

Home Energy Efficiency Survey

1. Projected Program Budget	\$	6,112,567
2. Projected Program Impacts		
MWh		18,011
MW (Summer Peak)		6.52
3. Program Cost Effectiveness		
TRC		0.73
PAC		0.75

4. Program Descriptors

Market Sector: Residential
Program Classification: Statewide and Local
Program Status: Revised Existing

5. Program Statement

Lack of information or awareness of specific measures and practices is one of primary barriers to energy efficiency. Residential customers often lack information and knowledge about energy efficiency opportunities that would help them understand, manage and reduce their energy use.

Customers face difficulty assessing the value of energy efficiency opportunities and the information necessary to evaluate claims regarding future performance. Consumers also face difficulty in evaluating the veracity, reliability and applicability of claims made by sales personnel for a particular energy-efficient product or service.

A 2002 measurement study showed that there is a gap between the number of times energy efficiency measures are recommended and the frequency of people adopting the recommended measures. Results indicated that there is a need to fill the gap between awareness and adoption of low-cost measures, such as compact fluorescent lamps (CFLs).

What's New for 2006-08?

- Innovation
 - Gas and water-saving components
 - Energy use comparisons with similar households
 - Ongoing communications with participants to encourage and track measure adoption
- Integration
 - Demand Response programs and services
- Other Program Improvements
 - Outreach to new homeowners through “welcome” packages and information kiosks when applying for home loans
 - In-home survey expanded to target Asian community
 - Additional CBO outreach

6. Program Rationale

SCE's Home Energy Efficiency Survey (HEES) program will take advantage of statewide utility coordination and "best available practices" and optimize every opportunity in the marketplace to fill the gap between consumer awareness and adoption of energy efficient measures and practices. The HEES program provides a consistent and recognizable program presence throughout the state and offers similar services and processes coordinated statewide with PG&E, SDG&E and SCG. The program provides accurate and comprehensive information about energy and will induce a permanent change in attitudes and actions toward energy efficiency by assisting customers in understanding their energy usage and patterns of usage.

The measurement results of SCE's 2002 HEES and In-Home Survey programs indicates that 74% of program participants implemented at least one recommendation after the survey was completed. The measurement study also indicates the HEES program helps overcome the barrier of customers not willing to make energy efficiency investments by providing "no cost" and "low cost" energy-saving recommendations.

The 2006-08 program is an extension of this existing information program, which is one of the primary tools used to effectively communicate in five languages (English, Spanish, Chinese, Vietnamese and Korean) and four delivery channels (mail-in, on-line, in-home and phone surveys) the importance of energy and water efficiency to California's diverse society. Since 2002, more than 120,000 English-, Spanish- and Chinese-speaking customers participated in SCE's energy surveys.

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Recognized on a national level in 2004 by the National Energy Efficiency Best Practices Study, the HEES program will capitalize on its four energy survey offerings to deliver an integrated approach that expands its reach across various customer markets. Key elements of the comprehensive approach include:

- **Providing a range of options to offer participants a choice of surveys.** Input from the joint SCE/SCG Program Advisory Group (PAG) and public workshops recommended that the utilities offer different energy surveys and ask customers which one they prefer to complete. The options would provide different access, such as mail-in or online, and include services other than energy payback. The HEES program is flexible and allows customers to choose from SCE's four survey options. SCE will investigate providing model numbers to make the energy survey flow seamlessly into the adoption of recommended measures.
- **Integrating program participation as part of an existing, routine transaction, such as the purchase of a home or the installation of a heating and cooling system.** This approach makes energy surveys more likely to become a permanent part of the market. For example, a PAG member recommended that the utilities develop a "welcome package" to encourage new homebuyers to complete an

energy survey. In response, SCE will distribute “welcome packages” to new homeowners and encourage them to complete a survey upon service turn-ons. One year later, after move-in, SCE will follow-up with the customer to track results. Additionally, a PAG member recommended that the utilities make energy efficiency mortgages more available to homebuyers. SCE will collaborate with SCG to participate in an energy survey through the energy efficiency mortgage pilot program.

- **Offering survey instruments and marketing materials in multiple languages.** Energy surveys will be available to a broader range of customers. The program offers energy surveys in English, Spanish, Chinese, Vietnamese and Korean. The PAG recommended the use of community-based organizations (CBOs) to outreach to the local communities, especially for the residential market. SCE will continue to work-side-by-side with CBOs to target the Spanish and Asian communities for participation in the HEES program. In 2004-05, SCE collaborated with CBOs to target Spanish and Asian communities. These efforts resulted in more than 1,000 completed surveys. In 2006-08 and at the recommendation of PAG members, SCE will expand its outreach to additional CBOs and target faith-based organizations (FBOs). The program has proven to be an effective tool to reach customers who otherwise have limited access to reliable efficiency information, including non-English speaking consumers.

SCE and SCG also received a recommendation from the PAG process to build an online interface between the two utility billing systems so that customers served by both utilities would receive one survey that provided electric and gas savings information. SCE will incorporate this recommendation into its 2006-08 program plans and collaborate with SCG to offer one joint survey available through the same four delivery channels. The venture may require the development of an online interface between electric and gas customer information systems.

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SCE will also collaborate with regional and local water agencies to offer information on electric, natural gas and water efficiency. The partnership between energy and water is an innovative aspect of the program. Water conservation lowers energy use and energy bills. The utilities and water agencies will extend the reach of their programs and services and reduce costs and hassles. Whitepapers submitted by the PAG recommended that the utilities consider collaborating with water agencies to promote energy and water efficiency.

The program will continue the integration with demand response programs to increase consumer awareness of incentives available through the SCE’s Summer Discount

Program (air conditioning cycling) and the 20/20 Summer Savings Program (20/20 rebate). SCE plans to enhance the survey instruments and strengthen the connection between information and incentive programs and services.

The HEES program focuses on equity, recognizes the vast diversity in the State, and serves as a primary tool to bring valuable information on energy efficiency, demand response and water conservation to the residential customer market.

7. Program Outcomes

The desired outcomes of the program are to increase consumer awareness, knowledge and adoption of opportunities for energy and water efficiency.

The program provides customers with information at no charge to help them become familiar with ways to control and reduce energy usage in their homes. SCE will continue to focus on improving the current program by increasing participation, ensuring customer equity, and providing innovative approaches to optimize opportunities in the residential market.

This program includes a direct install component and will deliver immediate, measurable energy savings. SCE will install CFLs in the homes of customers participating in the in-home survey. In addition, the program has the potential to achieve energy savings for each completed survey as documented by past measurement studies. PAG members recommended utilities report and claim energy savings associated with residential audits. In response, SCE will claim and report energy savings for each completed energy during the 2006-08 program cycle.

8. Program Strategy

HEES will be delivered through six program strategies to effectively address the gap between awareness and efficiency measure adoption.

- *Mail-In Energy Survey*—self-completed questionnaire and personalized energy and water report mailed to the home
- *On-Line Energy Survey*—instant access to energy and water efficiency information and incentives
- *In-Home Energy Survey*—face-to-face consultation on ways to save energy and water
- *Phone Energy Survey*—convenient service for customers unable to complete energy surveys by mail, Internet or in the home
- *Welcome Packages*—encourages energy survey at the time of move-in and one year later to track results
- *Energy Efficient Mortgages*—information kiosks in financial institutions, time-of-sale inspections and energy efficiency certification of existing homes

Through collaborative efforts with SCG and water agencies, SCE will offer all program strategies in multiple languages, targeting customers at key trigger events such as:

- High energy bills
- Service turn-ons

- Purchase of new home
- Purchase of an older home
- Financing or refinancing home mortgage

As recommended by the PAG, the program will continue to target high energy users through direct mail solicitations.

The program will also send follow-up postcards and

emails about energy usage to communicate with customers to save energy and water. This feature will develop a continuous dialogue with participants to strengthen efficient measure adoption.

SCE will distribute “welcome packages” to encourage new homeowners to request an energy survey. This strategy will include automatic follow-up by SCE within a year after move-in to review results.

At which time a service turn-on is requested, SCE will distribute “welcome packages” to encourage new homeowners to request an energy survey. This strategy will include automatic follow-up by SCE within a year after move-in to review results. The PAG also recommended that the utilities target homes built prior to 1986, and SCE will incorporate this recommendation in its targeted energy survey solicitation mailings.

Another opportunity to encourage customers to adopt energy efficiency is during the financing or re-financing of a home. SCE and SCG have limited experience with intervention in these types of transactions, but have an interest of seizing this opportunity to have customers take action on energy efficiency with the possible reward of a reduced interest rate on these types of loans. SCE and SCG envision a program on a pilot basis to test the theory. Program rationale includes running a pilot program to achieve tangible educational and behavioral results with linkages to existing incentive programs. SCE and SCG are not providing financing for participants. The innovative approach may include, but is not limited to, utilizing information kiosk to promote energy efficiency upgrades to homeowners and small business owners who are planning remodeling or upgrading projects. The kiosks would be located in the lobbies of financial institutions and contain information on energy efficiency and demand response and available incentives. The program would provide consumers direct access with information at this significant decision point. Parties submitting proposals would establish agreements with banks or credit unions interested in participating in the program.

The energy efficient mortgage pilot program would encourage customers to participate in an energy efficiency survey to help identify the energy saving opportunities. Subject to negotiation with the implementers, banks or lenders could offer preferred consideration for customers applying for home improvement loans, which include an energy efficiency plan. The program would support the efforts through public recognition for participating in Energy Efficiency programs, which benefit their customers, and the community at large.

The PAG recommended that the utilities connect the residential survey to point-of-purchase when customers are making purchases for of energy efficient products. Retailers have not expressed great interest in the placement of kiosks in their stores. However, the utilities will incorporate this recommendation and partner with local banks and credit unions to offer energy and water efficiency information.

9. Program Objectives

SCE plans to achieve more than 100,000 completed surveys and install nearly 40,000 CFLs during 2006-08.

Customers participating in the HEES program will learn to:

- Better manage their home energy and water costs,
- Make informed purchase decisions for energy-efficient technologies, e.g., appliances, equipment and lighting products,
- Determine which appliances or equipment in and around the home consume the most energy and water, and
- Learn about additional resources and programs available to help reduce energy and water usage.

10. Program Implementation

SCE will competitively bid all survey components and pilot program activities for implementation by selected subcontractors. As recommended by the PAG/Public, SCE will continue to provide efficiency recommendations based on a whole-house system approach capturing data based on billing history. Examples of our whole-house system surveys include the mail-in and online surveys.

SCE will develop a targeted mailing strategy to encourage customers identified as high-energy users to participate in the mail-in survey option.

SCE will develop and implement On-Line Survey advertising and marketing campaigns to encourage customer participation. The On-Line Survey, available on SCE's web site, provides customers with direct access to information on energy and water energy. Customers spend 5-15 minutes to answer specific questions and instantly receive an analysis of energy use in their homes as well as energy-saving recommendations. On-Line Surveys are available in English, Spanish, Chinese and Vietnamese.

SCE will develop a targeted mailing strategy to encourage customers identified as high-energy users to participate in the mail-in survey option. Survey solicitation packages are mailed to customers. Customers complete the mail-in survey and return it to SCE for processing. SCE sends the customer a personalized energy representing actual energy usage in easy-to-read charts and graphs. Reports include information on energy efficiency and demand response programs and other energy-related information to encourage adoption of energy and water efficiency. Copies of the mail-in survey in all five languages are also available on SCE's website.

In 2004 and 2005, SCE collaborated with CBOs to target Spanish and Asian communities. These efforts resulted in an additional 1,000 surveys. In 2006-08 and at the recommendation of PAG members, SCE will expand its outreach to include additional CBOs to target local communities. SCE also plans to collaborate with faith-based organizations (FBOs).

The In-Home Energy Survey provides customers, who may not respond to On-Line and Mail-In survey options, with a more personalized, face-to-face energy survey option. After responding to the energy survey solicitation cards to schedule an in-home survey, a specially trained energy auditor inspects the home and provides the customer with immediate answers to basic questions as well as specific recommendations on how customers can save energy and water. The energy auditor installs CFLs in the home and provides valuable energy-saving information. The water agency proposes to provide showerheads and faucet aerators for installation. The PAG requested that the utilities continue their in-home surveys. In-home surveys are conducted in English and Spanish and SCE plans to continue this survey option and offer Chinese in-home surveys.

The Telephone Survey is an alternative to the In-Home Survey and allows customers to obtain immediate results from a trained auditor. The energy auditor walks the customer through the survey over the phone and provides specific energy recommendations and information on incentive programs. Surveys are available in English and Spanish and will be expanded to include Chinese.

11. Customer Description

The program targets residential customers in distinct market segments that are looking for ways to reduce their electric bills. Customers have four survey options to choose from: mail-in, via the Internet, on-site or telephone surveys.

12. Customer Interface

The program provides maximum ease for residential customers to participate. The surveys are available in multiple languages to meet the needs of our different customer groups:

- 1) *Customers who prefer to access information online and receive instant recommendations.* The On-Line Survey provides customers who frequently access the Internet with an interactive feature easily accessible on SCE web site, which allows customers to obtain immediate customized results by answering specific questions regarding their home energy use online.
- 2) *Customers with limited online access.* The written version of the survey is available in five languages. This Mail-In Survey version allows customers with limited or no on line access the flexibility of an easy-to-complete mail-back format.
- 3) *Non-English speaking customers with limited or no on-line access and prefer a more personalized face-to-face survey option.* The In-Home Survey provides customers,

particularly customers who may not respond to On-Line and Mail-In Survey options, with a more personalized, face-to-face energy survey alternative.

- 4) *Customers who request immediate energy solutions over the phone.* The Telephone Survey is an alternative to the In-Home survey that allows customer to obtain immediate results from a trained energy auditor. The energy auditor walks the customer through the survey over the phone and provides specific energy-saving information.

13. Energy Measures and Program Activities

13.1. Measures Information

Measure information provided in corresponding cost-effectiveness calculator and portfolio workbook.

13.2.1 Energy Savings and Demand Reduction Level Data

Energy savings and demand reduction information provided in corresponding cost-effectiveness calculator and portfolio workbook.

Past measurement studies have demonstrated that the program lead to the potential energy savings resulting from the actions customers take after receiving an energy survey. The 2002 EM&V study on SCE's Residential Audit Programs conducted by Ridge and Associates has estimated the above gross and net kWh and kW impacts per dwelling/energy survey. Additionally, the study also concluded that energy savings and demand reduction last beyond the expected two years.

13.3. Non-energy Activities

Non-energy activities include targeted mailings of survey solicitation packages and cards marketing activities.

13.4. Subcontractor Activities

Subcontractor activities for the program are listed below for all survey components:

Mail-In:

Subcontractor is responsible for printing and mailing the survey packages, receiving and analyzing the survey results, processing and mailing the energy reports to the customers.

On-Line:

Subcontractor is responsible for hosting, managing, and maintaining all on-line energy analysis tools.

In-Home and Telephone:

Subcontractor is responsible for scheduling appointments and conducting on-site or telephone surveys and processing completed surveys.

13.5. Quality Assurance and Evaluation Activities

Quality assurance and evaluation activities will be conducted on a monthly basis to ensure that customers are receiving pertinent and beneficial information in reducing their energy consumption at home.

SCE will perform telephone inspections and verifications on an ongoing basis throughout the program term. SCE will also randomly select and call customers who participated in the In-Home Survey for verification and quality assurance.

Inspection of the CFLs installation will also be performed on selected customer homes to ensure compliance.

13.5.1. Expected Number/Percent of Inspections

SCE will inspect approximately 200 (5%) CFLs installation in 2006, 220 in 2007 and 242 in 2008.

13.6. Marketing Activities

The program will continue to promote energy efficiency, demand response programs and other information and services. The program will incorporate a variety of marketing approaches to promote the survey and increase participation. Because utility service areas and customer segments are unique, marketing efforts may be tailored by each utility to obtain maximum effectiveness and the highest response rate. Where practical, SCE will jointly launch marketing efforts with other utilities, and will explore opportunities to coordinate with CBOs and FBOs in outreach efforts and to deliver program services directly to traditionally HTR areas. These CBOs and FBOs may include churches, community centers, adult schools and senior centers.

Activities will include, but are not limited to, targeted direct mail campaigns, promotions, on-line marketing, Interactive Voice Response (IVR), community events, radio spots, newspaper ad and coordination with the statewide marketing agencies' marketing and outreach efforts. SCE will continue to coordinate closely with the Statewide Marketing and Outreach Campaign, such as the statewide Flex Your Power campaign.

14. Program Changes

Based on the responses from the competitive bids, there were no proposals offering the Home Energy Action plan and the monthly communications options. Therefore, these two elements were removed from the program write-up. However, the program will include a mechanism for tracking measure adoptions and offer ongoing communications. Instead of monthly notices, the SCE will periodically send follow-up postcards and e-mails to encourage customers to adoption energy and water efficiency opportunities.

The survey components will not include links to the Contractor State License Board, League of American Homeowners and other resources for a list of licensed contractors. Also, SCE will not reward participants in the pilot energy efficiency mortgage program through publicity. These changes are actually corrections to the write-up.

The Time of Sale (TOS) inspection was removed from the program write-up, because it is limited to only those ‘new homebuyers’ that are going through a TOS inspection of the respective home they are going to purchase. SCE will continue to proactively implement the “Welcome Home” package to target the “new customer”. There is also limited study data to show the cost effectiveness of the TOS program. TOS may be explored further once more information is available.

SCE continues to work with the local water agencies. One of the primary water agencies in SCE’s service territory proposes to provide showerheads and faucet aerators for installation with the in-home energy survey.