

Home Energy Retrofits *Research Report*



 Association of
Bay Area Governments

STOPWASTE.ORG
Reducing the Waste Stream for Alameda County

Working Draft

Prepared by



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1. Top Marketing Recommendations

The purpose of this report is to understand California property owner's specific interest, awareness, and perceptions regarding energy use, energy efficiency, home retrofits, and related topics. These study results are being used to design and support marketing and outreach campaigns that encourage participation in energy efficiency and retrofit improvements. In addition, this information will also inform the development of the program design.

The marketing campaigns in both Los Angeles County and the Bay Area have specific objectives for the number of property owners that must participate in the program by 2012.

- Alameda County: 8,500
- Bay Area: 17,000
- Los Angeles County unincorporated area: 15,000
- Los Angeles County cities: no specific objective

In addition, because the programs are funded by the American Recovery and Reinvestment Act of 2009, the program must also generate jobs:

- Alameda County: 1,600
- Bay Area:
- Los Angeles County unincorporated area: 2,600
- Los Angeles County total (projected but not required): 5,000

To meet both objectives, the marketing campaign therefore will be aimed at generating the most number of participating homeowners (and businesses as appropriate) in the shortest timeframe. At the same time, the campaign will also aim to develop increased awareness of the whole house performance approach and build demand in the broader community for future participation in the programs.

Between February and early April, MIG, working with FM3Research, conducted the following research to identify target audiences and gauge awareness of and interest in energy-saving retrofits:

- Four focus groups in Los Angeles County
- A survey of 1,200 homeowners in Los Angeles County
- Three focus groups in Alameda County
- A survey of 600 homeowners in Alameda County
- A survey of 900 homeowners in other Bay Area Counties

Based on that research and statewide focus groups conducted by Action Research, the MIG team makes the following recommendations for developing a successful marketing strategy, including target markets, key messages, communications methods and messengers. In analyzing the information, enough similarities are apparent in survey and focus group responses to coordinate marketing and messaging efforts—with some additional specific marketing to select geographic areas.

Marketing Recommendations for the Program

1. Education does not move people to increased participation. In LA County, our initial test yielded 52% very or somewhat likely to participate. Thirteen positive messages were well received (well over 70% positive). But after all the information was provided, just 45% were interested—a loss of 7%. In the Bay Area, 48% were interested initially and 49% after more information—within the margin of error. We begin to lose interest when it comes to cost, requiring an audit, and mandatory elements, regain it when we ask about rebates, and lose it when we talk about interest rates. This points to the necessity of constant positive messages to offset negative perceptions about cost (as well as audits and contractors).

The more complex the program is, the less people want to hear about it. If this were a ballot measure we would not win—however, it is important to note that we don't need a majority of homeowners to participate in order to achieve the target number of retrofits.

Recommendation: Simplify. Do not present the program as having two completely separate paths. This forces people with limited information to try to figure out which path to take. For example, given that most people believe their homes are energy efficient, they may initially think they should be on the Whole House Performance path, then find they need an audit and be turned off by the cost.

Instead, we can present a first-step “Efficiency Package” for those who have done no or limited upgrades and are interested in having much of their costs offset by rebates. We can truthfully show how this pencils out. A “Whole House Package” would be for those who have already done one or more of the basic elements and are interested in making investment-grade improvements (a different target audience). It will be critical to keep the “rules” very simple.

2. Cost is a major barrier. In all of the surveys and focus groups, cost consistently arose as a major barrier that would prevent participants from making energy-efficiency upgrades or improvements. For example, in LA County, 67% answered “extremely important” or “very important” when asked to rank the importance of cost in preventing them from making upgrades to their homes. In Alameda County, 71% “strongly agreed” with the statement, “In the current economy, I am trying to cut household expenses wherever I can.” And in both areas, 72% said that given my current finances, I cannot afford to make any major improvements to my home right now. In the Bay Area, 50% of homeowners were willing to spend \$3,000, 29% would spend \$5,000 and it drops off to just 17% willing to spend \$7,000. In LA County, the question was phrased somewhat differently, with 57% of homeowners willing to spend less than \$5,000 and 36% willing to spend more than \$5,000.

Two other aspects of costs also are of concern. The cost of the audit was presented as being \$300-\$500 (although contractors say the real cost is \$600-\$1000). In focus groups, few would be willing to pay that much, even when it was explained in more detail. Additionally, we did not test the \$475 application fee for financing (the application fee is roughly the same in Alameda and Los Angeles) but given the extreme price sensitivity, this will likely be a further drag on participation.

Recommendation: The Efficiency Package will likely be the most attractive option for the most people. While the long-term goal is to shift people to think about whole house

performance, program goals will likely not be achieved in the short-term unless the Efficiency Package is prominently promoted.

Develop a rebate for audits that would be applied after retrofit work is done.

3. Cost is a major motivator. On the flip side, the idea of saving money on energy bills is very attractive and a prime motivator. In focus groups and surveys in both areas, the concept of energy independence (not dependent on their utility company/not subject to their rates) resonated strongly (both reducing dependence on the electric company and on foreign oil). People want to be sure the upgrade cost “pencils out” with potential savings. Showing this to be true is really only possible for the Efficiency Package.

Recommendation: The website and marketing materials need to clearly show how the Efficiency Package in particular will save on utility bills for different types of houses (without financing).

4. Rebates/tax credits are critical to success. After dropping to 38% interest at spending \$5,000, interest levels bounced back up to 69% interest in LA County and 70% in the Bay Area when participants heard they could receive rebates and tax credits that could virtually offset the costs. In focus groups, rebates (immediate cash) rated higher than tax credits (waiting for next year).

Recommendation: The website and marketing materials need to clearly show which rebates will apply and how much in total will be saved for specific types of improvements. Then tax credits should be layered on. Receiving the rebates should be an automatic part of the program—one application for everything.

The program should not launch unless *all* rebates are in place—federal, utility, county, etc. Participation rates will not reflect our survey findings without them. And, there will be a backlash from people who participated before all the rebates were available (unless they are retroactive).

5. The financing plan is not attractive. Homeowners appreciate the availability of financing but the current package is not attractive to them. In LA County, 48% were interested in a loan “for those who want to take part in the program but do not have the funds at this time to do so.” But more information about the loan program drives down support. Mentioning that your property is the collateral dragged support down 42% negative and 40% positive. In the Bay Area, only 35% were interested in a loan that you could pay back on your property tax bill.

When asked about an interest rate of 7-8%, In LA County, only 24% viewed that favorably and it generated 62% negative. In fact, 55% of initial supporters say they would be less likely to consider the program with financing—the strongest negative reaction to any component. An additional concern was the ability to pay the loan back early, without having to pay all the interest. Contractors also felt that their customers wouldn’t be interested in loans with rates that high.

Recommendation: The financing should always be presented as an option, secondary to other incentives. This is a home energy-saving improvements program with a financing option, not a PACE program.

Develop a rebate specifically to bring down the interest rate, or an option to have either a cash rebate or lower interest rate. Being able to say that you can get a “discount” on the interest rate may overcome initial resistance to paying rates higher than home equity loans. Again, this points to the Efficiency Package as being the point of entry for most people.

6. Contractors are both a valuable asset and a perceived liability. All research indicates that homeowners who have worked with a contractor would trust that contractor to recommend energy efficiency upgrades. Credentials resonate strongly. However, most believe that a good contractor is hard to find and in general don't trust them. They are wary of an auditor being the same person as the contractor.

Recommendation: Stress the Building Performance Institute credential, as a watchdog organization working with the Department of Energy and the Environmental Protection Agency. 61% of those asked viewed that link favorably.

7. Accountability is Essential. Hearing that the program would have scheduled and random checks of the work done by contractors led 65% to be more likely to participate. Half of the initial detractors of the program are more likely to support it after hearing this component.

Recommendation: The website should include quality assurance points, specifically emphasizing the amount of quality checks for contractors who will be participating through the “Basic Path.”

8. Counties are both a valuable asset and a perceived liability. In all areas, property owners don't consider County government a credible administrator or messenger about the program. LA County generated 49% negative responses (46% positive), and in the Bay Area as a whole, Counties received 46% negative responses (45% positive). In focus groups, wasteful government programs were cited as a reason not to participate or believe that the program should even be offered. On the other hand, the County is a non-partisan, non-money-making entity, as opposed to contractors and utilities. The County seal does cause people to notice and read materials, and lends an official stamp; this is an official program.

Research also shows that while homeowners have heard of programs that include rebates, most are unable to name specific programs unaided. This points to a need for a single, strong brand that can stand out from the crowd.

Recommendation: Include the County seal on all marketing material, and also include partners such as ARRA and, as appropriate, utilities and environmental groups.

9. There is an audience primed, ready and waiting. All research points to a significant number of homeowners who understand the need to reduce energy consumption (for a variety of reasons specific to each audience) and who have already made both behavioral changes and home energy upgrades that makes them receptive to further improvements.

Recommendation: Market the program as a simple, one-stop-shop that will allow the homeowner to make choices about what to do and how much to spend, take advantage of rebates/tax credits, find certified contractors and options for financing—packaged with quality assurance.

Marketing and Communications: Criteria, Markets, Barriers, Messages and Modes

Criteria for Successful Launch

To successfully launch the marketing and outreach campaign, the following program elements must be in place. We do not recommend proceeding without them.

- All rebates (federal, utility, county) in place and available to homeowners
- Robust website up
- Strong majority of cities are participating
- Coordination with utilities in place
- Marketing materials ready
- Community outreach plan in place and ready to go
- Contractor marketing materials available
- Media plan in place
- Program design finalized (can launch without the financing available)

Key Target Markets

The demographic groups showing the most interest in making energy-efficient upgrades to their homes and participating in a government program are:

- Homeowners under age 50
- Women (college educated)
- Homeowners with homes built before 1940 (those are the strongest targets, although we can expand the target to homes built before 1970)
- Homeowners with school-age children at home (larger families especially)
- Homeowners of color (Asian-63%, Latinos-62%, African Americans-59%)
- Homeowners with household incomes of \$60,000-\$120,000
- Homeowners who have made a few energy upgrades already
- Those who speak Spanish as a primary language (e.g., took the LA County survey in Spanish-68% positive response)
- Those who are transitioning by buying a house or increasing family size (from focus groups but not tested in survey)

- In Alameda County, the geographic areas with high interest are Berkeley, Oakland and San Leandro
- In Los Angeles County, the geographic areas with high interest are the Central area and the Westside (the unincorporated area focus will be based on the demographics). (Note: Communities will be targeted across all Supervisorial Districts)

Barriers to Action

There are several very real barriers, which can be overcome by following some of the above recommendations and through careful messaging.

Cost. Most homeowners continue to feel the pinch of the current economy and are reluctant to make what they see as major investments in home improvements. Consequently, the price point at which most homeowners are willing to make any investments is relatively low. In the Bay Area, \$3,000 is the top choice, with support dropping after \$5,000. In Los Angeles, the question was asked differently, with only 38% reacting favorably to spending between \$5,000 and \$10,000. Respondents in all demographic and all attitudinal groups gave this response as the highest barrier.

The Economy. Not only is the price point low, given the economy and the state of their finances, large majorities (72%) says they cannot afford to make any major improvements to their homes at the moment.

Lack of Urgency. A potential barrier is the fact that most homeowners feel their homes are at least somewhat energy-efficient already, are generally comfortable, and have good indoor air quality. Even those in the oldest homes – those built before 1920 – gave their homes a good score in terms of energy efficiency. Increased comfort is not a good driver either, with 80% believing their homes are comfy enough; it does not appear to be a top issue for most homeowners, particularly compared to economic and cost concerns.

A significant minority did express some level of concern about the air quality in their homes. It was a broadly compelling message, but the weakest of those tested, probably due to the fact that so few homeowners consider it an issue for themselves. While indoor air quality should not be a part of a broader marketing campaign, it should not be ignored entirely. When asked about different occasions when homeowners might consider making energy-efficient home upgrades, “If someone in your home’s health is at risk” was the number one reason. Therefore, among specific subgroups with respiratory challenges (e.g., asthma, chronic bronchitis, etc.), this could actually be a very compelling motivator.

Motivators to Action/Messages

We need to move people from their kitchen table to the website (or call center). And then from the website to action. *The top key message remains that rebates/tax credits will offset upfront costs.* Beyond that, the top motivators are:

1. **Saving on Utility Bills.** Upgrading a home to use less energy and water can reduce utility bills

by 20 percent or more – saving you money over time.

2. **Reducing Foreign Oil/Fossil Fuels.** At a time when we are trying to reduce our dependence on foreign oil and other fossil fuels, upgrading the energy efficiency of our homes is an important step we can all take. (In focus groups the concept of energy independence further resonated as independence from utility companies; getting off the grid).
3. **Increasing Property Values.** Homes that are energy-efficient and environmentally friendly are more appealing to home-buyers in the Bay Area. These upgrades can increase your property value. (Scored higher in Bay Area.)
4. **Helping the Environment/Climate Change.** We all need to do our part to help the environment and slow climate change. Making our homes more green and energy efficient is an important step we should all take.
5. **Certified Contractors Save Money.** Specially trained and certified contractors know how to find improvements that the average homeowner would not. Their assessments will ensure that you find more energy savings and, therefore, save more money on your utility bills. (Tested only in Los Angeles County.)
6. **Comfort.** Upgrading your home’s energy efficiency can make it a more comfortable place to live—no more drafty, cold rooms.
7. **Indoor Air Quality.** These upgrades can improve indoor air quality in your home and make it healthier and safer, reducing health risks like asthma.

All the above messages received a more positive response in the Bay Area (scoring from 76%- 87%) than in LA County (scoring from 71%-74%). Looking at the intensity of reactions by target group—those that indicated the message is *very* convincing—narrows these key messages to five. The table shows the percent by group, with the top two messages in bold for each target audience. Saving on Utility Bills was unanimously very convincing across all target groups. The top four messages should be emphasized.

Motivating Messages

Message	Percentage VERY Convincing					
	Age <50	Women	Kids at Home	Home <1939	\$60K-\$120K	Non-White
1. Utility bills	51	54	57	61	55	53
2. Foreign oil/fossil fuels	42	47	43	59	54	44
3. Property values	41	46	45	54	32	52
4. Environment/climate change	47	47	46	55	46	46
5. Contractors save money*	76	74	89	81	NA	90
6. Comfort	36	38	39	49	40	43
7. Indoor air quality	35	37	39	39	38	44

*This includes both “very convincing” and “somewhat convincing,” tested in LA County only

We will need to use a combination of messages. The environmental benefits associated with increased energy efficiency are compelling reasons to make home upgrades, but – with the exception of certain populations – are not likely sufficient on their own to drive program participation. However, in combination with economic benefits, they make for the most persuasive reasons to make energy-efficient home upgrades.

(A message about job creation does generate positive response, but it is not in and of itself a motivator for a homeowner. It is a secondary “feel good” message that can be layered in.)

Communication Messengers

Different target audiences will find different “messengers” credible.

- **Neighbors and other homeowners** who have used the program are two of the most credible messengers, followed closely by friends and co-workers. Clearly, word of mouth, on-site signage and neighborhood outreach to attract neighbors’ interest will be persuasive.
- **Architects/design professionals** ranked just below (or even in Alameda County), pointing to a need for outreach to professional associations/trade publications to promote the program when designing remodels and working with homeowners.
- **Gas and electric utilities** were ranked next in surveys, seen as credible sources of information by all target audiences. The focus groups shed some additional light on how homeowners view their utility companies. In all of the focus groups, PG&E or Edison were specifically discussed by participants. Most appeared conflicted, viewing them as a good source of information through utility bills, but also questioning their profit motives should the utility make too many specific recommendations. At the same time, many participants had received rebates for purchasing energy-efficient appliances and found those programs to be effective. A few mentioned positive experiences from having PG&E or Edison conduct brief home inspections. The focus group findings suggest that utility companies are a good general source of information, but that information from them may need third-party validators, whether they are friends, other homeowners, architects, design professionals or environmental organizations, depending on the audience.
- **Environmental organizations** also ranked in the top tier; perhaps surprisingly, homeowners of color rated environmental organizations higher than did any of the other target groups.
- **Building contractors** received mixed response as to credibility, better in the Bay Area (62%) than in Los Angeles (46%). In focus groups, those who had worked with a contractor they liked would trust that contractor to advise them.
- The same mix is true for **home improvement store staff** in the Bay Area (62%) and Los Angeles County (53%). Again in focus groups, they were viewed as in business to sell you something, but if there were independent information like a brochure, they would accept it from store staff.
- Reactions to **local and county government** is lukewarm to weak, with city government resonating more positively. Respondents often cite government waste, which points to not playing up that this is a county run program.

Communications Modes

Modes were tested in the Bay Area survey, and in the Los Angeles County focus groups.

- **Utility bill inserts** is the top mode when specifically thinking about energy, generating more intense responses across the board.
- **Newspaper articles**, especially those pointing to a website, ranked next.
- **Mailers** follow closely behind as a preferred mode of communication.
- **Television ads** rank next, although there are differences between the groups. About 25% of homeowners of color indicated they would *definitely* pay attention to television ads, more than any of the other target audiences.
- **Posters/notices at public venues** would *definitely* be pay attention to by about 20% of younger homeowners and homeowners with older homes, more than for other target audiences.

Communications Modes

The following table is based on the survey from the Bay Area, but similar qualitative findings came out of the Los Angeles County focus groups. The top two modes for each target audiences are in bold; the gray shaded modes will not be as effective.

Modes	Percentage Definitely or Maybe Pay Attention					
	Age <50	Women	Kids at Home	Home <1939	\$60K-\$120K	Non-White
	72	79	77	84	76	75
An insert in your utility bill	69	77	69	75	72	74
A booth at an event, such as a fair, festival or farmer's market	81	70	78	70	77	75
Ads at a hardware or do-it-yourself store	70	70	69	63	70	71
A newsletter or publication mailed to your home	77	66	79	71	75	75
A website	77	60	75	66	72	64
A radio ad	74	63	76	53	60	70
A television ad	69	66	69	57	70	78
Posters at a library, city hall, or city permitting office	68	62	64	66	64	65
An advertisement in newspaper	65	59	69	60	66	72
A billboard	59	45	49	49	48	57
Notice on a social networking website or a listserve	33	29	33	26	28	29

Defining the Brand

The brand is the visible focus of statewide and local Energy Retrofit Programs. The brand should guide every aspect: visuals, tone and content of all written and multimedia materials, outreach and advertising. The brand elements are:

Assumptions. The starting point for developing the brand.

- Encompass the value that homeowners get by participating; the results. The value elements will be based on polling (e.g., cost savings, rebates/tax credits, increased comfort, improved indoor air quality, pride in being green, etc.). The brand should not emphasize the program or the process, nor personal behavior change. However, it is likely, and desirable, that by focusing on the results there will be spill over effects in terms of program recognition and future behavior change.
- Given the launch date, there is not enough time to build awareness of a more abstract name (Apple, Bing, Telesis, Orange). Therefore the name should be more representational and resonate with immediately understandable values. It has to be intuitively inspiring and make sense; you “get it” when you hear it.
- This is not a product brand; this is a complex and comprehensive program. However, the name/tagline can’t explain the entire program; the visuals and messaging layered on it will create interest and drive people to the website or another outlet for more information.
- The name and tagline must be strong enough to stand on their own without visuals, for example for radio.
- The name does not need to be translatable, especially if a created word/name. The tagline must be translatable.

Principles. How the brand will be created.

- Does not conflict with existing brands of IOUs, local governments
- Builds on existing work done by IOUs, local governments
- Allows flexibility in manipulation of brand components
- Allows for local identity

The Foundation. Attributes that are critical to grounding the brand.

- Easy to understand
- Descriptive
- Credible
- Trans-political

- Compelling
- Resonates with diverse audiences
- Effective

Positioning. Who the brand is for, what we want them to do and why.

For homeowners in (Los Angeles County) (California) (Bay Area) who want to reduce their homes' energy use and increase comfort, while saving money and helping the environment, we are the source for practical information and innovation—we make it simple.

Every time anyone communicates in writing or in person, you should answer a simple question: Does this specific communication reflect our unique positioning?

Personality. The brand's core values and characteristics described and experienced as human personality traits.

- **Practical:** We provide one-stop-shop information
- **Can-Do:** We make it easy so you can get things done
- **Empowering:** We provide you with the ability to make choices and take actions that make sense for you
- **Inspirational:** We bring new ideas that will inspire you to go beyond what you thought you could do

Brand Names (testing)

- Empower (LA County) (Bay Area) (California)
- Re-Energize (LA County) (Bay Area) (California)
- HomeFree (LA County) (Bay Area) (California)
- EcoFit Home (Business)
- EcoSense Home (Business)
- TerraFitHome (Business)

Tag Lines (testing)

- Your Path to Energy Independence
- Your Path to Energy-Saving Upgrades
- Your Path to Home Energy Savings
- Resources and Tools for Energy-Saving Upgrades
- Energy Upgrades Rebate/Loan Program
- Energy-Saving Solutions for (X County) Homes
- Rebates for Energy-Saving Renovations

2. Context

Introduction

The purpose of this research report is to understand Californians' specific interest, willingness and ability to participate in whole house retrofit programs to reduce energy and water use. The report summarizes the tests to understand general interest, awareness, and perceptions regarding energy conservation and energy efficiency. This report specifically focuses on Los Angeles County and the nine Counties in the Bay Area represented by the Association of Bay Area Governments (ABAG). Study results will be used to help design and support marketing campaigns that encourage participation in home retrofits for energy efficiency, water conservation and green building designed to meet local resource conservation goals and, more broadly, California's Global Warming Solutions Act of 2006.

National Context

As part of the American Recovery and Reinvestment Act of 2009 (ARRA), Vice President Joe Biden commissioned a report entitled *Recovery Through Retrofit*. The report set out to highlight the issues, barriers and opportunities that exist between promoting energy efficiency and retrofits and increasing jobs in a growing alternative energy sector. In essence, the report explores the potential win-win situation of promoting energy efficiency and creating jobs. *Recovery Through Retrofit* was preceded by a report titled *Rebuilding America: A Nationwide Policy Framework for Investment in Energy Efficiency Retrofits* that was jointly produced by the non-partisan groups The Center for American Progress and The Energy Future Coalition. *Rebuilding America* (which focused on residential and commercial buildings) developed similar conclusions and called for similar actions to develop "an energy efficiency industry that will retrofit 40% of our nation's building stock (50 million buildings) within the next 10 years."

As the *Recovery through Retrofit* report states, "Home retrofits can potentially help people earn money, as home retrofit workers, while also helping them save money, by lowering their utility bills. By encouraging nationwide weatherization of homes, workers of all skill levels will be trained, engaged, and will participate in ramping up a national home retrofit market."¹ This report outlines some salient facts:

- 130 million homes in the U.S. generate 20% of our nation's carbon dioxide emissions
- Home energy use can be reduced by up to 40% and greenhouse gas emission reduced by up to 160 million metric tons by 2020 using existing retrofit techniques and technologies
- Home energy bills may be reduced by \$21 billion annually

The recommendations in this report "lay the groundwork for a self-sustaining home energy efficiency retrofit industry" and provide strategies for overcoming the three identified barriers:

- Limited access to reliable and straightforward information
- Limited access to financing
- Limited access to skilled workers

Some of their recommendations include:

- ***Develop Energy Performance Labels for Homes*** – This recommendation attempts to do for homes what EnergyStar did for appliances. Though new homes can receive an EnergyStar rating, there is no established system for existing homes.
- ***Develop a National Home Energy Performance Measure*** – There is a need to develop benchmarks for home energy performance so homeowners, contractors, and financial institutions can all understand the goal of energy retrofits and have measurable standards by which to compare and contrast.
- ***Support Municipal Energy Financing*** – This allows the cost of retrofits to be attached to homeowner's property tax bill, which are generally lower than utility bill savings, which are tied to the home even if it goes through a sale.
- ***Improve Energy Efficient Mortgages*** – This expands the use of these mortgages, which will simplify the process of obtaining energy retrofit financing at the point of sale. It will also ensure that retrofits are accurately appraised.
- ***Expand State Revolving Loan Funds*** – This will expand the program from the current 16 states to 50 states and allow consumers to apply for energy retrofit loans from private lenders at lower interest rates.
- ***Establish National Workforce Certifications and Training Standards*** – This will set national standards for training a qualified energy retrofit workforce.¹

Statewide Context

The state of California is responsible for more than 1% of the world's greenhouse gases and over 6% of the United States emissions. In 2005 Governor Arnold Schwarzenegger signed an Executive Order on climate change to increase innovations and programs to combat greenhouse gas emissions. In 2006, California passed the California Global Warming Solutions Act of 2006 (AB32) to create a series of regulatory and market incentives to reduce greenhouse gas emissions to 1990 levels by 2020. As part of the implementation of AB32 and measures to meet its goals, clean energy and alternative energy proposals are being explored, green building measures are being created, and programs that encourage the reduction of energy and water use statewide are being funded. Local governments, as well as investor-operated utility (IOU), are part of the solutions anticipated in this bill.²

California Assembly Bill 811 (AB 811)

AB 811 was enacted to assist in the implementation of AB32. It was signed into law in 2008 and authorizes California cities and counties to designate areas within their jurisdictions as financing districts allowing interested property owners to get funding to assist with paying for the installation of renewable energy products and to make energy efficiency improvements. The improvements need to be permanent and can be done for residential, commercial and/or industrial properties. The loans are tied to the property's tax bill and are maintained with the house or property, not the owner.

¹ Source: *Recovery through Retrofit* (October 2009), *Rebuilding America: A National Policy Framework for Investment in Energy Efficiency Retrofits* (August 2009)

² Source: State of California California's Resource for Global Climate Change Information

This bill is now in the process of being implemented through a variety of mechanisms. CaliforniaFirst is in the process of establishing grant funds of \$16.5 million to offset fees associated with the issue of bonds, and start-up costs for 14 counties who have agreed to participate in this pilot financing district program. In addition, individual counties have moved forward to develop local financing programs under AB811 to provide similar financing districts.

The IOUs in California are joined together by direction of the CPUC to work together to develop and launch a statewide Whole House Retrofit program with retrofit assistance and rebates covering all of the IOU's territories. Some municipal utility companies are also developing retrofit programs for their costumers that include incentives and rebates, including a substantial program by Sacramento Municipal Utility District (SMUD).

California Retrofit Programs

Following is a summary of some the key retrofit programs being provided in the state of California. The programs are very similar in the overall offerings. The primary difference is that many do not include green building principles. In addition the provision of rebates, incentives and financing differs to a certain extent. The rebates offered by the IOUs will be available to utility customers as well as the local government specific rebates and program financing. Very few programs include Large Commercial retrofits. However, it is anticipated that Federal programs may soon offer rebates and other incentives to these businesses.

Energy Retrofit Program Elements

Agency/Organization	Program Element Included												
	Whole-House Retrofit	Water	Green Building	Solar	Weatherization	Do It Yourself	GreenPoint Rated	Single Resident	Multifamily	Small Commercial	Large Commercial	Rebates	Financing District
Investor Owned Utilities (IOU)	X	X		X	X	X		X	X	X	X	X	
ABAG	X	X	X	X	X	X	X	X	X	X		X	X
Los Angeles County	X	X	X	X	X	X	X	X	X	X		X	X
SMUD	X			X	X	X	X	X	X	X		X	
Rural Coalition of Counties	X			X	X			X	X				X
San Diego Clean Gen (CSCE)	X	X		X	X			X	X				X
California First	X	X		X	X			X	X	X	X		X

3. Survey Research Summary

Surveys and focus groups with homeowners about energy retrofit elements and proposed programs were completed in February through April in Alameda County, the Bay Area and Los Angeles County by MIG, in association with Fairbank, Maslin, Maullin, Metz & Associates (FM3).

Surveys

The Alameda County survey included 600 participants and has a margin of error of +/-4%, the Bay Area survey included 900 participants, and the Los Angeles County survey included 1,200 participants with a margin of error of +/-3%.

We found a generally higher interest in the program overall and higher positive responses to messages in Alameda County than in either the larger ABAG survey or in Los Angeles County. But in analyzing specific audiences and specific messages, there was a high degree of similarity within those specific audiences in both Counties. In other words, white, college-educated women under age 50 in both Counties responded in the same way to the same messages, and white men over 50 with high school educations responded similarly within both Counties. There are specific geographic “hot spots” that we will target additionally, where responses to messages was stronger among all audience types than it was in other geographic areas.

Another important note is that the Alameda County and ABAG surveys asked about interest in the program. In Los Angeles County the bar was higher; people were asked about their willingness to participate in the program. Thus, the LA County participation numbers may be closer to predicting participation rates.

The following summary is organized in three sections: residents’ general impressions about energy-efficient homes, products and programs; who is most interested in these types of programs and products; and what types of outreach efforts will be most effective in reaching the target audience.

Home Energy Consumption

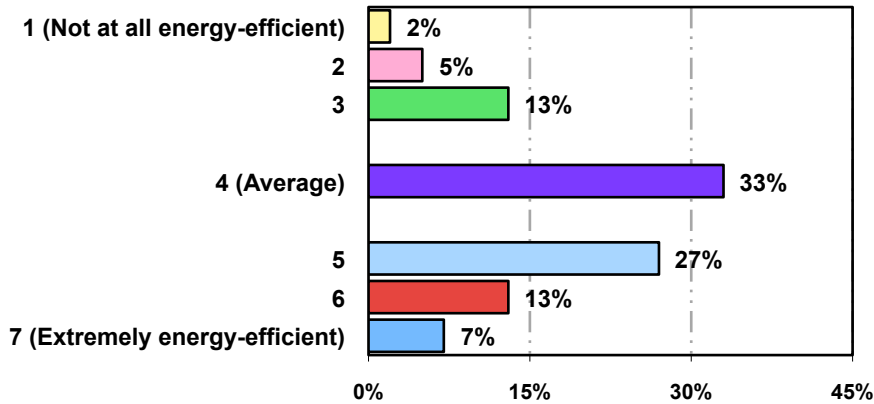
Most residents feel their homes are comfortable and energy-efficient and many feel they’ve reduced their energy use or made energy-efficiency upgrades in the last few years (91% and 66% respectively in Los Angeles County) or have made upgrades. Those who do not feel their homes are energy efficient cite cost as the major barrier to completing upgrades. A majority of residents expressed interest in making energy-efficiency retrofits to their homes. Those that did cited *long-term cost savings* and *energy independence* as primary motivators. However, regardless of household income or interest, most were not interested in making changes that would cost more than \$5000. Those who seemed less interested in making retrofits were either worried about costs or felt they had made sufficient changes already.

General Impressions about Energy Efficiency Programs and Products

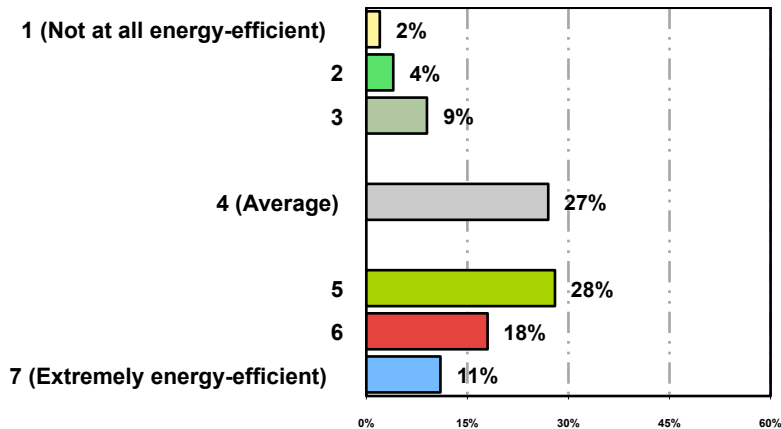
- *Most residents feel their homes are energy efficient*

A majority of people feel their homes are already energy efficient. In particular, 57% of Alameda County and Bay Area homeowners feel their homes are energy efficient, while in Los Angeles County that number drops to 47%. Conversely, only 17% of Alameda County homeowners feel their homes are energy inefficient, with that number slightly higher in Los Angeles County at 20%.

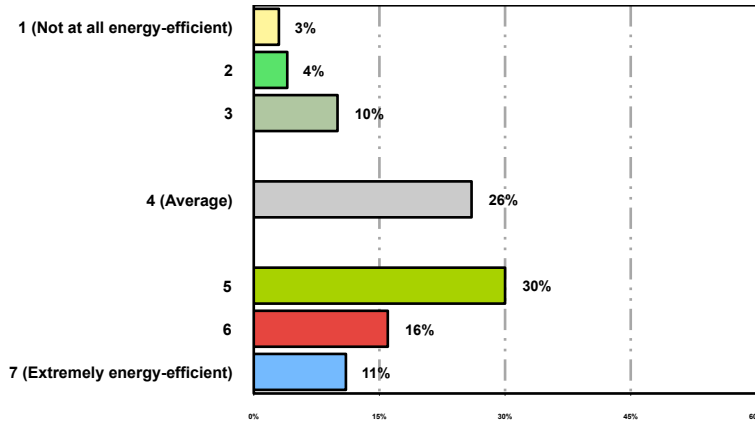
Los Angeles County



Bay Area Region (excluding Alameda County)



Alameda County



- ***Most residents have made behavior changes to reduce their energy use.***

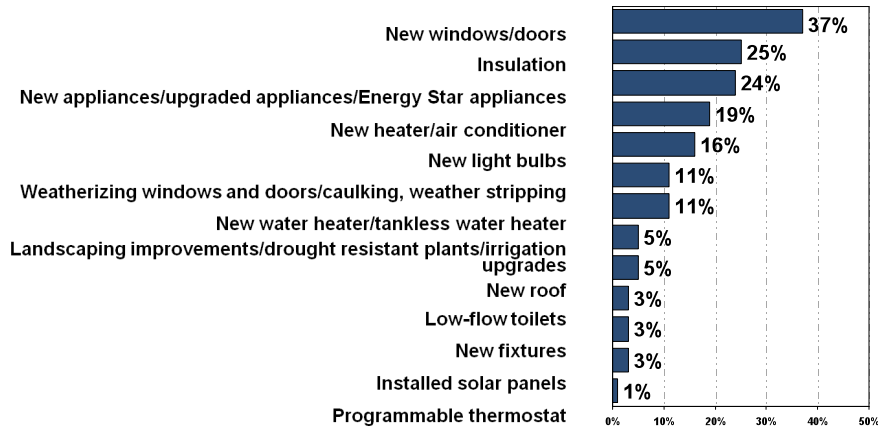
About 90% say they have made some changes and nearly half say they have made “a lot” of behavioral changes. Whether or not they actually have, this result shows that homeowners are aware of the importance of reducing energy consumption (for whatever reason). It also suggests that they may understand both the benefits of and *limitations of* behavioral changes on their energy bills.

- ***Recent energy-efficient upgrades focus on sealing homes and buying energy-efficient products***

Most property owners have made at least a few home energy efficiency upgrades in recent years. Over the last few years, those who have completed energy upgrades in Los Angeles County focused on new windows/doors, insulation, energy-efficient appliances, new heater/air conditioner, and new light bulbs.

Again, this finding show a population that is primed to understand the importance of energy conservation, a population that is familiar with the efforts involved in making such upgrades, and a population that has overcome the time, hassle and knowledge barriers to get home upgrades done.

Los Angeles County



- ***Most residents feel their homes are comfortable and not excessively drafty***

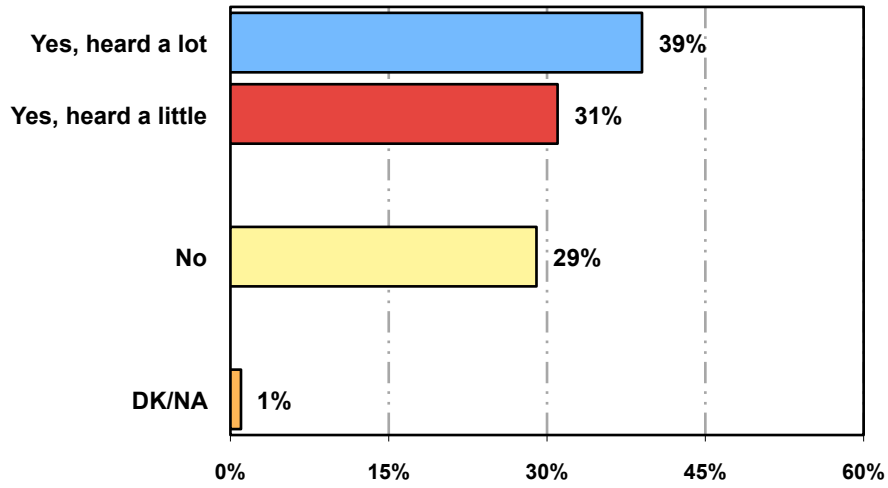
Around 80% of residents in both Alameda and Los Angeles Counties felt that most of the rooms in their homes remained at a comfortable temperature. Around 25% felt their homes feel old and out-of-date.

Those who have made “a lot” of home efficiency upgrades are more likely to see their homes as energy efficient, not surprisingly. This means they have experienced the benefits, and are primed to accept messages that build on that. The results also show that *those who have made upgrades are more likely to consider the program*. About 60% of people who have made upgrades remain open to further improvement.

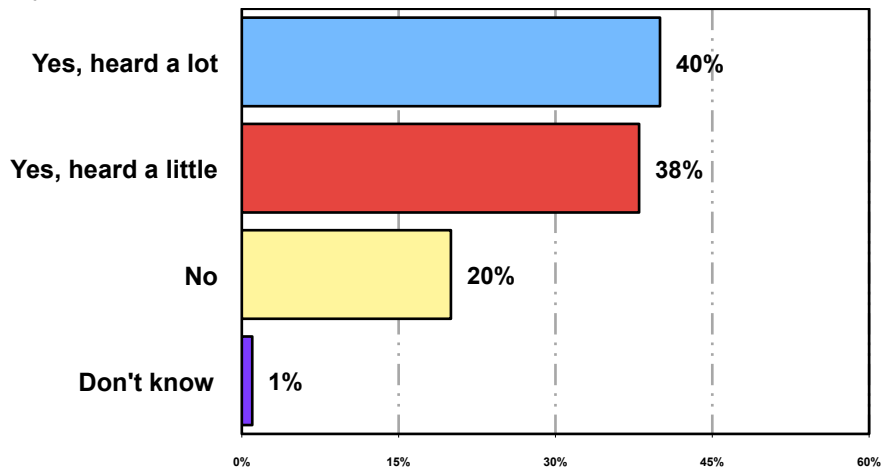
- ***Most people are aware of programs to make homes more energy-efficient***

Between 65-70% of residents of Alameda, the Bay Area and Los Angeles County are at least somewhat aware of programs that promote energy-efficiency. Between 30-40% of residents have heard a great deal about these types of programs.

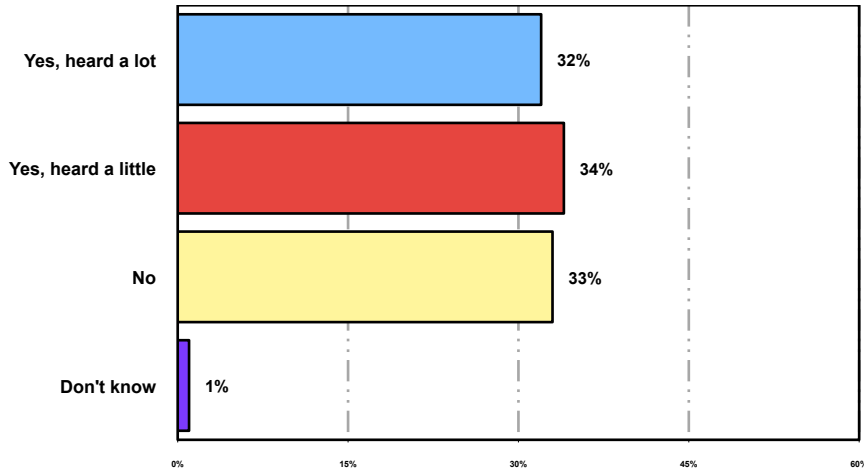
Los Angeles County



Bay Area



Alameda County



- ***Fewer are aware of specific energy-efficiency program and product types***

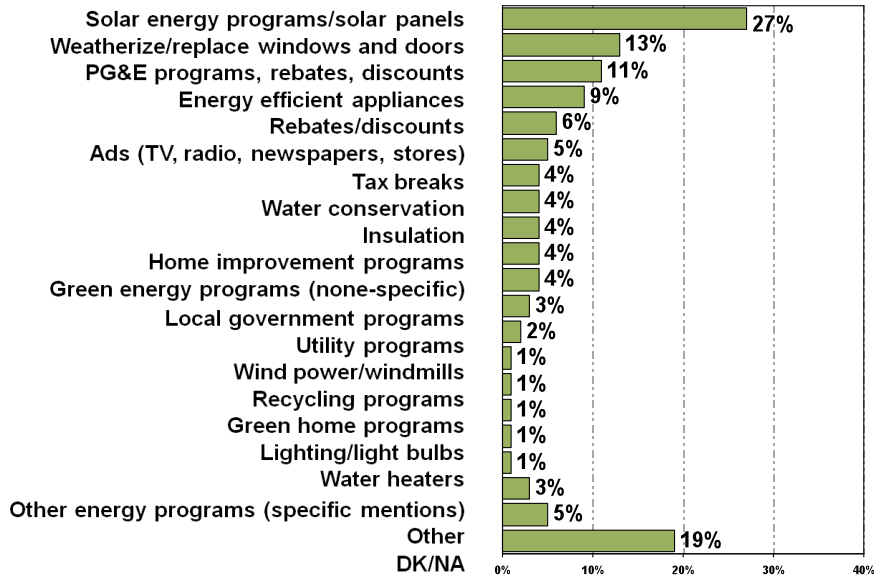
Solar energy tops the charts in both counties as the most familiar type of energy-efficiency program and products available. Following that, utility programs including rebates and discounts, weatherizing doors and windows, and energy efficient appliances are the most well-known program and product types.

This finding suggests that homeowners are receptive to communication about energy programs. However, the inability to remember names and specifics suggests that homeowners face a cluttered “energy” communications environment—this program will face the same challenge, especially if there are different local government and utility brands throughout the state.

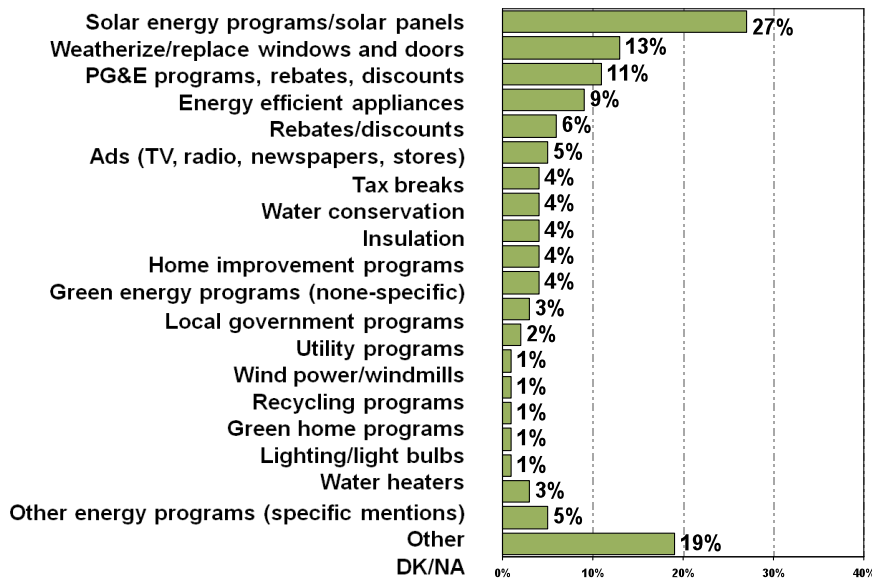
Los Angeles County



Bay Area (excluding Alameda County)



Alameda County



- ***Interest in making energy-efficiency upgrades***

Though the surveys in Alameda and Los Angeles County differ slightly in how they asked this question, both gauged initial interest in the programs after a brief description and both similar percentage of interest – 58% in Alameda County and 52% in Los Angeles County. About 17% say they are “very likely” to consider participating in the LA County program. While that level of support is weak, it is a positive sign that the minimum number of participants can be reached.

Residents Interested in Energy-Efficiency Retrofit Programs and Products*

Gender*

Though the surveys in Alameda and Los Angeles County differ slightly in how responses were gathered, both captured interest according to gender. In Alameda County 75% of both women and men were interested in energy-efficiency programs; however a greater proportion of women (46% to 37%) expressed extreme interest. In Los Angeles County, 52% of men and 49% of women were interested in energy-efficiency programs. College-educated women In LA County are far more likely to be interested than non-college-educated women, which drags down the women’s overall percentage.

* Note: The Alameda County survey asked about “interest,” the LA County survey asked a higher-level “participation” question. Thus results may appear lower in LA County.

Both men and women 18-49 are target audiences, however, other indicators suggest that women hold views more amenable to the participating in the program, including that they are more likely to believe their electricity bills are too high and to think they spend too much on heating or cooling.

Gender	Alameda County	Los Angeles County
Men	75%	52%
Women	75%	49%

Ethnicity*

Though the surveys in Alameda and Los Angeles County differ slightly in how responses were gathered, both captured interest according to ethnicity. Comparisons between the two counties are less revealing than the trends within each county. Generally speaking, Asian, Latin and black residents expressed the most interest, though interest is pretty evenly spread through the four ethnic groups compared between both surveys.

Again, other indicators suggest that African-American and Latino homeowners are more likely to believe their electricity bills are too high and to think they spend too much on heating or cooling. Non-whites are more interested in making home upgrades, react more positively to each of the program messages and consistently say they are likely to consider the program.

Ethnicity	Alameda County	Los Angeles County
Asian	79%	63%
Latino	77%	62%
Black	77%	59%
White	74%	51%

Income*

Though the surveys in Alameda and Los Angeles County differ slightly in how responses were gathered, both captured interest according to income levels. Comparisons between the two counties are less revealing than the trends within each county. For Alameda County those with an income between \$60,000 and \$120,000 expressed the most interest at over 80%, the next most interested bracket includes those who make more than \$120,000. For Los Angeles County there is no noticeable difference in interest between income brackets where interest hovers just over 50% for all income levels.

Income	Alameda County	Los Angeles County
Under 60K	54%	52%
60-90K	85%	52%
90-120K	81%	55%
120K+	70%	55%

*Age**

Though the surveys in Alameda and Los Angeles County differ slightly in how responses were gathered, both captured interest according to age and found that initial interest wanes as the resident ages.

Age	Alameda County	Los Angeles County
18-39	88%	63%
40-49	83%	62%
50-64	75%	53%
65-74	68%	49%
75+	60%	34%

*Age of Home**

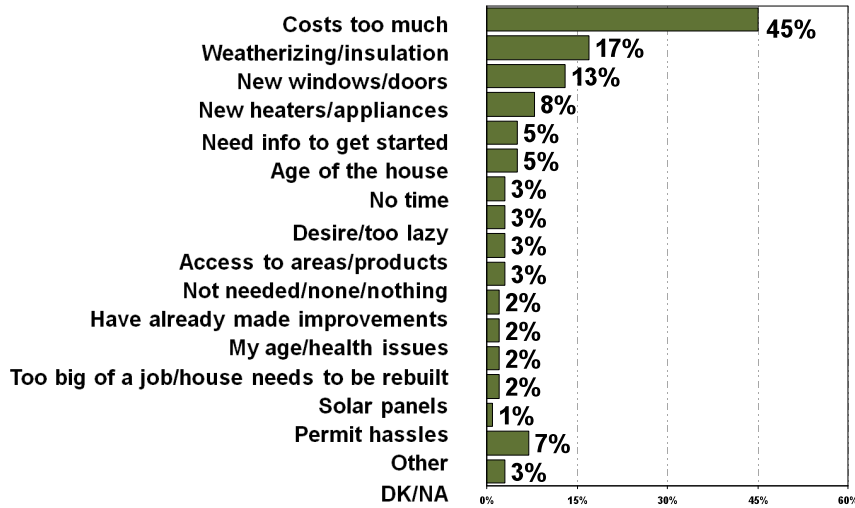
Though the surveys in Alameda and Los Angeles County differ slightly in how responses were gathered, both captured interest according to the age of their home. Though the increase is only slight, interest does increase with those whose homes are older and for those whose were built after 1980. Those with homes built between 1960-1979 expressed less interest.

Year Home Built	Alameda County	Los Angeles County
1900-1959	76%	54%
1960-1979	72%	47%
1980-2009	77%	49%

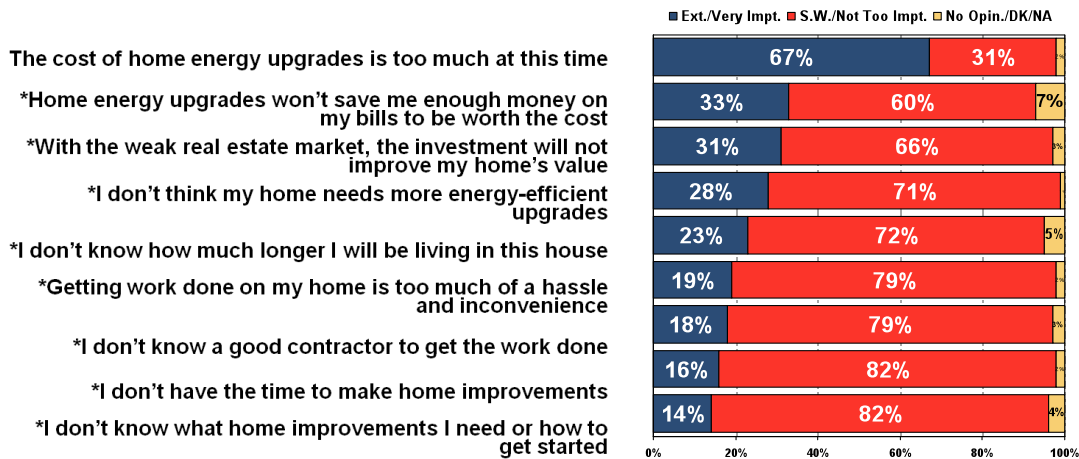
- ***Cost is the major barrier to making energy-efficiency improvements***

Cost is the major barrier for those interested in making energy retrofits. Nearly half of those in Alameda County who felt their homes were not energy-efficient thought improvements would cost too much. That percentage increased in Los Angeles County to 67%. Some felt the promise of savings would not offset the cost of improvements, nor would these type of improvements increase the value of their home given the current real estate market. Others felt they didn't have sufficient time or information to embark on a project that could involve a lot of unknowns, hassles and inconveniences.

Alameda County



Los Angeles County³



³ Sources: Los Angeles County Energy Issues Survey PowerPoint (March 2010), Los Angeles County Home Energy Retrofit Program Survey of Los Angeles County Single-Family Homeowners Summary of Results (March 2010), Alameda County Homeowners and Energy Efficiency: Key Findings from Green Packages Phone Survey.

Focus Group Findings

Fourteen focus groups were conducted by MIG, FM3, and Action Research in the following cities between early and mid-March 2010 to gain feedback about energy efficiency, energy retrofits and the messages that might resonate with the target audience.

Alameda County Focus Groups (MIG/FM3):

- Berkeley
- Fremont
- Livermore

LA County Focus Groups (MIG/FM3, Action Research)

- Los Angeles (3)
- Pasadena (3)

Other Statewide Focus Groups (Action Research):

- Fresno
- Riverside
- Sacramento
- San Diego
- Santa Rosa

Unlike the surveys, focus group information is qualitative instead of quantitative. The following summary focuses on the main feedback that was received, with some notes about particular comments that were received in local areas.

Key Findings

Remodeling Preferences and Issues

- The focus group participants could easily list a number of home improvement projects they would like to undertake—but none of the participants of the FM3 groups initially named energy efficiency upgrades on their list of preferences. The Action Research Groups mentioned structural integrity, safety, indoor drafts, high energy and water costs, and health as issues.
- A lack of funding to pay for improvements is the most significant impediment to starting these projects, as is the fact that their current home may not be their permanent home.

- Not only is money an impediment to making home improvements, but so too is the perception that “a good contractor is hard to find” and that contractors and permitting officials have varying levels of knowledge.
- Many participants had completed energy-efficiency projects like installing new windows, adding insulation, and weather stripping.
- Many feel they would include energy efficiency improvements when they are in process of completing other home remodeling projects.

Familiarity with Energy Efficiency Terms

- The term “retrofit” reminds participants of earthquake proofing rather than home upgrades. Furthermore, the term “audit” had little meaning to most participants and reminded others of taxes, government, or costs.
- When the word “energy” is included in the program name, participants more easily associate the terms “audit” and “retrofit” with energy efficiency upgrades.

Awareness of Energy Efficiency Programs

- While many participants have heard of appliance rebate programs, there is virtually no familiarity with energy efficiency programs by name other than “Energy Star.”
- While some expressed concern over not getting a rebate after applying for it, the residents of Pasadena and Riverside had positive association with rebates following a compact fluorescent light giveaway that was easy and reliable.

Interest in Energy Efficiency Options

- There is notable interest in renewable solar panel systems and energy efficient windows and a slightly more modest interest in high-efficiency heating and air conditioning systems and wall and roof insulation.
- Options that are less familiar to residents are also less well-received, indicating the importance of educating residents about new technologies and energy options.
- Residents expressed concern about whether energy efficiency upgrades and retrofits would realize cost savings given that utility costs are an uncontrolled expense.
- Though people are interested in energy efficiency options, many are cautious given the state of the economy and the real estate market.

More Program Details

Emphasis was placed on discussing program specifics in Los Angeles and Pasadena, but some comment regarding energy efficiency and retrofit programs was discussed at all of the focus groups.

- Hearing general information about the program generated interest in the program, but not without reservations.

- Hearing more information about one’s eligibility for the program only added speed to the participants’ concerns—in particular the concept of using the home as collateral for the loan, and requiring that homeowners choose from a pool of specially trained contractors.
- Participants wanted reassurance that they would be able to choose which repairs to undertake.
- General concern about contractors and control over what repairs would be made was exacerbated by the experience of the few who took part in the airport noise and pollution abatement program.
- Further detailed information about the costs of the program and the financing plan only exacerbated concerns about the program including mixed reaction to the fact that the loan would stay with the home. Some felt this would be an obstacle if or when they decided to sell their house.
- Throughout the groups, participants questioned where the money was coming from—who was paying for this program.
- Feedback was mixed on the value of having a “green” certified home.

The Audit

More emphasis was placed on discussing program specifics in Los Angeles and Pasadena, but some comment regarding energy efficiency and retrofit programs was discussed at all of the focus groups.

- The participants also had significant reservations about a required audit to determine what improvements needed to be made to qualify for the program.
- Most participants were opposed to paying between \$300 to \$500 for the assessment. They said that they can get this assessment for free through the utility companies.
- At a minimum, participants wanted to be able to have a credit for the cost of the assessment that could be applied to any work they get done.
- Concerns about contractors greatly influenced reaction to the audit program, with participants questioning the qualifications of the pool of contractors used and the system for training and certifying the assessors.
- Further impeding support for the audit process, many participants (in particular women) felt that they know their home better than anyone and don’t need an expert to tell them they have “drafty windows.”

Program Branding

More emphasis was placed on discussing program specifics in Los Angeles and Pasadena, but some comment regarding energy efficiency and retrofit programs was discussed at all of the focus groups.

- The results show that participants have a positive association with the word “green,” with many suggesting names for the program that incorporate this word. Others choose names with the word “energy” because it speaks directly to what the program is about.
- There was no definitive winner among any slogans and taglines tested for the program. However, those that explained the program directly or highlighted energy independence were somewhat more effective.

Messages

- There was no stand out message among those tested on behalf of the program—a not altogether surprising result given the reluctance to embrace the program.
- Messages focused on the program saving participants money were met with mixed results. Again, this is not surprising given that the cost-savings claims were weakly received throughout the groups.
- The negative messages that were most effective focused on the program not generating a financial benefit for a very long time and that most government programs suffer from waste and mismanagement—two of the themes that emerged throughout the groups.

Information Sources

- The participants said they would turn to a number of sources to get information about the Los Angeles Energy Program, including inserts in their utility bills, letters from their city or the county, information from their contractors, a website promoted in a newspaper article on a television story, and information from homeowners' or neighborhood associations.
- While the men were supportive of information at their door, none of the women wanted someone coming to their door to speak with them. Many felt that phone calls were too intrusive.
- Participants also felt that different sources would be better for different types of information. For example, messages about home improvements would be powerful if they came from neighbors, and messages about property value would be best coming from real estate associations and appraisers. Perceived neutrality of the messenger was also desirable.
- Green Home tours and community workshops were received amiably, however having contractors or realtors involved was not.

However, despite these questions, there was still universal interest in learning more about the program at the end of the discussion and strong support for the ambitions of the program.

Statewide Market Segment Findings

As part of the California Public Utilities Commission's (CPUC) efforts to encourage Californians to make increased energy efficiency efforts, Opinion Dynamics Corporation (ODC) completed a study to determine key target audiences for the new *Smart Energy Living* campaign. CPUC hopes to "to increase consumer awareness and participation in demand-side management activities and to encourage behavior changes that save energy, reduce greenhouse gas emissions, and support clean energy solutions."ⁱⁱ

While the CPUC/utility campaign aims for long-term, behavior change, the Energy Retrofit campaign will be a more immediate purchase decision. There will be a different emphasis on a different group of people, but there are similarities in the characteristics of segments. Specifically, this campaign will target populations most similar to "Alex the Leading Achiever" and "Carlos the Practical Spender."

Figure 1 provides a snapshot summary of each target audience’s level of energy efficiency importance (as a factor of personal relevance and awareness), their primary non-financial motivations, and their potential behavioral movement (indicated by the arrows in the “behavioral movement potential” column).

Figure 1. Final Five Statewide Segments

SEGMENT	E.E. IMPORTANCE	MOTIVATION RANK	BEHAVIORAL MOVEMENT POTENTIAL	OUTREACH RECOMMENDATIONS
LEADING ACHIEVERS		1 Money 2 Environment 3 Foreign oil 4 Future gen. 5 Health	1 Climate chg. 2 Healthy env. 3 Future gen.	BEHAVIORAL MOVEMENT POTENTIAL: Arrow from No Cost to High Cost. APPEAL > Engage as peers and leaders in movement OUTREACH APPROACH > Sophisticated, info-driven, available online
PRACTICAL SPENDERS		1 Money 2 Foreign oil 3 Future gen. 4 Health 5 Environment	1 Energy independence 2 Nat'l security 3 Help economy	BEHAVIORAL MOVEMENT POTENTIAL: Arrow from No Cost to High Cost. APPEAL > Straightforward, non-nonsense messaging OUTREACH APPROACH > IOU programs, traditional media
STRIVING BELIEVERS		1 Money 2 Environment 3 Future gen. 4 Foreign oil 5 Health	1 Climate chg. 2 Resources 3 Animal and plant life	BEHAVIORAL MOVEMENT POTENTIAL: Arrow from No Cost to High Cost. APPEAL > Social capital-driven media with "us" appeal OUTREACH APPROACH > Web-based formats with clear information
THRIFTY CONSERVERS		1 Money 2 Environment 3 Foreign oil 4 Health 5 Future gen.	1 Climate chg. 2 Healthy env. 3 Resources	BEHAVIORAL MOVEMENT POTENTIAL: Arrow from No Cost to High Cost. APPEAL > Efficiency barrier-reduction messaging OUTREACH APPROACH > IOU programs, point-of-purchase messaging
DISCONNECTED		1 Money 2 Environment 3 Help state lead 4 Health 5 Foreign oil	1 Animal and plant life 2 Healthy env. 3 Climate chg.	BEHAVIORAL MOVEMENT POTENTIAL: Arrow from No Cost to High Cost. APPEAL > Community health and well-being messaging OUTREACH APPROACH > Community or faith-based local outreach

* The circles in these diagrams indicate where each segment is now. Arrows show the direction for movement. Disconnected has low adoption overall, and needs to be moved in both directions.

Table 9. Segmentation Snapshot²⁴

	Leading Achievers	Practical Spenders	Striving Believers	Thrifty Conservers	Disconnected
% of Sample	22%	18%	25%	21%	15%
Own/Rent	Mostly owners	Mostly owners			Mostly renters
Urban/Rural		More rural	More urban		
Income	Higher Income			Lower income	Lowest Income
Ethnicity	Mostly white				AA and Hispanic
Age	Older	Older			Younger
Education	More educated	Less educated	More educated	Less educated	Less educated
Political Affiliation	Liberal	Conservative	Liberal	Conservative	
Not important	↓	↑	↓	↑	↑
Not my job	↓	↑	↓	↑	↑
Resource-minded	↑	↓	↑	↓	↓
Crusader	↑			↓	
Follower	↓		↓		↑
Altruistic	↑	↓	↑	↓	
Practices		↓	↑	↑	↓
Low cost EE	↑	↑	↓	↓	↓
Low cost with Install	↑	↑	↓	↓	↓
High Cost EE	↑	↑	↓	↓	↓
OU Participation	↑	↑	↓	↓	↓
Willingness to Reduce Energy Use	↑		↑	↓	

²⁴ Arrows indicate statistical significance at 95% confidence compared to all remaining segments.

Based on their research and analysis ODC developed general recommendations:

- Outreach efforts should be tailored, in format, content, and depth of information to each segment. The same marketing strategy or a single mass media campaign is unlikely to maximize movement among all groups.
- Outreach efforts should constitute non-traditional as well as traditional media formats to enlist all segments in a call to action campaign, aimed at moving each segment to the next energy saving step.

Their evaluation efforts and ethnographic research show the depth of knowledge, understanding, and personal concern for energy efficiency and conservation is greatly varied. Currently many feel they are doing everything they can which for 85% is *one* energy efficiency/energy conservation (EE/EC) act. However, the goal is to encourage people to be a *Smart Energy Living* resident which by their definition would mean doing an average of ten different types of EE/EC actions.

- To move households to action, outreach activities need to address misunderstandings on what constitutes an energy “efficient” behavioral choice through substantive education and outreach.

Further, marketing and outreach efforts risk skimming the surface with awareness-raising campaigns and may not effectively inform, educate, and motivate Californians beyond their current levels of commitment and behavioral adoption.

- Moving individuals to action does not require changing their fundamental belief systems or generating new concern for issues that are not currently relevant to a given consumer. Rather, outreach activities should leverage the *current* attitudes and beliefs of each target audience and speak to them in their terms, from their perspective, and with messaging that directly appeals to them.

Traditional mass media advertising has its place for marketing and outreach, however, other outreach strategies, including using community action groups, online resources, and point-of-purchase materials must also be incorporated to generate a successful behavior-change campaign.

- Due to their localized and tailored content, grassroots and community-based groups, as well as information-driven web formats, have a strong role in helping to mobilize segments to action and to generate a *behavior change*, above and beyond the limited, awareness-generating capacity of mass media.

In addition to its recommendations, ODC provided a detailed look at the distinguishing characteristics and motivating factors for target audiences. The following charts provide a glimpse the two groups closest to our target markets.

Leading Achievers

22% of sample

Psychographics (Top 2 Box)			Demographics and Geographic Location (% of Total)					
	Segment	Others		Segment	Others	Segment	Others	
Psychographics (Top 2 Box)			Gender			Children in Household		
Recycles	90% ↑	74%	Male	43%	44%	None	61%	
Deals well with unexpected events	68% ↑	56%	Female	57%	56%	1	19%	
Can solve problems	78% ↑	67%	Age			2-3	17% ↓	
Happy with life	69% ↑	59%	24 or younger	5% ↓	14%	4 or more	3%	
Practical outlook	84% ↑	72%	25-34	9% ↓	20%	Annual Household Income		
			35-44	20%	21%	Less than \$30K	15% ↓	
			45-54	30% ↑	17%	\$30K-\$49,999	17% ↓	
			55-64	22% ↑	11%	\$50K-\$74,999	15%	
			65 or older	14%	17%	\$75K-\$99,999	19% ↑	
			Ethnicity			\$100K-\$149,999	18% ↑	
			White or Caucasian	76% ↑	49%	\$150K-\$249,999	11% ↑	
			Black or African American	3% ↓	8%	\$250,000 or more	5%	
			Hispanic or Latino	13% ↓	31%	Annual Income Level		
			Asian	5% ↓	10%	Low (State standard)	21% ↓	
			Other	2%	2%	Medium (>L.I.-\$200K)	69% ↑	
			Education			High (\$200K+)	10% ↑	
			High school or less	7% ↓	30%	IOU Territory		
			Some college/associate degree	37%	35%	PG&E	42%	
			College graduate	23%	18%	SCE	40%	
			Graduate degree	33% ↑	17%	LADWP	4% ↓	
			Own/Rent			SDG&E	10%	
			Own	84% ↑	58%	Other	3%	
			Rent	16% ↓	42%	Urban/Rural		
						Urban	83%	
						Rural	16%	
							15%	
Political Affiliation (% of Total)								
	Segment	Others						
Liberal	39%	32%						
Moderate	25%	31%						
Conservative	36%	37%						
Perceived Energy Use Compared to Neighbors (% of Total)								
	Segment	Others						
Uses more energy	16%	12%						
Uses as much energy	25%	30%						
Uses less energy	52%	47%						
Don't know	6% ↓	11%						

Arrows indicate statistically significant difference at 95% confidence

Leading Achievers - 22% of sample



Arrows indicate statistically significant difference at 95% confidence

Leading Achievers* – 22% of sample

Practices (No Cost)		Low-Med Cost Requiring Knowledge or Installation (% Yes)	
Turn off TV when not in use (Top 3 Box)	82%	Programmable thermostat	81% ↑
Turn on min number of lights (Top 3 Box)	90% ↑	Motion detectors	45% ↑
Turn off computer (Top 3 Box)	57%	Ceiling fans	83% ↑
Unplug cell phone chargers (Top 3 Box)	60%	Attic vent	62% ↑
Unplug other electronics and power strips (Top 3 Box)	33% ↓	Purchases (% Yes)	
Unplug computer when not in use (Top 3 Box)	14% ↓	Solar panels installed	9%
Turn off lights when leave a room (Top 3 Box)	90% ↑	Smart meter installed	25%
Calculated carbon footprint (% Yes)	11%	Double-paned windows	76% ↑
Low-Cost EE Equipment		EE HVAC	81% ↑
Low flow shower heads (% Yes)	84% ↑	EE large appliance	94% ↑
HVAC maintenance (maintains it at least once a year)	78% ↑	EE consumer electronics	44%
% CFLs installed (75% or 100% CFLs)	61% ↑	Insulation	72% ↑
Installed light timers (% Yes)	27% ↑	Cool roofs	25%
Installed water-heater wrap (% Yes)	68% ↑	EE Water heater	77%
Installed window film or weather stripping (% Yes)	57% ↑	Added something to help shade home	70% ↑
IOU Participation (Excluding Low-Income Energy Programs)			
Energy Audits (had any type of audit)	27% ↑	Signed up for DR alerts (% Yes)	36% ↑
Use less energy when asked by power company (Top 3 Box)	80% ↑	Signed up for EE course (% Yes)	10% ↑

* Behaviors stated for all those able to take action (e.g. have device or own home)

Arrows indicate statistically significant difference at 95% confidence

Practical Spenders 18% of sample

Psychographics (Top 2 Box)		
Practical Spenders did not stand out from the overall group on any of the psychographic questions. Compared to Striving Believers, Practical Spenders were significantly higher on:		
Can find ways to get what want	36% ↑	22%
Don't worry about future	21% ↑	11%

Political Affiliation (% of Total)		
	Segment	Others
Liberal	17% ↓	37%
Moderate	34%	29%
Conservative	49% ↑	34%

Perceived Energy Use Compared to Neighbors (% of Total)		
	Segment	Others
Uses more energy	19% ↑	12%
Uses as much energy	30%	29%
Uses less energy	42%	49%
Don't know	8%	10%

Demographics and Geographic Location (% of Total)					
	Segment	Others		Segment	Others
Gender			Children in Household		
Male	47%	43%	None	50%	56%
Female	53%	57%	1	14%	18%
Age			2-3	30%	23%
24 or younger	7% ↓	13%	4 or more	6%	3%
25-34	16%	18%	Annual Household Income		
35-44	18%	21%	Less than \$30K	19%	25%
45-54	14%	21%	\$30K-\$49,999	34% ↑	23%
55-64	20% ↑	12%	\$50K-\$74,999	25% ↑	14%
65 or older	25% ↑	15%	\$75K-\$99,999	7% ↓	14%
Ethnicity			\$100K-\$149,999	12%	13%
White or Caucasian	54%	56%	\$150K-\$249,999	4%	8%
Black or African American	6%	7%	\$250,000 or more	1%	2%
Hispanic or Latino	29%	27%	Annual Income Level		
Asian	10%	9%	Low (State standard)	38%	37%
Other	2%	2%	Medium (>L.I. -\$200K)	61%	58%
Education			High (\$200K+)	2% ↓	5%
High school or less	32% ↑	23%	IOU Territory		
Some college or associate degree	42%	35%	PG&E	34%	39%
College graduate	13% ↓	20%	SCE	50% ↑	40%
Graduate degree	12% ↓	23%	LADWP	2% ↓	8%
Own/Rent			SDG&E	8%	9%
Own	83% ↑	60%	Other	5%	4%
Rent	17% ↓	40%	Urban/Rural		
			Urban	79%	86%
			Rural	21% ↑	13%

Arrows indicate statistically significant difference at 95% confidence

Practical Spenders – 18% of sample

Primary Non-Money Motivation:		Reducing foreign oil	
Willingness to Reduce Energy Use at DR Times:		5.3	

Motivation Rank		
	Segment	Others
1 Saving money		Saving money
2 Foreign oil		Environment
3 Future generations		Foreign oil
4 Health		Future generations
5 Environment		Health

Primary Non-Money Motivations (% of Total)	
	Segment
Energy independence	42%
National security	17%
Bolster economy	13%

Behaviors (% of Total Possible)		
	Segment	Others
Practices	51% ↓	55%
Low cost purchases	59% ↑	40%
Medium cost purchases	69% ↑	36%
High cost purchases	54% ↑	38%
IOU programs	35% ↑	24%

Attitudes (Means, Scale 1-7)		
	Segment	Others
Not important	3.3 ↑	3.0
Not my job	3.3 ↑	2.6
Crusader	4.5	4.7
Resource-minded	5.7 ↓	5.9
Follower	4.0	3.8
Altruistic	3.4 ↓	3.9

Social Influences (Top 2 Box)		
	Segment	Others
Try to convince family and friends to use less	33%	33%
Among first to adopt	31%	34%
Change if others they respect do	30%	29%
Others are saving	23%	18%
Change if others do their part	32%	29%
Wrong to waste	56%	55%

Information Sources (% of Total)		
	Segment	Others
Most trusted	Utility (38%)	Utility (33%)
Least trusted	State of CA (22%)	Retailers (27%)
Online		

Arrows indicate statistically significant difference at 95% confidence

Practical Spenders* – 18% of sample

Practices (No Cost)		Low-Med Cost Requiring Knowledge or Installation (% Yes)	
Turn off TV when not in use (Top 3 Box)	75%	Programmable thermostat	71% ↑
Turn on min number of lights (Top 3 Box)	73% ↓	Motion detectors	51% ↑
Turn off computer (Top 3 Box)	68%	Ceiling fans	88% ↑
Unplug cell phone chargers (Top 3 Box)	59%	Attic vent	71% ↑
Unplug other electronics and power strips (Top 3 Box)	34%	Purchases (% Yes)	
Unplug computer when not in use (Top 3 Box)	21%	Solar panels installed	6%
Turn off lights when leave a room (Top 3 Box)	81%	Smart meter installed	38% ↑
Calculated carbon footprint (% Yes)	5%	Double-paned windows	70% ↑
Low-Cost EE Equipment		EE HVAC	74%
Low flow shower heads (% Yes)	78% ↑	EE large appliance	91% ↑
HVAC maintenance (at least once a year)	79% ↑	EE consumer electronics	52% ↑
% CFLs installed (75% or 100% CFLs)	56% ↑	Insulation	72% ↑
Installed light timers (% Yes)	27% ↑	Cool roofs	33% ↑
Installed water-heater wrap (% Yes)	72% ↑	EE Water heater	78%
Installed window film or weather stripping (% Yes)	53% ↑	Added something to help shade home	71% ↑
IOU Participation (Excluding Low-Income Energy Programs)			
Energy Audits (had any type of audit)	19% ↑	Signed up for DR alerts (% Yes)	27% ↑
Use less energy when asked by power company (Top 3 Box)	79% ↑	Signed up for EE course (% Yes)	14% ↑

* Behaviors stated for all those able to take action (e.g. have device or own home)

Arrows indicate statistically significant difference at 95% confidence

Sources: ODC Memo Re: Market Segmentation Findings (December 10, 2009), ODC Ethnographic Research Findings (8/25/09), and DRAFT California Statewide Marketing, Education and Outreach Plan (January 18, 2010)

5. Demographics

Los Angeles County

Los Angeles County is the most populous county in California, includes 88 incorporated cities, substantial unincorporated areas and a total population that makes up more than twenty five percent of the population of the State. The county covers 4,061 square miles and most of the population is located in the south and southwest. Unincorporated areas represent one-tenth the population, living within two-thirds of the land area. Los Angeles County is governed by a five-member County Board of Supervisors, with each representing over 2 million people. Each of the five supervisors presides over a district illustrated on the map on the following page.



Demographic Snapshot

This summary of the existing population, housing stock and buying power of Los Angeles County provides insight into this community and the potential size of the target market. Recognizing the importance of accurate and current information, all of the demographic data are summarized from Claritas Update Demographics for 2009 unless otherwise noted. This data utilizes a variety of sources to update the 2000 census data to the current year.

Population

The basic details of the population, including age, gender, race/ethnicity and education are provided below.

	Incorporated	Unincorporated	Total County
Total Los Angeles County Population 2009	9,069,929	1,084,928	10,154,857
Total Households	2,997,944	294,026	3,291,970

**Unincorporated Los Angeles Household Data from the County and represents 2007 data*

Age

Los Angeles County has a relatively young population, with nearly 50% of people under the age of 34. For the purposes of this research and project, the target population, those who are most likely to be homeowners, are those between the ages of 25 and 54 and represent nearly 51% of the current population. (Overall population is trending to be older and will increase the target age population in the coming years.)

Women represent an important target audience for this program. Men and women are nearly equally represented within the population. However, those within our target age group of 25 to 54 equal just 22% of the total population.

Los Angeles County by Age

	Total Population	Percentage	Females	Males
Under 24	3,600,084	35.7%	18%	19%
25-34	1,418,284	14.1%	7%	7%
35-44	1,546,489	15.4%	8%	8%
45-54	1,420,490	14.1%	7%	7%
55-64	1,006,983	10.0%	5%	5%
65+	1,082,388	10.7%	6%	4%

Ethnicity and Diversity

Los Angeles County is extremely diverse County. As shown in Chart 1-2, over 35% of the households are Hispanic or Latino, 10% of the households are Black or African-American and over 12% are of Asian decent. White households are just under 40%. When looking at total number of people or population, Los Angeles County is even more diverse and becoming more so each year, as shown in Chart 1-3.

Los Angeles County Households by Race

2009 Households by Race	Households	% of Total Households
White Alone	1,279,723	38.9%
Black or African American Alone	332,166	10.1%
American Indian and Alaska Native Alone	8,098	0.2%
Asian Alone	418,625	12.7%
Native Hawaiian and Other Pacific Islander Alone	5,833	0.2%
Some Other Race Alone	6,368	0.2%
Two or More Races	80,188	2.4%
2009 Households by Ethnicity	Households	% of Total Households
Not Hispanic	2,131,001	64.7%
Hispanic or Latino HHS (variable race choices)	1,160,969	35.3%

Los Angeles County Population by Race

Ethnicity	Population	
	2000	2008
Hispanic	44.6%	47.6%
White Non-Hispanic	31.7%	28.5%
African American	9.8%	8.5%
Asian/Pacific Islander	12.2%	13.4%
Native American	0.3%	0.3%
Multi-Race	1.3%	1.7%

Source: California Department of Finance, May 2008; L.A. Stats 2008; Los Angeles County Economic Development Corporation, April 1, 2009.

Education

31% of the current Los Angeles Population has an Associate Degree or higher. However, an equal amount has no college experience at all. The survey information indicates that our target will be those with at least a college degree, and particularly women.

Educational Attainment

2009 Educational Attainment for Population 25+	Population 25+	% of Total Population 25+
Up To High School Graduation	1,989,706	31%
High School Graduate + Some College	2,504,469	39%
Associate or Bachelors	1,424,227	22%
Advanced Degree	556,232	9%
Total Pop 25+	6,474,634	100%

Housing Stock

In Los Angeles County, 46% of housing is owner-occupied. Within the unincorporated areas, nearly 60% or 175,653 households are owner-occupied. That means we need over 8.5% of those homeowners to participate in the program—a fairly high number.

Housing Tenure

	Total Housing Units	% of Total Housing Units	Unincorporated (Source: 2007 Data Los Angeles County)	% of Unincorporated Housing Units
Total Housing Units	3,417,422		294,026	
Total Renter Occupied Units	1,723,611	50%	104,781	35.6%
Total Owner Occupied Units	1,568,359	46%	175,653	59.7%
Vacant Units	125,452	4%	13,592	4.6%

Housing Age

The target age of homes for this program are houses built before 1940 up to approximately 1970; 60% of houses in Los Angeles County fall within this range.

Housing Units by Year Built

Housing Units by Year Built	Housing Units	% of Total Housing Units
1990 to 2009	463,253	14%
1970 to 1989	895,829	26%
1950 to 1969	1,271,508	37%
Pre 1950	786,832	23%

Length of Residency

Most people (65%) in Los Angeles County have lived in their homes less than 10 years. While this is not a direct indicator of willingness to spend money on long term remodels, it is a factor to consider when marketing long-term financing.

Length of Residency

Length of Residency	% of Total Households
Resident 10 or Less Years	65%
Resident 15 Years	10%
Resident 20 Years	6%
Resident 30 Years	9%
Resident 40 Years	6%
Resident 40+ Years	5%

Income

The following breakdown identifies the number and percentage of households in each of eight total household income ranges. People surveyed with incomes between approximately \$75,000 and \$120,000 seemed most interested in energy retrofits. This represents approximately 20% of the Los Angeles County population. While it would seem that higher incomes would indicate higher interest, our surveys did not support that. It may be that those with substantially higher incomes over \$150,000 do not perceive the need to save on utility bills or make efficiency upgrades.

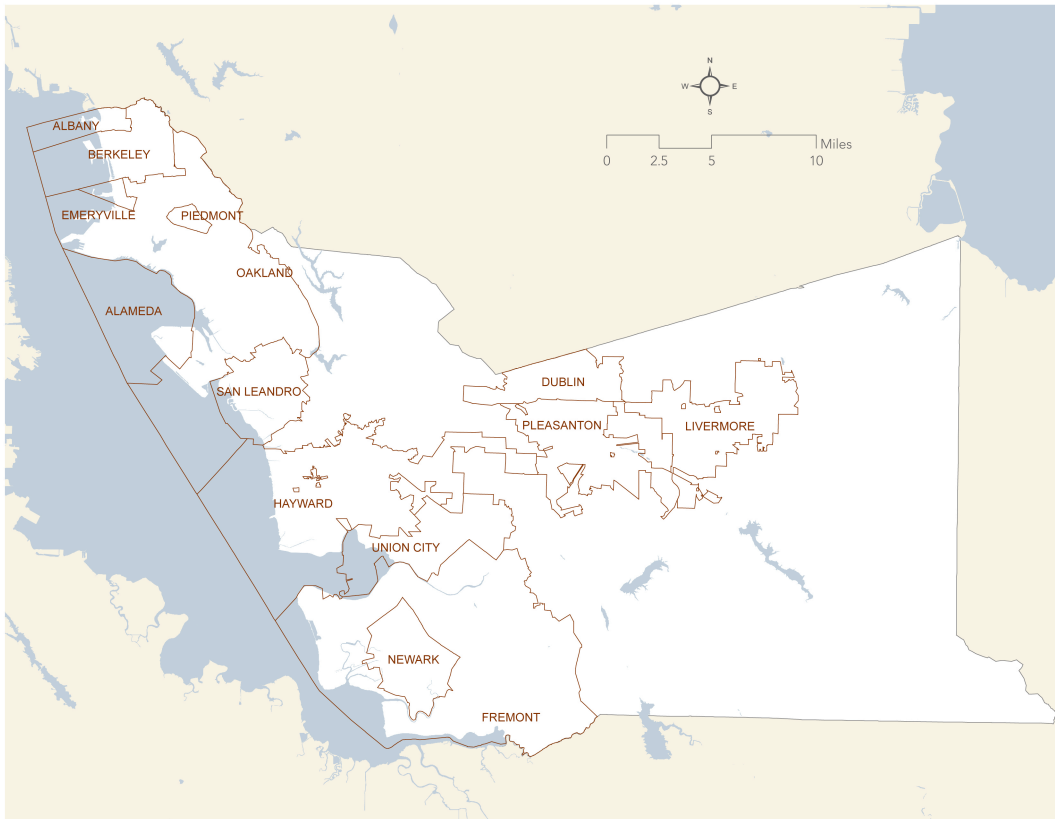
Household Income

2009 Household Income	Total Households	% Households
<\$25k	761,944	23%
\$25-50K	785,978	24%
\$50-75K	583,148	18%
\$75-100K	389,921	12%
\$100-150K	420,985	13%
\$150-250K	233,543	7%
\$250-500K	74,618	2%
\$500K+	41,833	1%

The most recent median income for Los Angeles County can be drawn from the 2006-2008 American Community Survey data and is equal to **\$55,192**.

Alameda County

Alameda County is located directly across from San Francisco and includes 14 incorporated cities and 6 unincorporated communities spread over 738 square miles of land. The population of the county is focused in the west adjacent to the San Francisco Bay. Most of the unincorporated area in the county lies in the east with a small concentration of unincorporated communities between San Leandro and Hayward. The incorporated cities of Alameda County are indicated on the following map.



Alameda County Demographics

Demographic Snapshot

This summary of the existing population, housing stock and income of Alameda County provides insight into this community and the potential size of the target market. Recognizing the importance of accurate and current information, the demographics are summarized from Claritas Update Demographics for 2009 unless otherwise noted. This data utilizes a variety of sources to update the 2000 census data to the current year.

Population

The basic details of the population, including age, gender, race/ethnicity and education are provided below.

Total Alameda County Population 2009	1,499,246
Total Households	532,909

Age

Alameda County has a relatively young population with 33% under the age of 24. For the purposes of this research and project, the target population are those between the ages of 25 and 54 which represents a robust 44% of the current population. Overall population is trending to be older and will increase the target age population in the coming years.

Women represent an important target audience for this program. Men and women are nearly equally represented within the population. Those within our target age group equal 23% of the total population.

Alameda County Age

	Total Population	Percentage	Females	Males
Under 24	491,033	33%	16%	17%
25-34	199,215	13%	7%	7%
35-44	237,890	16%	8%	8%
45-54	231,048	15%	8%	8%
55-64	172,773	12%	6%	6%
65+	167,287	11%	6%	5%

Ethnicity and Diversity

Alameda County is diverse. As shown in the chart below, around 21% of the households are of Asian descent, 15% of the households are Hispanic or Latino and over 14% are black or African American. White households are just over 44%.

Alameda County Households by Race and Ethnicity

2009 Households by Race	Households	% of Total Households
White Alone	238,428	44.7%
Black or African American Alone	75,034	14.1%
American Indian and Alaska Native Alone	1,716	0.3%
Asian Alone	114,760	21.5%
Native Hawaiian and Other Pacific Islander Alone	2,512	0.5%
Some Other Race Alone	1,403	0.3%
Two or More Races	18,372	3.4%
2009 Households by Ethnicity		
Not Hispanic	452,225	84.9%
Hispanic or Latino HHS (variable race choices)	80,684	15.1%

Education

Alameda County has a very highly educated community with 42% of the population with an Associate Degree or higher; 14% have an advanced degree. The survey information indicates that our target will be those with at least a college degree, and particularly women.

Educational Attainment

2009 Educational Attainment for Population 25+	Population 25+	% of Total Population 25+
Up To High School Graduation	179,604	18%
High School Graduate - Some College	409,412	41%
Associate or Bachelors Degree	282,054	28%
Advanced Degree	137,143	14%
Total Pop 25+	1,008,213	100%

Housing Stock

In Alameda County, 52% of all the housing is owner-occupied. The prime target age of homes for this program are houses built before 1940, which is 27% of the total housing. Expanding to houses built before 1970 increases the target to 83% of all houses.

Housing Tenure

	Total Housing Units	% of Total Housing Units
Total Housing Units	560,183	
Total Renter-Occupied Units	242,430	43%
Total Owner-Occupied Units	290,479	52%
Vacant Units	27,274	5%

Housing Units by Year Built

Housing Units by Year Built	Housing Units	% of Total Housing Units
1990 to 2009	92,559	17%
1970 to 1989	146,441	26%
1950 to 1969	168,233	30%
pre 1950	152,950	27%

Most people (62%) in Alameda County have lived in their homes less than 10 years. While this is not a direct indicator of willingness to spend money on long term remodels, it is a factor to consider when marketing long-term financing.

Length of Residency

Length of Residency	% of Total Households
Resident 10 or Less Years	62%
Resident 15 Years	11%
Resident 20 Years	6%
Resident 30 Years	9%
Resident 40 Years	6%
Resident 40+ Years	6%

Income

The following breakdown identifies the number and percentage of households in each of eight total household income ranges. People surveyed with incomes between approximately \$75,000 and \$120,000 seemed most interested in energy retrofits. This represents approximately 25% of the Alameda County population. While it would seem that higher incomes would indicate higher interest, our surveys did not support that. It may be that those with substantially higher incomes over \$150,000 do not perceive the need to save on utility bills or make efficiency upgrades.

Household Income

2009 Household Income	Total Households	% Households
<\$25k	88,894	17%
\$25-50K	101,390	19%
\$50-75K	92,989	17%
\$75-100K	74,595	14%
\$100-150K	94,141	18%
\$150-250K	59,849	11%
\$250-500K	14,779	3%
\$500K+	6,272	1%

The most recent median income for Alameda County can be drawn from the 2006-2008 American Community Survey data and is equal to \$70,079.

Buying Power

Also relevant to this project is the potential buying power of county residents. Nielson Claritas maintains a Consumer Buying Power database that tracks potential household expenditures based on a five year base of demographic and spending information. The spending information is drawn primarily from surveys conducted by the Bureau of Labor Statistics. This information is collected from the consumers and is geographically based on the household where they live, rather than where the purchases were made. The most current year information is available for is 2009 with the amounts representing the anticipated annual expenditure beginning January 1st of that year. Three key categories of data seem relevant to this effort, Household Repairs, Major Appliance Purchases and Utility Costs.

Household Repairs

The Household Repairs category covers the anticipated expenditures on equipment, labor, materials and services to improve and maintain residences. The total anticipated expenditures in this category for Los Angeles and Alameda County is listed below.

	Alameda County	Los Angeles County
Total Household Repairs	\$ 265,144,854	\$ 1,341,921,134

The total potential spending on household repairs for 2009 represents just over \$400 per household in Los Angeles County and \$500 for Alameda County. However, if you assume that owner-occupied households are making most of these expenditures, the same amount per owner occupied household would be approximately \$850 per year for Los Angeles County and \$900 for Alameda County.

Within this total household repairs figure there are four items that are most clearly related to energy efficiency: Heat/Air Conditioning/Electric; Electric Supplies, Heat/Cool Equipment; Roofing/Gutters and Paneling/Roofing/Siding Materials. These four items make up nearly half of all expenditures in household repairs. The amounts for each of these items are listed below.

	Alameda County	Los Angeles County
Heat/Air Conditioning/Electric Labor/Mat	\$ 55,348,221	\$ 280,178,143
Electric Supplies, Heat/Cool Equipment	\$ 3,085,103	\$ 15,091,051
Roofing/Gutters Labor/Materials	\$ 43,013,687	\$ 219,008,604
Paneling/Roofing/Siding Materials	\$ 13,790,058	\$ 72,032,835

Major Appliances

In addition to home improvements the second major category of purchases tracked in the Consumer Buying Power database that most directly impacts energy efficiency is Major Appliance Purchases. Total 2009 potential buying power for Alameda and Los Angeles Counties for major appliances is detailed in the table below.

	Alameda County	Los Angeles County
Window A/C	\$ 6,731,609	\$ 40,314,712
Refrigerator/Freezer	\$ 35,436,449	\$ 186,756,668
Clothes Washer	\$ 13,057,812	\$ 70,448,152
Clothes Dryer	\$ 14,706,174	\$ 78,744,439
Stoves, Ovens	\$ 20,780,995	\$ 105,860,632
Microwave Ovens	\$ 7,324,259	\$ 40,297,864
Dishwashers/Disposals/Hoods	\$ 14,422,100	\$ 73,491,248
Total Major Appliance Purchases	\$ 112,459,398	\$ 595,913,715
Per Household Expenditure	\$211	\$181

Utilities

The final category of expenditures from the Consumer Buying Power database is utility costs. This includes the fuels and electricity used to heat, cool and provide power to households.

	Alameda County	Los Angeles County
Fuel Oil	\$ 21,647,074	\$ 105,594,464
Gas, Bottled or Tank	\$ 19,367,297	\$ 113,146,494
Other Home Heating Fuels	\$ 2,732,868	\$ 15,681,175
Electricity	\$ 614,807,461	\$ 3,633,807,969
Natural Gas	\$ 270,712,920	\$ 1,544,939,271
Total Utility Costs	\$ 929,267,620	\$ 5,413,169,373
Annual Per Household Expenditure	\$1,744	\$1,644

The purpose of the retrofit program is to reduce energy consumption by 20%. If the average consumer reduced energy use and their utility bill by 20%, the average annual utility bill in Alameda County would drop by approximately \$350 a year and in Los Angeles by approximately \$330 a year.

5. Best Practices

We looked at 10 programs; 5 are listed in each table.

Best Practices At a Glance

Canada, Boulder, Vermont, Oregon, New York

	ecoENERGY Canada	ClimateSmart Boulder Colorado	Efficiency Vermont	Energy Trust Oregon	Green Jobs New York
Financing Options	\$5,000 grant funds available, awards averaged just over \$1000.	\$2,500 cash rebates, federal tax credits Loan program: \$3,000-\$50,000 with 5.2%-6.8% interest \$15,000 average	\$2,500 cash rebates, federal tax credits Discounted loan options	Home equity loans: 7% Direct cash rebates State and federal tax credits	Audit fees waived for residential applicants with income less than two times the median county household income.
Program Funding	Funded by federal tax dollars (\$1.5 billion in 2007)	Energy Efficiency and Conservation Block Grants/ ARRA	Source of funds: separate charge on customer utility bills		ARRA-funded
Contractor Training and Certification			Training provided for contractors through: Building Performance Initiative, ENERGY STAR Contractors	Trade Ally Network: 1,200 contractors, 50% of projects from there	Plan to build partnerships and one-on-one training grassroots training efforts
Marketing Strategy	Program grew by 85% in second year Lacked a comprehensive marketing strategy/brand	Financial incentives Intense publicity campaign focused on environmental benefits	The program has been featured on numerous news channels/ media	User-friendly website Identify target communities	Currently identifying target communities
Energy Audit	2 energy efficiency assessments with 18-month period for homeowners to retrofit.	Yes	Yes	Yes	Yes

(Continued on Next Page)

	ecoENERGY Canada	ClimateSmart Boulder Colorado	Efficiency Vermont	Energy Trust Oregon	Green Jobs New York
Number of Participants	Only 2.8% of nationwide housing stock participated in the program.	612 participants, totaling \$10 million; About 285 contractors; City is exploring hiring contractors (Two Techs in a Truck)	High level of customer awareness and awareness and participation among builders	Between 2007 and 2008, 19,731 residents participated in the Single Family Home retrofit.	Initial stages of development
Age of Program	Commenced in April 1, 2007 and ended March 31, 2010			Initiated in 2007	Initiated 2010
Other	Program is currently on hold due to internal program evaluation.	Mandatory homeowner workshop for loans			
Program Results	Participating homes achieved an average increase of 19% energy efficiency	After energy audit, half of homeowners didn't implement even the simplest recommendations, despite discounts and rebates	10% of State invested in efficiency in 2006		NA: Initial stages of development
Lessons Learned	An accessible, easy-to find website is very important.	Financial incentives and an intense publicity campaign aren't enough to spur most homeowners to action	Maintain cost effectiveness of program: might have to reduce incentives	Challenge to distinguish program from free auditing programs Audit fees should be waived for residential applicants with income less than two times the median county household income.	NA: Initial stages of development

Best Practices At a Glance (Continued on next page)

Wyoming, Missouri, San Francisco, North Carolina, Anaheim

	Home Performance Alliance Wyoming	Statewide Energy Campaign Missouri	Solar Water Heater Rebates San Francisco	Home Performance North Carolina	Anaheim Home Energy Makeover California
Financing Options	Rebates, tax credits GEOSmart loans Offer interest rate 9.9% and 7.9%	PACE financing MAAEP will recruit grants, affiliates and sponsors to pay for media promotions through realtors, remodelers and other organizations with homeowner databases.	PACE financing \$350 million rebate program	Federal tax credits	Finalist gets up to \$50,000 energy efficiency improvements
Program Funding	Coalition of allied utilities, government, and private-sector organizations will provide financial and in-kind program support.		None.	Pilot project for federal HomeStar program	Providers sponsored the contest
Contractor Training and Certification	Home energy Auditing and Improvement Orientation/Training/Certification for Alliance Staff and Home Improvement Contractors.	MAAEP will develop a proprietary best practices standard and offer MAAEP Green Certification for qualifying homes and buildings.	None.	Working with Central Carolina Community College to offer the State's community college system's weatherization faculty training program.	None.
Marketing Strategy	Home Energy Makeover Contest Program website, media relations and outreach, community group outreach, and joint exhibits	Community outreach and education, member networking and education, media, and Facebook page.	San Francisco Solar Map website – illustrates solar activity in the city.	Facebook page, Twitter account, energy-focused blog	Winning home becomes a model, tours offered
Energy Audit	Yes	Yes	No	Yes	20 finalists get free audits
Number of Participants	4th Quarter 2009 – 10,535 single family homes retrofitted, 5,691 multifamily homes retrofitted.	Goal is to help weatherize 7500 Missouri homes to a 30% thermal improvement	Initial stages of development	Initial stages of development	500 applicants: Houses that use the most energy based on actual past energy use, size of home, age of home (need not luck)

	Home Performance Alliance Wyoming	Statewide Energy Campaign Missouri	Solar Water Heater Rebates San Francisco	Home Performance North Carolina	Anaheim Home Energy Makeover California
Age of Program	Initiated in 2007	Initiated 2009	Initiated 2010	Initial stages of development	
Program Results		Job creation, energy independence, home improvement and sustainability are all positive outcomes derived from energy efficiency			
Lessons Learned	Rely on contractors as major educators and promoters of the program.	Rebate program is working with Kansas City Power & Light and Missouri Gas Energy to provide home owners with rebates of up to \$1200			

Best Practices Details

Each of the programs listed on the preceding Best Practices table is described here in more detail.

1. ecoENERGY Retrofit Program, Canada

ecoENERGY launched a program that relied on licensed auditors to provide inspections and detailed recommendations for property owners, which required action within 18 months to qualify for grant funding. Though up to \$5000 was available to each grant recipient, awards averaged just over \$1000. Unfortunately, the program has recently been suspended due to low overall participation. The lack of a marketing campaign is likely to blame since the program grew by 85% during its second year when word started to get out. The good news is that participants increased their home efficiency by 19%.

Program Description

- Nationwide program provided by Natural Resources Canada
- Provides financial support to implement energy-saving projects.
- Different application processes for homes, commercial and institutional buildings and industrial facilities.
- Commenced in April 1, 2007 and ended March 31, 2010 (to be reinstated in 2011 after the Government of Canada conducts an audit of the program).
- Two energy audits (energy efficiency assessments) are performed on a single or multiple dwelling home
- Homeowners hire local service organizations licensed by the Natural Resources Canada who send a certified energy advisor to perform a detailed, on-site evaluation of a home's energy use. The homeowner receives a checklist of recommended retrofits and reduces water consumption.
- Between the two audits, the homeowner has 18 months to undertake specific energy efficiency improvements for which financial grants are available under the program.

Funding

- Individual households can receive a maximum of \$5,000. On average over the 2-year program, households are receiving \$1,095 in grant funding.
- Funded by federal tax dollars (\$1.5 billion in 2007)
- Eligible homeowners for grants: single-family homes, detached homes; low-rise multi-unit residential buildings (MURBs) that are more than 3 stories high and some mixed-use buildings with at least 50 percent permanent residential space.

Marketing Strategy

- The program lacked a comprehensive marketing strategy and brand.

Challenges

- The Government prematurely cut the application period short. They did not accept additional applications after March 31, 2010.⁴
- The percent of houses built prior to 2000 that are estimated to participate in the program is low – only 2.8% of eligible home are participating after 2 years

Opportunities

- The number of households participating in the program is increasing⁵ - 85% more homeowners signed up to participate in Year 2 of the program.
- The average energy savings per household that has completed the second or E energy audit under the ecoENERGY program is equivalent to 14,168 kWh of electricity.
- To compensate for the termination of the national program, regional programs (“Complementary Programs”) are sprouting up all over the Country⁶

Lessons Learned

- An accessible, easy-to find website is very important. ecoENERGY’s website is extremely hard to find.
- Participating homes achieved an average increase in home energy efficiency of 19%
- Terminating the nationwide program has received a significant reaction from the wind sector, which claims that ending ecoENERGY funding hurts Canada’s wind sector.⁷
- Percentage of households and retrofit improvements
- A large percentage of houses that received audits recommending draft proofing and space heating did the retrofit.
- A small percentage of houses that received audits recommending attic insulation actually added it.
- The older the building, the more likely to have basement, attic, walls, windows and door improvements.
- The younger the building, the more likely to have the space heater improved.

2. ClimateSmart, Boulder, Colorado⁸

Boulder’s ClimateSmart program provides energy efficiency and renewable energy services that are unavailable elsewhere. Homeowners can apply for a \$3,000 minimum or a \$50,000 maximum loan, which will be repaid through a special assessment on property taxes. Unfortunately, the program is slow to take off. Staff speculates it’s because people are resistant to give up their energy-using gadgets. Program administrators and the City of Boulder are considering mandatory energy-efficiency upgrades, which have been met with resistance from residents and business owners. There are plans to leverage peer pressure to increase program participation and the City is exploring opportunities to

⁴ <http://www.cbc.ca/canada/story/2010/03/31/eco-retrofit.html>

⁵ <http://www.blogcatalog.com/blog/daily-home-renovation-tips-1/26f948f75375eddba519eb26ff932153>

⁶ <http://oee.nrcan.gc.ca/residential/personal/retrofit-homes/provincial-municipal.cfm?attr=4>

⁷ http://www.rechargenews.com/regions/north_america/article208545.ece

⁸ Simon, Stephanie. “Even Boulder Finds It Isn’t Easy Going Green.” The Wall Street Journal. February 13, 2010.

hire contractors who will conduct basic upgrades for residents. Future marketing campaigns will shift focus to financial benefits of upgrades.

Program Description⁹

- ClimateSmart is a joint City of Boulder and Boulder County campaign designed to:
- ✓ Connect local residents and businesses to cost-effective programs for reducing energy use and saving money
- ✓ Support the achievement of local greenhouse gas reduction goals
- ✓ Build community

It has:

- ✓ Create a model for regional sustainability
- 612 participants, totaling nearly \$10 million
- Over 282 contractors
- Six utilities in the area also provide rebates for residents¹⁰
- Federal tax credits are also an option for residents
- Home energy efficiency audits are not required
- The program provides education, financial incentives and services not available elsewhere to help people make energy efficiency and renewable energy improvements to their homes and commercial buildings.
- ClimateSmart also promotes transportation alternatives to driving and the switch to low-emission vehicles and alternative fuels.

Funding

- Energy Efficiency and Conservation Block Grants/ ARRA
- Financing options include: HELOC (home equity line of credit; HEILs (Home Equity Installment Loan); 3rd Part Financing for Solar PV, ClimateSmart Loan Program
- ClimateSmart Loan Program¹¹ - administered by Boulder County
- Homeowners must attend a mandatory educational workshop in March or April 2010.
- Homeowners can apply for a \$3,000 minimum or a \$50,000 maximum (or 20% of the statutory value of your home, whichever is less).
- Financing will be repaid by the homeowner through a special assessment on their property taxes.
- Eligible improvements: both energy efficiency and renewable energy improvements can be financed through the program.

⁹ <http://www.bouldercounty.org/bocc/cslp/homeenergy.pdf>

¹⁰ Personal interview with Susie Strife, Boulder County Sustainability Coordinator. March 22, 2010.

¹¹ http://www.bouldercounty.org/bocc/cslp/cslp_residential.html;

http://www.bouldercounty.org/bocc/cslp/cslp_faqs.html

- Good candidates may: be likely to qualify for a lower-interest loan through a private lender, do not want to incur personal debt, want a loan with a longer repayment period.
- Program costs: \$75 non-refundable application fee, closing costs (4%)

Marketing Strategy

- Financial incentives
- Intense publicity campaign focused on environmental benefits

Challenges

- People do not want to give up their gadgets (iPod, cellphone, laptops)
- Existing economic climate
- Mandatory energy-efficiency upgrades

Opportunities

- City can measure building's carbon footprints and publicize the results
- Leverage peer pressure (host energy-efficiency block parties, Facebook page, offer prizes.
- Jobs for contractors
- City is exploring the possibility of hiring contractors to do basic upgrades for residents (Two Techs in a Truck)

Lessons Learned

- Marketing campaigns should focus on financial benefits: Save energy, save money

Rebate Examples: XCEL ELECTRIC CUSTOMERS

- Air Sealing/Reduce Infiltration 20%, up to \$300
- Attic Insulation: 20%, up to \$300
- Wall Insulation: 20%, up to \$300
- High Efficiency Evaporative Cooler: Up to \$200 for ISR Air Flow Rating =2,500 CFM: Up to \$500 for a Media saturation effectiveness of 85% or higher.
- Central Air Conditioner (AC): Up to \$500
- Saver's Switch: Earn a \$40 bill credit each year by allowing Xcel to manage peak load during summer months.

3. Efficiency Vermont¹²

Efficiency Vermont, a statewide program, provides technical assistance and financial incentives for households and businesses and integrates a formerly loose patchwork of programs. Their Home Performance with Energy Star program provides up to \$2,500 cash rebates for state residents plus the up to \$1,500 federal tax credits. The incentives are project-specific and include an energy audit

¹² <http://www.energycanada.com/pages/>

rebate. It is funded by a separate charge on customer utility bills and, in partnership with a federal credit union, provides discounted loan options. Numerous news channels have boosted statewide awareness and a Facebook page posts regular updates and information. In general, customer and contractor program awareness is high. Major challenges include maintaining a cost-effective program, even though statewide savings of electricity, fossil fuel and water are substantial.

Program Description

- Type of organization: Statewide Energy Efficiency Utility (EEU) under contract to the Vermont Public Service Board
- Provides technical assistance and financial incentives to Vermont households and businesses to help them reduce their energy costs with energy-efficient equipment and lighting and with energy-efficient approaches to construction and renovation.
- Training provided for contractors through: Building Performance Initiative, ENERGY STAR Contractors¹³
- \$2,500 cash rebates, federal tax credits
- Loans through various banks, promoting 5% interest.

Funding

- Source of funds: separate charge on customer utility bills.
- New England Federal Credit Union is partnering with Efficiency Vermont so that members can get discounted loan options to weatherize their homes¹⁴

Marketing Strategy

- Conducted a Home Energy Makeover Contest
- The program has been featured on numerous news channels, magazines, and newspapers including: Fox 44 News, Backpacker Post, The Burlington Free Press, Fresno Bee and the Mercury News, among others
- Facebook page¹⁵
- High level of customer awareness and awareness and participation among builders (92% of the state's construction industry indicated awareness of the Vermont Energy Star Homes program).¹⁶

Challenges¹⁷

- Maintaining cost effectiveness for the program. It was recommended by an auditor to assess and implement the following changes:
- Reduce incentive amounts.
- Limit the duration of appliance incentive promotion to specific months.

¹³ <http://www.bpi.org>

¹⁴ <http://www.nefcu.net/page.php?page=310>

¹⁵ <http://www.facebook.com/pages/Efficiency-Vermont/276274905371>

¹⁶ <http://publicservice.vermont.gov/pub/other/vtres%20.pdf>

¹⁷ <http://publicservice.vermont.gov/pub/other/vtres%20.pdf>

- Restrict eligibility to ENERGY STAR models that qualify for the Consortium for Energy Efficiency's Tier 3 standards.

Opportunities

- The EEU integrates a formerly loose patchwork of energy efficiency programs throughout the state. It successfully attains the associated economies of scale and significant cost benefits.
- The program has achieved the following benefits: substantial savings of electricity, fossil fuel, and water.

Lessons Learned¹⁸

- Under the contract with the Vermont Public Service Board, all the policy objectives must be prioritized so that one goal is not achieved at the expense of the other. The contract includes elements such as performance indicators, targets, and specific requirements attached to these priorities.

¹⁸

<http://74.125.155.132/search?q=cache:4erq1PQRPN AJ:www.innovations.harvard.edu/awards.html%3Fid%3D3664+efficiency+vermont&cd=19&hl=en&ct=clnk&gl=us&client=safari>

INCENTIVES

Step 1: Meet these minimum requirements in order to qualify for all other Home Performance with ENERGY STAR incentives. Many Vermont homes have the potential to reduce air leakage by 30% or more. In 2009, more than 90% of homes achieved at least a 10% reduction.

ENERGY EFFICIENT HOME IMPROVEMENT	QUALIFYING CRITERIA	CUSTOMER INCENTIVE
Minimum Requirement	Air leakage reduction $\geq 10\%$ as measured by a pre- and post-blower door test*	\$250 audit fee rebate
	Install all recommended health and safety improvements including mechanical ventilation, CO detectors, or other essential health and safety improvements	

Step 2: Complete additional energy efficiency improvements to increase your incentive. Not every home will qualify for an incentive in every category. Efficiency Vermont offers incentives for the energy efficiency improvements that save the most energy. In general, the less efficient your home was to start, the more opportunity there is to save.

ENERGY EFFICIENT HOME IMPROVEMENT	QUALIFYING CRITERIA	CUSTOMER INCENTIVE		
Air Sealing	Reduce air leakage as measured by a pre- and post- blower door test	20-35% reduction \$500	$\geq 35\%$ reduction \$750	
Insulation	Install insulation meeting the following R-value* criteria:			
		LOCATION	EXISTING INSULATION	NEW INSULATION
	Attic flat		R-value \leq R-16	R-value \geq R-49
	All other locations		R-value \leq R-6	R-value \geq R-12
		R-values between 6 & 8	R-value \geq R-18	
		R-values between 8 & 16	R-value \geq R-49	
Heat Distribution Improvement	Install at least \$200 of duct sealing, leak repair, or other heat distribution improvements	\$100		
Heat System Replacement	Replace an inefficient heating system with an efficient new system. See your contractor for details on qualifying criteria.	\$500		

Step 3: See if you qualify for bonus incentives. Bonus incentives are for truly comprehensive projects that substantially improve the air tightness and insulation levels of your home.

ENERGY EFFICIENT HOME IMPROVEMENT	QUALIFYING CRITERIA	CUSTOMER INCENTIVE
Comprehensive Retrofit Bonus Package	Reduce air leakage $\geq 35\%$ as measured by a pre- and post- blower door test	\$500
	Install insulation in areas equivalent to at least 75% of the home's finished floor area (example: a 2000 sq. ft home could qualify by installing 1000 sq. ft of insulation in the attic and 500 sq. ft of insulation in the walls). Insulation must meet the above criteria for pre- and post- effective R-value.	

Step 4: Calculate your total incentive based on the completed energy efficiency home improvements.

Maximum total incentive per project	\$2,500
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4. Energy Trust, Oregon¹⁹

The State of Oregon launched Energy Trust, a statewide program operated by a non-profit organization. The program offers 7% home equity loans, state and federal tax credits, and direct cash rebates for participants. Investor-owned utilities in Oregon charge customers a 3% systems benefit, which funds the program. Retrofitted, energy efficient homes are displayed and marketed. Newspaper, magazine, radio, and television advertisements and key messaging for contractor trade allies are integral to program marketing. Over 1,000 independent contractors serve as ambassadors of the program in the field. The program's website is critical to the program; the trade ally website maintains contractor listings, calendar of events and classes, meeting notes, and newsletter archives. The importance of distinguishing Energy Trust from other free auditing programs is vital to the success of the program. In the future, marketing efforts will improve to increase awareness levels by leveraging customer feedback and enhancing website.

Program Description

- Statewide program for residential, business, and public/non-profit
- Non-profit organization
- Home equity loans are 7%
- Home Equity Loan — borrow from \$5,000 to \$50,000, with a term up to 15 years; 6.75%
- Unsecured Home Improvement Loan — borrow from \$1,000 to \$50,000, with a term up to 5 years; 8.5%
- State and federal tax credits
- Direct cash rebates by specific element
- Home Comfort Package: Receive a \$150 bonus in addition to the standard cash incentives when you install attic, wall and floor insulation *and* seal air leaks:
- Wall insulation: \$0.30 per square foot
- Attic/ceiling insulation: \$0.25 per square foot
- Floor insulation: \$0.30 per square foot
- Air sealing: up to \$400
- Participants surveyed reported the following:
- 49% of participants are age 35-54
- Property built before 1999
- Income level \$50K–\$100K

Funding

- 3% Systems Benefit Charge on bills of customers of investor-owned utilities in Oregon (such as PG&E and PacifiCorp)

¹⁹ <http://energytrust.org/>

Marketing Strategy

- New Homes cooperative marketing funds are available for trade ally builders, verifiers, and performance testing contractors to market energy-efficient homes.²⁰
- Funds may be used for advertising (newspaper, magazine, radio, television and billboards), websites, brochures and other approved marketing pieces.
- Energy Trust provides clear logo guidelines and key messaging for trade allies.

Challenges

- Challenged by lawmakers who are critical that the State is cutting education budgets while Energy Trust has a large budget. The nonprofit's fund has been tapped in the past to help pay debt.²¹
- The Trust is an easy target; employees earn a high living wage (over \$100,000 each)
- The Public Utility Commission looks over the organization's books, but it doesn't oversee management. The Board is self-appointing, with no input from the governor or the legislature.
- Since the group is nonprofit, employees cannot comment on legislation.

Opportunities

- Trade Ally program. In order to pass Energy Trust's solar incentives to clients, contractors must become solar trade allies.
- Benefits (cited by trade allies) of being a trade ally:
 - Job leads and access to referrals
 - Independent verification/legitimacy/customer confidence
 - The name/name recognition
 - Cash incentives
 - Helping customers save money and energy
 - Helping the environment/expanding the green market/efficiency
 - Support/training/seminars
 - Staying in touch with market/keeping informed
 - Marketing reimbursements
 - 1,200 independent contractors serve as ambassadors of the program in the field
 - Trade allies secure up to 50% of the projects for which Energy Trust provides incentives.
 - Trade ally website: maintains contractor listings, has calendar of events and classes, meeting notes, newsletter archives.
 - Requirements to become a trade ally:

²⁰ http://energytrust.org/library/forms/enh_fm_coop_mktg.pdf

²¹

http://74.125.155.132/search?q=cache:0lsJm7DwUH0J:www.oregonlive.com/news/index.ssf/2009/03/oregon_lawmakers_eye_energy_tr.html+energy+trust+oregon&cd=29&hl=en&ct=clnk&gl=us&client=safari

- Workers compensation certificate
- Participation in a free Home Energy Solutions Weatherization Specifications webinar
- Initial application – contact information, services offered, specialty, licenses and certifications, license number

Lessons Learned²²

- Work to distinguish program from other free auditing programs by:
- Using the terms “building science”, “technical expertise” and “whole house approach” – to set it apart.
- Ensure that auditors are properly trained to be able to explain the program.
- Improve marketing of the program by
- Leveraging customer feedback and testimonials to promote the program to others; this may help overcome the barrier of cost.
- Continue to employ multiple forms of advertising, as participants come in from a variety of sources.
- Expand the marketing specifically to increase awareness levels.
- Explore whether other programs can be used to pull participants into the Energy trust program.
- Expand information on the website to include more detail and specificity of entire process (assessment, installation, and close-out).
- The website is very important and should be made user friendly, clear, and navigable as possible.
- Maintain a Trade Ally Network which includes: manufacturers, contractors, distributors, installers, builders, developers, etc.

5. Green Jobs – Green NY, New York State²³

Green Jobs, New York State’s retrofit program, provide audits to eligible applicants based on a sliding scale. Program developers are working closely with the State, interest groups, and stakeholders to provide necessary workforce training. The program is new and is funded by the American Recovery and Reinvestment Act 2009. Marketing efforts will be directed towards targeted, untapped customers and communities in priority geographies, building partnerships with local community-based groups, and conducting one-to-one “grassroots” outreach efforts.

Program Description

- Will provide energy audits to eligible applicants based on a sliding scale; audit fees are waived for residential applicants whose demonstrated income is less than two times the median county household income.
- Energy efficiency improvements eligible for funding include: weather stripping, caulking, testing, repairing and replacing heating or cooling systems, thermostat upgrades, water heater repair and

²² Opinion Dynamics Corporation. Energy Trust of Oregon Home Energy Solutions Program Process and Impact Report Volume 2 – Word Updated. November 2009.

²³ <http://www.getenergysmart.org/>

replacement, health and safety issues, repair and replacement of storm windows, permanent windows and exterior doors, repair or replacement of major household appliances, installation of thermal solar heat or hot water systems, insulation, replacement of inefficient light bulbs and fixtures and fuel switching to convert an electrically-heated building to a more efficient heating.

- NYS Energy Research and Development Authority (NYSERDA) work closely with the NYS Department of Labor and partner with community-based organizations, workforce development organizations, and labor organizations to provide the necessary workforce training to support the Program, including, but not limited to entry-level, occupational, continuing education and advanced training, and apprenticeships.
- Program offers low-interest loans; contractors are heavily involved: “Low-interest ENERGY STAR Financing is offered...Your contractor can supply you with the current interest rate.”
- This is an unsecured loan, not a second mortgage or equity loan.
- The limit on the loan is \$15,000 or \$20,000, depending on your credit score.
- You can select a term of 3, 5, 7 or 10 years.
- Financing is available to owner-occupied 1- or 2-family homes.

Funding

- American Recovery and Reinvestment Act of 2009

Marketing Strategy

- Outreach and marketing goal: Bring residents, multifamily building owners, small businesses, and not-for-profit organizations into NYSERDA Energy Efficiency programs offering GJGNY audits and loans. Increase the number of energy efficiency retrofits made possible through GJGNY financing by targeting of previously untapped customers in priority geographies.

Challenges

- This program is in its initial stages of development.

Opportunities²⁴

- Identify target communities and provide a strategic plan on how they would accomplish outreach and education, through:
 - Building partnerships with local community-based groups
 - Conducting one-to-one “grassroots” outreach efforts
 - Outreach and consumer education will include:
 - Educating prospects on the benefits of energy efficiency
 - Qualifying residents for a free or reduced price audit
 - Providing program information including:
 - Retrofit process, benefits (whole house approach)

²⁴ Role of Constituency-Based Organizations in Outreach and Marketing of Green Jobs – Green NY (Draft 2/17/10)

- List of network of contractors
- Financing options and incentive programs available and high level, general information on standard qualifications
- References to loan qualification, other programs, CBO contacts
- Recruit and aggregate customers to participate in the Green Jobs-Green NY program
- Follow up with prospects to determine interest
- Provide information about energy efficiency workforce training opportunities and career pathways.

Lessons Learned

- This program is in its initial stages of development.

6. Wyoming Home Performance Alliance²⁵

The Wyoming Home Performance Alliance is composed of energy utilities and developers, government, education, and private-sector organizations and embodies a comprehensive “whole house” approach to make energy-related improvements. Its goal is to retrofit at least 500 Wyoming homes annually. Home energy auditing and improvement training and certification certify qualified contractors as BPI Professional Building Analysts. The Wyoming GeoSmart Loan program will provide financing options for homeowners, offering interest rate buy-downs to 9.9% and 7.9%. Marketing strategies include: website, media relations and outreach, community group outreach, exhibits, incentive program design and implementation and a Home Energy Makeover Contest. Wyoming’s low-density population poses a challenge to program implementation. An online auditing tool will provide an opportunity for Wyoming residents to engage in energy efficiency and audits in the future. Additional program develop opportunities indentified contractors as major educators and promoters of the program.

Program Description

- Whole house approach: Home Performance with ENERGY Star
- The Home Performance Alliance is a voluntary initiative that allows Wyoming-based energy utilities and developers, government, education, and private-sector organizations to publicly demonstrate their commitment to encouraging Wyoming residents to take control of rising residential utility costs by using a comprehensive “whole-house” approach to make energy-related improvements.
- Goal is to encourage whole-house retrofit for at least 500 Wyoming homes annually that result in air-sealing, insulation, and heating system replacement to provide increased home affordability, improved home comfort, reduced utility bill delinquency, carbon emissions reduction, and reduced energy usage.
- Home Energy Auditing and Improvement Orientation/Training/ Certification for Alliance Staff and Home Improvement Contractors. As a BPI affiliate, Wyoming Home Performance will expand its efforts with third-party trainers to teach the fundamentals of home performance evaluation and whole-home retrofit planning and execution with a focus on the house-as-a-system concept, including mechanical equipment, the building envelope and manufactured housing.

²⁵ 3rd Wyoming Energy Efficiency Exchange. <http://www.wyominghomeperformance.com/alliance/>

- Loans Available for \$2,500 to \$50,000 for up to 20 years at below-market interest rates
- Energy savings
- 80% of Energy Trust’s initial 2012 goal of 300 average megawatts were saved between 2002 and 2009.
- 58% of the current 2012 goal of 21 million annual therms (equivalent to providing gas heat to about 24,000 homes)
- Number of home retrofits: 4th Quarter 2009 – 10,535 single family homes retrofitted, 5,691 multifamily homes retrofitted.
- Funding
- Wyoming Home Performance will soon announce the Wyoming GeoSmart Loan program in partnership with the nationally recognized Electric & Gas Industries Association (EGIA). The program will provide unsecured and secured financing options for homeowners to make energy-related improvements with longer terms and more preferential rates than generally available. There is the potential for Alliance partners and qualified contractors to offer interest rate buy-downs to 9.9% and 7.9% as well as “6 months as cash” and other promotional programs with no financial risk to Wyoming Home Performance or the Alliance partners. The program can provide data reporting to Alliance partners to validate participation.
- A coalition of allied utilities, government, and private-sector organizations will provide financial and in-kind program support. The Alliance Partners may include:
 - Electric and natural gas utilities, whether private, municipal or cooperatively owned
 - Propane and fuel oil service companies
 - Natural resource developers
 - City/county government agencies
 - Chambers of commerce and other civic organizations
 - Environmental interest groups
 - Energy-related product retailers, distributors, and manufacturers
 - Non-profit civic and community-based organizations
 - Organizations supporting affordable housing

Marketing Strategy

The program website²⁶ - at is the central focus of all Wyoming Home Performance promotional and information activities. The site features Wyoming Home Performance Alliance partner logos and related programs with direct links to Wyoming Home Performance Alliance partner resources, as appropriate. In addition to the Internet site for the general public, a password-protected intranet site has been established for certified contractors to access proprietary program information and materials. Such a site could be made available to Alliance partners as well.

Media relations and outreach - A continuation of the media outreach plan first started in February 2007. Publicity campaign activities should result in significant print and broadcast media

²⁶ www.wyominghomeperformance.com

recognition in a manner consistent with articles that appeared recently in *Wyoming Business Report*, *Laramie Boomerang*, and *WyoFile.com*. There will be an opportunity for Wyoming Home Performance Alliance partner identification in all media campaign efforts.

Community Group Outreach. Wyoming Home Performance staff continues to identify and recruit community leaders to allow program staff to conduct presentations to their groups. Extensive efforts are made to meet with job training, economic development, and other public agencies to integrate efforts to reach out to potential contractors as well as consumers.

Joint Exhibits. A Wyoming Home Performance exhibit booth could bring together all consumer and contractor marketing materials of Alliance partners statewide in a professional-looking display as an alternative to each organization exhibiting separately at local and regional home shows and similar community events. Wyoming Home Performance staff could allow Alliance partners and participating contractors to “share” booth staffing duties to cross-promote various initiatives without committing dedicated promotional resources.

Incentive Program Design and Implementation. Wyoming Home Performance will work with Alliance partners and others to assist in the design, implementation, evaluation and statewide coordination of consumer and/or contractor-oriented energy efficiency incentives such as the “Residential Home Performance with ENERGY STAR Incentive” that offers Cheyenne Light, Fuel & Power residential customers a cash rebate incentive of \$150 after completing a home energy audit and recommended improvements through a qualified Home Performance with ENERGY STAR® service contractor.

Home Energy Makeover Contest. Contests similar to those offered in Colorado and elsewhere (see www.egia.org/anaheim) create program awareness among consumers in an innovative manner and immediately engage participating contractors. The contest winners would be chosen based on those homes with greatest potential to demonstrate home energy savings. The improvements may be donated from manufacturers and distributors with labor by local contractors/builders. In addition, comprehensive home performance analyses without improvements may be awarded as consolation prizes. Copies of all the home performance analysis reports could be available to all consumers to review and compare with their own home. These contests serve to create strong connections with the local media and community event producers and emphasize the positive cash flow nature of the energy retrofits, if financing were used.

Challenges

- Wyoming’s low population.
- Encourage contractors to conduct 5 retrofit jobs through the program per quarter.
- Showcase energy and non-energy benefits “through the winner’s eyes”

Opportunities

Home Energy Analysis Online for Consumers. Wyoming Home Performance hopes to enter into a licensing agreement with Apogee Interactive to offer an online energy audit like the one now available at: <http://blackhillspower.apogee.net/homesuite/>. The online tool could allow homeowners to input their billing data and also access weather data to compare their lifestyle and home characteristics with standards to learn the potential cost savings from common home improvements. Availability of the online tool statewide through www.wyominghomeperformance.com in close coordination with Alliance partners could allow for seamless integration with Wyoming Home Performance and Alliance web sites with consistency in energy savings representations and centralized

tracking of direct referrals to a local Wyoming Home Performance contractor for a Home Performance Assessment and improvement installation proposal.

Lessons Learned

- Slow process to build the program up.²⁷
- Rely on contractors as major educators and promoters of the program.
- Marketing and contest
- Pick a typical and savvy homeowner
- Award prizes based on building science rather than “luck” or “need”
- Focus media on winner AFTER measures installed
- Help “lowers” do their own home performance makeover
- Cultivate media without playing favorites
- Rally all product/service providers for their conceptual as well as in-kind support but maintain overall control of messaging

7. Missouri Statewide Energy Campaign²⁸

Missouri Statewide Energy Campaign is spearheaded by the Missouri Association of Accredited Energy Professionals (MAAEP). Retrofit funding opportunities for customers includes PACE financing. MAAEP plans to conduct media promotions through realtors, remodelers, and other organizations. The Association plans to raise public awareness of energy audit and remediation benefits by working with other trade groups and initiating radio and TV advertising. Missouri, unfortunately, has limited funding for rebates and federal funding sources, challenging the availability of viable incentives and motivation factors.

Program Description

Missouri Association of Accredited Energy Professionals (MAAEP)– includes representatives from Missouri Department of Natural Resources, Sustainable Solutions, Hayes Company, AB May, US Environmental Protection Agency, Green Cat, Hishaw Construction, Henges Insulation, Crowder College, Performance Plus Homes and many other energy efficiency businesses and related home contractors.

Goal is to help weatherize 7,500 Missouri homes to a 30% thermal improvement or better with grant start-up funding, and to continue over time with private sector sponsorship and membership fees supporting the organization after the first 18 months.

Funding

²⁷ Connie Wilbert, Program Director, Wyoming Home Performance Alliance, Personal Interview, April 2, 2010.

²⁸ http://www.csrwire.com/press/press_release/28883-Energy-professionals-organize-statewide-across-Missouri

PACE program finances the costs over 15-20 years, and with savings gained from lower monthly utility bills, home owners immediately put cash into their pockets while increasing the comfort and value of their homes," explained attorney and former energy geologist Tom Appelbaum.

MAAEP will recruit grants, affiliates and sponsors to pay for media promotions through realtors, remodelers and other organizations with considerable homeowner databases. MAAEP will develop a proprietary best practices standard and offer MAAEP Green Certification for qualifying homes and buildings.

Marketing Strategy²⁹

Community Outreach – coordinate a “speakers bureau” for civic, commercial, trade, and citizen groups to promote the benefits of enlisting the services of our members.

Member Networking and Education – sponsoring meet-ups, seminars, and trade-shows for our members, featuring manufacturers and recognized industry experts to provide practical advice and share experiences, including business management and growth techniques, technical best practices, and market analysis.

Marketing – Raising public awareness of the benefits of energy audits and remediation, including working with other trade groups and initiating radio and TV advertising.

Facebook Page³⁰

Challenges

- No specific challenges reported.

Opportunities

- Job creation, energy independence, home improvement and sustainability are all positive outcomes derived from energy efficiency
- Despite a lack of substantive government incentives in the last decade, the clean-energy economy has grown steadily. A recent Pew Report found that job growth in the clean-energy economy outperformed total job growth in 38 states and the District of Columbia between 1998 and 2007.

Lessons Learned

- Kansas City, Missouri - The Home Performance with Energy Star rebate program is working with Kansas City Power & Light and Missouri Gas Energy to provide home owners with rebates of up to \$1200 when properties are improved with efficiency upgrades," explained Ramona Schwartz of the Metropolitan Energy Center. "We've had over 200 completed contracts since our program began -- with many more in the pipeline.

8. Solar Water Heater Rebates, San Francisco California³¹

Solar Water Heater Rebates are available in San Francisco, California for homeowners and businesses that install solar thermal water heaters. The PACE financing program, local rebates that can be combined with the state-level California Solar Initiative, and the federal tax credit are funding

²⁹ <http://www.maaep.org/>

³⁰ <http://www.facebook.com/pages/Missouri-Association-of-Accredited-Energy-Professionals/334397311411>

³¹ Baker, David. "Rebates for solar water heaters approved." SF Chronicle. Friday, January 22, 2010.

opportunities for City residents and businesses. The high upfront cost is the main deterrent to program participation and single-family homes do not use enough electricity to make the pay back in the short-term. Program implementation supports reductions in the cost of solar water heating systems of at least 16 percent by increasing market size and encouraging cost reductions through market efficiency and innovation.

Program Description

- \$350 million rebate program for homeowners and businesses that install solar thermal water heaters.
- A typical home solar water system costs from \$5,000 to \$7,000. The average rebate will start at \$1,500, and will fall to \$550.
- Residential installations can receive a higher incentive if they use a local installer (\$4,000) or a installer trained through the city's workforce development system (\$6,000)
- Program will run for 8 years or until the funding runs out.

Funding

- PACE program – Property Assessed Clean Energy Program. Each additional property tax will be paid in full within 20 years.
- Local rebates can be combined with the state-level California Solar Initiative and the federal tax credit.

Marketing Strategy

San Francisco Solar Map Website³² – illustrates solar activity around the city; provides case studies of certain projects; includes the following solar installations types including: solar water heaters. The website also includes solar resources: solar installers, permitting process information, educational classes.

Challenges

- High upfront cost is the primary barrier preventing property owners from making these types of upgrades.³³
- Perception of fog.
- Single-family homes do not use enough electricity to make the pay back in the short-term.

Opportunities

- Expansion of the market for other solar thermal technologies that displace natural gas and electricity use, in addition to solar water heating.
- Support reductions in the cost of solar water heating systems of at least 16 percent through a program that increases market size and encourages cost reductions through market efficiency and innovation.

³² <http://sf.solarmap.org/>

³³ SF Power Brokers Energy Audits & Solar Energy.

<http://74.125.155.132/search?q=cache:o3yTSt3PdvAJ:greentini.net/+solar+water+heater+rebates+in+s.f.&cd=11&hl=en&ct=clnk&gl=us&client=firefox-a>

- Engage in market facilitation activities to reduce market barriers to solar water heating adoption, such as high permitting costs, lack of access to information, and lack of trained installers.

Lessons Learned

This program just started (February 2010) and is in the process of development.

9. Home Performance, North Carolina³⁴

North Carolina's Home Performance program is a privately owned company that conducts energy audits, energy ratings, verifies homes Green according to NAHB standards. The federal program, HomeStar, endorses the State's Home Performance program as a pilot initiative for the recently passed energy efficiency and retrofit legislation.

Program Description

- Conducts energy audits, energy ratings, verifies homes Green according to NAHB standards, and is weatherization contractor in Orange, Chatham, Durham, Wake, Lee, and Alamance counties.
- Privately owned company by Mark Bashista, the owner of Home Performance NC, Inc. who is a certified RESNET HERS rater, a Green Rater, and a BPI Analyst, an NAHB verifier, as well as a Licensed General Contractor.

Funding

- Privately operated organization.
- HomeStar funds

Marketing Strategy

- Facebook page³⁵
- Twitter account³⁶

Challenges

- No challenges reported

Opportunities

- Maintains a blog where people can write in to "Mr. Energy" with questions regarding energy efficiency, retrofits, and cost effectiveness.³⁷
- The program is a HomeStar pilot project.
- Working with Central Carolina Community College to offer the State's community college system's weatherization faculty training program.
- The State Board of Community Colleges approved an allocation to Central Carolina of \$34,000 from Workforce Investment Act funds designated for enhancing the education and credentialing of community college faculty.³⁸

³⁴ <http://www.homeperformancenc.com/>

³⁵ <http://www.facebook.com/pages/Pittsboro-NC/Home-Performance-NC/200997454317>

³⁶ <http://twitter.com/homeperformnc>

³⁷ <http://www.homeperformancenc.com/category/all-blog-posts/>

Lessons Learned

- No lessons learned reported.

10. Anaheim Home Energy Makeover, California

The Home Energy Makeover Contest was recently hosted by Anaheim, California, as well as several cities and states. Contest administrators select the most energy inefficient home in the area, based on BTU-per-square-foot and other factors. The winning home receives a makeover using energy-saving products and services donated by local suppliers. Then, all contest entrants and other community members are invited to tour the newly-improved, winning home and learn how to conduct their own energy makeover at their own expense using the local suppliers. The contest is advertised through various media outlets and a dedicated website, and takes time to develop and to be successful.

Program Description

- Anaheim Public Utilities includes: Electric and Gas Industries Association (EGIA) and City of Anaheim Public Utilities Department and is a non-profit electric and water utility that offers residents and businesses quality electric and water services.
- Provide Energy and Water Efficiency Workshops, Home Energy Makeover Contest
- Home Energy Makeover Contest³⁹ – the basics:
- Capitalize on homeowner and media interest in energy savings in ways that leverage the popularity of home renovation and home makeover shows. In addition, the Contests offer exciting sponsorship opportunities to raise visibility for a range of energy-saving products and services.
- The contest takes a building-science approach to the selection of a home that best demonstrates the potential for energy savings based on BTU-per-square-foot and other factors.
- The winning home receives a makeover using energy-saving products and services donated by local suppliers.
- Then, all contest entrants (i.e. contest losers) and other community members are invited to tour the newly-improved, winning home and learn how to conduct their own energy makeover at their own expense using the local suppliers. In all cases, the winning home owners make a compelling case to the home visitors and media for the non-energy benefits that the improvements achieve in comfort, health, safety and more.

Funding

- Rate-payer

Marketing Strategy

- Home Energy Makeover Contest strategic goals

³⁸

<http://webcache.googleusercontent.com/search?q=cache:VQwqz5z5pVsJ:www.cccc.edu/news/story.php%3Fstory%3D296+north+carolina+%22home+performance%22+program&cd=16&hl=en&ct=clnk&gl=us&client=firefox-a>

³⁹ <http://www.homeenergymakeover.com/>

- Create homeowner awareness in a dramatic way
- Capture media attention with the program concept
- Prove that there is market demand for home performance to: contractors, program co-sponsors, community leaders, product/service providers
- Demonstrate the measures that pay for themselves through energy bill savings
- Demonstrate how to conduct a house performance analysis and communicate the results
- Model a collaborative process for home performance contractors to work together
- Constipate the traditional home improvement market
- Home Energy Makeover website
- Dedicated energy makeover contest website, online contest registration, sponsor links, case studies, fact sheets, photos and video links
- Print materials
- Flyer in all City facilities, press release (6 total papers), TV PSAs, LA Times insert, Energy Fair Distribution and more
- Broadcast and events
- Static TV Ad on Public Broadcasting Channel 50, ran 6 times daily throughout June contest
- Anaheim Green Lifestyle Community Fair – flyer highlighting Makeover Contest
- Follow-up on all contest entrants

Challenges

- Contest methods center on four tasks: task 1 – Contest Planning; Task 2- Co-sponsor Recruitment; Task 3 – Contest Administration; and Task 4 – Winning Home Documentation and Lessons Learned.⁴⁰
- Contest development takes time and promotion to be successful

Opportunities⁴¹

- Created a sustainable building program with 17 active projects expected to receive green building certification, including 1,200 residential units.

Lessons Learned⁴²

- Home energy makeover contests demonstrate powerful ways to save energy and improve a home by capitalizing on homeowner and media interest in energy savings in ways that leverage the popularity of shows like ABC's Extreme Makeover: Home Edition. Contests offer exciting sponsorship opportunities to raise visibility for a range of energy-saving products and services.⁴³
- Marketing and contest lessons learned:
- Pick a typical and savvy homeowner

⁴⁰ <http://www.utilityexchange.org/docs/MotivatingExistingHomeowners.pdf>

⁴¹ http://www.anaheim.net/utilities/grn_con/Top10.pdf

⁴² http://www.hpwes.org/presentations/SE_mdg091708.pdf

⁴³ <http://www.utilityexchange.org/docs/MotivatingExistingHomeowners.pdf>

- Award prizes based on building science rather than “luck” or “need”
- Focus media on winner AFTER measures installed
- Help “lowers” do their own home performance makeover
- Cultivate media without playing favorites
- Rally all product/service providers for their conceptual as well as in-kind support but maintain overall control of messaging
- Showcase energy and non-energy benefits “through the winner’s eyes”

Key Successes

Successful energy efficiency programs tend to have a common theme⁴⁴

- Deeply committed senior management and program staff
- Clearly defined goals and objectives
- Data-driven, systematic and comprehensive portfolio and program planning processes
- Stable program funding sources and level

⁴⁴ Itron, Inc. Portfolio Best Practices Report. July 2008

Appendix: Methodology and Sources

The demographic and potential expenditure information included in this report is drawn from the Nielsen Claritas Update Demographics and Consumer Buying Power databases, whose methodology and sources are outlined below. Specific methodologies pertaining to the data used for this report are located in the Demographics section.

Since 1984, annual income and expenditures have been collected from surveys in varying detail, classified by income, age, consumer unit size, and other demographic characteristics of consumer households. The primary input data for the Nielsen Consumer Buying Power database is from the Bureau of Labor Statistics *Consumer Expenditure Survey* (CEX). The CEX provides information on the buying habits of American consumers, including expenditures, income, and other characteristics of the consumer unit (families and single consumers) and is based on two surveys: the quarterly Interview survey and the weekly Diary Survey.

The surveys target the total non-institutionalized population (urban and rural) of the United States. The data is collected from the independent quarterly Interview and weekly Diary surveys of approximately 7,500 sample households. Each survey has its own independent sample, and each collects data on household income and socioeconomic characteristics. The Interview survey collects expenditure data on major items that respondents can be expected to recall for three months or longer, like automotive repairs, home improvements, new appliance purchases, or vehicle purchases. It also includes monthly out-of-pocket expenditures, such as housing, apparel, transportation, health care, and insurance. The Diary survey includes weekly expenditures of frequently purchased items, such as food and beverages, tobacco, personal care products, and nonprescription drugs and supplies. Individual expenditures from both the Diary survey and the Interview survey aggregated to their corresponding Universal Classification Codes (UCCs) for each household record.

In essence, the CEX data provides the propensity (usage rates and household expenditure) by demographic cohort (age, income, family type, etc.) that is then applied to low-level demographic data to create small-area estimates. The biggest challenge in the use of CEX data is two-fold: 1) the collapse, evaluation and understanding of five years worth of CEX survey data and 2) the UCC to line item to category hierarchy to focus on items of value and with significant sample to produce accurate models. Nielsen enhances the CBP geographic estimates by controlling them to independent national forecasted values. Nielsen generates current-year and five-year estimated expenditure figures for each CBP category using data from a variety of sources, including industry and trade associations, and the Personal Consumption Expenditures of the Bureau of Economic Analysis (BEA). All variables present consumer expenditures for a household-level. The data is not presented as adult-level measures. Also, the data is expressed as dollars of expenditure for geographies based upon where the households are located and not where the dollars were actually spent.

In addition to the CEX data, Consumer Buying Power also incorporates information from the following sources:

- Nielsen Claritas Update Demographics
- Nielsen Cartographics
- U.S. Census Bureau: Census of Retail Trade

ⁱ Recovery Through Retrofit October 2009