



Annual Report

Fiscal Year 2014-2015

MISSION

To empower consumers and professionals to make clean, efficient and effective energy and water decisions by making innovative, voluntary market solutions accessible and economically viable.

VISION

Regional market actors are exponentially advancing sustainable, healthy and prosperous buildings and communities throughout the Central Coast.

KEY ACCOMPLISHMENTS THROUGH JUNE 2015

Based on the data collected through June 2015, key emPower accomplishments include:

Reached over
1 Million
Residents

with energy-saving messaging

Nearly
34,000
visits
to the
emPower
website

34,000



Conducted
or
exhibited
at **242**
events


Provided
600
Energy Coach
home energy
site visits

Provided direct customer service and education to over 10,000 interested individuals regarding energy opportunities and services

10,000


250
LED lightbulbs

Were provided to 180 customers, equating to an annual savings of **6,000 kWh**

875 home energy projects initiated, 152 of which are reported complete

29% average annual energy savings

191,333 kWh savings

33,208 therm savings annually

4,620 metric tons of CO₂ equivalent avoided (assuming a 15-year life for most projects)

\$3 million

in project activity for participating contractors



Leading to nearly \$8 million in economic multipliers (according to IMPLAN projections).

Generated approximately **1,600** home energy project leads for local participating contractors

\$2,000,000  in loan applications for participating lenders

700 Provided workforce training for over 700 attendees from the building trades, resulting in 700% increase in nationally recognized building performance certifications in Santa Barbara County

(The estimates above are based on project data (130) received by participating contractors)

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Prepared by:

The emPower Central Coast Team

COUNTIES OF SANTA BARBARA,
VENTURA AND SAN LUIS OBISPO



Executive Summary

This report compiles the progress and accomplishments of **emPower Central Coast** (hereafter referred to as emPower), the County of Santa Barbara’s innovative clean energy and building efficiency program, from start-up phase through the present Tri-County service model (November 2011 – June 2015). With particular attention to Fiscal Year 2014-2015, this report serves as emPower’s first Annual Report and includes three sections which are summarized below.

Background (Section 1)

Through the leadership of the Santa Barbara County Board of Supervisors, the emPower program was launched in Santa Barbara County in November 2011. Recognizing that buildings account for approximately 40% of national energy use and emissions, the County designed the emPower program to help property owners complete voluntary energy-saving improvements by overcoming obstacles such as affordability and confusion, while also spurring economic activity and jobs in the local building trades.

Since its inception over 3.5 years ago, emPower has continued to be awarded full external funding support from federal, State and utility agencies and has not required County General Fund contributions. On June 25, 2013, the Board approved additional funding awards to allow emPower to expand its existing service model to the Tri-County region (encompassing 1.4 million residents and 135,000 single family homes) in collaboration with Ventura County and San Luis Obispo County. By leveraging public and private resources (i.e. utilities, building professionals, credit unions), along with collaborative relationships with many community agencies, emPower currently operates 12 services to support homeowner and building professionals who are completing energy upgrades. These services are aimed not only at increasing the number of energy upgrades, but transforming the region’s clean energy and building efficiency market by increasing both supply and demand of energy improvements.

| emPower's 12 Services | |
|----------------------------------|------------------------------|
| Homeowner Services | Contractor Services |
| Utility incentives up to \$6,500 | Training and enrollment |
| Low-interest unsecured loans | Mentorship |
| Community Education | Tool lending library |
| Qualified contractors | Personalized support |
| Personalized customer support | Exposure and lead generation |
| Expert energy advice | Retrofit rewards |

Accomplishments and Performance Indicators (Section 2)

emPower has generated important early outcomes during the program's first 3.5 years in service, and continually seeks to apply lessons learned towards addressing challenges and improving program implementation. Key outcomes are described in detail throughout this document, with particular attention to progress made since the Tri-County expansion in Fiscal Year (FY) 2014-2015 (July 1, 2014 – June 30, 2015). Outcomes are organized under six key program objectives. Examples of significant program achievements are highlighted below:

Objective 1: Increase Demand for Energy Upgrades

- Widespread consumer awareness across the Tri-County region
 - 133 educational outreach events conducted in FY 2014-2015 alone since Tri-County expansion, 175% increase over FY 2013-2014
- Direct customer engagement and education with over 10,000 local residents
 - Over 5,000 in FY 2014-2015
- 675 residents have initiated a home energy retrofit
- Completion of 600 Energy Coach Visits
 - Over 350 in FY 2014-2015

Objective 2: Demonstrate Actual Energy Savings from Home Energy Upgrades

- 152 completed projects with average energy savings of 29% (1,483 kWh and 257 therms) annually
 - Completed projects increased by 36% over 2013-20
- Provided 250 LED lightbulbs to customers, saving 6,000 kWh annually

Objective 3: Transform Efficiency Market for Sustained Benefit to Local Contractors and Economy

- Hosted over 700 attendees at trainings for building professionals
- Enrolled 17 additional local contractors in FY 2014-2015
- Participating contractors reported \$3 million in emPower project income, leading to new and retained jobs, and roughly \$6 million in economic impact

Objective 4: Increase Understanding of Residential Efficiency Behavior and Needs

- Information gathered during 600 Energy Coach visits and subsequent surveys provides insights into local housing stock and homeowner needs.

Objective 5: Encourage Lenders to Enter Energy Efficiency Financing Market

- Program credit enhancements enabled two local credit unions to create a new, low cost loan product for the region, making tens of millions in private capital accessible for energy improvements
- \$2 million in loan applications have been submitted to date

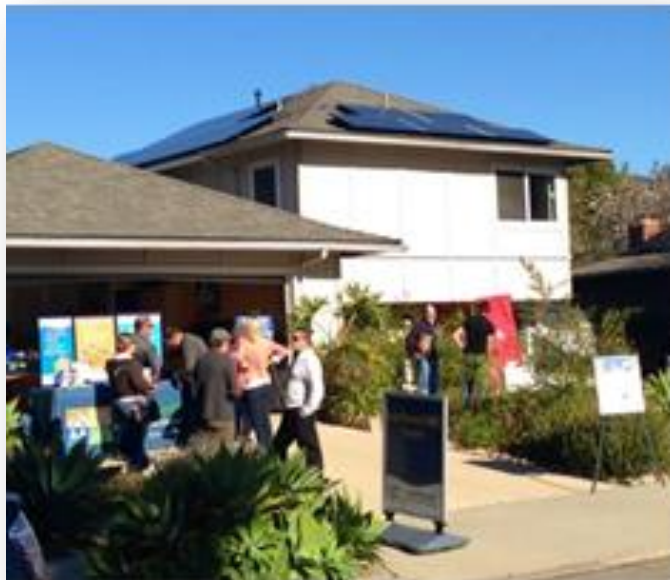
- No borrower defaults experienced to date, demonstrating low risk for lenders considering entering market

Objective 6: Build Upon Program Model to Deliver Effective Energy Services

- Originally focused on financing, the program has now delivered 12 distinct services to the region
- Tri-County expansion allowed the program to continue services while leveraging external resources for greater impact throughout a larger (quadrupled) service region
- Developed a broader service delivery model and IT systems to expand services to additional sectors

Next Steps (Section 3)

Like many residential energy improvement programs, emPower continually works to find better ways to motivate homeowner and building professionals to voluntarily complete energy improvements. emPower has generated early but important outcomes for the community including stimulating the local home performance market and reducing local energy usage. With strong direction and aggressive goals from the Counties and the State, emPower is poised to make further progress in support of its goals and objectives. In fact, emPower has developed a concept called the “Whole Community Approach” (WCA) that serves as its guiding vision in its next phase to accelerate uptake of energy improvements throughout the region. This approach capitalizes on emPower’s strategic position as a “go to” for energy assistance throughout the region, by improving its ability to identify consumers in all sectors and place them with a right-sized service – either internally or via its extensive network of partners.



1. Background

Why Address Inefficient Existing Buildings?

Buildings account for approximately 40% of national energy use and emissions. In California, aggressive steps are being taken to lower traditional energy consumption in buildings, from new building standards¹, to the Governor’s call to double energy efficiency in buildings and increase the renewable portfolio share to 50% by 2030. Notably, the State recently outlined an array of strategies in its Existing Building Energy Efficiency Action Plan², which calls for specific actions by local governments. In California’s residential sector alone, the State estimates that 5.8 million homes are likely candidates for substantial energy retrofits, which is anticipated to cost \$60 billion.

In Santa Barbara County, the Board of Supervisors has made energy efficiency and sustainability a key priority for the County since 2009 when the Board adopted Resolution 09-059, committing the County to take immediate, cost effective and coordinated steps to reduce the County’s collective greenhouse gas (GHG) emissions. In line with these priorities, the 2014-2015 County Legislative Principles include “Community Sustainability,” highlighting the intent to promote economic stability and environmental stewardship through participation in the growing green economy.

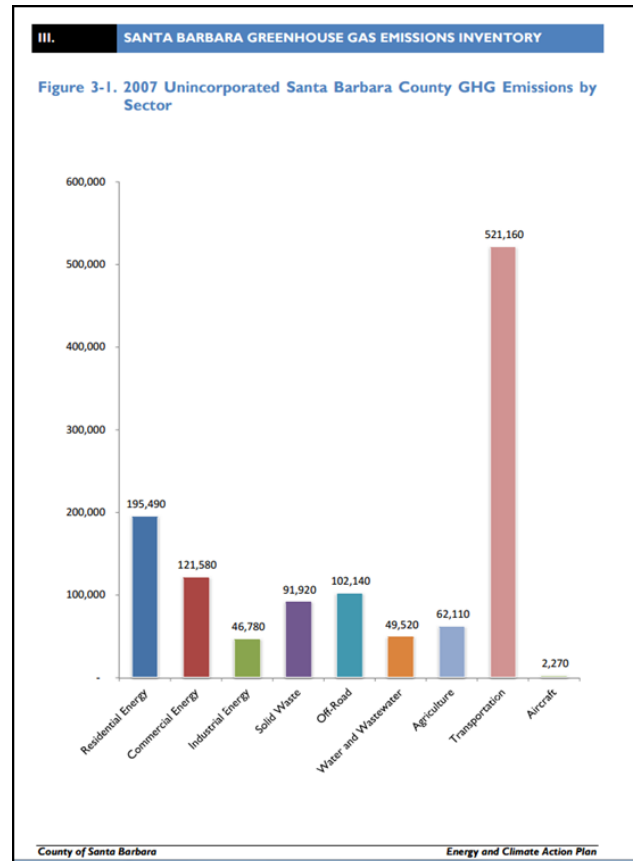


Figure 1: SB Greenhouse Gas Emissions

In June 2015, the Santa Barbara County Board of Supervisors adopted the County’s Energy and Climate Action Plan (ECAP), which illustrates that residential and commercial buildings account for the County’s second and third largest greenhouse gas emission sources (see Figure 1). Accordingly, the ECAP calls for significant energy improvements in over 7,000 homes and 320 businesses by 2020 without incorporating mandatory measures. In fact, 41% of the County’s 2020 emission reductions are expected to come from voluntary building efficiency initiatives, which is the area emPower specializes in. Ventura and San Luis Obispo Counties have already adopted their own energy plans and targets, as have several cities within in the Tri-County region.

While some assume that the region’s temperate climate means property owners are unable to make useful efficiency gains, recent PG&E data, for example, shows that 26% of northern Santa Barbara County homes are in the “highest” electricity use category, averaging 789 kWh and \$163 per home, per month (not including

1 Updated California Title 24 building standards went into effect on July 1, 2014: <http://www.energy.ca.gov/title24/>

2 AB 758 called for an Existing Building Energy Efficiency Action Plan (draft posted 3/2015): <http://www.energy.ca.gov/ab758>

natural gas bills)³. In the years that emPower has been operating, the program’s Energy Coaches have visited approximately 600 homes in the tri-county region and find that because the region’s building stock is relatively old, approximately 95% of those homes are good candidates for retrofits. Retrofitting the region’s buildings not only represents an opportunity to lower energy consumption, but also presents economic opportunities for local building professionals.

The volume of demand for energy upgrades on existing residential properties in the Tri-County region is substantial. To help house a population of 1.4 million people, there are 315,000 single family residential properties in the Tri-County. Many of these homes are older and in need of rehabilitation, including the measures eligible for emPower incentives and financing. emPower estimates that approximately 135,000 single family homes (owner-occupied and over 25 years old) throughout the Tri-County are good candidates for emPower services.

Purpose & History

Over the course of the last several years, buildings have become a key focal point of both State and national policy strategies to stimulate economic recovery while lowering energy consumption. A visual timeline is provided in Appendix A summarizing program history including major milestones (launch in November 2011 and Tri-County expansion in July 2014) along with key State and federal policies since 2009 when emPower was originally conceptualized. The timeline reflects the significant amount of national and State political will and capital that has been deployed specifically to help local governments stimulate the economy and put people back to work, while also improving buildings and saving energy.



emPower’s purpose focuses on removing obstacles for homeowner and contractors to implement energy efficiency improvements and enable lasting market transformation that can support a low energy demand economy. emPower’s mission statement is as follows:

To empower consumers and professionals to make clean, efficient and effective energy and water decisions by making innovative, voluntary market solutions accessible and economically viable.

emPower’s vision is as follows:

Regional market actors are exponentially advancing sustainable, healthy and prosperous buildings and communities throughout the Central Coast.

Program Design and Delivery

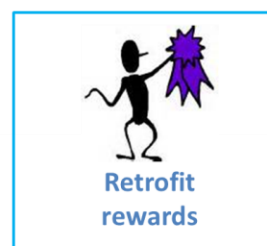
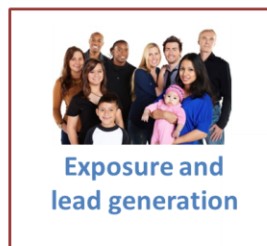
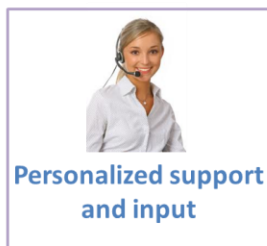
emPower has continually evolved over time as it strives to achieve program objectives and goals. Currently the program offers a suite of 12 services, 6 targeting homeowner participation, and 6 targeting contractor participation, which are outlined below and explained in further detail in Appendix B.

³ PG&E BRAT data 2015

HOMEOWNER SERVICES



CONTRACTOR SERVICES



HOMEOWNER SERVICES

The following services are designed to assist local homeowners and drive demand for upgrades.



Community Education: emPower employs a multi-faceted marketing, education and outreach approach to generate program awareness and educate homeowners about the benefits of energy efficiency and available program and services throughout the Tri-County region. Activities range from educational homeowner workshops to Radio, TV, online and print advertising. According to emPower’s contractors, the program’s ability to attract homeowners and connect them with participating contractors has led to significant growth in the demand for home energy projects.



Personalized Customer Support: Because undertaking home energy upgrades can be overwhelming and confusing for homeowners, emPower was designed to offer a local, personalized presence, rather than just a hotline and website. The program’s marketing activities described above have led to a great need for knowledgeable customer service available to connect customers with contractors, lenders and rebate programs. Program Specialists are available by phone, email and in person to help homeowners navigate through various stages of an upgrade.



Low-interest unsecured loans: The emPower Home Upgrade Loan is the result of a unique public-private partnership between the County of Santa Barbara, CoastHills Credit Union and Ventura County Credit Union. By offering affordable and accessible financing with low monthly payments, emPower provides a valuable tool to help homeowners overcome the high upfront costs associated with home upgrades and solar installations. These unsecured loans are available up to \$30,000 with 15 year terms. The rates start at 3.9% and there are no fees or closing costs.

Note: Secured loans require some form of collateral and unsecured loans do not.



Rebates and Incentives: emPower combines high dollar utility rebates and incentives with low cost financing to make home energy efficiency upgrades affordable and accessible for local homeowners. This combination allows emPower customers to reduce the overall cost of an upgrade and subsequently reduce the loan amount resulting in lower monthly payments.



Onsite Energy Advice: emPower has three Energy Coaches on staff to provide expert energy advice to homeowners. The Energy Coaches conduct home energy site visits and assist local homeowners with considering useful energy improvements and connecting them with participating contractors. All of the Energy Coaches are home performance experts, hold multiple energy efficiency

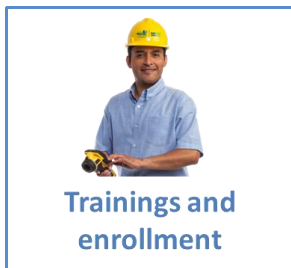
certifications such as the Building Performance Institute’s Building Analyst certification and have years of experience in the contracting industry.



QUALIFIED CONTRACTORS: Lack of qualified contractors has been cited by homeowners as a barrier to making home energy upgrades. To overcome this barrier, emPower has developed a list of contractors with the skills and training needed to conduct home energy efficiency upgrades. To date, emPower has enrolled 29 participating contractors that can perform residential energy efficiency and solar upgrades. This list reduces the amount of research that homeowners must undertake to find a suitable contractor and helps them feel more comfortable with moving forward with a project.

CONTRACTOR SERVICES

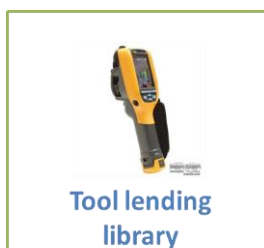
The following services assist local contractors with driving demand for upgrades and provide them with the tools needed to successfully integrate home performance upgrades into their business model.



TRAININGS AND ENROLLMENT: The presence of a skilled, trained and qualified workforce is critical to the success of a large scale building retrofit and renewable energy installation initiative. emPower provides free or substantially discounted, local trainings in building performance, sales and other skills (ex. BPI Building Analyst and Home Energy Rating System (HERS) certification). The program also conducts a Contractor Input Committee to gather feedback on program offerings and facilitate sharing and peer learning amongst contractors.



MENTORSHIP: emPower has three Energy Coaches currently on staff to serve the Tri-County Region. All three are BPI certified professionals and have accumulated years of experience in home energy efficiency and the construction industry. They are available to mentor emPower contractors and their staff on an as needed basis to provide technical advice. They can also support contractors with usage of diagnostic equipment and accompany them on the job test-ins and test-outs required by some incentive programs to determine energy savings.



TOOL LENDING LIBRARY: By joining the emPower program as a participating contractor, professionals can have access to a Home Performance Tool Lending Library, through a membership sponsored by emPower. This allows contractors to

practice with tools such as blower doors and duct blasters while trying to pass required training and to get comfortable with the equipment before purchasing their own tools.



Personalized support and input

PERSONALIZED SUPPORT AND INPUT: Because complying with multiple utility and other program requirements can be daunting for contractors, emPower staff provides ongoing support. Staff is available to walk contractors step by step through the emPower program as well as other utility programs. Staff also works closely with programs such as Energy Upgrade California Home Upgrade to stay abreast of program updates and convey these to contractors.



Exposure and lead generation

EXPOSURE & LEAD GENERATION: Leads generated by the emPower program are one of the most valuable benefits our contractors receive. Many of these leads have been prequalified by staff or through Energy Coach site visits and are considered very high quality. Contractors are also able to gain exposure to local homeowners by being listed on the directory of Participating Contractors and setting up a booth at program workshops and events.



Retrofit rewards

RETROFIT REWARDS: emPower provides “retrofit rewards” marketing credit to contractors based on the number of projects they report back to the program. These credits can be redeemed for collateral materials such as customizable brochures, mailers, flyers and yard signs.

Program Operations

Tri-County Model

As program originator, Santa Barbara County is the lead and central administrator for the services of the Tri-County emPower program. Due to successful development of its existing emPower program, Santa Barbara County was offered additional funding by the California Energy Commission and California Public Utilities Commission to expand program operations into Ventura and San Luis Obispo Counties, which did not have the type of services emPower offered to residents and contractors, including financing, targeted outreach, customer service, and workforce development activities. Both Counties entered into contract with Santa Barbara County in April 2014, receiving pass-through funding to administer local community outreach, customer service and contractor engagement services. The Tri-County model was intended to reduce redundancies in delivering energy services to the region and create additional demand to increase program uptake and accelerate the region’s growing building performance industry. The transition to the Tri-County model entailed a great deal of business process changes and training, but has overall been smooth and effective.

Budget

emPower is fully funded by external funding sources including the US Department of Energy, the California Energy Commission and investor-owned utilities. It is important to note that, unlike mandatory measures (i.e. code enforcement), motivating property owners and contractors to voluntarily make substantial energy improvements requires a multi-faceted service approach. Program spending to date to administer the 12 services described above throughout the Tri-County region is estimated below.

| Program Spending Breakdown | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 |
|-------------------------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| Salaries and Benefits | \$ 220,500 | \$ 272,000 | \$ 386,600 | \$ 401,300 | \$ 495,500 |
| Operations/Program Delivery | \$ 202,000 | \$ 529,200 | \$ 508,200 | \$ 528,800 | \$ 846,700 |
| Total Program Spending | \$ 422,500 | \$ 801,200 | \$ 894,800 | \$ 930,100 | \$ 1,342,200 |
| Loan Loss Reserve Transfer | | \$ 1,000,000 | | \$ 1,600,000 | |

Figure 2. Program Spending Since Start Up

Increases in spending over time reflect a ramp up of staffing levels from 1 full time equivalent (FTE) to 4 FTE in Santa Barbara County and associated program activities at different phases of program development, such as startup (2011) and Tri-County launch (2014). In 2014-2015, nearly \$.5M in operations/program delivery expenses (i.e. staffing and outreach costs) are associated with pass through to Ventura and San Luis Obispo. In addition, certain services are centrally administered by Santa Barbara County for the Tri-County, including the highly popular Energy Coach service. The loan loss reserve transfers indicate the year in which \$1 million and \$1.6 million was drawn from external funding sources and placed in an account with emPower's lending partners as a credit enhancement for the emPower Home Upgrade Loan (\$2.4M as loan loss reserve, \$200K as an interest rate buy down pilot in Santa Barbara County). The scenario in which the loan loss reserve funds actually diminish is if there are defaults against outstanding emPower Home Upgrade Loans. There have been no defaults against any of the emPower loans to date.

2. Accomplishments and Performance Indicators

emPower staff gather, track, manage and analyze many data sources using several systems, including a sophisticated customer relationship management system. Staff use this information for internal and grant related reporting, and also to inform program improvements and other internal decision making. emPower staff conduct Quarterly Strategic Planning Meetings to review the previous quarter's performance and plan for upcoming priorities. Performance highlights are provided below and performance details are provided by objective in the following sections.

Highlights to Date

Based on the data collected through June 2015, key emPower accomplishments include:

- Achieved significant service enhancements (see next section)
- Reached over 1 million residents with energy saving messaging
- Drove nearly 34,000 visits to emPowers website
- Conducted or exhibited at 242 events
- Provided direct customer service and education to over 10,000 interested individuals regarding energy opportunities and services
- Provided 250 LED lightbulbs to 160 customers equating to an annual savings of 6,000 kWh
- Generated approximately 1,600 home energy project leads for local participating contractors
- Provided 600 Energy Coach home energy site visits
- Led to initiation of 675 home energy projects, 152 of which are reported complete
 - The estimates below are based on project data (130) received by participating contractors:
 - 29% average annual energy savings
 - 191,333 kWh savings and 33,208 therm savings annually
 - Assuming a 15 year useful life, projects will avoid 4,400 metric tons of carbon dioxide equivalent
 - Approximately \$3 million in project activity for participating contractors, leading to nearly \$6 million in economic multipliers (according to IMPLAN projections).
- Received over \$2,000,000 in loan applications for participating lenders
- Provided workforce trainings for over 700 attendees from the building trades, resulting in 700% increase in nationally recognized building performance certifications in Santa Barbara County

2014-2015 Program Service Enhancements

Before further describing performance metrics, it is important to point out significant progress on the program's continual goal to improve the service delivery model. In this fiscal year, emPower worked with its partners to make the following service enhancements available.

- **Tri County launch:** In partnership with Ventura and San Luis Obispo Counties, the program was relaunched as "emPower Central Coast" and now serves the Tri-County region. To better serve a larger region, staff was



organized into 6 functional teams, and standard operating procedures were compiled.

- **Energy Coach:** Due to an increase in demand following the Tri-County program launch, two additional Energy Coaches were brought on to help cover the service territory and better assist Spanish speakers. In addition, extensive process improvements were put into place to lower costs per visit, better screen potential retrofit candidates, and ensure that all home visits resulted in contact with a participating contractor, which has improved project conversion rates.
- **Incentives:** emPower is promoting significantly increased incentives for solar thermal and comprehensive home upgrades offered by the utilities, which help projects become more affordable and cost-effective.
- **Relationship with low income providers:** Low income households are often able to attain services at no or low cost. emPower has developed closer relationships with organizations serving the low income community's energy improvement needs. Now emPower can better refer customers that may qualify for low income programs, and conversely will receive referrals from low income programs if customers are ineligible for their services.
- **Higher loan maximum:** Given demonstrated need, emPower lenders agreed to increase the emPower maximum loan amount from \$25,000 to \$30,000.
- **Interest rate buy down:** Using federal DOE funds, emPower worked with CoastHills and Ventura County Credit Union to buy down the interest rate on approximately 100 emPower Home Upgrade Loans by 200 basis points. These funds are not eligible for use outside of Santa Barbara County, however emPower is pursuing opportunities to expand this pilot across the Tri-County.
- **Financing of incremental measures:** To expand the types of eligible measures that can be financed, the program worked with utilities to develop a single measure (or incremental measure) program called SimpleStart that allow homeowners to finance energy efficient measures completed outside of the more comprehensive, whole house utility program.
- **Prepayment re-amortization option:** The prepayment re-amortization lets emPower borrowers to apply rebates or tax credits for a onetime prepayment on the principle of the loan and allow for a re-amortization, which would keep the terms of the loan the same but lower the monthly payment.
- **Website and Data Management:** This year, the public-facing website was overhauled to allow for greater user navigation, including an option to enroll for services online. Staff also migrated all data into a Customer Relationship Management system and integrated this database with the Drupal website platform, which has increased efficiencies. Staff worked diligently over this year to improve data quality. The program has also developed an external user portal allowing contractors, customers, lenders and staff to better communicate and access project details and progress.
- **Contractor Training:** emPower offered a new contractor training this year to help them become prepared to comply with new Title 24 standards when completing Heating, Ventilation and Cooling (HVAC) upgrades. In addition, emPower initiated a Contractor Training Subsidy Program to allow for individual contractors to seek out training opportunities on their own and receive reimbursement up to \$750.
- **More contractors:** emPower has enrolled 17 new contractors within 2014-2015, many in Ventura and San Luis Obispo, including General B, insulation and HVAC contractors.
- **New homeowner education opportunities:** emPower dramatically expanded its presence on social media, and also developed new event formats, including a 4-week peer learning workshop series to provide in-depth guidance to homeowners beginning their upgrade.
- **LED lightbulb giveaways:** This pilot allowed the program to provide free LED lightbulbs to customers that signed up to receive ongoing information from the program.

Outcomes by Objectives

As described in the Executive Summary, the program has 6 key objectives that drive its efforts. The following sections provide performance indicators that measure emPower's progress toward accomplishing those objectives.

Objective 1: Increase Homeowner Demand for Energy Upgrades

emPower has conducted a comprehensive marketing and customer service strategy to improve local homeowners' awareness of energy efficiency, and increase the demand for energy upgrades. The key services emPower provides to achieve this goal are Community Education and Outreach, Personalized Customer Support and Onsite Expert Energy Advice as described in Section 2. The combined efforts of these three services have contributed to homeowners' participation and satisfaction in the program. Program progress and success thus far is demonstrated in the charts below.

Outcomes:

The program has reached over 1 million residents with continual energy efficiency messaging. As shown below, over 10,000 interested individuals have proactively contacted the program (email, phone, website, event) seeking energy efficiency information and assistance. The number of interested individuals has increased greatly from 1,092 by end of the year 2011-2012 to 5,308 in 2014-2015 with the continuous outreach efforts of the program.

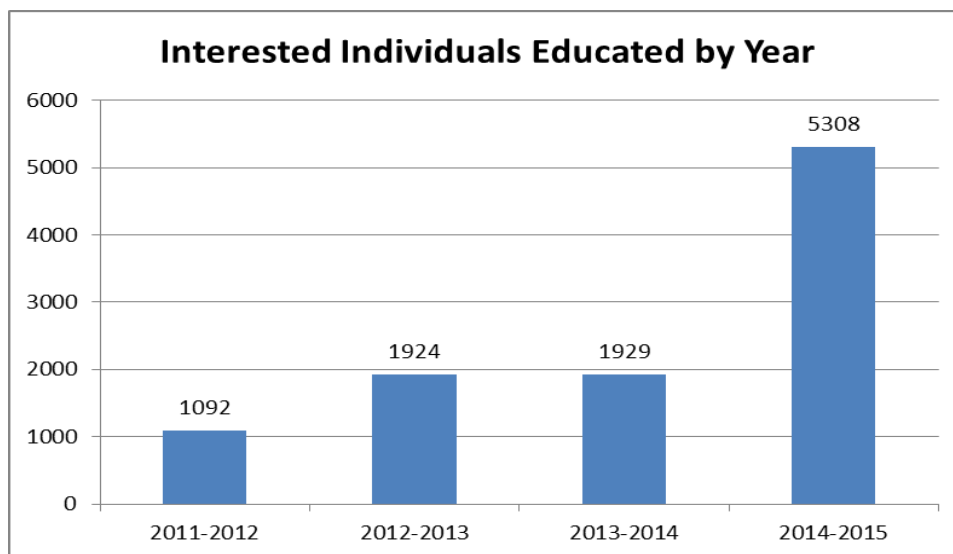


Figure 3. Number of interested individuals that have contacted the program year to year

As shown in Figure 3, part of the reason for the dramatic increase in 2014-2015 interested individuals is related to the successful community outreach efforts in the new service territories in Ventura and San Luis Obispo Counties, which are helping to recruit new participants into the program. Figure 4 shows the number of interested individuals educated by County. The smaller proportion of interested individuals in Santa Barbara County reflects the greater emphasis on education and outreach efforts in the expanded territories and the fact that the program has been operating in Santa Barbara County for several years and has already connected with many interested individuals.

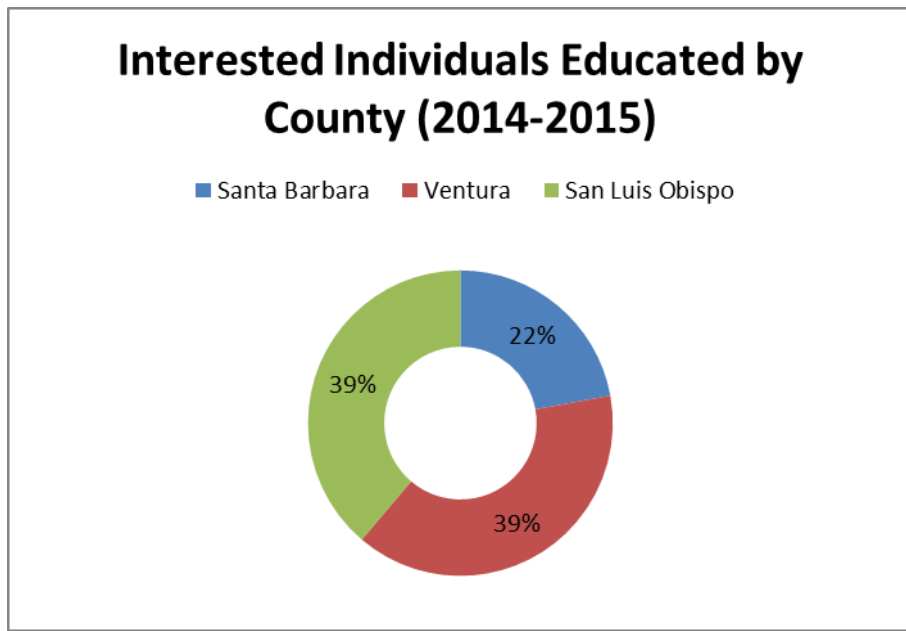


Figure 4. Percentage of interested individuals by County

One of the most effective ways that emPower drives interest and participation in the program is by conducting in-person, educational community events. Figure 5 shows that staff in the Tri-County region conducted 133 outreach events in 2014-2015, an increase of 209% over 2013-2014. Attendees of events learn about home efficiency issues and opportunities, and have a chance to sign up to get started on a home upgrade with the Energy Coach or a participating contractor.

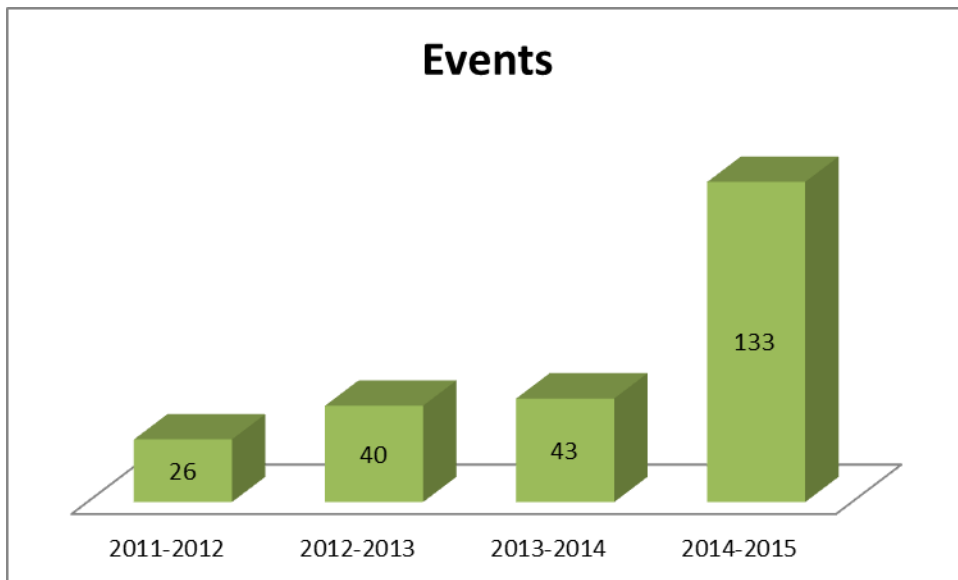


Figure 5. Number of workshops/outreach events year over year

In addition to the successful offline events, emPower engages in social media marketing. emPower regularly posts event photos and activity announcements on social media platforms such as Facebook and Twitter. Figures 6 and 7 show the increasing growth in the number of page "likes" and people reached.

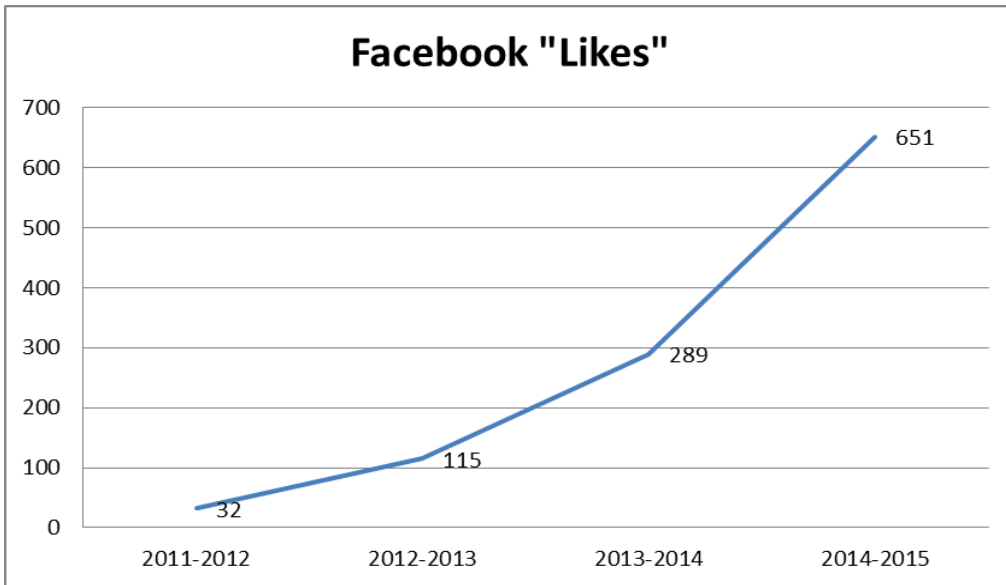


Figure 6. emPower Facebook page "likes" year to year

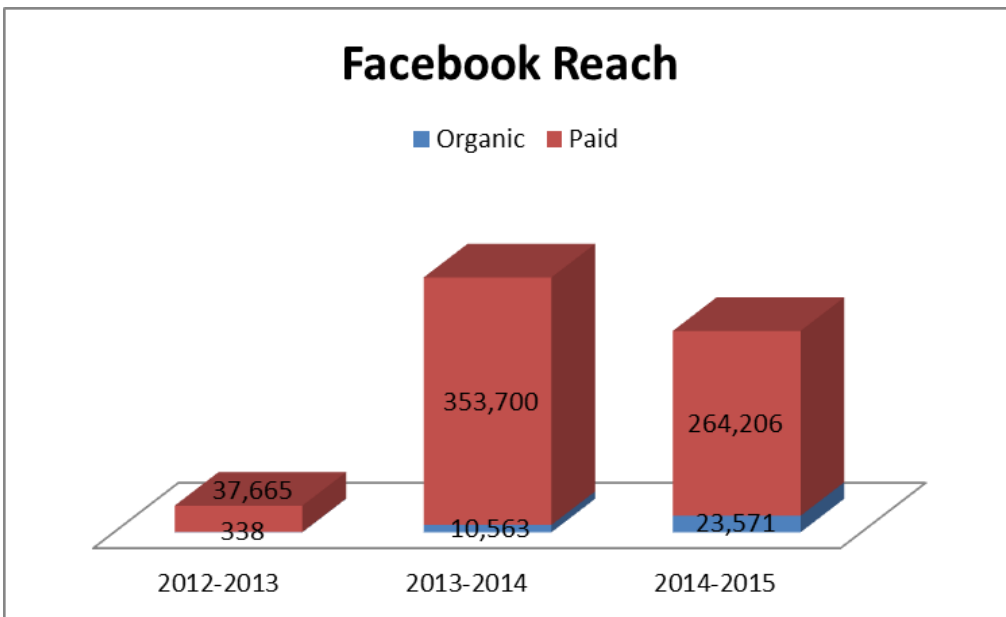


Figure 7. emPower Facebook reach year to year

As a result of ongoing marketing efforts, visits to the emPower website have steadily increased year to year with visits nearly tripling since the launch of the program in Ventura and San Luis Obispo Counties.

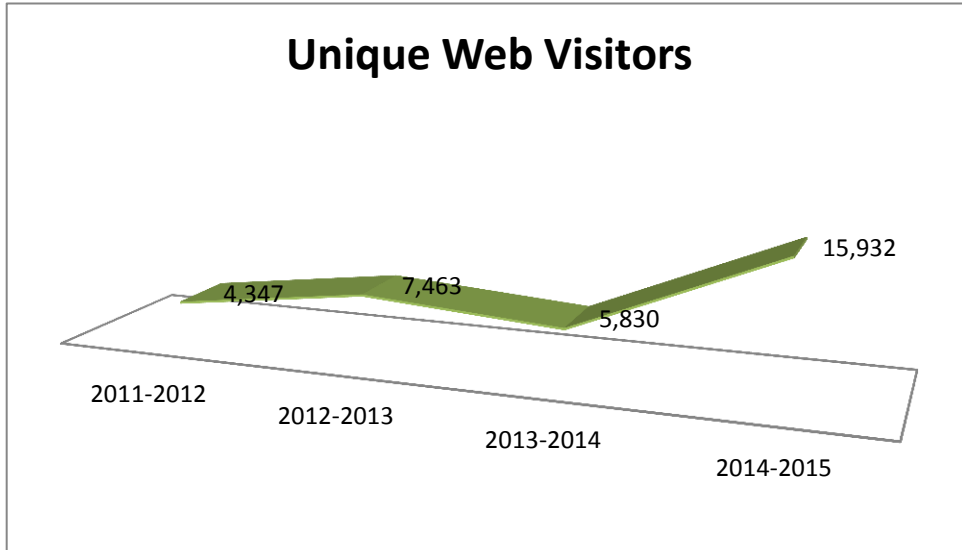


Figure 8. emPower website visits year over year

The widespread homeowner awareness generated has led to general increase in Energy Coach visits, which is often the first step a homeowner takes towards making home energy improvements. As illustrated in Figure 9, in 2014-2015, emPower exceeded its goal of 300 annual visits with a total of 355 visits across the Tri-County.

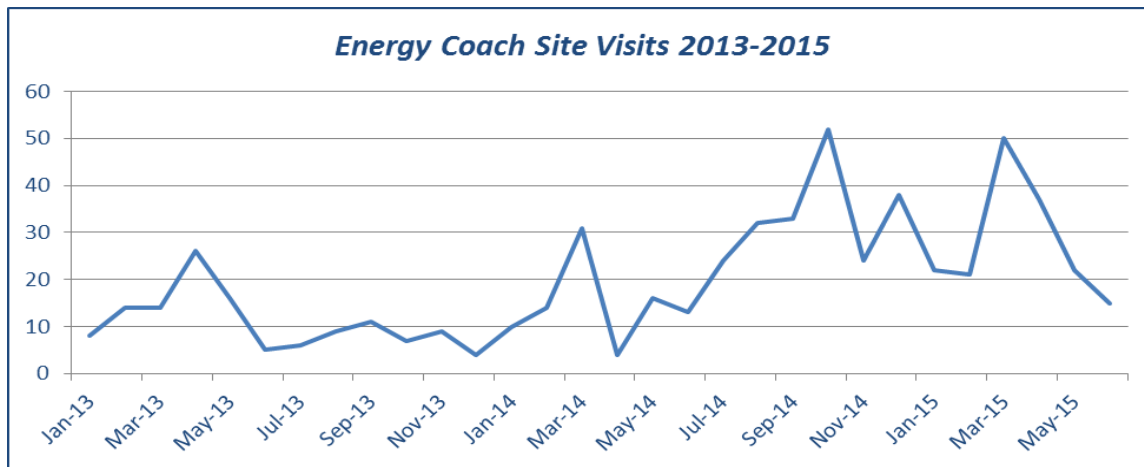


Figure 9. Monthly Energy Coach site visits completed 2013-2015

The geographic distribution of Energy Coach visits can be seen visually on Figure 10 below.



Figure 10. Map of Energy Coach Visits to Date

The Energy Coach service aims to better prepare and motivate homeowners for making effective energy saving improvements. In an effort to improve the quality of services overall, emPower has surveyed homeowners (using Survey Monkey and phone surveys) that have taken advantage of the Energy Coach site visit service and learned that 76% are more likely to make home energy upgrades (see Figure 11), and **41% of survey respondents indicate that they have already initiated energy efficiency upgrades.**

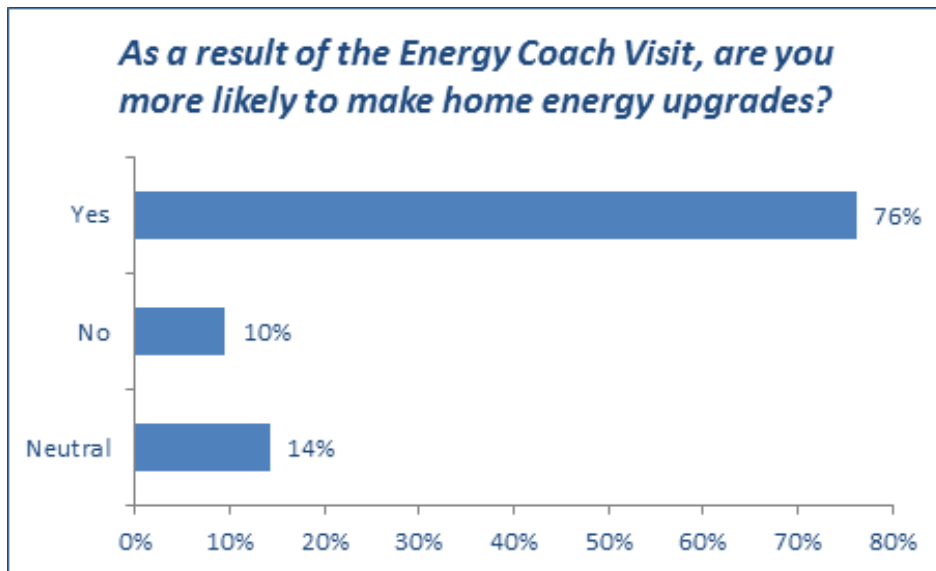


Figure 11. Survey Question Response

In addition, the survey has elicited testimonials from Energy Coach customers, such as the following:

“The energy coach really answered all my questions so that I could understand how I can have a warmer home and how I can pay less for energy. Great insight and understanding.”

“He was very professional and well informed, and helped us figure out an energy efficiency plan for our house.”

“He took a lot of time with me and explained a lot. It was great for planning in the future to make the best energy choices.”

“Very knowledgeable and helped me understand the functions of my home. Gave good insight on what improvements to make.”

“Our energy coach was very knowledgeable and helpful. Got us to focus on what we can do to improve attic insulation and air duct sealing.”

According to data gathered by the program, 64% of customers (367) who took advantage of the Energy Coach service took the next step and contacted a participating contractor. Given program improvements in January 2015, 100% of Energy Coach customers have since been put in contact with a participating contractor. Participating contractors report that 31% of Energy Coach customers have an active or complete project. Contractors also indicate that the Energy Coach service has been an enormous help in driving down their costs associated with identifying qualified leads.

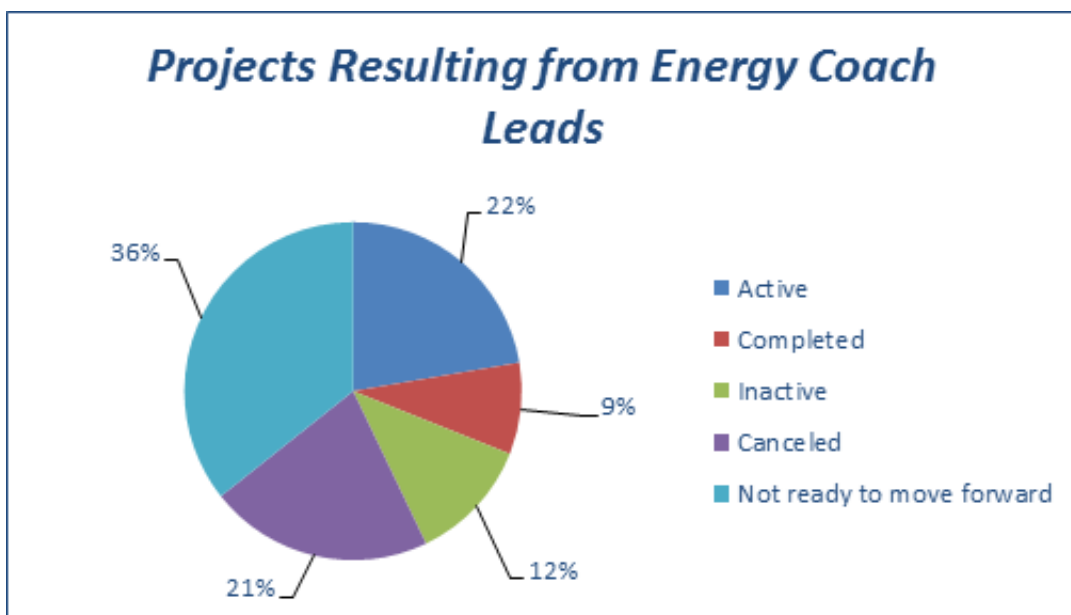


Figure 12. Projects resulting from leads generated by Energy Coach

It is important to note that participating contractors receive leads from the program in several ways, not just through the Energy Coach service. The program estimates that it has generated roughly 1,600 leads for contractors to date. This shows that increasing the demand for home upgrades in the Central Coast requires multiple support services and multiple steps. Below is a diagram illustrating the high level conversion rates starting from reaching a customer to initiating a project, and for those that need it, initiating an emPower loan. The program continues to make strides to increase all conversion rates.

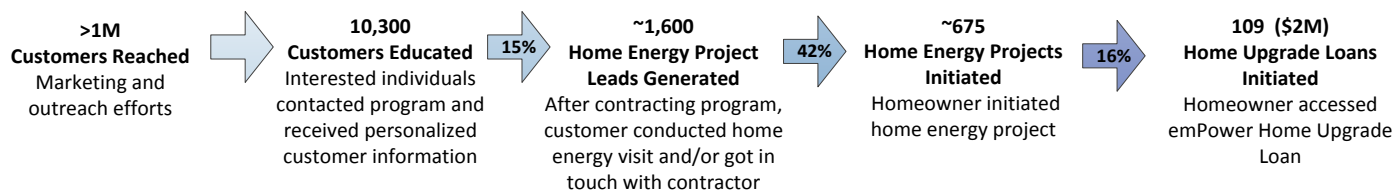


Figure 13. emPower customer conversion to date

Figure 14 illustrates the increasing number of projects completed on a yearly basis. A total of 152 projects have been reported as complete to date. The program understands that there are likely to be other energy improvements made as a result of its efforts that have not been reported back to the program by contractors or participants. More details on completed projects are provided in the next section.

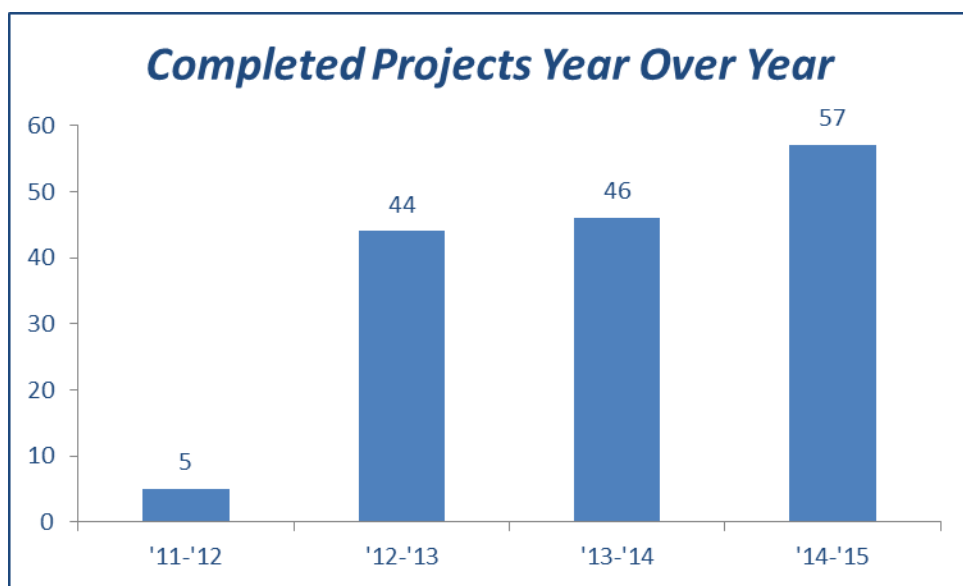


Figure 14. emPower projects reported by year

Analysis/Discussion:

To help homeowners understand the benefits of making energy efficiency improvements and encourage participation, it is essential to develop successful outreach strategies and compelling messaging. emPower has experimented extensively with different types of outreach events and messages. By utilizing a variety of outreach avenues (workshops, outreach events, print/online/TV/radio ads, social media, partner support, door-to-door, etc.) the program believes it has identified the right mix of activities that will generate desired demand. To date, emPower has hosted 75 homeowner events, participated in 167 outreach events and attracted nearly 34,000 web hits to emPowersbc.org from November 2011 to June 2015. The growth of interested individuals and Facebook page likes reflect emPower’s successful efforts in marketing and outreach.

Attracting interested individuals to the program is only the first step to moving participants through the process of making upgrades. Once engaged, homeowners have many questions about the process involved

with making upgrades, available upgrade options, amount of rebates and incentives and how to apply for the loan. Many times they also need technical advice. Supporting these homeowners is a top priority and this is reflected by the positive feedback we receive from customers regarding their interaction with program staff and our Energy Coaches.

The highly popular Energy Coach service has been able to act as a bridge between homeowners and contractors. Initially starting with just one Energy Coach to serve Santa Barbara County, emPower now has three Energy Coaches to meet demand for the service throughout the Tri-county. With decades of contracting experience amongst themselves, the Energy Coaches are able to provide expert advice and knowledge to homeowners. Since January 1, 2015 the Energy Coaches have connected 100% of homeowners who have visits with a Participating Contractor.

Going forward, emPower will continue to retool its approaches as needed to gain additional interested individuals and help move them through the process of completing home energy upgrade projects. New efforts could include adding new workshop topics, advertising with new media outlets, energy saving pledges, etc. Staff will continue to provide excellent customer service and technical assistance and refine these activities based on customer feedback.

Objective 2: Demonstrate Actual Energy Savings from Home Energy Upgrades

emPower offers a range of upgrade packages designed to accommodate customers' interests, needs and budgets. While homeowners choose to do upgrades for a variety of reasons, all eligible upgrades are intended to reduce energy use. A combination of pre and post-upgrade testing, as well as energy modeling are used to determine estimated energy savings for many, but not all, completed projects. As other service providers, such as Property Assessed Clean Energy (PACE) financing administrators enter the market, it is important to ensure that projects completed are helping to meet local and State goals associated with energy savings.

Outcomes:

One of the main challenges of the program is capturing data on the energy saving measures completed. The program does not have access to longitudinal utility customer usage data, and cannot require that all customers served report back on projects or energy savings achieved. However, the program is aware of 152 complete projects to date (see Figure 16), the majority of which are associated with complete project information including energy saving data as provided by participating contractors using utility standards such as energy modeling and deemed savings. Through customer feedback, the program occasionally is aware of projects that were completed by the homeowners (DIY) or those that were completed by a contractor that is not participating in the program, but it is anticipated that these numbers are vastly underrepresented and that there are significant additional energy saving activities that have resulted from program services.

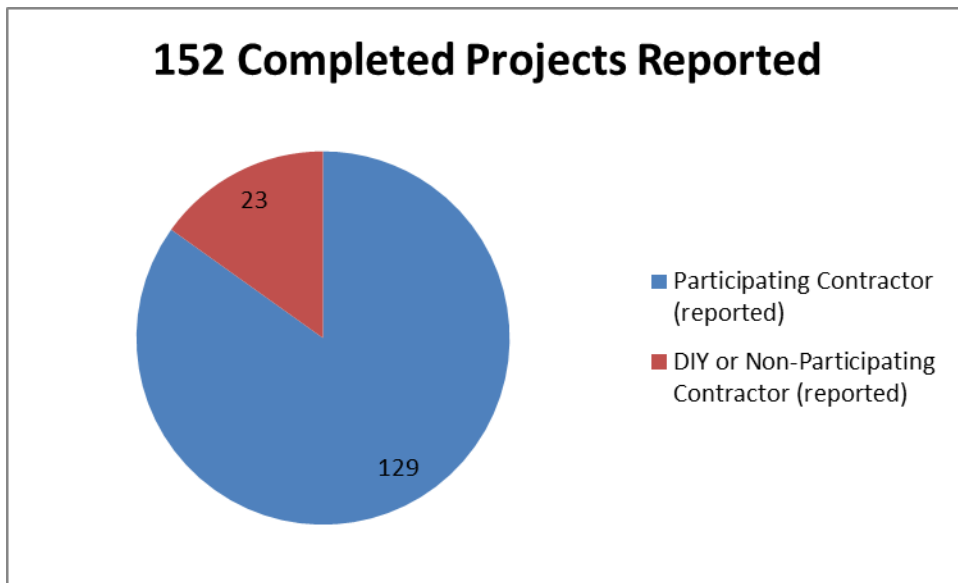


Figure 15. Completed projects reported to date

Of the 129 projects reported complete by participating contractors, 75 went through a “whole house” retrofit incentive program (5 of which added solar PV), 10 went through emPower’s in-house Flex Path incentive program, 25 were non-rebated energy efficiency projects, 8 were solar photovoltaic-only projects and 11 were solar thermal water heating projects.

To illustrate energy savings, the table below shows the savings derived from the 115 “whole house” retrofit projects completed since 2011 in Ventura, San Luis Obispo and Santa Barbara as provided by the utilities⁴.

| | Combined Total | SCE/SCG | | PG&E | |
|---------------------------------------------------|----------------|------------|------------------|------------------|-----------------|
| | | Ventura | S. Santa Barbara | N. Santa Barbara | San Luis Obispo |
| Number of projects | 115 | 46 | 22 | 34 | 13 |
| Average retrofit cost | \$ 21,360 | \$ 20,664 | \$ 21,224 | \$ 21,729 | \$ 23,085 |
| Average rebate | \$ 2,770 | \$ 2,887 | \$ 2,082 | \$ 3,116 | \$ 2,618 |
| Average energy savings | 26% | 24% | 19% | 31% | 28% |
| Average kwh saved | 2,103 | 3269 | 228 | 1694 | 2218 |
| Average therms saved | 243 | 180 | 140 | 384 | 268 |
| Average estimated cost savings | \$ 456 | \$ 597 | \$ 94 | \$ 496 | \$ 465 |
| Estimated total cost savings over 15 years | \$ 843,407 | \$ 461,555 | \$ 34,772 | \$ 284,102 | \$ 101,669 |

Figure 16. Energy Savings from Whole House Utility Incentive Program⁵

⁴ From preliminary data provided by Southern California Edison, Pacific Gas and Electric and Southern California Gas Company on retrofits completed under the Energy Upgrade California Home Upgrade program. These figures may be re-evaluated and refined on an annual basis before finalized with the Public Utilities Commission. Figures include approximately 21 projects that were completed in Ventura and San Luis Obispo Counties prior to the expansion of the emPower program. Cost savings were estimated using standard utility rates.

⁵ The Estimated Total Cost Savings Over 15 Years assumes annual growth rates in of 1.4% and 1.5% for electricity and gas rates respectively. These growth rates are based on pricing data over the past three decades taken from the California Energy Commission’s Energy Almanac.

By tying eligibility to utility incentive programs, emPower not only ensures that projects are as affordable as possible, but also takes advantage of the robust quality control and energy savings calculations conducted by the utilities. The rebates typically correlate to the level of energy savings achieved, meaning the higher the rebate, the greater the energy savings expected. As shown in Figure 17, of those homeowners that have received a rebate, 50% received rebates that were between \$2,000 - \$4,000.

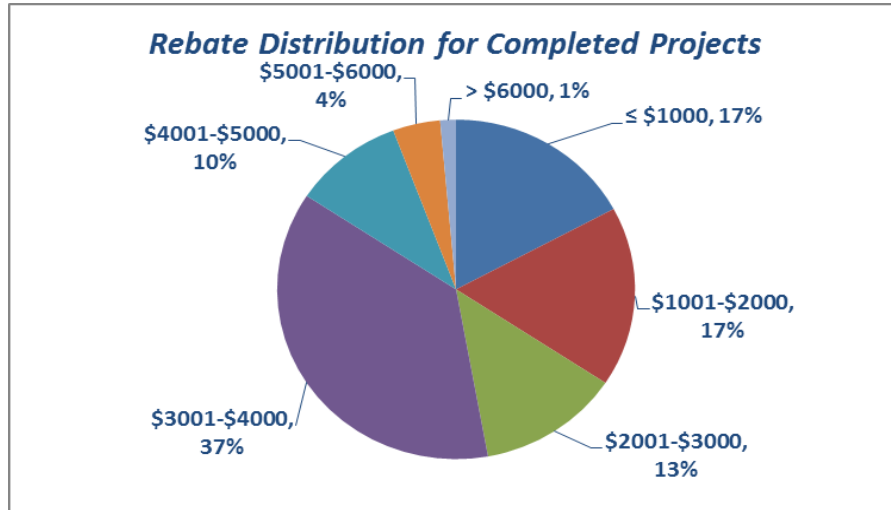


Figure 17. Homeowner received rebates through emPower program distribution 2011-2015

The graphs below show the estimated kWh and thermal savings for projects completed by participating contractors and reported with complete energy savings data, which together account for a 29% energy savings and approximately \$360 in annual cost savings on average.

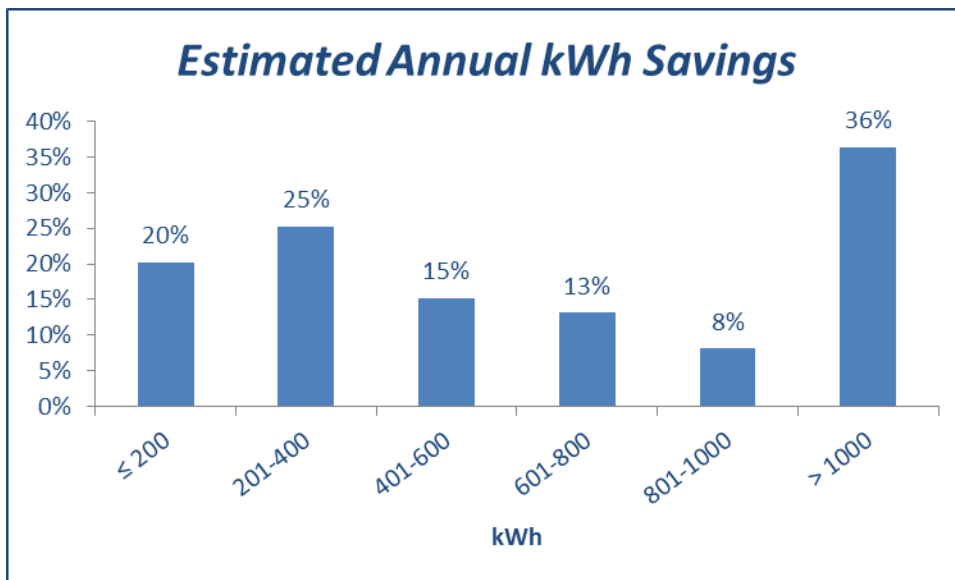


Figure 18. Estimated absolute and relative kWh savings per year through emPower program

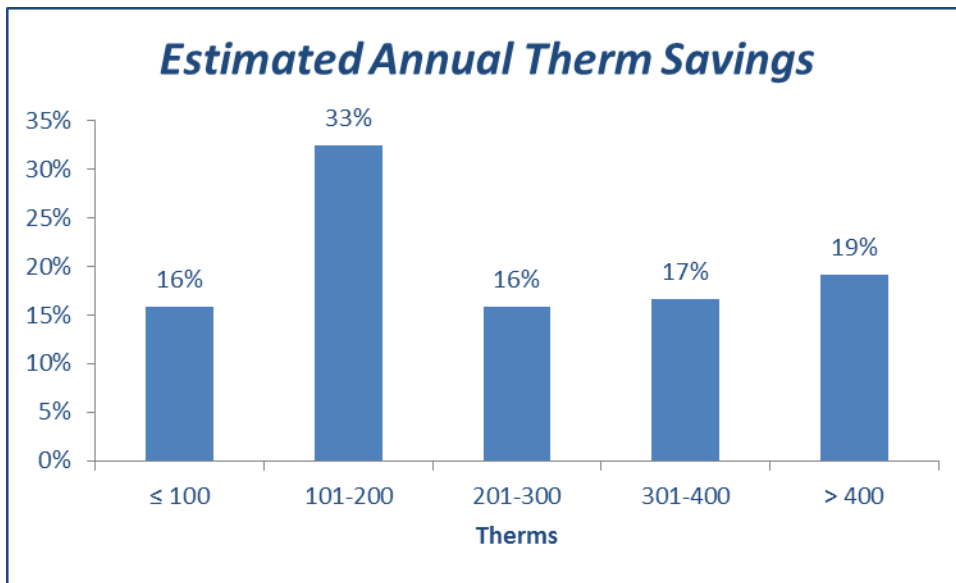


Figure 19. Estimated absolute and relative therm saving per year through emPower program

For the 129 completed projects reported by participating contractors, the average annual kWh savings is approximately 1,483 kWh and 257 therms per year, totaling an estimated 191,333 kWh and 33,208 therms saved per year. Assuming a 15 year useful life, these projects account for an estimated total of approximately 4,620 metric tons of carbon dioxide equivalent avoided⁶.

Analysis:

Energy savings resulting from emPower projects varies based on the packages and upgrades measures selected. However, overall energy savings resulting from the 152 completed emPower projects in the Tri-County area are significant, even considering the large amount of data that has yet to be captured on projects that have yet to be reported by customers or contractors. Offering substantial rebates and low-interest financing allows these energy savings to be accessible to homeowners who otherwise may not be able to afford to make energy improvements. In addition, the availability of this type of financial support may also encourage homeowners to undertake more comprehensive retrofits that result in deeper energy savings.

emPower will continue to look for new undertakings and partnerships that will produce affordable energy savings and other benefits such as occupant comfort and health. New activities may include expanding the Home Upgrade Loan to cover water efficiency or providing incentives for behavior modification that results in a reduction in energy use.

Objective 3: Transform EE Market for Sustained Benefit to Contractors and Economy

To achieve its goal to transform the local market for clean energy solutions, emPower is working to increase opportunities and create value for contractors and the workers they employ. Participating contractors recruited to the program benefit by being able to connect customers with available rebates and incentives, and unsecured, low-interest financing. They are also eligible to access leads via referrals from program staff, Energy Coaches, emPower's online directory, and by attending homeowner workshops and events. Additional

⁶ Environmental Protection Agency Greenhouse Gas Calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>

services provided to participating contractors include access to ongoing training opportunities, Energy Coach mentorship and a Home Performance Tool Lending Library.

Outcomes:

After the program expansion, a priority of the Tri-County emPower team was to recruit more participating contractors. Consequently, emPower enrolled 17 new contractors to participate in the program in 2014-2015. Figure 20 shows the number of contractors currently serving each County.

| 29 Total Contractors | | |
|-----------------------|-----|----|
| # Serving each County | | |
| SLO | VEN | SB |
| 13 | 11 | 16 |

Figure 20. Participating contractors by County

Contractors that are participating in the program have received over 1,600 leads from the program to date, which has led to approximately \$3 million in project income. Using IMPLAN economic modeling software, it is estimated that the economic multiplier impact is over \$6 million.

Contractor testimonials:

“emPower jobs will make up 35% of my business in 2013. Due to emPower, I plan to hire more people into our new home performance division.” – Joe Halsell, Halsell Builders

“emPower’s marketing and outreach saves us time and money by raising the awareness of whole house energy efficiency in the community and provides us with supplementary lead generation by providing our information to a high number of interested homeowners” – Shawn Jacobsen, Allen Associates

“I cannot tell you how valuable the emPower sponsored BPI class and the resulting Building Analyst certification has been to me. I am grateful for this opportunity” - Tom Kirschner, Kirschner Construction

In addition, in 2014-2015, emPower conducted 17 contractor trainings or meetings, which support skill building and increased program participation. emPower trainings have served to increase the number of the Building Performance Institute (BPI) certified professionals from 5 to 38 from 2011 to 2015⁷. emPower Energy Coaches also conducted 9 on-site mentorship sessions with contractors this year to support increased capacity to complete high quality energy upgrades.

| Contractor Support Activity | 2014-2015 | Program To Date |
|--------------------------------|-----------|-----------------|
| Contractor Trainings/Meetings | 17 | 57 |
| Training Attendees | 189 | 724 |
| Contractor Mentorship Sessions | 9 | 60 |

Figure 21. emPower contractor support metrics

⁷ Building Performance Institute Individual Locator: http://bpi.org/individual_locator.aspx

Analysis/Discussion:

Since emPower’s inception, it has generated benefits for the local economy and created new opportunities for contractors. By recruiting contractors, driving consumer demand and providing skill building opportunities, emPower has already made headway in establishing a lasting and prosperous local building performance construction market. Increasing knowledge of building performance and energy efficiency in the local contracting trades is anticipated to have larger impacts beyond those reported to emPower, such as improving new construction and other renovation practices.

Objective 4: Increase Understanding of Residential Efficiency Behavior and Needs

An understanding of residential energy efficiency behavior and needs is essential to providing services valuable to homeowners. The Energy Coach service available through emPower offers homeowners expert energy advice before moving forward with a home upgrade. By completing a walk-through of the home, the Energy Coach is able to identify problems and opportunities to improve the efficiency of various systems within a home. This also provides access to valuable information on the local housing stock. By collecting data on a wide variety of homes in various locations, emPower is able to determine trends and identify specific needs to address.

Outcomes:

The charts below are based on information gathered at 597 Energy Coach site visits across the Tri-County region. These metrics only provide a sampling of the data collected by the Energy Coaches, but provide a general picture of common problems found in local homes.

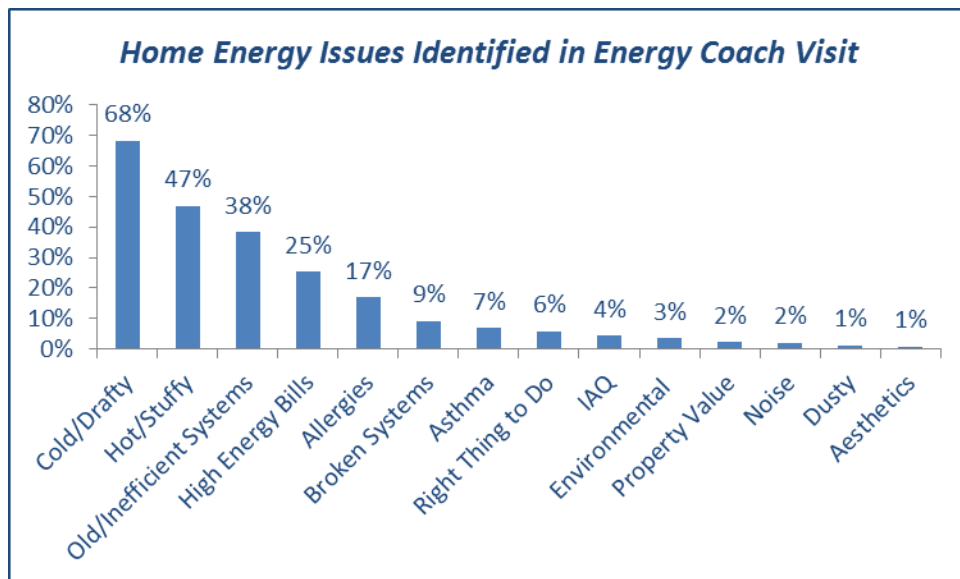


Figure 22. Home energy issues identified by homeowner in energy coach visit

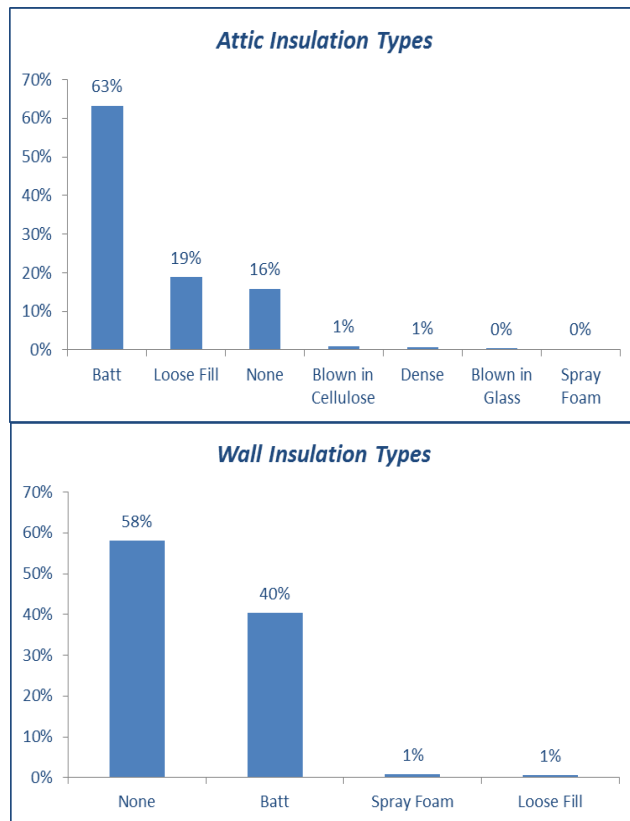


Figure 23. Insulation conditions identified in energy coach visit

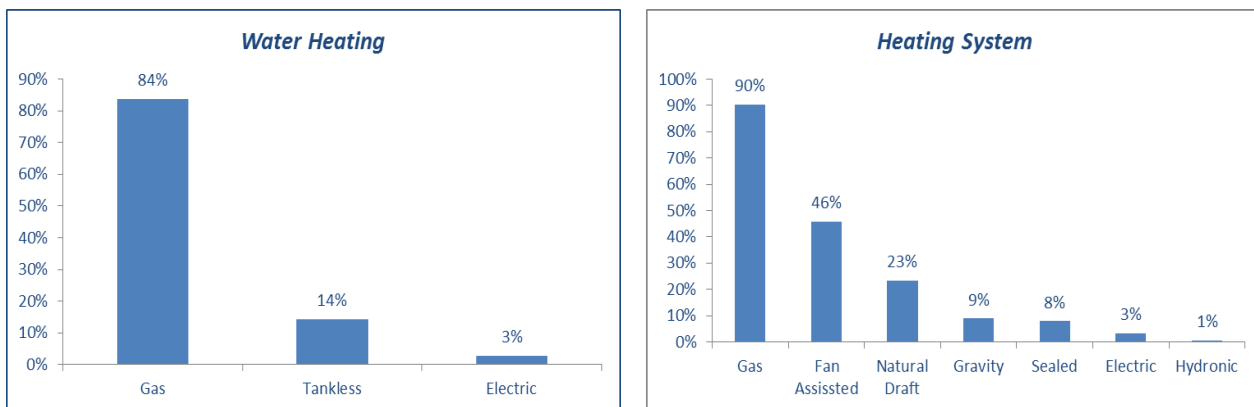


Figure 24. Water heater and heating system identified in energy coach visit (multiple options)

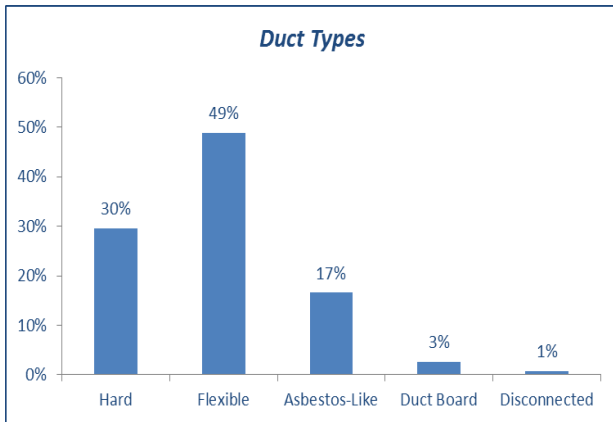


Figure 25. Duct types identified in energy coach visit

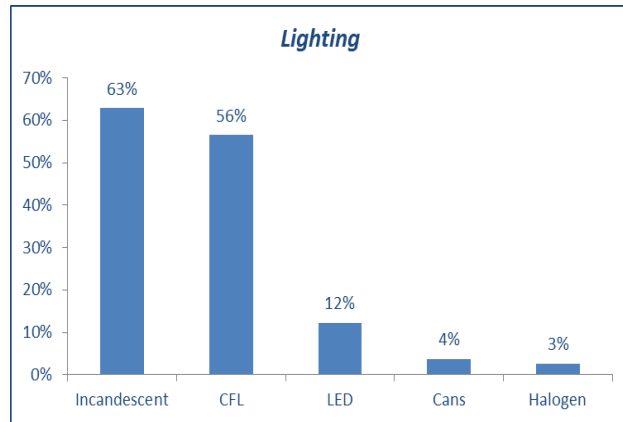


Figure 26. Light types identified in energy coach visit

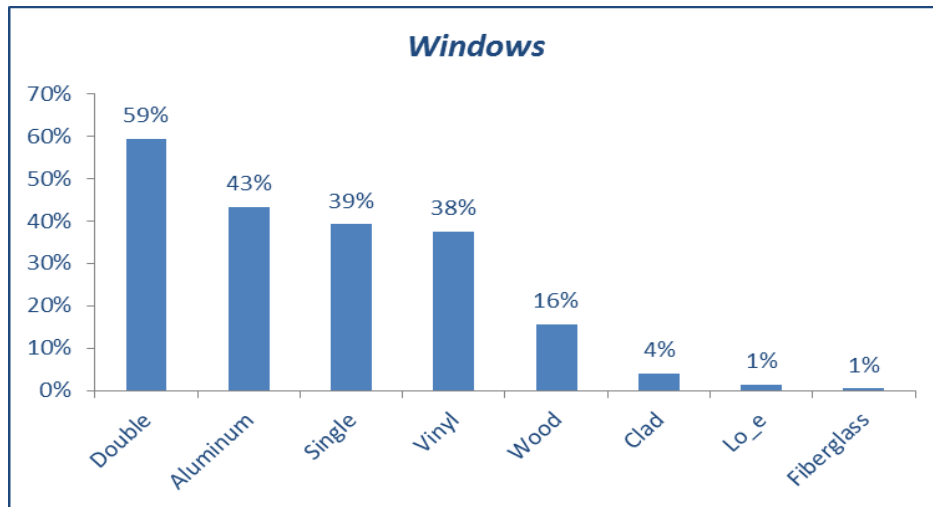


Figure 27. Window types identified in energy coach visit

As illustrated in Figure 22, the top energy issues identified by homeowners during energy coach visits are cold/drafty rooms, old/inefficient systems, and hot/stuffy rooms and spaces. Unsurprisingly, based on homeowner-identified issues, the Energy Coaches found most houses do not have wall insulation (58%), and the most common type of attic insulation is batt (63%), which is often insufficient or improperly installed.

Lighting is an easy opportunity to cut down on electricity usage. With 63% of homes still using incandescent lighting, there is significant opportunity for homeowners to make this small, but impactful change immediately.

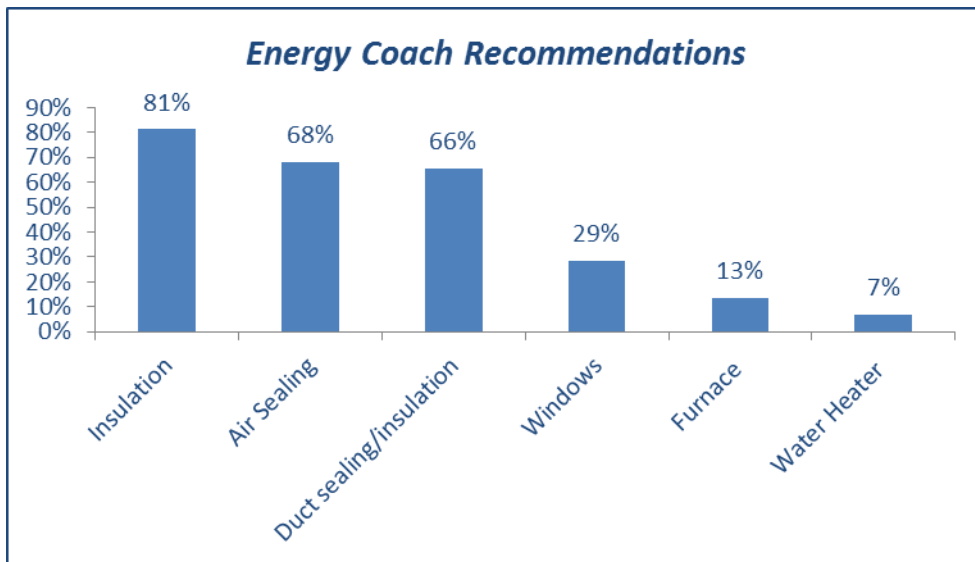


Figure 28. Energy Coach Recommendations by energy efficiency measure

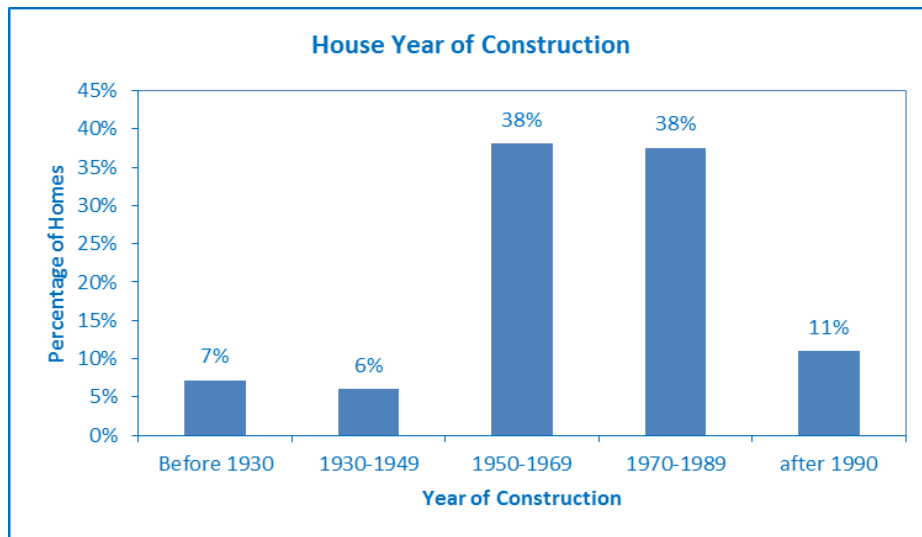


Figure 29. House year of construction identified by energy coach visit

Analysis/Discussion:

Through the Energy Coach service, emPower was able to obtain first-hand data of local homes' energy efficiency conditions. With an overall older housing stock, homes in the Tri-County area face similar problems such as little or no insulation, old and broken systems, and discomfort inside the home. This personalized service has increased homeowners' awareness of energy efficiency and helped to guide them toward the resources available to improve their home's performance.

Objective 5: Encourage Lenders to Enter Energy Efficiency Financing Market

The high upfront cost is a typical barrier that prevents homeowners from getting started with home energy upgrades. emPower's Home Energy Upgrade Loan offers a more affordable option for those interested in an energy upgrade through low monthly loan payments. By partnering with CoastHills Credit Union and Ventura

County Credit Union, emPower was able to provide low interest and long term unsecured loans to encourage lenders to enter energy efficiency financing market. One of emPower’s long term objectives is to contribute useful data to the lending community about the performance of energy efficiency financing, in order to encourage more lenders to participate in a healthy, diverse and attractive energy loan market.

Outcomes:

As of May 2015, the emPower program has received nearly \$2 million in loan applications (109 applications) to date, with \$780,000 in applications submitted in 2014-2015.

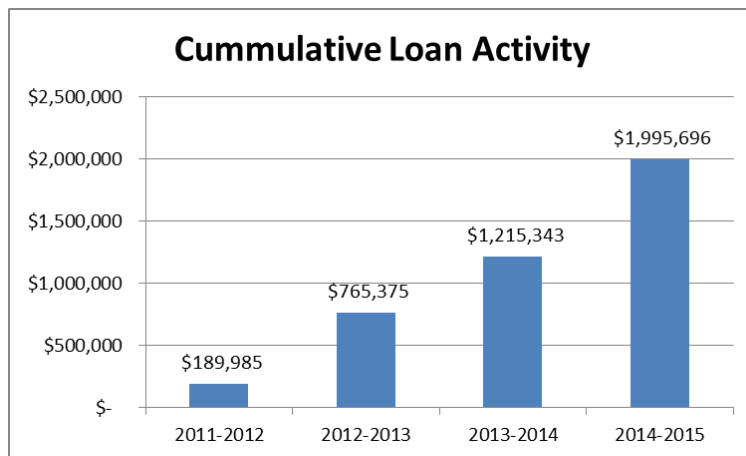


Figure 30. Cummulative loan activity by year

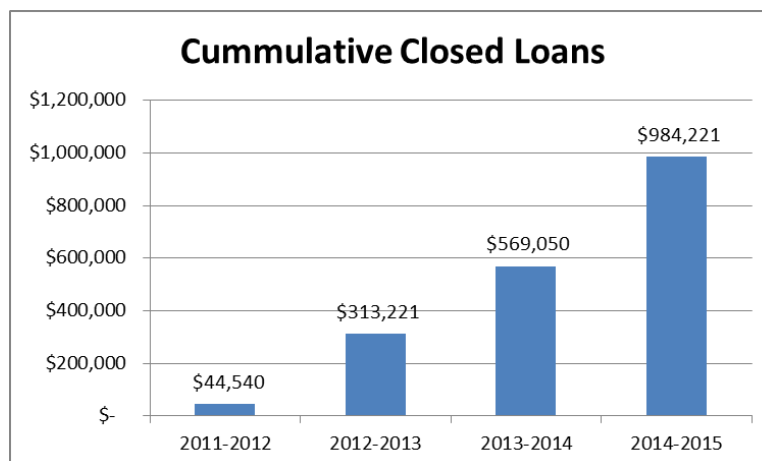


Figure 31. Cummulative closed loans by year

Of the loan applications submitted, emPower lenders have already closed nearly half of the loans, totaling approximately \$1 million. A majority of homeowners received a loan amount between \$20,000 and \$25,000. The most popular upgrades financed through emPower are duct sealing, duct insulation, air sealing, attic insulation, furnaces, windows and water heaters. Of significance to the larger lending community, there have been no defaults against any of the emPower loans to date, demonstrating that this asset class tends to perform well and with low risk

Figures 32 and 33 show the distribution of FICO scores and household income amongst emPower borrowers with closed loans.

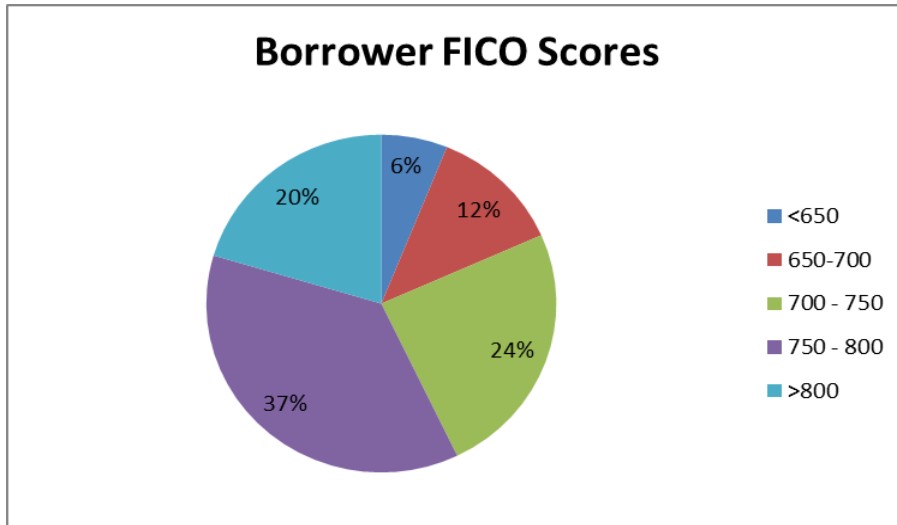


Figure 32. Borrowers' FICO score distribution among closed loans

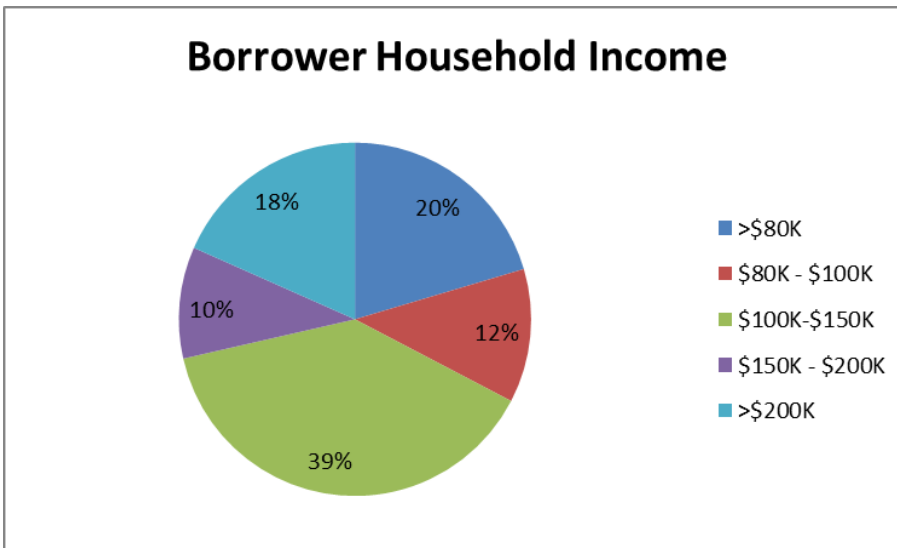


Figure 33. Borrowers' household income distribution among closed loans

Analysis/Discussion:

emPower has succeeded in welcoming two local lending institutions into the region's energy efficiency financing market, where attractive energy efficiency financing options were previously lacking. Before the program began offering a credit enhancement relationship, these institutions were not offering such a loan product, let alone a loan product at attractive terms and rates. The volume of demand for emPower financing

continues to increase, but is still below what was originally anticipated. Approximately 15% of the emPower customers that pursue a home energy upgrade project also pursue an emPower loan. Contractors report that some customers are able to pay for the project with cash on hand, while others may have access to a home equity line of credit.

emPower's experience can be added to a growing body of national research evidence that suggests that tying financing products exclusively to complicated, whole-house requirements leads to low levels of loan uptake and lender and contractor participation. Conversely, more flexible project eligibility standards are correlated with higher loan volumes. Unfortunately, emPower's external funding sources have strict requirements which dramatically limit the types of projects that can be financed, such as prohibiting solar-only loans unless they are combined with multiple energy efficiency measures, and only permitting those projects that are associated with often cumbersome utility rebate programs. In addition, other products have begun entering the market, including Property Assessed Clean Energy (PACE) loans in Ventura County, which are likely assuming a proportion of the loan volume. In the long run, the region will be more successfully served as more and more lenders with attractive and competitive loan products enter the market.

Objective 6: Build upon Program Model to Deliver Effective Energy Services

emPower continually seeks to leverage the investments made in developing the program to produce greater clean energy outcomes for the region.

Outcomes

This year, emPower is pleased to have built upon the program model in the following ways:

- Successfully expanded services into the Tri-County region including Ventura and San Luis Obispo Counties
- Pursuit of continued and potential new funding opportunities
- Regularly provided input on Statewide energy efficiency and financing initiatives
- Developed "Whole Community Approach" concept for future energy service delivery (explained in Section 3), which entails expansion of services into other sectors including commercial. A broader scope of services allows emPower to implement a variety of emission reduction measures in line with climate action plan goals adopted by many jurisdictions within the Tri-County region.

Outcomes:

One of the greatest successes of the emPower program in its first 3.5 years has been in applying initial external funding to the development and operation of an organization with a broad range of valuable and lasting assets and expertise. These services have set the foundation for more robust energy services that can assist other sectors if applicable funding is identified.

Addressing Challenges

Overall, emPower has accomplished a great deal in terms of both building programmatic infrastructure, generating community and economic outcomes and making progress towards its mission. As a startup and

recently expanded program, emPower has, of course, experienced challenges along the way. This section describes some of the key challenges during the initial stage of the program, and how these challenges are being proactively addressed.

Program redesign delayed launch: When the Property Assessed Clean Energy (PACE) model originally developed to finance energy improvements was challenged at the federal level, emPower was redesigned to establish the current credit enhancement financing model. The redesign led to a one year delay of program launch, diminishing the time available to generate outcomes during initial grant funding periods.

Complicated project eligibility impacts demand: emPower’s original program design included a long, simple and inclusive list of eligible measures designed to meet homeowner demand. However, initial grant awards issued rules prohibiting solar-only projects and strongly encouraged awardees to support the most comprehensive retrofit (“whole house”) possible to elicit high energy savings. As a result, the program was advised to pair program services alongside the Statewide Energy Upgrade California incentive program administered by utility companies. The program offers two “whole house” retrofit options, both of which struggle to attract uptake given somewhat inconvenient and cumbersome requirements. Lower than anticipated participation affect local programs like emPower throughout California. Over time, it has become clear to policy makers throughout the nation that incentive programs need to be simplified and that many homeowners want to undertake projects incrementally.

As a result, the Energy Upgrade California program has made improvements, and funding sources have allowed emPower to expand its eligible upgrade measures to allow for simpler projects. However, utility funding will only allow the program to finance projects that have received a utility incentive, which adds time and administrative costs to a project. emPower continues to work with funding agencies to expand eligible measures and simplify processes for participants. In addition, emPower provides education and information on DIY ways to save energy including simple replacements and behavioral changes.

Contractor capacity is key: The program is currently delivering more leads per month than participating contractors are able to serve quickly. Local contracting companies tend to be small to medium sized and often choose to allocate resources primarily to serve the customers with the highest project values, leaving customers with smaller projects outpriced or underserved. emPower is working to encourage additional contractors (including specialty contractors) and non-profit energy service organizations to join the program and serve participants with smaller project needs.

Some contractors claim that the time added to a project to apply for a utility rebate or incentives ends up costing more than the value of the rebate or incentive. This perception has deterred some local contractors from joining the program. To overcome this obstacle, emPower supports contractors through mentorship with the Energy Coach while they learn and master the requirements of the program.

To encourage participating in utility programs such as Energy Upgrade California, emPower has offered local BPI or HERS training at a subsidized rate. However, some attempts to coordinate local training opportunities have failed to generate enough interest to substantiate the cost. Low participation rates can be attributed, in part, to a smaller population of building professionals. emPower initiated the Contractor Training Subsidy Program to allow for individual contractors to seek out training opportunities on their own and receive reimbursement up to \$750.

Motivating consumer action takes more than a loan: Making millions in local, low cost, private lending capital available to help consumers afford the upfront costs of energy improvements has been a significant

accomplishment of the program, particularly given that the external funding the County receives is only spent in the event of default. The financing service means that we can enable thousands of customers to take on small to large energy upgrades, which often elicit savings to offset loan repayment, at virtually no cost to the County. While financing is a necessary program offering for those that need it, emPower contractors report that approximately half of the consumers they speak with are interested in financing. Program experience shows that there are other important components of comprehensive program delivery that are often more effective in helping homeowners to undertake actions that result in lower energy use, which is the ultimate goal of the program. These services include outreach, education, technical energy advising, referrals to qualified contractors, incentives, and ongoing customer support (the process can take up to 12 months). As explained in detail in the next section, emPower continues to improve its services and capacity to increase the overall number of projects completed.

Energy data is difficult to gather: As mentioned under Objective 2, the program does not have perfect access to energy data. The investor owned utilities are bound by confidentiality regulations and are limited in their ability to provide customer usage data, which could help demonstrate long term savings trends. Much of the program's energy saving data comes from participating contractors who may be using one of various modeling tools sanctioned by the State. For projects that are not conducted by a participating contractor, the program struggles to attain information about work complete as a result of emPower's efforts (education, Energy Coach home visits, etc). Staff conduct surveys and follow up with customers to learn about project outcomes, but are typically unable to collect adequate information to estimate energy savings. As a result, the energy impact demonstrated by metrics in this report is anticipated to be significantly undervalued.

Ongoing funding is not stable: emPower continues to be fortunate to be fully funded by external sources, however all the awards received to date are considered "one-time" rather than ongoing funding. The program is currently funded primarily by Investor Owned Utilities through the California Public Utilities Commission 2013-2015 Energy Efficiency portfolio cycle, as well as the California Energy Commission through Los Angeles County. Program staff continue to actively pursue another allocation of funds in 2016 and beyond, and are also actively seeking new funding opportunities to retain and expand program services.

3. Next Steps

The emPower team is looking forward to a productive future. With strong direction from the Counties and the State, emPower is poised to make further progress in support of its mission to lower energy use.

In fact, the program has developed a concept called the “Whole Community Approach” (WCA) that serves as its guiding vision in its next phase. The concept acknowledges that, despite countless energy saving opportunities, programs and messages, consumers and communities in California struggle to achieve substantial energy reductions. The program suggests that competing messages, fragmented points of entry, lack of communication between program administrators, and one size fits all programs are paralyzing communities that could be more effectively achieving their low carbon potential. The WCA is a natural extension of the emPower Central Coast program, capitalizing on emPower’s strategic position as a “go to” for energy assistance throughout the region, by improving emPower’s ability to identify consumers in all sectors and place them with a right-sized service – either internally or via its extensive network of partners - to meet their specific needs. Providing streamlined, right-size service delivery ensures that any consumer can find the best available service to help them go as far as they are willing to go on energy savings, rather than sending them to a service that doesn’t meet their needs, misses the mark and ultimately discourages the consumer from taking action.

In the Tri-County, there are dozens of service providers that offer a part of the solution for each type of consumer, but most consumers will not take the time to piece together the right services, or may find the service too complex or cumbersome to bother with. Conversely, many service providers do not have adequate resources to reach consumers effectively. emPower is well positioned to be a first point of contact for a larger segment of the community. emPower can offer tremendous extra value for the region by expanding upon this unique role in order to help a broader range of consumers find, qualify and take advantage of services that can accelerate the rate of energy saving projects and actions via streamlined and sophisticated program delivery. emPower does not seek to compete with multiple existing service providers in the region (i.e. local government utility partnership administrators, IOUs, nonprofits, cities, lenders, contractors, workforce trainers, etc.), but rather better leverage, promote and support them, thereby enhancing the effectiveness of resources available across the region. In this way, emPower can not only provide a valuable service to consumers but also to service providers. Much like in the “whole building approach,” a comprehensive understanding of how interacting energy services can work together will deliver the best results, meaning ***more consumers saving more energy***. The framework diagram for the WCA is provided in Appendix 3.

Expected Outcomes 2015-2016

Assuming ongoing funding is provided, emPower expects to generate and track the following measurable outcomes during fiscal year 2015-2016.

| Key Metrics | Annual Goal Estimates |
|------------------------------------------|-----------------------|
| Contractor reported complete projects | 300 |
| Contractor reported projects in progress | 300 |
| Interested Customers Served | 4000 |
| Number of Loan Applications | 150 |
| Total Value of Loan Applications | \$4,500,000 |
| Number of Loans Closed | 100 |
| Total Value of Loans Closed | \$3,000,000 |
| Total Number of Marketing Events | 75 |
| Total Number of Event Attendees | 1500 |
| Total Number of Energy Coach Visits | 300 |
| Number of New Participating Contractors | 10 |
| Total Number of WE&T Events | 10 |

Figure 34. Key Metrics

Beyond fiscal year 2015-2016, program infrastructure and funds will have lasting impacts, given that loan loss reserve can support millions of dollars in capital that will be available to continue offering emPower Home Upgrade Loans for several years.

Conclusion

In 2009, the Santa Barbara County Board of Supervisors recognized that addressing the County’s 150,000 existing homes presented a unique opportunity to simultaneously create jobs, increase resource efficiency and deliver a wide array of benefits to both property owners and the broader community. In mid-2011, the Board authorized emPower to deploy strategies to help property owners tackle key obstacles to making energy improvements, such as affordability, inconvenience, and confusion. Now in 2015, the same key obstacles still exist for many property owners. However today, emPower’s staff, partners and contractors are armed with the experience, tools, services and expertise to overcome them.

Despite initial challenges, emPower has generated early but important outcomes for the community. From beginning to transform the local contracting workforce and creating jobs, to providing services to over 10,000 local residents, 675 of which have taken action to assess and upgrade their home’s energy efficiency, emPower has made significant headway in stimulating the local home performance market and reducing local energy use.

By undertaking program activities to drive demand for energy improvements, emPower has learned key lessons in its first 3.5 years of service that can be applied to the next phase moving further towards a “Whole Community Approach.” For example, while financing and rebates are important solutions, emPower has evolved to fill a broader set of community needs, including providing widespread energy efficiency education, connecting residents with qualified contractors, matching low income and underserved markets with available services and delivering other wrap around services that meet the varied needs of all those residing in the Tri-County. The Tri-County emPower regional model continues to best position emPower to take advantage of future opportunities to continue and expand its services in support of its mission.

Appendices

APPENDIX A: Policy and Program Visual Timeline

| 2009 | |
|-------------------------------------|-------------------------------------------------------------------------------------|
| Funding changes | |
| Federal/State policy actions | AB 32, AB 811, ARRA (Recovery Act), AB 758 ⁸ |
| Board actions | Directed feasibility study for residential/commercial PACE program |
| Program changes | Designed comprehensive building efficiency program based on PACE financing |
| 2010 | |
| Funding changes | County advance for PACE program, awarded ARRA funds by DOE and CEC (\$3.1M) |
| Federal/State policy actions | PACE challenged by FHFA (July) |
| Board actions | Approved PACE, but halted it after FHFA concerns |
| Program changes | Began program redesign after PACE halted |
| 2011 | |
| Funding changes | |
| Federal/State policy actions | AB 1X14 |
| Board actions | Board authorized redesigned emPower program |
| Program changes | emPower solicited lending partners, launched services in November |
| 2012 | |
| Funding changes | CEC ARRA funding expires, SoCalGas/PUC funding awarded (\$875K) |
| Federal/State policy actions | Proposition 39 enacted ⁹ , PUC acts to continue ARRA programs allow RENS |
| Board actions | Direct staff to pursue new funding awards |
| Program changes | Focused efforts to drive demand, recruit and train contractors and assist customers |
| 2013 | |
| Funding changes | CEC ARRA and SoCalGas/PUC funding awarded for Tri-County (\$5.25M) |

⁸ CA Assembly Bill 32 (2006) Global Warming Solutions Act, including greenhouse gas (GHG) targets for local governments and building efficiency as a major pillar of GHG reductions

CA Assembly Bill 811 (2008) authorized local governments to administer property assessed clean energy (PACE) financing

Federal American Recovery and Reinvestment Act (ARRA) (2009), including Energy Efficiency and Conservation Block Grant (EECBG) formula and competitive funding to local governments

CA Assembly Bill 758 (2009) directed California Energy Commission to address existing buildings in partnership with local governments

⁹ Proposition 39 is expected to generate \$500 million a year for clean energy projects across the State.

| | |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Federal/State policy actions | Cap and Trade in effect ¹⁰ , State agencies seek emPower financing insights |
| Board actions | Authorized new funding awards |
| Program changes | Energy Coach, new upgrade rebate option (Flex Path), new data storage system, lead generation program |
| 2014 | |
| Funding changes | DOE ARRA funding expires |
| Federal/State policy actions | PUC approved 2015 funding extension |
| Board actions | Authorized pass-through to Ventura/SLO, amended lending agreements |
| Program changes | Launched emPower Central Coast regional services, Santa Barbara County only rate buy down pilot, progress payments, add 2nd Energy Coach |
| 2015 | |
| Funding changes | SoCalGas/PUC funding extended for 2015 |
| Federal/State policy actions | PUC Rolling Cycle proceeding in progress; CEC considering LG Challenge |
| Board actions | Approved participation in American Solar Transformation Initiative possible amendments to reprogram funds towards broader services. |
| Program changes | New SimpleStart Upgrade option, Energy Coach process improvements, new event formats, formalize referral process, develop external user web portal |

¹⁰ The State's Cap and Trade greenhouse gas emission policy is expected to generate \$6 billion in auction proceeds by 2020 in the power sector.

APPENDIX B: Program Services (Detail)

HOMEOWNER SERVICES



REBATE
Utility incentives up to \$6,500



Coast Hills
FEDERAL CREDIT UNION
Bank among friends
Low-interest unsecured loans



Qualified contractors



Personalized customer support



Community education



Onsite expert energy advice

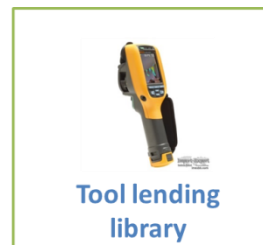
CONTRACTOR SERVICES



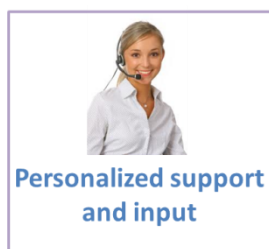
Trainings and enrollment



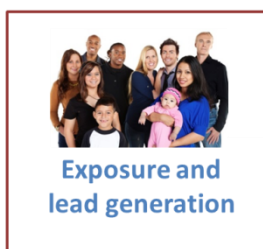
Mentorship



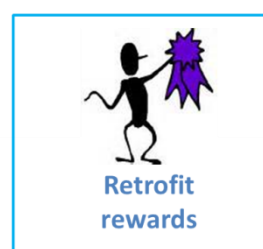
Tool lending library



Personalized support and input



Exposure and lead generation



Retrofit rewards

HOMEOWNER SERVICES

The following services are designed to assist local homeowners and drive demand for upgrades.

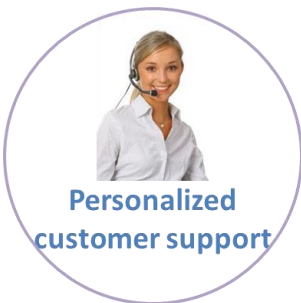


Community Education: A multi-faceted marketing, education and outreach approach is necessary to generate program awareness and an understanding of available energy efficiency services throughout the Tri County region. emPower's branding and messaging is designed to be relatable to the specific needs of local homeowners. A large component of emPower's outreach activities aim to educate homeowners about the benefits of energy efficiency and the principles of home performance, a comprehensive whole-house approach to identifying and fixing comfort, indoor air quality and energy efficiency problems in a home

while ensuring occupant safety. Implementing the following marketing functions accounts for a significant amount of emPower time and resource, and also provides the greatest opportunity for widespread impact. In fact, emPower contractors report that our marketing is one of the most beneficial services emPower provides. According to contractors, the program's ability to attract homeowners in need and connect those prospective customers with participating contractors has led to significant growth in the demand for home energy projects.

Services

- Educational events: Homeowner Dinner Workshop, Home Energy Party, Home Energy Showcase, Lunch and Learn, Peer Learning Workshop Series, exhibit booths at community events
- Presentations: Local agency hearings or meetings, business and REALTOR meetings, HOA meetings
- Advertisements: Radio, TV, online and print, special campaigns Partnership development: Community Partner Advisory Group, marketing collaboration with credit unions and other partners
- Web outreach: Interactive website (emPowerSBC.org), eNewsletter, eblasts (program and partners), social media
- Earned media: Regular press releases and coverage
- Collateral development: Brochures, flyers, homeowner case studies, direct mailers, door hangers, pens, magnets, yard signs, reusable shopping bags, table top display, energy efficiency posters



Personalized Customer Support: Because undertaking home energy upgrades can be overwhelming and confusing for homeowners, emPower was designed to offer a local, personalized presence, rather than just a hotline and website. The program's marketing activities described above have led to a great need for knowledgeable customer service available to connect customers with contractors, lenders and rebate programs. All customer contacts have recently been added to emPower's

sophisticated new customer relationship management software, for consistent tracking and follow up.



Services:

- Program Specialists are available by phone, email and in person to help homeowners navigate through various stages of their single family comprehensive home energy upgrade.
- Information and referrals to other programs and services for residents (including those that are not interested in single family comprehensive home energy upgrades), such as:
 - Free weatherization or retrofit services for low income households
 - Information on tax credits and single measure utility incentives
 - Program referrals for mobile home, multi-family and commercial energy services



Low-interest unsecured loans: By offering affordable and accessible financing with low monthly payments, emPower provides a valuable tool to help homeowners overcome the high upfront costs associated with home upgrades and solar installations. Without financing, a comprehensive home energy upgrade may cost a homeowner \$15,000 or more, to be paid all at once. With emPower financing, a homeowner would pay little or nothing down and simply make monthly payments of approximately \$125, which can also be offset by utility savings resulting from the upgrades.

Services:

The emPower Home Upgrade Loan is the result of a public-private partnership between the County of Santa Barbara and CoastHills Credit Union. The County placed externally awarded funding into a loan loss reserve with CoastHills at a leverage ratio of 20:1, making tens of millions in private capital available for home upgrade loans. In exchange for emPower covering a portion of potential defaults, CoastHills in turn offers



accessible unsecured loans at better terms and rates than are typically available on the market. The attributes of the emPower Home Upgrade Loan are illustrated in figure 2. This table displays the specific advantages emPower financing can offer homeowners in comparison to a Home Equity Line of Credit (HELOC), a Refinance Loan (ReFi) or another unsecured loan product.

| Attributes | emPower loan | HELOC/Refi | Other unsecured |
|----------------------|-----------------|-------------------|-----------------|
| Loan Type | Unsecured | Secured | Unsecured |
| Starting rate | 3.90% (fixed) | 3-6% variable | 13-30% |
| Loan size | \$1,000 - 25000 | 90% Loan to Value | \$5-15,000 |
| Term | 15 years | 5- 30 years | 5 or less |
| Collateral | None required | Home | None required |
| Equity required | No | Yes | No |
| Closing costs | No | Maybe | No |
| Fees | 0 | Yes | Maybe |
| Prepayment penalties | No | Maybe | Maybe |
| Approval time | 1 day or less | 3+ weeks | 1 day or less |
| Minimum FICO | 590 | varies | varies |

Figure 2. emPower loan attributes

Note: Secured loans require some form of collateral and unsecured loans do not.



Rebates and Incentives: emPower combines high dollar rebates and incentives with low cost financing to make home energy efficiency upgrades affordable and accessible for local homeowners. This combination allows emPower customers to access rebates and incentives that will reduce the overall cost of an upgrade, subsequently reducing the loan amount and resulting in lower monthly payments.

Services:

emPower promotes the following rebate and incentive programs, which help qualify projects for emPower financing:

- **Energy Upgrade California® Home Upgrade (EUCA):** EUCA is a statewide program administered by the investor owned utilities that offers incentives that may exceed \$6,500 for residential energy upgrades. In 2011, emPower was strongly encouraged by grant agencies to team up with EUCA. The combined approach was not only key to providing the most affordable upgrades possible, but it also allowed emPower to leverage the EUCA infrastructure already developed to qualify contractors, determine project eligibility, ensure proper job completion and perform quality control and quality assurance without expending any additional tax payer dollars.
- **CSI Solar Water Heating:** Utilities offer a substantial rebate (up to \$4,366) through the California Solar Initiative (CSI) for solar thermal water heating, which is an energy efficiency measure that heats water using the warmth of the sun thereby lowering traditional energy consumption. In August 2012, emPower began allowing solar thermal projects approved by the utilities to be eligible for emPower financing on a standalone basis without requiring they be combined with other energy efficiency measures.
- **Flex Path** (launched January 2013): Based on a successful model in Los Angeles County, emPower’s limited time “Flex Path” option allowed homeowners to receive a \$1,000 rebate for completing a more flexible range of energy saving improvements with a participating contractor.
- **SimpleStart:** emPower developed the SimpleStart program to allow homeowners to pick and choose one or more qualified upgrades that are eligible for single measure utility rebates and allow them to finance these measures with an emPower Home Upgrade loan. This provides homeowners who may not want to undergo a more comprehensive upgrade with an option for financing. All eligible measures are associated with single measures utility incentives.



Onsite Energy Advice: In 2012, it became clear that many interested homeowners needed additional assistance to make progress through the program pipeline. Many interested homeowners struggled to take the first step to meet with a participating contractor. emPower determined that many homeowners did not feel comfortable contacting contractors and needed additional expert “energy

advice” before moving forward with a home upgrade. Homeowners needed a more customized and personal onramp to the program. In other parts of the country, similar programs have successfully added an energy advisor service to

provide expert, unbiased, third party technical assistance to both homeowners and participating contractors on-site or over the phone.

Services:

In 2013, emPower selected the first Energy Coach to provide assistance to homeowners. Due to program expansion and customer demand, emPower brought on a second Energy Coach in July 2014 to provide technical assistance in in San Luis Obispo area. In 2015, emPower hired a third Energy Coach to address the need for a Spanish speaking Energy Coach and to provide additional support for the Ventura area. All of the Energy Coaches are home performance experts, hold multiple energy efficiency certifications such as the Building Performance Institute’s Building Analyst certification and have years of experience in the contracting industry. The Energy Coaches conduct home energy site visits and assist local homeowners with considering useful energy improvements and connecting them with participating contractors.



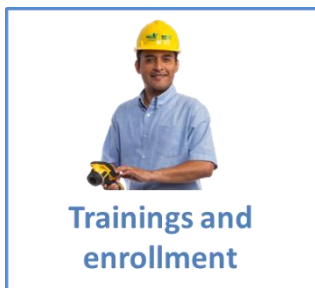
QUALIFIED CONTRACTORS: Lack of access to qualified contractors has been cited by homeowners as a barrier to making home energy upgrades. To overcome this barrier, emPower has worked hard to develop a list of contractors with the skills and training needed to conduct home energy efficiency upgrades. To date, emPower has recruited and enrolled 29 participating contractors that can perform residential energy efficiency and solar upgrades. This list reduces the amount of research that homeowners must undertake to find a suitable contractor and helps them feel more comfortable with moving forward with a project.

Services:

- List of qualified and trained contractors
- Online filtering tool to help assist homeowners with selecting the right type of contractor

CONTRACTOR SERVICES

The following services assist local contractors with driving demand for upgrades and provide them with the tools needed to successfully integrate home performance upgrades into their business model.



TRAININGS AND ENROLLMENT: The presence of a skilled, trained and qualified workforce is critical to the success of a large scale building retrofit and renewable energy installation initiative. Without contractors who have the prerequisite skills required to conduct this type of work, the program would be unable to meet the demand generated by our Homeowner Services.

Services

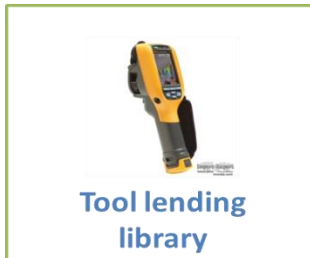
- Free or substantially discounted, local trainings in building performance, sales and other skills (ex. BPI Building Analyst and Home Energy Rating System (HERS) certification)
- Coordination of a Contractor Input Committee to gather feedback on program offerings and facilitate sharing and peer learning amongst contractors



MENTORSHIP: emPower has three Energy Coaches currently on staff to serve the Tri County Region. All three are BPI certified professionals and have accumulated years of experience in home energy efficiency and the construction industry. They are available to mentor emPower contractors and their staff on an as needed basis.

Services:

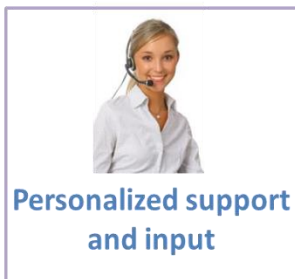
- Onsite, phone or e-mail technical advice
- Assistance with job test-in and test-out
- EnergyPro support



TOOL LENDING LIBRARY: By joining the emPower program as a participating contractor, professionals can have access to a Home Performance Tool Lending Library, through a membership sponsored by emPower. This allows contractors to practice with tools while trying to pass required training and to get comfortable with the equipment before purchasing their own tools. The service can help smaller scale contractors overcome obstacles to entering the home performance market.

Services:

- Access to blower door, duct blaster and other home performance tools
- Diagnostic tool training and demos



PERSONALIZED SUPPORT AND INPUT: Because complying with multiple utility and other program requirements can be daunting for contractors, emPower staff provides ongoing support. Staff is available to walk contractors step by step through the emPower program. Staff also works closely with programs such as Energy Upgrade California Home Upgrade to stay abreast of program updates and convey these to contractors.

Additionally, emPower also shares contractor feedback with utility staff in an effort to help streamline and improve utility program offerings.

Services:

- Assistance with navigating enrollment in emPower and utility rebate programs
- Contractor program support and advocacy with statewide utility programs
- Assistance with loan qualification process and required documentation



Exposure and lead generation

EXPOSURE & LEAD GENERATION: Leads generated by the emPower program are one of the most valuable benefits our contractors receive. Many of these leads have been prequalified by staff or through Energy Coach site visits and are considered very high quality. Contractors are eligible to gain exposure to local homeowners and access leads through multiple methods as shown below.

Services:

- Online and print directory of Participating Contractors
- Referrals from program staff who receive calls/e-mails from homeowners requesting to be contacted by a contractor
- Referrals from free home energy site visits conducted by emPower Energy Coaches
- Contractor attendance/exhibit space at homeowner workshops and events
- Media exposure
- Access to marketing materials (yard signs, brochures, door hangers, etc.)



Retrofit rewards

RETROFIT REWARDS: emPower provides “retrofit rewards” marketing credit to contractors based on the number of projects they report back to the program. These credits can be redeemed for collateral materials.

Services

- Production and printing of customizable brochures, mailers, flyers, yardsigns, etc.

APPENDIX C: Vision Concept for new Energy Service Delivery Paradigm

emPower’s “Whole Community Approach” aims to significantly improve the community’s ability to target the region’s highest users (i.e. Energy Performance Districts), while ensuring that all consumer types are matched with the most appropriate service available in the community to meet their specific need. The following diagram illustrates how emPower’s WCA works. emPower believes that the effectiveness of the hallmark “Gateway to Efficiency” program delivery apparatus can apply to all sectors and unlock the potential of the Central Coast by providing the most comprehensive and sophisticated approach to serving consumers. This approach will require careful coordination to prevent overlap or duplication of efforts. For example, emPower may pilot certain activities such as outreach to schools or public buildings in Santa Barbara only with Ventura and San Luis Obispo having the ability to opt in to these services at a later time if feasible.

