

ATTACHMENT A:

ABAG Report to CEC on Energy Upgrade California

Retrofit Bay Area

Final Report

Prime Contractor Name: **Association of Bay Area Governments**

Contract Agreement Number: **400-09-021**

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The information contained in this draft final report for the Retrofit Bay Area Program includes activities, metrics, accomplishments, and expenditures completed through the January 2012 Reporting Period. The final financial report and narrative will include program activities through the end of the contract. Although there are more major findings, best practices, and lessons learned than are contained herein, the CEC page and topic restrictions limit content. The final Policy Paper deliverable will contain more detailed recommendations and all the county and partner recommendations.

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1. EXECUTIVE SUMMARY

A. Program Background and Approach

The Association of Bay Area Governments (ABAG) partnered with eight counties and a team of public and private partners to develop and implement Retrofit Bay Area, a comprehensive regional-scale residential retrofit program. The assembled partners represented 103 local governments in California’s second most populous region, and a diversity of program expertise that draws together leadership at the local, state, and national level. Retrofit Bay Area was created to develop a program that would rapidly accelerate home energy retrofits across the region, achieve deep market penetration, and accomplish market transformation in alignment with State energy policy. The program was designed to help transition the region from the utility single measure approach to a whole building approach, in order to achieve deeper energy savings that meet State energy goals. The program was also designed to be highly transferrable, both statewide and nationally.

Retrofit Bay Area aligned local government workforce and outreach stakeholder pathways, business capacity, utility infrastructure, and consumer demand to implement an energy efficiency whole building market transformation program that completed the following:

- Leveraged government workforce and outreach stakeholder programs to engage the private sector to harness market forces and accelerate program participation
- Expanded the energy upgrade delivery capacity of building professionals and the supply chain through workforce development programs
- Drove consumer demand for home energy upgrades through innovative marketing and communication strategies that leveraged existing community and private-sector distribution channels and promoted word-of-mouth program promotion

B. Project Structure

Retrofit Bay Area is a regional energy network of the statewide Energy Upgrade California™ program (Energy Upgrade California), developed and implemented by local governments in coordination with Pacific Gas and Electric Company (PG&E), the California Public Utility Commission (CPUC), and the California Energy Commission (CEC). Energy Upgrade California is an umbrella brand with a one-stop-shop website (www.energyupgradeca.org) for home owners wanting to find qualified contractors to conduct energy saving improvements that will reduce energy use, make homes more comfortable, and improve indoor air quality. Energy Upgrade California is an unprecedented energy efficiency market transformation program aimed at changing the historical single measure approach to a whole house scientific approach. In the Bay Area, the program is designed to leverage PG&E’s IOU program utility incentives and QA/QC process, as well as the customer and community engagement resources, workforce capabilities, and codes and standards of the participating local governments.

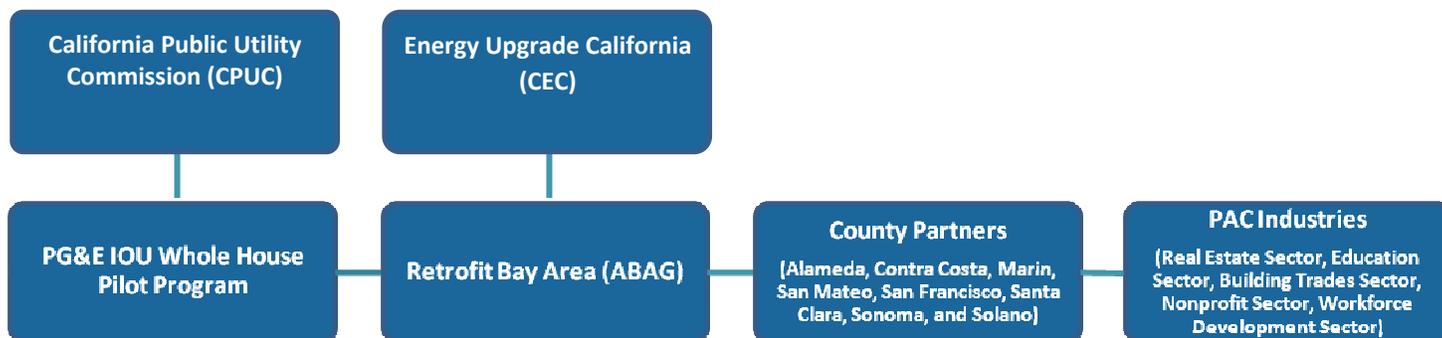


Figure 1.1: Retrofit Bay Area Energy Upgrade California Program Relationships

C. Program Organizational Structure

ABAG was the prime contractor, lead facilitator, and convener of the Retrofit Bay Area. ABAG led project management activities and had primary budget and contract oversight, as well as maintaining a program website and call center. ABAG convened bi-monthly Steering Committee meetings, and quarterly Program Advisory Committee meetings. The Steering Committee was composed of one representative from each county. Their primary role was to seek agreement on the implementation of the regional program design, marketing and outreach strategies, workforce development support, and local stakeholder engagement. The Program Advisory Committee included the Steering Committee and key program stakeholders from the building trades, education, non-profit, realtor, and workforce industries who were the on-the-ground implementers of the program. Their primary role was to advise the Steering Committee on the practicality of regional program activities and to obtain feedback and buy-in from their respective constituencies in support of the program. The following figure illustrates the organizational structure of the program.



Figure 1.2: Funding/Contractor Organizational Structure

In addition to ABAG, the Retrofit Bay Area partners consisted of eight local lead agencies representing eight of the nine Bay Area counties. Each of these agencies was responsible for planning and implementing their local Energy Upgrade programs. Two local agencies, StopWaste.org and the Regional Climate Protection Authority (RCPA), had the lead role in producing regional deliverables (Table 1.1). These regional deliverables benefited all county participants by establishing regional consistency of program design, quality assurance, marketing templates, and workforce gaps analysis for use by all participants. Bevilacqua Knight, Inc. (BKi), a private energy consulting company, was selected through two separate competitive procurement processes by StopWaste.org and RCPA to support program design, implementation, and administration. In that role, BKi provided administrative support, completed key regional deliverables, and provided oversight of sub-consultants charged with completing various regional deliverables.

Table 1.1: Retrofit Bay Area Lead Agency Deliverables

ABAG	StopWaste.Org	Regional Climate Protection Authority	Local Lead Agencies
Contract Administration and Program Oversight	Regional Marketing Plan and Collateral	Regional Reporting Administration	County-level Reporting
Coordinate Program Advisory Committee and Steering Committee	Regional Multifamily Program Design, Training Curriculum, Contractor Requirements, HERS II Software Module, Stakeholder Outreach, Asset Manager Tool, Quality Assurance Protocols	Regional Workforce Development Plan	Implementation and customization of program through local workforce, education, building trades, realtor, retailer, and marketing and outreach partners
Regional Local Government Website	Regional Incentive	Regional Participant Recruitment	Local policy, codes and standards; Links to Climate Action Plans
Regional Customer Support Call Center	Regional Web-Based Tracking Platform	Regional Public Policy Recommendations, Implementation Plan	Health, Safety, and Public Service
Contractor Scholarship Management	Regional Real Estate Training Curriculum, Multiple Listing Service Green Features Guidance Document	Regional Contractor Qualifications, and Certification Requirements	Contractor and homeowner outreach and support

2. PROGRAM GOALS

The original goals of Retrofit Bay Area mirrored those of the American Recovery and Reinvestment Act of 2009 (ARRA): (a) energy savings, (b) job creation/preservation, and (c) economic recovery. The program was designed to implement a comprehensive whole building energy efficiency retrofit program for existing residential buildings.

To achieve these goals, Retrofit Bay Area identified a set of three core program objectives that addressed the major barriers to market transformation and served to guide program design. These three objectives aimed to spur residential energy retrofits.

- Provide financing mechanisms, including both Property Assessed Clean Energy (PACE) and alternative financing, to address the high upfront cost of energy retrofits
- Demonstrate more effective marketing and outreach methods to inform and motivate property owner participation
- Streamline participant, contractor, and administration processes to reduce the high transaction costs and build a quality green workforce

The intent behind these objectives was to deliver a program that fundamentally and permanently transformed the energy market by deploying the whole building approach. This required the development of a solid foundational relationship between the utility (PG&E) and participating local governments. The program design was initially set forth and vetted through the Home Energy Retrofit Coordinating Committee (HERCC), which was composed of statewide local governments, utilities, contractors, CEC, and CPUC. The HERCC formed a number of subcommittees to flesh-out the content, approach, and implementation of the program design, marketing and outreach, and workforce preparedness. The HERCC recommendations strongly influenced the final design of the utility program.

Local governments leveraged this Energy Efficiency Community Block Grant (EECBG) funded program design development to secure the ARRA-funded Retrofit Bay Area funded contract to support implementation of marketing and outreach activities, workforce training, and incentives. Initial program goals for these efforts, within a landscape that included Property Assessed Clean Energy (PACE) financing programs, included achieving 15,000 single family and 2,000 multifamily upgrades over a two year period, creating 1,739 jobs (later discussions with the CEC reduced these targets to 1,066 single family and 815 multifamily upgrades). In working toward these goals, Retrofit Bay Area would create an infrastructure capable of supporting the ongoing implementation of a regional whole building retrofit industry beyond the life of the program's contract.

A. Program Objectives – Successes and Barriers

Retrofit Bay Area sought to create jobs and stimulate the economy through a comprehensive program to implement energy retrofits in existing residential buildings. Retrofit Bay Area program administrators have achieved key program outcomes: (1) a regional market primed for continued growth and (2) the alignment of infrastructure for ongoing program support.

The program had three core program objectives: 1) provide finance mechanisms; 2) demonstrate effective marketing and outreach; and 3) streamline participant, contractor, and administrative processes. The following are the key successes and barriers to achieving these objectives:

Financing Mechanisms

Financing was a critical component of the program because of the high upfront costs of an upgrade. The average cost of an Advanced upgrade is \$14,439 for 32 percent energy savings, while deeper energy efficiency retrofits can cost as high as \$40,000.¹ Early on in this program, a Federal regulatory agency stopped development of all Property Assessed Clean Energy (PACE) financing programs in the state with the exception of the Sonoma County Energy Independence Program (SCEIP), which modified its program design and continued to operate. The Federal regulatory guidance had a devastating effect on the development of PACE programs and the availability of funding for upgrades. There are few other financial products in the market today that are accessible and affordable for most homeowners. The downturn in the economy, combined with the high cost of the Advanced upgrades and the lack of available affordable financing, resulted in slower uptake than originally expected. In addition, the Basic upgrade path was expected to be the lower cost entry point for homeowners; however, because of the program design issues, it only saw minimal uptake. Compounding the problem of limited financing options was a lack of a single point of contact for homeowners wanting to explore finance options. Contractors, as the primary contact for homeowners, had to increase their knowledge about financing products in order to help consumers navigate their options.

Marketing and Outreach

The Retrofit Bay Area counties expressed interest in a uniform brand and regionally consistent approach to marketing. Moore Iacofano Goltsman, Inc. (MIG) was hired for the purpose of conducting market research and analysis, identifying the target demographic, and developing a uniform brand and marketing strategy. This effort was expanded to include statewide stakeholders and resulted in the Energy Upgrade California brand.

A Marketing Subcommittee² helped to develop regional collateral, website elements, and advertising buys to support individual county marketing and outreach campaigns. A multiple touch approach was used to educate homeowners about the whole house approach, and a combination of marketing materials and media ads helped to steer consumers to the Energy Upgrade California website. .

Consumer and contractor facing template materials (discussed further starting on page 9) were created and shared with the counties to ensure brand consistency, unity of messaging, and to reduce development costs. Established local government stakeholder and outreach networks were used to educate homeowners, contractors, and retailers about the program. In some counties, “hot spot” maps were developed to conduct targeted marketing. The original program design assumed that retrofit metrics would be available from PG&E through their whole house retrofit program. However, these data proved difficult to obtain, and only toward the end of the program was access to aggregate-level data made available. These data would have been very useful during the targeted marketing stage.

The whole house approach was new to both consumers and contractors, which meant a steep learning curve, as well as some market confusion, and misalignment between conventional practices and marketing efforts. At times, the program had difficulty providing what was needed to sell comprehensive energy upgrades. For example, contractors needed better marketing and sales tools earlier in the program to reduce the time they spent with homeowners educating them about the whole house approach. More widespread awareness of the Energy Upgrade California program would have helped to create stronger brand recognition.

¹ Based on PG&E Whole House Data for Retrofit Bay Area Program metrics as of 3/31/2012.

² This subcommittee was comprised of marketing staff from the local lead agencies and program consultants.

Streamlined Processes

Retrofit Bay Area sought to streamline homeowner and contractor participation in the program to facilitate targeted uptake. Retrofit Bay Area marketed Energy Upgrade to homeowners as the umbrella for local lead agency and PG&E programs, with participation in Energy Upgrade facilitating participation in as many programs under this umbrella as appropriate. Homeowner facing marketing efforts often integrated participating contractors (in events such as workshops) to connect homeowners with building professionals who could provide general education and specific upgrade advising. Electronic communication channels including list serves, email distribution lists, and E-newsletters were often centralized by local lead agencies and their partners to streamline messaging to homeowners and contractors. PG&E's Whole House Rebate program's requirements for contractor credentials and trainings, shaped by recommendations from the HERCC and its local government (and other) members, were utilized as the base contractor requirements for Retrofit Bay Area. As necessary, local lead agency contractor trainings aimed to augment these base requirements by providing additional subsidized trainings that addressed field mentoring, energy modeling, and contractor sales and marketing. Retrofit Bay Area incentives leveraged as many PG&E Whole House Rebate program protocols and practices as possible, including the associated energy modeling, QA/QC processes, and web-tracking software (though this last tool, the Green Compass System, was launched late in the program in fall of 2011).

This work to increase homeowner and contractor participation in the program made up a majority of the program's activities, and are fully outlined starting on page 9 of this report. Such work was at times complicated by the multitude of program partners working under the Energy Upgrade umbrella, including the Retrofit Bay Area contract, the Local Government Commission contract and the PG&E Whole House Rebate program. Furthermore, local lead agency incentive programs were not deployed in the regional market for long enough to allow for these programs to be modified based upon lessons learned. Local lead agencies seek to address these complexities as future support for Energy Upgrade is planned.

A number of administrative processes were developed to address the ARRA contract requirements and State requirements. A Basecamp was established as a single communication hub for counties and program partners to upload files, share documents, message members, and calendar events or deadlines. A monthly reporting template that met ARRA and CEC content requirements was created for narrative progress reporting and monthly invoicing. This enabled individual counties to report on program progress and budget, which could be rolled up into a single monthly report. Several State and Federal mandates such as the Environmental Protection Act, historic preservation, and waste management were addressed at the regional level, alleviating individual county review. As an example, a State Historic Preservation Consultation letter was filed to exempt the majority of building energy retrofit measures, and a process was established for reporting of non-exempt activities by counties. The Steering Committee acted as the platform for all administrative decisions that affected the entire contract. This ensured buy-in from all counties on procedures and processes. A regional waste management plan was created by determining the average waste quantity and type per upgrade and calculating the total waste amount by type. These blanket processes exempted most individual projects from having to file separately, which would have increased contractor job processes. The Steering Committee agreed from the launch of the program to strive for region-wide uniformity to reduce consumer and contractor confusion, delays, and costs as contractors conducted work in different counties. Program administrators worked closely with PG&E to establish consistent quality assurance requirements and standard contractor participation requirements.

Fulfilling the administrative requirements of the ARRA funding caused significant delays. Key areas of concern were requirements for contract amendments, including budget shifts and approval of program personnel, approval of subcontracts, inconsistent interpretation of administrative requirements, and administrative requirements that did not support program activities. The result is that initial performance on the contract was delayed by months. Budget shifts between tasks were limited; triggering budget amendments that also took

several months. Because of the number and nature of the subawardee/subcontractor relationships, some subcontractors experienced a two-to-four month delay in invoice payment, causing significant distress especially for subcontractors with small operating budgets trying to make payroll. These problems could have been eased by granting CEC program management staff more authority to approve subcontracts, budget amendments, and staffing changes on the project. In addition, the program would have benefitted from a uniform commitment from State departments to support ARRA awardees; however, this would have required changes to historical administrative processes.

Earlier engagement by the CPUC would have helped better define the roles, required collaboration, and need for streamlining and consistency of the utility and local government programs. For example, the utility and local government retrofit targets were not aligned: PG&E's original target for their entire territory was 15,500 single family upgrades to be conducted from January 2010 to December 2012; within the ABAG region (as just a part of PG&E's territory). The original local government program target was 15,000 single family and 2,000 multifamily upgrades to be conducted between July 2010 and March 2012. This resulted in the two programs operating separately for a good portion of the contract. The utility's emphasis on safety and liability avoidance significantly increased program complexity. In 2011, PG&E's Whole House Rebate Program administrator was replaced, resulting in increases in Participating Contractor requirements that delayed contractors' ability to sell and complete jobs, and caused non-participating contractors to question whether they wanted to change their business model to participate in the program. It was also difficult to meet the ARRA reporting requirements for energy data metrics without having a data-sharing agreement in place between local governments and PG&E from the on-set of the program.

3. ACCOMPLISHMENTS

Retrofit Bay Area sought to create jobs and stimulate the economy through a comprehensive program to implement energy retrofits in existing residential buildings. From disparate local efforts, Retrofit Bay Area created and developed program infrastructure and tools that would sustain a regional whole building retrofit industry. Program activities and accomplishments focused on two objectives designed to address the major barriers to this market transformation: (1) demonstrating more effective marketing and outreach methods, and (2) streamlining participant, contractor, and administration processes to reduce high transaction costs and build a quality green workforce. The third primary objective identified in the Retrofit Bay Area proposal, to build on existing finance mechanisms, was supported only in Sonoma County, where the continuation of the Sonoma County Energy Independence Program (SCEIP) was the only residential PACE program in the ABAG region.

In addition to the information below, further details related to local lead agency program operation are offered in the attached individual county reports submitted to Retrofit Bay Area.

A. Activities Undertaken

Retrofit Bay Area was designed to be a comprehensive program that established an infrastructure to transform the whole building retrofit industry. The following activities and accomplishments effectively leveraged program funding to establish this infrastructure.

Retrofit Bay Area effectively administered contract funds within the parameters tied to CEC ARRA stipulations. Administration activities included:

- Creation of a region-wide Steering Committee made up of staff from each local lead agency and principal subcontractors, who met at least bi-weekly for over 27 months of program development and operation
- Master Agreement contract approvals and amendments with the CEC and coordination of 8 subawardee agreements and 34 additional subcontracts
- Creation of a region-wide Program Advisory Committee that included Steering Committee members, as well as nominated representatives from industry sectors related to whole building retrofits (e.g., training/community colleges, contractors/trades, real estate, utility)
- Monthly Reporting (Finance/Narrative Report) for 19 months of contracted program activities
- ARRA Section 1512 Metrics Reporting for 13 months of program operation (began in February 2011 upon CEC approval of the Retrofit Bay Area Implementation Plan)
- Coordination of subawardee/subcontractor input for the Kick-off Meeting, two Critical Program Review Meetings, a Department of Finance Audit, and the Final Report/Final Meeting
- Documentation of required permits, waste management plans, and historic preservation compliance

Retrofit Bay Area developed a strong working relationship between local lead agencies and the PG&E Whole House Rebate Program (as the administrators of the regionally applicable Investor Owned Utility funded Energy Upgrade California rebates). This unprecedented regional relationship has the capacity to lend additional future support to local government and PG&E whole building programs and help maintain the momentum started under Retrofit Bay Area. This foundation included:

- Monthly (and often more frequent) meetings to first establish, in coordination with the HERCC, and then review the status of:
 - Overall program design
 - Contractor qualifications and certification requirements
 - Quality assurance and consumer protection policies
 - Minimum energy efficiency thresholds and verification protocols
 - Reporting protocols

- Coordination of marketing efforts, collateral development, and outreach activities
- Review of job processing procedures and activities to best leverage local government supports for these same utility efforts
- Reporting of energy retrofit activity and associated metrics as allowed by PG&E to communicate program successes to local government partners

Retrofit Bay Area prime and subawardee contract recipients collaborated extensively with other similarly aligned ARRA-initiated and existing whole building retrofit efforts, including:

- Local lead agencies’ Department of Energy Better Building Program pilots
- Ecology Action’s Local Government Commission Energy Upgrade California contract
- Engage 360 (when funded) and the rebate database (still maintained)
- The CEC Statewide Energy Upgrade California Steering Committee, Marketing Summit, and other CEC planning/program development activities
- Local workforce training initiatives (i.e., Clean Energy Workforce Training programs; HERO – Home Energy Retrofit Occupations Department of Labor grant; Climate Corps Bay Area)
- Local Energy Upgrade California programs (i.e., Small Cities Climate Action Partnership EECBG incentive programs, SCEIP HERS II Rebate program)

Retrofit Bay Area local lead agencies collaborated extensively with local stakeholders and aligned programs through existing and newly developed relationships as summarized in Table 3.1. This collaboration was tailored to the specific needs of the local agencies and the local whole building retrofit market, and provided the foundation for program operation/implementation activities.

Table 3.1: Retrofit Bay Area Local Lead Agency Partners

County	Local Lead Agency	Local Partners (subcontracted and/or leveraged)
Alameda	Alameda County Waste Management Authority (Stopwaste.Org)	<ul style="list-style-type: none"> • Bevilacqua Knight, Inc. • Renewable Funding • Moore Iacofano Goltsman, Inc. • Underground Advertising, Inc. • Allison & Partners • Jungle Communications • Build it Green • California Building Performance Contractors Assoc. (CBPCA) • Herschong Mahone Group • SmartSolar • Rising Sun Energy Center
Contra Costa	Contra Costa County DCD Building Inspection Division	<ul style="list-style-type: none"> • Workforce Investment Board of Contra Costa County • Ecology Action • Contra Costa Cities
Marin	County of Marin Community Development Agency	<ul style="list-style-type: none"> • Marin Climate and Energy Partnership • Marin Clean Energy • California Youth Energy Services • Workforce Investment Board of Marin County • Marin Builders Association • Sustainable Marin
San Francisco	City and County of San Francisco — Dept. of Environment	<ul style="list-style-type: none"> • O’Rorke, Inc. • ICF International • ARUP

County	Local Lead Agency	Local Partners (subcontracted and/or leveraged)
San Mateo	County of San Mateo County Managers Office	<ul style="list-style-type: none"> • Community/Contractor/CBO Advisory Board • City/County Advisory Board • San Mateo County Workforce Investment Board • Skyline College • Sustainable San Mateo County • Town of Hillsborough • San Carlos Green • Acterra • Cool the Earth
Santa Clara	County of Santa Clara	<ul style="list-style-type: none"> • Acterra • Rick Williams, Real Estate and Finance Consultant • ICF Incorporated, LLC • American Consumer Shows • Cities of Cupertino, Mountain View, Sunnyvale, Los Altos Hills, Monte Sereno leveraged
Solano	City of Suisun	<ul style="list-style-type: none"> • Re-AI Construction • Appraisals and More • Apollo Energies • Archon Energy Solutions • Benicia Sustainability Commission • Green Environmental Technologies • Pacific Crown Builders • Paramount Energy • Solano Center for Business Innovation • City Managers in Solano County Cities
Sonoma	Sonoma County Regional Climate Protection Authority	<ul style="list-style-type: none"> • Bevilacqua Knight, Inc. • Energy Upgrade Sonoma County Advisory Committee • Sonoma County Energy Independence Program • Climate Protection Campaign • Sonoma County Energy Watch • Solar Sonoma County • Kathy Goodacre, Sole Proprietor • Clean Energy Advocates • PG&E • Build It Green

Marketing and Outreach Methods

The aforementioned program infrastructure was central to demonstrating marketing and outreach methods among program partners to more effectively transform the whole building retrofit market. These included coordinated efforts through the Retrofit Bay Area Steering Committee, regional Program Advisory Committee, local Advisory Committees and other local government partnerships, and the CEC, PG&E, Ecology Action, and other regional/statewide partnerships and activities. Retrofit Bay Area developed a Regional Marketing and Outreach Plan that provided guidance to local lead agencies. Retrofit Bay Area leveraged local resources and stakeholder groups to provide a cohesive and comprehensive approach to marketing and outreach of Energy Upgrade California in the Bay Area that served as guide for local lead agencies in promoting and launching successful local marketing campaigns.

Retrofit Bay Area local lead agencies developed and carried out marketing campaigns to give the program consistent branding and messaging. These campaigns were developed in conjunction with the roll-out of the Energy Upgrade California brand in February 2011, and included:

- Regional and local marketing and outreach plans
- Regional marketing materials and media buys (broadcast, outdoor, and online)
- Regional and local public relations campaigns
- Regionally developed marketing collateral templates

- Local marketing materials, media buys (including broadcast, outdoor, print, and online), earned media, and social media campaigns
- Market analysis developed by certain local lead agencies based upon housing stock, demographic, and energy use patterns, including:
 - Target audiences
 - Key messaging
 - “Hot spot” maps
- Extensive local outreach directed by regional and local marketing plans/analysis, including:
 - Presentations/workshops with key partners/stakeholders (e.g., building department staff, realtors)
 - Community event tabling
 - Canvassing
 - Homeowner presentations (e.g., through community, business, and civic groups)
 - Homeowner workshops
 - Individual homeowner engagement (e.g., the Solano County “Homeowner Program Manager,” a role developed so that a homeowner is working with one individual throughout the Energy Upgrade California/Solano+ program process)
- Trigger event marketing to capture energy efficiency upgrade opportunities through trigger events (furnace or hot water heater replacement, remodels and renovations, etc.), such as:
 - Realtor-client outreach materials and trainings as outlined below
 - Program collateral and educational materials maintained within building departments
 - Implementing retailer outreach programs that provide in-store training and marketing displays to local home improvement retailers
- Additional stakeholder engagement activities, including:
 - Recruiting “energy champions” (i.e., Energy Upgrade participating “early adopting” homeowners) to host home tours and provide case studies
 - Implementing employee outreach programs that provide in-office program presentations at local businesses

Retrofit Bay Area marketing and outreach efforts were primarily designed to promote the Energy Upgrade California program and brand. In addition to the collateral and marketing efforts discussed above, this also included extensive work with www.EnergyUpgradeCA.org

- Local lead agency efforts to promote and update content within county pages
- Promotion of Contractor/Rater, Rebates/Incentives, and Financing directories
- Promotion and updating of News and Events within Local Info county pages
- Alignment of ABAG Call Center (510-464-8484) and Web Supports (<http://retrofit.abag.ca.gov/>) with www.EnergyUpgradeCA.org resources

Local lead agencies also developed Energy Upgrade California content on local Websites, including:

- San Francisco: http://www.sfenvironment.org/our_programs/interests.html?ssi=6&ti=14&ii=50
- Marin: <http://www.marincounty.org/energyupgrade>
- Contra Costa: <http://energyupgradecc.squarespace.com/>
- Santa Clara: <http://www.sccgov.org/energyupgrades>
- Sonoma (in coordination with SCEIP): <http://www.sonomacountyenergy.org/>

Retrofit Bay Area implemented, and coordinated with, various regional and local rebate programs. These programs and associated metrics are summarized in Section (b) below. Local lead agencies developed coordinated marketing to integrate Retrofit Bay Area funded rebates into other rebate offerings, including messaging and collateral to align with:

- PG&E Whole House Rebate Program
- Alameda Municipal Power Rebate Program
- EECBG—funded local rebate programs
 - Albany
 - Hayward
 - Piedmont
 - Pleasanton
 - San Leandro
 - Hillsborough
 - Menlo Park
 - San Bruno
 - San Francisco
- HERS II Rebate Programs
 - Statewide through Ecology Action
 - Sonoma County through SCEIP

In addition to marketing and outreach directed at homeowners, Retrofit Bay Area marketing and outreach activities also targeted contractor and realtor groups.

- Contractor-focused marketing and outreach activities included:
 - Co-brandable collateral templates specifically for contractor use
 - Workshops with Participating Contractors on how to use/leverage Energy Upgrade California logos, branding, messaging, and collateral templates
 - Sharing of local lead agency developed “hot spot” maps based on housing stock, demographic, and energy-use patterns
 - Support to contractors so they could be appropriately listed in www.EnergyUpgradeCA.org directories
- Realtor-focused marketing and outreach activities included:
 - A Multiple Listing Service (MLS) working group, which developed “Resources for Greening the MLS” and other aligned documentation to educate realtors and MLS organizations on whole building retrofits
 - Realtor focused workshops and trainings to educate realtors on whole building retrofits
 - Working groups to address potential implementation of time-of-sale energy conservation ordinances
 - Realtor-client facing materials for program outreach

Table 3.2: Retrofit Bay Area Summary of Marketing and Outreach Methods

General Marketing Activities	
Total Media Impressions ³	462,674,165
Total Website Page Views (Energy Upgrade California/local portals as appropriate)	442,529
Targeted Communications (direct mail/email, door hangers)	1,089,040
“General Energy Upgrade” tabling events	
Number of events held	121
Public/property owner focused “General Energy Upgrade” workshops/information sessions	
Number of workshops/information sessions held	212
Number of attendees to workshops/information sessions	4,611
Sector-specific “General Energy Upgrade” workshops/information sessions (for realtors, building officials, city council, etc.)	
Number of workshops/information sessions held	112
Number of attendees to workshops/information sessions held	1,747

Streamlined Participation Processes

Retrofit Bay Area undertook numerous activities to streamline participant, contractor, and administration processes to reduce high transaction costs and build a quality green workforce. Some of these activities focused on the immediate needs of program participants, while others addressed larger-scale/long-term program protocols and requirements. Many of the regional activities that served contractor and other workforce development efforts were outlined by the Retrofit Bay Area Workforce Development Plan (submitted to the CEC as part of the Implementation Plan) and/or developed with the input of the Steering Committee, the regional Program Advisory Committee, and the regional PAC Workforce Working Group. Local activities were based out of these regional resources, as well as local Advisory Committees, Workforce Investment Board community college/training organization partnerships, and local contractors.

Retrofit Bay Area local lead agencies worked extensively with the contractor community to increase the number of contractors in the program and gain feedback from those already participating. These activities included:

- Local presentations/workshops on Energy Upgrade California and how to participate in the program with various contractor audiences/organizations
- Promotion of contractor trainings required for participation in the PG&E Whole House Rebate Program, including:
 - Participation Workshops
 - Basic Package Technical Trainings
 - Advanced Package Technical Trainings
- Local contractor forums and roundtables hosted as either on-going or single events to provide feedback for how to recruit additional, and better serve existing, Participating Contractors
- “On-Demand” contractor support services (support identified as necessary within the market during the course of program implementation, such as EnergyPro trainings) for contractor questions related to Energy Upgrade California and the PG&E Whole House Rebate Program

³ Media impressions do not include impressions from: 9 marketing placements by Suisun City/Solano County; 3 by Marin County, and 1 by Contra Costa County. All other placements by these counties and all other counties are included.

- Contractor surveys on marketing efforts, lead generation, and training needs

Many Retrofit Bay Area activities were designed to further improve Energy Upgrade California aligned information and skill sets held by Participating Contractors and potential participating contractors (e.g., experienced contractors that had taken Building Performance Institute (BPI) courses at a local community college). These activities included:

- Development of contractor resources to communicate contractor credentials, certification requirements, and general program curriculums for:
 - Single-family energy retrofits as aligned with PG&E Whole House Rebate Program
 - Multifamily energy retrofits as aligned with statewide Multifamily HERCC recommendations
- Trainings developed, hosted, and/or promoted to contractors to address specific topics/needs relevant to contractor participation in Energy Upgrade California, including Retrofit Bay Area funded trainings (summarized in Table 3.3) and trainings leveraged by Retrofit Bay Area (summarized in Table 3.4)
 - Building Performance Institute Building Analyst test preparation, certification, and mentoring
 - EnergyPro trainings to reduce contractor error and increase input speed for program-required energy modeling
 - Sales and marketing trainings to increase marketing effectiveness and increase close rates
 - Combustion Appliance Zone Safety Testing to increase contractor field-based skills
 - Certified Green Building and GreenPoint Rated certifications to increase building and allied professionals' understanding of green building
- Partnership with local workforce development initiatives, including:
 - Promotion of training programs offered by local workforce partners
 - Coordination with the Home Energy Retrofit Occupations (HERO) grant in Alameda and San Mateo counties
 - Coordination with the California Youth Energy Services to provide Green House Calls to homeowners in Alameda and Marin counties
 - Coordination with the Marin Workforce Investment Board (WIB) to promote Green Regional Education and Employment in the North Bay (GREEN). Project GREEN trained 78 building professionals (exceeding their target of 75), of which 55 had found full time employment as of June 30, 2011.
 - Coordination with Climate Corps Bay Area to place corps members in Sonoma County (at both RCPA and SCEIP)
 - Coordination with Clean Energy Workforce Training Program (CEWTP) partners in Alameda, Contra Costa, and Sonoma counties
 - Coordination with Workforce Institute/Going Evergreen in Santa Clara County to provide energy modeling skills training
 - Americore members hired as additional local county staff
- Additional sales, job processing, and general contractor staff support services including:
 - Online information resources specific to contractor needs related to local government incentives (<http://contractors.abag.ca.gov/>) and workforce agencies and trainings (i.e., https://energyupgradeca.org/county/san_mateo/events and https://energyupgradeca.org/county/san_mateo/bpi_trainings)
 - Auditor/contractor teams developed within Solano County to allow homeowners to work with a single point of contact throughout the Energy Upgrade California/Solano+ program process
 - Business development resources including guidance on how to develop profitable business models and access growth capital/financing

- Communicating retrofit and rebate application statuses related to Retrofit Bay Area Rebate and PG&E Whole House Rebate programs (in coordination with Build It Green/PG&E)

Retrofit Bay Area program administrative processes coordinated with and leveraged existing PG&E Whole House Rebate processes and protocols as much as possible. This resulted in a more consistent regional marketplace and helped simplify contractor participation in the multiple program components (specifically rebate programs) present throughout the region.

- Single Family:
 - Quality Assurance (QA) Protocols and Plan (including development through Single Family HERCC and PG&E collaboration) leveraged as primary QA process for Retrofit Bay Area rebate programs. Those local lead agency programs issuing project-based rebates added additional desktop review QA to supplement PG&E protocols, principally to address issues of historic preservation.
 - Minimum energy efficiency thresholds consistently applied between programs; PG&E project reporting tools and verification protocols leveraged when possible
 - PG&E Qualified Participating Contractor List used as initial threshold for contractor participation in Retrofit Bay Area rebate programs
- Multifamily:
 - Coordinated with statewide multifamily committee (MF HERCC) for the development of:
 - Multifamily upgrade packages/approaches to whole building upgrades
 - Minimum energy efficiency thresholds and project reporting procedures for whole building upgrades
 - Quality assurance protocols for whole building upgrades, including protocols for verification of projects
 - Developed a high-rise module for Energy Pro to more effectively model multifamily buildings
 - Initiated development of a statewide online decision tool and multifamily asset manager to assist property owners and building operators in planning, funding, and designing upgrades, as well as managing properties for energy use post upgrade. The asset manager is currently under continued development through a separate California Energy Commission contract.
 - Quality Assurance (QA) Protocols and Plan (including development through the Multifamily HERCC) initiated to be aligned with future local government rebate programs, if implemented
 - Minimum energy efficiency thresholds, project reporting procedures, and verification protocols initiated
 - Multifamily packages and software module developed for energy modeling

Finally, Retrofit Bay Area developed and demonstrated the following tools designed to improve local lead agency understanding of the whole building energy retrofit market and further accelerate retrofit uptake:

- Bulk equipment purchase agreement templates and an on-going bulk purchasing pilot sponsored by Stopwaste.org through partnership with Truitt & White and BuilderLink. Truitt & White was able to secure price reductions of 40 percent off of list price for commonly used Energy Upgrade California materials.
- A co-op marketing pilot for contractors funded in conjunction with the CEC
- Tool Lending Libraries established as an ongoing resource for:
 - The Solano+ Program
 - Energy Upgrade California in Marin County
- A local government portal for “Green Compass,” a software tool that allows local lead agencies to track and report on incentives paid by local government funds
- Multifamily project tools, including:

- A Multifamily Navigation/Asset Manager Web tool to assist multifamily building owners/operators and portfolio managers in the retrofitting of multifamily buildings
- EnergyPro HERS II/Green Point Rated software for high-rise multifamily projects
- A white paper on whole building energy retrofit policy recommendations and lessons learned

Table 3.3 summarizes trainings directly funded by Retrofit Bay Area. Table 3.4 summarizes trainings leveraged by Retrofit Bay Area.

Table 3.3 Trainings Funded by Retrofit Bay Area

Training	Number of Trainees
EnergyPro (Basic)	93
EnergyPro (Advanced)	34
EnergyPro (Multifamily)	20
Sales and Marketing (2 day)	43
Making the Sale (1 day)	33
Worst Case Combustion Appliance Zone Safety Testing	11
Certified Green Building Professional	3
Green Point Rated Single Family Elements	33
Green Point Rated Existing Homes	51
Green Point Rated Multifamily Elements	11
Green Point Rated Core	86
Multifamily Existing Building (5 day)	70
Multifamily Green Building Operator (5 day)	28
BPI Building Analyst	8
BPI Field Mentoring (1 day)	73
BPI Field Mentoring and Field Test Prep (2 day)	19
Certified Green Real Estate Professional (2 day)	142
Green Realtor Training (4-hour)	22
TOTAL WORKERS TRAINED	780

Table 3.4 Additional Trainings Promoted/Leveraged by Retrofit Bay Area

Training	Funding Organization	Number of Attendees, ABAG Region (if reported)
PG&E Participation Workshops	PG&E	498 in person (additional 409 online) ⁴
Basic Package Technical Training	PG&E	Not Reported
Advanced Package Technical Training	PG&E	Not Reported
Energy Upgrade California Sales and Marketing and EnergyPro Workshops	Ecology Action	Not Reported
BPI Building Analyst	Ecology Action	Not Reported

B. Incentives

As referenced above, whole building energy retrofit projects completed within Retrofit Bay Area counties were eligible for a range of regional and local rebate programs. As an overarching requirement, all single family

⁴ PG&E held 21 “in-person” participation workshops in ABAG counties with 498 attendees. PG&E also began offering on-line participation workshops in August 2011; PG&E only provides data for on-line participation workshops in aggregate for all of PG&E territory: 409 individuals have attended 9 of these on-line workshops.

whole building projects had to participate in the PG&E Whole House Rebate program in order to receive a Retrofit Bay Area project rebate. Metrics associated with the PG&E program are detailed in Section (d) below.

Rebate programs funded directly by Retrofit Bay Area were originally part of two local lead agency programs. Initial allocations included \$750,000 for incentives in Contra Costa County and \$415,000 for incentives in San Francisco. Retrofit Bay Area’s first contract amendment saw a reallocation of \$60,000 for incentives in Marin County; the second contract amendment saw a reallocation of \$500,000 for incentives in Santa Clara County, \$300,000 for incentives in San Mateo County, and \$100,000 for incentives in Solano County bringing the total Retrofit Bay Area incentive allocation to approximately \$2.1 million. In August 2011, a California Department of Finance audit of all State Energy Program contract recipients resulted in a request by the CEC for Retrofit Bay Area to initiate a contingency plan to ensure all contract funds would be spent. In response, a Regional Rebate program was made available to all Retrofit Bay Area Counties, thereby enabling the establishment of rebate programs in Sonoma and Alameda counties, and layering additional funds on top of already existing local programs. These Retrofit Bay Area rebate programs are summarized in Table 3.5. Launched in October 2011, these additional Regional Rebates resulted in accelerated project uptake. A run on remaining funds in December 2011 caused the total rebate allocation to be oversubscribed by \$1.6 million. Retrofit Bay Area worked with local lead agencies and the CEC to allocate sufficient funds to cover this oversubscription, in the event that all the rebates that have been applied for are awarded. Retrofit Bay Area funded rebate totals are summarized in Table 3.6.

Tables 3.5 and 3.6 below highlight the range of rebate programs offered by local lead agencies under Retrofit Bay Area. These programs started at different times as indicated in the description of contract amendments above. Because of this and other differences between local lead agencies programs, the results summarized in Table 3.6 should not be used as the sole indicator of individual local lead agency program success or lack thereof.

Table 3.5 Description of Rebates Funded by Retrofit Bay Area (SEP)

Incentive Program	Incentive Type	Incentive Amount	Description
ABAG Regional	Assessment	\$300	Available to all 8 counties on a first come first serve basis.
	Basic	\$1000	
	Advanced	\$2000	
Contra Costa	Advanced	20% of project cost for projects < \$10,000 25% of project cost for projects > \$10,000	\$5,000 maximum incentive. Must achieve 20% or greater energy savings.
Marin	Assessment	\$300	Additional \$500 available for Marin Clean Energy Customers
	Basic/ Advanced	\$1,000 for project; \$2,000 for project with open house ⁵	
San Mateo	Assessment	\$300	Not eligible for the regional assessment incentive
	Basic	\$1,000 fixed	Matches, and awarded in addition to, PG&E Rebate
	Advanced	\$1,500 - \$4,000	
San Francisco	Assessment	Up to \$250	Paid through Retrofit Bay Area funds and other local funding sources.
Santa Clara	Assessment	80% of assessment cost up to \$800	Not eligible for the regional assessment incentive
Solano	Assessment	\$200	

⁵ Marin offered an additional project rebate to homeowners that completed an upgrade and hosted an open house, termed a “Showcase” within Marin County, to help spread the word about the program to neighbors, friends, and family.

Table 3.6 Summary of Rebate Activity Funded by Retrofit Bay Area

County ⁶		Regional Assessments	Regional Basic Package Rebates	Regional Advanced Package Rebates	Local Assessments	Local Single Family Basic Package Rebates	Local Single Family Advanced Package Rebates	Local Multifamily Rebates ⁷
Alameda	# Issued	128	0	102	Not Offered	Not Offered	Not Offered	Not Offered
	Total Value	\$37,622	\$0	\$198,630	\$0	\$0	\$0	\$0
Contra Costa	# Issued	168	0	146	Not Offered	Not Offered	155	Not Offered
	Total Value	\$50,198	\$0	\$290,665	\$0	\$0	\$595,544	\$0
Marin	# Issued	63	0	29	73	None Issued	34	Not Offered
	Total Value	\$17,182	\$0	\$56,253	\$21,697	\$0	\$53,200	\$0
San Francisco	# Issued	97	0	65	73	None Issued	66	6
	Total Value	\$22,096	\$0	\$76,158	\$18,700	\$0	\$173,449	\$30,000
San Mateo	# Issued	137	0	142	Paid Regionally	None Issued	147	Not Offered
	Total Value	\$40,341	\$0	\$262,828	\$0	\$0	\$421,650	\$0
Santa Clara	# Issued	11	2	82	461	Not Offered	4	Not Offered
	Total Value	\$3,300	\$2,000	\$158,980	\$271,113	\$0	\$102,067	\$0
Solano	# Issued	21	0	21	Paid Regionally	Not Offered	Not Offered	Not Offered
	Total Value	\$6,300	\$0	\$42,000	\$0	\$0	\$0	\$0
Sonoma	# Issued	40	2	30	Not Offered	Not Offered	Not Offered	Not Offered
	Total Value	\$11,850	\$2,000	\$59,300	\$0	\$0	\$0	\$0
RETROFI BAY AREA TOTAL	# Issued	665	4	617	607	0	406	6
	Total Value	\$188,889	\$4,000	\$1,144,814	\$311,510	\$0	\$1,345,911	\$30,000
							Total Spent:	\$3,025,124
							Total Allocated:	\$3,426,813

Local lead agencies also promoted Energy Upgrade California aligned rebates funded by other program partners (i.e., not directly by the Retrofit Bay Area funds). These leveraged rebate programs are summarized in Table 3.7.

⁶ Final Retrofit Bay Area Incentive project data as of 4/30/12.

⁷ Retrofit Bay Area funds only paid by County of San Francisco.

Table 3.7 Description of Rebates Promoted/Leveraged by Retrofit Bay Area

Leveraging Partner	Incentive Program	Incentive Type	Incentive Amount	Description
PG&E	PG&E Whole House Rebate	Basic	\$1,000 fixed	
		Advanced	\$1500 - \$4000	Depending on energy savings 15%-40%
CEC	Statewide HERS II Rebate	HERS II Assessment	\$300 “test-in” rating \$200 “test-out” rating	“Test-out” rebate available for completed upgrades
Alameda	City of Alameda	Advanced	\$1,500 - \$4,000	Depending on energy savings 15%-40%
	City of Hayward	EUC Assessment	\$250	PG&E Advanced Package required Matches, and awarded in addition to, PG&E Rebate
		Basic	\$1,000 fixed	
		Advanced	\$1,500 - \$4,000	
	City of Piedmont	EUC Assessment	\$190	Funds are first-come, first-served
		Basic	\$590	
		Advanced	\$590	
	City of Pleasanton	Basic	\$500 if project <\$10,000; \$1000 if project >\$10,000	
		Advanced	\$500 if project <\$10,000; \$1000 if project >\$10,000	
	City of San Leandro	EUC Assessment	\$250	
		Basic	\$400	
		Advanced	\$250-\$500	With 15% to 40% Energy savings
	City of Albany	EUC Assessment	Up to \$190	PG&E Advanced Package required
		Basic or Advanced	Up to \$590	PG&E Basic or Advanced Package required
Unincorporated County of Alameda	EUC Assessment	Up to \$750		
StopWaste.Org	Green Point Rated - Existing Home	\$1000		
San Francisco	City of San Francisco	SFHip Advanced	\$2,000	Added to the SFHip Advanced Incentive
		Income-Based	\$3,000	
		SFHip 2-4 Unit Building	2-unit building: \$10,000 3-unit building: \$15,000 4-unit building: \$20,000	
Town of Hillsborough	EUC Assessment	Up to full cost minus \$25		
San Mateo	City of San Bruno	EUC Assessment	100%	PG&E Advanced Package required Matches, and awarded in addition to, PG&E Rebate
		Basic	\$1,000 fixed	
		Advanced	\$1,500 - \$4,000	
City of Menlo Park	EUC Assessment	100%	PG&E Advanced Package required	
Sonoma	SCEIP HERS II Rebate	HERS II Assessment	100%; Up to \$1,000 for HERS II test-in/test-out; Up to \$1400 for a BPI test-in/HERS II test-out	Additional rebates available for properties in excess of 2500 square feet or with more than one HVAC system

C. Finance Programs

No finance programs were initiated under Retrofit Bay Area. The original program proposal stated that Retrofit Bay Area would build on the region’s existing investments in PACE financing and reduce or remove barriers

for a wide range of projects and population segments. In July 2010, the Federal Housing Finance Agency (FHFA) issued a statement that put restrictions on PACE programs, essentially putting such financing on hold⁸. Therefore, this aspect of the proposal was only supported in Sonoma County, where the Sonoma County Energy Independence Program (SCEIP) continued to operate as the only residential PACE program in California. Other local lead agency marketing and outreach efforts worked to promote existing and newly created financing mechanisms as they became available.

In Sonoma County, local lead agency coordination with SCEIP was designed to promote the SCEIP Home Energy Rating System (HERS) energy analysis rebate program and facilitate the integration of Energy Upgrade California quality assurance, loading order, workforce development, and marketing program elements into SCEIP eligibility criteria. Coordination efforts included:

- Local trainings to support Energy Upgrade California Participating Contractors and HERS whole house raters including EnergyPro software instruction, sales and marketing, SCEIP financing application preparation, and HERS Building Performance Contractor orientation
- A unified marketing message that encompassed the statewide Energy Upgrade California offer and local SCEIP financing services, including financing for single measures as well as whole building retrofits
- Uniform marketing collateral and coordinated outreach activities through an Outreach Network for program staff, Participating Contractors and raters, and community partners, which included coordination of event/presentation scheduling, master collateral and presentation materials, and best practices training for network members making presentations and tabling at events

Beyond SCEIP coordination efforts in Sonoma County, Retrofit Bay Area local lead agencies did not have access to program partners with the capacity to influence lending programs that consumers might use to finance energy retrofit projects. However, whenever possible, Retrofit Bay Area marketing and outreach efforts promoted existing and newly created financing mechanisms and resources, including:

- Green Loan Programs
- Energy Efficient Mortgages
- CHF Financing Program

D. Key Program Outcomes

Retrofit Bay Area sought to create jobs and stimulate the economy through a comprehensive program to implement energy retrofits in existing residential buildings. In light of the activities and accomplishments outlined above, Retrofit Bay Area participants are proud to have achieved the following key program outcomes:

Creation of a market for whole building energy retrofits

Prior to the launch of Retrofit Bay Area and Energy Upgrade California, there was no regional market for whole building retrofits. Before these programs started, individual entities were advancing various components of whole building initiatives. Building performance contractors were performing energy retrofits through the national Home Performance with ENERGY STAR program, which was administered by the California Building Performance Contractors Association. Local governments were exploring financing options, but without consistent loading order requirements. Utilities were offering single measure energy efficiency rebates but had no rebates for comprehensive projects delivering deeper energy savings. Each effort had its own terminology, protocols, and priorities. Retrofit Bay Area and Energy Upgrade California effectively changed this landscape, introducing consistency and standardization that has enabled the regional market to evolve into a statewide

⁸ <http://www.fhfa.gov/webfiles/15884/PACESTMT7610.pdf>

program. In an unprecedented collaboration, contractors, local governments, and utilities have developed consistent messaging, standard contractor participation requirements and quality assurance protocols, and complimentary incentive programs.

Alignment of infrastructure for ongoing program support

Central to program successes to date, and to continued improvement of the program moving forward, is the unique aligned infrastructure of program participants. Coordination in program design and implementation between contractors, local governments, and utilities paved the way for the creation of this new regional market. While it is clear that there are challenges within the current program design, this evolving partnership will enable program participants to continue to refine the program and effect those changes that are most necessary to maintain the momentum the program has established.

A regional market primed for continued growth

Retrofit Bay Area primed the region's whole building energy retrofit market for increased and continued growth. Marketing and outreach activities have begun to accelerate energy retrofit uptake as messaging has been refined and critical grass roots relationships have been established. This layered approach, initiated by local lead agencies, complements contractor and PG&E Whole House Rebate marketing efforts, allowing multiple and aligned marketing outreaches to consumers. Workforce development activities have expanded Participating Contractor skills and increased the capacity of the regional workforce to fulfill key roles within the whole building energy retrofit industry. Finally, quality assurance and reporting protocols have promoted consumer confidence in work performed under Energy Upgrade California, and enabled local lead agencies to begin communicating program accomplishments to constituents.

While market transformation within the 13 months of program operation under Retrofit Bay Area is unfeasible, it is important to recognize that the program has paved the way for a full market transformation to follow, wherein the whole building energy retrofit industry achieves increased energy savings while spurring job creation and economic development. The unprecedented partnership developed under Retrofit Bay Area between local lead agencies, PG&E, and contractors has yielded the current program accomplishments cited above. Retrofit Bay Area local lead agencies and program partners are actively seeking the means to build on these accomplishments to provide continued support of Energy Upgrade California.

In a final analysis of program goals, Retrofit Bay Area offers the metrics in Table 3.8. Retrofit Bay Area cites single family energy retrofit totals based upon PG&E Whole House Rebate program data, and multifamily energy retrofit totals based upon existing local programs operated by Stopwaste.org and the County of San Francisco; the single family and multifamily data sets are inherently different based upon the goals of the separate program operators. Job creation data are based upon program contract funds, as well as leveraged funds, and are calculated from the CEC directive for this data.⁹

⁹ “Use the Council of Economic Advisers’ Estimates of Job Creation (May 2009) from the American Recovery and Reinvestment Act of 2009, to provide a formula-based estimate of jobs created by the proposed program. Divide the total investment in the program by \$92,000 to estimate the number of direct jobs created. The total investment shall include ARRA SEP funding and all leveraged funds.” — Request for Proposal California Comprehensive Residential Building Retrofit Program #400-09-403 (CEC October 2009).

Table 3.8 Retrofit Bay Area Key Outcome Metrics

Single Family Retrofits promoted through PG&E Whole House Rebate Program¹⁰	
Number of Retrofits Achieved (Completed)	1,029
Number of Retrofits Promoted (Completed and in Process) ¹¹	1,643
Average Energy Savings per Retrofit	32%
Average kWh savings per Retrofit	1,163
Total kWh saved (Calculated from Average for Completed Retrofits)	1,196,727
Average Therm savings per Retrofit	391
Total Therms saved (Calculated from Average for Completed Retrofits)	402,339
Average Cost per Retrofit	\$14,439
Total Value of Retrofits Incentivized (Calculated from Average for Completed Retrofits)	\$14,857,731
Average Square Footage per Retrofit	1,874
Total Square Footage Retrofitted (Calculated from Average for Completed Retrofits)	1,928,346
Participating Contractors (All PG&E Territory)	206
Participating Contractors (ABAG Territory only)	90
Multifamily Retrofits promoted through Local Lead Agency Programs¹²	
Number of Retrofits Achieved (Completed Units)	826
Number of Retrofits Promoted (Completed Buildings)	30
Total Value of Retrofits Incentivized	\$23,929,414
Total Square Footage Retrofitted	435,797
Job Creation – Retrofit Bay Area	
Jobs Created – Program Funds (\$10,827,395)	118
Jobs Created – Leveraged Funds ¹³ (Local Funds)	127
Jobs Created – Leveraged Funds ¹⁴ (Private Capital + PG&E Whole House Rebate Funding)	161
TOTAL¹⁵	406
Jobs Created – Associated PACE Programs¹⁶	190

¹⁰ PGE Whole House Data for Retrofit Bay Area Program metrics as of 3/31/2012.

¹¹ “Retrofits Achieved” were noticed as complete by PG&E as of 3/31/2012; “Retrofits Promoted” were noticed as at least initiated by PG&E as of 3/31/2012 and therefore reflect local lead agency marketing efforts to promote upgrades through 3/31/2012.

¹² StopWaste.org and County of San Francisco metrics as of 3/31/2012; these programs were primarily funded through programs other than Retrofit Bay Area; the single family and multifamily data sets are inherently different based upon the goals of the separate program operators.

¹³ \$11,667,695 in Energy Upgrade aligned Local Funds reported through 3/31/2012.

¹⁴ \$14,857,731 in Private Capital and Rebate Funding for PG&E Rebated Retrofits through 3/31/2012.

¹⁵ Total jobs created by the program include direct jobs funded by Retrofit Bay Area directly, and indirect jobs generated by activities that leveraged program activities.

¹⁶ \$17,469,773 in PACE Lending through the Sonoma County Energy Independence Program reported through 3/31/2012; it is not possible to disaggregate Retrofit Bay Area only leveraged funds from this total.

4. CONCLUSIONS

A. Major Findings or Conclusions

- A marketing transformation program requires a multi-year, multi-phased contract. This two-year contract sufficed to establish the basic infrastructure for long-term sustainability and substantial ramp-up of energy upgrades. Substantial additional funding is necessary to achieve the volume of energy upgrade projects needed to meet environmental, job creation, and economic recovery goals.
- Substantial regional incentives created additional traction to increase uptake in the program because of the depressed economic market, the high cost of the Advanced upgrades, and the lack of low-interest loans.
- The program requires ongoing alignment of utility and local governments as program implementers to reach the depth of market penetration required.
- The program design is too complicated for homeowner ease of understanding and contractor ease of use; a new, simpler program design would improve program success.
- Deeper energy savings are necessary to reach the statewide energy and greenhouse gas goals. Additional research and pilot testing of the package of energy-saving measures and ways to integrate renewable energy generation and HVAC contractor point of contact are required.
- Consistency in the contract structure would have significantly reduced contract and budget delays, but may not have given counties the autonomy they required.
- The workforce tasks should have occurred in later phases when increased volume of energy retrofits triggered the need for additional staff. Workforce Investment Boards did not experience enough early job demand to justify their continued participation.
- Local governments played a key role in implementing the program by using existing community networks and infrastructure to deliver program messages to citizens where they live, work, and play.
- Delays in launching the program impacted time-sensitive marketing and outreach campaigns for educating homeowners on the whole house approach.
- Financing options are necessary for homeowners to afford the Advanced upgrades.
- Driving consumers to the Energy Upgrade California website made it difficult to track which marketing method initially drove them to the website and whether homeowners completed upgrades.
- Access to PG&E retrofit data was very difficult to obtain, and only toward the end of the program was access to aggregate-level data made available.

B. Best Practices

- Uniform statewide brand guidelines and tools that maintain the integrity of the brand provide a framework for continuity of consumer awareness that local marketing campaigns can build upon to drive program participation.
- Marketing templates and outreach targeted to reflect specific community needs.
- One-Stop-Shop website where all information on the program is located.
- Steering Committee and Program Advisory Committee resulted in program buy-in and substantial stakeholder program outreach.
- Providing consistent regional incentive design, rather than multiple local incentives, that delivers substantial added value to property owner upgrades, with minimal burden, can drive program participation.
- Uniform program design resulted in increased consumer and contractor program understanding.

- Establishing the project exemptions for the California Environmental Quality Control Act, Waste Management, and Historic Preservation paved the way for similar future projects, and streamlined individual projects going through the pipeline.
- Leveraging the Home Energy Retrofit Coordinating Committee facilitated bringing together local governments, utilities, CEC, and CPUC around whole building.

C. Lessons Learned

Program Design

Lesson #1: Keep It Simple for Contractors

An inherently complicated program design created a huge ramp-up for contractor credentials, along with expansion of the contractor business model to include sales, finance, and homeowner education. A simpler program design should be considered.

Lesson #2: Limit Mid-Course Program Design Changes

Substantial mid-course program design changes including a change in the utility administrator, the introduction of HERS II, and changes in credential requirements for Participating Contractors undermined the consistency of the marketing of the program and program requirements.

Lesson #3: Limit Administration

The related administration for participation in this program by the regional incentive administrator, the local counties, PG&E, and the CEC was extensive. A reduction in reporting, paper submitted, and parties to report to is necessary to enable all parties to focus on completing energy upgrades.

Lesson #4: Roles of Regional Agency and Local Government

The role of the ABAG as the convener and facilitator was critical to obtaining the contract, establishing regional program uniformity, and mobilizing community awareness and market demand. Local governments aligned this program with their traditional role as protectors of the public health and safety as it applies to climate protection. They also leveraged local relationships and resources to reduce overall project costs with local building supplier engagement, provide local finance options, offer contractor training, and conduct homeowner outreach through existing networks including local leaders and organizations. Local government endorsement of the program created credibility with consumers.

Lesson #5: Revisit Upgrade Path Design

The program offered a choice between a Basic path upgrade and an Advanced path upgrade, and 95 percent of the energy upgrades were Advanced path projects. Many Participating Contractors found that the minimum project scope required to turn a profit went beyond the Basic path parameters. Thus it was not a viable business model. Also, because some homeowners had already done some work on their home, they were not eligible for Basic path participation. Revisiting the upgrade program design is necessary to increase energy savings, decrease path costs, and make it simpler for the contractor and homeowner.

Lesson #6: Incentives

The regional incentive did drive homeowners to participate in the program, however, there are concerns that homeowner participation will drop off once the incentive program is ended. The region benefitted from a uniform regional incentive program design, which increased simplicity and program understanding for contractors who work across county borders. Santa Clara County subsidized assessments up to 80% of the cost, up to \$800, paid directly to contractors; analysis by Santa Clara indicated that 45% of these assessments converted to completed upgrades. Further study to quantify the relationship of these leads to completed upgrades is necessary to inform if and how this approach can be successfully replicated and scaled elsewhere.

Lesson #7: Accessibility to Data

A data sharing agreement needed to be in place from the beginning of the program between local governments and PG&E. The program design had all the critical program data (e.g., energy savings, upgrade locations, high energy user locations) held by the utility, which made targeted marketing and program success very difficult.

Workforce

Lesson #8: Building Trust

Many homeowners have an ongoing relationship with and trust in contractors who have performed work for them in the past. Most of these contractors are not home performance contractors. Building trust for Participating Contractors can be accomplished through local advertising that features local home performance contractors and by leveraging trusted local non-profits to organize local contractors. Local government support and endorsement of Participating Contractors is a critical element to building consumer trust.

Lesson #9: Contractor Reports

Contractors were providing reports for consumers they knew wanted to proceed with an upgrade. However, contractors were sometimes so busy educating homeowners, conducting assessments, or completing upgrades that delivery of reports to consumers could be delayed for months. Consider developing guidelines for report delivery and content.

Lesson #10: Trusted Independent Guide

A trusted third-party is necessary to guide property owners through a project. County employees can serve in this role, providing unbiased information and helping homeowners navigate the program.

Marketing

Lesson #11: Understanding Market Segments

Homeowners varied in their reasons for participating in the program. Some cared about the environment, others about health and comfort, others wanted to save money, and others wanted to be off the grid all together. Additional market segment studies are necessary to determine trends and effective marketing strategies for those segments.

Lesson #12: Strategic Multi-faceted Marketing Required

There is no one single marketing approach that will reach or resonate with everyone. Given the demographic, geographic, economic, and ethnic diversity in the ABAG region, multiple approaches are needed to reach targeted audiences. There is a need to market to different segments with different strategies – social media, print, radio, TV, tabling events, workshops, etc. Such multi-faceted marketing should be employed in future programs. In addition, social equity needs to be addressed in outreach strategies, particularly with the limited options available for financing.

Lesson #13: Localized Marketing Required

Marketing success in generating leads was supported by customized marketing-education-outreach approaches that leveraged the character of a community, local events, and trusted messengers. Most jurisdictions also had local websites that linked to the Energy Upgrade California Website. These local websites provided more localized information and were typically hosted on County websites where residents are used to searching.

Lesson #14: Local Government Partnerships

Local government partnerships with industry professionals (contractors, realtors, retailers etc.), non-profits, and community groups were extremely important to promoting the program, educating the consumer, and driving contractors to trainings.

Lesson #15: Continued Marketing Required

Most homeowners are not aware of how their homes work or the economic and environmental benefits of energy efficiency. While the Energy Upgrade California website and local marketing campaigns have achieved an initial measure of homeowner education, building broader awareness and deeper knowledge will be key to future program implementation and market transformation.

5. TECHNOLOGY

Table 5.1 describes any products produced or technology transfer activities accomplished through the contract.

Table 5.1 Retrofit Bay Area Technology Products Produced

Task Number	County/Agency	Item	Description
2.2	RCPA	Single Family Training Curriculum	Training standards and professional credentials conforming to requirements for participation in the PG&E Whole House Rebate Program.
2.2	StopWaste.Org	Multifamily Training Curriculum	Trainings standards and professional credentials established to build upon single family training curriculum.
2.7	ABAG	Website/Call Center	Retrofit Bay Area web site: http://retrofit.abag.ca.gov/ Call Center Info: http://www.abag.ca.gov/callcenter/ Contractor Portal: http://contractors.abag.ca.gov/
2.7	Contra Costa County	Website	www.EnergyUpgradeCC.org developed and maintained as a portal for Contractors to make reservations for County rebates and for homeowners and Contractors to get information about Energy Upgrade California in Contra Costa County.
2.7	Contra Costa County	Video Produced	Partnered with the City of Martinez to do homeowner workshop. Workshop was recorded and played on Community Access Channel, both for City of Martinez and for Contra Costa County.
2.8	Marin County	Tool Lending Library	Assisted with the development of a contractor tool lending library.
2.7	Marin County	Website	A local website providing information on local incentives and the participation process for homeowners and contractors. www.co.marin.ca.us/energyupgrade
2.7	Marin County	Public Service Announcement	Local public service announcement for public access television, online government channel, and YouTube.
2.7	Marin County	Software	Graphic design software for the development and modification of marketing materials.
2.7	Marin County	Educational Display	Educational dollhouse display to illustrate the principles of home energy performance.
2.7	County and City of San Francisco	Website	Homeowner online portal and home performance survey and contractor picker in collaboration with EnergySavvy. http://sfe.energysavvy.com/
2.7	Santa Clara County	Website	A webpage with a hidden URL for program partners to download marketing materials for EUC and local incentive information:
2.7	Santa Clara County	Audio Produced	Multiple radio promos produced
2.7	Santa Clara County	Video Produced	www.youtube.com/sccenergyupgrades Video Produced-
2.7	Santa Clara County	Database	Collected a database of over 600 emails for people who attended events/workshops, expressed interested in learning more about the program, and signed up through the website to receive program updates.
2.8	San Mateo County	Website	County landing page for residents: http://www.co.sanmateo.ca.us/energyupgrade
2.7	RCPA	Website	http://www.sonomacountyenergy.org/
2.7	RCPA	Audio-Produced	Multiple radio promos produced
2.2	StopWaste.org	Software	Multifamily Navigation Tool/Asset Manager
2.4	StopWaste.org	Software	Energy Pro HERS II/Green Point Rated Software to provide

Task Number	County/Agency	Item	Description
			enhancements to the HERS II/CA T-24 part 6 code compliance software application to multifamily existing buildings
2.6	StopWaste.org	Software	Green Energy Compass-Software development for tracking retrofit project results and environmental benefits
2.7	StopWaste.Org	Audio Produced	30-second radio spot for airing on KCBS
2.7	StopWaste.Org	Video Produced	Partnered with KTVU TV and Advanced Home Energy to produce 9 one minute vignettes of the Yee Family Basic Upgrade http://youtu.be/M-af4r2lgE4
2.7	StopWaste.Org	TV Ad Produced	30-second TV spot on KTVU promoting EUC
2.7	Suisan City	Tool Lending Library	Tool Lending Library for Solano + program

6. DELIVERABLES

The schedule of deliverables reported in Table 6.1 covers deliverables completed through the life of the contract.

Table 6.1 Retrofit Bay Area Schedule of Deliverables and Due Dates

Deliverable	Brief Description	Due Date in Agreement	Date Delivered to CEC
1.1 Attend Kick-off	Kick-off Meeting Deliverables	10/12/2010	10/12/2010
	An Updated Schedule of Deliverables	10/12/2010	10/12/2010
	An Updated Gantt Chart	10/12/2010	10/12/2010
	An Updated List of Leverage Funds	10/12/2010	10/12/2010
	An Updated List of Permits	10/12/2010	10/12/2010
1.2 CPR Meetings	CPR Meeting Deliverables	TBD	4/11/2011 9/8/2011
	CPR Report 1 - 5 days in advance of CPR meeting		4/7/2011
	CPR Report 2 - 5 days in advance of CPR meeting		9/4/2011
	CPR deliverables identified in this Scope of Work		4/11/2011, 9/8/2011, 3/30/12
	Agenda and a List of Expected Participants		CCM Deliverable
	Schedule for Written Determination		CCM Deliverable
	Written Determination		CCM Deliverable
1.3 Final Meeting	Final Meeting Deliverables	3/19/2012	Canceled by CEC
	Written documentation of meeting agreements and all pertinent information - 3 working days after final meeting	3/22/2012	N/A
	Schedule for completing closeout activities - 3 working days after final meeting	3/22/2012	N/A
1.4 Monthly Progress Reports	Monthly Progress Reports	4/30/2012	Monthly
1.5 Final Report	Final Report Deliverables	4/13/2012	
Final Report Outline	Draft Outline of the Final Report	1/16/2012	12/5/2011
	Final Outline of the Final Report - 5 working days after receipt of CCM comments. CEC sent all ARRA awards their preferred outline.	1/17/2012	1/27/2012
Final Report	Draft Final Report. – CEC modified due date for deliverable for all ARRA awardees	2/29/2012	3/16/2012
	Final Report – CEC modified due date for deliverable for all ARRA awardees	4/13/2012	4/30/12
1.6 Identify and Obtain Leverage Funds	Identify and Obtain Leverage Fund Deliverables	3/30/2012	

Deliverable	Brief Description	Due Date in Agreement	Date Delivered to CEC
	A letter regarding source of all leverage funds	10/8/2010	10/8/2010
	Letter that Leverage Funds were Reduced (if applicable)	3/30/2012	9/4/2011
1.7 Identify and Obtain Required Permits	Required Permit Deliverables	3/30/2012	
	A letter documenting the Permits or stating that no Permits are required	10/8/2010	10/8/2010
	Updated list of Permits as they change during the Term of the Agreement	3/30/2012	No permits required
	Updated schedule for acquiring Permits as it changes during the Term of the Agreement	3/30/2012	No permits required
	A copy of each approved Permit (including air quality) and any documents prepared pursuant to CEQA	3/30/2012	No permits required
1.8 Prevailing Wage Determinations and Weekly Certified Payrolls	Prevailing Wage Determinations and Weekly Certified Payrolls Deliverables	3/30/2012	
	Copies of Applicable Wage Determinations	30 days after contract execution and 30 days after subcontract execution for subcontractors performing labor and mechanic work	No Davis Bacon
	Weekly Certified Payrolls	3/30/2012	No Davis Bacon
1.9 Historic Preservation Consultation	Historic Preservation Deliverables	TBD	
	Consultation Package	TBD	10/28/2010 4/13/2011 5/21/2011
1.10 Waste Management Plan	Waste Management Deliverables	TBD	
	Waste Management Plan	TBD	5/18/2011
1.11 Electronic File Format	A Letter requesting exemption from the Electronic File Format (if applicable) - 90 days before deliverable is submitted	3/30/2012	No exemption required
1.12 Establish the PAC	PAC Establishment Deliverables	12/17/2010	12/17/2010
	Draft List of PAC Members	10/12/2010	10/12/2010
	Final List of PAC Members	12/17/2010	12/17/2010
	Letters of commitment from each PAC member	12/17/2010	12/17/2010
1.13 Conduct PAC Meetings	Conduct PAC Meeting Deliverables	3/30/2012	
	Draft PAC Meeting Schedule	10/12/2010	10/31/2010

Deliverable	Brief Description	Due Date in Agreement	Date Delivered to CEC
	Final PAC Meeting Schedule	1/19/2011	12/31/2010
	PAC Meeting Agenda(s) with Back-up Materials for Agenda Items	Quarterly	April 2011, July 2011, October 2011, January 2012
	Written PAC meeting summaries, including recommended resolution of major PAC issues	Quarterly	April 2011, July 2011, October 2011, January 2012
2.1 Program Management	Program Management Deliverables	4/30/2012	
Implementation Plan	Draft implementation plan	1/19/2011	1/19/2011
	Final implementation plan - 15 days after receipt of CCM comments	TBD	6/16/2011
	Draft agreements (subcontracts, MOUs, letters of commitment and intent, etc.)	1/19/2011	Ongoing
	Final executed agreements (subcontracts, MOUs, letters of commitment and intent, etc.) signed by all parties to each agreement.	TBD	Ongoing
Program Risk Management	Monthly risk management reporting to identify perceived risks and actions taken (or to be taken) to mitigate these risks, to be included in monthly progress reports	Monthly	Monthly
2.2 Workforce Development	Workforce Development Deliverables	3/30/2012	
Workforce Development Plan	Workforce Development Plan - submitted as part of implementation plan	1/19/2011	1/19/2011
Training Curriculum	Multifamily curriculum	2/14/2011	12/31/2010
Ongoing training marketing and outreach	Rosters of training graduates, as part of monthly reporting	Monthly	Monthly
	Workforce development updates, as part of monthly reporting	Monthly	Monthly
Training Curriculum	Single-family curriculum	2/21/2011	1/19/2011
2.3 Participant Recruitment	Participant Recruitment Deliverables	3/30/2012	
Stakeholder outreach	Stakeholder outreach meeting schedules; Presentation content for stakeholder outreach meetings	5/1/2011	4/29/2011
	Stakeholder outreach attendance rosters, Stakeholder outreach meeting reports	3/30/2012	Monthly
Contractor recruitment	Contractor orientation workshop schedules; Presentation content for contractor orientation workshops	9/1/2011	9/1/2011
	Contractor orientation workshop meeting reports; Attendance rosters for contractor orientation workshops	3/30/2012	Monthly

Deliverable	Brief Description	Due Date in Agreement	Date Delivered to CEC
2.4 Retrofit Installations	Retrofit Installations Deliverables	3/30/2012	
Retrofit installation activity	Monthly reports of retrofit installation activity including updates on neighborhoods identified and number of households retrofitted	Monthly	Monthly
Qualified Participating Contractor List	Qualified Participating Contractor List	10/15/2010	10/15/2010; Monthly
	Model scopes of work-This item was incorporated into the California Better Buildings Program scope of work and is no longer a deliverable under Retrofit Bay Area	5/19/2011	No longer a deliverable
Multifamily performance packages and HERS II software module	Multifamily packages and software module	10/31/2011	11/28/2011
	Streamlined diagnostic protocols -This item was incorporated into the California Better Buildings Program scope of work and is no longer a deliverable under Retrofit Bay Area	5/19/2011	No longer a deliverable
Establish Bulk Purchase Agreements	Bulk equipment purchase agreements	5/19/2011	5/19/2011
2.5 Quality Assurance	Quality Assurance Deliverables	3/30/2012	
Establish quality and consumer protection policies	Draft and final QA and consumer protection policies, submitted as part of implementation plan	1/19/2011	1/19/2011
Review and revise/adopt CBPCA-PG&E Policy & Procedures Manual	Policies and procedures manual, submitted as part of implementation plan	1/19/2011	1/19/2011
Establish contractor/rater qualifications and certification requirements	Contractor/rater qualifications and certification requirements, submitted as part of implementation plan	1/19/2011	1/19/2011
Quality assurance activities	Quality assurance activities and outcomes and customer satisfaction reports, submitted as part of monthly reporting	Monthly	Monthly
	Multifamily professional credentials	1/19/2011	1/15/2011
	Multifamily QA protocols and QA plan	9/30/2011	9/30/2011
2.6 Verification of Energy Savings	Verification of Energy Savings Deliverables	3/30/2012	
Establish minimum energy efficiency threshold policy	Minimum energy efficiency thresholds, submitted as part of implementation plan	1/19/2011	1/19/2011
Define and confirm job verification protocols	Verification protocols, submitted as part of implementation plan	1/19/2011	1/19/2011
Energy and carbon savings calculation and reporting	Project reporting procedures and energy and carbon savings calculation methodologies, submitted as part of Implementation Plan	1/19/2011	1/19/2011

Deliverable	Brief Description	Due Date in Agreement	Date Delivered to CEC
Energy and carbon savings calculation and reporting	Web-based tracking and reporting system- delay due to intellectual property issues.	10/3/2011	12/1/2011
	Monthly reports of energy savings (including database of estimated post retrofit HERS II rater verification and actual monthly utility-use information), carbon reductions, and EM&V efforts, as part of program reporting	Monthly	Monthly
2.7 Marketing and Outreach	Marketing and Outreach Deliverables	3/30/2012	
Develop integrated marketing & outreach plan	Draft marketing plan, submitted as part of implementation plan	1/19/2011	1/19/2011
	Final marketing plan	2/21/2011	1/21/2011
	Marketing Materials	3/31/2011	3/31/2011
	Consumer website	2/14/2011	2/14/2011
Operate public relations and marketing campaigns	PR and marketing progress reports, as part of monthly reporting	Monthly	Monthly
Operate customer interface via website and hotline system	Website activity tracking reports, as part of monthly reporting	Monthly	Monthly
	Schedule of real estate training events	9/30/2011	1/31/2011
Added-value development (MLS, etc.)	Documentation of MLS listings as part of monthly reporting- This deliverable was replaced with a report on greening the MLS in California	Monthly	2/29/2012
	Real estate training curricula-Trainings delivered October 2011 and February 2012; MLS listings deliverable was said to be not possible to deliver in December report and BIG is delivering a best practices module in Feb report in its place	7/1/2011	10/31/2011 2/20/2012
	Multifamily Asset Manager Web Tool -Code development work for the navigation was on hold until additional funding under the LGC contract became officially available in Nov. Deliverable completed in Feb and any further work is being paid for under a different contract	11/1/2011	2/29/2012
2.8 Public Policy Support	Public Policy Support Deliverables	4/13/2012	
Recommend policy options for cities and county	White paper on policy recommendations- Delay due to CEC extension of contract through April allows larger, more complex recommendations to be developed	3/15/2012	4/19/12
Deliver policymaker presentations to elected officials and key decision makers	Presentation content; presentation schedules	4/13/2012	4/30/12
Meetings and briefings to county and stakeholders	Meeting reports- Delay due to CEC contract extension through April, to be included in April monthly report	4/13/2012	4/30/12

7. BUDGET

Actual Expenditure reported in Table 7.1 covers expenditure through the life of the contract.

Table 7.1 Retrofit Bay Area Project Budget

Budget Category or Deliverable	Brief Description	Budgeted	Actual Expenditure
1.1 Attend Kick-off Meeting	Establish lines of communication and procedures for implementing Contract Agreement	\$11,748.00	\$11,746.70
1.2 CPR Meetings	Meetings between the Energy Commission and the Contractor to discuss any modifications needed to be made to tasks, deliverables, schedule or budget to the Contract Agreement	\$15,971.37	\$15,971.11
1.3 Final Meeting	Final Meeting with the Energy Commission to discuss findings, conclusions and recommendations as well as closeout of the Agreement	\$10,003.00	\$8,884.06
1.4 Monthly Progress Reports	Preparation of monthly progress reports summarizing the Agreement activities performed by Contractor. This includes assessment ability to complete deliverables within current budget including expenditures tracking	\$436,229.29	\$425,825.90
1.5 Final Report	Preparation of the written Final Report that describes the work performed under the Agreement	\$85,005.09	\$75,009.29
1.12 Establish the PAC	Establishment of a regional Program Advisory Committee (PAC) that will coordinate the residential building retrofit efforts among the eight counties (Alameda County, Sonoma County, Contra Costa County, San Francisco County, Santa Clara County, Suisun City, Marin County, San Mateo County)	\$3,113.00	\$3,112.17
1.13 Conduct PAC Meetings	Monthly PAC meetings for purpose of coordinating regional program design and implementation	\$146,591.24	\$125,175.27
2.1 Program Management	Perform deliverables/activities detailed under both the Implementation Plan and Program Risk Management tasks. These activities include development of a detailed plan to complete the proposed program and manage and mitigate risks that affect program performance and successful outcome	\$408,636.93	\$398,010.80
2.2 Workforce Development	Establish a skilled workforce capable of delivering targeted volume of home retrofits, consistent with program quality standards	\$754,263.05	\$753,117.51
2.3 Participant Recruitment	Engage stakeholders to provide input on effective design, cultivate partners and allies to champion the program through their communication channels	\$565,052.00	\$556,476.48
2.4 Retrofit Installations	Retrofit of single family homes and multifamily housing units, which includes creating standards for multifamily retrofits, screening contractor applications, and developing a centralized approach to delivering retrofits	\$3,580,297.48	\$3,180,552.45

Budget Category or Deliverable	Brief Description	Budgeted	Actual Expenditure
2.5 Quality Assurance	Apply consistent quality standards to build consumer confidence and maximize customer satisfaction by cooperating with utility incentive programs and providing monthly reports on QA activities and outcomes	\$114,802.57	\$111,591.24
2.6 Verification of Energy Savings	Documentation of expected annual energy savings from participating projects based on field verification of actual installed improvements; provide informative summary reports	\$230,037.00	\$228,758.50
2.7 Marketing and Outreach	Develop and implement a communications strategy that will motivate property owners to invest in efficiency and/or solar retrofits to their properties	\$4,796,064.66	\$4,760,060.83
2.8 Public Policy Support	Develop public policy support for building retrofits	\$192,185.32	\$173,102.67
	<u>TOTAL</u>	\$11,350,000.00	\$10,827,395.00

8. APPENDIX

Retrofit Bay Area Program Advisory Committee (PAC) Agenda

PAC Meeting 1: April 12, 2011

Retrofit Bay Area Program Advisory Committee Meeting Agenda

Tuesday, April 12, 2011 9:00 am – 12:00 pm

Association of Bay Area Governments

101 Eighth Street, *Joseph P. Bort MetroCenter Auditorium*, Oakland, CA 94607

I. Welcome and Introductions	9:00-9:10
II. Retrofit Bay Area Update	9:10-9:20
<ul style="list-style-type: none">• <i>Status of Deliverables</i>• <i>Implementation Plan Update</i>	
III. Marketing & Outreach	9:20-11:20
<ul style="list-style-type: none">• <i>Goals and Objectives (10 min)</i>• <i>Background (30 min)</i><ul style="list-style-type: none">○ <i>Driving Demand (Mark Zimring)</i>○ <i>Establishing the Brand Guidelines</i>• <i>Issues and Opportunities (60 min)</i><ul style="list-style-type: none">○ <i>Co-Branded Marketing Collateral/Templates</i>○ <i>County Content on EUC Website</i>○ <i>Community Outreach</i>• <i>Ensuring Ongoing Coordination (20 min)</i><ul style="list-style-type: none">○ <i>State</i>○ <i>Region</i>○ <i>County</i>○ <i>MIG</i>○ <i>Ecology Action</i>○ <i>Renewable Funding</i>	
IV. Workforce Development	11:20-12:00
<ul style="list-style-type: none">• <i>Contractor Scholarship program design recommendations</i>• <i>Workforce Partner Working Group – status update & recommendations</i>• <i>Workforce Gaps Analysis</i>	

Retrofit Bay Area Program Advisory Committee

Meeting Agenda

Tuesday, July 12, 2011 9:00 am – 12:00pm

Association of Bay Area Governments

101 Eighth Street, Joseph P. Bort MetroCenter Auditorium, Oakland, CA 94607

I. Welcome and Introductions	9:00-9:10
II. Retrofit Bay Area Update	9:10-9:40
<ul style="list-style-type: none">• <i>Implementation Plan Update – Michele Rodriguez</i>• <i>County Incentives – Chris Bradt</i>• <i>Contractor Scholarship – Chris Bradt</i>• <i>Bulk Purchase in Alameda County – Karen Kho</i>	
III. Marketing & Outreach	9:40-11:40
<ul style="list-style-type: none">• <i>Collateral – Tim Carroll/Judi Ettlinger</i><ul style="list-style-type: none">○ <i>Co-Branded Marketing Collateral/Templates</i>○ <i>Energy Upgrade California Website Content and Analytics</i>○ <i>Community Outreach</i>○ <i>Press Kit</i>• <i>Co-Op Marketing Program – Christine Collopy</i>• <i>Canvassing Lessons Learned – Chris Bradt</i>• <i>Penetration of Retrofits – Carrie Armel, Stanford Pre-Court</i>• <i>Engage 360 – ABAG Pilot – Sarah Davis</i>	
IV. PG&E Whole House Program	11:40-12:00
<ul style="list-style-type: none">• <i>New Administrator Briefing – Bruce Mast</i>	

Retrofit Bay Area Program Advisory Committee

Meeting Agenda

Tuesday, October 11th, 2011 10:00 am – 12:00pm

Association of Bay Area Governments

101 Eighth Street, Room 171 Conference Room, Oakland, CA 94607

I. Welcome and Introductions	10:00-10:10
II. Retrofit Bay Area Implementation	10:10-10:50
<ul style="list-style-type: none">• <i>P.G. & E Whole House Rebate Program – Joanne Panchana, Program Manager</i><ul style="list-style-type: none">○ <i>Green Communities Coordinator/Data Report</i>○ <i>September Building Retrofits</i>○ <i>Homeowner Workshops</i>○ <i>Job Processing Update</i>○ <i>Participating Contractors approved</i>○ <i>Contractor Support meetings</i>○ <i>Multifamily rebates and protocols</i>	
III. Program Resources	10:50-11:30
<ul style="list-style-type: none">• <i>Incentives (County & Regional) - Jonathan Strunin</i>• <i>Workforce and Contractor Training – Chris Bradt</i>• <i>Marketing & Outreach Program – Tim Carroll and Judi Ettinger</i><ul style="list-style-type: none">○ <i>Marketing Working Group Update</i>○ <i>Current Marketing Initiatives</i>○ <i>Marketing Funding</i>○ <i>Co-Op Marketing Pilot Update</i>	
IV. Energy Upgrade after ARRA: Part I	11:30-12:00

Retrofit Bay Area Program Advisory Committee

Meeting Agenda

Thursday, January 19th, 2012 9:00 am – 12:00pm

Meeting Location: Renewable Funding, 155 Grand Avenue, 3rd Floor, Oakland

Conference Line: (641) 715-3625 Access Code: 705455#

I.	Welcome and Introductions	9:00-9:10
II.	Review Proposed Changes to the Utility Energy Efficiency Portfolios for the 2013-2014 Transition Period	9:10-9:30
III.	Upgrade Metrics – Joanne Panchana, PG&E	9:30-9:45
IV.	ARRA Lessons Learned Report Review	9:45-10:00
V.	Industry Sector Presentations (20 min per sector)	10:00-11:40
	<ul style="list-style-type: none">• Building Trades Sector: <i>Chris Cone, Efficiency First North Bay Chapter</i>• Non-Profit Sector: <i>Kif Scheuer, Strategic Energy Innovation</i>• Realtor Sector: <i>Arlene Baxter, Women’s Council of Realtors</i>• Workforce Sector: <i>(George E. Carter, Contra Costa Workforce Investment Board</i>• Education Sector: <i>Chuck Carpenter, Contra Costa College</i> <p><i>Each industry sector member has been asked to loop-out to their constituency to answer the following questions, this information will be used to help inform the development of the ARRA Lessons Learned Report:</i></p> <ul style="list-style-type: none"><i>i. What were your initial hopes for what Energy Upgrade California could have meant to your industry?</i><i>ii. What do you see as the benefits and accomplishments of the Energy Upgrade Program in California within your industry?</i><i>iii. What are your top 3 recommendations for program design and continued implementation in regard to your industry moving forward?</i>	
VI.	Overarching Themes or Missed Topics	11:40-12:00

Program Advisory Committee Sector Feedback

Building Trade Program Feedback

Prepared by Chris Cone, Efficiency First North Bay Chapter Vice Chair

What were your initial hopes for what Energy Upgrade California™ could have meant to your industry?

We hoped that Energy Upgrade California would initiate a needed revolution in how consumers think about and use energy services. We provide a key solution to important and pressing societal problems including climate change, a depressed housing market, and economic recession. We see the bigger picture in which home performance and renewable generation achieve the deep reductions in fossil fuel use needed to stabilize the climate impacts. Energy Upgrade is a vehicle for accelerating public awareness of and market demand for this new value proposition. We've made a good start, but the market transformation envisioned will take commitment, lots of education, and time.

We hope the program will create widespread consumer education and participation because it sets standards for Participating Contractors that foster consumer confidence, it enlists local government partners who can advocate as neutral third parties for the societal value of energy industry services, and it helps property owners with financing and rebates. While many in the industry are leery of building a business model on the availability of rebates, which are by their nature temporary, as an aid to jump-starting market demand and with the commitment of the California Public Utilities Commission to a set time frame, rebates are a valuable tool.

It is our hope that Energy Upgrade California can mature into a significant lead generation tool, create new construction industry jobs, foster new partnerships between home performance and solar/wind generation vendors, and change how property owners perceive the value of their buildings, the energy they use, and their role in transitioning to a sustainable future.

What do you see as the benefits and accomplishments of the Energy Upgrade Program in California within your industry?

- **One-stop-shop toolkit:** Energy Upgrade California has provided a consumer toolkit that streamlines the initial energy upgrade process through the Web resource and local government marketing and provides both efficiency and renewable generation as a combined value.
- **Consumer education:** Energy Upgrade provides a uniform message that distills key consumer benefits creating a new offer in the efficiency marketplace that allows consumers to recognize a consistent value proposition and its associated benefits.
- **Recognizable brand/local government advocacy:** As a government-sponsored program, Energy Upgrade provides a recognizable brand and associated standards and credibility that are in line with government's role as protector of the community health and safety.
- **Consumer protection credibility:** By providing a vetting and QA process, Energy Upgrade fosters consumer confidence in the Participating Contractors.
- **Platform for market transformation** through the collaboration of government, nonprofit, community, and industry partners. This partnership is the first step in a broader process to initiate sustainable practices and economic structures for all aspects of the community (e.g., transportation).

What are your top three recommendations for program design and continued implementation in regard to your industry moving forward?

- **Simplify the rebate process** to (1) be consistent, timely, and contractor- and consumer-friendly (i.e., fewer onsite visits, less paperwork, stable process) and (2) focus the consumer's needs for services and

not regulatory goals. (Contractors are struggling to turn a profit with the added overhead from the incentive approval and QAQC process.)

- **Allow contractor-focused software** that uses operational energy analysis for more accurate energy savings estimates, and supports cost-effective project development and sales processes. (Reconcile HERS modeling with Participating Contractor modeling needs.)
- **Support growing companies** with employee mentoring **and further advanced home performance training** funding to develop qualified workers with field experience, growth capital resources to underwrite business expansion, and partnerships with renewable generation partners to reach net zero energy goals for existing and new homes and businesses.
- **Continue marketing/education/outreach** in local communities to build brand recognition and lead generation.

Education/College Program Feedback

Prepared by Chuck Carpenter, Contra Costa College and by Danny Beesley, Laney College

Contributions made by Nicholas Alexander, Richmond Build Green Careers Academy, Director and Jodi Pincus, Rising Sun Energy Center, Executive Director

What were your initial hopes for what Energy Upgrade California™ could have meant to your industry?

We had initially hoped that EUC was going to bring about a large awareness to the industry as well as to home owners about the benefits of energy efficiency measures.

Secondarily we had anticipated that EUC was going to make the process of rebates and incentives for energy efficiency measures a very painless process for all parties involved including, homeowners AND contractors.

The training we provided with ARRA dollars would be put to use in jobs provided by retrofitting Bay Area homes. Our students were from at risk workers from the construction sector. These workers were primarily from the communities of San Pablo and Richmond with 18-35 % unemployment.

What do you see as the benefits and accomplishments of the Energy Upgrade Program in CA within your industry?

EUC has brought about a slight awareness in the general public about energy efficiency, but unfortunately to us it does not look like the awareness levels that are necessary in order to catalyze this industry were achieved.

Jobs were created at the end of November by Energy Upgrade contractors, but with PGE restrictions many of our trainees were not eligible. Other trainees who had a construction background were able to start their own company. The time from the end of our training grant and the availability of employment made it almost impossible to keep the Trainees engaged. Some of the HVAC training has become a part of courses offered at LMC.

What are your top 3 recommendations for program design and continued implementation in regards to your industry moving forward?

- Coordinate certificates required with training. This was a moving target with much of our training dollars spent on BIG
- Certificates and HERS I and waiting for HERSII before BPI became a requirement.
- Earlier rollout and more community meetings.
- Better Advertising, especially radio.
- Eliminate as much hassle as possible for the contractor by providing supportive services so that the contractor does not have a steep learning curve or an increased workload in order to participate in the program.
- Involve the supportive educational intuitions, such as Laney College earlier on in the planning process. We could have been training our students with a bigger focus on EUC if we were privy to the information and processes contractors were required to know in order to participate.
- Reduce or eliminate the bureaucratic steps in making changes or corrections to the program (I know that this is mostly beyond the control of the EUC implementers)

Non-Profit Program Feedback

Prepared by Kif Sheuer, Sustainable Communities Program Director, Strategic Energy Innovations

	HERO	SCCAP	Fresno HET	CCBA
Program Outline	HERO is a DOL grant to San Mateo County to provide training in the Home Performance Industry through a partnership of WIBs and Community Colleges in San Mateo and Alameda County	Small Cities Climate Action Partnership brings cities - Albany, Benicia, El Cerrito, Orinda, Moraga, San Pablo, Piedmont - together to work on climate protection topics.	The Home Energy Tune-Up Program offers homeowners free HERSII residential energy audits and contractor training.	A 30 member AmeriCorps program that places volunteers with local governments and nonprofits for a year
Intersection with EUC	Training Home Performance Contractors (including BPI certification) and trying to place them in the workforce	Implemented a micro-grant for homeowners that piggy backed on EUC	Providing homeowners with free home energy surveys to help inform their decisions for low-cost and no-cost energy upgrades; Providing free training and BPI certification for contractors	Several members are implementing EUC projects in Sonoma County, with BIG, and in Richmond.
Rate Performance	“Fell Far Short of Expectations” (2 of 4 responded)	Between “Fell somewhat short of expectations” & “Just met expectations” (3 of 3 responded)	“Fell somewhat short of expectations” (1 of 2 responded)	Between “Fell far short of expectations” & “Fell somewhat short of expectations” (2 of 2 responded)

	HERO	SCCAP	Fresno HET	CCBA
<p>What were your initial hopes for what Energy Upgrade CA could have meant to your industry?</p>	<p>That it would spur significant market activity leading to a hiring wave and demand for training</p> <ul style="list-style-type: none"> • Provide support with the information of the various Home Energy Performance Incentives and Rebates available. Connections to possible partnerships with employers/contractors involved in Home Energy Performance industry that would support the efforts of home energy performance. • Stimulate demand, provide widespread consumer education, create jobs and opportunities for energy efficiency contractors - particularly small business owners who make up the majority of home performance contractors. • Partner on mutually beneficial opportunities to reach contractors & construction professionals regarding resources available to support their entry or expansion in the home performance industry. Our hope was that this would generate demand for our HERO training offerings. 	<p>That it would create a wave of home retrofits to help cities meet their CAP targets and raise awareness of energy savings in the cities</p> <ul style="list-style-type: none"> • Helping residents in the community reduce energy use while saving money. • To get as many homes more energy efficient as possible. • In order to make my climate action goals, I need to encourage 500 homeowners per year for the next 10 years to reduce their natural gas use by 30%. I was hoping that EUC would jump start that effort. • It could have helped homeowners make basic improvements and increase efficiency and reduced ghgs in the residential sector so that the City could meet its climate action goals. 	<p>That it would encourage homeowners to receive their free home energy survey and then to pursue energy upgrades in their homes.</p> <ul style="list-style-type: none"> • I had hoped that EUC would support our Home Energy Tune-Up program and encourage homeowners to take immediate action to reduce their energy consumption. • I had hoped that EUC rebates would encourage homeowners to want to take advantage of the Home Energy Tune-up program and save money on energy upgrades. 	<p>Limited knowledge about program, but excitement.</p> <ul style="list-style-type: none"> • Not sure at this moment in time. • I was excited about it as a piece of the green economy.

	HERO	SCCAP	Fresno HET	CCBA
<p>What do you see as the benefits and accomplishments of the Energy Upgrade Program in CA within your industry?</p>	<p>Small increase in consumer awareness but did not drive contractor participation in the industry</p> <ul style="list-style-type: none"> • It was a good start, and made a small dent in consumer education, and did reach a small number of consumers. It was probably too much to ask that EUC transform the industry. • Although the EUC team did a great job targeting East Bay homeowners based on the incredibly short ramp up time, from my perspective the team was unable to drive demand from the contractors to participate. 	<p>Maybe raised some awareness of energy efficiency in the community, but overall outcomes did not result in homeowners following through with energy efficiency upgrades.</p> <ul style="list-style-type: none"> • We had a few residents take advantage of the program in the City • It made people think about energy efficiency since they could afford to do the upgrades. • Perhaps the effort got some homeowners interested in thinking about weatherization improvements. But in the end, maybe only a handful in my community actually was able to use EUC. And as long as the projects are as expensive as they have been demonstrated in the proposals I've seen, very few of our residents will pursue a whole house performance retrofit. I do however love the testing methodology and believe it is a powerful tool for providing homeowners with a roadmap to energy efficiency. • The program ended up being very expensive and a labyrinth of bureaucracy so that homeowner participation was lackluster. Add to this ABAG's sudden termination of its \$2,000 incentive program and the result is a disaster of a program and a great disappointment. 	<p>Increased funding opportunities and technical assistance for energy efficiency projects for homeowners</p> <ul style="list-style-type: none"> • The benefits and accomplishments are the availability of rebates and the technical assistance choosing cost-effective energy efficiency projects for homeowners. • EUC helped increase awareness and resources for homeowners 	<p>Some job additional job opportunities for contractors and increased awareness of energy efficiency among general public as a result of collaborative efforts across sectors.</p> <ul style="list-style-type: none"> • A great amount of rebates attracting homeowners, as well as some job opportunities for local contractors and raters. • Energy Efficiency education and relevance to the public is increasing. The partnership between sectors of the government, private contractors, consultants and non-profit advocates has been impressive although convoluted. They have been able to transform this unwieldy concept with highly technical language into more marketable and tangible language. Those in the field now know the huge collective effort that this undertaking was and are better prepared to see the industry through the next stage where rebates are reduced. Huge collective education.

	HERO	SCCAP	Fresno HET	CCBA
<p>What are your top 3 recommendations for program design and continued implementation in regards to your industry moving forward?</p>	<p>Identify and understand contractors needs to create a program that would align with the industry</p> <p>Build connections between program and training programs to support contractor participation</p> <p>Expand on marketing program incentives/rebates and training</p> <ul style="list-style-type: none"> • Build connections between collaborative programs and training providers, workforce agencies, and employers that would support energy efficiency. • Expand on information & resources not only from the perspective of homeowners but also training providers & employers that support home performance. • Expand on marketing efforts of incentives and rebates available. • Understand needs of contractor population. Explore different models for job creation. • Simplify requirements for contractor qualification. Provide one definitive document and publicize • Create policy for home ratings so energy efficiency is integrated into home buying & construction industry rather than being stand-alone. • Ask contractors & construction professionals who are interested in participating what support services would convince them to commit to commit to the next round of EUC program • Work directly with contractors or those who support them to identify skill gaps & design curriculum, classes & workshops to provide proficiency in those areas. Consider short classes that add-on targeted skills to those who are already in the industry or those who can transfer similar skills to the energy efficiency industry • Create EUC training website & publicize link on all marketing collateral 	<p>Simplify and expedite process</p> <p>More strategic efforts to target the right residents and increase understanding of program</p> <ul style="list-style-type: none"> • Have a public campaign for residents to understand the program • Start early in advertising the program • Obtain more funding to provide opportunity to more people • Treat EUC like the boutique ee program that it is and stop throwing so much money at it. • Get more strategic and targeted in your measures and design a program that is more in line with how the middle class decides to make home improvements -- incrementally. • And give my local govt a fraction of what you spent on marketing to really focus the dollars on the residents we know are ready to make improvements. • Continue incentives. • Get more contractors into the program. • Simplify and expedite the process. 	<p>Simplify and streamline program</p> <p>More rebate tiers</p> <p>Allow for alternatives to BPI testing</p> <ul style="list-style-type: none"> • EUC needs to allow homeowner s to flow through the program more quickly and freely; allowing for alternatives to BPI testing and more rebate tiers. • Simplify program process so homeowner s get quicker feedback, more rebate options 	<p>Extend program to allow for more uptake. Continue education and support of program and Participating Contractors</p> <ul style="list-style-type: none"> • At this moment in time, not sure. • Persistent marketing to people. • Not enough time has been given to the program for mainstream people to see the value offered. • Continued education and support for the contractors marketing themselves and sales skills.

	HERO	SCCAP	Fresno HET	CCBA
Other Comments	<p>Great idea for targeting homeowners to drive demand for services but unfortunately this effort did not transform the industry. Could be improved by clearer guidelines and simplification of program.</p> <ul style="list-style-type: none"> The program was too complicated for consumers and contractors, many coordination changes, fits and starts, and unclear guidelines for how the program worked. It also seemed to favor large companies that have the resources to hire staff. Great idea for creating jobs except the reality of the job market is that BPI certified folks need to freelance. There were too many barriers to entry for contractors to get involved. Complexity and barriers prevented opportunity to grow the industry. I think the strategy was by targeting homeowners they would drive up the demand for services but unfortunately that did not translate to referrals or full classes. Obviously, EUC did their best to bring homeowners, local government agencies, & contractors together to take advantage of the program but there were other factors that were out of their control-obstacles to participation also included BPI certification requirements, resources needed for rebate processing & economy factors-were all obstacles that weighed into the decision to participate-the contractors weren't convinced that there was enough demand to ensure an adequate return on their investment. 	<p>Benefits of program are well worth it to those who took advantage. Program partners frustrated that homeowner investment compared to homeowner savings was high. Further, EUC program marketing was complicated and top-down, a more successful program would be more community-based and homeowners would get the information they need to understand benefits of home energy efficiency.</p> <ul style="list-style-type: none"> For those that took advantage of the program benefits are well worth it. I just started working with the program for my home so the jury is still out. I'm concerned that the current model of throwing lots of money at the customer to do the retrofits is unsustainable. Reports from homeowners indicated that a cumulative investment of \$390,000 on the part of 24 homeowners would yield a total of 20,700 kwh and 7,170 therms. This is just too high a cost for the savings, and that's not counting the \$10 million in public funds used to market. I felt very frustrated with how EUC locked up residential energy dollars, but still relied on local govt to market the program in their community for free. I spent precious dollars to feed residents at a local workshop and then spent hours on the phone with concerned citizens who needed someone to talk to to understand the program and get a detailed explanation on the concept of whole house performance. This without a dime from EUC. I'm convinced there is a less complicated, less expensive, more targeted, less top-down, more community based way to get more than 24 homeowners to do home ee retrofits. 	<p>Clash between Fresno HET and EUC contractor requirements made process slower and more difficult for homeowners</p> <ul style="list-style-type: none"> The Home Energy Tune-Up Program offers homeowner s free HERSII residential energy audits and coordinatin g with EUC was difficult. Wish the program ran smoother so that it didn't need so much marketing. 	<p>Focus efforts on low-income rebates to open up additional marketing opportunity. Excitement surrounding energy efficiency still persists.</p> <ul style="list-style-type: none"> If there could be a focus on low-income accessibility/ outreach/rebates, I think there would be more widespread results. Not only would it benefit those who could really use the improvements, but also it could potentially open up another audience for marketing etc. for EUC My answer is an expression of the attitude of my colleagues. I came into this industry without expectations other than idealist hopes for energy reduction. We have done that but not at the pace or volume that people in my industry have hoped. The amount of support and excitement continues to fuel my hope that there will be a tipping point in which the public gets it and invests in their homes.

Realtor Program Feedback

Prepared by Arlene Baxter, Women's Council of REALTORS East Bay Chapter, 2011 President, Berkeley Assoc. of REALTORS, Director and Past-President; McGuire Real Estate, Berkeley and by David Stark, Public Affairs Director, Bay East Association of REALTORS®

What were your initial hopes for what Energy Upgrade California™ could have meant to your industry?

Our primary hope was that EUCA would be a program about which we could help provide outreach and education to homeowners and prospective homeowners. We hoped that our involvement would contribute to the added value clients receive from REALTORS®, and that REALTORS' involvement would increase participation in the programs.

My personal hope was that many REALTORS would increase their own knowledge of energy efficiency by assisting their clients through the process.

What do you see as the benefits and accomplishments of the Energy Upgrade Program in CA within your industry?

The financial incentives provided as part of the program, and the marketing program around those incentives, were helpful in raising awareness of energy efficiency retrofits and promoting energy efficiency from the perspective of saving home owners money.

In the Berkeley area especially, it is our hope that the program helped more homeowners to identify and seriously consider addressing more significant efficiency measures than are currently addressed within point-of-sale ordinances, i.e. RECO, which are mostly very basic measures. Our sincere hope was that the incentive method would result in more significant improvements being made, and the “whole house” approach being appreciated.

What are your top 3 recommendations for program design and continued implementation in regards to your industry moving forward?

- **Be Clear about the Timing:** Consumers need to know when the money will be available and for how long. Most homeowners are not used to making major financial decisions quickly. If you are counting on the financial incentives being the motivating factor, then it needs to be clear how much a consumer will receive, under what circumstances, and for how long.
- **Keep it Simple:** Accessing the program should be quick, easy and follow a “one-stop-shop” philosophy. Consumers should be able to access all potential funding resources through a single point of contact. This appeared to be the intent of the program organizers, and yet the system still appeared complex to consumers.
- **Focus on Saving Money and Increasing Comfort:** Program designers should put themselves in the position of homeowners who may know nothing about energy efficiency or, at worst, be actively opposed to anything that references “global warming” or GHG emission sources. Even in the San Francisco Bay Area not every homeowner is a “true believer” or “early adopter.” Program marketing and promotion should account for this and emphasize the financial benefits related to energy efficiency improvements, both short term and long term. Calculating energy savings over a seven-year period (the average period of ownership per home) might have helped amplify the savings. And perhaps actively addressing the challenge of how to quantify increased comfort might have made for an interesting campaign!

Workforce Development Program Feedback

Prepared by George E. Carter III, Workforce Development Board of Contra Costa County, Business Services Representative

What were your initial hopes for what Energy Upgrade California™ could have meant to your industry?

That jobs would be created due to the demand from homeowners retrofitting their homes.

What do you see as the benefits and accomplishments of the Energy Upgrade Program in CA within your industry?

Several contractors have become BPI certified as a result of training provided by the Workforce Development Board of Contra Costa County in partnership with the City of Pittsburg and Pittsburg Adult School.

What are your top 3 recommendations for program design and continued implementation in regards to your industry moving forward?

- Keep workforce development in mind when planning programs
- Consider working with elected officials to spread the word
- Continue to expand network of partnering organization/agencies

ATTACHMENTS LIST

Attachment A: Supply and Equipment Inventory List-Revised

Attachment B: StopWaste.org Lessons Learned Report

Attachment C: Marin County Lessons Learned Report and Case Studies

Attachment D: Santa Clara County Lessons Learned Report and ICF SCCHIP Marketing Report

Attachment E: San Mateo County Lessons Learned Report

Attachment F: Solano County Lessons Learned Report and Case Studies

Attachment G: Regional Climate Protection Campaign Lessons Learned Report and Case Studies