

Marin Energy Authority
Energy Efficiency Program
for 2013-2014



Program Implementation Plan

July 16, 2012

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For copies of this document contact the Marin Energy Authority in San Rafael, California
or visit www.marinenergyauthority.org/ee

Table of Contents

| | | |
|------|---|----|
| I. | Introduction..... | 1 |
| | Legislative Mandate | 1 |
| | Regulatory Guidance | 2 |
| II. | MEA Energy Efficiency Program Plan Overview and Organization..... | 4 |
| | Overview | 4 |
| | Organization..... | 4 |
| | Statutory Requirements | 4 |
| | Ruling Guidelines..... | 5 |
| III. | Executive Summary: MEA EE Program 2013-2014..... | 9 |
| | Program Description..... | 9 |
| | Total Program Budget: \$4,015,205..... | 10 |
| | Total Program Savings:..... | 11 |
| | Summary Description of Each Sub-Program..... | 11 |
| IV. | Sub-Program MEA01 – Multi-Family | 14 |
| V. | Sub-Program MEA02 – Small Commercial..... | 36 |
| | Program Description: | 36 |
| VI. | Sub-Program MEA03 – Single Family | 55 |
| VII. | Sub-Program MEA04 – Financing Pilots..... | 79 |
| | Program Description: | 80 |

Appendix A: E3 Calculations and Related Reference Information

Appendix B: General Reference Information

Appendix C: Letters of Support

I. Introduction

The Marin Energy Authority (“MEA”), a local government agency, was formed in December 2008 for the purposes of implementing a community choice aggregation (“CCA”) program and other energy-related programs targeting significant greenhouse gas emissions (“GHG”) reductions.

MEA administers the first community choice aggregation program in the State of California. MEA currently serves approximately 95,000 customers, and at full implementation will serve approximately 129,000 customers throughout Marin County and the City of Richmond. MEA is structured as a Joint Powers Authority made up of 13 local government members including: the City of Belvedere, Town of Corte Madera, Town of Fairfax, City of Larkspur, City of Mill Valley, City of Novato, City of Richmond, Town of Ross, Town of San Anselmo, City of San Rafael, City of Sausalito, Town of Tiburon, and the County of Marin.

The purpose of the Marin Energy Authority is to address climate change by reducing energy related greenhouse gas emissions and securing energy supply, price stability, energy efficiencies and local economic and workforce benefits. It is the intent of MEA to promote the development and use of a wide range of renewable energy sources, including but not limited to solar and wind energy production at competitive rates for customers, while encouraging reductions in energy usage through energy efficiency programs.

The California Public Utilities Code provides the relevant legal authority for MEA to become a Community Choice Aggregator and invests the California Public Utilities Commission (“CPUC” or “Commission”) with the responsibility for distributing energy efficiency funds collected either (i) through funds collected from ratepayers in general, or (ii) through non-bypassable charges to customers of CCA programs, allowing CCA programs to administer energy efficiency programs as described below. The CPUC has registered MEA as a Community Choice Aggregator and continues to ensure compliance with basic consumer protection rules. The CPUC certified MEA’s Implementation Plan in February 2010 and certified MEA’s Revised Implementation Plan in January 2012.

Legislative Mandate

Assembly Bill 117 (2002) and Senate Bill 790 (2011) contain specific provisions for energy efficiency programs by community choice aggregators. The approval of each bill resulted in modifications to the California Public Utilities Code to enact the legislative

mandate. The California Public Utilities Code as directed in AB 117 instituted Section 381.1 (a) which permits CCAs to “apply to become administrators for cost-effective energy efficiency and conservation programs established pursuant to Section 381.” SB 790 added additional subsections 381.1 (d) through (g). Subsections (e) and (f) authorizes a community choice aggregator to, “elect to become a 3rd-party administrator of funds collected from the aggregator’s electric service customer and collected through a non-bypassable charge authorized by the commission for cost-effective energy efficiency and conservation programs.”

Regulatory Guidance

On June 20, 2012 Administrative Law Judge (“ALJ”) Julie A. Fitch issued a Ruling in the ongoing energy efficiency Rulemaking (R.09-11-014) at the Commission titled “Administrative Law Judge’s Ruling Regarding Procedures for Local Government Regional Energy Network Submissions for 2013-2014 and for Community Choice Aggregators to Administer Energy Efficiency Programs.” This Ruling provides clarification and guidance on how CCAs should proceed in applying for EE funds during both the remainder of the 2012 and the upcoming 2013-2014 funding cycle.

ALJ Fitch explains that for the 2013-2014 cycle CCAs have two options for seeking EE funding through the Commission, either through 381.1 (a) or through 381.1 (e) and (f). ALJ Fitch also requests that CCAs wishing to apply for funding through 381.1 (a) should apply concurrently with the newly implemented Regional Energy Network (“REN”) application process for local governments seeking to administer EE funds. For this reason a CCAs application under Section 381.1 (a) for the 2013-2014 funding cycle is subject to both the general criterion within Section 381.1 and the six areas of interest for the REN Program Implementation Plans as specified in Ordering Paragraph 34 of Decision D.12-05-015 which states:

- a) Leverage additional state and federal resources so that energy efficiency programs are offered at lower costs to ratepayers;
- b) Address the water/energy nexus;
- c) Develop and deploy new and existing technologies;
- d) Address workforce training issues;
- e) Address hard-to-reach customer segments such as low to moderate income residential households and small to medium sized businesses; and
- f) Include an organizational chart that identifies the local governments that are part of the proposed regional pilot, a narrative description of each of their roles, and plans to coordinate

Applicability of the Energy Efficiency Policy Manual

As clarified in Decision 12-11-015 approving funding for the Marin Energy Authority proposal, MEA's use of ratepayer funds is subject to the policy guidance contained in the Energy Efficiency Policy Manual, version 4.0 or subsequent updates provided by Commission staff to comply with the Decision.

II. MEA Energy Efficiency Program Plan Overview and Organization

Overview

As a community choice aggregator, and also as part of its authority as a local government, MEA has elected to administer an energy efficiency program from August 2012 through December 31, 2012, under Public Utilities Code 381.1(e) and 381.1(f). Currently there is a Draft Resolution E-4518 submitted by Energy Division which will be voted on at the Commission Meeting on August 3, 2012. This resolution calls for the approval of MEA's 2012 EE funding proposal and requires PG&E to provide the appropriate allocation of funds that have been collected from MEA customers since MEA's initial proposal request was submitted on February 3, 2012.

Pursuant to CA Public Utilities Code 381.1, MEA puts forth this application for the 2013-2014 Energy Efficiency Program ("Program") Plan to administer Energy Efficiency Programs using funds collected throughout MEAs service area. In 2013-2014, MEA is applying to administer funds under Public Utilities Code 381.1(a). For this reason the 2013-14 Program will not be restricted to customers who are taking service from MEA's CCA option (Marin Clean Energy) but instead the Program will be offered to any electricity customer in MEA's jurisdictional service area.

Organization

MEA's 2013-2014 Program consists of four sub-programs:

- a) Multi-Family Program
- b) Small Commercial Program
- c) Single-Family Utility Demand Reduction Program
- d) Finance Pilots Program

The content of the MEA Energy Efficiency Program Plan complies with the statutory requirements of AB 117, SB790, and the Commission's additional REN/CCA guidelines provided in ALJ Fitch's Ruling.

Statutory Requirements

Consistent with requirements identified in the CA Public Utilities Code Section 381.1(a), the MEA Energy Efficiency Program Plan addresses:

- Program Description

- Program Deliverables and Benefits
- Projected Energy Savings with Cost Effective Analysis
- Program ‘Value Add’ Benefits including:
 - Accommodating the need for Broader Programs
 - Avoiding Redundancy
 - Workforce Development and Job Creation
 - Steering Benefits to Economically Disadvantaged Areas
- Funding Requirements
 - Staffing
 - Program Budget
- Audit and Reporting Requirements
- Evaluation, Measurement, and Verification Protocols
- Program Performance Metrics

Ruling Guidelines

Additionally, throughout this 2013-2014 MEA Energy Efficiency Program Plan, there is content supporting the following key points of emphasis as identified in the 5/10/2012 CPUC Rulemaking 09-11-014, as follows:

1. Leverage Additional State and Federal Resources so that Energy Efficiency Programs are Offered at Lower Costs to Ratepayers

Each sub-program section of the Program has a Leveraging Resources and Knowledge Transfer sub-section identifying some of the many areas MEA will leverage to increase efficiencies and minimize costs to ratepayers. Some of the most common leveraging includes technical assistance programs for both Multi-Family and Small Commercial Sub-Programs, software services for each of the sub-programs, training programs for contractors and tenants, shared outreach models, and cross promotion of programs.

2. Address the Water/Energy Nexus

Water energy nexus, or what MEA refers to as “Watergy,” is emphasized in each of the sub-programs and includes:

- MEA’s bundled measure incentives in the Multi-Family and Small Commercial sub-programs supporting high efficiency water measures that also affect energy

consumption including high efficiency clothes washers, toilets, showerheads and water heating systems,

- MEA software tools and programs which will integrate cross utility measures in all categories,
- MEA's partnership with local utility providers including the Marin Municipal Water District (MMWD) to leverage water utility rebates for hot water and water conservation energy measures, and
- MEA's coordination with and use of resource information from the On-Water Bill Financing Pilot (PAYS) in Sonoma County's Town of Windsor.

3. Develop and Deploy New and Existing Technologies

MEA's Plan includes deployment of new software as well as measures that incorporate new and existing technologies as follows:

- MEA Multi-Family and Small Commercial programs will provide incentives for new technology measures including LED lighting, optimized water distribution systems, residential plug load sensors-/-smart plug deployment, occupancy sensors for lighting/fans, smart thermostats, residential energy dashboard and enhanced notification systems for peak power-/-demand response.
- MEA will leverage existing and continued development of software and outreach services to amplify customer awareness, engagement and action. MEA will continuously identify opportunities to promote cross utility solutions for energy and water efficiency, green product rebates, and other programs to consumers through events, presentations, workshops, marketing, and targeted mailing.
- MEA will promote cross-program services through the integrated, one-stop online service for customers to learn about all Investor Owned Utility ("IOU"), Marin County, City of Richmond, water utility, and other local Demand Side Management ("DSM") offerings.
- MEA will provide customers with energy efficiency and water conservation education and software tools in addition to the materials provided. This education will allow residents to achieve additional savings through changed behavior.

4. Address Workforce Training Issues

MEA will address workforce training issues in each of the sub-programs as follows:

- MEA will partner with the key green workforce development programs that already exist in the MEA service area including the Marin City Community Development Corporation (MCCDC) and RichmondBUILD (“RB”) to offer curriculum in pre-apprenticeship construction skills and green jobs training in underserved communities with an emphasis on energy efficiency and a programmatic goal of achieving Building Performance Institute (BPI) certification.
- The workforce development programs will (1) create employment and career opportunities for residents that want to participate in the green jobs industry, (2) augment a program that seeks to reduce violence in the community, and (3) provide training for taking on the role of a “Contractor” to implement energy efficiency measures.
- Because youth and adults will be hired locally from the communities in which they live they will in many cases serve customers from those communities. The Program will employ an economically, ethnically, and socially diverse group of youth and adults; people representative of the diversity and culture of their community. This will allow them to become leaders and educators that challenge neighborhoods to become energy and water efficient. This combination of energy efficiency with job training will provide a valuable service in the growing green industry.
- Specialized training will also be provided to the key multi-family and small commercial oriented trade sectors to address any lack of energy efficiency knowledge that exists in the sectors. This training will focus most on the efficiency gains that can be achieved in conventional construction and operation practices. It will cover technology and hardware upgrades as well as software tools that benefit multi-family and small commercial buildings. It will also include information regarding verification methods used.
- MEA will provide technical assistance to assist and equip contractors with the energy efficiency skills to successfully penetrate the market and navigate the Program landscape while providing quality services to clients through training and mentoring activities.

5. Address Hard-to-Reach Customer Segments Such as Low to Moderate Income Residential Households and Small to Medium Sized Businesses

Addressing hard-to-reach customer segments is highly emphasized throughout the MEA Energy Efficiency Program. For example:

- The MEA Energy Efficiency Program will leverage existing customer relationships, build upon market research and collaborate with innovative partner companies to access community based organizations, schools, local companies, religious institutions and other organizations as drivers of energy efficient behaviors in hard to reach customer segments.
- MEA participates in over one hundred public community events annually and will utilize community events to connect with hard-to-reach customer segments.
- MEA will launch online social networking platforms to stimulate local behavior changes through online competition facilities.
- MEA will pilot a standard offer program for energy efficiency procurement. This program will be modeled after similar programs that have had great success in the hard-to-reach residential markets and allow for a high level of market innovation to reach untapped sectors.
- The Program is designed to serve hard-to-reach residents including renters, non-English speaking households who often miss out on services due to language barriers, and low-moderate income households. Furthermore, the program will provide energy retrofits and conservation education to energy customers at a reduced cost, and in some cases at no cost.
- MEA will bring services directly to underserved households by using bilingual contractors and job trainees. Because program contractors are hired directly from the communities they serve, their language skills mirror the community itself and allow increased access to non-English speaking households.
- The Program will empower customers and local contractors to assist with promoting the Program to their neighbors, friends and family to help spread information about the Program through trusted channels.
- The Program will engage in renter-specific marketing.
- MEA will utilize a bundled measure approach designed to capture underserved projects that have smaller budgets and scope of work.
- MEA will serve building owners who have relatively little access to private or low-cost financing for retrofits and thus are underserved by the existing marketplace.

III. Executive Summary: MEA EE Program 2013-2014

Program Description

To meet the aggressive goals set by the California Public Utilities Commission as part of the Long Term Energy Efficiency Strategic Plan, the Commission has recognized the need for collaboration among utilities and local governments to achieve market transformation toward energy efficiency. In the Ruling (R.09-11-014) on 2013-2014 Energy Efficiency Portfolios, the Commission clarified the roles of Regional Energy Networks and Community Choice Aggregators to achieve the goals of the strategic plan.

MEA will deliver an energy efficiency program that supports the Commission's long-term strategic goals. These goals include:

- Promote effective decision-making to create widespread demand for energy efficiency measures
- Increase collaboration and leveraging of other low-income programs and services
- Increase access to programs by hard-to-reach customers
- Identifying segmented concentrations of customers to improve delivery
- Develop local projects that integrate energy efficiency, DSM, and water/wastewater end uses
- Carry out integrated marketing of DSM opportunities across all customer classes
- Use social marketing techniques to build awareness and change consumer attitudes and perceptions
- Collaboration with local community-based organizations and local programs to add value to existing programs

To build upon successful regional programs, MEA proposes sub-programs that will:

1. Enhance IOU-offered single-measure and whole-building retrofit programs for multi-family properties through targeted outreach and technical support to multi-family property owners, with new incentives to support single and multi-measure options for common areas and tenant improvements.
2. Provide Small Commercial Program offering incentives for multi-measure retrofits, initiated through targeted outreach and technical support to small commercial property owners.
3. Implement On-bill Repayment (OBR) pilot of a financing program to enable accessibility of financing to underserved markets – including moderate and middle income

homeowners, owners of multifamily housing, and owners of small businesses without easy access to financing.

4. Augment the Investor Owned Utility Single-Family Programs through innovative marketing and outreach efforts, and increased homeowner awareness and activity using custom decision-making support tools and software and options for greater reduction of utility demand across socio-economic lines.
5. Implement MEA pilot Standard Offer (“SO”) Program for Energy Efficiency Procurement utilizing best practices from around the country. This finance program, by its design, will introduce competition for demand reduction into the marketplace and will be designed to serve underserved customers in the MEA service territory, with a particular emphasis on agricultural accounts.
6. Projected MEA Program Total Resource Cost (TRC) and Program Administrator Cost (PAC)

i. TRC 1.63

PAC 4.78

Total Program Budget: \$4,015,205

Table 1: Total Projected Program Budget by Function

| Function | Program Year | | |
|------------------------------------|--------------|-------------|-------------|
| | 2013 | 2014 | Total |
| Admin (\$) | \$178,590 | \$160,492 | \$339,082 |
| General Overhead (\$) | \$164,616 | \$154,384 | \$319,000 |
| Incentives (\$) | \$591,913 | \$650,566 | \$1,242,479 |
| Direct Install Non-Incentives (\$) | \$713,402 | \$714,296 | \$1,427,698 |
| Marketing & Outreach (\$) | \$185,551 | \$351,384 | \$536,935 |
| Education & Training (\$) | \$72,081 | \$77,930 | \$150,011 |
| Total Budget (\$) | \$1,906,153 | \$2,109,052 | \$4,015,205 |

Total Program Savings:

Table 2: Total Projected Program Budget & Savings by Sub-Program

| Subprogram | Total (\$) | Kwh | KW | Therms |
|--|-------------------|------------|-----------|---------------|
| Multi-Family Program | \$860,971 | 731,614 | 970 | 39,107 |
| Small Commercial Program | \$1,380,817 | 5,890,146 | 1,577 | 561,475 |
| Single-Family Utility Demand Reduction Program | \$473,417 | 4,424,286 | 5 | 249,581 |
| Finance Pilot Programs | \$1,300,000 | 998,672 | 704 | 42,830 |
| Total ¹ | \$4,015,205 | 11,046,045 | 1,581 | 599,516 |

Summary Description of Each Sub-Program

Multi-Family Energy Efficiency Program (“MFEEP”)

The MEA Multi-Family Program will consist of customized improvements designed to maximize investment in energy efficiency while overcoming the split incentive barrier². MFEEP will reduce barriers to retrofits and new construction energy efficiency offerings by providing technical assistance and incentives to multifamily property owners. MEA will promote these retrofits through targeted outreach and training to property owners and contractors, and will

¹ Note total savings does not include savings from financing portfolio which is included as a reference.

² The split-incentive refers to situations where the owner of the energy use equipment does not pay the utility bills, and therefore does not gain the financial incentive associated with investing in more efficient equipment. This is common in tenant occupied properties, such as multi-family and small commercial.

make financing options available through MEA OBR or future Bay Area Regional Energy Network (BayREN) Programs that may include Property Assessed Clean Energy (“PACE”) and loan loss reserve. MFEEP will also broaden the engagement of stakeholders in messaging and marketing campaigns that factor social and economic co-benefits to customers into the value of energy efficiency upgrades.

Small Commercial Program

The MEA Small Commercial Program is a multi-measure program for small commercial high energy use segments which include, but are not limited to, restaurants, retail, and professional services. The Small Commercial Program will reduce barriers to retrofits by providing technical assistance and incentives to building owners. MEA will promote these retrofits through targeted outreach and training to property owners and contractors, and will make financing options available through MEA OBR or future BayREN Programs that may include commercial PACE and loan loss reserve.

Single-Family (“SF”) Utility Demand Reduction Program

The MEA Single-Family Utility Demand Reduction Program will enable energy and water savings with associated cost reductions through behavior changes, upgrading of appliances, and water conservation measures that affect energy. Funding will be primarily for innovative education and outreach programs, web-based action plan tools, and support services. The Program will include targeted canvassing and outbound mailer “Energy Reports” to drive participation in the web-based tools and help customers identify key savings opportunities. Additionally, the program will support the MEA finance pilots with targeted marketing and will market other regional programs, including the PG&E Energy Upgrade California program and the BayREN Enhanced Basic Path program.

Finance Pilots Program

MEA will pilot 2 innovative programs to ensure that retrofits are financially competitive and accessible to a broader and more diverse range of property owners for each of MEA’s direct service elements: an On-Bill Repayment and a Standard Offer (SO) Energy Efficiency pilots program. The funding will be used to help build the OBR and SO frameworks to enable financing of underserved markets. The OBR program allows private banks or financing entities to provide financing to building owners, with the repayment charge placed as a line item on the bill that includes MEA charges. The OBR will also include a credit enhancement for programs to meet the needs of these underserved segments. For Standard Offer, there is no need for capital investment by the property owner. Energy savings will be bid in from an applicant (or implementer) from either customer category. Energy savings will then be paid based on "avoided costs" of energy demand or other energy related savings.

Audit Reporting and EM&V

MEA utilizes a third party to perform and publish an audit of the financial statements at the end of each fiscal year. MEA will extend the auditing and reporting requirements from the existing (generation side) auditing to also encompass the energy efficiency program. These are released publically and can be found on the MEA website. EM&V on savings claims and program performance will be conducted by Energy Division.

Energy Efficiency Reporting

MEA will submit monthly and annual reporting for energy efficiency performance to the Board of Directors. Reporting categories will include inquiries, applications, audits, contracts, projects, measures, energy/GHG reduction, funding, jobs created, and budget. MEA will work with the CPUC to define and comply with the appropriate reporting requirements per the Energy Efficiency Policy Manual, version 4.0.

MEA will submit a copy of all reports to the CPUC for informational purposes.

IV. Sub-Program MEA01 – Multi-Family

1. Sub-Program Name: MEA Multi-Family Energy Efficiency Program
2. Sub-Program ID number: MEA01
3. Type of Sub-Program: Partnership
4. Market sector or segment that this Sub-Program is designed to serve:
 - a) Residential
 - i. Including Low Income? Yes No;
 - ii. Including Moderate Income? Yes No.
 - iii. Including or specifically multi-family buildings Yes No.
 - iv. Including or specifically Rental units? Yes No.
 - b) Commercial (List applicable NAIC codes: _____)
 - c) Industrial (List applicable NAIC codes: _____)
 - d) Agricultural (List applicable NAIC codes: _____)
5. Is this Sub-Program primarily a:
 - a) Non-resource program Yes No
 - b) Resource acquisition program Yes No
 - c) Market Transformation Program Yes No
6. Indicate the primary intervention strategies:
 - a) Upstream Yes No
 - b) Midstream Yes No
 - c) Downstream Yes No
 - d) Direct Install Yes No
 - e) Non Resource Yes No.
7. Projected Sub-Program Total Resource Cost (TRC) and Program Administrator Cost (PAC)
 - i. TRC 1.06 PAC 2.42

8. Projected Sub-Program Budget

Table 1: Projected Sub-Program Budget

| Function | Program Year | | |
|------------------------------------|--------------|-----------|-----------|
| | 2013 | 2014 | Total |
| Admin (\$) | \$83,088 | \$76,754 | \$159,842 |
| General Overhead (\$) | \$44,293 | \$39,707 | \$84,000 |
| Incentives (\$) | \$155,721 | \$214,374 | \$370,095 |
| Direct Install Non-Incentives (\$) | \$33,417 | \$33,417 | \$66,834 |
| Marketing & Outreach (\$) | \$68,444 | \$61,356 | \$129,800 |
| Education & Training (\$) | \$26,576 | \$23,824 | \$50,400 |
| Total Budget (\$) | \$410,749 | \$450,222 | \$860,971 |

9. Sub-Program Description, Objectives and Theory

a) Sub-Program Description and Theory

The Multi-Family Energy Efficiency Program will provide cost-effective residential energy efficiency improvements that will benefit low-income and market rate occupants and owners of multi-family buildings in the MEA service area. MFEEP will be carried out in partnership with existing community partners such as Marin City Community Development Corporation and multifamily efficiency experts such as the Associated for Energy Affordability.

The MFEEP has and will continue to coordinate closely with BayREN for planning and project execution to ensure that both parties share best practices and experiences to date, and to ensure there is no duplication of funding. Customers within the MEA service area (County of Marin and City of Richmond) will not be served by the BayREN multi-family program until the MEA MFEEP exhausts its available incentive dollars. Funding for the MEA MFEEP will be designated specifically for onsite technical assistance, local incentives, assessment rebates, local marketing, outreach to property owners, tenants, and contractors, and software analysis tools for consumer engagement and technical assistance. Funding for the MFEEP sub-section of the MEA program will also be tied to the financing sub-section of the MEA Energy Efficiency Program Plan, which includes an on-bill repayment program. The on-bill repayment program will be available to participants in the MFEEP as a financing tool to implement identified energy efficiency measures.

The MFEEP will provide outreach, audits, incentives and direct installation of a comprehensive set of energy efficiency measures specifically tailored for multi-family residential units by local licensed project contractors. Customers will be provided with a “Technical Assistant” to help them through the process and assistance in identifying a contractor to carry out the work. The Technical Assistant will be under contract to MEA the contractors will be a member of the local workforce. The role of the Technical Assistant (“TA”) will be to explain the MEA Program services and facilitate the customer experience. The Technical Assistant will perform initial facility assessments, online assessments, and then on-site assessments for selected sites, to determine energy savings potential and operational feasibility. The Technical Assistant will also serve as the Quality Assurance (QA) representative.

MEA will draw from the job training programs described in the ‘Workforce Training Issues’ section above to identify qualified contractors. Incentives will be offered on a customized, calculated basis to encourage deeper energy improvements. MEA plans to offer financing for up to 100% of the remaining project cost for those customers that do not have available capital to invest in energy efficiency.

The goals of the MFEEP are to increase the participation rate of building owners and tenants alike by providing both technical assistance and incentives tailored through a multi-measure program. The MFEEP components will consist of:

- Targeted outreach
- Customized technical assistance
- A combination of direct installation and bundled measure incentives for each property requiring two or more measures, targeting an average of 10 percent energy savings
- Workforce development support for multi-family-oriented trade sectors

The project offers building owners two types of assessments. The first type of assessment covers well-established and cost-effective electrical upgrade measures, primarily including appliances, lighting, HVAC, and envelope. The second type is a comprehensive building assessment for common areas only to capture the building’s overall condition and performance. The project will then recommend efficiency measures that are determined to be cost-effective. If a property owner chooses to install measures that will impact the pressure dynamics of the building, including building envelope measures (such as but not limited to insulation, windows, weather-stripping), and / or if the preliminary audit indicates a combustion safety issue (such as evidence of back drafting), then combustion appliance safety testing will be conducted as a component of the project. The MF HERCC Combustion Safety Protocol will be followed for guidance.

Buildings owners that choose to participate in MFEEP will be provided with the opportunity to receive incentives for these measure types as well as access to financing programs. Eligible measures include lighting and controls, appliances, HVAC, envelope, domestic hot water and space heating boiler improvements, and water conservation. There will also be tenant education on energy and water conservation.

Through these components, the MFEEP addresses the following market barriers to whole-house upgrades:

- **Market confusion around which programs will apply to the various multi-family building sub-sectors and retrofit scopes.** A TA will be assigned to walk each participating property owner through the steps of initiating an energy upgrade, and introduce them to the appropriate programs.
- **Lack of utility data tracking and analysis by property owners/managers.** The technical assistance provided will include enrolling projects into utility tracking, analysis and benchmarking software, to inform project-specific decisions.
- **Lack of accessible analytical methodologies,** which leaves property owners ill-equipped to evaluate the technical and economic potential for retrofitting their properties. The TA, building owners, operators, and tenants will use energy savings analysis software specifically designed for the multi-family sector to identify each project's opportunities.
- **Lack of access to affordable capital to pursue retrofitting opportunities.** The TA will connect projects pursuing financing to MEA OBR financing and future local PACE program (potentially offered through the BayREN program) to offset the capital requirements.
- **Lack of energy efficiency knowledge in the multi-family-specific building trades.** Training will be provided to contractors in the HVAC and DHW sector of the multi-family trade.
- **Diversity of building types, which prevents a single approach for all buildings.** MFEEP features customized technical assistance that will offer guidance tailored to each building's specific needs and challenges.
- **Diversity of upgrade scopes within the lifetime of a multi-family building.** During a multi-family building's lifecycle, there are specific times when it is most cost-effective and convenient for the owners to make energy and green upgrades. The TA providers will be cognizant of these trigger events and will recommend approaches that effectively leverage these opportunities. MFEEP will also utilize software that is automatically triggered by key events detailed below in the "Measures and Incentive Levels" section.

- **Split incentives caused by tenants receiving the energy savings benefits of property owner investments.** The technical assistance provided will be tailored to the metering configurations and needs of each building. It may include assistance with green lease agreements and capital expense pass-through mechanisms to balance the split incentive. Utility tracking assistance may include guidance on obtaining utility bill data.

b) Sub-Program Energy and Demand Objectives

Table 2: Projected Sub-Program Net Energy and Demand Impacts, by Calendar Year

| MEA Multi-Family Program | | | |
|---------------------------------|-------------|-------------|--------------|
| Program Years | | | |
| | 2013 | 2014 | Total |
| kWh | 324,639 | 406,975 | 731,614 |
| Peak kW | 418 | 553 | 970 |
| Therms (millions) | 16,105 | 23,002 | 39,107 |

c) Program Non-Energy Objectives

i. SMART non-energy objectives of the program:

- During the period 2013-2014, 24 contractors in the multi-family building trades will be trained in whole building audit, retrofit, and savings verification and tracking protocols.
- During the period 2013-2014, 42 projects, representing approximately 1,680 units will undergo energy efficiency retrofits, through the MEA Program.
- During the period 2013-2014 50 projects, representing 2,000 units, will receive technical assistance through the MEA program.
- During the period 2013-2014, the MEA will make 100 calls for marketing and property owner outreach.

ii. Relevant baseline data: See below

iii. Quantitative program targets (PPMs): See below

Table 3: Quantitative Program Targets (PPMs)

| Target | 2013 | 2014 |
|---|--------------------------|----------------------------|
| Number of units incented | 700 | 980 |
| Number of multi-family contractors trained | 12 | 12 |
| Number of projects & units receiving technical assistance | 20 projects 800 units | 30 projects 1,200 units |
| Number of calls by technical assistance providers | 40 | 60 |

d) Cost Effectiveness/Market Need

MEA has utilized the Energy + Environments and Economics for a preliminary cost effective analysis. The analysis projects a 15% savings in energy over a baseline energy usage calculated through EnergyPro modeling performed by the Multifamily Subcommittee of the California Home Retrofit Coordinating Committee. MEA projects savings of 15% for an average project cost of \$50,000. For actual project implementation, MEA will utilize the custom calculation methodology as defined in Attachment B to CPUC Decision 11-07-030 to deliver site specific energy savings for each project. This will provide the opportunity for Energy Division to review the customized calculation methodology and site specific program assumptions in real time.

e) Measure Savings/ Work Papers

Calculation tools utilized to develop site specific estimates will be provided to Energy Division of the CPUC for review.

Table 4: Work Paper Status

| # | Work paper Number/Measure Name | Approved | Pending Approval | Submitted but Awaiting Review | Not Yet Submitted |
|----------|---------------------------------------|-----------------|-------------------------|--------------------------------------|--------------------------|
| 1 | Bundled Measure Incentive Program | N/A | | | |

10. Program Implementation Details

a) Timelines

Table 5: Sub-Program Milestones and Timeline

| Activity | Year | | |
|---|-----------------|----------------|----------------|
| | 2012 | 2013 | 2014 |
| Premarketing and Customer Recruitment | Aug 15 - Dec 31 | | |
| Marketing Tools Development | | Jan 1 - Mar 31 | |
| Multifamily Portal Setup for customers, contractors, and administration | | Jan 1 - Mar 30 | |
| Marketing, Education and Customer Recruitment | | Jan 1 - Dec 31 | |
| Workforce training | | Mar 1 - Apr 30 | |
| Project Assessments and Development | | Mar 1 - Dec 31 | Jan 1 - Dec 31 |
| ECO installation | | Jun 1 - Dec 31 | Jan 1 - Dec 31 |
| Year –end Program Evaluation | | 30-Nov | 30-Nov |
| Year-end Program Reporting | | 31-Dec | 31-Dec |

b) Geographic Scope

The Geographic Region where the MEA Program will operate is Climate Zone 2 and 3.

c) Program Administration

Table 6: Program Administration of Program Components

| Program Name | Program Component | Implemented by: (X = Yes) | | | |
|---------------------------------------|-------------------------|----------------------------|-------------------------------|--------------------------------------|----------------------------------|
| | | MEA staff | Contractors - competitive bid | Contractors – No competitive bid | Local government or other entity |
| Multifamily Energy Efficiency Program | Targeted Outreach | X | | | |
| | Technical Assistance | | | X | Offsite Support |
| | Bundled Measure Rebates | X | | | |
| | Software development | | | Consumer Engagement & Analysis Pilot | EUC Developed MF Tools |
| | Workforce Development | | | RichmondBuild / MCCDC | Trades Training |

d) Program Eligibility Requirements:

- i. *Customers in the MEA service area including Marin County and the City of Richmond.*

Table 7: Customer Eligibility Requirements

| Customer Eligibility Requirement |
|---|
| Four or more units |
| Property located in MEA Service area |
| Property not participating in an IOU or REN program for the same measure set. |

- ii. *Contractors/Participants:*

Table 8: Contractor/Participant Eligibility Requirements

| Role | Eligibility Requirement |
|--------------------------|---|
| TA Provider | Qualifications include required training and certifications to provide comprehensive energy efficiency multi-family building audits, ability to provide comprehensive energy efficiency technical assistance, including advice and referrals for non-EE DSM measures and non-energy measures. |
| Installation Contractors | Licensed in appropriate trade. Desired willingness to work with workforce training program graduates and / or local hires. |
| QA Provider | Same requirements as TA Provider (may be same entity or subcontracted to another entity with equivalent qualifications). |

e) Program Partners

- i. *Manufacturer/Retailer/Distributor partners:*

This subprogram will not include any upstream activities, and therefore will not include any manufacturer/retailer/distributor partners.

- ii. *Other key program partners:*

- City of Richmond
- County of Marin
- Dominican University
- Lenders (including without limitation banks, credit unions)
- Marin City Community Development Corporation

- Marin Energy Watch Program (MEWP)
- Marin Employment Connection
- Marin Workforce Investment Board
- Marin Municipal Water District
- Pacific Gas& Electric
- Professional Building Operation and Management Companies and Organizations
- Real Estate Professional/Associations
- Professional Building Trade Associations
- Richmond Build
- Rising Sun Energy
- San Francisco Foundation
- Saving Neighborhood Energy to Generate Neighborhood Wealth (SNEGNW)

f) Measures and Incentive Levels

MFEEP will provide direct incentives that cover energy assessment costs and also provide many additional services described in more detail below. MEA will offer a calculated incentive tied to energy savings. The incentive will be tiered based on the payback of specific measures; for example, measures with a longer payback will receive a higher incentive than those with a short payback. This incentive design is aimed at filling the market gap between single-measure and whole building utility programs while still encouraging and enabling an investment in more comprehensive efficiency measures. The calculated incentive approach is designed to allow the greatest flexibility for the program in serving a wide variety of properties with varying capital reserves, and encourage installation of two or more measures that will result in an average of 10 percent energy savings.

The bundled measure approach will utilize a customized list of measures based on utility bill information, a site survey, and savings calculated based on specific site information. The Technical Advisor will utilize spreadsheet tools and potentially approved program software to calculate projected savings. The estimated energy savings per measure will vary by building type and take into account interactive effects. The bundled measure approach will offer the following solutions:

- Incorporate actual utility usage data to inform measure recommendations
- Offer an alternative to costly energy audits for smaller project scopes and smaller buildings

- Provide property managers with basic energy savings information that may help them justify pursuing a more comprehensive audit later
- Reduce reliance on costly audits, that may depend upon energy models with questionable accuracy (they may not necessarily provide more savings assurance than a refined deemed savings calculation)
- Can motivate unplanned work, by layering complementary or additional measures onto a planned single measure
- Allow property owners to choose from a broad range of energy efficiency measures and utilize contractors that they trust

Measures eligible under the bundled measures incentive include those listed in Appendix A, and may include additional measures identified to achieve energy savings. The list will be refined based on program monitoring and feedback.

Table 9: Summary Table of Measures, Incentive Levels and Verification Rates

| Measure Group | Market Actor Receiving Incentive or Rebate | MEA | |
|--------------------------------|--|--|----------------------------|
| | | Incentive Level | Installation Sampling Rate |
| Energy Assessment | Property owner | Up to \$50/unit and \$5,000 cap per building | N/A |
| Bundled Measures - Minimum 10% | Property owner | Based on savings TBD | 10-15% |

g) Additional Services

- i. Technical Assistance to Identify Approach and Potential Measures, Begin Utility Tracking*

The technical assistance offered through this program is intended to serve a broad range of properties at different points in building life cycle. It will assist property owners by providing them with customized recommendations and facilitating their participation in rebate and financing programs. The Technical Assistant will leverage newly developed information technology (IT) tools and additional analytic methodologies to identify the appropriate approach and retrofit measures for each building. If the identified project is outside the scope of the MEA MFEEP, the Technical Assistant will refer projects to the appropriate utility programs. Technical assistance will include referring owners to qualified energy auditors/raters, comparing financing options and contractor bids, and referring the owner to the utility whole-building rebate.

The opportunity to participate at this level is limited to a relatively small portion of the building. Thus, the technical assistance program is likely to have a higher degree of

participation from building owners that are planning smaller scale improvements over time. The program will be tracking the participation of projects and expects that property owners will come back to do additional improvements throughout the life cycle of the building. Where appropriate, the Technical Advisor will refer projects to the utility single-measure rebate program. However, these programs do not include all measures that are of interest to building owners, and the incentive levels are based on individual measures, rather than the overall energy savings that can be achieved by pursuing multiple measures.

Table 10: Additional Services

| Additional Services that the Sub-Program will Provide | To Which Market Actors | MEA |
|---|-------------------------------|----------------|
| Software services to encourage owners/tenants to assess measures and connect to funding opportunities | Property owner and tenant | Fully incented |
| Benchmarking & utility cost tracking from a Technical Assistant | Property owner and tenant | Fully incented |
| Recommendations and support regarding upgrade approach from a Technical Assistant | Property owner | Fully incented |
| Referral to existing Statewide, Utility programs such as whole house retrofit or DSM programs | Property owner | Fully incented |
| Financing & project bid comparison from a Technical Assistant | Property owner | Fully incented |
| Bundled measures - site visit and recommendations | Property owner | Fully incented |

h) Sub-Program Specific Marketing and Outreach

MEA will emphasize that there are options to fit any multi-family property, and that there is live technical assistance available to help decide on the best approach.

Targeted outreach will leverage existing organizational structures and communication channels, including customer contacts, industry associations, local government member agencies, and service providers and property management associations. Examples include:

- Property-owner organizations, including Apartment Owner Associations, Home Owners Associations, Real Estate Investment Trusts, the Nonprofit Housing Association of Northern California
- Public agencies and programs with a housing-related mission, including Marin Housing Authority and Marin City Community Development Corporation.

- Service providers, including property management companies, HVAC maintenance companies, mechanical engineers, general contractors, etc.

i) Sub-Program Specific Training

The bundled measure incentive uses an auditor/rater delivery model rather than providing training designed specifically for all qualifying participating professionals. Because of the high number of specialized subcontractors on any given comprehensive multi-family rehabilitation project, it is not as effective to require a single contractor to obtain certification for all contractors and sub-trades. Rather, it is more effective to target specific professional training at the sub-trade that has the greatest potential for delivering efficiency improvements. To ensure that a pool of knowledgeable contractors is available to support the demand created by the incentive, training will be offered in partnership with the Marin City Community Development Corporation and Richmond Build for the following trades:

- Electrical contractors (C10)
- HVAC contractors (C20)
- Boiler contractors (C4)
- Roof installers
- Window contractors
- Plumbers (C36)
- Insulation contractors

Specialized training will give these contractors the expertise needed to optimize the specifications and operations of these systems. This training will focus on the efficiency gains to be made for conventional construction and operation practices. Contractors that have completed the training will be listed on MEA's website with credentials.

The following training courses will be provided for MFEEP:

- Safety and safety plans – 10hrs
- MFEEP: How does it work – 8 hrs
- Energy Codes (new T24) and Regulations – 24 hrs
- Energy Education for tenants of multifamily facilities – 12 hrs

j) Sub-Program Software and/or Additional Tools

Because an in-building audit can be costly and somewhat time consuming, some customers may prefer to use an automated audit combined with a customized action plan as a first step. This option would allow the customer to quickly determine what utility savings might be achieved

by participating in the program. The automated audit and tracking will be offered to all customers at no charge to the customer.

Software has been developed and tested in the Sonoma County Energy Independence Program (SCEIP) that can automate the highly complex energy-economics optimization calculations needed for each unique building/unit. With such automation, many hours of in-building analysis can be reduced to a number of minutes, allowing for streamlined identification of measures with the most potential for savings and a reasonable 'pay back' period.

A 20-question simulated on-line audit would be used that calculates long-term savings of a range of measures tailored to the customer. Results would be provided in the form of a "customer action-plan," which is a prioritized list of measures for utility savings and costs. The action plan will also include a list of local services and next steps for implementation. By identifying customers with the most to save, making them aware of the savings potential, and giving them a no-cost audit online, participation in the Program is likely to be accelerated in the MEA service area.

Customers participating in the automated audit will be encouraged to also consider an in-building audit, but they would be able to do so with more information available and may be more likely to follow through with implementation.

The audit and tracking tool will also provide program administrators with feedback on actual savings per bundle of measures to refine savings estimates credited toward measures included in future projects applying for bundled measures.

The audit and tracking tool will utilize modeling calculations based on basic information about the existing building utility use and proposed improvements. These assumptions and algorithms will align with industry accepted modeling tools. However, the data input requirements will be less extensive than full modeling software programs, and will not require a full on-site audit. This assessment tool is designed to reduce the barrier to upgrades caused by the cost and time investment required to complete a full audit and energy model run.

- i. Pre-implementation audit required* ___ Yes X No
- ii. Post-implementation audit required* ___ Yes X No
- iii. Audit Incentives*

Table 12: Post-implementation Audits

| Levels at Which Program Related Audits Are Rebated or Funded | Who Receives the Rebate/Funding (Customer or Contractor) |
|---|---|
| 100% | Customer or Contractor on behalf of customer |

k) Sub-Program Quality Assurance Provisions

Table 13: Quality Assurance Provisions

| QA Requirements | QA Sampling Rate (Indicate Pre/Post Sample) | QA Personnel Certification Requirements |
|---|--|--|
| Initial Site Visit - by Technical Assistant | 100% of bundled measure (pre) | BPI Accredited |
| Post Implementation Site Visit by Technical Assistant | 10-15% in tenant units, 100% common area installations | BPI Accredited |

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

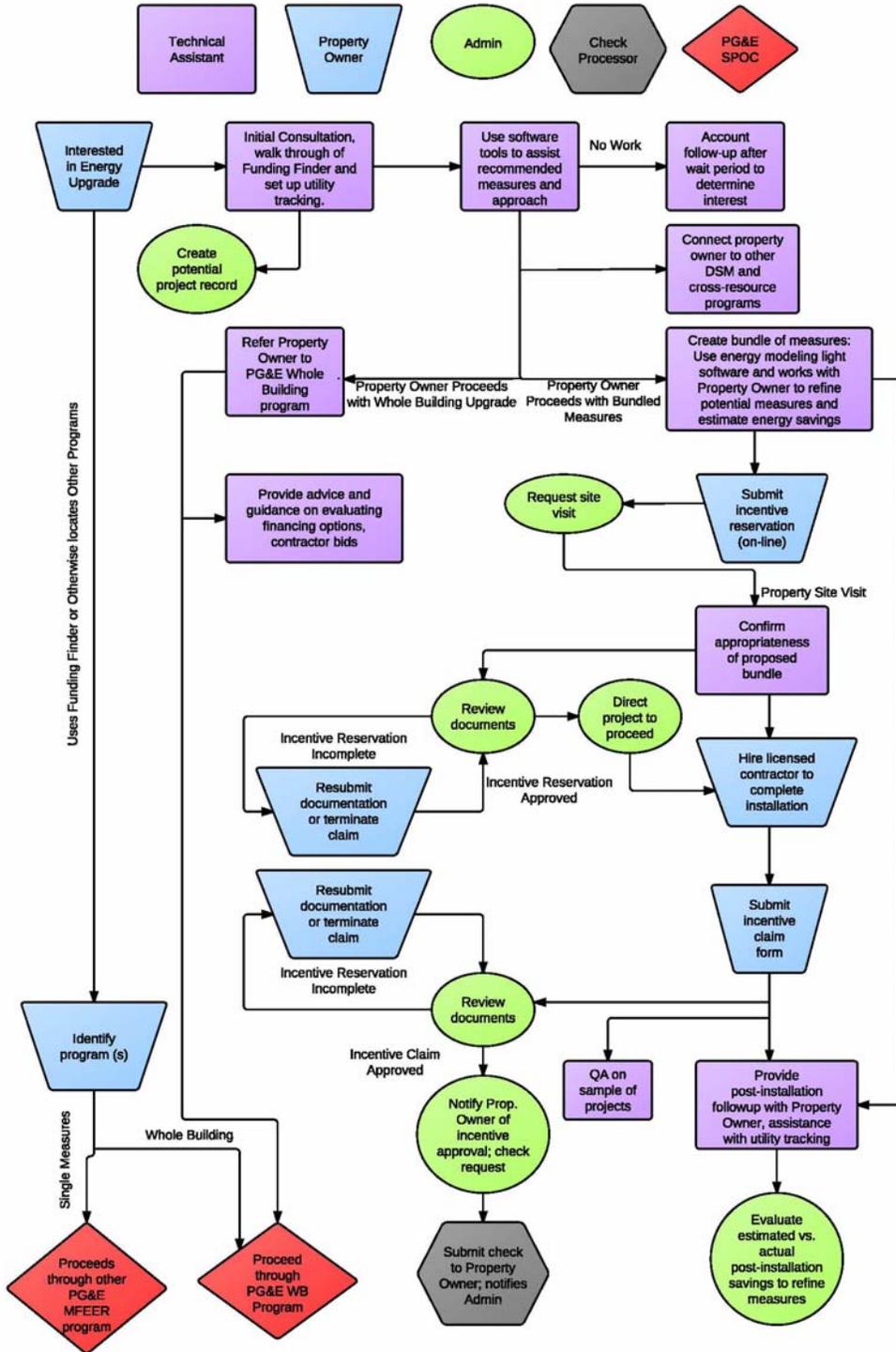
MEA will partner with the key green workforce development programs that already exist in our service area including the Marin City Community Development Corporation and RichmondBUILD to provide jobs training and outreach in communities where multi-family buildings are concentrated. Because youth and adults will be hired locally from the communities in which they live they will in many cases serve customers from those communities. MFEEP will employ an economically, ethnically, and socially diverse group of youth and adults people representative of the diversity and culture of their community. This will allow them to become leaders and educators that challenge neighborhoods to become energy and water efficient. This combination of energy efficiency with job training will provide a delivery method while effectively raising awareness locally about the program.

MFEEP will leverage existing customer relationships, build upon market research and collaborate with innovative partner companies to access community based organizations, schools, local companies, religious institutions and other organizations as drivers of energy efficient behaviors in hard to reach customer segments. MEA participates in over one hundred public community events annually and will utilize community events to communicate with hard-to-reach customer segments. MEA will also launch online social networking platforms to stimulate local behavior changes through online competition facilities.

Because MFEEP is designed to serve hard-to-reach residents including renters, non-English speaking households, and low-moderate income households, MEA will bring services directly to multi-family buildings by using bilingual contractors and job trainees. Because program contractors are hired directly from the communities they serve, their language skills mirror the community itself and allow increased access to non-English speaking households. MFEEP will empower customers and local contractors to assist with promoting the program to their neighbors, friends and family to help spread information about the program through trusted channels.

m) Sub-Program Process Flow Chart

Figure 1: Program Process Flow Chart



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

Table 14: Cross-cutting Sub-Program and Non-IOU Partner Coordination

| Multi-family Program | | |
|---|--|--|
| Other MEA Sub-Programs | Coordination Mechanism | Expected Frequency |
| Single Family | Direct service from TA | All potential projects, either through the TA or Contractors |
| Small Commercial | Direct service from TA | All potential projects, either through the TA or Contractors |
| Financing | Referral through TA | All potential projects, either through the TA or Contractors |
| Other IOU/PUC Sub-Programs | | |
| MFEER | Meetings, communication, participating contractor and QA updates | Monthly |
| EUC - Whole Building | Meetings, communication, participating contractor and QA updates | Monthly |
| Single Point of Contact | Meetings, communication, participating contractor and QA updates | Monthly |
| Coordination Partners Outside CPUC (non-MEA and non-IOU) | | |
| BayREN | Meetings, communication, participating contractor and QA updates | Monthly |
| Local Government Partnership Programs | Meeting, coordination on program delivery | Monthly |

o) Logic Model

The logic informing the MEA Multi-Family Sub-Program design is aligned with recommendations from industry stakeholders and best practices from existing programs. The MEA approach is very similar to the BayREN recommended approach with the exception of added on-site technical assistance, additional software analysis tools for the owner or tenant and TA, additional training for trades and tenants, and minor differences in measures to reflect MEA service area building types. In anticipation of the planning efforts, detailed surveys have been conducted in the Marin County and Richmond markets. Selected measures and approach reflect the findings.

During 2010 – 2011, the Home Energy Retrofit Coordinating Committee’s Multi-family Subcommittee was convened to gather the insights and recommendations from industry experts and professionals.

This program’s design largely reflects the findings from that stakeholder process, which have been compiled in the report *Improving California’s Multi-family Buildings: Opportunities and Recommendations for Green Retrofit & Rehab programs: Findings from the Multi-family Subcommittee of the California Home Energy Retrofit Coordinating Committee* dated April 11, 2011, (see Appendix B).

The program logic draws from the experience of local governments in administering pilot programs and built multi-family retrofit infrastructure through Energy Upgrade California. During this time, local governments provided outreach, customized technical assistance, rater training, and software development. The local programs were summarized in the report *Recommendations for Energy Upgrade California in the Bay Area* dated April 13, 2011, (see Appendix B).

Additionally, stakeholder input has been gathered by the local governments of Berkeley, Oakland, and Emeryville through a grant to study the multi-family sector and its barriers, particularly split-incentive. Their research included a survey of local government actions and policy options and compiled feedback from owners and tenants of multi-family properties. A report summarizing the policy options was published in October 2011 titled *Increasing Energy Efficiency in Existing Multi-family Buildings*, (see Appendix B).

The findings across these publications identify the components of this program as key strategies to removing barriers to multi-family retrofits. As described above, the desired outcome of MFEPP is to address market barriers by:

- Providing customized technical assistance to overcome the diversity of building types and energy usage and billing configurations, and providing assistance with analyzing potential upgrade measures,
- Providing guidance through the complicated initial assessment of upgrade potential that could lead to a whole-building upgrade approach, and referring projects to existing utility programs,
- Providing a viable alternative to the whole-building performance-based incentive that is less capital intensive yet customized,
- Training trades that represent a large opportunity for energy savings in multi-family buildings, and are underserved by single-family training initiatives, and
- Creating a mechanism for data feedback on the actual performance of implemented upgrade measures to refine the accuracy of energy savings estimates used in multi-family energy modeling, and a better understanding of highest opportunity measures.

11. Additional Sub-Program Information

a) Advancing Strategic Plan Goals and Objectives

The MFEEP is strongly aligned with the CPUC Strategic Plan Goals and Objectives as illustrated in the table below. The Strategic Plan states that low to middle income multi-family units were not specifically addressed in the first Plan and recognizes that the market must be addressed in future iterations of the Plan.

Table 15: Strategic Plan Alignment

| MEA Multi-Family Program Alignment with CA Long Term Energy Efficiency Strategic Plan | | |
|--|--|--|
| Residential | | |
| Strategy Number | Strategy | MEA MF Program Strategy |
| 2-2 | Promote effective decision-making to create widespread demand for energy efficiency measures | Multi-family decision support software and TA are designed to provide multi-family property owners with the expertise and analytical tools |
| Low Income | | |
| Strategy Number | Strategy | MEA MF Program Strategy |
| 2-1 | Collaborate and leverage of other low-income programs and services | Referrals to other state, IOU, and local government low-income specific programs |
| Local Government | | |
| Strategy Number | Strategy | MF Program Strategy |
| 4-4 | Develop local projects that integrate energy efficiency, DSM, and water/wastewater end uses | Tools and projects that integrate cross utility measures in all categories are an intended outcome of the comprehensive TA |

b) Integration

i. Integrated/Coordinated Demand Side Management

The Program’s targeted outreach and technical assistance are designed specifically to promote customer education and awareness of existing DSM programs and to support participation in the most appropriate DSM options.

Table 16: Non-EE Sub-Program Information

| Non-EE Sub-Program | Rationale and General Approach for Integrating Across Resource Types |
|--------------------------------|---|
| California Solar Initiative | Refer eligible and interested projects |
| Automated Benchmarking Service | Track & Compare Energy Performance setup by TA |

ii. Integration across resource types

Table 17: Non-EE Sub-Program Information

| Non-EE Programs – across resource types | |
|--|---|
| Non-Energy Programs | Rationale and General Approach for Integrating Across Resource Types |
| Water utility rebates | Leverage water utility rebates for hot water and water conservation energy measures; refer to Marin water utilities for other eligible measures |

c) Leveraging of Resources

The program will leverage multi-family program infrastructure that was developed through ARRA funding as well as direct statewide incentives available for energy and water efficiency upgrades. There will also be cross-leveraging between the MFEEP and the MEA Finance Pilots. Leveraged resources will include:

- Software Tools:
 - Multi-Family Web Portal with Funding Finder and Compass Portfolio Tracker
 - Action Planning tools
- Trained raters/auditors
- Technical Assistant Services Design

The Program will also leverage other sources of funding:

- BayREN Multi-Family Sub-Program (TBD)
- Federal, state, PG&E, MMWD, NMWD, and local government
- MEA Finance Pilot Program including on-bill repayment and standard offer for energy efficiency procurement

d) Trials/ Pilots

The MEA Multi-Family program is expected to begin operation in August 2012. This program will serve as a trial program for the more comprehensive Multi-Family Program described herein. Lessons learned from the 2012 Multi-Family Program will be incorporated into the MFEEP for 2013-14 to allow for continual improvement.

In compliance with Ordering Paragraph 15 of D. 12-11-015, MEA will participate in a mid-cycle workshop to compare preliminary program results and make recommendations for best practices for statewide multifamily energy efficiency programs. MEA will collect such data as is

required to support the Evaluation, Monitoring, and Verification activities of the California Public Utilities Commission to support this further understanding of best practices in reaching this underserved market sector.

e) Knowledge Transfer

MEA staff and partners will regularly share program outcomes, benchmarks and milestones, and also track challenges, lessons learned, and necessary adjustments for all technical, administrative, and marketing aspects of program implementation. These data sets will be organized and transmitted to local government partners operating similar programs (e.g. County of Marin, City of Richmond, County of Sonoma); through regular meetings of local government forums (such as the Governor’s Office of Planning and Research, the LGSEC, Local Government Commission, Urban Sustainability Directors Network, etc.); regional NGO and institutional partners and through program updates provided to Commission and program partners.

12. Market Transformation Information

This program is not identified as a market transformation program.

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

N/A

V. Sub-Program MEA02 – Small Commercial

Program Description:

The MEA Small Commercial Program is a multi-measure program for high energy use customer segments. Customer segments include but are not limited to restaurants, retail, and professional services. It will lower barriers to retrofits by providing technical assistance and incentives to building owners. MEA will promote these retrofits through targeted outreach and training to property owners and contractors, and will make financing options available through MEA's on bill repayment program, MEA's standard offer for energy efficiency procurement and future BayREN Programs that may include PACE commercial and loan loss reserve.

1. **Sub-Program Name: MEA Energy Efficiency Small Commercial Program**
2. **Sub-Program ID number: MEA02**
3. **Type of Sub-Program: Core Third Party Partnership**
4. **Market sector or segment that this Sub-Program is designed to serve:**
 - a) **Residential**
 - i. *Including Low Income? Yes No;*
 - ii. *Including Moderate Income? Yes No.*
 - iii. *Including or specifically Multi-family buildings Yes No.*
 - iv. *Including or specifically Rental units? Yes No.*
 - b) **Commercial (List applicable NAIC codes):**
 - i. *54 – Professional, Scientific and Technical Services*
 - ii. *445120 – Convenience Stores*
 - iii. *7225 – Restaurants*
 - c) **Industrial (List applicable NAIC codes):**
 - d) **Agricultural (List applicable NAIC codes):**
5. **Is this Sub-Program primarily a:**
 - a) **Non-resource program Yes No**
 - b) **Resource acquisition program Yes No**
 - c) **Market Transformation Program Yes No**
6. **Indicate the primary intervention strategies:**
 - a) **Upstream Yes No**
 - i. *Midstream Yes No*
 - b) **Downstream Yes No**

The Restaurant Energy Efficiency Project (REEP) will provide cost-effective direct installation services to some of the most energy intensive businesses in Marin's commercial building sector: restaurants. By recommending packages of comprehensive measures tailored to restaurants, REEP will be a cost effective program for the underserved restaurant market segment. The need for REEP is high as restaurants use approximately 5 to 7 times more energy per square foot than other commercial buildings. High volume quick-service restaurants (QSRs) may even use up to 10 times more energy per square foot than other commercial buildings.³

Most commercial kitchen appliances are energy intensive. For example, a typical electric deep fryer uses more than 18,000 kilowatt-hours (kWh) of energy per year, which alone could cost the owner more than \$1,700 in electricity. REEP will combine bundled measures, including water measures, with direct installation, financing and customized incentives that bring the cost of measure installation down to extremely attractive levels for this energy intensive market segment.

Professional Services & Other Office Building Segments

The Professional Services Energy Efficiency Project (PSEEP) will provide cost-effective direct installation services to Marin's largest commercial building sector: professional services. MEA will package a combination of comprehensive measures tailored to office buildings for this sector, also an underserved energy efficiency segment. Beyond lighting measures, the energy efficiency market has been reluctant to implement energy efficiency programs and improvements into the smaller commercial professional services space for several reasons. Some of these reasons include split fiscal incentives between building owners and tenants, a general aversion to increased debt carried on buildings, information gaps on the value of benefits and co-benefits, and lack of financing options with favorable rates of return. PSEEP has the potential to address these barriers through internal-program, leveraging external partnership, leveraging opportunities for cash-neutral or cash-positive improvements, and providing financing tools that can be carried as an operating rather than debt expense. PSEEP will also utilize outreach and education programs to building owners, operators and managers on the potential for savings through updated methods for utility load management. As a result PSEEP has the potential to promote the larger-scale, deeper energy savings of commercial buildings.

³ http://www.energystar.gov/ia/partners/publications/pubdocs/restaurants_guide.pdf

b) Sub-Program Energy and Demand Objectives

Table 2: Projected Sub-Program Net Energy and Demand Impacts, by Calendar Year ⁴

| 1. | Program Years | | |
|-------------------------|------------------|-----------|-----------|
| | 2013 | 2014 | Total |
| Sub-Program Name | Small Commercial | | |
| kWh | 2,945,073 | 2,945,073 | 5,890,146 |
| Peak kW | 788 | 788 | 1,577 |
| Therms (millions) | 280,737 | 280,737 | 561,475 |

c) Program Non-Energy Objectives

i. Quantitative program targets (PPMs):

Table 3: Quantitative Program Targets (PPMs)

| Target | 2013 | 2014 |
|---|------|------|
| Convenience Stores Energy Efficiency Program | 50 | 50 |
| Restaurant Energy Efficiency Program | 75 | 75 |
| Professional Services Energy Efficiency Program | 50 | 50 |

- Generate at least \$3,500,000 in energy efficiency upgrades for commercial buildings
- Complete a minimum of 385 commercial energy efficiency upgrades
- Complete energy efficiency upgrades to Commercial buildings encompassing at least 77,500 square feet (385 upgrades with average space of 1500 square feet).
- Provide outreach and education to at least 350 Restaurants, 150 Convenience stores, and 500 Professional Service Businesses

ii. Cost Effectiveness/Market Need:

MEA’s small commercial direct services will provide cost-effective direct installation services to some of the most energy intensive businesses in Marin’s commercial building

sector: restaurants and convenience stores. By packaging a combination of comprehensive measures tailored to these segments, MEA will provide cost effective solutions for these underserved market segments. The program will also target professional buildings, which are the most prevalent type of commercial building in the MEA service area. This will allow for streamlining a program that is applicable in a wide range of locations, resulting in greater cost effectiveness.

d) Measure Savings/ Work Papers

- i. MEA utilized the DEER database for estimating savings of selected cost effective measures.*

10. Program Implementation Details

a) Timelines

Table 4: Sub-Program Milestones and Timeline

| Activity | Year | |
|---|------------------|----------------|
| | 2013 | 2014 |
| Premarketing and Customer Recruitment | Jan 1 - Apr 30 | |
| Marketing Tools Development | Jan 1 - Apr 30 | |
| Multifamily Portal Setup for customers, contractors, and administration | Jan 1 - Apr 30 | |
| Marketing and Customer Recruitment | Whole Year | |
| Workforce training | Jan 1 - Apr 30 | |
| Project Assessments and Development | March 1 - Dec 31 | Whole Year |
| ECO installation | Jun 1 - Dec 31 | Jan 1 - Dec 31 |
| Year –end Program Evaluation | 31-Dec | 31-Dec |

b) Geographic Scope

The Geographic Region where the MEA Program will operate is Climate Zone 2 and 3.

c) Program Administration

Table 5: Program Administration of Program Components

| Program Name | Program Component | Implemented by: | | |
|------------------------------------|-------------------------|-----------------|---------------------------------------|--|
| | | MEA staff | Contractors - Competitive bid process | Contractors - No competitive bid process |
| Bundled Measures Incentive Program | Targeted Outreach | X | | X |
| | Technical Assistance | | | X |
| | Bundled Measure Rebates | X | | X |
| | Software development | | | Consumer Engagement & Analysis Pilot |
| | Workforce Development | | | RichmondBuild/MCCDC |

d) Program Eligibility Requirements

- i. Customers in the MEA service area including Marin County and the City of Richmond.*

Table 6: Customer Eligibility Requirements

| Customer Eligibility Requirement |
|---|
| Property located in MEA Service Area |
| Property not served by other ratepayer funded program |

- ii. Contractors/Participants:*

Table 7: Contractor/Participant Eligibility Requirements

| Role | Eligibility Requirement |
|--------------------------|--|
| TA Provider | Qualifications include required training and certifications to provide comprehensive commercial building audits, ability to provide comprehensive Technical Assistance including advice and referrals for non-EE DSM measures and non-energy measures. |
| Installation Contractors | Licensed in appropriate trade |
| QA Provider | Same requirement as TA Provider (may be same entity or subcontracted to another entity with equivalent qualifications) |

e) Program Partners

- i. Manufacturers in related trades .N/A*
- ii. Other key program partners:*

- City of Richmond
- County of Marin
- Marin County Energy Watch Partnership
- East Bay Energy Watch Partnership
- Dominican University
- Lenders (including without limitation banks, credit unions)
- Marin City Community Development Corporation
- Marin Energy Watch Program
- Marin Employment Connection
- Marin Municipal Water District
- Pacific Gas& Electric Rising Sun Energy
- San Francisco Foundation
- Marin Workforce Investment Boards

f) Measures and Incentive levels

For the small commercial segments, MEA proposes to utilize a custom project, site specific program methodology to determine energy savings and incentive levels. This incentive design intends to recommend to property owners a bundled measure incentive to encourage building owners to initiate energy efficiency retrofits without overwhelming them with costs. The bundled, customized measure approach is designed to capture projects that have a smaller budget and scope of work, and

encourage installation of two or more measures that will result in an average of 15 percent energy savings.

The bundled measures will provide a customized list of measures based on utility bill information, calculated energy savings, and a site survey. The Technical Assistant will utilize customized spreadsheets and program software to calculate projected savings. The estimated energy savings per measure will vary by building type and take into account interactive effects. The pilot is designed to offer the following solutions:

- Incorporates actual utility usage data to inform measure recommendations
- Offers an alternative to costly energy audits for smaller project scopes and smaller buildings
- Provides property owners and managers with basic energy savings information that may help them justify pursuing a more comprehensive audit later
- Can motivate unplanned work, by layering complementary or additional measures onto a planned single measure
- Allows property owners to choose from a broad range of energy efficiency measures and utilize contractors that they trust
- Is integrated with financing offerings to encourage deeper retrofits and potentially overcome split incentive barriers

Measures eligible under the bundled measures incentive include energy retrofits, LED lighting and lighting controls, HVAC, refrigeration, water conservation, building envelope, kitchen equipment, and may include additional measures identified to achieve energy savings. The list will be refined based on program monitoring and feedback.

Projects will be developed according to the Custom Project Methodology developed by the CPUC and articulated in Attachment B to Decision 11-07-030. This allows for site specific information and the most customized approach possible. In accordance with this methodology, projects will be submitted to the CPUC at the earliest possible point, but no later than a two week rolling basis, and will be accompanied by supporting calculation methodologies. The CPUC will have the ability to review any project it chooses, and make prospective recommendations to the MEA Efficiency team on supporting calculation methodologies.

Table 8: Summary Table of Measures, Incentive Levels and Verification Rates

| Measure Group | Market Actor Receiving Incentive or Rebate | MEA | |
|---|---|----------------------|----------------------------|
| | | Incentive Level | Installation Sampling Rate |
| Bundled Measures | Property owner and Operations Manager | Based on savings TBD | 10-15 % |
| Res-Small Commercial Sector Pre-Project Energy Audits | Property Owner and Operations Manager (can sign for direct payment to contractor) | Based on savings TBD | 10-15 % |
| Energy Assessment | Property owner and Operations Manager | Up to \$500 | N/A |

g) Additional Services

The technical assistance offered through this program is intended to serve a broad range of properties at different points in the building life cycle. A Technical Assistant will provide property owners with customized recommendations and will facilitate customer participation in rebate and financing programs. The Technical Assistant will leverage newly developed IT tools and additional analytic methodologies to identify the best approach and retrofit measures for each building. Technical Advisors will also refer projects to the appropriate utility programs, or single-point-of-contact where applicable.

h) Sub-Program Specific Marketing and Outreach

The MEA Small Commercial sub-program will be coordinated very closely with the Local Government Partnership Small Business Direct Install (SBDI) programs that operate in the same service territory. Marketing and outreach strategies will be coordinated with these programs to ensure minimal customer overlap and to mitigate potential market confusion. MEA plans to sub-contract for the delivery of the program with the existing SBDI implementer in this area to facilitate program coordination and minimize overlap.

Marketing materials describing the project participation process and benefits will be prepared for direct mail and distribution to customers. Outreach and marketing will be provided to customers initially through direct mail and by telephone and electronic

contact from MEA Account Managers. This outreach strategy will be supported by an in-field direct canvassing approach that has proven effective in the SBDI programs. All convenience stores, restaurants, and other professional service customers located in MEA's service area will be eligible to participate in the project and will be provided with marketing material. Interested customers will then be evaluated to determine qualification for the program at this point in the process. To qualify, the customer will need to verify their interest in following through with project implementation and will also need to undergo credit evaluation for any required financing. After the customer meets the qualification criteria, a program participation agreement will be signed.

The Small Commercial Sub-Program will use marketing, education and outreach strategies to highlight the benefits of program and encourage participation. While the program intends to leverage the SBDI model, the more comprehensive nature of this program requires the involvement of the building owner at the earliest possible stage to overcome split incentive barriers. Therefore, door to door canvassing will be supplemented with direct owner engagement. Benefits that will be highlighted in marketing and communications will include: social and environmental benefits such as, reduced fossil fuel consumption, reduced greenhouse gas emissions, improved indoor air quality and improved healthy spaces; economic benefits such as decreased electricity and maintenance costs, higher building performance, governmental incentives related to expedited plan review, permitting and inspection, and new valuations on energy efficiency such as Green MLS ratings. Marketing, education and outreach activities will also highlight the economic benefits of; MEA Financing Program options, contractor/supplier incentives; and energy savings achieved through improvements under the water-energy nexus.

In many cases owners are reluctant to pay for building improvements that appear to only benefit tenants. However, MEA will address this market barrier with outreach and education that highlights the benefits described above, as well as the value of co-benefits achieved by combining MEA program options. MEA will also highlight the benefits and advantages of whole building retrofits that build energy efficiency and can leverage financing options and incentives to implement cash-neutral or cash-positive results. This occurs when upgrades provide cost avoidance that surpasses monthly loan expenses, and will serve as a compelling incentive to customers when communicated through outreach and education.

i) Sub-Program Specific Training

Similar to the Multi-Family Program, it does not make sense to require a single contractor certification for all contractors and sub-trades. Rather, it will be more effective to target specific professional training at the sub-trade that has the greatest potential for delivering efficiency improvements.

Specialized training will give these contractors the expertise needed to optimize the specifications and operations of these systems. This training will focus less on the verification methods and more on the efficiency gains to be made in conventional construction and operation practices. Trainings will be held by MEA and training partners (Rising Sun, RichmondBUILD, and Marin City Community Development Corporation) at least monthly in training forums. These training forums will also be offered through the web, both during the actual training and after by video.

To ensure that a pool of knowledgeable contractors is available to support the demand created by the incentive, training will be offered in partnership with the Marin City Community Development Corporation and Richmond Build for the following trades:

- Electrical contractors (C10)
- HVAC contractors (C20)
- Boiler contractors (C4)
- Roof installers
- Window contractors
- Plumbers (C36)
- Insulation contractors

The following training courses will be provided for the MEA Small Commercial Sub-Program:

- Safety and safety plans – 10hrs
- MEA Small Commercial Program: How does it work – 8 hrs
- Energy Codes (new T24) and Regulations – 24 hrs
- Energy Education for commercial facilities – 12 hrs

j) Sub-Program Software and/or Additional Tools

Because an in-building audit can be costly and somewhat time consuming, some commercial customers may prefer to use an automated audit combined with a customized action plan as a first step. This option would allow the customer to quickly determine what utility savings might be achieved by participating in the program. The

automated audit and tracking will be offered to all customers at no charge to the customer.

Software has been developed and tested in the Sonoma County Energy Independence Program (SCEIP) that can automate the highly complex energy-economics optimization calculations needed for each unique building/unit. With such automation many hours of in-building analysis can be reduced to a number of minutes, allowing for streamlined identification of measures with the most potential for savings and a reasonable 'pay back' period.

A 20-question simulated on-line audit would be used that calculates long-term savings of a range of measures tailored to the customer. Results would be provided in the form of a "customer action-plan", which is a prioritized list of measures for utility savings and costs. The action plan will also include a list of local services and next steps for implementation. By identifying customers with the most to save, making them aware of the savings potential, and giving them a no-cost audit online, participation in the Energy Efficiency Program is likely to be accelerated in Marin.

Customers participating in the automated audit should also consider an in-building audit, but they would be able to do so with more information available and may be more likely to follow through with implementation.

The tool will also provide program administrators with feedback on actual savings per bundle of measures to refine savings estimates credited toward measures included in future projects applying for bundled measures.

The assessment and tracking tool will utilize some modeling calculations based on basic information about the existing building utility use and proposed improvements. These assumptions and algorithms will align with industry accepted modeling tools. However, the data input requirements will be less extensive than full modeling software programs, and will not require a full on-site audit. This assessment tool is designed to reduce the barrier to upgrades caused by the cost and time investment required to complete a full audit and energy model run.

The MEA software tools will integrate with Energy Star Portfolio Manager, a free web-based tool offered by the Environmental Protection Agency that allows building owners and operators to track and assess energy and water consumption in their buildings. Automated Benchmarking is a tool within Portfolio Manager that allows customers to have energy consumption data uploaded to their account from their utilities.

- i. Pre-implementation audit required ___ Yes X No
- ii. Post-implementation audit required ___ Yes X No
- iii. Audit Incentives

Table 9: Post-implementation Audits

| Levels at Which Program Related Audits Are Rebated or Funded | Who Receives the Rebate/Funding (Customer or Contractor) |
|---|---|
| Incorporated into Project Cost | N/A |

k) Sub-Program Quality Assurance Provisions

Table 10: Quality Assurance Provisions

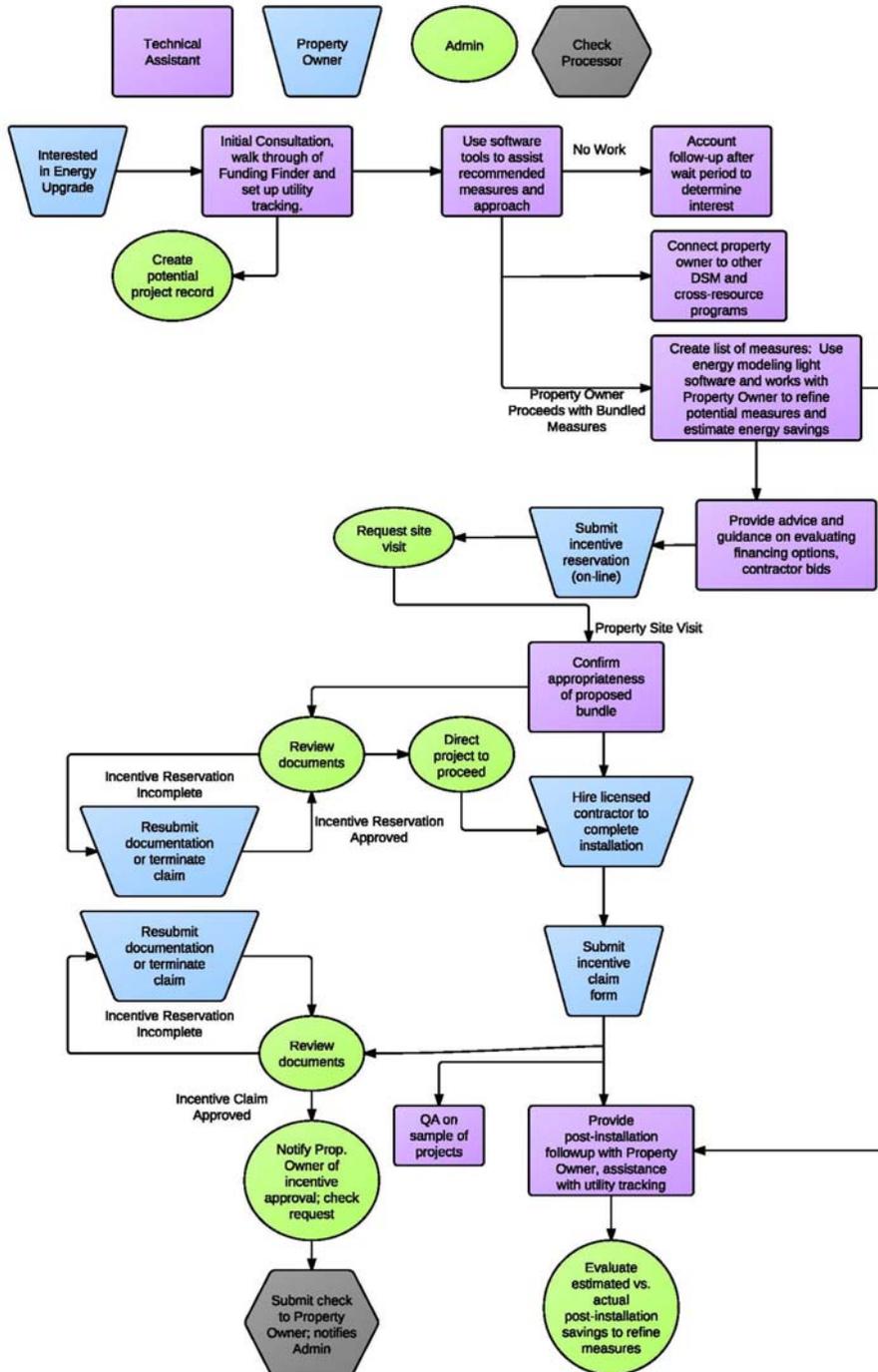
| QA Requirements | QA Sampling Rate (Indicate Pre/Post Sample) | QA Personnel Certification Requirements |
|----------------------------|--|--|
| Site Visit - by program TA | 100% | TBD |

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

Sub-Program specific marketing and outreach is detailed in Section h above. Installation will be performed by Contractors, including contractors who have participated in the job training program described above. The customer can receive the incentive directly or can request that it go directly to the contractor.

m) Sub-Program Process Flow Chart

Figure 1: Small Commercial Sub-Program Process Flow Chart



n) Cross-cutting Sub-Program and Non-IOU Partner Coordination

Table 11: Cross-cutting Sub-Program and Non-IOU Partner Coordination

| Financing Portfolio Sub-Program | | |
|---|--|--|
| Other MEA Sub-Programs | Coordination Mechanism | Expected Frequency |
| Finance OBR | Project referrals | Concurrent with all potential projects, either through Technical Assistants or Contractors |
| Single-Family Sub-Program | Project referrals | Concurrent with all potential projects, either through Technical Assistants or Contractors |
| Multi-Family Sub-Program | Project referrals | Concurrent with all potential projects, either through Technical Assistance or Contractors, or Contractors |
| IOU Program Name | Coordination Mechanism | Expected Frequency |
| PG&E Smart Lights Program (Energy Upgrade California) | MEA has contracted with the SmartLights program to ensure the greatest coordination possible between the Local Government Partnership programs | Daily |
| Coordination Partners Outside CPUC | Coordination Mechanism | Expected Frequency |
| BayREN | Meetings, communication, participating contractor and QA updates | Monthly |

o) Logic Model

The logic informing the MEA Small Commercial Sub-Program design is aligned with recommendations from industry stakeholders and best practices from existing programs. The MEA approach is very similar to the MEA Multi-Family Sub-Program which includes on-site technical assistance, similar software analysis tools for the building owner and Technical Assistant, training for trades and tenants, with differences in measures to reflect the MEA small commercial building energy efficiency segment. In anticipation of the development of the Program, MEA has conducted initial outreach to

small commercial representatives in the Marin County and Richmond markets to gauge interest and develop the initial design.

MEA has also conducted research and reviewed existing information in the field during the process of developing the Program. During 2010 – 2011, the Home Energy Retrofit Coordinating Committee’s Multi-family Subcommittee was convened to gather the insights and recommendations from industry experts and professionals. Findings of this Committee have been used as a basis for some program elements. In addition, this program’s design draws upon the findings from the report, *“Characterization and Analysis of Small Business Energy Costs”* by SBA Office of Advocacy April, 2008, (see Appendix B).

The desired outcome of the MEA Small Commercial program is to address market barriers by:

- Providing customized technical assistance to offer service for a wide range of building types, energy usage patterns, and billing configurations, while also providing assistance with analyzing potential upgrade measures,
- Providing guidance through the complicated initial assessment of upgrade potential that could lead to a whole-building upgrade approach, and referring projects to existing utility programs,
- Providing a viable alternative to the whole-building performance-based incentive that is less capital intensive yet customized,
- Focusing training on trades that represent a large opportunity for energy savings in small commercial buildings, and
- Creating a mechanism for data feedback on the actual performance of implemented upgrade measures to refine the accuracy of energy savings estimates used in small commercial energy modeling, and a better understanding of highest opportunity measures. (See Sub-Program 3, section j for additional information).

11. Additional Sub-Program Information

a) Advancing Strategic Plan Goals and Objectives

The MEA Small Commercial Sub-Program advances the following goals, strategies and objectives of the California Long Term Energy Efficiency Strategic Plan:

Table 12: Strategic Plan Alignment

| MEA Small Commercial Program Alignment with CA Long Term Energy Efficiency Strategic Plan | | |
|--|--|--|
| Residential | | |
| Strategy Number | Strategy | MEA Small Commercial Program Strategy |
| 2-2 | Promote effective decision-making to create widespread demand for energy efficiency measures | Small commercial decision support software and Technical Assistance are designed to provide small commercial property owners with expertise and analytical tools |
| Low Income | | |
| Strategy Number | Strategy | MEA Small Commercial Program Strategy |
| 2-1 | Collaborate and leverage other low-income programs and services | Referrals to other state, IOU, and local government low-income and small business-specific programs |
| Local Government | | |
| Strategy Number | Strategy | MEA Small Commercial Strategy |
| 4-4 | Develop local projects that integrate energy efficiency, DSM, and water/wastewater end uses | Tools and Projects that integrate cross utility measures in all categories are an intended outcome of the comprehensive technical assistance provided |

b) Integration

i. Integrated/coordinated Demand Side Management

The Program’s targeted outreach and technical assistance are designed specifically to promote customer education and awareness of existing DSM programs and to support participation in the most appropriate DSM options.

Table 13 - Non-EE Sub-Program Information

| Small Commercial Bundled Measures Incentive Sub-Program | | |
|--|---------------|---|
| Non-EE Sub-Program | Budget | Rationale and General Approach for Integrating Across Resource Types |
| California Solar Initiative | | Refer eligible and interested projects |
| Automated Benchmarking Service | | Track & Compare Energy Performance setup by TA |

ii. Integration across resource types

Table 14 - Non-EE Sub-Program Information (Cross Resource)

| Non-EE Programs – across resource types | |
|--|---|
| Non-Energy Programs | Rationale and General Approach for Integrating Across Resource Types |
| Water utility rebates | Leverage water utility rebates water conservation energy measures; refer to Marin water utilities for other eligible measures |

c) Leveraging of Resources

The program will leverage multi-family program infrastructure that was developed through ARRA funding, including:

- Software Tools:
 - Action Planning tools
- Trained raters/auditors
- Technical Assistant Services Design

d) Trials/ Pilots

N/A

e) Knowledge Transfer

MEA staff and partners will regularly share program outcomes, benchmarks and milestones, and also track challenges, lessons learned, and necessary adjustments for all technical, administrative, and marketing aspects of program implementation. These data

sets will be organized and transmitted to local government partners operating similar programs (e.g. Marin County, City of Richmond, County of Sonoma); through regular meetings of local government forums (such as the Governor’s Office of Planning and Research, the LGSEC, Local Government Commission, Urban Sustainability Directors Network, etc.); regional NGO and institutional partners, and through program updates provided to Commission and program partners.

12. Market Transformation Information

This program is not identified as a market transformation program.

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

N/A

VI. Sub-Program MEA03 – Single Family

1. Sub-Program Name: MEA Single-Family Utility Demand Reduction Program
2. Sub-Program ID number: MEA03
3. Type of Sub-Program: Partnership
4. Market sector or segment that this sub-Program is designed to serve:

a) Residential

- i. Including Low Income? Yes No;
- ii. Including Moderate Income? Yes No.
- iii. Including or specifically Multi-Family buildings Yes No.
- iv. Including or specifically Rental units? Yes No.

b) Commercial (List applicable NAIC codes: _____)

c) Industrial (List applicable NAIC codes: _____)

d) Agricultural (List applicable NAIC codes: _____)

5. Is this sub-Program primarily a:

- a) Non-resource program Yes No
- b) Resource acquisition program Yes No
- c) Market Transformation Program Yes No

6. Indicate the primary intervention strategies:

- a) Upstream Yes No
- b) Midstream Yes No
- c) Downstream Yes No
- d) Direct Install Yes No
- e) Non Resource Yes No.

7. Projected Sub-Program Total Resource Cost (TRC) and Program Administrator Cost (PAC)

i. TRC = 1.35

PAC = 1.35

8. Projected Sub-Program Budget

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

| Sub-Program | Program Year | | |
|------------------------------------|--------------|-----------|-----------|
| | 2013 | 2014 | Total |
| Admin (\$) | \$18,000 | \$18,000 | \$36,000 |
| General Overhead (\$) | \$42,000 | \$42,000 | \$84,000 |
| Incentives (\$) | \$0 | \$0 | \$0 |
| Direct Install Non-Incentives (\$) | \$3,485 | \$4,379 | \$7,864 |
| Marketing & Outreach (\$) | \$63,107 | \$239,028 | \$302,135 |
| Education & Training (\$) | \$17,408 | \$26,010 | \$43,418 |
| Total Budget (\$) | \$144,000 | \$329,417 | \$473,417 |

9. Sub-Program Description, Objectives and Theory

a) Sub-Program Description and Theory

The primary goal of the MEA Single-Family (SF) Utility Demand Reduction Program is to provide focus for Utility Demand Reduction Management through the use of education, tools, and services. This Sub-Program will focus primarily on savings and costs reductions through informing consumers about their opportunities and connecting them to resources to take action. The barriers MEA is addressing with our outreach services and tools are lack of education and awareness that would lead to behavior changes and energy upgrades. To address this barrier, MEA will provide outreach and education to residents so that they are informed and engaged. MEA will then facilitate response and action through simple behavior and retrofit enhancements.

The program addresses the following market barriers to utility demand reduction:

b) Lack of Consumer Awareness

Customers are generally unfamiliar with the details of how and when they use their energy, and actions they could take to reduce energy use that fit their needs. In the energy efficiency industry there has been limited attention and focus on consumer utility usage management, behavior to create utility usage reduction. Under the ARRA SEP programs, most of the funding resources for single-family utility customers has been on the benefits of whole-house energy upgrades. One area that has been missing is engaging outreach services and tools to attract and more clearly educate consumers about their personal utility (electricity, gas, water) use including effect on costs, comfort, and environment, and then stimulate them to take action.

MEA proposes an automated priority action sequence for customers which will include a combination of changes in behavior, some simple and inexpensive do it your-self projects and technologies, or utility reduction retrofit projects.

This sub-Program will result in engaging marketing and outreach campaigns and services to targeted user segments that will increase customer participation in cross utility demand reduction to a more diverse set of customers

c) Visibility of Utility Reduction Opportunities, All in One Place

Customers do not currently have visibility to their utility use, the combined effect of energy and water, and how the combination of energy efficiency with renewable generation can be optimized to meet their needs.

While there is a wealth of information, programs, tools, and services available across communities to address utility demand reduction, customers do not see the combined affects and do not have the time, technical capacity, or patience to figure out the best course of action.

The MEA Single-Family Utility Demand Reduction Program will address this barrier through the combination of easy to use online support tools to optimize the customers' utility use and an action plan based on the customers' desired effect (utility costs, comfort, GHG reductions, etc.). The Program will further enable action by connecting the customer to resources including information about qualified contractors, funding and other incentives that are available. Finally, the Program will deepen the reach of the web tool through supportive outreach campaigns, including a neighborhood canvassing approach, a school campaign, and direct mailers to targeted customers in the MEA service territory.

d) Understanding of Steps to Take Action

For those consumers that recognize the opportunities available to reduce their utility use and want to make change to realize benefits to fit their needs, many do not know where to start.

The MEA Single-Family Utility Demand Reduction Program will address this barrier by providing simple tools and services to dramatically increase actions taken by consumers on their utility demand reduction. This will be achieved by helping the customer find and connect to the appropriate qualified contractors, helping find the most suitable financing, and by providing a facility for automatic rebate/incentive submissions. All of

these features will maximize consumer benefits, while minimizing consumer effort and investment needs.

e) High Cost of Energy Upgrades

Whole-house and even single measure upgrades are often beyond a customer’s ability to pay. Initiating finance programs to defray the up-front costs will help but some will not be interested in financing the upgrades.

The MEA Single-Family Utility Demand Reduction Program will address this barrier by providing visibility to custom actions the customer can take by simple changes in behavior and high return on minor capital investments. The program will also provide cross linkage to MEA Finance Programs, such as on-bill repayment, which could be a good fit for the customer wanting to avoid up-front costs.

f) Sub-Program Energy and Demand Objectives

Table 2: Projected Sub-Program Net Energy and Demand Impacts, by Calendar Year

| | Program Years | | |
|---------------------------------------|---------------|-----------|-----------|
| | 2013 | 2014 | Total |
| Single-Family Advanced Support | | | |
| kWh | 2,209,520 | 2,214,766 | 4,424,286 |
| Peak MW | 2 | 3 | 5 |
| Therms (millions) | 124,858 | 124,723 | 249,581 |

The basis for these demand objectives is two-fold. The largest percentage of the savings is based on the anticipated impact associated with the direct mailers, otherwise referred to as Home Energy Reports. The impact of these Home Energy Reports has been studied across the country and is shown to produce anywhere from 1-4% reduction in energy demand across targeted participants. The factor of 1.87% has been used to determine anticipated electrical savings in this program, and a factor of 1.24% has been used to determine savings in the natural gas sector. The savings estimates are further refined based on actual average annual electricity consumption in the MEA service territory and the analysis of a 2010 study in Sonoma County by PlanetEcoSystems, Inc (PEI), which provides average consumption data for the gas sector. The PEI analysis was focused on identifying energy demand reduction strategies that could be eliminated with an economically positive outcome for the consumer. The following are assumptions used in the analysis that help to shape savings estimates for this program:

- 97,330 single family households in MEA service area (as per 2010 census data).
- Households were grouped into 3 categories based on demand,
 - Households with average energy bills less than \$100/month,
 - Households with bills between \$100-\$300/month ,
 - Households with bills over \$300/month.
- Each group has its own average demand profile and characteristics.
- Total estimated residential MEA service area annual electricity demand = 595 million kWh; gas demand = 38 million Therms (based on actual data from the MEA service territory (electric) and information gathered in the County of Sonoma (gas).
- Most homes likely to be principally motivated by actions to reduce demand that are 'economically positive' for them (i.e. those actions that will actually result in net savings).
- This program is largely driven by helping homeowners find the 'economically positive' actions that apply to their specific circumstances; using that information to motivate homes into action.
- Expect the average participating home to save 1.87% of electrical usage and 1.24% of gas usage.
- Therefore, expect demand reduction by end 2014 to be 4.5 million kWh and 179,000 therms.

Please refer to the attached work paper, Appendix I, for more detail on the available body of knowledge and how it has been used to support savings estimates for this program.

g) Program Non-Energy Objectives

i. SMART non-energy objectives of the program:

- During the period 2013-2014, marketing and outreach activities will create 8700 impressions resulting in the customer accessing the energy efficiency portion of the MEA website.
- During the period 2013-2014, the number of MEA customers that create actions plans (using MEA web services) will be 20 percent of the single-family residential owner occupied homes (OOH) or 19,466 homes.

- During the period 2013-2014, the average reduction of water use by customers that created actions plans will be 10 percent.
- During the period 2013-2014, 18 schools will participate in MEA energy efficiency programs.

h) Relevant Baseline Data

The statistics on owner occupied homes in Marin County and City of Richmond are provided by the US Census Bureau (2010).

i) Quantitative program targets (PPMs)

Table 3: Quantitative Program Targets (PPMs)

| Target | 2013 | 2014 |
|--|-------------|-------------|
| Number of single-family homes reached through outreach campaigns | 6,182 | 26,885 |
| Number of owner occupied households that develop action plans using MEA web services | 9,733 | 9,733 |
| Number of owner occupied households participating in utility demand reduction competitions (school outreach) | 3,844 | 2,144 |

j) Cost Effectiveness/Market Need

The MEA Single Family Utility Demand Reduction Sub-Program will provide cost-effective support services to homeowners by utilizing targeted outreach and software services. This free service will educate customers about their personal property footprint, help them assess priorities based on return on investment to reduce utility costs (whether it be behavior, do it yourself, or retrofit measures they can take). By providing this software, MEA will provide cost effective solutions for the single family market (as well as multi-family and small commercial segments).

k) Measure Savings/ Work Papers

- i. Savings estimates source for this sub-program are as follows:*

Table 4: Work paper Status

| # | Workpaper Number/Measure Name | Approved | Pending Approval | Submitted but Awaiting Review | Not Yet Submitted |
|--|---|----------|------------------|-------------------------------|-------------------|
| 1 | Marin Energy Authority Single Family Utility Demand Reduction Program | | | X | |
| This work paper was re-submitted to Energy Division for review on May 7, 2013. | | | | | |

10. Program Implementation Details

a) Timelines

Table 5: Sub-Program Milestones and Timeline

| Milestone | Date |
|--|-----------------------|
| Project Initiation Meeting | 1/16/2013 |
| Marketing and Outreach Plan Design | 4/1/2013 |
| Web Services Definition | 1/18/2013 |
| Media program design | 6/1/2013 |
| Local Data Integration | 2/28/2013 |
| Campaign Programs for events/schools/employers | 5/6/2013 |
| Action Planning Tools Deployed | 3/15/2013 |
| Quarterly Progress Reports | 5/31/2013 – 1/15/2014 |

b) Geographic Scope

The Geographic Region where the MEA Program will operate is Climate Zone 2 and 3.

c) Program Administration

Table 6: Program Administration of Program Components

| Program Name | Program Component | Implemented by MEA staff | Implemented by contractors |
|---------------------|--|---------------------------------|-----------------------------------|
| MEA03 | Program Administration and Oversight | X | |
| | Marketing and Outreach Program | X | X |
| | Web Services | | X |
| | Program Design and Setup | X | X |
| | Program Implementation: Web Deployment, MEO, Quality Assurance | X | X |
| | Program Reporting | X | |
| | Rewards Incentive Implementation | X | |

d) Program Eligibility Requirements

- i. Customers in the MEA region including Marin County and the City of Richmond.*

Table 7: Customer Eligibility Requirements

| Customer Eligibility Requirement |
|---|
| Single-Family Detached Housing |
| Property located in MEA service area |

- ii. Contractors/Participants:*

Table 8: Contractor/Participant Eligibility Requirements

| Contractor Eligibility Requirement |
|--|
| Participating Contractor, including meeting all license and certification requirements |

e) Program Partners

- i. Manufacturer/Retailer/Distributor partners:*

This sub-program will not include any upstream activities, and therefore will not include any manufacturer/retailer/distributor partners.

ii. Other key program partners:

- City of Richmond
- County of Marin
- Strategic Energy Innovations
- Green Building Associations/Green Building Labeling Programs
- GreenSave
- Marin Workforce Investment Boards
- Pacific Gas & Electric Company
- Marin City Community Development Corporation
- Marin Energy Watch Program
- Marin Employment Connection
- Marin Municipal Water District
- Rising Sun Energy Services
- San Francisco Foundation
- PlanetEcoSystems
- Utilibill

f) Measures and Incentive Levels

Table 9: Summary Table of Measures, Incentive Levels and Verification Rates

| Measure Group | Market Actor Receiving Incentive or Rebate | MEA | |
|----------------------|--|-----------------|----------------------------|
| | | Incentive Level | Installation Sampling Rate |
| Program Participants | Residential Customers | 100% | 15% |

g) Additional Services

Table 10: Additional Services

| Additional Services that the Sub-Program will Provide | To Which Market Actors |
|---|--|
| Marketing & Outreach | School program administrators (to reach single-family homeowners) |
| Data Analytics | Administrators for campaign management and program performance reporting |

h) Sub-program Specific Marketing and Outreach

Marketing and outreach is a key element of this sub-program to increase customer awareness and action for utility demand reduction. The program will include the following components:

- Targeted outreach campaigns for schools, neighborhood profiles, and high energy users.
- Segment data analysis for automated campaign management (i.e. outbound mailers).
- Customized web services for specific consumers properties to engage, educate, and keep track of projects and new service offerings that match consumer needs.
- Outreach through other relevant market actors and partners. MEA will work with private and public outreach partners for campaigns to schools and neighborhoods.
- Integration of Energy Efficiency Program into the existing MEA brand.
- Social network tools to stimulate utility reduction activities by encouraging continued changed behavior and enabling collaboration. Tools will include testimonials, actual measures savings, ratings of measures, profile matching for consumers to share information on how they can save energy, water, and money, and demand reduction competitions among school groups.

i. Outreach

Three specific sub-programs have been developed to drive participants towards the web tool and facilitate their energy saving projects.

Outbound Mailers

The well-tested use of “Home Energy Report” style outbound mailers (i.e. direct mailers) will be used in this program to inform customers in MEA’s service territory about the availability of the web tool. These mailers will additionally show the customer how their energy usage ranks relative to other customers with similar characteristics. Such information will be consistent with CPUC practices and policies regarding the privacy of customer information. This program will be implemented as a pilot in 2013 to test the Marin and Richmond response to the mailers, and will incorporate lessons learned in 2013 for a more robust program in 2014.

School Program

The PEI team and MEA will work with Strategic Energy Innovations and other local partners to develop a curriculum that can be delivered in the classroom. The curriculum will build upon SEI’s existing and successful curriculum, but will incorporate the web tool so classrooms can develop energy action plans, track their progress towards achieving energy reduction goals, and challenge other classes to accomplish energy reduction targets. The PEI team has developed a portal specific to the schools program

that will facilitate these activities. In addition to this curriculum, students will be provided with “Energy Savings Kits,” including light, DIY efficiency measures (high performance shower heads and faucet aerators, CFL bulbs, and information on how to save energy through behavioral choices.)

Neighborhood Canvassing

The PEI team will work with local partners to target high energy consuming neighborhoods with canvassing teams. These teams will go door to door offering in home consultations for households, utilizing the web tool as a primary interface for communicating opportunities. The objective will be to develop an account for the homeowner via the web tool where they can start an action plan and track progress towards accomplishing energy reduction targets. This will also provide an opportunity for ongoing communication between the homeowner and the Program, for example, to identify rebates that may be a good fit or neighborhood events that may be of interest to the participant.

Additional outreach funds will be focused primarily on building awareness of MEA demand reduction services and driving community members to MEA energy efficiency web services through the following channels:

- MEA website
- Customer direct mail and electronic communications
- Homeowner workshops
- Contractor outreach and support
- Community event participation at approximately 200 local events annually
- Printed and electronic media
- MEA social media

ii. Search Engine Marketing

Search engine marketing (SEM) through search engine optimization (SEO) techniques to attract more local web users to the MEA site and services.

iii. Website Content Customization

The website is a critical tool to move consumers from a state of being merely interested in learning more about the Program, to actually contacting a contractor. The site will include a secure contractor portal for listing and update of company information as well as access to relevant program information for the contractor. MEA staff will have secure

access to the on-line content management system enabling prompt action for customer interface and website updates.

Table 11: MEA Marketing Activities

| Task | Description | Objective |
|------------------------------------|---|---|
| Homeowner outreach programs | Creative outreach programs with help of service partners to stimulate demand reduction activities in MEA’s service area. | Connect directly with homeowners through neighborhood canvassing, schools, and events. |
| Social and Search Engine Marketing | Maximize results in attracting consumers to the website through integration with social tools and search engine optimization. | Increase awareness, website visits, community connection and demand reduction through social tools. |
| Website Customization | Enable content management for immediate update capability by MEA program stakeholders. | Provide local, custom flavor to website; provide forum for local programs and ideas to be promoted. |

i) Sub-Program Specific Training

On-line (free) training and videos for program staff and contractors regarding administration features for social marketing, reporting, and content management. In addition, videos and on line training will be provided for contractors, staff and consumers.

j) Sub-Program Software and/or Additional Tools

The following software features will provide the infrastructure for the Residential Utility Demand Reduction sub-Program:

i. Consumer Engagement Software Tools:

- **Information Aggregators:** Aggregates information from numerous government and public sources and organizes the information to make it easy for customers to understand, and take beneficial actions.
- **Utility System Optimizer:** Outputs an action plan for property owners segmented by utility bill, health/comfort, or green factors. The action plan is a priority list of behavior, simple do-it yourself, or retrofit measures designed to reduce utility demand.
- **Finders:** Access applicable rebates, qualified contractors, and financing (if required) for the custom list of measures.
- **Social Networking Facilities**

- **Assemblers:** Assembles groups with similarities to organize for group action (i.e. group discount purchases)
- **Compare & Compete:** Compare with neighbor or similar building structures. Competition tools to disseminate via schools, social media groups, and local governments.
- **Project Status/Alert Tools:** Project management, energy management and monitoring tools.

ii. Administrative Tools:

MEA will have a back-end system with features for the following administrative functions: Campaign management, program performance tracking, consumer analysis, and rebates and awards administration.

k) Assessment Incentive Program

i. Pre-implementation audit required Yes No N/A

ii. Post-implementation audit required Yes No N/A

l) Audit Incentives

Table 12: Post-implementation Audits

| Levels at Which Program Related Audits Are Rebated or Funded | Who Receives the Rebate/Funding (Customer or Contractor) |
|---|---|
| N/A | No direct rebates offered in this program |

m) Sub-Program Quality Assurance Provisions

Table 13: Quality Assurance Provisions

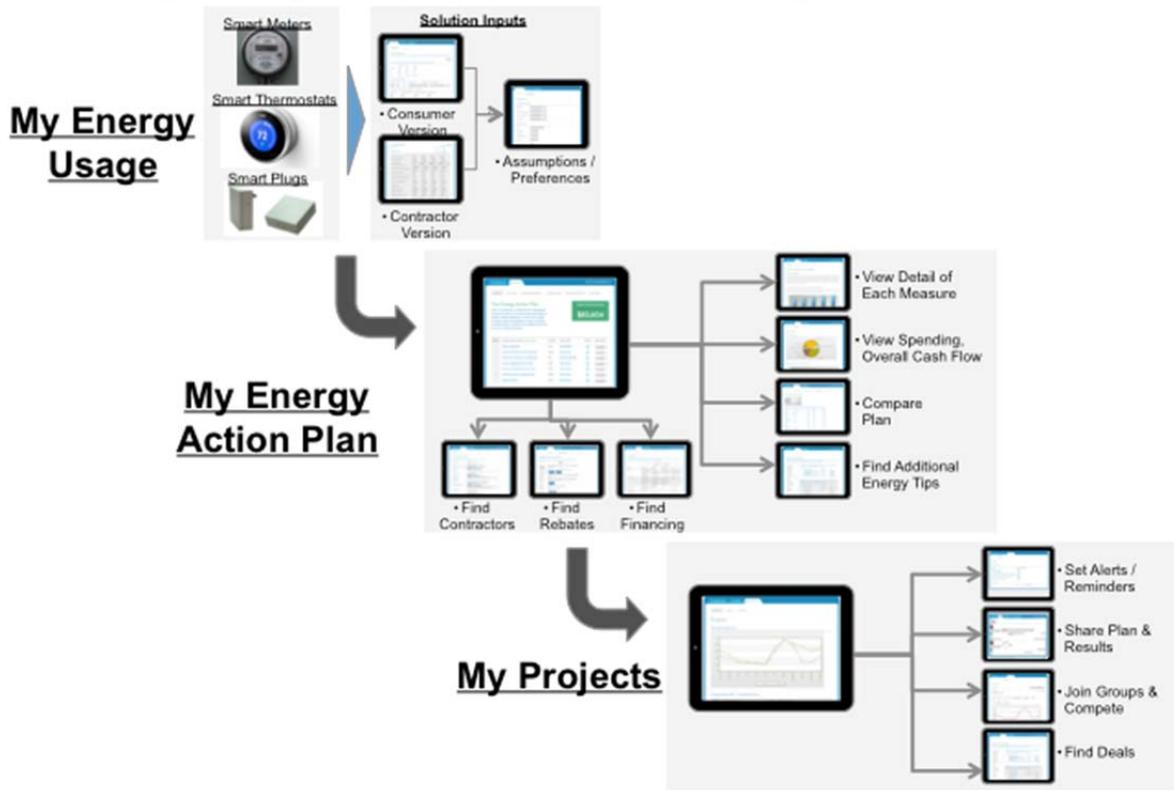
| Program Element | QA Requirements | QA Sampling Rate (Indicate Pre/Post Sample) | QA Personnel Certification Requirements |
|--------------------------|---|--|--|
| Software Database | Measure database to ensure it is up to date with accurate costs per measure | 100 % pre/post | MEA staff in Energy Efficiency Division |
| | Contractor list holds valid license and meets eligibility requirements | 100 % pre/post | MEA staff in Energy Efficiency Division |
| | Rebates list accurate and up to date | 100 % pre/post | MEA staff in Energy Efficiency Division |

n) Sub-Program Delivery Method and Measure Installation /Marketing or Training

N/A

o) Sub-Program Process Flow Chart

Figure 1: Single Family Utility Demand Reduction Program Process Chart



p) Cross-Cutting Sub-Program and Non-IOU Partner Coordination

Table 14: Cross-cutting Sub-Program and Non-IOU Partner Coordination

| MEA Single-Family Sub-Program | | |
|---|--|--|
| Other MEA Sub-Programs | Coordination Mechanism | Expected Frequency |
| Multi-Family | Campaigns for all residential (SF and MF). Tools can be used for both SF and MF. | School or event competitions; if tenant receives direct install services |
| Financing (OBR) | Software workflow | If retrofit required and financing is desired by consumer |
| Coordination Partners Outside CPUC | Coordination Mechanism | Expected Frequency |
| Non-MEA Financing Programs for SF | Project referrals, meetings, other regular communication | Quarterly or as needed |
| Local Workforce Investment Boards | Meetings, other regular communication | Quarterly or as needed |
| Community Based Organizations, Religious Institutions, Educational Institutions | Meetings, other regular communication | As needed as part of marketing efforts |

q) Logic Model

The MEA Single-Family Utility Demand Reduction Program builds largely upon experience in Sonoma County conducting program activities and pilots in support of the Sonoma County Energy Independence Program (SCEIP) and Energy Upgrade California (EUC) from 2009-2012. These programs supported the PG&E Whole House Program, SCEIP, and Energy Upgrade California through marketing, contractor training, customer support, additional incentives, professional outreach, and the development of a one-stop web resource for consumer engagement, contractor support, and administration activities. Through these activities and experiences, MEA has identified strategies for addressing market barriers for its energy efficiency programs. The market barriers are described above.

In sections b, c, d, and e, the desired outcome of the MEA Single-Family Program is to address these significant market barriers by:

- Increasing awareness through stimulating outreach programs with web services that assist consumers in reducing costs of energy by altering their behavior.

- Providing a web service that:
 - Encourages activity by aggregating relevant energy efficiency information sources
 - Makes visible priority actions for consumers and enable them to take actions through connected services to local service providers
 - Organizes common interest groups such as MEA single-family, schools program participants, or other stakeholders through social network tools
 - Provides tools to support local contractor activities
 - Facilitates participation in on-bill repayment programs
 - Provides program oversight of project performance and campaign management

- Lowering cost, education, and process barriers to participating in the PG&E Whole House Program by providing assessment incentives, conducting broad awareness and targeted customer outreach, and providing an independent third party to advocate for the customer.

- Equipping contractors with the skills to successfully penetrate the market and navigate the complicated energy efficiency program landscape while providing quality services to clients through training and mentoring activities.

11. Additional Sub-Program Information

a) Advancing Strategic Plan Goals and Objectives

Table 15: Strategic Plan Alignment

| MEA Single--Family Program Alignment with CA Long Term Energy Efficiency Strategic Plan | | |
|--|---|---|
| Residential | | |
| Strategy Number | Strategy | MEA Single Family Utility Reduction Program Strategy |
| 2-2 | Promote effective decision-making to create widespread demand for energy efficiency measures | This is a key element of MEA Single Family program. MEA will conduct broad outreach and awareness campaigns to customers and provide support around decision making through software. |
| 3-2 | In coordination with Strategy 2-2 above, develop public awareness of and demand for highly efficient products | See 2-2 above. |
| DSM Coordination and Integration | | |
| Strategy Number | Strategy | MEA Single Family Utility Reduction Program Strategy |

| | | |
|--|--|--|
| 1-1 | Carry out integrated marketing of DSM opportunities across all customer classes | MEA marketing efforts will be coordinated with IOU Whole House Program, Local Government Partnerships, Weatherization Programs, and other DSM programs available in the region. |
| Marketing, Education and Outreach | | |
| Strategy Number | Strategy | MEA Single Family Utility Reduction Program Strategy |
| 1-3 | Use social marketing techniques to build awareness and change consumer attitudes and perceptions | The innovative MEA marketing campaign will build upon initial market research conducted, and draw from innovative partner companies to access customers through community based organizations, schools, local companies, religious institutions and other organizations as drivers of energy efficient behaviors. Campaigns will also use online social networking platforms to stimulate activity through online competition facilities, and enable customers with common interest to share information on how they can reduce utility demand and save money. |
| 1-5 | Conduct public communications campaigns, alongside longer-term efforts supporting school education initiatives to deliver the efficiency message | See 2-2 and 1-3 above. MEA will coordinate with BBP Pilots that activate schools as “Energy Ambassadors” to spread energy efficiency message to students and parents. |
| Local Government Goals | | |
| Strategy Number | Strategy | MEA Single Family Utility Reduction Program Strategy |
| 4-4 | Develop local projects that integrate energy efficiency, DSM, and water/wastewater end uses | MEA software service will promote cross-resource DSM offerings as well as installations of water conservation measures. BayREN marketing will be coordinated with cross-resource BBP pilots such as On-Water Bill Financing in Sonoma County. |
| 5-2 | Develop model approaches to assist local governments participating in regional coordinated efforts for energy efficiency, DSM, renewables, green buildings, and zoning | MEA and partners will engage local governments at multiple levels as member agencies to support outreach campaigns and ensure local government is aware and encouraging other state-wide DSM program offerings. |

b) Integration

i. Integrated/Coordinated Demand Side Management

Through software and outreach services, MEA will continuously identify opportunities to promote indoor and outdoor water efficiency, green product rebates, and other programs to consumers. MEA will promote cross-program services through the integrated, one-stop online service for customers to learn about all IOU, Marin County, City of Richmond, water utility, and other local DSM offerings. The online service will also help property owners optimize their energy and water use based on their property footprint and personal preferences. In addition, a significant part of homeowner marketing will be cross promotion efforts between MEA and Marin Municipal Water District programs to ensure that, whether through media, collateral, web, or targeted outreach, homeowners are made aware of all program options and provided opportunities to participate in all relevant programs. Any demand side measures (DSM) accomplished through this integration of DSM program information will be tracked and reported separately, and will not be included in energy savings reported for the Marin Energy Authority efficiency portfolio.

Table 16: Non-EE Sub-Program Information

| Single-Family Retrofit Sub-Program | | |
|--|-------------------------------|---|
| Non-EE Sub-Program | Budget | Rationale and General Approach for Integrating Across Resource Types |
| MMWD and NMMWD Utility Indoor Water Efficiency Incentives Programs | Varies depending on incentive | Cross promotion |
| Local Government Outdoor Water Efficiency Programs | Varies depending on incentive | Cross promotion |

c) Leveraging of Resources

The program will leverage single-family program infrastructure that was developed through ARRA funding, including:

- Software Tools:
 - Sonoma County Action Planning tools
- Trained raters/auditors

d) Trials/ Pilots

MEA will coordinate closely with 2013 pilot efforts conducted by MEA partners. These include the On-Water Bill Financing Pilot conducted through Sonoma County (www.windsorefficiencypays.com), and the community-based social marketing program Energize for the Prize in Alameda County (www.energizefortheprize.org). Results from these pilots will inform marketing and other offerings to be conducted in 2014 and beyond.

e) Knowledge Transfer

MEA staff and partners will regularly share program outcomes, benchmarks and milestones, and will also track challenges, lessons learned, and necessary adjustments for all technical, administrative, and marketing aspects of program implementation. These data sets will be organized and transmitted to local government partners operating similar programs (e.g. County of Marin, City of Richmond, County of Sonoma); through regular meetings of local government forums (such as the Governor's Office of Planning and Research, the LGSEC, Local Government Commission, Urban Sustainability Directors Network, etc.); regional NGO and institutional partners, and through program updates provided to Commission and program partners.

12. Market Transformation Information

a) Market Transformation Objectives

The market transformation objectives of the MEA Single-Family Retrofit Program are the following:

- Develop increased general knowledge and awareness amongst homeowners of energy efficiency practices and benefits, and encourage a long-term transition towards energy efficient behaviors and purchases
- Create high level of awareness of energy efficiency among relevant professional industries, including real estate, building trades, manufacturing/supply, and other industries
- Streamlined coordination of DSM programs with PG&E, local governments, and other organizations
- Development of a skilled and motivated professional building workforce that makes energy efficient best practices standard practice in service delivery.

b) Market Description

Market actors include:

- **Building Performance Contractors** - Deliver Whole House Energy Retrofits to Residential Property Owners, Participating Contractors in Energy Upgrade California
- **General Contractors** - Oversee delivery of residential remodels, other installation work; May perform direct installation or subcontract to specialty contractors. May or may not be associated with whole house performance upgrades and Energy Upgrade California
- **Specialty Contractors** - Have specialty license in HVAC, Insulation and deliver installation. May also perform whole house and general contracting duties. May or may not be associated with whole house performance upgrades and Energy Upgrade California
- **Green Building Professionals** - Building professionals, including general and specialty contractors, who are trained in delivering or assessing technical work that incorporates additional green building concerns beyond energy efficiency, such as outdoor water efficiency, indoor air quality, resource conservation, and low-impact development/site water management. Serve as private contractors or on behalf of green building rating and incentive programs.
- **Residential Property Owners** - Owners of property desiring to reduce utilities and resulting costs, increased health and comfort, and/or greenhouse gas reductions.
- **PG&E** - Operated energy efficiency incentive programs, primarily Energy Upgrade California. Conduct contractor management, quality assurance, program administration for Energy Upgrade California.
- **MEA** - Implement energy efficiency programs in MEA service area. Support PG&E energy efficiency programs through professional and customer outreach. Coordinate amongst local actors to ensure enforcement of codes. Pilot energy efficiency programs. .
- **Workforce Training Organizations** - Marin community colleges, Marin City Community Development Corporation RichmondBUILD , Marin Workforce Investment Boards, and other nonprofit programs that provide job training and placement services for new professionals.
- **Non-Energy Efficiency and Conservation Programs** - County of Marin, Marin Municipal Water District (MMWD), North Marin Municipal Water District (NMWD), and other programs that promote and incent resource conservation, air quality, green products, and other non-energy efficiency efforts.
- **Other Relevant Professional Trades** - This includes all professional industries and associations that may affect property owner and building professional choices, including real estate professionals, product manufacturers and

suppliers. These actors affect behavior of their clients through the services they offer and products they provide.

c) Market Characterization and Assessment

Many of the market barriers associated with the single-family energy efficiency and whole house markets are described above in sections b, c, d and e. The following market characterization and assessment is based on experiences of MEA partners and by *Recommendations for Energy Upgrade California in the Bay Area* report dated April 11, 2011.

i. Homeowner Awareness and Behavior

Most homeowners are not aware of their energy and water use behavior patterns and how they could save money, increase comfort, and reduce negative impact on the environment through energy efficiency. Building broader awareness and deeper knowledge will be key to future program implementation and market transformation.

Also, homeowners vary in their level of education and their primary motivation for undertaking energy and water efficiency work in their homes, including saving money, increasing comfort and health, and protecting the environment (among others). Given this, as well as the demographic, economic, and ethnic diversity in the MEA service area, there is no one marketing approach that will reach or resonate with everyone. There is a need to market to different segments with different strategies to include social media, school programs, neighborhood canvassing, public events, radio, television, workshops, etc. Such multi-faceted marketing will be employed in the Program. To maximize marketing success and increase action by consumers, MEA will leverage the character of the community, and communicate through local events, and trusted messengers.

Today, there's a lack of coordinated efforts for marketing, education and outreach to provide an integrated approach for single-family utility demand reduction programs. Additionally, awareness amongst other industry actors is relatively low as energy/water efficiency considerations have not yet entered into standard business practice for many relevant market actors. Through the Single-Family Utility Demand Reduction Program, MEA partners will engage these actors through cross-promotion and marketing efforts so energy efficiency can be a core consideration.

Other market barriers as described in the Sub-Program Description and Theory, including general lack of awareness, low visibility of utility demand reduction opportunities, and high cost of energy, has limited customer interest in participating in

energy efficiency programs offered (i.e. EUC and PG&E programs) with no coordinated solution being provided to address many of these barriers.

ii. Coordination of DSM Programs

The ARRA period prompted a degree of collaboration between actors by helping establish relationships between ARRA program participants in Marin County and Richmond.

Despite this initial collaboration, there are still significant challenges associated with coordination and confusion among the actors in the marketplace. This in turn causes confusion to consumers. Notable examples include the coordination of marketing and outreach messages among programs, coordination of incentive program offerings and messaging around those offerings, cross promotion of programs and benefits of water/energy offerings, and sharing of program data amongst organizations for program evaluation. It is clear that there is a need for increased and continued coordination and education between the actors, and additional facilities and tools for increase customer awareness that will limit confusion, and stimulate action for modifying behavior and retrofit activity.

d) Proposed Interventions

Proposed interventions have been detailed throughout this Sub-Program description. In addition, the Financing Pilots Sub-Program (MEA04) includes proposed interventions to address market trend formation. These proposed interventions are summarized in the table below.

Table 17: Market Transformation Barriers and Interventions

| Barrier | Proposed Intervention |
|--|---|
| Lack of customer awareness | Broad and targeted marketing campaigns |
| Visibility of opportunities for cross utility demand reduction | One stop resource for education, analysis, and connection with service providers to take action |
| Required audit and audit costs | Assessment incentives |
| Program cost barriers | OBR financing (MEA04) |

e) Logic Model

Targeted marketing campaigns and the availability of integrated utility demand reduction tools combined with incentive programs that reduce audit costs and provide

retrofit financing, will significantly increase actions through behavior and energy/water conservation retrofits.

f) Market Transformation Indicators (MTIs) and Evaluation Plans

Resolution E-485 lists adopted Market Transformation Indicators for the 2010-2012 Energy Efficiency Portfolio. To ensure consistency with adopted Market Transformation Indicators and Program Evaluation strategies, MEA proposes the following Market Transformation Indicators:

- Costs to customers of whole house retrofits, including costs of materials, equipment, and labor.
- The proportion of households that elect not to perform comprehensive energy upgrades due to various barriers such as lack of available financing, lack of qualified contractors, undesirable payback period, lack of urgency, “hassle” of upgrade, or uncertainty that the upgrades will provide appreciable benefit.

Program evaluation will be conducted by Energy Division of the CPUC according to standard EM&V practices in place and established by the Commission. MEA will participate in data collection and interpretation activities, as needed according to Commission Rulings and Energy Division Guidance.

VII. Sub-Program MEA04 – Financing Pilots

1. Sub-Program Name: MEA Energy Efficiency Financing Program
2. Sub-Program ID number: MEA04
3. Type of Sub-Program: Core Third Party Partnership
4. Market sector or segment that this sub-program is designed to serve:
 - a) Residential
 - i. Including Low Income? Yes No.
 - ii. Including Moderate Income? Yes No.
 - iii. Including or specifically Multi-family buildings Yes No.
 - iv. Including or specifically Rental units? Yes No.
 - b) Commercial (List applicable NAIC codes: _____)
 - i. 54 – Professional, Scientific and Technical Services
 - ii. 445120 – Convenience Stores
 - iii. 7225 – Restaurants
 - c) Industrial (List applicable NAIC codes: _____)
 - i. See above for Commercial; plus
 - ii. 236210 – Industrial Building Construction
 - d) Agricultural (List applicable NAIC codes: _____)
 - i. Included in Commercial/Industrial
5. Is this Sub-Program primarily a:
 - a) Non-resource program Yes No
 - b) Resource acquisition program Yes No
 - c) Market Transformation Program Yes No
6. Indicate the primary intervention strategies:
 - a) Upstream Yes No
 - b) Midstream Yes No
 - c) Downstream Yes No
 - d) Direct Install Yes No
 - e) Non Resource Yes No
7. Projected Sub-Program Total Resource Cost (TRC) and Program Administrator Cost (PAC)
 - i. TRC = 0.07 PAC = 1.50.

Program Description:

The high up-front installation costs for energy efficiency have prevented the market from responding on a broad scale to energy saving opportunities. MEA will pilot two innovative programs to ensure that funding is available and that retrofits are financially competitive and accessible to a broader and more diverse range of property owners for each of MEA's direct service elements. The two programs are, 1) On-Bill Repayment (OBR) Program and, 2) Standard Offer (SO) Energy Efficiency pilot program. The funding for this Sub-Program will be used to help build the OBR and SO frameworks to enable financing of underserved markets and achieve upgrades cost-effectively in underserved markets.

The OBR program will streamline loan application and enrollment processes, offering customers and contractors continuity, consistency and support to a wider, deeper reach for energy efficiency retrofits, and will itself be leveraged with other MEA sub-programs and sub-program elements (such as Workforce Education and Training, software services, and other customer incentives).

To leverage private capital, the OBR program will allow private banks or financing entities to provide financing to building owners, with the repayment charge placed as a line item on the bill. In particular, MEA will partner with organizations implementing financing pilots (including OBR) that can address underserved markets – including moderate and middle income homeowners, owners of multifamily housing serving affordable populations, and owners of small businesses without easy access to financing. Program funds would be used to help build the OBR framework, including use as OBR-related credit enhancement for programs meeting the needs of underserved borrowers, such as moderate/middle income homeowners. The OBR Program will allow the customer to avoid the up-front cost associated with substantial energy upgrades and instead allow pay-back to occur on the monthly electricity bill.

The MEA OBR Program relies upon existing billing arrangements between PG&E and MEA to implement, as PG&E handles the billing interface for the MCE⁵ product. This billing relationship is defined in Electric Rule 23, Community Choice Aggregation Service⁶. This tariff provides the process under which charges associated with the MCE clean energy program will be transmitted to PG&E and relayed on the PG&E billing

⁵ MCE Clean Energy, or MCE, is the term for the electricity product of the Marin Energy Authority.

⁶ Electric Rule 23 can be found at: http://www.pge.com/tariffs/tm2/pdf/ELEC_RULES_23.pdf.

statement. The existing arrangement under which PG&E provides this service to MEA allows for the addition of up to 25 line items. To avoid adding burden to the PG&E billing system, MEA has designed the OBR billing process to be consistent with the requirements of Electric Rule 23, and has accepted the limitations that this arrangement will place on the OBR program. Because of this relationship, the MEA OBR Program is distinct in a few ways:

1. The MEA OBR Program does not include provisions for utility shut off as a result of non-payment.
2. The MEA OBR Program is initially only available to MCE customers.
3. The OBR charges are subject to the same billing irregularities that occur with the placement of energy charges on the PG&E bill⁷.

MEA has also chosen not to pursue transferability of the debt with sale or transfer of the property. Upon a change in ownership of the account with which the debt is associated, for example with sale of the property, the OBR obligation comes off of the energy bill and becomes due.

In addition to the customer-based financing options, MEA will also pilot a standard offer for energy efficiency procurement. This program will be modeled after similar programs in place in the Texas market and in the New England market. Rather than targeting property owners, this program will be tailored to third party vendors who bid energy savings to MEA at a fixed price. This program will be piloted as a potential way to reduce MEA resource adequacy procurement. Third party vendor would work directly with customers to obtain savings and would receive payment upon verification of savings.

8. Projected Sub-Program Budget

⁷ The irregularities, and the strategies designed to overcome them, are further clarified on page 84 below, in the Multifamily and Small Commercial program section, under the heading *Financial Terms*.

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

| Sub-Program | Program Year | | |
|------------------------------------|--------------|-----------|-------------|
| | 2013 | 2014 | Total |
| Admin (\$) | \$36,000 | \$26,000 | \$62,000 |
| General Overhead (\$) | \$14,000 | \$11,000 | \$25,000 |
| Incentives (\$) | | | |
| Direct Install Non-Incentives (\$) | \$580,000 | \$580,000 | \$1,160,000 |
| Marketing & Outreach (\$) | \$24,000 | \$21,000 | \$45,000 |
| Education & Training (\$) | \$4,000 | \$4,000 | \$8,000 |
| Total Budget (\$) | \$658,000 | \$642,000 | \$1,300,000 |

9. Sub-Program Description, Objectives and Theory

a) Sub-Program Description and Theory

i. Sub-Program – MEA Financing Elements:

On-Bill Repayment Program for Multi-family and Small Commercial

Table 2: Projected Sub-Program Budget, by Calendar Year

| Multi-Family and Small Commercial On-Bill Repayment | Program Year | | |
|---|--------------|-----------|-----------|
| | 2013 | 2014 | Total |
| Admin (\$) | \$18,000 | \$13,000 | \$31,000 |
| General Overhead (\$) | \$7,000 | \$5,500 | \$12,500 |
| Incentives (\$) | | | |
| Direct Install Non-Incentives (\$) | \$273,500 | \$273,500 | \$547,000 |
| Marketing & Outreach (\$) | \$10,000 | \$10,000 | \$20,000 |
| Education & Training (\$) | \$3,000 | \$3,000 | \$6,000 |
| Total Budget (\$) | \$311,500 | \$305,000 | \$616,500 |

One of the impediments to participation in energy efficiency programs is the relatively large upfront cost, especially by building owners who have relatively little access to private or low-cost financing. These include moderate and middle income homeowners, as well as owners of multifamily apartment buildings, and small businesses. MEA plans to address this up-front cost obstacle with the On Bill Repayment (OBR) program.

Program Design

The MEA OBR Program for Multi-family and Small Commercial is designed to complement the existing MEA programs for Multi-family and Small Commercial customers. The program will rely upon the energy evaluators to make the project applicants aware of the financing opportunity. A simple financial analysis will be

included in the energy evaluation reports to provide the project applicant with a snapshot of the fiscal impact of pursuing financing to complete the full recommended scope of work.

Eligible participants include multi-family and non-residential building owners in good standing. River City Bank will underwrite On-Bill Repayment Applicants using underwriting criteria at their discretion. To qualify for financing, the project must include measures recommended by the energy evaluator and approved by Energy Division. Financing will be provided for total project cost, less any rebates, and will be provided only upon successful completion of final project inspection as provided by the MEA Multi-Family and Small Commercial program implementers.

Financial Terms

MEA is working with River City Bank, a mid-sized bank based in the Sacramento, CA region, for the Multi-Family and Small Commercial On-Bill Repayment Program. River City Bank has agreed to make a loan portfolio of \$3.65 million available to MCE customers during the 2013 – 2014 calendar years, subject to successful completion of an initial 6 month pilot period during which the total loan commitment will not exceed \$500,000. Multi-Family and Small Commercial property owners who are current MCE customers are eligible for the program; applicants will be subject to an underwriting process conducted by the lender. In the case of property owner / tenant relationships, the loan will be placed on the property owner energy account. Loans will be secured by a UCC-1 Fixture Filing, which River City Bank will file. A UCC-1 Fixture Filing provides notification that the holder of the Filing, in this event River City Bank, has a security interest in certain fixtures of the property considered 'attached' to the property, and can reclaim those fixtures in the event of default, foreclosure, or bankruptcy. The filing takes priority over pre-existing voluntary liens and deeds of trust encumbrances unless River City Bank agrees to subordinate, in which case the fixture filing would be subordinated to a junior lien status. A properly recorded fixture filing survives foreclosure and bankruptcy, unless River City Bank has agreed to subordinate.

MEA has negotiated the following terms with River City Bank for this program:

| Table 3. Multi-Family and Small Commercial Program Terms | |
|--|-----------------------|
| Loan Size | \$10,000 - \$265,000* |
| Interest Rate | 5% Fixed |
| Loan Terms | 5-10 Years |
| Fees | \$250 |
| Loan Loss Reserve | 15%, up to \$547,000 |
| *Larger loans available upon special consideration by River City Bank. | |

MEA will utilize incentive dollars in the form of a loan loss reserve to support the total pool of loans. The loan loss reserve will sit in an account at River City Bank held by MEA, and can only be drawn upon in certain pre-defined circumstances. The loan loss reserve is eligible to be drawn upon in the event of a default, which is defined as 90 days of non-payment to the loan, and will support the recovery of up to 100% of the loan amount, including interest and fees⁸. In the event of a default, the loan charge will be removed from the bill and River City Bank will presume responsibility for collections. If the collection effort is successful, River City Bank will deposit recovered funds, less any collection and legal fees, back into the loan loss reserve account.

The loan loss reserve account also includes a \$5,000 “carve out” to be available to either MEA or River City Bank to buffer against billing irregularities. This is necessary as MEA’s billing system is handled through PG&E. Occasionally, an MCE charge will need to be canceled and rebilled due to inaccurate data from PG&E or due to an error in PG&E’s billing system. When this occurs, the MCE charge will not be included on the PG&E bill, resulting in the OBR charge not being included in the bill. In this event, MEA or RCB may draw upon the “carve out” to temporarily cover the cost of the missed payment. At the end of every 30 day period, MEA and RCB will revisit the status of OBR customer accounts and distinguish any true delinquencies from those caused by billing irregularities; at this point, the “carve out” will be replenished.

⁸ The actual amount of the loss which may be recovered by River City Bank is currently the subject of negotiations in the Operating Agreement. The 100% cap has been provided as an upward bound. The Board approved Operating Agreement will be provided to the Energy Division of the CPUC when available.

OBR Program In Support of Residential Single Family Program

Table 4: Single Family OBR Program Budget, by Calendar Year

| Single Family On-Bill Repayment | Program Year | | |
|---|------------------|------------------|------------------|
| | 2013 | 2014 | Total |
| Admin (\$) | \$9,000 | \$6,500 | \$15,500 |
| General Overhead (\$) | \$3,500 | \$2,750 | \$6,250 |
| Incentives (\$) | | | |
| Direct Install Non-Incentives (\$) ⁹ | \$250,000 | \$250,000 | \$500,000 |
| Marketing & Outreach (\$) | \$9,000 | \$9,000 | \$18,000 |
| Education & Training (\$) | \$1,000 | \$1,000 | \$2,000 |
| Total Budget (\$) | \$272,500 | \$269,250 | \$541,750 |

The OBR Residential Program will allow the customer to avoid the up-front cost associated with substantial energy upgrades by allowing pay-back to occur on the monthly electricity bill. The single family OBR Program will be available to single family homeowners who are current customers of the MCE program. A loan loss reserve (LLR) will be used to help customers access the available financing by encouraging the bank to lend to lower FICO's than it otherwise would; however, applicants will still be subject to an underwriting review by the lender. The loan loss reserve will be available to reimburse the bank for defaults on loans originated pursuant to the OBR program, and will cover losses up to 100% of the loan amount including any interest and fees¹⁰. Leveraging the LLR acts to mitigate the market's credit barrier. The funds requested under the MEA OBR Sub-Program would facilitate financing for an additional 500 single family energy upgrade loans worth approximately \$5 million. Another fundamental objective governing the development of the OBR Program is utilizing and leveraging these mechanisms as financing options for underserved communities and attaining greater socio-economic equity in the implementation of energy efficiency programs.

Program Design

The MEA OBR Program seeks to support existing single family residential rebate programs, specifically the Energy Upgrade California program. Energy Upgrade California Basic and Advanced Projects will qualify for financing. The single family

⁹ These are the funds for the loan loss reserve, as described in the narrative.

¹⁰ The actual amount of the loss which may be recovered is the subject of negotiations in the Operating Agreement. The 100% cap has been provided as an upward bound. The Board approved Operating Agreement will be provided to the Energy Division of the CPUC when available.

program will also allow for OBR to be used for high efficiency reactive measures, specifically HVAC and domestic hot water equipment that is certified by the Air Conditioning, Heating, and Refrigeration Institute (AHRI). The program may entertain emerging technologies that are outside of the AHRI database, but such measures will be brought to the Energy Division of the CPUC for review in advance consistent with the custom project review methodology. All projects will be required to verify that a permit was pulled, and projects involving combustion appliances may be required to undergo specific testing and verification per the legal requirements of the California Building Code¹¹.

Financial Terms

| Table 5. Anticipated Single Family Program Terms | |
|---|--|
| Loan Size | \$2,500 - \$30,000* |
| Interest Rate | 6.5% Fixed |
| Loan Terms | 5-10 Years |
| Fees | \$50 Application Fee \$150 Documentation Fee (can be financed) |
| Loan Loss Reserve | 700+ Fico – 5% 671 – 700 FICO – 10% 670-640 FICE – 15% Total cap of \$500,000 |
| *Larger loans available upon special consideration by the lender. | |

Legal Issues Associated with the On-Bill Repayment Program

The OBR program raises many interesting legal issues regarding the role of the utility in a financing program and whether or not that role triggers disclosure or legal compliance requirements. MEA legal counsel has investigated this issue at the request of MEA and has determined that the applicability of these federal and state requirements depends

¹¹ Per the existing building code, central HVAC replacements in climate zone 2 would be required to undergo duct testing and sealing. In January of 2014, these requirements will apply statewide.

largely on the role MEA plays in relation to the financing. MEA legal counsel has advised that because MEA would be acting solely in the role of billing administrator the financial institution bears the burden of compliance with the applicable legal requirements.

MEA is still working to establish relationships with specific financial institutions, and therefore some program design questions remain unresolved at this point. However, MEA has chosen to design the program and the program outreach in such a way as to avoid triggering the various state and federal requirements that apply to the consumer lending market. MEA is working closely with legal counsel as the program develops, and will inform the CPUC as any changes to program design arise that may trigger the need to comply with licensing or disclosure requirements.

Standard Offer Procurement in support of MEA Hard-to-Reach Customers

Table 6: Standard Offer Sub-Program Budget, by Calendar Year

| Standard Offer Program | Program Year | | |
|--|--------------|----------|-----------|
| | 2013 | 2014 | Total |
| Admin (\$) | \$9,000 | \$6,500 | \$15,500 |
| General Overhead (\$) | \$3,500 | \$2,750 | \$6,250 |
| Incentives (\$) | | | |
| Direct Install Non-Incentives (\$) ¹² | \$56,500 | \$56,500 | \$113,000 |
| Marketing & Outreach (\$) | \$4,000 | \$2,000 | \$6,000 |
| Education & Training (\$) | 0 | 0 | 0 |
| Total Budget (\$) | \$73,000 | \$67,750 | \$140,750 |

In addition to the customer-based OBR finance option, MEA will also pilot a standard offer for energy efficiency procurement. This program will be modeled after similar programs in place in the Texas market and in the New England market. Rather than targeting property owners, this program will be tailored to third party vendors who bid energy savings to MEA. This pilot will test if this program can be used as a way to reduce MEA resource adequacy procurement requirements.

The Standard Offer will establish a cost to be paid for demand reduction in the MEA region and will provide the opportunity for third party vendors to submit a bid to sell the demand reduction to MEA. To achieve the demand reduction the third party will

¹² These are the funds for the loan loss reserve, as described in the narrative.

need to identify cost-effective opportunities and work directly with account holders to ensure completion of measures.

Under the Standard Offer program MEA pays for the demand reduction only after the third-party vendor has verified and delivered the proposed savings. This approach transfers risk to the implementer, as they are in the best position to manage the risk.

The Standard Offer Sub-Program is designed to create competition in the marketplace for energy efficiency projects. The program will be designed to lead third party vendors away from market sectors that have already been served, and prompt them to seek hard to reach sectors in the community who are not already being served. The Standard Offer Sub-Program structure encourages innovation and new approaches that will yield energy savings that are currently untapped.

Due to the small size of the MEA program, a traditional procurement process may not be the right avenue, as it will create high transactional costs for a small program size and could deter participation. MEA seeks instead to either solicit input via a Request for Information / Request for Offer, and / or to develop the program via a series of informal discussions with subject matter experts, market actors, and property owners from the target market sector. If the latter approach is taken, MEA will host several publicly noticed meetings and conduct specific outreach to organizations such as the Marin Agricultural Land Trust to ensure the meetings have open participation and include the relevant stakeholders.

MEA anticipates offering two different avenues for participation in this program. One avenue may be targeted specifically at the agricultural sector. This sector was chosen due to the lack of a consistent, comprehensive agricultural energy efficiency program in the existing portfolio and due to the strong agricultural nature of Marin County. Additionally, the small scope of the program may be a good fit for the agricultural sector, which has fewer accounts than comparative sectors (for example, commercial and residential.) However, there may still be interest and opportunity for commercial property participation, so MEA chooses to leave this open for discussion and consultation with stakeholder groups.

Specific program terms, such as pricing, contract term, structure of EM&V arrangements, and eligible measures are purposefully left open to be addressed via stakeholder discussions. MEA is targeting a price of \$0.10 / kWh reduction and \$1.00 / therm reduction, but will need to stay competitive relative to the other available rebate programs in the energy efficiency portfolio. MEA also anticipates capping total contributions from any single project at 50% of the available pool of funding, to create

the maximum opportunity for smaller contractors and projects to be viable in this program. MEA will amend its PIP to include these program details once they are available, and agrees to not solicit projects or enter into agreements until such information has been included in the PIP and Energy Division of the CPUC has been given the opportunity to review.

b) Sub-Program Energy and Demand Objectives

Multifamily and Small Commercial On-Bill Repayment

MEA has allocated all savings from this sub-program into the cost savings calculations for sub-programs MEA01, MEA02, and MEA03. The costs for this sub-program are included in the E3 cost savings calculations and are reflected in the total MEA Program TRC and PAC.

Single Family On-Bill Repayment

c) Program Non-Energy Objectives

i. Quantitative program targets (PPMs):

Table 7: Quantitative Program Targets (PPMs)

| Target | 2013 | 2014 |
|--|-------------|-------------|
| Energy Efficiency Building Loans – Single Family Residential | 90 | 410 |
| Energy Efficiency Building Loans – Multi-Family | 13 | 20 |
| Energy Efficiency Building Loans – Small Commercial | 15 | 35 |
| Energy efficiency projects resulting from Standard Offer Procurement | 0 | 3 |

ii. OBR PPMs

- Generate at least \$5,000,000 in energy efficiency upgrades for single-family homes
- Complete a minimum of 500 single-family home energy efficiency upgrades financed through OBR
- Produce an average of at least 15% energy efficiency improvement in single-family home projects

- Complete energy efficiency upgrades to single-family homes encompassing at least 300,000 square feet
- Complete a minimum of 33 multi-family home energy efficiency upgrades under OBR
- Generate at least \$2,650,000 in energy efficiency upgrades for multi-family buildings through OBR program (33 upgrades with average of \$80,000 for each upgrade)
- Produce an average of at least 15% energy efficiency improvement in multi-family buildings
- Complete a minimum of 50 small commercial building energy efficiency upgrades under the Small Commercial OBR option
- Complete energy efficiency upgrades to Commercial buildings encompassing at least 750,000 square feet (50 projects with average of 1,500 square feet per project)
- Provide outreach and education to at least 500 small commercial buildings regarding the OBR program
 - iii. *Standard Offer Program PPMs*
- Provide opportunity for at least three different innovative projects
- Conduct outreach to 20 agricultural account holders in the MEA service territory

Data Tracking

An important component of verifying the success of financing to support energy efficiency programs is tracking the data necessary to quantify program success. MEA will work with a web tool vendor to develop a tracking system for the financing program, including such information required to support Evaluation, Monitoring, and Verification activities. This information will be provided to the California Public Utilities Commission per any reporting requirements specified in the Energy Efficiency Policy Manual, 4.0 (or subsequent versions) but no less frequently than annually.

d) Cost Effectiveness/Market Need / Savings Methodology

In developing the MEA Finance Sub-Program MEA reviewed relevant information to address market needs appropriately and to ensure cost effectiveness in program design. *Scaling Energy Efficiency in the Heart of the Residential Market: Increasing Middle America's Access to Capital for Energy Improvements*, published April 4, 2012 (see Appendix B) outlines the need for financing to promote broader adoption of energy efficiency strategies.

The Role Of Local Governments And Community Organizations As Energy Efficiency Implementation Partners: Case Studies And A Review Of Trends, published February 2012 (see Appendix B) outlines the need for finance programs to avoid up-front costs, and also articulates why local government organizations, like MEA, are in a strong position to operate cost-effective programs due to their relationship with the community and with partner organizations.

Both the OBR and SO Programs address stated needs for finance options and innovative approaches that are cost effective. The design of the Standard Offer program will prevent MEA from paying for additional or unanticipated costs; MEA will only pay for the demand reductions that are actually delivered to MEA.

The cost effectiveness of the MEA financing portfolio was analyzed by preparing the anticipated impact of the availability of financing on the expected participation rate. The process evaluation of the statewide On Bill Financing program found that financing was a critical factor in the decision of many participants to undergo the efficiency project¹³. However, the OBF program offered a 0% interest rate, while it is possible the MEA interest rate may be closer to 7%. The OBF Process Evaluation study includes a sensitivity analysis to determine the impact interest rate increases would have on the desire to access the financing and therefore be capable of implementing an efficiency project. The study estimates that at a 7% interest rate, 10% of the population would still be willing to pay the interest rate to access financing¹⁴.

While this analysis is specific to the small commercial sector, there is not a sufficient sample size to analyze the impact On-Bill Repayment would have on the multifamily and single family residential markets in California. As a result, MEA chooses to utilize the information from the evaluation study in estimating *ex ante* savings associated with the financing program. Based on the information above, MEA estimates that 10% of program participation would be driven by access to the On-Bill Repayment program. As a result, MEA has provided an E3 calculator which applies a 10% increase in the savings of each of the subprograms and allocates these savings to the appropriate OBR sector. The total program cost was calculated by multiplying the available credit enhancement by 10, assuming the program will leverage the credit enhancement 10:1.

¹³ Cadmus Group, March 2012. California 2010-2012 On Bill Financing Process Evaluation and Market Assessment, page 36.

¹⁴ *Ibid*, pg. 59

Measure Savings/ Work Papers

The OBR program is designed to complement existing MEA efficiency programs. All measures eligible under the existing MEA multi-family and small commercial programs are therefore eligible for OBR.

As MEA does not have a specific rebate program for the single family sector, OBR will complement the Energy Upgrade California Advanced Path and, when available, the revised Basic Path. The single family program will also allow for OBR to be used for high efficiency reactive measures, including HVAC and domestic hot water equipment that is certified by the Air Conditioning, Heating, and Refrigeration Institute (AHRI). The program may entertain emerging technologies that are outside of the AHRI database, but such measures will be brought to the Energy Division of the CPUC for review in advance for any relevant recommendations. All projects will be required to verify that a permit was pulled, and projects involving combustion appliances may be required to undergo specific testing and verification per the legal requirements of the California Building Code¹⁵.

10. Program Implementation Details

a) Timelines

¹⁵ Per the existing building code, central HVAC replacements in climate zone 2 would be required to undergo duct testing and sealing. In January of 2014, these requirements will apply statewide.

Table 8: Program Administration of Program Components

| Activity | Year | | |
|--|-----------------|-----------------------|----------------|
| | 2012 | 2013 | 2014 |
| OBR Program and SO Design | Sept 1 - Dec 31 | Sept 1 - Dec 31 | |
| Contracts w/ Banks (OBR) | Sept 1 - Dec 31 | Jan 1 – May 31 | |
| Lead Contractor Agreements (OBR) | Sept 1 - Dec 31 | | |
| Integrate OBR with MEA Customer Billing | Sept 1 - Dec 31 | Jan 1 – June 30 | |
| Target Roll Out Date, Multi-Family and Small Commercial OBR | | June 17 | |
| Target Roll Out Date, Single Family OBR | | August 12 | |
| MEA sets proposed rates (by kWh and therm) for Standard Offer energy efficiency deliveries | | February 11 – July 31 | |
| SO Outreach and contractor training | | June 1 – July 31 | |
| ECO installation | | August 1 - Dec 31 | Jan 1 - Dec 31 |
| Year –end Programs Evaluation | | 30-Nov | 30-Nov |
| Year-end Programs Reporting | | | Jan 31 |

b) Geographic Scope

The Geographic Region where the MEA Program will operate is Climate Zone 2 and 3.

c) Program Administration

Table 9: Program Administration of Program Components

| Program Name | Program Component | Implemented by MEA staff | Implemented by contractors to be selected by competitive bid process | Implemented by contractors NOT selected by competitive bid process |
|-----------------------------|---|---------------------------------|---|---|
| Financing Portfolio Program | Program Administration | Supervisory Administration | | X |
| | Project Tracking & EMV | | | X |
| | Financial Program Marketing | X | | X |
| | Assessment Incentive Program Implementation | | | X |
| | Financial Program Marketing | X | | X |
| | Financial Program Outreach – Target Markets | X | | X |
| | Program Reporting | X | | |

d) Program Eligibility Requirements

Table 10: Customer Eligibility Requirements

| Sub-Program | Eligibility Requirements |
|-----------------------|--|
| Single-Family OBR | Single-Family Detached Home |
| | Located in Marin/Richmond Region |
| | Project Complies with Energy Upgrade California Basic / Advanced Requirements, and / or the Single Measure Implementation Path |
| | Meets Responsible Lending Criteria as Determined by Bank |
| | MCE Customer |
| Multi-Family OBR | Multi-Family Building of at least 4 Units |
| | Located in Marin/Richmond Region |
| | Meets Responsible Lending Criteria as Determined by Bank |
| | Project Consists of Measures Recommended in Audit Report |
| | MCE Customer |
| Commercial OBR | Small Commercial Building |
| | Located in Marin/Richmond Region |
| | Project Consists of Measures Recommended in Audit Report |
| | Meets Definition of “Commercial” Building/Facility |
| | MCE Customer |

Table 11: Contractor/Participant Eligibility Requirements

| Sub-Program | Eligibility Requirements |
|--------------------|--|
| OBR | Must be Participating Contractor, including meeting all license and certification requirements |
| SO | Implementer must be licensed in measures implemented |
| SO EM&V | Verifier must be meet SO EM&V criteria (TBD) |

e) Program Partners

- i. Manufacturer/Retailer/Distributor partners: N/A*
- ii. Other key program partners:*

- City of Richmond
- CleanFund
- County of Marin

- Dominican University
- Lenders (including without limitation banks, credit unions)
- Marin City Community Development Corporation
- Marin Energy Watch Program
- Marin Employment Connection
- Marin Municipal Water District
- Pacific Gas& Electric Rising Sun Energy
- San Francisco Foundation
- Saving Neighborhood Energy to Generate Neighborhood Wealth
- Wells Fargo

f) Sub-Program Specific Marketing and Outreach

The MEA Financing Sub-Program is designed to overcome market barriers caused by a lack of credit and financing options. The Sub-Program will utilize marketing, outreach and education (ME&O) for specific stakeholders and partners in the single-family, multi-family and commercial sectors.

The OBR program will leverage existing outreach occurring to the residential and commercial customers as part of the program elements described above, the interface with the EUC Program and the City of Richmond and Marin County Energy Watch Program. It will also leverage outreach related to the PACE program after development through the BayREN PACE Program.

The Finance Sub-Program will use marketing, education and outreach strategies to highlight the benefits of program and encourage participation. Benefits that will be highlighted in marketing and communications will include: social and environmental benefits such as, reduced fossil fuel consumption, reduced greenhouse gas emissions, improved indoor air quality and improved healthy spaces; economic benefits such as decreased electricity and maintenance costs, higher building performance, governmental incentives related to expedited plan review, permitting and inspection, and new valuations on energy efficiency such as Green MLS ratings. Marketing, education and outreach activities will also highlight the economic benefits of; MEA Financing Program options, contractor/supplier incentives; and energy savings achieved through improvements under the water-energy nexus.

In many cases owners are reluctant to pay for building improvements that appear to only benefit tenants. However, MEA will address this market barrier with outreach and

education that highlights the benefits described above, as well as the value of co-benefits achieved by combining MEA program options. MEA will also highlight the benefits and advantages of whole building retrofits that build energy efficiency and can leverage financing options and incentives to implement cash-neutral or cash-positive results. This occurs when upgrades provide cost savings that surpass the usual monthly electricity bill, and will serve as a compelling incentive to customers when communicated through outreach and education.

g) Sub-Program Specific Training

The Financing Sub-Program will engage skilled consultants, contractors and implementers, and will not require independent skills-based training. However, training will be provided for single family contractors to highlight the appropriate role for contractors to play in messaging the availability of the single family OBR program.

h) Sub-Program Software and/or Additional Tools

i. Consumer Engagement, Contractor, and Administration Portals

1. X Yes ___ No
2. Pre-implementation audit required X Yes ___ No
3. Post-implementation audit required X Yes ___ No

MEA will leverage software developed for Sonoma County for finance programs. The software will enable a streamlined workflow that is initiated through customers and contractors in each of the customer segments with options for extended services for financing. The MEA energy efficiency web portal will include consumer and contractor portals as detailed in Sub-Program MEA 03, Single Family Utility Demand Reduction Program. Consumers and contractors, on behalf of their clients, will be able to identify and potentially apply for financing for selected and qualified measures¹⁶.

¹⁶ Due to legal implications, the web tool may need to link to an external web site for the application, but MEA desires to have this process as automated as is possible and will work to that end.

Table 12: Post-Implementation Audits

| Levels at Which Program Related Audits Are Rebated or Funded | Who Receives the Rebate/Funding (Customer or Contractor) |
|---|---|
| The Multi-Family and Small Commercial Program offer no-cost audits | N/A |
| Not applicable for SO Program | N/A |

i) Sub-Program Quality Assurance Provisions

Table 13: Quality Assurance Provisions

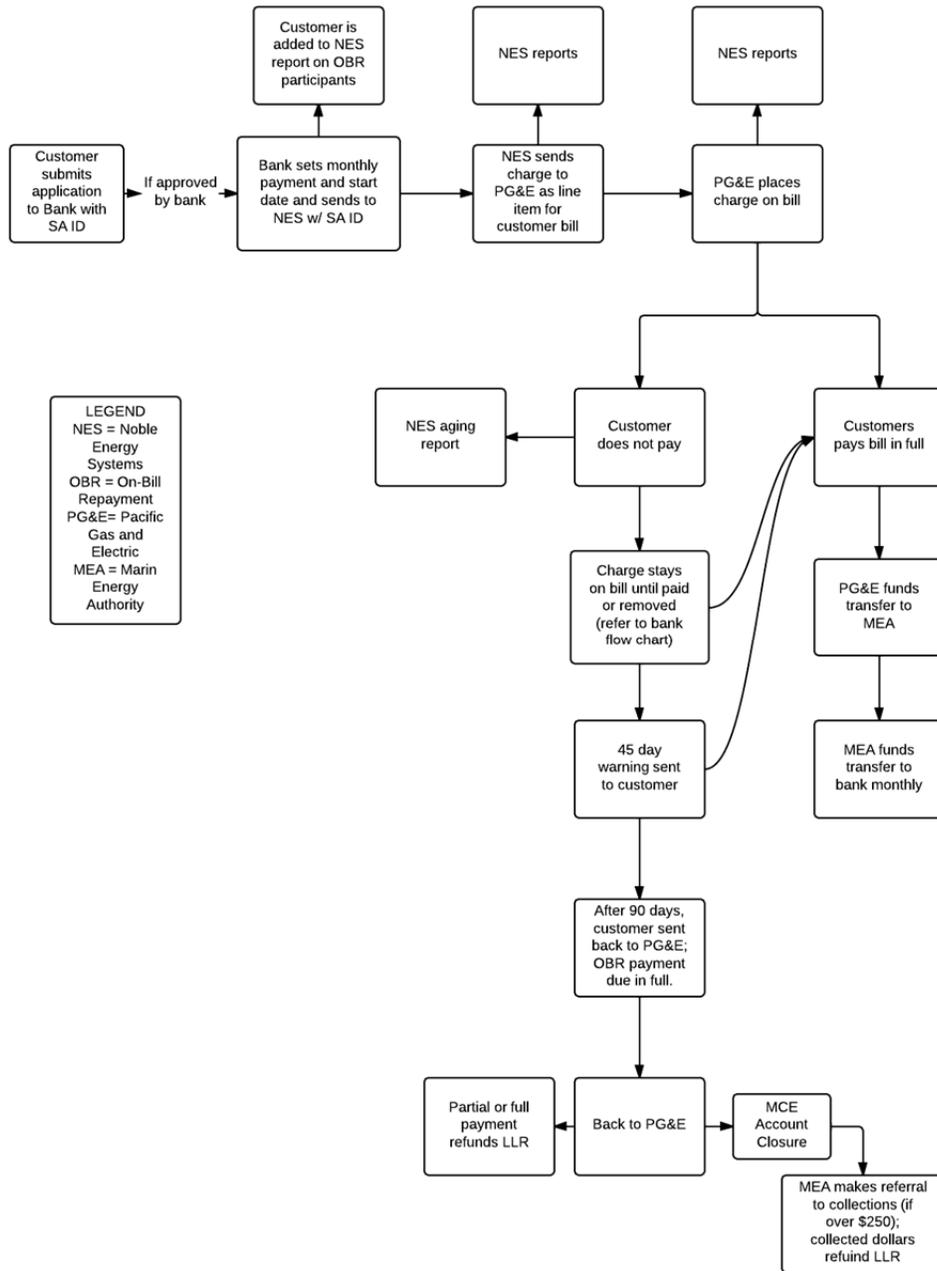
| QA Requirements | QA Sampling Rate (Indicate Pre/Post Sample) | QA Personnel Certification Requirements |
|---|--|---|
| Property must meet eligibility requirements | 100 percent pre | None |
| Property Owners Must Meet Responsible Lending Criteria | 100 percent pre | None |
| Contractor holds valid license and meets eligibility requirements (Energy Upgrade Participating Contractor or participant in other qualified program) | 100 percent pre | None |
| Project meets requirements of program | 100 percent pre | BPI-BA |
| Field Verification of Measures Installed | 100 percent for SO & OBR | BPI-BA or HERS field verifier if single measure |

j) Sub-Program Delivery Method and Measure Installation /Marketing or Training

Marketing for this Sub-Program is described above. No additional marketing or training will be provided. Measure installation will rely on existing channels for all programs, including MEA efficiency programs and existing IOU rebate programs.

k) Sub-Program Process Flow Chart

Figure 1: OBR Finance Process



1) **Cross-cutting Sub-Program and Non-IOU Partner Coordination**

Table 14: Cross-cutting Sub-Program and Non-IOU Partner Coordination

| Financing Sub-Program | | |
|--|--|---|
| Other MEA Sub-Programs | Coordination Mechanism | Expected Frequency |
| Single-Family Sub-Program | Project referrals | Continuous coordination through weekly meetings |
| Multi-Family Sub-Program | Project referrals | Continuous coordination through weekly meetings |
| Small Commercial | Project referrals | Continuous coordination through weekly meetings |
| IOU Program Name | Coordination Mechanism | Expected Frequency |
| REN Financing Programs (LLR, PACE, etc.) | Meetings, communication, participating contractor and QA updates | Monthly |
| PG&E Smart Lights Program | Meetings, communication, participating contractor and QA updates | Monthly |
| Coordination Partners Outside CPUC | Coordination Mechanism | Expected Frequency |

m) Logic Model

Scaling Energy Efficiency in the Heart of the Residential Market: Increasing Middle America’s Access to Capital for Energy Improvements, published by Lawrence Berkeley National Laboratories, April 4, 2012 (see Appendix B) outlines the need for financing to promote broader adoption of energy efficiency strategies.

The Role Of Local Governments And Community Organizations As Energy Efficiency Implementation Partners: Case Studies And A Review Of Trends, published by the American Council for an Energy Efficient Economy and the Energy Efficiency Strategy Project / Massachusetts Institute of Technology, February 2012 (see Appendix B) outlines the need for finance programs to avoid up-front costs, and also articulates why local government organizations, like MEA, are in a strong position to operate cost-effective programs due to their relationship with the community and with partner organizations.

11. Additional Sub-Program Information

a) Advancing Strategic Plan Goals and Objectives

The MEA Financial Sub-Program advances the following goals, strategies and objectives of the California Long Term Energy Efficiency Strategic Plan:

Implementation of MEA’s Energy Efficiency Program will produce cost-effective energy savings. The reduction in customer demand will benefit customers through long-term savings on energy bills. In addition, the program will contribute to the safe and reliable operation of the electric distribution grid by reducing peak demand. The focus on multi-family dwellings furthers the alignment with State goals described in Public Utilities Code section 399.4 and also aligns with the CPUC Strategic Plan. The collaboration with local community-based organizations and local programs conforms with State Public Utilities Code requirements as well as state and regional goals to add value to existing programs. MEA is structuring the Program to address the water-energy nexus, and to provide incentives and opportunities for small commercial and residential.

b) Integration

i. Integrated/coordinated Demand Side Management:

The OBR Program will promote customer education and training as described in section h, i and j above. The SO portion of the Finance Sub-Program incorporates the option for DSM in the simple design allowing for any form of capacity reduction. DSM options will be encouraged for SO in web-based information and other outreach information. Because this is a market-based program it is likely that some SO bids will include DSM to achieve the proposed reductions. The SO program will ensure separate tracking of energy savings associated with DSM measures, and will necessitate close coordination with applicable DSM programs.

Table 15: Non-EE Sub-Program Information

| Non-EE Sub-Program | Rationale and General Approach for Integrating Across Resource Types |
|--------------------------------|---|
| California Solar Initiative | Refer eligible and interested projects |
| Automated Benchmarking Service | Track & Compare Energy Performance setup by TA |

ii. Integration across resource types (energy, water, air quality, etc.):

Table 16: Non-EE Sub-Program Information (Cross Resource)

| Non-EE Programs – across resource types | |
|--|---|
| Non-Energy Programs | Rationale and General Approach for Integrating Across Resource Types |
| Water utility rebates | Leverage water utility rebates for hot water and water conservation energy measures; refer to Marin water utilities for other eligible measures |

c) Leveraging of Resources

The Financing Sub-Program will leverage the following programs:

- Energy Upgrade California Brand
- PG&E Whole House Incentive Program-Basic Contractor Credentials Quality Assurance Support, Marketing Channels
- Marin Energy Watch-Co-Marketing Channels
- Other local government energy and sustainability efforts and campaigns
- Other local government programs within relevant agencies and bureaus, such as building, permitting and inspection departments
- Marin Municipal Water District
- Saving Neighborhood Energy to Generate Neighborhood Wealth

d) Trials/ Pilots

The OBR Program will be launched initially as a pilot program in collaboration with the San Francisco Foundation and a non-profit organization, Saving Neighborhood Energy to Generate Neighborhood Wealth (SNEGNW). This pilot program will test OBR in up to three neighborhoods/regions in California targeted to home-owning families whose incomes are too high to qualify for grant funding, but too low to be interested in or qualify for other unsecured financing. The SNEGNW program is structured to catalyze consumer demand using neighborhood-based marketing and aggregation approaches, focusing on ordinary California working families, and integrating private community-based capital into the utility bill repayment mechanism.

SNEGNW would structure an OBR pilot with MEA and a private lender targeted to moderate/middle income homeowners in Marin and Richmond. The pilot is intended to test these financing innovations in the County of Marin and the City of Richmond while building scalable models for California and the nation.

e) Knowledge Transfer

MEA staff and partners will regularly share program outcomes, benchmarks and milestones, and also track challenges, lessons learned, and necessary adjustments for all technical, administrative, and marketing aspects of program implementation. These data sets will be organized and transmitted to local government partners operating similar programs (e.g. Marin County, City of Richmond, County of Sonoma); through regular meetings of local government forums (such as the Governor's Office of Planning and Research, the LGSEC, Local Government Commission, Urban Sustainability Directors Network, etc.); regional NGO and institutional partners (e.g.), and through program updates provided to Commission and program partners.

12. Market Transformation Information

The Finance Sub-Program will help transform the market by reducing or eliminating the key barrier to energy efficiency upgrades: customer upfront cost. In addition, the SO Program will test a new concept to the California market that is used effectively in other states to create energy demand reductions through market competition.

a) Market Description

Market actors include:

- **Building Performance Contractors** - Deliver Whole House Energy Retrofits to Residential Property Owners, Participating Contractors in Energy Upgrade California
- **General Contractors** - Oversee delivery of residential remodels, other installation work; May perform direct installation or subcontract to specialty contractors. May or may not be associated with whole house performance upgrades and Energy Upgrade California
- **Specialty Contractors** - Have specialty license in HVAC, Insulation and deliver installation. May also perform whole house and general contracting duties. May or may not be associated with whole house performance upgrades and Energy Upgrade California
- **Green Building Professionals** - Building professionals, including general and specialty contractors, who are trained in delivering or assessing technical work that incorporates additional green building concerns beyond energy efficiency, such as outdoor water efficiency, indoor air quality, resource conservation, and low-impact development/site water management. Serve as private contractors or on behalf of green building rating and incentive programs.

- **Residential Property Owners** - Owners of property desiring to reduce utilities and resulting costs, increased health and comfort, and/or greenhouse gas reductions.
- **Lenders** - private banks or financing entities to provide financing to building owners
- **PG&E** - Operated energy efficiency incentive programs, including Energy Upgrade California. Conduct contractor management, quality assurance, program administration for Energy Upgrade California.
- **MEA** - Implement energy efficiency programs in MEA territory. Support PG&E energy efficiency programs through professional and customer outreach, coordination amongst local actors, enforcement of code. Pilot energy efficiency programs. .
- **Workforce Training Organizations** - Marin Community colleges, Marin City Community Development Corporation (MCCDC) and RichmondBUILD (RB), Marin workforce investment boards, and other nonprofit programs that provide job training and placement services for new professionals.
- **Marketing & Outreach Partners** - Saving Neighborhood Energy to Generate Neighborhood Wealth (SNEGNW), SF Foundation and other partners to design and drive utility demand reduction campaigns.
- **Non-Energy Efficiency and Conservation Programs** - County of Marin, MMWD, NMWD, and other programs that promote and incent resource conservation, air quality, green products, and other non-energy efficiency efforts.
- **Other Relevant Professional Trades** - This includes all professional industries and associations that may affect property owner and building professional choices, including real estate professionals, product manufacturers and suppliers. These actors affect behavior of their clients through the services they offer and products they provide.

b) Market Characterization and Assessment

Major market barriers associated with residential and non-residential energy efficiency retrofits are described above in section a. Sub-Program Description and Theory. The barriers of upfront retrofit costs, secure lending, increased debt aversion and access to customers is described more fully below. This market characterization and assessment is based on experiences provided by MEA partners and by *Recommendations for Energy Upgrade California in the Bay Area* report (see Appendix B).

c) Upfront Retrofit Costs

Large upfront costs have a stagnation effect on market movement for all residential and non-residential market segments. This is particularly an issue for building owners who have relatively little access to private or low-cost financing

d) Secure Lending

Lenders have expressed an interest in working with customers through an OBR program because such a program provides a security/assurance mechanism to the lender. Linking the repayment to the energy bill is an approach that promotes increased lender engagement. The implied threat of disconnecting utility service in the case of default can provide additional security for lenders, enabling more lender participation, lower interest rates, and thus a higher attraction rate to consumers. This approach provides an opportunity to test the value to the lender of the implied, but not actual, threat of disconnection.

e) Building Owner Aversion to Increased Debt Carried on Buildings

Building owners in most MEA market segments, and particularly in small commercial and multi-family segments, are averse to carrying additional debt. Having a finance program that may allow debt to be perceived as an operating expense could allow deep energy efficiency projects to become a realistic option for building owners.

f) Proposed Interventions

Proposed interventions have been described throughout this sub-program description. Along with the Financing Pilots Subprogram (MEA04), these proposed interventions are summarized in the table below:

Table 17: Market Transformation Barriers and Interventions

| Barrier | Proposed Intervention |
|-----------------------------------|---|
| Upfront Retrofit Costs | Broad and targeted marketing campaigns |
| Secure Lending | OBR Attracts lenders and lower finance rates |
| Owner Debt Aversion | OBR removes debt from balance sheet |
| Program cost barriers | OBR and SO financing (MEA04) |
| Access to hard to reach customers | Standard Offer creates competition in underserved markets |

g) Logic Model

Targeted marketing campaigns and the availability of integrated utility demand reduction tools combined with incentive programs that reduce audit costs and provide retrofit financing, will significantly increase actions through behavior and energy/water conservation retrofits. See logic model in section o. above for more information.

h) Market Transformation Indicators (MTIs) and Evaluation Plans

Resolution E-485 lists adopted Market Transformation Indicators for the 2010-2012 Energy Efficiency Portfolio. To ensure consistency with adopted Market Transformation Indicators and Program Evaluation strategies, MEA proposes working with the CPUC to determine which data would be of the highest value for collection in this program:

- MEA will participate as possible in all data collection and interpretation activities, as directed by the Commission, to facilitate EM&V activities conducted by Energy Division of the Commission.
- MEA will report to Board and Partner organization on outcomes for all relevant Programs