task	Timeline for Dissemination
Workforce Development —Energy and Climate Leadership Institute	Develop curriculum that blends technical and leadership skill building. Integrating best practices, climate and energy literacy, science and research with collaborative leadership, communication, negotiation, and facilitation skills. Curriculum and recruitment tailored to mid- to senior-level facility operators.	Develop curriculum	April – May 2010
		Recruit for 2010 class	June – August 2010
		Offer 7-day course	September 2010
		Support, track, and follow up with graduates on their energy and climate leadership goals	October 2010 – May 2011
		Evaluate program success	Jun 2011
		Write report and disseminate best practices	July – Sep 2011
		Offer course through partnerships in other CA	Oct 2011-Oct 2012

		regions	
Workforce Development – Energy Efficiency Internship	Develop program that inspires and trains entry-level workers in green careers. During training participants learn hands-on energy service skills and offer basic audits and recommendations to homes and businesses in their community. Upon completion of the internship, participants are assisted with job placement with apprenticeships, on-the-job training, and 2 and 4 year certification and degree programs	Design an entry level pre-apprentice-ship program curriculum that includes technical training, soft skills, and green, energy, and climate literacy	Mar – May 2010
		Recruit for summer program	Apr – May 2010
		Offer summer internship program, PG&E audit course, and hand-on training	Jun – Aug 2010
		Recruit for fall program	Aug 2010
		Offer fall internship program, PG&E audit course, and hand-on training	Sep – Dec 2010
		Provide support for participant job and continuing education placement	Sep – Mar 2011
		Participant and community surveys to determine program success	Jan – Apr 2011
		Write report and disseminate curriculum and best practices	May – Aug 2011
Energy Use Information and Transparency	Pilot Energy Management Software with 200 small and medium enterprises	Customize SMEasure for U.S. customers with local weather data for benchmarking	Mar – May 2010
		Recruit pilot businesses and local government in the Sierra Nevada region	Jun 2010 – Jun 2011
		Track customer energy usage via software and provide technical assistance	Jul 2010 – Jul 2011
		Complete customer surveys and compile data	Aug 2011 – Oct 2011
		Prepare and publish report, lessons learned and best practices	Nov 2011 – Dec 2011
		Prepare strategy for	Jan – Apr 2012

		statewide dissemination of software	
		Customize weather data for additional regions	May – July 2012
		Expand pilot to next phase	August – December 2012

**ATTACHMENT B-6**  
**SILICON VALLEY ENERGY WATCH (SVEW)**  
**COMMUNITY ENERGY CHAMPIONSHIP FUND**  
**SOCIAL MARKETING PROGRAM**  
**RESPONSES TO COMMISSION'S PILOT PROJECT CRITERIA**

The City of San José, which administers the Silicon Valley Energy Watch program, proposed two projects. The first is the Community Energy Championship Fund (CECF), a two and a half year mini-grant program that will support small, local, and innovative social marketing campaigns designed to achieve significant and lasting behavior change surrounding energy efficiency. Harnessing the leadership and expertise developed over seven years of successful Energy Watch implementation and incorporating findings from the Marketing, Education and Outreach Task Force of the California Energy Efficiency Strategic Plan, the City will implement the CECF in concert with a diverse network of local community partners.

**1. A specific statement of the concern, gap, or problem that the applicant seeks to address and the likelihood that the issue can be addressed cost-effectively through future utility programs that would be developed as a result of the Innovator Pilot program**

Long term behavior change is critical to energy efficiency market transformation. The Community Energy Championship Fund will foster local social marketing and education efforts tailored to the unique characteristics of Santa Clara County's diverse communities. The resulting array of innovative programs will create widespread, lasting changes in both attitudes and behavior regarding energy use. For the purpose of this proposal, we refer to efforts targeting long term behavior change via complex outreach and education as behavioral programs.

California's energy and GHG emission reduction goals require both technical and behavioral approaches - two distinct areas of influence with very different implications for policy, cost-effectiveness, and evaluation, measurement, and verification (EMV). There is currently a broad range of technical approaches to energy efficiency -- programs that target the development, proliferation, and/or adoption of technological solutions. These include Title 24, reach codes, appliance efficiency standards, equipment rebates, weatherization, and home performance programs.

In contrast, only a rudimentary array of publicly-funded energy efficiency programs focusing on long term behavior change exist. These tend to be fragmented and under-resourced. Attitudinal shifts, which underlie behavior change, are difficult to measure; the precise source of any behavior change is

even harder to pinpoint. The effects of behavioral programs tend to be longer term, making them less suitable for public backing that demands near-term, conclusive demonstration of success and cost effectiveness.

### The Behavioral Approach, Defined

Unlike technical programs that prompt discreet actions (getting an audit, installing equipment, etc), behavioral programs use social marketing and education to build the awareness and knowledge that lead to sustained behavior change. Technical interventions may be used in support of the overall outreach effort, but they are not the focus. For example, an awareness campaign might include a contest in which the winner receives a free energy efficient appliance or home performance retrofit. The actual goal of the program, however, was to use this case to build awareness of and excitement about energy efficiency, rather than to achieve direct energy savings as a result of the installation or audit.

Behavioral energy efficiency programs address critical demand-side prerequisites to market transformation in the following loading order:

**Awareness:** Occupants/managers gain increased understanding about the importance of building energy efficiency, and of the potential for simple, individual behavior changes to have an impact.

**Example:** Residents understand how and why energy efficiency is an important and achievable component of climate change mitigation, pollution prevention, and home cost savings.

**Knowledge:** Managers/occupants learn actions, tools, or practices that increase building energy efficiency.

**Example:** A building manager downloads a free manual describing low- and no-cost, highly efficacious actions that can be undertaken to decrease her facility's energy use with no change to output or comfort.

**Direct behavior change:** Managers/occupants make choices to use and/or purchase fewer energy-intensive non-essential appliances/equipment, use them less often, or use them in a more efficient manner.

**Example:** A homeowners exchanges several seldom-used energy-inefficient luxury appliances for a single, more efficient model... and encourages his friends to do the same.

### The Program Gap

Local, community-based, and non-traditional behavioral programs present underutilized opportunities for government- and utility-administered energy efficiency market transformation efforts. The results of such programs are documented insufficiently to allow effective scaling-up or transmission. Projects

tend to be limited to communities that are already advanced, politically progressive, or resource-rich. Many otherwise successful programs miss opportunities to leverage public or ratepayer funds and resources.

Recent studies by Opinion Dynamics Corporation (ODC), part of ongoing ethnographic research on market segmentation funded by the California Public Utilities Commission, indicate that residents tend to trust local community leaders far more than utility or government representatives on matters of energy efficiency, conservation, and climate change. These findings have important implications for current ratepayer-funded programs, which prioritize short-term cost savings and broad (e.g. statewide) marketing efforts in lieu of the more “unproven” realm of local, community-based social marketing.

Finally, without a structure to support and consistently learn from community-level behavioral programs, utility and government programs suffer stunted program uptake rates, gaps in public support, and missed synergistic opportunities.

#### Local Necessity

Targeted behavioral programs are particularly critical in Santa Clara County. Our county features communities that are ethnically, linguistically, and geographically diverse. The City of San José, with over half of the county’s population, has no racial majority. One third of residents are Latino, and almost 30 percent are Asian. County-wide, more than a third of residents are foreign-born, primarily from Asian countries. Nearly a fifth of adults over age 25 -- 19% -- hold a graduate degree, while over 14% have not completed high school.

These characteristics, income and geographical dispersion, and other factors, render Santa Clara County a complex web of subcultures. Here, unique and small-scale outreach programs have a far greater likelihood of achieving intended results than region-wide or single-focused government-sponsored campaigns.

#### Program Sustainability Beyond the Pilot

Inherent in the CECF program design is leveraging of existing resources, namely in terms of local outreach expertise and specialized communication tools. As such, this program will be highly cost-effective. Funds will be dedicated solely to supporting the energy efficiency components within programs’ broader environmental outreach initiatives, evaluating those programs, and disseminating results. The Pilot will culminate in a rigorous analysis of program results, documentation of best practices and key challenges, and step-by-step guides to implementing similar behavioral programs according to various factors. This plan is detailed below. Future

programs will be able to build on the results of the CECF by accessing these publications and hearing directly from program implementers.

## **2. Whether and how the project will address a Strategic Plan goal or strategy and market transformation**

The market transformation required by the California Energy Efficiency Strategic Plan (CEESP) cannot occur without increased public awareness, motivation, and knowledge. These are the foundational elements which sustain demand for a product or service once state subsidies have concluded, and which inspire adherence to standards beyond the reach of enforcement activities. Behavioral programs focus on the interactive effects of building design/performance and occupant behavior. Occupant behavior can ensure that installed EEMs continue to deliver intended benefits; or it can serve to undo efficiency improvements.

To facilitate progress toward the achievement of the CEESP, the California Public Utilities Commission (CPUC) has convened an Advisory Marketing, Education and Outreach (MEO) Task Force. This Task Force has been working with all four Investor Owned Utilities and various stakeholders to explore California's MEO needs with respect to energy efficiency market transformation. This effort represents renewed commitment and broadened thinking regarding increasing public motivation about energy efficiency. Efforts have focused on statewide marketing, as well as market segmentation research, including the ODC study mentioned above. The CECF program will contribute to these efforts by creating a local laboratory for additional research and for implementing preliminary MEO Taskforce findings.

CECF-funded behavioral initiatives will lead to increased demand for energy efficiency audits, upgrades, and retrofits developed and implemented with Public Goods and ARRA funds. By transforming attitudes and building knowledge, these programs will ensure that homeowners, residents, and building managers are "on board" with the policies and public resources that support the CEESP – reaching out to access energy efficiency resources or PACE financing, pursuing recommended changes from subsidized audits, and operating their buildings in ways that maximize installed energy efficiency measures.

Additionally, the CECF will help the funded programs themselves – small municipal community development initiatives, neighborhood, and community based organizations (CBOs) – to develop the necessary expertise to administer and implement a comprehensive environmental outreach program, and to continue to be a community hub of energy efficiency information and resources. By participating in the CECF, organizations will gain knowledge about energy and environmental resources, local and regional energy efficiency initiatives, and related goals and policies. This knowledge will persist beyond the period of

the program, laying a foundation for new and more advanced initiatives in the targeted communities.

### **3. Specific goals, objectives and end points for the proposed project;**

The Silicon Valley Energy Watch Community Energy Championship Fund will accomplish the following goals:

Leverage local outreach infrastructure to expand the reach of PGC- and ARRA-funded energy efficiency programs: Outreach conducted through trusted channels, and/or by local community leaders, will bring the message of existing programs to hard-to-reach communities, increase program uptake, and lower the marketing and education costs of these public programs. Local organizations have better knowledge of community needs and of the most effective communication methods for their audience.

Facilitate innovation in community outreach and education: Funding a broad network of locally-based community outreach programs will enable SVEW to explore a broader range of communication and behavioral market transformation strategies. From this experimentation, best practices will be derived to inform, improve, and augment statewide outreach efforts.

Build public interest in energy efficiency by combining energy education with broader environmental curricula or content: Energy efficiency has enjoyed increased public attention in recent years, particularly due to the focus of many ARRA funding streams. It nonetheless remains an intangible topic, receiving less priority than comfort or economic and safety issues. By combining it with other environmental content, CECF programs will increase the accessibility of energy efficiency to target audiences who would otherwise be uninterested or unmotivated to seek it out.

Implement rigorous evaluation, measurement, and verification (EMV) of local education- and behavior-based energy efficiency programs: The EMV plan, described below, will ensure that program documentation and results are reported in a consistent, rigorous, and comprehensive manner, and disseminated broadly. This sharing will benefit other individual outreach programs throughout Silicon Valley, as well as outreach and behavior-based energy efficiency programs throughout California and the US.

Build Capacity among local organizations and municipalities to implement and sustain effective energy-related community outreach programs, including opportunities to gain hands-on experience for individuals and employees new to the energy field.

Objectives in support of these goals are the following:

1. Distribute mini-grants to support community-based non profit and Santa Clara County municipal behavioral energy efficiency programs by June 2011. The CECF will provide grants to municipal outreach programs and to non profit community based organizations (CBOs) to initiate or meaningfully expand long term behavior change programs geared towards sustainable energy efficiency market transformation. The program will designate separate local government and CBO buckets of funding, allocating some for each. CBOs can apply for between \$10,000 - \$25,000, with a potential result of between 8 - 20 awards. Santa Clara County municipalities can apply for between \$15,000 - \$25,000, with a potential result of between 6-10 awards.

2. Provide organizational outreach and technical education to potential applicants and awardees. Upon issuing the first CECF RFP, SVEW will conduct six 3-hour Bidder Workshops throughout the County for small community organizations to explain the program, its theory, and broader policy context, and to provide a background on energy efficiency. Many small organizations are initially ill prepared for the requirements of complex government grants, despite having an excellent chance of effectively serving certain communities. Additionally, the CECF is designed to incorporate technical concepts, such as Whole House performance, which will require a detailed understanding of energy efficiency technologies and resources. CECF staff will maintain close contact with these programs' staff throughout the course of the program, holding periodic "train the trainer" sessions and providing updates on relevant programs such as the CPUC MEO Task Force findings, services, and technologies. SVEW staff will conduct regular site visits to ensure that awardees are meeting their administrative burdens. Awardees will be able to post questions, successes, and new ideas on an online project management tool such as Basecamp®. This will enable SVEW to efficiently monitor progress, address challenges as they arise, and communicate en masse as needed. It will also allow awardees to communicate and share new strategies with each other.

3. Ensure grant awardees conduct behavioral programs in keeping with the goals and theory of the CECF pilot program. Silicon Valley Energy Watch staff will maintain close communication with awardees, conducting periodic site visits and providing targeted assistance as appropriate, to ensure that funds are expended and programs comported in a manner that supports the above goals. Funded programs must demonstrate, at the time of application and throughout the course of implementation, support of these goals and ability to provide complete program data in support of the overall evaluation effort.

4. Conduct detailed evaluation, measurement, and verification (EMV) of near-term program results. Staff will work with awardees to gather detailed

data about program design, target population, and program results. Grant awardees will be responsible for the bulk of this item, but SVEW staff will provide templates for certain items to ensure internal validity and consistency. Both quantitative and qualitative data will be gathered.

5. Produce comprehensive evaluation and best practices materials that can guide the proliferation, expansion, and improvement of energy efficiency behavioral programs throughout California and the nation. Using the EMV data gathered during the course of program implementation, SVEW staff will produce overview and in-depth materials, including a Community Energy Efficiency Outreach Program Start-up Kit. SVEW staff will maintain regular communication with PG&E and the CPUC Marketing, Education, and Outreach (MEO) Taskforce, via bi-annual summary reports, regarding program performance and preliminary findings. See below for further detail.

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

##### Program Design

The Community Energy Championship Fund will provide grants to local organizations that demonstrate innovative outreach approaches and integrate multiple sustainability topics, and whose outreach initiatives are targeted at well-defined communities. Grants will support programs whose mission it is to increase awareness, build knowledge, and promote lasting behavior change regarding energy efficiency within defined communities.

Development of new outreach tactics, educational approaches, and measure mixes are inherent within the Community Energy Championship program. The following three elements provide the foundation of our program, and are the criteria by which the CECF will determine eligible initiatives.

- Small, local programs are most effective in inspiring behavior change. The program builds on local knowledge of community “touch points:” points of contact or communication styles that will be particularly salient for the local community and effective in building awareness and inspiring behavior change. Local implementers, whether non profit organizations, communities of worship, or targeted local government initiatives, have the most intimate knowledge of these touch points and how to effectively leverage them. They also have the respect and trust of their community members, and are seen as more credible than remote organizations of power. Such programs will thus be the most effective in inspiring behavior change towards energy efficiency beyond the scope of utility, PACE, or other public energy efficiency programs.

- Behavioral energy efficiency outreach will be more effective when integrated with broader sustainability messages. For many, energy efficiency is an intangible concept. Even when taught extensively, it may not gain the same traction as other sustainability issues, such as water, recycling, pollution, and so on. In addition, there is tremendous variance in which persuasion tactics will be most effective for a given person or social unit. Linking energy with other environmental topics will increase its salience, and provide a greater likelihood that previous “non-believers” will develop favorable attitudes toward efficiency and conservation.
- Social marketing and education should be combined with tangible incentives to solidify program participation. While education and social marketing are critical, tangible incentives can serve as a “gateway” to behavior change. Strategically providing prizes, free audits or tools, or discounted services, can engender excitement about an effort, bring members on board who might not otherwise take notice, and hold interest in the initiative long enough for the broader outreach and educational efforts to take hold.

Target communities may be defined as geographic, ethnic, faith-based, or otherwise. Programs will gauge, as accurately as possible, the strengths, needs, and limitations of their target communities; include specific and detailed information regarding energy efficiency and, where appropriate, renewable energy; tailor information to their communities’ unique characteristics; situate energy within a broader understanding of environmental and community sustainability and climate protection; and target immediate as well as long-term behavior changes. Programs may offer or facilitate energy audits, technical upgrades to homes, or appliances to supplement outreach and education. Grants may not be used for facility upgrades or non-related equipment for the organizations conducting outreach programs.

### Strategic Placement and Experience

The Silicon Valley Energy Watch Program, administered by the City of San José, has gained valuable community outreach experience throughout Santa Clara County over its seven years of implementation, rendering it uniquely suited to implement the CECF program. It has developed a deep understanding of the needs of its complex population, which will enable staff to consider the communities’ unique communication needs and knowledge gaps, as well as the demands of energy efficiency and climate goals, in evaluating grant proposals. Its experience will enable a strategic, yet equitable, distribution of funds. Further, SVEW's role throughout the region in policy coordination and implementation of broad educational programs will enable it to tie funding awards to regional priorities and local political considerations.

The City of San José also has extensive successful outreach and grant-making experience, most notably in its Go Green Schools initiative operated by the Environmental Services Department. Together with its companion program, the City of San José Go Green Initiative, Go Green Schools provides technical assistance, training, and mini-grants of up to \$5,000 to support school recycling and environmental education. Since its inception in 2005, the program has awarded over \$237,000 for 145 school projects or programs; held three day-long environmental conferences attracting over 500 parents, teachers, and administrators; and provided over \$100,000 of recycling containers to schools.

The City of San José has a wealth of related grant-making expertise through various programs, which SVEW will also draw upon in implementing this program. This includes administration of Federal Housing and Urban Development (HUD) Community Development Block Grant (CDBG) awards to local organizations for community revitalization initiatives; the Healthy Neighborhood Venture Fund and other programs from the City's Parks, Recreation, and Neighborhood Services Department; and a number of operating, project, and development grants offered by the City's Office of Cultural Affairs.

### Past Program Success

**Carbon Diet Club** In the 2006-2008 CPUC Public Goods program cycle, Silicon Valley Energy Watch provided funding to the City of Morgan Hill to support their Carbon Diet Club (CDC), an innovative community outreach strategy geared towards reducing the community's GHG emissions. CDC engages households by creating a team environment wherein members spend two to three weeks mapping out individual action plans for reducing carbon emissions. Targeted behaviors include energy, transportation, water, and food. This program marked the first iteration of the CECF pilot concept. SVEW provided \$20,000 to support the energy efficiency component of CDC. Morgan Hill used the award to certify the city's Environmental Programs Coordinator as a HERS rater, pay for 36 initial HERS audits for participant households, and provide \$150 towards energy upgrades for households receiving audits. To date, audits funded through this program have identified potential average annual energy savings of \$770 per home. Over 80 households have participated in the CDC to date. In 2010, the City of Morgan Hill intends to expand the CDC through improved social marketing of the program, expanded implementation with key community partners including two high schools, and continuing the free home energy audit service for member participants.

**Green@Home: High Energy Program** In 2009, Silicon Valley Energy Watch was approached by the reputable environmental nonprofit Acterra regarding the High Energy Program (HEP), a new behavior-based initiative that could achieve substantial energy reductions. HEP will operate in five of the six cities in PG&E territory with the highest average annual residential electric use, two of which

are in Santa Clara County. Average homes in these cities approach 15,000 annual kWh. Because these homes tend to be newer and higher-end, energy savings from basic weatherization and retrofit are not proportionate to average California homes.

The HEP provides extensive audits of energy and water utility bills, along with a detailed plug load audit. Paid staff conduct home audits by phone and in person. Twelve homes participated in an initial pilot, yielding as high as 62% energy savings. Far from requiring drastic lifestyle changes, audits showed that energy excess was due largely to two factors: standby or phantom loads from never- or seldom-used appliances, and intermittent loads from inefficient or rarely used luxury items.

HEH is an exemplary candidate for CECF funding. The program targets a well-defined sub-community of Santa Clara County that is under-served by existing energy efficiency services (i.e., homeowners using between 13,000 - 20,000 average annual kWh); uses a combination of audits, education, analysis, and follow-up; and is able to braid concepts of energy, water, and materials conservation. HEP creates a specialized home assessment to help residents identify areas of waste and provide recommendations for energy reduction. Most recommendations have no cost to implement, and no impact on lifestyle. Lasting savings have been determined by follow-up interviews and ongoing examination of utility bills. The program is easily scalable beyond initial CECF funding, as Acterra intends to create a self-directed, web-based approach to expand the program in future years. Following the HEP audit, staff can also recommend that homeowners receive a detailed HVAC or water audit as appropriate to achieve deeper savings.

Mobilize.org Formerly Generation Engage, Mobilize.org is a national youth outreach civic engagement organization with an active Silicon Valley branch. Local program leaders have been developing a proposal to create a Green Communities Initiative, which would combine four elements:

- Residential energy and environmental outreach: The program would target families with an integrated environmental outreach platform that addresses water, energy, recycling, climate change, and food. Families will receive intensive outreach and frequent contact with the program.
- Youth empowerment: Families would be accessed via their high school or middle school children. The “youth ambassadors” would learn environmental and efficiency concepts, translate them to their families, acquire baseline information on their families’ efficiency and conservation practices, and develop and implement workplans to increase their families energy efficiency and minimize harmful environmental impacts.
- Web 2.0: With program assistance, the youth ambassador would create a blog to report on milestones, successes, and challenges. Creative

multi media postings would be encouraged. The blogs would serve to share strategies among the youth ambassadors, and educate other youth in their schools about the importance of “starting at home.”

- Service learning: Mobilize.org has an active office on the De Anza Community College campus, including a service learning program in which many Environmental Studies students participate. For college credit, these students will participate as mentors to the youth ambassadors. They will assist with implementing the energy and environmental curricula to the youth ambassadors, provide media support for the blogs, and serve broader aspects of program design and administration.

##### **5. A clear budget and timeframe (including milestones) to complete the project and obtain results before December 2012**

Budget information was provided by the applicant but has been excluded by PG&E in this advice letter subject to negotiation between PG&E and the applicant.

Grants will be awarded in two program cycles. Phase 1 will issue requests for proposals (RFP) in May 2010 and award half of the funds in July 2010. Phase 2 RFPs will be issued in September 2010, with funds awarded in November 2010. The aggressive timeline for awards will ensure timely and complete collection, analysis, and publication of program outcome data by December 2012. The two-phase process will enable more advanced organizations to apply and commence programming earlier, while those needing additional application assistance or time to ramp up can apply during Phase 2. There will be no difference in award size or recipient class between the two phases, and all awardees will be subject to identical reporting requirements. Bidder Workshops will be conducted in the second and third quarters of 2010.

Funded programs will submit two midterm summary reports and one final report. The first midterm report will be due March 1, 2011 for Phase 1 awardees and May 1, 2011 for Phase 2 awardees. The second midterm report will be due October 1, 2011 for Phase 1 awardees and January 15, 2012 for Phase 2 awardees. Final program reports will be due October 15, 2012 for Phase 1 awardees (with a first draft due September 24) and November 19, 2012 for Phase 2 awardees (with a first draft due October 29). Additionally, all programs will receive a minimum of three site visits during the course of the program, which will occur mid-cycle between midterm reports.

SVEW staff will compile program results into a Final Community EnergyChampionship Fund Program Report, including the detailed publications discussed below, by December 17, 2012. A Summit on behavioral energy efficiency programs will be held in March 2012 to build regional interest in the

program, promote collaboration, present preliminary findings, and gain feedback as to which program aspects will be most beneficial for broader dissemination

2010			2011				2012			
Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Hire CECF staff										
May: Issue Phase 1 RFP	July: Award first half of CECF grants		March: First Midterm Report			Oct: Second Midterm Report			Sept: 1st Draft Case Studies Due	Oct: Final Draft Case Studies Due
	Sept: Issue Phase 2 RFP	Nov: Award second half of CECF grants		May: First Midterm Report			Jan: Second Midterm Report			Oct: 1st Draft Case Studies Due; Nov: Final Draft Case Studies Due
May & June: Hold six 3-hour Bidder Workshops	Sept: Hold two 3-hour Bidder Workshops	Oct & Nov: Site visits for phase 1 awardees	Feb & May: Site visits for phase 2 awardees	June & July: Phase 1 site visits			Feb & March: Phase 1 site visits	June: Phase 2 site visits		
				Sept: Phase 2 site visits						
				Finalize overall CECF logic model	Develop energy efficiency behavior aspirational survey instrument			Administer aspirational survey		
							Summit on behavioral energy efficiency programs			

Championship Fund Program Report, including the detailed publications discussed below, by December 17, 2012. A Summit on behavioral energy efficiency programs will be held in March 2012 to build regional interest in the program, promote collaboration, present preliminary findings, and gain feedback as to which program aspects will be most beneficial for broader dissemination.

**6. Information on relevant baseline metrics or a plan to develop baseline information against which the project outcomes can be measured. Project performance metrics shall be described in accordance with Appendix 2 of the CPUC’s Decision, provided below as Attachment A, which provides direction to the investor owned utilities (IOUs) regarding program performance metrics**

Baseline metrics will be developed at the county and zip code level using utility data. At the grant recipient level, detailed pre-intervention surveys will be used. The surveys will be developed as part of the overall CECF scope of work by SVEW staff, who will work with grant awardees to add more detailed questions specific to their community or neighborhood as appropriate. The combination of these surveys from various subpopulations throughout the County will together present an effective picture of the following attributes of the region's residents:

- Awareness of energy efficiency issues: impacts of residential building energy use on carbon emissions, and potential for energy savings due to simple behavior changes or complex building interventions;
- Belief in personal efficacy (i.e., the potential for one person or community to make a difference) regarding regional environmental sustainability and climate change mitigation;
- Most salient conservation topics (areas of greatest concern, or where behavior change is most likely, such as energy efficiency, transportation, wildlife conservation, etc);
- Primary motivation for changing energy related habits (i.e. financial savings, peer influence, environmental conservation, health, etc);
- Primary barriers to energy efficiency behavior change and program uptake (lack of awareness, cost of interventions, accessibility of services, etc);
- Influence of demographic factors on attitudes and motivation regarding energy efficiency;
- Willingness to reduce energy intensive behaviors, overall and given varying prices of interventions

Through the Bidder Workshops and during ongoing program supervision, SVEW staff will ensure that funded programs understand the EMV needs and progress to date of the CPUC MEO Task Force, and will work with programs to ensure ongoing integrity of data collection and analysis. Baseline information will be assessed at program start and updated at the time of midterm reporting. These tasks will be completed by CECF-funded programs with the assistance from SVEW. As needed, SVEW will retain volunteer interns, recruited from Santa Clara County universities and community colleges, to participate in administering surveys, collecting data, and working with funded programs to compile data.

Using the data from these surveys, SVEW will compose an overall picture of segmented market characteristics and associated energy efficiency communication and education needs among Santa Clara County's diverse subpopulations. This information will assist in evaluating the appropriateness of the various outreach modes employed by CECF-funded programs. It will also be

used to compose a comprehensive logic model of the CECF, which will be completed within two quarters of Phase two grant awards.

### **7. Methodologies to test the cost-effectiveness of the project;**

For each awarded program, detailed information will be collected regarding community members reached; financial savings per home, unit, or building as applicable; comprehensiveness of outreach efforts, concepts taught, and measures enacted as a result of interventions; funding leveraged as a result of combining energy efficiency with related sustainability and conservation measures. Cost-effectiveness will then be assessed considering a number of scenarios:

Gross savings per home/unit in the targeted area per award amount: This value will be measured against baseline information at program conclusion (fourth quarter of 2012).

Projected long-term savings (2- and 5-year) savings per person in target area/population per award amount: These projections will be generated using assessment tools designed to gauge permanent changes in attitudes, awareness, and motivation regarding energy efficiency, as well as explicit narrative feedback regarding participants' intentions to install energy efficiency measures or upgrade their homes in two and five years following program completion. Given that PACE financing will proliferate by 2012, including both renewable energy and large energy efficiency measures, we may be able to assume that stated intentions are more likely to be acted upon. SVEW will work with outside experts, such as Opinion Dynamics Corporation, to develop these prognostic assessment tools.

### **8. A proposed evaluation, measurement and verification (EM&V) plan;**

Program EMV will be accomplished via a mixture of case studies, progress reports, narrative feedback, pre and post surveys, and billing data where possible. SVEW staff will develop standard templates for the case studies and surveys, and will work with grant awardees in survey administration as needed in order to ensure data integrity and comprehensiveness.

1. Surveys: As described above, funded programs will be required to complete surveys assessing baseline information about their target audiences, as well as exit surveys regarding projected future actions. Where needed, SVEW staff will train or assist awardees in administering the surveys as tailored to their programs or populations. SVEW will pay for development and translation of surveys as appropriate. To create the "future actions" assessment tool, SVEW will solicit external behavioral evaluation expertise. SVEW will retain interns to assist in administering these surveys through partnerships with San José State and Santa Clara Universities as well as local Community Colleges.

2. Progress reports: Midterm reports will also follow prescribed templates developed by SVEW and introduced at the time of contracting. The reports will provide summary data regarding population served, interventions employed, energy efficiency measures addressed/installed, and any other pertinent data. They will also include a section for addressing any challenges and planned program changes. All midterm reports will be posted to the online project management tool (e.g. Basecamp®). A sample of outstanding midterm reports will be posted to the SVEW-CECF Online Home with the permission of program administrators.
3. Case Studies / Final Reports: All funded programs will be required to compose a Final Case Study (Final Report), utilizing the template provided by SVEW, by October 15, 2012 (Phase 1 awardees) and November 12, 2012 (Phase 2 awardees). This template will require information on program budget and type (municipal, small CBO, non profit branch, etc); target audience size and demographic characteristics; program scope; outreach tactics; and challenges. These reports will be posted to the Online Home upon review and any necessary revisions by the CECF program administrator and SVEW staff. Case studies will include detailed quantitative data in the same categories as the Quarterly Reports, as well as qualitative/narrative data and Program Theory information. Upon review of the Draft Final Case Studies, SVEW may request additional data or narrative information.

**9. A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities.**

SVEW will compile case studies of all individual CECF-funded programs. It will develop both quantitative and qualitative analyses of funded programs' performance and outcomes, and a deep discussion of the Pilot's overall near-term success and anticipated long-term market transformation effects. Based on these analyses, the City of San José will develop a printed and online guidebook; a set of online best practices resources; and a Community Energy Efficiency Outreach Program Start-up Kit. All reports and materials will be publicly available on the CECF Online Home, as free downloadable PDFs or equivalent.

A "cadre" of experts, drawn from representative programs, will be recruited to deliver presentations to IOU and state staff, local governments, and other organizations interested in developing long term energy efficiency behavioral change programs. These presentations will be available by request as of October 2011. In early March 2012, the City of San José will host a Summit on

behavioral energy efficiency programs, featuring a panel discussion with administrators of representative CECF awardees. The Summit will be geared towards an audience of utility, CPUC, CBO, and local government staff from around the State.

## ATTACHEMENT B-7

### SILICON VALLEY ENERGY WATCH (SVEW)

#### MUNICIPAL WHOLE HOUSE REHAB PROJECT RESPONSES TO COMMISSION'S PILOT PROJECT CRITERIA

The City of San José, which administers the Silicon Valley Energy Watch program, proposed two projects. The second project, the Municipal Whole House Rehab Pilot, will expand the ability of municipal housing departments to incorporate Whole House energy efficiency into standard rehab work. The project will allow a limited number of units undergoing standard retrofits through the City's Single Family Housing Rehab program to receive comprehensive energy efficiency retrofits, traditionally absent from these programs.

**1. A specific statement of the concern, gap, or problem that the applicant seeks to address and the likelihood that the issue can be addressed cost-effectively through future utility programs that would be developed as a result of the Innovator Pilot program**

Municipal housing departments generally include rehabilitation programs with "life, health, and safety" missions. These denote urgent housing needs, such as emergency roof repairs, generally faced by low-income and at-risk populations within the communities. The priorities reflect federal and state funding priorities. While energy efficiency measures may be a secondary benefit of these programs, they are rarely an explicit goal. Limited efficiency measures are sometimes an eligible use of funds, but shrinking program budgets and increased demand for services render municipal housing programs unable to incorporate energy efficiency measures to the most beneficial extent. Significant opportunities for efficiency improvements are therefore often missed.

In 2001, the City of San José negotiated a settlement agreement with the Calpine/Bechtel Corporation in conjunction with the Metcalf Energy center. The agreement included an award of \$1 million to the City for low-income energy efficiency retrofits. In late 2004, the San José City Council approved a program workplan developed by the City's Housing and Environmental Services Departments to incorporate cost-effective energy efficiency measures and appliance replacements beyond traditional LIHEAP measures into existing Housing Department rehabilitation programs. Over a three year period, the program provided expanded energy efficiency measures to over 370 low-income households in San José. This one-time funding source was exhausted in 2008.

Housing programs throughout the State continue to experience shrinking program budgets. In addition to the depletion of the Calpine funds in San José, and a declining local tax increment, State funding challenges and the ongoing struggles of the national economy have severely impacted all cities' abilities to fund residential energy efficiency measures.

In order to cost effectively incorporate energy efficiency into standard municipal housing rehab programs, three strategies may be employed:

1. All Housing Rehab Specialists have expertise in energy efficiency to evaluate and determine the most cost effective improvements on a case by case basis;
2. A standardized approach to incorporating energy efficiency measures in the rehabilitation of various housing types is employed;
3. Programs coordinate with outside resources such as utility-sponsored low-income energy efficiency programs.

In order to meet the goals of the California Energy Efficiency Strategic Plan of retrofiting the State's entire housing stock by 2020 and the Center for American Progress' goal of retrofiting 40% of the nation's homes by 2020, all three strategies will be required.

### The Opportunity

Through the Silicon Valley Energy Watch, extensive energy efficiency training has been provided to municipal building inspectors and other staff, including San José's Housing rehabilitation staff. Currently, the City of San José Housing Department has three Rehabilitation staff certified as Greenpoint raters through Build It Green's professional training program. These trained inspectors have been unable to directly implement the benefits of their training due to the budget constraints described above.

The Municipal Whole House Rehab (MWHR) pilot will enable the development of the Municipal Whole House Rehab Template, a compilation of templates that identify optimal paths to energy efficiency for locally predominant building types. These will enable staff to minimize missed opportunities, and direct scarce rehab funds towards approaches that maximize energy efficiency potential. They will position municipalities to more efficiently leverage related residential energy efficiency programs, rapidly scale up for future publicly funded efficiency programs, and better coordinate with local energy industry partners due to increased in-house expertise.

Standard weatherization and retrofit programs are an effective tool in addressing residential energy upgrade needs. Nonetheless, energy efficiency opportunities continue to be missed because of regionally inappropriate income requirements, substandard housing conditions, and limited capacity of

weatherization programs to perform extensive concomitant repairs. In order to eliminate service gaps and to minimize redundant services, municipal housing programs must be prepared to not only coordinate local efforts when feasible, but also to incorporate energy efficiency retrofit measures within their Rehabilitation projects. To that end, programs will need designated funding, highly trained staff, and simplified assessment and implementation tools.

## **2. Whether and how the project will address a Strategic Plan goal or strategy and market transformation;**

The Calpine/Bechtel settlement allowed staff to expand existing programs and learn the fundamental approaches to energy efficiency measures. Through external training and certifications, Housing staff have since pursued a higher level of expertise. The MWHR program will create the opportunity for San José and other local governments to take the next step toward implementing comprehensive programs prepared to optimize energy retrofit efforts.

This program will directly benefit low income populations, as these are usually the prime focus of municipal housing efforts. By funding the City of San José's Housing Rehab Department to develop and publish a detailed standard template for integrating energy efficiency work into standard projects, this program will assist any local governments throughout California in effectively incorporating energy efficiency into their own programs. Local governments will thereby better support utility-funded residential energy efficiency programs. More importantly, it will prohibit lost energy efficiency opportunities that would otherwise impede CEESP progress.

The CEESP specifies a near term goal of implementing "pilot home retrofit programs with effective integration and delivery of comprehensive demand-side options..." and a mid term goal of monitoring performance of these homes and continuously improving whole-house energy efficiency programs (p. 19). The MWHR program will further these goals, first by facilitating rapid scaling-up and efficient deployment of comprehensive energy efficiency measures in all homes touched by municipal housing rehab programs, and second by developing and disseminating the model templates to other municipal governments throughout California.

The MWHR will focus particularly on HVAC testing and retrofits, addressing the CEESP's third of four Big, Bold, Energy Efficiency Strategies: Transforming the HVAC industry to ensure optimal energy performance for California's climate. This CEESP goal further specifies applying whole-house approaches to energy consumption, including an interim target of 20% energy reduction by 2015. The MWHR will exceed this goal among its targeted homes by achieving a minimum of 20% savings in every home receiving rehab work. Development of detailed rehab templates beyond this program cycle will advance this goal even further.

The CEESP's fourth Big, Bold, Energy Efficiency Strategy specifies that all eligible low income customers must be given the opportunity to participate in low income energy efficiency programs by 2020. The City of San José Housing Rehab program expects to coordinate with at least 3,000 low income households between now and 2020. Completing the MWHR pilot in 2010-2011 will allow those households to benefit generally from increased expertise, and directly the incorporation of the template into standard rehab workplans. Beyond the City of San José, similar effects will occur as a result of the templates' publication and dissemination.

### **3. Specific goals, objectives and end points for the proposed project**

The Municipal Whole House Rehab Pilot will accomplish the following goals:

Achieve whole-house home performance retrofits as an integral component of all municipal rehab projects, with a minimum of 20% energy savings per project. Savings for many projects may approach the Home Performance standard of 70-90% savings per home.

Incorporate energy efficiency into the standard workplans of municipal housing rehab programs to increase program efficiency and maximize public housing funds in support of California's energy efficiency and GHG emissions reduction goals.

Objectives in support of these goals are the following:

1. Conduct whole-house energy efficiency retrofits simultaneously with Single Family Rehab projects in 80 homes. The CSJ Housing Rehab program will conduct all aspects of the projects, including audits, rehab work, and inspections, using internal staff and/or existing contractors.
2. Based on completed work in the 80 homes, model optimal energy efficiency measure mixes for representative housing types and presenting conditions in San José and track energy and resident cost savings. Modeling will be completed by existing housing inspectors using the Lawrence Berkeley National Labs' (LBNL) Home Energy Saver (HES), an advanced building modeling software program, and combined with the results of HERS audits and other information collected.
3. Develop and publish standard templates for including energy efficiency in any rehab project based on a variety of criteria. Templates will be based on findings from the HES modeling, and disseminated to municipal housing departments throughout California.

### **4. New and innovative design, partnerships, concepts or measure mixes that have not yet been tested or employed;**

The templates developed as a result of the MWHR pilot will enable municipal housing staff who lack specific energy backgrounds, or who have minimal familiarity with home performance or building science theory and resources, to easily incorporate whole house efficiency measures into their standard work without adding pressure to constrained budgets and staff time. The templates will make it easier for municipal housing departments to successfully argue for additional resources directed toward efficiency improvements to their councils or boards, and to State and federal funding grantmaking agencies.

Key San José Housing Rehab inspectors have undergone HERS training, and are currently in the process of receiving certification. Working with CBPCA and CHEERS, The MWHR will leverage SVEW educational funding to provide this training and certification to other local government inspectors throughout Santa Clara County. HERS-II audits in conjunction with the MWHR will therefore be possible, again broadening the potential of municipal housing departments beyond their traditional limits.

The rationale for conducting all rehab/retrofit and modeling activities in-house, as opposed to sharing responsibilities with the LIEE and LIHEAP programs, is three-fold:

1. Target Population: The residents targeted for this work are largely from income groups not targeted by LIEE and LIHEAP programs, whose target populations fall in the City's Extremely Low Income (ELI) category.
2. Efficiency of program delivery: Staff time has been shown to be more efficiently spent coordinating all phases of each project in house, rather than allocating set minimal aspects of each project to an external partner.
3. Consistent Program Design and Replicability: A single, consistent program implementer allows for a more replicable program design

The program will communicate with SVEW, LIEE, the Santa Clara County designated LIHEAP provider, Rebuilding Together Silicon Valley, and San José Conservation Corps regarding ongoing progress and results. Those partners will, benefit from increased staff knowledge, collaboration opportunities, and public awareness generated as a result of the program. Via linked program administration and established outreach channels, SVEW and local non profit partner organizations will be able to more efficiently target residential outreach and education efforts. Results of the MWHR pilot will also be tracked through the Silicon Valley Energy Map, a component of the 2010-2012 SVEW program.

The City of San José Housing Rehab program coordinates extensively with the City's Strong Neighborhoods Initiative, an innovative, inter-departmental

community revitalization approach operated jointly by the City Manager's Office and the San José Redevelopment Agency. Extensive past work with SNI has rendered the City of San José Housing Department an adept collaborator, incorporating innovative neighborhood outreach and a community empowerment approach into its brick-and-mortar programs. By virtue of this partnership and the precedent it bespeaks, the San José Housing Rehab Department will be able to link with environmental outreach and energy education programs, such as those funded by the Community Energy Championship Fund, to broaden the impacts of the MWHR projects.

**5. A clear budget and timeframe (including milestones) to complete the project and obtain results before December 2012;**

Budget information was provided by the applicant but has been excluded by PG&E in this advice letter subject to negotiation between PG&E and the applicant.

The City of San José Housing Department will provide existing staff, already trained and certified as Certified Green Building Professionals and Greenpoint Raters, to conduct all installations and modeling. A maximum 12% of the overall grant will be applied to staffing costs related to retrofit and modeling. One quarter of the FTE funded by this overall grant will assist in preparing and publishing the final template documents.

The Modeling Pilot will be folded into the Department's existing Single Family program. This will enable an equitable distribution of resources among projects until designated funds have been exhausted. Per-unit costs will range from \$3,500 to \$4,500. The applicant recommends that an estimated 80 homes will receive whole-house energy efficiency retrofits as part of their City of San José Housing Rehab projects over the course of one and a half years.

All retrofit projects conducted with funds from the Modeling Pilot will be completed by September 30, 2011. This will provide 15 months to conclude documentation of cost effectiveness and energy savings results for all projects, complete all models, finalize templates, and publish results by October 2012. Templates will be available online through the City's Housing Department website as well as the SVEW website.

**6. Information on relevant baseline metrics or a plan to develop baseline information against which the project outcomes can be measured. Project performance metrics shall be described in accordance with Appendix 2 of the CPUC's Decision, provided below as Attachment A, which provides direction to the investor owned utilities (IOUs) regarding program performance metrics;**

The San José Housing Department currently collects detailed demographic, building, property, and asset information for each property undergoing work. Additional processes for collecting baseline data will be introduced to support the MWHR Pilot. Baseline data will be comprised of three components: HERS audits, including all information required by the LBNL HES software; an Energy behavior survey, including plug load analysis, developed by the City of San José Housing Department in conjunction with SVEW; and PG&E billing data.

#### **7. Methodologies to test the cost-effectiveness of the project;**

The City of San José Housing Department has never before assessed cost effectiveness of energy efficiency retrofits as a part of its rehab work. Using the tools described above, the MWHR will test theoretical cost effectiveness, or proposed improvement calculations, and conduct actual bill review of all projects for one year. Using the baseline data described above, staff will develop detailed profiles of occupant types, housing types as related to energy efficiency potential, and categories of cost effectiveness.

#### **8. A proposed evaluation, measurement and verification (EM&V) plan;**

The City of San José Housing Department currently tracks all of its information using an Access Database. Currently there are over 300 information fields, covering approximately 5,000 records. To facilitate the MWRH pilot, the Department will add tracking fields to the existing system. Because cost effective maximization of energy efficiency is the focus of the MWHR pilot, the cost effectiveness tests described above will constitute the bulk of EMV efforts.

City of San José housing rehab inspectors trained and certified as Greenpoint Raters, including HERS certification, will evaluate each home completed under this program. This will include collecting baseline information and documenting energy efficiency improvements as described above, as well as ensuring proper design and installation of new equipment. Through their assessments of energy savings and cost effectiveness inspection staff will compare multiple program approaches. Staff will address the following questions:

- Which measures or system approaches will produce greater energy and cost savings, given particular Silicon Valley housing types, vintages, and common health and safety issues?
- What are the most efficient internal processes, including staffing and outreach approaches, given municipal Housing Rehab funding constraints?

2010	2011				2012						
Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
	San José Housing Department includes Whole House energy efficiency retrofits in approximately 80 single family units										
	Rehab inspectors analyze and document energy and cost savings associated with each project, including bill review										
							Compile, edit, and format templates				
									Sept: Post Municipa l Whole House Rehab Templat e online		

The answers to these questions will constitute the crux of the Municipal Whole House Rehab Template. Other measurable outcomes to be tracked include water savings, carbon equivalent reductions, and interaction with simultaneous life/health/safety improvements.

**9. A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities.**

To support dissemination beyond the City of San José, the MWHR will leverage SVEW educational funds to train and certify municipal housing staff from other Santa Clara County cities as HERS raters. This will enable those cities to maximize the templates developed as a result of the pilot. It will also fuel excitement about the templates as they are being developed.

The compiled templates, entitled the Municipal Whole House Rehab Template, will be freely available on the City of San José and SVEW websites. It will be downloadable in PDF or equivalent as individual templates or as an entire document. The modeling software used for this program element is freely available online from LBNL, and can be effectively used by a building rehab inspector or similar professional trained in basic energy efficiency practices.

All 80 pilot rehab projects will be complete by the end of 2011. Energy, occupant cost savings, and cost effectiveness analyses will be conducted throughout the period of rehab. All final analyses will be completed by March 30, 2012. City of San José Housing staff, working with SVEW staff, will compile, edit, and format templates in Q2 of 2012. The entire Municipal Whole House Rehab Template will be posted online in September 2012, so that concurrent outreach and press releases about the project does not occur during the summer vacation months.

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**Attachment C:**

**Program Performance Metrics**

## Attachment C – Innovator Pilots Program Performance Metrics

### Innovator Pilots Program

**1. Include a list of the utility and program administrator staff directly involved in deriving the program performance indicator metric. Include their title and contact information.**

Lynne Galal

- Telephone: (415) 973-0040
- E-mail: L1g7@pge.com

**2. Describe each program performance indicator being proposed for this program. Indicate in a description for each, what type of performance indicator it is (see attached above). If the program indicator is being changed from an already approved program indicator indicate why the change is necessary. Provide additional analysis that adequately justifies the need to revise the metric as an attachment to this worksheet.**

**Proposed metric:**

Dollars distributed to participating local governments or agencies to date.

**Baseline:**

\$0 distributed to participating agencies at program inception.

**Proposed metric:**

Complete summary report on lessons learned and best practices that can be used by other local governments.

[PG&E will monitor and document best practices and lessons learned from the Innovator Pilots program and will broadly disseminate this information. Per D. 09-09-047, the dissemination of best practices and lessons learned from the innovator pilots are intended to reach all California utilities. In order to reach the broadest possible audience, lessons learned and best practices will be captured through awardees' specific project lessons learned materials, through fact sheets and through a summary report.](#)

[PG&E will require that all 2010-2012 awardees shall prepare a strategy to disseminate best practices and lessons learned to all California cities. PG&E shall further require that all 2010-2012 awardees post their project specific reports, templates, videos, summaries of lessons learned and other best practices material described in their dissemination strategy on the California energy efficiency web portal local government page no later than April 1, 2013.](#)

[The program summary report, to be publically posted on the new California energy efficiency web portal local government page no later than June 1, 2013, will include a concrete strategy and schedule to identify and disseminate best practices and lessons](#)

learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities, including core PG&E programs and PG&E local government partnership programs. In addition to the summary report, PG&E will post fact sheets on PG&E's web site and will provide them to the statewide best practices coordinator no later than June 1, 2013.

In the event that PG&E offers solicitations for innovator pilot proposals for the 2013-2015 period, PG&E will work to post interim summary results from the 2010-2012 program on the California energy efficiency web portal local government page at least two months prior to the 2013-2015 RFI due date.

**Baseline:**

Summary report 0% completed at programs inception.

**3. For each program performance metric being proposed, indicate why you have selected them including how the metric meets the SMART convention (Specific, Measurable, Actionable, Relevant, Timely)**

- Specific: Provides a defined level of program progress
- Measurable: Results can be tracked by program staff
- Actionable: Action can be taken based on reported progress
- Relevant: It is direct measurement of program activities and results
- Timely: Results can be reported on a quarterly basis

**4. State the program mission. The program mission is the basic purpose of a program, its reason for existing, and the general means through which it will accomplish its purpose in view of overarching goals and objectives (CEESP, BBEES, CPUC EE Goals).**

The Innovator Pilots Program was designed to allow communities who are leaders with respect to their energy and greenhouse gas (GHG) reduction activities to test creative approaches to address energy efficiency. This program will be available on a competitive basis to local, regional, or sub-regional governments or associations of governments. The Program will provide funding for projects that will test, demonstrate, and measure innovative ways to deliver energy savings.

**5. Describe the program performance goals (both internal and external), standards, and/or benchmarks. Program goals should support the programs' overall mission and are general statements about the results to be produced by the program. If program goals are being revised from previous program goals indicate why the change is necessary providing additional analysis to justify the change.**

CEESP Section 12 (Local Governments) – Goal 3.5

Develop an innovation incubator that competitively selects energy design, technology, and system initiatives for local government pilot projects.

CEESP Section 12 (Local Governments) – Goal 5-2

Develop model approaches to assist local governments participating in regional coordinated efforts for energy efficiency, DSM, renewables, green buildings, and zoning.

**6. Describe the critical work processes, program requirements, and critical results desired (both internal and external) linked to promotion of the program mission and goals above.**

Strategic Plan Section 12 (Local Governments) – Goal 3.5

The Program will provide funding for projects that will test, demonstrate and measure innovative ways to deliver energy savings. These projects may include, but will not be limited to: strategic resource management planning, social marketing and community outreach programs, a network of regional experts, behavior-based energy demand-side management, bundled incentives to promote integration of demand-side management incentives, integrated audits, cooperative green procurement initiatives, and green energy careers.

Strategic Section 12 (Local Governments) – Goal 5.2

PG&E, in collaboration with the selected Innovator Pilot partners, will monitor and document best practices and lessons learned from the selected projects and will disseminate this information in fact sheets available on PG&E's web site. Applicants that are selected by PG&E will be required to share their project results with entities such as the League of California Cities, the Local Government Commission, ICLEI -Local Governments for Sustainability, Councils of Governments, and other public sector entities to enable replication and/or modification by other governments.

**7. Describe how the proposed program performance metrics are a measure of the critical work processes or critical results identified above.**

Since this program is designed to encourage innovation by governments that can be widely replicated by other governments by providing them funding and expertise, the proposed metrics measure the success of the critical work processes above.

**8. Describe what the program objectives are. Program objectives are the specific milestones and targets to be achieved to which the proposed program performance metrics seek to measure. Program objectives should be chosen that promote accomplishment of the program goals and should meet the SMART convention described above. If the program objectives are being revised from previous program objectives indicate why the change is necessary. Provide additional analysis to justify this change.**

Dollars distributed to participating agencies to date.

- TBD pending final negotiations of individual project contracts

Complete summary report on lessons learned and best practices.

- TBD

**9. Describe how the metrics will be collected, what data source they will come from, and how they will be tracked and reported.**

Data will tracked offline from utility program tracking database and will be reported at least annually and more frequently if requested by the Commission.

**10. Attach a program logic model that graphically represents what has been described in this worksheet. Logic models should depict the flow between program activities, their outputs, and subsequent short term, intermediate, and long term outcomes as well as how program elements are linked and the influence of external influences. Proposed program performance indicators should be incorporated at the appropriate locations within the logic model indicating what program activities and outcomes within the model will be measured both internal and external to the program (see example above).**

An overall logic model for this program is provided as Attachment D. Since each project will have different activities and outputs, the program logic model is provided at a very high level.

**11. Include a completed Program Performance Indicator Table as an attachment to this worksheet (see example below).**

See Table below

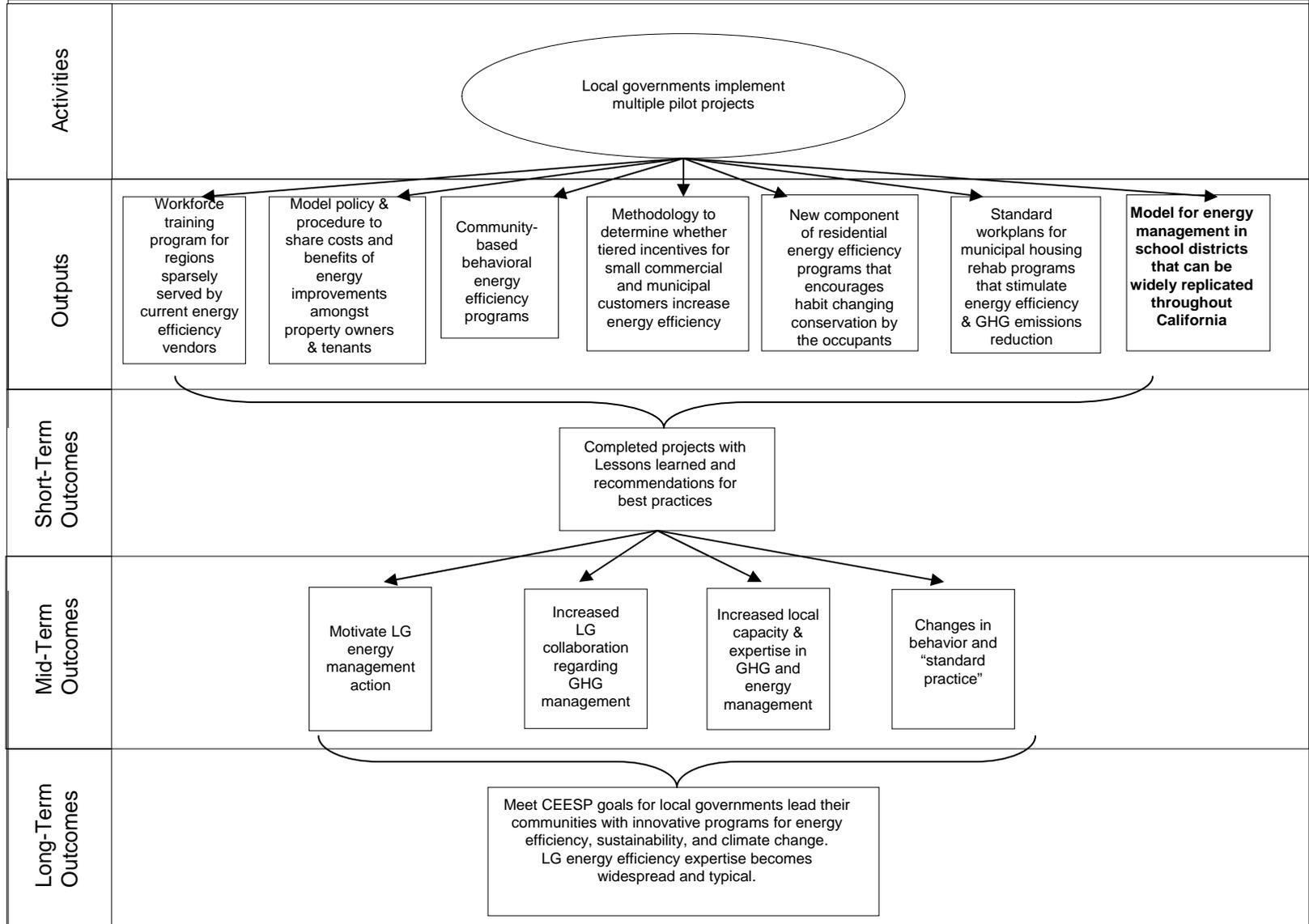
### Innovator Pilots Performance Indicator Table

Program Sector	Program Name	Program #	IOU Program Goals	Strategic Planning Strategy	2010-2012 Strategic Milestones	IOU Proposed Metrics
Government Partnership Programs	Innovator Pilots	PGE 2125	<p>Strategic Plan Section 12 (Local Governments) – Goal 3.5            Develop an innovation incubator that competitively selects energy design, technology, and system initiatives for local government pilot projects.</p>	<p>Strategic Plan Section 12 (Local Governments) – Goal 3.5            The Program will provide funding for projects that will test, demonstrate and measure innovative ways to deliver energy savings. These projects may include, but will not be limited to, strategic resource management planning, social marketing and community outreach programs, a network of regional experts, behavior-based energy demand-side management, bundled incentives to promote integration of demand-side management incentives, integrated audits, cooperative green procurement initiatives, and green energy careers.</p>	TBD	Dollars distributed to participating agencies to date.
			<p>Strategic Plan Section 12 (Local Governments) – Goal 5-2            Develop model approaches to assist local governments participating in regional coordinated efforts for energy efficiency, DSM, renewables, green buildings, and zoning.</p>	<p>Strategic Plan Section 12 (Local Governments) – Goal 5.2            PG&amp;E, in collaboration with the selected Innovator Pilot partners, will monitor and document best practices and lessons learned from the selected projects and will disseminate this information in fact sheets available on PG&amp;E’s web site. Applicants that are selected by PG&amp;E will be required to share their project results with entities such as the League of California Cities, the Local Government Commission, ICLEI -Local Governments for Sustainability, Councils of Governments, and other public sector entities to enable replication and/or modification by other governments.</p>	TBD	Complete summary report on lessons learned and best practices that can be used by other governments.

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**Attachment D:  
Logic Diagram**

# PY 2010 - 2012 Innovator Pilots Logic Diagram



Key: LG: Local Government, GHG: Greenhouse Gas

# **ADVICE 3081-G-B/3597-E-B**

## **Attachment E:**

### **Revision to Innovator Pilot Program Portion of PG&E's Local Government Partnership Master Program Implementation Plan**

4E – Program Element Description and Implementation – Innovator Pilots

**Overview**

Half of the cities and counties in PG&E’s service area are engaged in climate action, and many local communities have an innovative vision for meeting new energy savings, GHG reduction and renewable energy goals that align with the CEESP. However, they may lack the financing and technical know-how to transform their vision into successful projects that provide the desired benefits. Moreover, even the most successful project cannot serve as a model for other communities without a mechanism in place for sharing best practices and lessons learned.

The Innovator Pilots program is a non-resource program that will help advanced communities overcome these barriers by empowering their creativity to demonstrate new approaches to energy use and GHG reduction that aligns with the longer-term elements of the CEESP and AB32 and to become models for all local governments in California. These projects may include, but will not be limited to, strategic resource management planning, social marketing and community outreach programs, a network of regional experts, behavior-based energy demand-side management, bundled incentives to promote integration of demand-side management incentives, integrated audits, cooperative green procurement initiatives, and green energy careers.

By working with localities that are pioneering new concepts in energy savings and GHG reduction, the Innovator Pilots program specifically identifies, harnesses and ensures optimal use of market trends. By sharing programs and results with other localities, academia, and the workforce through inclusion of such information in a variety of outreach and training programs, this program can help disseminate wise adoption of new strategies for delivering energy savings that could ensure greater long term savings and GHG reduction statewide.

Specifically, the program will target public sector customers, including new and existing LGPs, governments, government associations, and quasi-government groups (including non-profit organizations that support energy efficiency programs and/or GHG reduction efforts) — especially those that are already advanced on the energy efficiency learning curve through participation in energy efficiency and PG&E programs. The program will consider projects that involve public sector partnerships with private entities, and will provide a range of support, including technical assistance and information sharing. Since the solicitation process is intended to generate innovative ideas, proposals may be selected that include activities and/or technologies that are not specifically stated in this document. Using a rigorous set of selection criteria, Innovator Pilots will fund projects which could include the following types of activities:

• **Innovative Ways to Deliver Energy Savings:** These may include, but will not be limited to, Strategic Resource Management Planning, social marketing and community outreach programs, a network of regional experts, behavior-based DSM, bundled incentives to promote IDSM, integrated audits, and cooperative green procurement

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initiatives.

• **Green Jobs and Workforce Development:** Highly leveraged green jobs and workforce development projects ensure that Innovator Pilot Funds serve low income communities. Uses of funds will be coordinated with other available funds and activities in the project area. Projects will leverage GHG reduction and innovative activities listed above including integrated audits, new technologies and financing, to ensure that low income populations benefit from job creation that results from additional energy projects and strategies.

### Non-Incentive Services

This is a non-resource program; all services are non-incentive services.

### Target Audience

The target audience for this program is any local, regional, or sub-regional government or association of governments with a strong history of energy efficiency participation and commitment to energy innovation—including cities, counties, schools, public hospital, councils of governments—as well as to quasi-governments and non-government organizations that count governments among their members. To ensure that a diverse range of communities receive Innovator Pilots services, PG&E will select governments to participate in the program that represent a mix of urban, suburban, low-income, and rural communities from diverse geographic areas.

In particular, this program targets localities that have demonstrated (typically through strong LGP participation) an advanced commitment to efficient energy use and GHG reduction programs and that meet stringent selection criteria. Innovator Pilots explicitly targets the cutting edge of the CEESP goals and builds on the services offered through our Green Communities Program by providing expanded resources and services to entities with a demonstrated track record for attaining energy efficiency and environmental goals.

Innovator Pilots communities will be selected according to rigorous criteria—described below.

### Implementation

This section describes how the Innovator Pilots program will select participants, work with the participants, and market the program.

PG&E will employ multiple competitive solicitations to identify and select projects for the program. Decision 09-09-047 (“Decision”) conditionally approved PG&E’s Innovator Pilots program subject to an advice letter detailing how the selected pilot partners will comply with the criteria for pilot programs outlined in Section 4.3 and Ordering Paragraph 20 of the Decision. In accordance with the Decision, on October 14, 2009, PG&E issued its first Request for Ideas (RFI) for the Innovator Pilot program. A second solicitation will be issued by January 30, 2011 in order to complete the selection

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process by May 30, 2011. The second solicitation will be targeted to support Strategic Plan Menu items as described in PG&E Advice Letter 3099-G-A/3624-E-A available online at the following link to PG&E Web site:  
[http://www.pge.com/notes/rates/tariffs/tm2/pdf/GAS\\_3099-G-A.pdf](http://www.pge.com/notes/rates/tariffs/tm2/pdf/GAS_3099-G-A.pdf)

**Deleted:** within the first year of the program.

PG&E will post the winning proposals (without budget information) for the first round of solicitations on the new energy efficiency web portal local government page once that has been launched (expected by September 2010). Prospective bidders will be directed to these public postings of winning proposals as part of the second solicitation process. The Strategic Plan Menu will also be posted on the web portal prior to the second round of solicitations.

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PG&E anticipates funding ten to fifteen projects total. Smaller projects could range from \$100,000 to \$500,000. Larger projects might range from \$500,000 to \$1M.

Proposed projects and partners will need to meet high threshold criteria to receive Innovator Pilots funding and services:

- **Innovation:** The project addresses the CEESP, is innovative, comprehensive and integrated, addresses lost opportunities and is expected to catalyze change. Projects address priority early actions for affected market segments (including government buildings, agriculture, commercial, residential, multifamily) or address big bold strategies or integrated solutions.
- **Broad Applicability and Transferability:** The proposed project will create a model that can be replicated by, or transferred to, other parties. In other words, applicants selected will not ultimately be unique in their ability to implement this type of project. Applicants must agree to assist PG&E in documenting pre- and post-Pilot knowledge, behaviors, and activities.
- **Demonstrated Commitment to Climate Action Planning:** Applicants must demonstrate commitment to energy management and/or climate action planning through previous participation in utility energy programs; partnerships with PG&E or other entities enabling resource management or climate planning; an established energy reduction plan or GHG targets; or other similar actions. Proposals should address statewide GHG reduction goals and be coordinated with the objectives of the Strategic Plan and AB32.
- **Feasibility:** The project has a high likelihood of success.
- **Leveraging:** Innovator Pilot funds should be used as a source of matching funds to leverage California Energy Commission (CEC) and/or other funding sources, where possible.
- **Fills Gaps:** The project addresses areas that are not currently being addressed by identifying and resolving barriers to energy efficiency; developing long-term

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relationships in the community; creating regional approaches; focusing on long-term solutions and savings; and/or piloting effective project evaluation that is in sync with CEESP goals.

- **Skill and Experience:** The applicant has adequate infrastructure and ability to implement the proposed scope.
- **Diversity:** If sufficient applications are submitted, and as funding permits, the program will fund a variety of geographic areas and community types (urban, suburban, rural, low income) in order to inspire all governments in California to be engaged in energy efficiency.

Once selected, PG&E will work closely with governments to refine the innovator pilot proposal and bring additional resources to bear on implementing the project. PG&E will ensure access and coordination among multiple departments within PG&E and with external parties as well. Program activities will address statewide GHG reduction goals and be coordinated with the objectives of CPUC, CEC, CARB and AB32 through numerous activities. In accordance with the Decision regarding newly approved pilot programs, all pilots will include:

- A specific statement of the concern, gap, or problem that the applicant seeks to address and the likelihood that the issue can be addressed cost-effectively through future utility programs that would be developed as a result of the Innovator Pilot program;
- Whether and how the project will address a Strategic Plan goal or strategy and market transformation;
- A concrete strategy, including schedule, to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities.

Outreach for the Innovator Pilots program will focus on generating applicants and also sharing the pilot program results with a wide range of actors to enable duplication and/or modification by other governments. PG&E will reach out to governments through local government partnerships and regional government organizations that represent or communicate with local governments. PG&E will also reach out to the statewide local government energy efficiency best practices coordinator to develop a process for targeting local governments for receiving assistance to build their capacity for competing in subsequent ongoing solicitations for the program. This assistance will help to ensure all governments have the opportunity to participate in the program and that the participants will represent diverse communities.

PG&E will coordinate the Innovator Pilots program with PG&E staff in the areas of Service and Sales, Government Relations and Government Partnerships. Outreach will also be coordinated and implemented through peer organizations for cities and counties, such as regional and sub-regional associations, Institute for Local Governments, League

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of California Cities, Councils of Governments, Local Government Commission, Regional Council of Rural Counties, California State Association of Counties, and ICLEI-Local Governments for Sustainability. Innovator Pilots will include outreach to low income communities through Green Communities contractors such as Great Valley Center and Sierra Business Council.

PG&E will monitor and document best practices and lessons learned from the Innovator Pilots program and will broadly disseminate this information. Per D. 09-09-047, the dissemination of best practices and lessons learned from the innovator pilots are intended to reach all California utilities. In order to reach the broadest possible audience, lessons learned and best practices will be captured through awardees' specific project lessons learned materials, through fact sheets and through a summary report.

PG&E will require that all 2010-2012 awardees shall prepare a strategy to disseminate best practices and lessons learned to all California cities. PG&E shall further require that all 2010-2012 awardees post their project specific reports, templates, videos, summaries of lessons learned and other best practices material described in their dissemination strategy on the California energy efficiency web portal local government page no later than April 1, 2013.

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The program summary report, to be publically posted on the new California energy efficiency web portal local government page no later than June 1, 2013, will include a concrete strategy and schedule to identify and disseminate best practices and lessons learned from the project to all California cities and to transfer those practices to energy savings programs to be offered by energy utilities, including core PG&E programs and PG&E local government partnership programs. In addition to the summary report, PG&E will post fact sheets on PG&E's web site and will provide them to the statewide best practices coordinator no later than June 1, 2013.

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In the event that PG&E offers solicitations for innovator pilot proposals for the 2013-2015 period, PG&E will work to post interim summary results from the 2010-2012 program on the California energy efficiency web portal local government page at least two months prior to the 2013-2015 RFI due date.

5E - Program Element Rational and Expected Outcome – Innovator Pilots

a) Quantitative Baseline and Market Transformation Information

See 5A., a. of the Master Government Partnership PIP

**Table 3** – Baseline metrics will be developed for each project separately. In accordance with the Decision, each proposal will provide information on relevant baseline metrics or a plan to develop baseline information against which the project outcomes can be measured. Project performance metrics shall be described in accordance with Appendix 2 of the CPUC's Decision, which provides direction to the investor owned utilities (IOUs) regarding program performance metrics.

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b) Market Transformation Information

See 5A., b. of the Master Government Partnership PIP

**Table 4** – Market Transformation Planning Milestones will be developed for each project separately. In accordance with the Decision, each proposal will provide information on whether and how the project will address a Strategic Plan goal or strategy and market transformation.

c) Program Design to Overcome Barriers

<b>Overcoming Barriers to Innovator Pilots</b>	<b>Barrier</b>	<b>Solution</b>
1	Many local governments do not have sufficient resources to develop comprehensive, innovative, pilot projects at the community level that support the CEESP.	<p>The Innovator Pilots program was developed based on the CPUC’s CEESP workshops and supports comprehensive, innovative, integrated pilot projects at the community-level that that leverage resources and align with the CEESP as well as the California Global warming Solutions Act (AB32).</p> <p>The Innovator Pilots program will foster the development of integrated projects that raise the bar, identify and resolve barriers to energy efficiency, and/or focus on long-term solutions or savings and pilot an effective calculation that is in sync with CEESP goals.</p> <p>Pilot projects could include:</p> <ul style="list-style-type: none"> <li>- Low income energy efficiency (LIEE), DR, and other programs wherever possible;</li> <li>- Green Jobs and Workforce Development activities that leverage resources of the Utility and other actors.</li> </ul> <p>The proposed Innovator Pilots program addresses the unique opportunity for public sector actors and IOUs to:</p> <ul style="list-style-type: none"> <li>- Develop a coordinated approach that focuses on on-the-ground action for GHG reduction</li> <li>- Leverage additional funding from</li> </ul>

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		CEC, air quality management districts and water, waste recycling, and transportation agencies - Effectively use existing government infrastructure to maximize resources and develop long term relationships in the community
2	Most local governments do not have capacity for long term strategic planning and implementation of their Climate Action Plans. They do not have sufficient strategic planning capacity to develop implementation strategies to meet GHG emissions targets by prioritizing use of Utility programs and tracking the results.	Innovator Pilots will provide resources for long term community-level strategic planning. Pilots will provide new strategies for local governments to use energy efficiency more productively and in a targeted manner to meet the GHG reduction goals reflected in their Climate Action Plans.

d) Quantitative Program Objectives

**Table 5** – See Table 5 of the Master Government Partnership PIP.

6E - Other Program Element Attributes- Innovator Pilots

a) Best Practices

The Innovator Pilots program is intended to develop new best practices at the cutting edge. It will break new ground in the delivery, integration, and financing of projects to achieve CEESP goals. Actions are based on best practices and lessons learned from PG&E’s 30 years of experience delivering energy efficiency and other demand side solutions, as well as the experiences and ideas shared by stakeholders during the creation of the CEESP. Further, this program will generate new best practices and lessons learned as it is implemented. These findings will be both widely shared and integrated into program design revisions to ensure continuous improvement and widespread replication of best practices.

b) Innovation

The proposed Innovator Pilots program creates a unique opportunity for public sector actors and IOUs to achieve innovation. The program develops a coordinated approach that focuses on-the-ground action, strategic resource management planning, and policy on GHG reduction; acknowledges different funding sources available at the federal, state, and local levels; promotes an integrated approach to PG&E offerings and leverages additional funding from air quality management districts and water, waste recycling, and transportation agencies; and effectively uses existing government infrastructure to maximize resources.

c) Interagency Coordination

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The Innovator Pilots program were developed based on the CPUC's CEESP workshops and supports comprehensive, innovative, integrated pilot projects at the community-level that align with the CEESP as well as the California Global warming Solutions Act (AB32):

- The program increases local capacity for informed energy action in the context of GHG emission reduction – a key strategy identified in the CEESP.
- Pilots involving community-level strategic planning will seek long-term savings and informed energy action by all sectors in a community based on PG&E energy use and program data, and will include in-depth market segmentation of residential and business customers to understand customers' wants and needs. Market segmentation helps meet customers' green or GHG reduction goals, helps PG&E to cater offerings to customers based on their interests and capacity, and also increases capacity for informed energy action, a key goal of the CEESP.

d) Integrated/coordinated Demand Side Management

The utilities will continue their commitment to coordination with other entities and third parties to deliver energy-efficient measures. Working with local government agencies and or partnerships, where applicable, is crucial to meeting the needs of each unique community. PG&E will continue to actively partner with local governments to explore opportunities to increase program outreach. In addition, program efforts will be coordinated with the local utility integration teams and the Statewide Integration Task Force to identify successful integration approaches and offerings, potential pilot programs and metrics.

The Innovator Pilots program will foster the development of integrated projects that include:

- LIEE, DR, EE and other programs wherever possible;
- Green jobs and workforce development activities that leverage resources of the Utility and other actors.

e) Integration across resource types

The proposed Innovator Pilots program addresses the unique opportunity for public sector actors and IOUs to:

- Develop a coordinated approach that focuses on –the-ground action and policy on GHG reduction
- Benefit from other local, state, and federal funding
- Adopt an integrated approach to PG&E offerings and, where appropriate, leverage additional funding from CEC, air quality management districts and water, waste recycling, and transportation agencies
- Effectively use existing government infrastructure to maximize resources

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f) Pilots

This is a pilot program that will enable advanced communities to create replicable, highly leveraged, innovative projects and approaches.

g) EM&V

For each participating jurisdiction, pre- and post-program data indicating knowledge, inclination, and activities directly related to pilot activities will be collected as a condition of the pilot. For example, participants' knowledge in a specific area may be measured before and after training. Another form of EM&V may take the evaluation of any changes in the number and/or quality of various pilot activities in pre- and post- periods.

Each applicant will need to include an evaluation plan as part of their proposal. Examples of quantitative results could be:

- A defensible measurement approach in sync with CEESP goals and provides testing opportunities for alternative measurement methodologies to describe costs and benefits (e.g. long-term or community scale) not currently captured by the E3 calculator
- Energy use and change in energy use. Using historic program data as a baseline and measuring energy and GHG reduction change resulting from the pilot
- Co-benefits in addition to energy reduction, including GHG reduction and renewables targets
- Progress toward meeting GHG and renewables targets
- Green workforce development and placement

Expected qualitative results could be:

- Identification of additional barriers to energy efficiency;
- Relationship changes and developments within and across jurisdictions;
- Documentation of program design, implementation, and results.

Through these outcomes, EM&V studies will inform and improve the Innovator Pilots programs as they progress.

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

Aglet	Defense Energy Support Center	Occidental Energy Marketing, Inc.
Alcantar & Kahl	Department of Water Resources	OnGrid Solar
Ameresco	Department of the Army	Praxair
Anderson & Poole	Dept of General Services	R. W. Beck & Associates
Arizona Public Service Company	Division of Business Advisory Services	RCS, Inc.
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BP Energy Company	Downey & Brand	SCD Energy Solutions
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California League of Food Processors	Intestate Gas Services, Inc.	Sutherland, Asbill & Brennan
California Public Utilities Commission	Los Angeles Dept of Water & Power	Tabors Caramanis & Associates
Calpine	Luce, Forward, Hamilton & Scripps LLP	Tecogen, Inc.
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Casner, Steve	MBMC, Inc.	Tioga Energy
Chris, King	MRW & Associates	TransCanada
City of Glendale	Manatt Phelps Phillips	Turlock Irrigation District
City of Palo Alto	McKenzie & Associates	U S Borax, Inc.
Clean Energy Fuels	Merced Irrigation District	United Cogen
Coast Economic Consulting	Mirant	Utility Cost Management
Commerce Energy	Modesto Irrigation District	Utility Specialists
Commercial Energy	Morgan Stanley	Verizon
Consumer Federation of California	Morrison & Foerster	Wellhead Electric Company
Crossborder Energy	NRG West	Western Manufactured Housing Communities Association (WMA)
Davis Wright Tremaine LLP	New United Motor Mfg., Inc.	eMeter Corporation
Day Carter Murphy	Norris & Wong Associates	
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