PA Consulting Group

# San Diego Gas & Electric

Final Summary Report: Process Evaluation
of the 2006–2008 Local Government
and Institutional Partnership Programs

January 5, 2009

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Version: 1.0

## *EXECUTIVE SUMMARY*

This report presents the Process Evaluation of San Diego Gas & Electric's (SDG&E) 2006–2008 Local Government and Institutional Partnership Programs. The Partnership Programs for 2006–2008 received funding from the California Public Utilities Commission (CPUC) under the Public Goods Charge (PGC). SDG&E's portfolio of programs consists of eight partnerships with the following entities:

- University of California/California State University Program (UC/CSU)

- California Community Colleges Program (CCC)

- California Department of Corrections and Rehabilitation Program (CDCR)

- City of San Diego

- City of Chula Vista

- County of San Diego

- San Diego County Water Authority (SDCWA)

- San Diego Regional Energy Office Energy Resource Center (SDERC)

The goal of partnerships is to promote energy savings in communities that do not have access to energy-savings programs through their traditional or core utility programs. The partnerships offer a combination of services that achieve direct and indirect energy-savings. Direct energy savings are gained through energy-efficiency resource activities such as energy-efficiency retrofits, CFL exchange programs and installation of energy-efficient spray valves. On the other hand, indirect energy-savings are achieved through non-resource activities such as training, information, outreach, and educational tools and methods.

This process evaluation identifies issues associated with the performance of the programs during the 2006–2008 cycle and recommends improvements for the design of new programs in 2009–2011 cycle. The process evaluation is based on a review of secondary data, in-depth interviews with program partners and stakeholders, and a survey of SDG&E customers.

The process evaluation concludes that the majority of SDG&E's 2006–2008 Local Government and Institutional Partnership programs are successful. Overall customer participation is high, resource savings goals are being met, and partners are actively participating in the programs. SDG&E's partners speak highly of the programs and of SDG&E as a partner.

All but two programs are on target to achieve their goals by the end of the program cycle in December 2008. The two programs that have not achieved their goals are the California Department of Corrections and Rehabilitation (CDCR) program and the California Community Colleges (CCC) program. The former program has experienced significant delays outside the control of SDG&E due to state-financing procedures and the latter program has suffered from being measured against a set of unrealistic goals established during the planning phase.

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Interviewed participants are generally very satisfied with their participation in the programs. Additionally, nearly a third of residential participants interviewed claim that they are making changes in their home based on information they received through the program.

The overarching portfolio-level findings are summarized below. Program-specific findings follow.

SDG&E Partnership program portfolio is well on its way to meeting both its net summer peak kW savings and net kWh savings for the 2006–2008 cycle. By May 2008, with 30 of the 36 months of the cycle completed (83 percent of the cycle), the kW savings goal was 78 percent met and the KWh savings goal was 84 percent met.

Unfortunately, the portfolio fell considerably short in terms of its gas savings. By May 2008, a cumulative total of 5,228,218 therms had been saved, only 55 percent towards its cycle goal of 9,500,000 . This low percentage rate is due primarily to the unrealistically high gas-savings goals set for the Community Colleges Partnership (CCC), which is discussed further in Chapter 6. Program-specific findings to illustrate include:

- UC/CSU is the most consistent in its progress towards 2006–2008 program goals.

- The City of Chula Vista and City of San Diego are both on target to meet their program goals and have drastically exceeded the gas-savings goals.

- CCC and CDCR programs have not faired as well and face significant challenges to meet their goals.

- SDCWA has made gas savings progress but not as much as initially projected.

The key portfolio-level findings are summarized below.

- **Achievement of Goals.** Most of SDG&E's resource programs are on track to meet or exceed their 2006–2008 goals. This accomplishment is even more impressive because many of the programs did not start in earnest until late in 2007, mainly because of prolonged contract negotiations.

- **Long-term Capacity Building.** The potential for longer-term savings varies by program type. To varying degrees, the statewide partnerships provide training associated with energy retrofits and MBCx, and are working to make an impact on campus/organizational purchasing policies and building practices.

- **Local Government Programs.** The most successful partnerships are those in which all partners are fully engaged in the program. The term "engaged" is used to indicate both buy-in to the partnership concept and commitment to making its implementation work.

- **Statewide Programs.** The statewide partnerships work well in terms of policy development and collaboration between partners and utilities and, overall, partners are quite complimentary about SDG&E's implementation efforts. The challenges associated with the CDCR and CCC partnerships have, on the whole, been outside SDG&E's control.

- **Unrealized Value.** SDG&E staff and partners maintain that there are many important things that these programs do—helping local government decision makers move

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toward acting on projects, providing expertise to facilitate projects that otherwise would not happen, reaching customers who would not otherwise participate in core programs (hard-to-reach segments), and building public awareness.

- **Staffing Resources.** Staffing is an important issue on the local government level, particularly because partnership funds are not designed to fund staff in perpetuity. Local government staffs tend to have limited time to dedicate to partnership work, yet it is important that the partnership has adequate staff resources—at whatever level—to ensure the necessary work is accomplished to support the partnership's initiatives.

- **Program Maturity.** PA's evaluation indicates that the local government and institutional partnership concept has gained momentum from its first program cycle, 2004–2005. It is clear that both IOUs and the Commission underestimated the amount of time it takes to set up partnerships with their complex relationships, multi-party contractual documents, and range of services. Expectations for accomplishment have had to be adjusted in some cases. These programs should just continue to get better with time.

- **Clarity of Focus.** PA's evaluation effort examined the extent to which SDG&E's external partners (1) fully understand and accept this obligation, (2) have the capacity (resources) and capability (skills) to fulfill this role, and (3) feel a direct obligation to fulfill the energy-savings commitments. Not surprisingly, the partners that are most fully engaged are those that meet all three of the above criteria. Every partnership that is not performing as well fails to meet at least one of these criteria.

- **Balancing Resource and Non-Resource Objectives.** One potential risk associated with partnership programs is the dual-nature of resource and non-resource activities. Because the partnership program portfolio aims at delivering near-term energy savings as well as building capacity and capabilities necessary for long-term energy savings, it may be more appropriate to articulate a partnership's goals in terms of both near-term or immediate resource goals and long-term resource goals. To balance the two objectives, partnership goals need to ensure that longer-term savings—as well as near-term energy-savings targets—are realized and that progress toward reaching both goals is measurable.

- **Recording Non-Resource Activities.** The CPUC has recognized the potential value of non-resource activities by focusing attention on these partnership elements in the impact evaluation that was launched during the time of this study. The CPUC's decision to place more emphasis on indirect impacts and non-resource program elements than originally intended for the 2006–2008 program cycle has placed significant additional pressure on SDG&E program managers to document these activities.

- **Length of Programs.** While most of those interviewed for this evaluation believe the partnership programs will lead to increased local government capacity to implement energy-efficiency actions and measures, they also believe that a three-year program cycle is insufficient time in which to achieve the results these programs can ultimately produce.

The PA process evaluation team identified general issues and recommendations that apply to all of the partnership programs as well as specific issues and recommendations for the individual partnership programs. These recommendations are based on the

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research detailed throughout the report. The key recommendations for the portfolio as a whole are:

1. Create and increase the visibility of the partnerships program "brand[1]."

2. Improve tracking of non-resource program activities.

3. Articulate long-term goals and develop metrics for their attainment.

4. Set interim goals and/or longer program periods.

5. Reduce cycle times2 for large retrofit projects.

6. Improve cross-program communications.

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[1] Branding in this case refers to a name or other symbol that a participant would associate with a program. Branding can be linked to utility or local government and thereby increase goodwill by association. Branding is also important for evaluation purposes such that participants would be able to recall a program by brand name or symbol when surveyed.

[2] Cycle time is the amount of time, usually in days, between the start (e.g., receipt of an application for project funds), and end (e.g., usually payment of the rebate check after the inspection has been performed) of a project during the period when it is part of a program. It refers to the activities that are within the control of the program and is a measure of processing time.

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## LIST OF ACRONYMS

| | |
|---|---|
| ACEEE | American Council for an Energy-Efficient Economy |
| AIA | American Institute for Architecture |
| ASHRAE | American Society of Heating, Refrigeration, and Air Conditioning Engineers |
| CCC | California Community Colleges |
| CCSE | California Center for Sustainable Energy |
| CDCR | California Department of Corrections and Rehabilitation |
| CFL | Compact Fluorescent Lamp |
| CPUC | California Public Utilities Commission |
| CSU | California State University |
| CSUOC | California State University Office of the Chancellor |
| DSM | Demand Side Management |
| EEGA | Energy Efficient Groupware Application |
| EMS | Energy Management Services |
| ESCO | Energy Services Company |
| GHG | Greenhouse Gas |
| HDMC | Honeywell DMC |
| HEW | High-efficiency Washer |
| ICLEI | International Council for Local Environmental Initiatives |
| IOU | Investor Owned Utility |
| LED | Light Emitting Diode (high-efficiency lighting) |
| LEED | Leadership in Energy and Environmental Design |
| LGIP | Local Government and Institutional Partnership |
| MBCx | Monitoring-based Commissioning |
| M&V | Monitoring and Verification |
| MWD | Metropolitan Water District of Southern California |
| NAM | Newcomb Anderson McCormick |
| PAM | Program Administrative Manager |
| PGC | Public Goods Charge |
| PG&E | Pacific Gas & Electric |
| SCE | Southern California Edison |
| SANDEE | San Diego Excellence in Energy Awards |
| SDCWA | San Diego County Water Authority |
| SDERC | San Diego Energy Resource Center |
| SDG&E | San Diego Gas and Electric Company |
| SDREO | San Diego Regional Energy Office |
| UC | University of California |
| UCOP | University of California Office of the President |
| UCSD | University of California San Diego |

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# Appendices

## 1.    INTRODUCTION

This report presents the results of the process evaluation of San Diego Gas & Electric's (SDG&E) 2006–2008 Local Government and Institutional Partnership Programs Portfolio. This evaluation was conducted between August 2007 and May 2008 by PA Consulting Group and a team of national energy-efficiency program experts that included subcontractors Dethman and Associates and J John Mitchell Associates. The purpose of this report is to evaluate their Local Government and Institutional Partnership Programs in relation to their energy and gas-savings goals for the 2006–2008 cycle in order to improve the next cycle of partnership programs in 2009–2011.

The California Energy Action Plan of 2005 established energy efficiency as the state's top priority procurement resource and called for utilities to invest in energy efficiency. The Energy Action Plan permits utilities to fund partnership programs between a regulated utility and a designated "partner," where the partner will work directly with the utility to provide energy-efficiency services.

These partnerships consist of activities managed by government agencies or non-profit community organizations to encourage increased energy efficiency behaviors among targeted groups. Partners' roles vary in each case, depending upon the specific activities undertaken and the skill sets and resources of each. The presumption in each partnership, however, is that the utility and the partner (whether a local or state government agency or a community-based non-profit) each bring something to the table to make it work.

### 1.1    PROGRAM OVERVIEWS

SDG&E's 2006–2008 Local Government and Institutional Partnership Programs Portfolio consists of eight programs. In addition to being partnered with SDG&E, the University of California/California State University Program, the California Community Colleges Program, and the California Department of Corrections and Rehabilitation Program are served by three other California Investor Owned Utilities (IOUs): Pacific Gas and Electric, South California Edison, and Southern California Gas.

**Table 1-1 SDG&E Government and Institutional Partnership Programs Overview**

| Program | | Overview |
|---|---|---|
| SDGE 3026 | University of California/California State University Program (UC/CSU) | The UC/CSU partnership is a statewide program designed to achieve immediate and long-term energy savings and peak-demand reduction within California's higher education system. The program establishes a permanent framework for sustainable, comprehensive energy management at campuses served by California's four IOUs. The program employs four key strategies to meet its goals—energy-efficiency retrofits, monitoring-based commissioning (MBCx), emerging-technology demonstrations, and training and education. All the campuses coordinate closely with the University of California Office of the President (UCOP) and Chancellor's offices. SDG&E services the University of California, San Diego (UCSD), San Diego State University, and the UCSD Medical Center. |
| SDGE 3001 | California Community Colleges Program (CCC) | The CCC Partnership Program offers incentives for retrofit and new construction projects, continuous commissioning, and educational training for the community colleges. The CCC system includes 109 campuses, which are served by California's four IOUs. SDG&E serves community colleges in the San Diego area. These facilities consume vast quantities of energy and make up a significant portion of both the electric and natural gas loads in the state of California. California's community colleges have full autonomy over their campuses and facilities, with little-to-no central coordination. |
| SDGE 3003 | California Department of Corrections and Rehabilitation Program (CDCR) | The CDCR program is a statewide program with partnership participation by all four California IOUs. It focuses on increasing the energy efficiency of the facilities on prison campuses, and as such, is similar to the statewide UC/CSU partnership. There are three components:<br><br>(1) Energy-efficient retrofit projects;<br><br>(2) Near-term peak energy and demand savings through customized assessments, calculated rebates, and building commissioning;<br><br>(3) Training of facilities and energy managers to improve Operation & Management techniques and to identify and obtain additional energy-efficiency opportunities.<br><br>The program finances energy improvement through a combination of incentives and state financing, and uses an Energy Service Company (ESCO) model to implement the measures. |

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| | Program | Overview |
|---|---|---|
| SDGE 3005 | City of San Diego | The City of San Diego Partnership Program is designed to leverage municipal operations to capture energy-efficiency opportunities. The partnership includes four components:<br>(1) Education and Outreach that provides information about energy efficiency to city residents and businesses;<br>(2) Business Spray Valve/CFL Program, which works to reduce energy consumption in the community by replacing pre-rinse spray valves and incandescent lighting with more efficient models;<br>(3) City of San Diego Project Facilitation, which assigns a project manager to facilitate energy-efficient retrofits, installation of energy-management systems, and installations of generation systems at municipal facilities;<br>(4) Peer-to-Peer, which provides training and assistance for other local governments and agencies in the region that would like to implement energy-efficiency programs.<br>The City of San Diego Partnership Program is also piloting a new component that provides incentives to developers who install energy-efficiency measures by offering them the chance to participate in the City's Sustainable Building Expedite Program free of charge. |
| SDGE 3002 | City of Chula Vista | The City of Chula Vista Partnership Program includes many of the same components that are part of the City of San Diego Partnership Program:<br>(1) Peer-to-Peer;<br>(2) City Facilities Energy-efficiency Program;<br>(3) Energy Efficiency and Conservation Outreach Programs, which includes the CFL and Spray Valve installations;<br>(4) Green Urban Infill Program, which promotes energy efficient and sustainable building practices for all new urban infill projects. |
| SDGE 3022 | County of San Diego | The County of San Diego partnership is an informational partnership designed to:<br>(1) Facilitate energy project and demand response implementation at county facilities and public housing units;<br>(2) Coordinate an on-bill financing pilot project;<br>(3) Provide education to other local governments;<br>(4) Promote energy efficiency in county facilities to staff as well as to other public and private entities. |
| SDGE 3023 | San Diego County Water Authority | The San Diego County Water Authority partnership offers point-of-purchase vouchers to encourage consumers to purchase high-efficiency clothes washers. Water customers of participating water agencies are eligible as long as vouchers are available for those agencies. Vouchers are provided to single-family and multi-family residences. |

| Program | | Overview |
|---|---|---|
| SDGE 3009 | San Diego Regional Energy Office Energy Resource Center (SDERC) | The SDERC Energy Resource Center partnership program is a collaborative effort between two existing programs—CCSE's Energy Resource Center (ERC) and SDG&E's Statewide Education and Training Program. This partnership provides energy-efficiency information, education, and outreach to the non-residential sector. |

## 1.2 REPORT STRUCTURE

This report consists of the following sections:

Chapter 2: Portfolio-level Program Theory and Logic Model

Chapter 3: Methodology

Chapter 4: Portfolio-level Findings

Chapters 5-12: Individual Partnership Program Findings

Chapter 13: Portfolio Recommendations

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## 2. *PORTFOLIO-LEVEL PROGRAM THEORY AND LOGIC MODEL*

This chapter presents the portfolio-level program theory and logic model. The logic models revisit the original intent of the Local Government and Institutional Partnership (LGIP) programs on the part of the California Public Utilities Commission (CPUC).[3] Individual program theories and logic models are included in each program chapter.

### 2.1 PORTFOLIO-LEVEL PROGRAM THEORY

The Local Government and Institutional Partnership programs are intended to address a perceived gap in the delivery of energy-efficiency services that local governments are in a unique position to fill. While IOUs and third-party providers in California have accomplished significant gains in energy efficiency, there are still large segments of society that are underserved or, for various reasons, have not fully participated in these programs. By leveraging existing services and communications vehicles in their communities, local governments are seen as ideal conduits for delivering energy savings. Because of their similar capabilities, some state agencies and non-profit organizations have also been included under the Local Government and Institutional Partnership Programs portfolio for the 2006–2008 cycle.

Local governments and institutions can play a key role in promoting energy conservation, energy efficiency, and alternative energy. The CPUC's 2008 "straw man," *Achieving Aggressive Energy Efficiency Goals in Local Communities and Statewide*[4] enumerates the following functions of local governments that need to be recognized, strengthened, and reinforced for a statewide approach to energy. Functions include:

- Setting policies and establishing goals for their communities

- Leading by example, with built projects and implementation of policies

- Enforcing state energy-efficiency/conservation codes and standards

- Adopting stricter local codes for new and existing buildings

- Incentivizing projects that voluntarily exceed state and local minimum energy standards

- Requiring higher energy standards for projects in redevelopment districts and/or for meeting affordable housing goals

- Requiring municipal contractors and vendors to meet higher energy-efficiency standards for services and products that they provide to the local government

- Developing and implementing programs that are tailored to their communities' needs

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[3] This diagram is consistent with the portfolio level LM developed by PA as part of the CPUC evaluation of the Partnership Programs.

[4] http://www.californiaenergyefficiency.com/local_govt.shtml

- Collaborating with other entities, including IOUs, in outreach initiatives, and if resources are available, providing education and technical assistance to local residents and businesses

- Promoting energy-efficient communities through community design, land use and zoning requirements

- Recognizing local individuals and businesses for exemplary energy management

- Promoting green-technology oriented economic development.

Partnership programs are intended to build government and community group capabilities for delivering energy services within communities; raise awareness among the public (households and businesses) about energy saving opportunities; and directly realize opportunities to save energy within local, state government, and community facilities, homes, and businesses. The partnership program model builds the capacities (resources) and capabilities (skills) of local governments and embraces the multi-cultural and multi-dimensional set of responsibilities that are part of local government and community agency realities[5].

SDG&E's local government partners have multiple functions in their communities. They are expressly obliged to serve all markets, dealing with issues of equity and inclusiveness, particularly for hard to reach groups. In service of these obligations, they must deliver public goods, such as education, police protection, and garbage disposal, regardless of cost effectiveness or other considerations. Utility providers also service a wide market; however, utility programs' priorities may differ from the local partners. When it comes to energy services delivery, these local entities do not share the responsibility of actually delivering kWh savings (or therms).

The partnership program model has two main dimensions (1) It is a resource acquisition vehicle, and (2) it is a community outreach and engagement tool. The challenge is that the partnership program model assumes local governments have significant roles to play in delivering direct and indirect kWh and therm savings—roles that are important but necessarily vary with each partnership based on the capacity and capabilities brought to the endeavor. This challenge is addressed in the program design documents, written commitments and contractual documents that articulate the responsibilities of the external partners that they must fulfill in exchange for the Public Goods Charge (PGC) funding provided.[6]

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[5] While the state institutional partners have many of the same qualities as local governments, they are much more focused on one segment of the market—schools, prisons—and as such, do have a considerably greater measure of control and direction that limit their responsibilities to that market.

[6] The Public Goods Charge (PGC) originated with Assembly Bill 1890 in 1996, which restructured the state's electricity markets. As part of AB 1890, energy-efficiency programs were funded with proceeds from the PGC. With the passage of Assembly Bill 1105 in 1999, authority over the PGC energy-efficiency programs were shifted from the CPUC to the CEC. In September 2002, AB 117 was passed into law. Section 381.1, which was added to Public Utilities Code, permits community choice aggregators (CCAs) to apply to administer cost-effective energy efficiency and conservation programs. The CPUC also adopted certain procedures in Decision (D.) 03-07-034 (dated July 10, 2003) to implement portions of AB 117 affecting the allocation of energy-efficiency program funds.

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### 2.2     LOGIC MODEL

A program logic model illustrates a set of interrelated program activities that combine to produce a variety of outputs that in turn lead to key short-, mid-, and long-term outcomes. The following evaluation activities supported the development of the Local Government and Institutional Partnership Programs portfolio-level logic model:

- Program documentation review

- Interviews with program design and delivery staff

While the *California Energy Efficiency Evaluation Protocols: Technical, Methodological, and Reporting Requirements for Evaluation Professionals* (The TecMarket Works Team, 2006), based largely on the *California Evaluation Framework,* does not require a program theory and logic model for every program, SDG&E agrees with the CPUC that program theories and logic models are indispensable for the effective and efficient design and delivery of the Local Government and Institutional Partnership Programs and assessing their energy and demand impacts.

The Local Government and Institutional Partnership programs logic model (Figure 2-1) flows from top to bottom and is organized according to six basic categories:

- Program Resources

- Program activities

- Outputs

- Short-term outcomes

- Intermediate outcomes

- Long-term outcomes

In addition, the logic model notes a variety of external influences that can also influence the program's outcomes. External influences include political and economic factors such as the housing and credit crisis that will affect local government tax revenues and gasoline prices.

Direct resource activities are highlighted in blue in the partnership program logic model. These include partnership efforts that include direct installs, incentive mechanisms and giveaways, and bulk distributions such as for CFLs.

Indirect resource activities are highlighted in yellow. Most of the indirect resource activities involve capacity building such as policy-work, education, and demonstration projects. Another major indirect resource activity for partnerships, but not SDG&E, discussed earlier is partnership efforts to "funnel" customers to participate in SDG&E's DSM programs. The theory behind all of these activities is that in the long-term they will result in sustainable energy, environmental and other non-energy benefits.

Figure 2-1 represents the SDG&E Local Government and Institutional Program Portfolio logic model. It is not the intent that all these activities, outputs, and outcomes be a part of each partnership program. However, all the elements represented are intended to be a

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component of at least one program included in the portfolio and are therefore represented in this portfolio level model. Also, note that the logic model is static and does not illustrate program changes.

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**Figure 2-1 SDG&E Local Government and Institutional Program Portfolio Logic Model**



Program Name: Local Government Partnership Programs Portfolio Logic Model
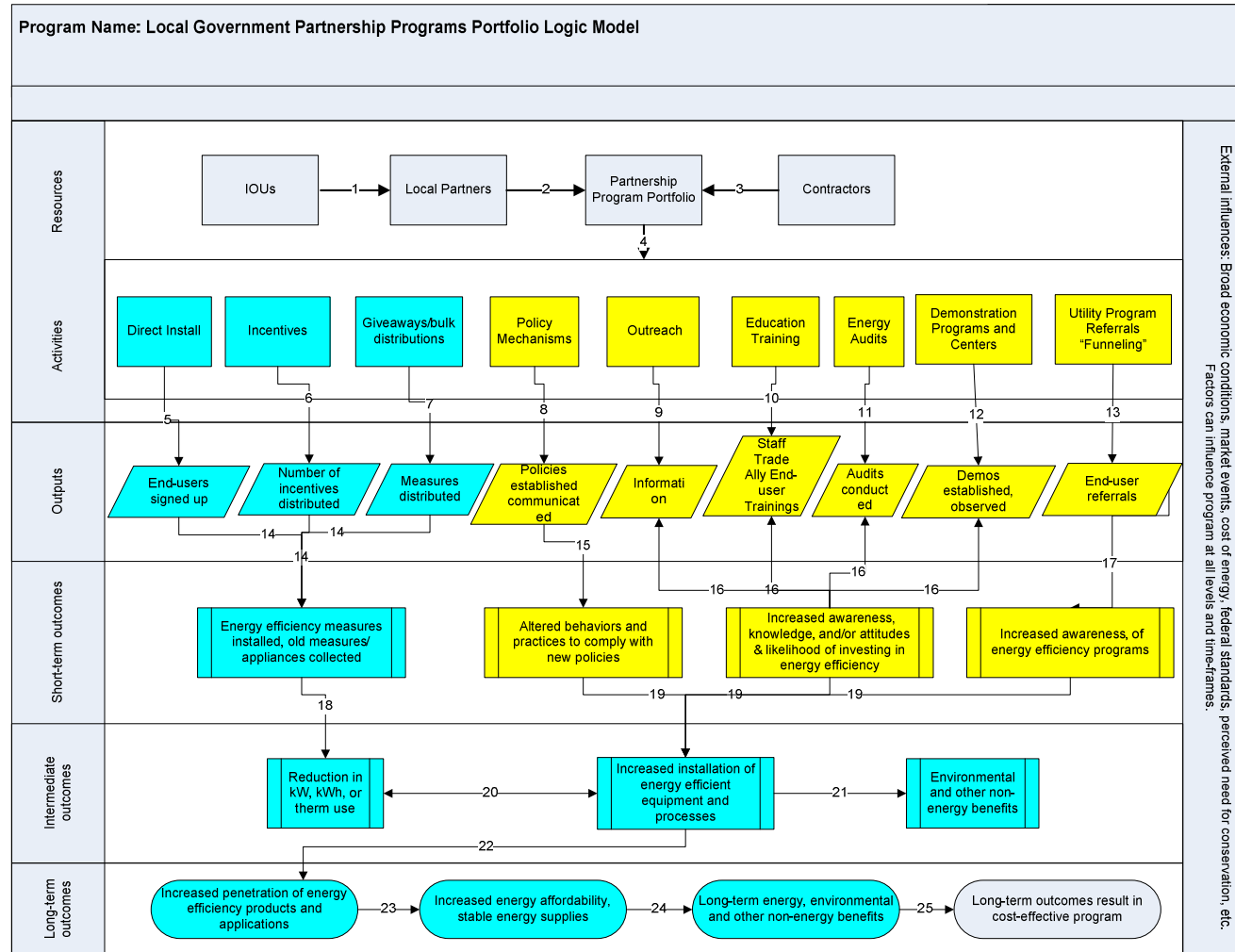
## 3. METHODOLOGY

San Diego Gas & Electric (SDG&E) contracted PA to conduct a process evaluation of its 2006–2008 Local Government and Institutional Partnership programs portfolio. The evaluation's goals, as identified in SDG&E's Request for Proposals[7] (RFP) were to:

- Review the programs within the context of the Partnership Program market segment to determine if there are unnecessary overlaps between programs, if significant parts of the market are being missed by the program designs, and/or if the targeted markets should be defined differently

- Document program theories, program goals, and implementation strategies

- Provide real-time feedback to program implementers with specific focus on improving program recruitment and delivery and identifying both implementation and program design problems for review and modification

- Assess the effectiveness of the programs and provide recommendations for improvement

- Evaluate areas of customer and trade ally satisfaction/dissatisfaction and provide recommendations for developing an ongoing system for tracking customer feedback

- Identify barriers and obstacles to meeting program goals.

PA's overall evaluation strategy, discussed in the next section, was designed to meet these goals.

### 3.1 EVALUATION STRATEGY

PA's scope of work with SDG&E originally encompassed the following eight tasks.

1. Conduct the project initiation meeting

2. Develop the final research plan

3. Review of program documents, materials, and budget

4. Data collection and analysis

5. Review tracking databases

6. Prepare reports and database of results

7. Presentation of results

8. Provide project management and progress reporting

Tasks 3, 4, and 5 were the bulk of the evaluation strategy and are discussed more fully below:

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[7] Request for Proposals for Partnership Programs Process Evaluation for San Diego Gas & Electric Company and/or Southern California Gas Company, May 1, 2007.

**Task 3. Review program documents, materials, and budget.**
This review allowed PA to lay out the program process flows, and develop both an overall portfolio-level logic model and program-specific logic models. As a result of this review, PA also produced a report on potential criteria for selecting partners for future SDG&E Partnership programs.

**Task 4. Data collection and analysis.**
This task comprised the bulk of the evaluation. PA conducted internal staff interviews, partner interviews, and a number of structured interviews with program participants, nonparticipants, and trade allies. Our data collection activities are described in detail in Section 3.2 below.

**Task 5. Review tracking databases.**
PA initiated work on this task during August but suspended work on this task in October as per SDG&E direction. Even so, each program chapter includes a brief discussion on program database issues.

## 3.2    PRIMARY DATA COLLECTION ACTIVITIES

The primary data collection activities included in-depth interviews with partnership staff and a telephone survey of residential and commercial programs.

- In-depth interviews were conducted with staff on each of the eight partnership programs. In total, 26 interviews were conducted with partner and implementation staff across the eight programs, between two and five staff per program.

  For each partnership program, staff from both SDG&E and the partner organization was interviewed. Additionally, two to four SDG&E staff working with each partnership program were interviewed.

- Telephone surveys were conducted with residential and small commercial customers Only four partnership programs had programs with specific residential and small business customers to survey: City of San Diego, City of Chula Vista, SDERC, and SDCWA. Both program participants and nonparticipants were interviewed. The residential surveys were administered in January 2008. The small commercial surveys were administered in February 2008.

  Participant databases served as the sample source for the participant surveys. The nonparticipant survey sample, provided by Sempra, was comprised of utility customers eligible for the programs identified by zip code. To screen for nonparticipants, we compared the sample against the participant data. Additionally, we confirmed they did not participate at the onset of the survey itself. In calling the customers, we indicated we were calling on behalf of SDG&E so they understood how we selected them to interview about the partnership program. This helped put the survey into context as opposed to being a marketing cold call.

  In total, PA collected 203 surveys from residential customers, 116 who had participated in the partnership programs and 87 who had not. One hundred and ninety-four small business customers were also surveyed, of which 114 had

participated in the partnership programs and 80 had not.8

When reviewing the data, note that the sample sizes are small (approximately 37 participants and 37 nonparticipants interviewed per program). Therefore, the data is not weighted and is not necessarily representative of the population. Thus, the results must be understood in light of the limitations of sample.

**Table 3-1 Summary of Data Collection Activities**

| Program Name | | Interviews | Survey Sample Sizes | |
|---|---|---|---|---|
| | | | **Participants** | **Nonparticipants** |
| SDGE3026 | UC/CSU program | • 2 utility staff<br>• 3 UC/SCU state staff<br>• 2 campus energy managers | N/A | N/A |
| SDGE3001 | CCC Program | • 2 utility staff<br>• 2 CCC state staff<br>• 2 community college facilities staff | N/A | N/A |
| SDGE3003 | CDCR | • 1 utility staff<br>• 1 implementation firm<br>• 1 CDCR staff | N/A | N/A |
| SDGE3005 | City of San Diego | • 3 utility staff<br>• 3 municipal staff | • 38 residential<br>• 37 small C/I | • 40 residential<br>• 35 small C/I |
| SDGE3002 | City of Chula Vista | • 3 utility staff<br>• 3 municipal staff | • 40 residential<br>• 36 small C/I | • 37 residential<br>• 32 small C/I |
| SDGE3022 | San Diego County | • 3 utility staff<br>• 2 municipal staff<br>• 2 county facility staff | N/A | N/A |
| SDGE3023 | SDCWA | • 4 utility staff<br>• 2 SDCWA staff<br>• 20 dealers | • 38 residential | • 86 residential*<br>• |
| SDGE3009 | SDERC | • 4 utility staff<br>• 3 CCSE staff | • 38 small C/I | • 73 small C/I* |

*The sum of nonparticipant surveys in this table does not equal the number of nonparticipant surveys completed. One survey could account as a nonparticipant for up to two programs (e.g., City of San Diego nonparticipants may also be eligible to participate in the SDCWA program).

## 3.3    SECONDARY DATA ANALYSIS ACTIVITIES

In addition to conducting primary research, PA's evaluation team reviewed a significant number of background documents and reports on individual programs and the portfolio overall. The materials reviewed include:

• SDG&E's filings with the CPUC regarding its 2006–2008 program portfolio

• The relevant Program Implementation Plans

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[8] For more details about the sample and response rates, see Appendix C.

**PA**

- SDG&E's quarterly and monthly reports on the Energy Efficiency Groupware Application (EEGA) website

- All program application materials and tracking systems

- Program marketing materials, where appropriate

- Program forms

- Evaluation reports from the 2004–2005 program cycle, when available

## 4.    PORTFOLIO-LEVEL FINDINGS

This chapter presents the portfolio level data for 2006–2008 SDG&E Local Government and Institutional Partnership programs. First, the portfolio-level findings regarding direct resource savings are presented for the overall portfolio and then comparatively by partnership program. Subsequently, ratings on the partnership are compared and detailed participant and nonparticipant survey results are presented.

### 4.1    ENERGY AND GAS SAVINGS FOR SDG&E PARTNERSHIP PROGRAM PORTFOLIO

#### 4.1.1    Overall Progress of SDG&E Local Government and Institutional Partnership Program Goals

The SDG&E partnership programs are well on their way to meeting both their net summer peak kW savings and net kWh savings for the 2006–2008 cycle. By May 2008, with 30 of the 36 months of the cycle past (83 percent of the cycle), kW savings goal was 78 percent met and KWh savings goal was 84 percent met (See Figures 4-1 and 4-2 respectively[9]).

**Figure 4-1 Progress Towards New Summer Peak kW Goals for SDG&E Partnership Programs**



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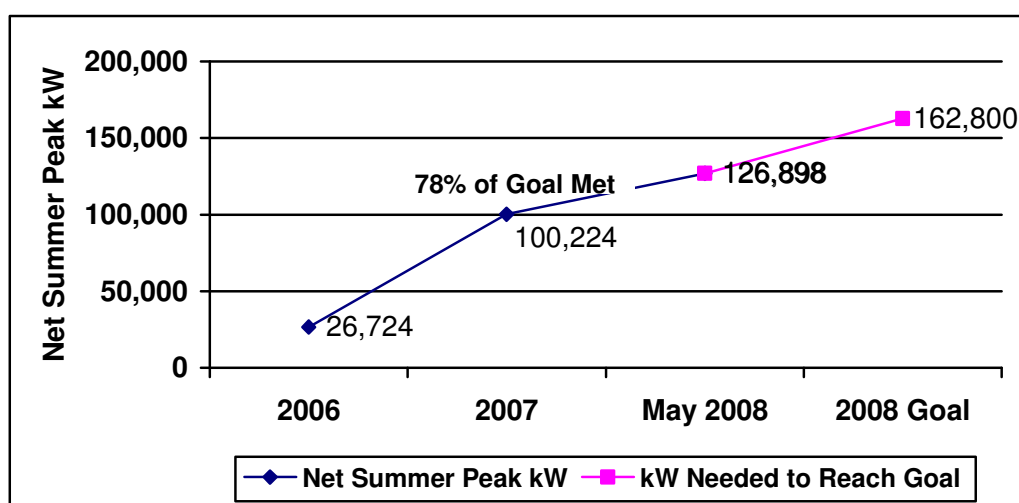
[9] San Diego Gas & Electric Company 2006–2008 Portfolio Summary Report. May 2008. Table 1-5, Portfolio Impacts-Cumulative.

**Figure 4-2 Progress Towards kWh Goals for SDG&E Partnership Programs**
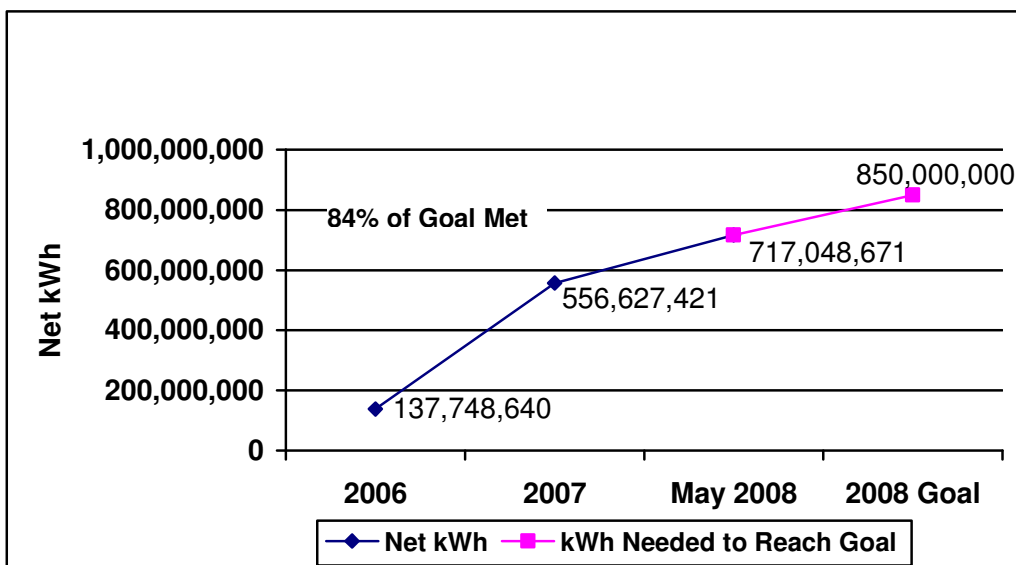


Unfortunately, SDG&E's partnership programs gas-savings goals fell considerably short. By May 2008, a cumulative total of 5,228,218 therms had been saved, only 55 percent towards its cycle goal of 9,500,000 (See Figure 4-3). This low percentage rate is due primarily to the unrealistically high gas-savings goals set for the CCC Partnership Program, which is discussed further in Chapter 6.

**Figure 4-3 Progress Towards Therms Goals for SDG&E Partnership Programs**
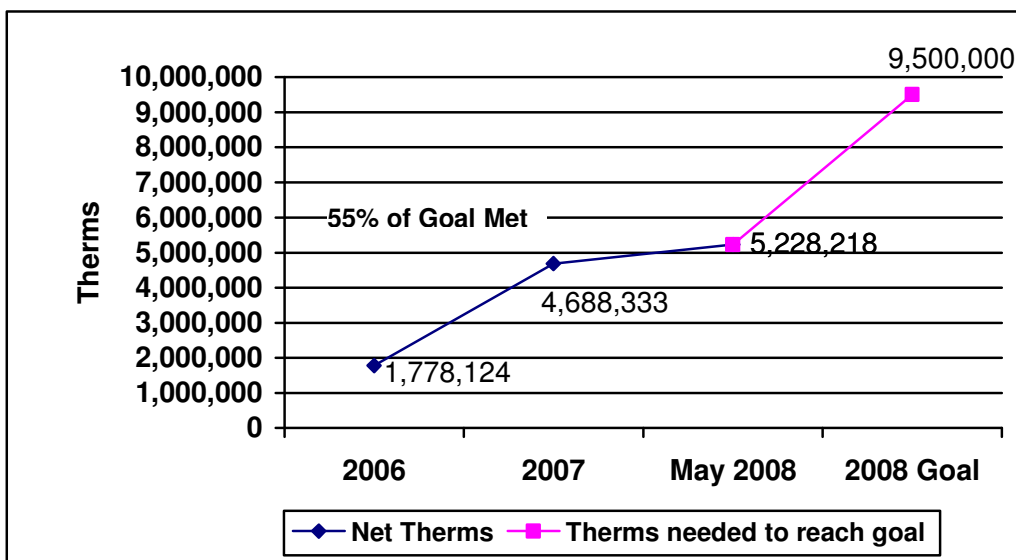
### 4.1.2 Progress of Individual SDG&E Local Government and Institutional Partnership Programs Toward 2006–2008 Goals

Figures 4-4 to 4-8 show the status of SDG&E's programs against their budgets, kW savings goals, kWh savings goals, and therm goals. [10] The figures present the cumulative state of expenditures and savings goals as of May 2008 in relation to the 2006–2008 partnership program budget and goals. As this section shows,

- UC/CSU is the most consistent in its progress towards 2006–2008 program goals

- The City of Chula Vista and the City of San Diego are both on target to meet their program goals and have drastically exceeded the gas-savings goals

- CCC and CDCR programs have not faired as well and face significant challenges to meeting the cycle goals

- In terms of gas savings, SDCWA has made progress, but not as much as initially projected.

Figure 4-4 shows expenditures per program relative to their budget for the 2006–2008 cycle as of May 2008. Overall, SDG&E partnership programs are significantly under budget considering the cycle is over 80 percent completed. Only UC/CSU, SDERC, and SDCWA have spent significant amounts of their total budgets. The rest of the programs have not spent even half of their budgets. This is particularly notable for CCC, which has a total budget of six million dollars for which less than three million has been spent. On the other end of the spectrum, CDCR has one of the smallest budgets and has hardly tapped into the available funding.

**Figure 4-4 SDG&E Partnership Program Expenditures Against Budgets**
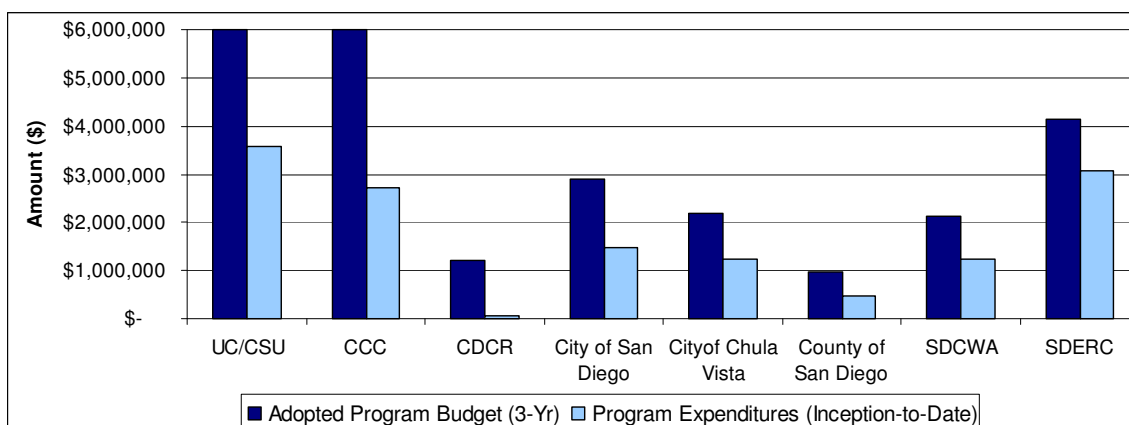


Six of the eight programs have specific resource savings goals. The partnership programs at UC/CSU, CCC, CDCR, City of San Diego, and City of Chula Vista all have both energy and gas-savings goals. San Diego County Water Authority has gas-savings goals only.

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[10] Since not all programs have resource goals, the figures include only those programs for which a particular metric is relevant.

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The County of San Diego and the SDERC as primarily educational programs have no specific energy or gas-savings goals.

In reviewing the data available by May 2008, SDG&E's 2006–2008 Local Government and Institutional Partnership programs portfolio is in line to meet resource savings goals in half of these programs. As Figure 4-5[11] illustrates, the City of Chula Vista has already surpassed their summer peak kW savings goals and the City of San Diego is very close to meeting its goal. UC/CSU is on target to meets its goals. CCC has seen some kW savings but is not on track to meet its goals. CDCR has made no summer peak kW savings during the 2006–2008 cycle.

**Figure 4-5 SDG&E Partnership Program Net Summer Peak Reduction Goals Against Installed and Committed Savings as of May 2008**
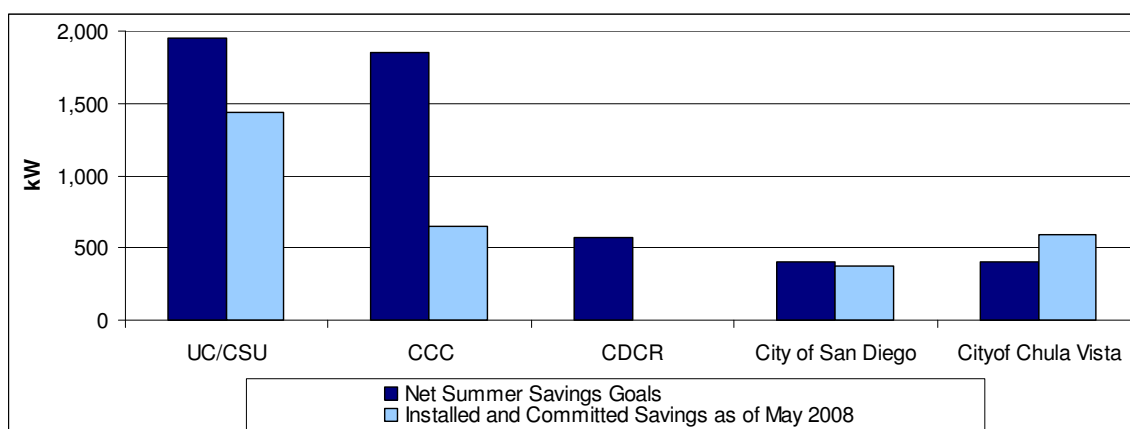


A review of the net annual kWh savings shows a slightly different story (Figure 4-6). In terms of net annual kWh savings, UC/CSU has surpassed its annual energy-savings goals. Both the City of Chula Vista and the City of San Diego are making progress towards their goals and again both CCC and CDCR are falling behind.

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[11] No data is present on kW savings for the County of San Diego, San Diego County Water Authority, or the California Center for Sustainable Energy. These three programs are educational and voucher based, thus none have kW savings goals.

**Figure 4-6 SDG&E Partnership Program Net kWh Savings Goals Against Installed and Committed Savings as of May 2008**
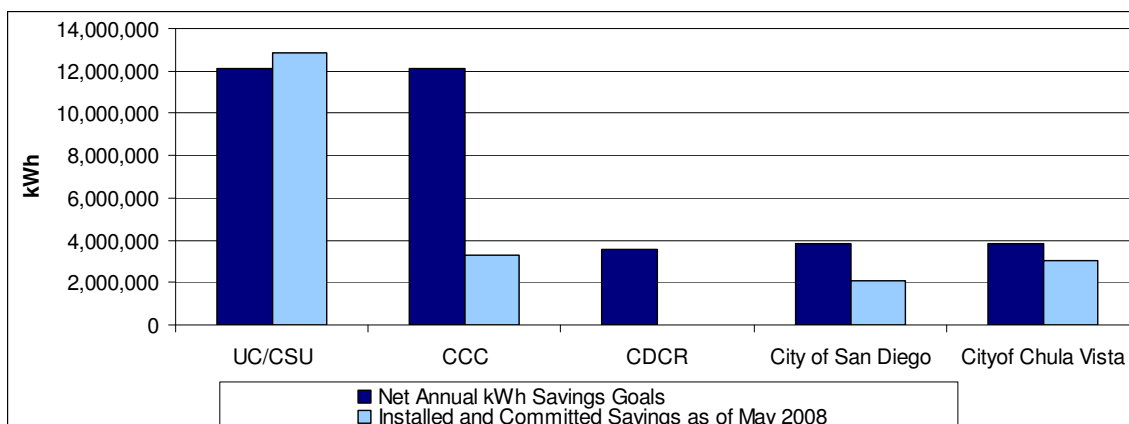


Figure 4-7 details the net annual therms gas savings in relation to program goals. The City of Chula Vista and the City of San Diego show tremendous success by exceeding their projected gas savings by a factor of two. UC/CSU is also on track to meet its gas-savings goals by the end of the cycle.

Poor progress is again seen by CCC and CDCR. SDCWA shows some gas savings but, in relation to its original goals, the savings is low.

**Figure 4-7 SDG&E Partnership Program Net Therms Savings Goals Against Installed and Committed Savings as of May 2008**
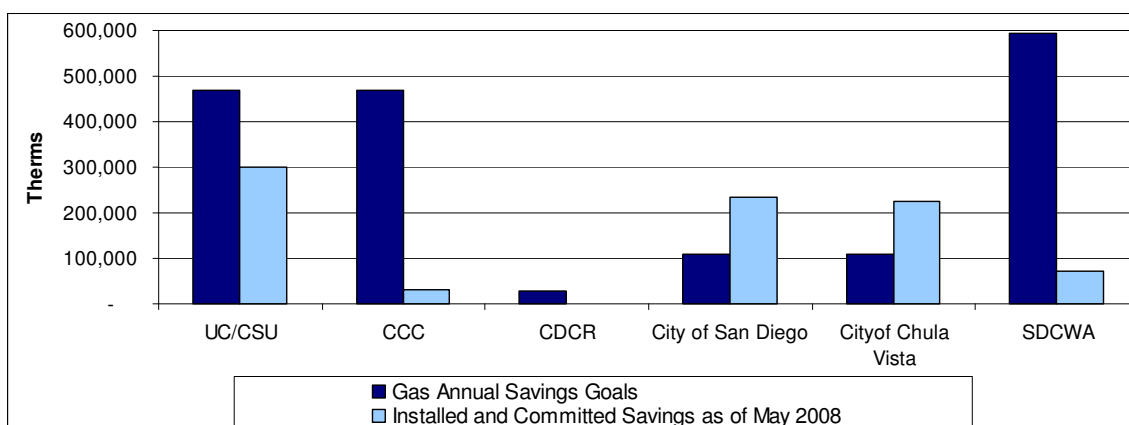


## 4.2    PERCEPTION OF PARTNER AND SDG&E PARTNERSHIPS

PA asked both utility staff and partners to rate the partnerships on a scale of one to ten—one means the utility is doing most of the implementation work and ten means the partner is doing most of the work. Figure 4-8 documents the results of this question. In cases where only the partnership line is evident, both SDG&E and the partner gave the same rating.

In most cases, the ratings are strikingly similar. The partnerships that are working best received a "five" from both partners, indicating that both play roughly equal roles.

Two programs stand out in their divergence in partner and SDG&E ratings: SDERC (denoted as CCSE in the graph below) and the County of San Diego. Evaluation efforts found that there were significant discrepancies in partner understanding of who is doing the majority of the work. Additionally, as discussed in individual chapters, these two programs exhibited less coordination than other programs.

**Figure 4-8 SDG&E and Partner Ratings of Program Management.[12]**
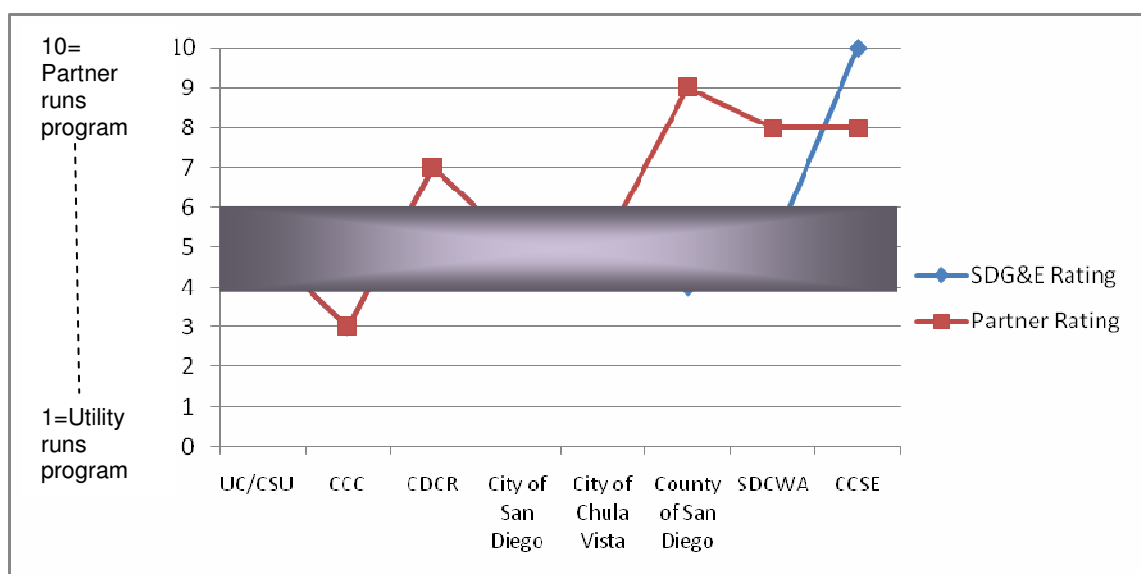


## 4.3    SUMMARY SURVEY FINDINGS

This section presents findings from a survey conducted with SDG&E's residential and small business customers. Both participants and nonparticipants of the various Local Government and Institutional Partnership Programs are represented.

### 4.3.1    Reliable Providers of Services and Information

PA asked all survey respondents about their preferences for energy-efficiency services and information (Figure 4-9). All respondents indicated that they believe SDG&E to be the most reliable source of services and information, more reliable than either the local government or a non-profit. Participants and nonparticipants interviewed did not show a difference in preference regarding the provider of energy-efficiency services or information, and are therefore represented in aggregate.

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[12] These rating are from the in-depth interviews with SDG&E and Partner interviews. See Table 2-1 for numbers of staff members interviewed for each Partnership Program. Although the number of staff members giving ratings for each program is small, the staff members who were interviewed were the most active and involved staff in running of the Partnership Programs and have the best perspective on the program management.

Forty-seven percent of residential survey respondents prefer to receive energy-efficiency services from SDG&E. Twenty five percent prefer to receive services from a local government or nonprofit. However, a significant percent of customers did not have a preference about the provider of energy-efficiency services (28 percent).

Similarly, nearly half of commercial respondents surveyed (47.8 percent) would prefer to receive energy-efficiency information and services, such as those offered in the partnership programs, from the utility. Fifteen percent would prefer to receive information from local government, fourteen percent from a non-profit group, and fifteen percent does not have a preference.

**Figure 4-9 Respondent Preference for Source of Energy-efficiency Services**
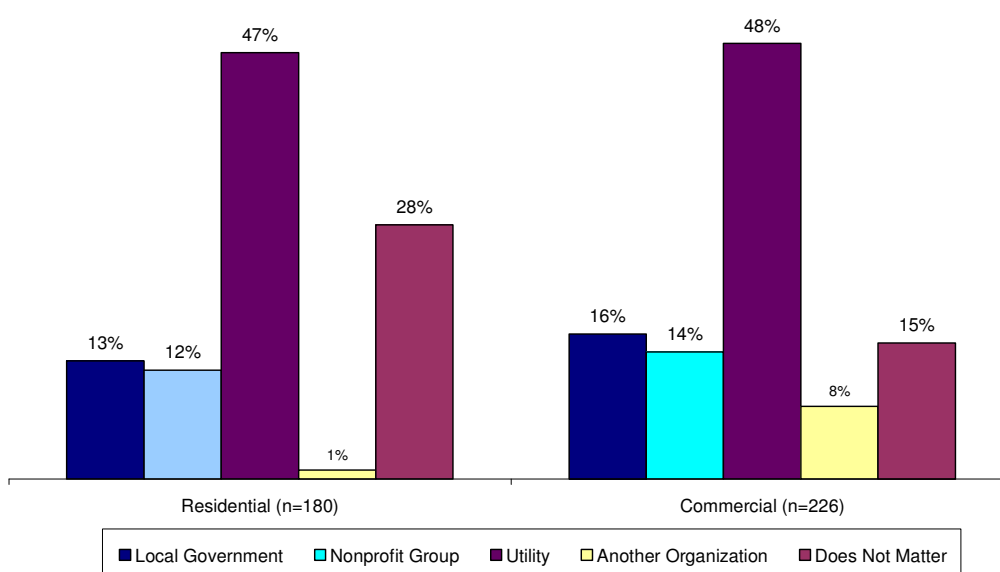


When asked if various organizations differed in their ability to provide energy-efficiency information and services, over half agreed there was a difference (52.5 percent). According to one residential customer:

> *"SDG&E would be more knowledgeable about how energy is consumed, whereas the government is just aware of how much energy is consumed, but may not know the best way [to conserve it]."*

Small business customers voiced the same sentiment, with nearly half of these respondents preferring to receive information related to energy efficiency and water conservation from a utility. According to two commercial customers:

> *"The utilities are a reliable source. I think non-profit and government are inefficient and less able to provide quality compared to a for-profit utility."*

> *"Utility has more experience with being able to answer questions or provide services "*

4-7

On a more cynical note, one small business customer said, "they all have a different financial reason for giving us the information."

Commercial customers also were further asked to indicate their confidence in the accuracy of information they might receive about saving energy from the utility versus another type of organization (see Figure 4-10). Forty-eight percent of commercial respondents said they would be very confident in the information they received from a utility, compared with twenty-nine percent who said they would be very confident of receiving information from the local government or non-profit group.

**Figure 4-10 Commercial Customer Confidence in Sources of Energy-efficiency Information (n=228)**
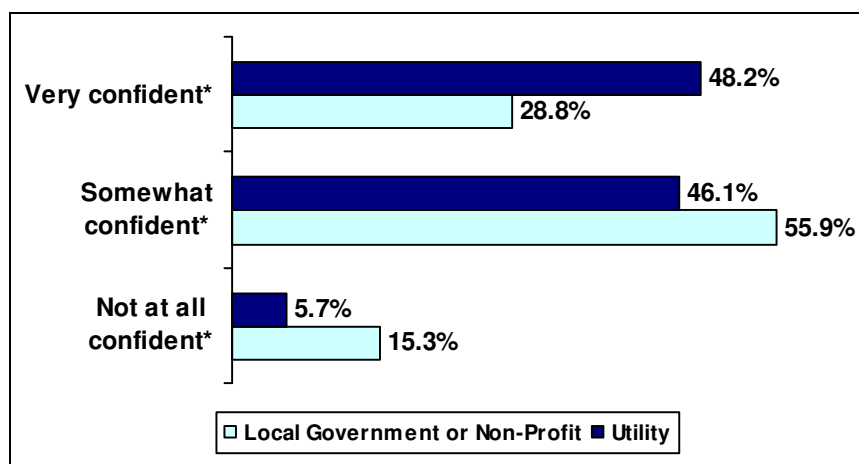


* Differences are statistically significant at the 95 percent confidence interval

About half of the above noted commercial respondents voiced the same confidence level in the utility and local government or non-profit organization. The majority of these respondents said they were somewhat confident (57 percent) or very confident (38 percent).

### 4.3.2 Energy Efficiency of Residential Buildings

Program participants and nonparticipants interviewed claim to have taken a variety of energy-efficiency actions in the past two years (See Figure 4-11). The most common actions taken by both participants and nonparticipants in the partnership programs were Installing CFL or energy efficient lighting, purchasing ENERGY STAR appliances and installing water conservation products.

Nearly a third (30 percent) of the residential customers surveyed who participated in one of the partnership programs say they took action based on information they received via the program. With the exception of adding insulation and installing CFL or energy efficient lighting (only a four percent difference), partnership program participants reported higher levels of implementation of energy-efficiency actions than nonparticipants. The starkest differences were seen in the purchase of ENERGY STAR thermostats (20 percent compared to five percent) and having the HVAC equipment checked for efficiency (30 percent compared to 17 percent).

**Figure 4-11 Residential Customer Energy-efficiency Actions**
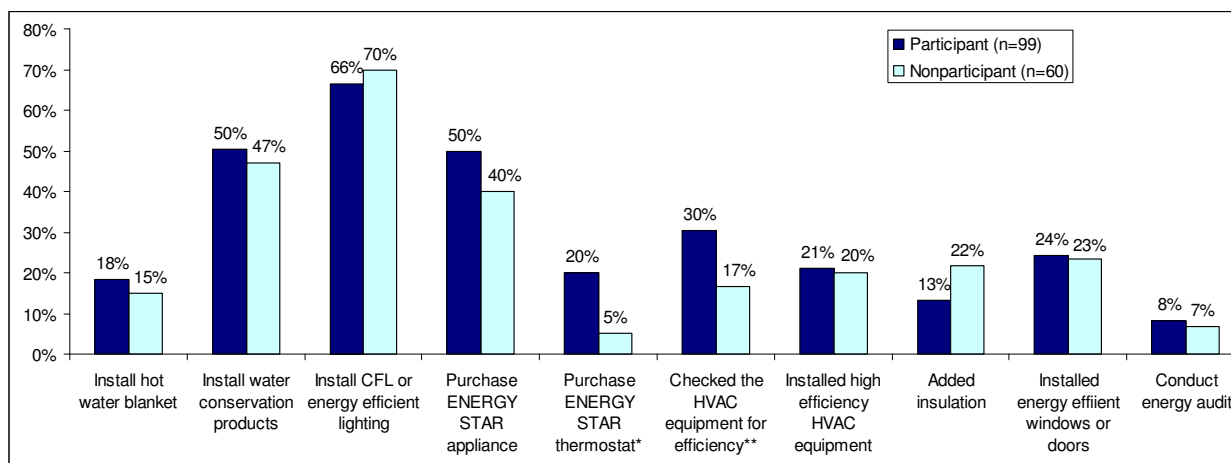


* Difference is statistically significant at the 95 percent confidence interval
** Difference is statistically significant at the 90 percent confidence interval

Those customers who were not in the partnership program were more likely than those customers who participated in the partnership program to either rate their home as not very efficient or very efficient (Figure 4-12). Other than the category "home is somewhat energy efficient," the differences are not statistically significant.

**Figure 4-12 Residential Customer Evaluations Efficiency of Home**
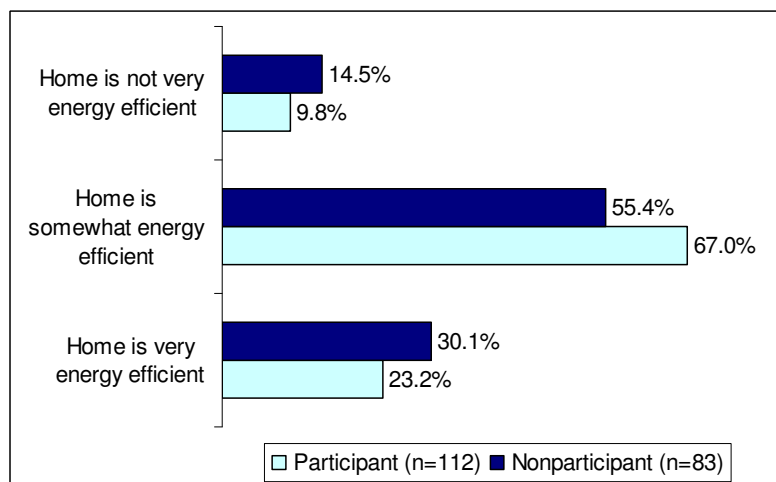


### 4.3.3 Sources of Information

Residential customers who participated in the CFL exchange programs and the HEW program were asked about how they heard about the programs.

How customers learned about the CFL exchange programs in the City of San Diego and the City of Chula Vista varied. Nearly 44 percent of the participants in the City of Chula Vista CFL exchanges learned about the exchange through a bill stuffer or mailing,

whereas only 18 percent of the City of San Diego CFL exchange participants surveyed learned about the program through mailings or bill stuffing. While mailings and bill stuffers have been the most effective way to reach Chula Vista participants, City of San Diego participants are more likely to have learned about the CFL exchanges through their place of work, the aquarium, or from a TV spot (55 percent cited "other" in response to this question). The second most effective method for the both the City of San Diego and the City of Chula Vista Partnership Programs was newspaper articles.

Not surprisingly, most participants in the SDCWA partnership (79 percent) learned about the partnership at the point of purchase (e.g. through a store or retailer). Considering the program is primarily a voucher program for energy efficient washing machines, this makes sense.

**Table 4-1 Percentage of Partnership Program Participants, According to Program and Source of Initial Information about Program**

|  | Store or retailer | Friend or neighbor | Mailing or bill stuffer | Newspaper Articles | Other |
|---|---|---|---|---|---|
| City of San Diego (n=38) | NA | 8% | 18% | 18% | 55% |
| City of Chula Vista (N=41) | NA | 12% | 44% | 15% | 29% |
| SDCWA (n=38) | 79% | 11% | 8% | 0% | 8% |

### 4.3.4    Customer Satisfaction

Participants generally voiced high levels of satisfaction with the programs. When asked to rate their satisfaction, the majority of residential respondents said they were very satisfied. The average rating fell between 4.6 and 4.9 on scale of one to five, where five is "very satisfied." Furthermore, all of the residential participants interviewed said they were either more satisfied or just as satisfied with the SDG&E partner organization as a result of the program experience. The City of Chula Vista participants were most likely to say they were more satisfied with the City than before the program experience (80 percent).

Commercial customer ratings for the pre-rinse spray valve installation program, the CFL exchange program, and the SDERC workshop were all very positive as well. Participants interviewed from the two City partnerships are very satisfied with the pre-rinse spray valve program. On a scale of one to five, where five is "very satisfied," participants in the City of Chula Vista's program rated it 4.8; participants in the City of San Diego program gave it a rating of 4.5. Participants interviewed from the SDERC workshops gave the workshops an average rating of 4.1.

### 4.3.5    Nonparticipant Interest in Program

As part of the nonparticipant survey, PA's researchers described the program and asked nonparticipants if they had heard of it. As Table 4-2 below shows, commercial respondents were more likely to have heard of the program than residential customers.

**Table 4-2 Percentage of Partnership Nonparticipants Interviewed Aware of Program**

| Program | Residential Respondents | Commercial Respondents |
|---|---|---|
| City of San Diego | 30% (n=40) | 46% (n=35) |
| City of Chula Vista | 47% (n=36) | 19% (n=32) |
| SDCWA | 9% (n=86) | NA |
| SDERC | NA | 0% (n=73) |

The table above represents the respondents that said they heard of the program but did not participate (hence a nonparticipant group). However, two percent of residential and eight percent of commercial nonparticipants contacted said they participated. A comparison of these individuals with the program databases did not yield a match and confirm their participation. This finding indicates some level of confusion with respondents, either in understanding the program offerings or confusing the program with another SDG&E program offering.

Researchers then asked about nonparticipant level of interest in participating in the program. In general, nonparticipants interviewed showed a moderate level of interest in the respective programs. Approximately two-thirds of these households eligible for the CFL-exchange component of the City of Chula Vista and City of San Diego programs were either very interested or somewhat interested in participating. Those who said they were not at all interested were asked for the reason for their disinterest. The most common response was the belief that they do not need a CFL. Survey respondents did not distinguish the reason why they did not need a CFL.

Nonparticipant interest in the HEW program was somewhat lower than that in the CFL exchange programs. This is to be expected because the HEW program is targeted to a group of households who have an immediate need to be met, one that is less common than that to replace a light bulb. Two-thirds of nonparticipants attributed their lack of interest to not needing to replace their washing machines.

### 4.3.6    Commercial Customers Installation and Purchasing Decisions

PA asked the small commercial customers in the City of San Diego and the City of Chula Vista about the level at which equipment purchase and installation decisions are made in their organizations. It was rare that decisions were made at the regional level. Most decisions were made at the corporate level or the local and location level.

**Table 4-3 The Level At Which Decisions To Install And Purchase Are Made**

|  | At the corporate level | At the regional level | At the local level | At the location level | Other |
|---|---|---|---|---|---|
| **City of San Diego (n=36)** | 39% | 3% | 19% | 28% | 11% |
| **City of Chula Vista (n=35)** | 43% | 3% | 9% | 34% | 11% |

## 5. UC/CSU PARTNERSHIP PROGRAM

### 5.1 INTRODUCTION

The UC/CSU program is a statewide partnership program that includes all four of the state's investor-owned utilities as well as all fourteen of the campuses within the University of California and California State University systems. The program offers incentives for energy efficient retrofits and monitoring-based commissioning (MBCx), along with training for campus facility staff.

The UC/CSU program began during the 2004–2005 cycle to overcome the barriers universities faced when trying to participate in utility energy-efficiency programs. The program's success during the 2004–2005 program cycle led to the program's inclusion during the 2006–2008 program cycle and inspired creation of the CCC and CDCR Partnership Programs described in Chapters 6 and 7.

The program is one of the more ambitious partnership programs, with a significant statewide 2006–2008 budget of $40 million, $6 million of which is allocated to SDG&E. SDG&E's goals for the 2006–2008 program are equally ambitious, particularly since there are only three UC/CSU facilities within SDG&E's service territory: the University of California, San Diego (UCSD), San Diego State University, and the UCSD Medical Center. The 3-year net goals for SDG&E are a savings of kWh 12,140,778, kW 1,956, and therms 469,704. As of May 2008, the UC/CSU program was on track to meet the kW goals and exceeded the kWh goals.

### 5.2 PROGRAM BACKGROUND AND STRUCTURE

#### 5.2.1 Program Description

The university systems are run out of central offices—the University of California Office of the President (UCOP) and the California State University Chancellor's Office (CSUCO). Both central offices are directly involved in developing system-wide budgets and work closely with the respective campuses in each system. SDG&E has one staff person dedicated to the UC/CSU and CCC Partnership programs.

The program concept includes three major components—energy-efficiency retrofits, monitoring-based commissioning, and energy-efficiency education and training.

1. **Energy-efficiency retrofits.** Retrofit efforts include lighting and controls, HVAC systems, and energy management controls. According to interviews, the majority of the savings are realized through the retrofit component of the program. Retrofits need to be deemed cost-effective to be considered for installation.

2. **Monitoring-based commissioning (MBCx).** The monitoring-based commissioning reviews building operations and installation of the equipment. The service goes beyond this traditional definition in several ways. First, the installations provide a built-in measurement and verification capability. Additionally, it provides education necessary to identify further energy-efficiency investment opportunities and become a "continuous commissioning" program and sustain savings.

3. **Energy-efficiency education and training.** This non-resource component of the program provides education and information dissemination to UC/CSU campus managers, project managers, and staff. The partnership's training component has three sub-components:

    a. Courses held directly by the partnership, most of which are run internally on the campuses on such issues as MBCx

    b. External courses on such topics as LEED and Building Operator Certification (BOC), for which participants are reimbursed

    c. Attendance at the annual sustainability conference, at which one campus receives an annual best practices award.

The UC/CSU partnership is supervised by a management committee that consists of representatives from each of the four utilities, the UCOP and the CSUCO. SCE, as lead utility, employs the statewide program administrative manager. The firm of Newcomb, Anderson, McCormick (NAM) was hired as the program administrative manager through a competitive bidding process. NAM coordinates bi-weekly management meetings with the management committee via teleconference and in-person meetings every few months.

Campus facility managers identify potential projects on their campuses, and then work with the UCOP and the CSUCO to obtain funding. The partnership pays up to 80 percent of the cost, depending on the energy savings associated with qualifying measures. The remainder comes from the campus budget.

Once the UCOP/CSUCO has signed off on a potential project, it goes through a due diligence review by SDG&E. The results of that review then go back to the campus, and any proposed project over $70,000 receives a pre-inspection. The next step is a review by the full management team, which must approve the project before work begins. Once the project has been approved, SDG&E signs an agreement with the campus, and work proceeds on the project. The agreement includes a schedule. Campuses receive 60 percent of the projected rebate when work begins, and 40 percent after the project has been completed and passed inspection.

### 5.2.2 Program Logic Model and Implementation Theory

According to the logic model illustrated in Figure 5-1 below, the UC/CSU's main activities include education, training, and energy projects. These activities are to result in six outputs: (1) a best practices manual, (2) training via workshops, (3) outreach programs on all 14 campuses, (4) development of an Energy Services Company (ESCO) infrastructure, (5) project file review, and (6) paperwork and incentive facilitation.

**Figure 5-1 UC/CSU Logic Model**
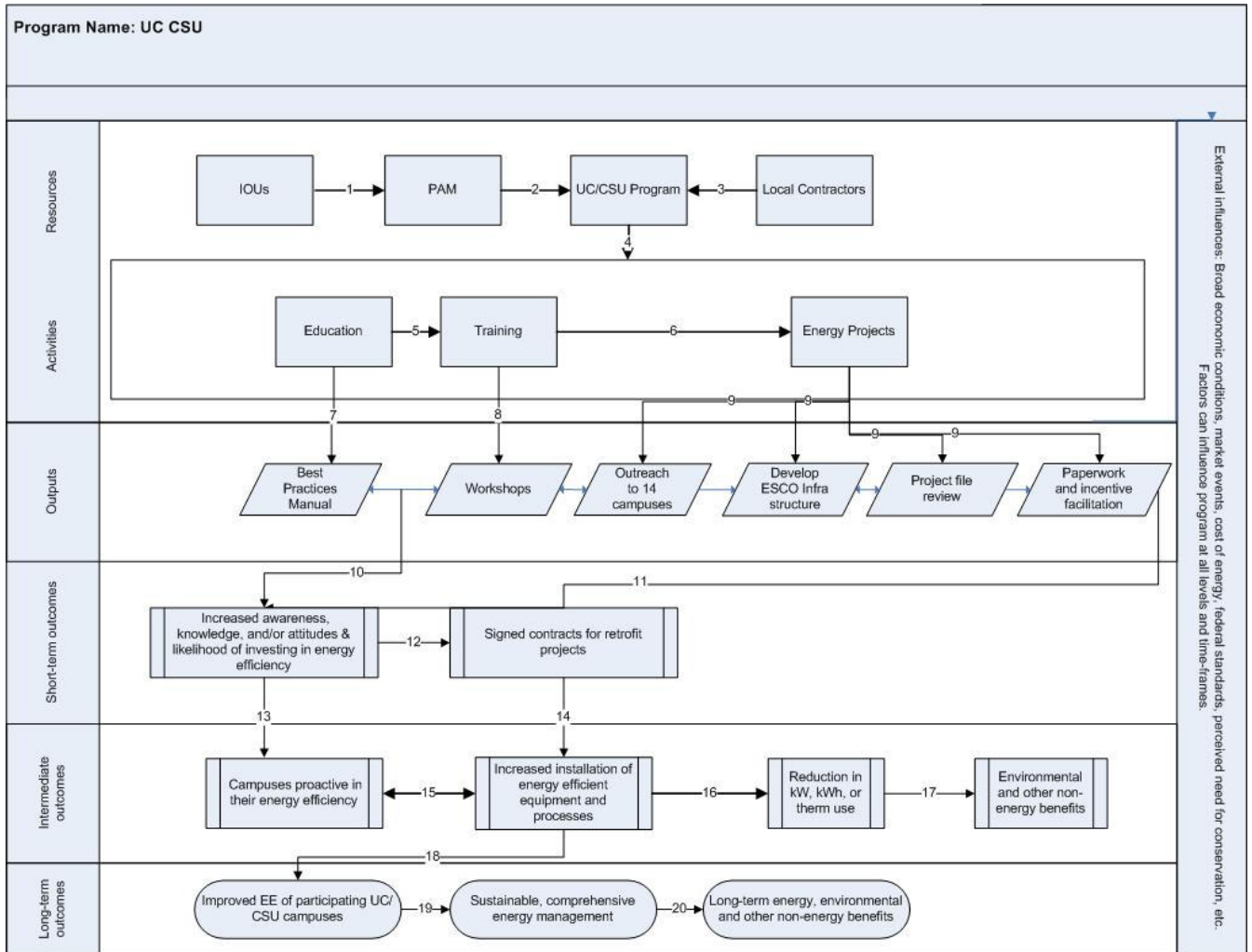
### 5.2.3    Data Tracking

NAM is responsible for maintaining the program tracking system and database. The tracking system details the status of projects over the life of the cycle. All partners have access to the project tracking system, but its use varies by utility. SDG&E updates its own information, while other utilities rely on NAM to enter information about projects within their service territories.

The online tracking system includes a document library with all program records, and a system that tracks each project's progress from design to completion. Partners can use it to run a variety of reports at any time. SDG&E's program manager also maintains her own internal spreadsheets for projects within SDG&E's service territory.

### 5.3    FINDINGS

***The program is on target in terms of its kWh, kW and therms savings goals.***

A review of the May 2008 Report on the EEGA website shows that the UC/CSU expects to exceed its energy saving (kWh) goals and nearly three-quarters of the way to reaching its demand (kW) goals and two-thirds of the way to meeting its therms goals. This analysis is based on the values provided in the "Total commitments" column (inception to date). In terms of budget, UC/CSU has spent or committed around 80 percent of its budget for the cycle.

***The UC/CSU Partnership program, recognized by a national organization as an exemplary program, is well subscribed to in terms of education components of the program.***

The UC/CSU Partnership program is running well. It has been written up as an ACEEE *Exemplary Energy-efficiency Program*[13]. According to the report, "The program is effectively transforming the California commissioning marketplace as many of these professionals [referring to engineers, consultants, and campus facility staff] have carried their knowledge and experience into other market sectors." ACEEE lauds the program for providing the nation's most comprehensive energy-efficiency program serving the higher education sector.

Campus participation in the internal partnership-offered training courses as well as external course offerings marketed and reimbursed by the partnership totaled approximately 2,045 person-days of training through December 2007. Most programs are oversubscribed, which indicates the high level of demand from the campuses for the training. Campus facility managers indicated that the building operator training, in particular, is one of the partnership's most valuable opportunities, and that they would like to see more opportunities to offer that course to participants.

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[13] York, Dan, Marty Kushler, and Patti White, "Compendium of Champions: Chronicling Exemplary Energy Efficiency Programs from Across the U.S." Published by American Council for an Energy Efficient Economy, Report Number U081 (February 2008).

5-4

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The program is growing to such a degree that the plan is for funding levels to increase significantly in the next program cycle. Discussions revealed that funding could increase significantly from $30 million across the three-year program to $30 million annually. Both the UC and CSU representatives welcome the potential expansion and believe the strong working relationships that exist today will pave the road for greater savings during the 2009–2011 program cycle.

### The UC and CSU representatives expressed high satisfaction for SDG&E, NAM, and the program in general.

SDG&E received high marks from the two university systems for working with them as a full partner. Representatives from both CSU and UCSD said they would not be able to provide the same services without the partnership, and that the utility funding has produced energy savings that would not otherwise have been captured.

A UC representative described SDG&E as "the most helpful (IOU) and assertive in getting things done." Furthermore, the representative said that San Diego campus is the University of California's "pride and joy because it's doing so well in the program."

CSU is more reliant on the partnership's technical support, and believes this is a "true" partnership, meaning that they need the technical support the partnership provides as well as the funding.

UCSD believes they could complete much of the work on their own, but also relies heavily on the funding. Despite their belief in being able to complete the work on their own, they are pleased about how the partnership is working.

Representatives from SDG&E, UCSD, and CSU all believe the partnership management team and the NAM executive team work well together and all are pleased with NAM's work coordinating the partnership. All of those interviewed thought the solid working relationships contribute significantly to the partnership's overall success.

Discussions about the 2009–2011 cycle have focused on expanding this program significantly. Both the UC and CSU representatives welcome the potential expansion and believe the strong working relationships that exist today will pave the road for greater savings during the 2009–2011 program cycle, particularly in SDG&E's service territory.

### Barriers to program implementation and/or achieving higher level of savings were identified through the research process. The barriers include staffing, funding levels, program cycle, project duration, and new construction needs.

Interviewees identified five additional barriers to program implementation and/or achieving a higher level of savings. The first barrier identified was inadequate internal staffing on campuses. Interviews noted the campus capital staff has many responsibilities, and it is hard to get their attention. Smaller campuses have to hire a third party to do full project design, which takes time and money. Therefore, they would like to see more technical assistance from utilities.

Second, interviewees expressed that it was difficult to get money from the campuses to cover portion of project that the partnership does not cover. The campuses have a fixed

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amount of money to spend on capital improvements annually, so energy projects compete with other non-energy investments for that funding. An advanced/early notification by the utility about the amount of funding available for the next program cycle will help facility managers to better planning of energy-efficiency projects.

The third barrier, an administrative barrier, identified is the length of a program cycle. The time restriction of a program cycle, while not noted as a barrier per se, was discussed by universities as a limitation to the program. Universities would like to see an ongoing program that is not bound by the artificial restrictions of the CPUC's program years. Interviews describe the desire for an "evergreen" program that provides funding on a rolling basis rather than a strict 36-month cycle as currently established. The sentiment is that the program takes a considerable amount of time to ramp up and by the time the program is steadily making progress or worked out any issues it begins to ramp down.

Along the same lines as the program cycle, program partners would like to see a longer project duration period. Projects usually take a long time to develop, at least a year. Therefore, it would be desirable to have a project pre-planning period of one year, submit projects, get them approved, and then roll them into a three- to five-year cycle.

Last, the inability to address new construction needs was cited as a barrier. New construction is provided by a separate program—Savings by Design. According to interviews, there is significant opportunity for the program to address and achieve greater savings from these new construction projects. Interviewees suggested that new construction be an active component of the program. They program is considering incorporating the new construction component for the next program cycle.

## 5.4    CONCLUSIONS AND OPPORTUNITIES FOR IMPROVEMENT

All of those interviewed believe the partnership management team and the executive team work well together, and SDG&E's portion of the UC/CSU partnership by all accounts is very successful. Both non-IOU partners interviewed indicated that they would not be able to provide the same services without the partnership, and that the utility funding has produced energy savings that would not otherwise have been captured.

Discussions about the 2009–2011 program cycle have focused on potentially expanding this program significantly. Both the UC and CSU systems welcome the potential expansion, and believe the strong working relationships that exist today will make it possible for the partnership to achieve much greater savings during the 2009–2011 program cycle overall.

Several factors clearly play a role in the program's success.

1. **All of the partners are engaged in and committed to making the program work.** The partnership was able to work out some issues during its initial cycle, leading to a much stronger program overall during the 2006–2008 program cycle.

2. **All partners' roles are defined clearly, and are operating as defined.** Both SDG&E and UCOP have had staff changes during the 2006–2008 program cycle, but those changes did not impact the program negatively because each partner's roles are clear, and new staff stepped right into those roles.

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3. **Regular communication has facilitated program success.** The partnership management meetings initially were held on a monthly basis, but have become bi-weekly as project activity has increased. In addition to the monthly meetings, SDG&E has additional teleconferences with the UCOP and CSUOC and the individual campuses as often as is needed. The frequent communication ensures that any issues that arise are handled quickly and efficiently, thus keeping the program on track to meet its goals.

4. **The program has been able to grow and evolve.** The 2006–2008 program incorporated several changes from the 2004–2005 program, based on the experience gained during the initial two program years.

5. **SDG&E staff work closely with local facilities.** This level of close involvement helped to make the participation as smooth as possible for those facilities.

The program is currently in the process of planning for its next program cycle. Because of the close working relationship between SDG&E and its partners, partner concerns already are being addressed in the 2009–2011 program design. The next program phase is being designed to address feedback from the universities about how the program could be still more effective.

For example, during the 2006–2008 cycle any new construction on a UC or CSU campus falls under a separate Savings by Design program rather than under the partnership program. In the next program cycle, it has been suggested that new construction be included in the partnership program, allowing the universities to address the efficiency of all facilities—both new and existing—through one program.

The partnership also is examining how best to meet the universities' request for an "evergreen" program, which will provide funding on a rolling basis rather than the strict 36-month cycle. This approach will better match campus planning cycles rather than being tied directly to the CPUC's defined program periods.

## 6. CCC PARTNERSHIP PROGRAM

### 6.1 INTRODUCTION

The California Community Colleges (CCC) Partnership program is a nonresidential program, first established in the 2006–2008 program cycle. The CCC program is a statewide partnership program that includes all four of the state's investor-owned utilities. SDG&E is the lead utility for the CCC Partnership program.

The momentum for developing the CCC program came from the success of the 2004–2005 UC/CSU program. CCC was designed to follow the UC/CSU model, with a central management committee that would work with the Community College Chancellor's Office (CCCO) to promote energy efficiency at the state's 109[14] community colleges. CCCO opted to participate in the partnership program because of its comprehensive approach to energy efficiency.

The CCC system is not organized centrally, thus each community college manages its participation in the program individually. Currently, 54 of the community colleges are participating in the program.

### 6.2 PROGRAM BACKGROUND AND STRUCTURE

### 6.2.1 Program Description

California's Community Colleges have $18 billion in public bond funding to spend on improving the facilities of CCCs. The funding will, among other improvements, support retrofit and new construction projects over the next ten years.

The CCC Partnership program was developed to incorporate energy-efficiency efforts into these planned retrofit and new construction projects. It is set up similar to the UC/CSU Partnership with a management committee that includes the four participating utilities, the CCCO, and the program administrator. Newcomb, Anderson, McCormick was selected to serve as the program administrator through a competitive bidding process similar to the one carried out for the UC/CSU program.

The program concept includes three major components—energy-efficiency retrofits, new construction assistance, and energy-efficiency education and training. One additional component is presented separately in this discussion—monitoring-based commissioning.

1. **Energy-efficiency retrofits.** The program meets with community college district administrative and facility staff to identify potential energy-efficiency opportunities. The program also directs participants to incentive resources that will help offset the costs of the investments. Examples of retrofit opportunities include lighting retrofits (T5 technology, LED applications), lighting control applications, and HVAC upgrades.

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[14] The number of campuses reported varies by source and tends to range from 109–110 campuses. (E.g., program logic paper, Quarterly report, "California Community College Partnership Program Sustainable Collaborative Presentation" from 2006).

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2. **New construction assistance.** As outlined in the program concept, this element of the program will help community colleges in designing their new construction projects to be in compliance with Title-24 minimum standards. This assistance was to include design review, development of design guidelines, and incentivizing of the incremental costs of energy efficiency in these new construction projects. New construction, while included in the program concept, is in practice not offered by the program. As discussed in the "Key Findings" section below. Savings by Design addresses the new construction needs.

3. **Energy-efficiency education and training.** The program offers training opportunities to CCC staff and project managers. The trainings piggyback on training opportunities offered through the UC/CSU program. The subject matter of the trainings is determined by the needs of the campuses participating in the program.

4. **Monitoring-based commissioning (MBCx).** Not detailed as a separate line item in the program implementation plan, monitoring-based commissioning ensures that the facilities are operating at an optimal energy-efficiency level. Additionally, it provides opportunities to identify further energy-efficiency investment opportunities. The monitoring-based commissioning component of the program is deemed as a pilot, and has not yet resulted in significant energy savings. The *First Quarterly Narrative Report* from 2008 noted the program had several projects approved at campuses, which included two MBCx workshops to provide information related to program requirements and promote program participation.

The partnership's focus in the 2006–2008 program cycle has been almost completely on developing retrofit projects. Savings for new construction projects are being recognized under the Savings by Design program.

The CCC Partnership program was designed with the assumption that the CCCO would be able to play a role similar to that played by the UCOP and CSUCO with the UC/CSU Partnership. In this role, the decision-making and management is centralized. However, the community colleges have a decentralized, district-based structure, in contrast to the UC/CSU centralized decision-making structure. The lack of centralization has posed a challenge to the partnership overall in terms of reaching the individual community college campuses. Campuses must be contacted through their districts, each of which has its own elected Board of Governors. The Board of Governors is the decision-making entity on program participation. And while the CCCO can advertise the program, it has no direct influence on participation.

### 6.2.2    Program Logic Model and Implementation Theory

Figure 6-1 shows the program's overall program theory and logic model. The program theory and logic model is identical to the UC/CSU program. The major activities are education, training, and energy projects. These activities are to result in six outputs: (1) a best practices manual, (2) training via workshops, (3) outreach programs on all 54 campuses, (4) development of an Energy Services Company (ESCO) infrastructure, (5) project file review, and (6) paperwork and incentive facilitation.

**PA**

**Figure 6-1 CCC Logic Model**
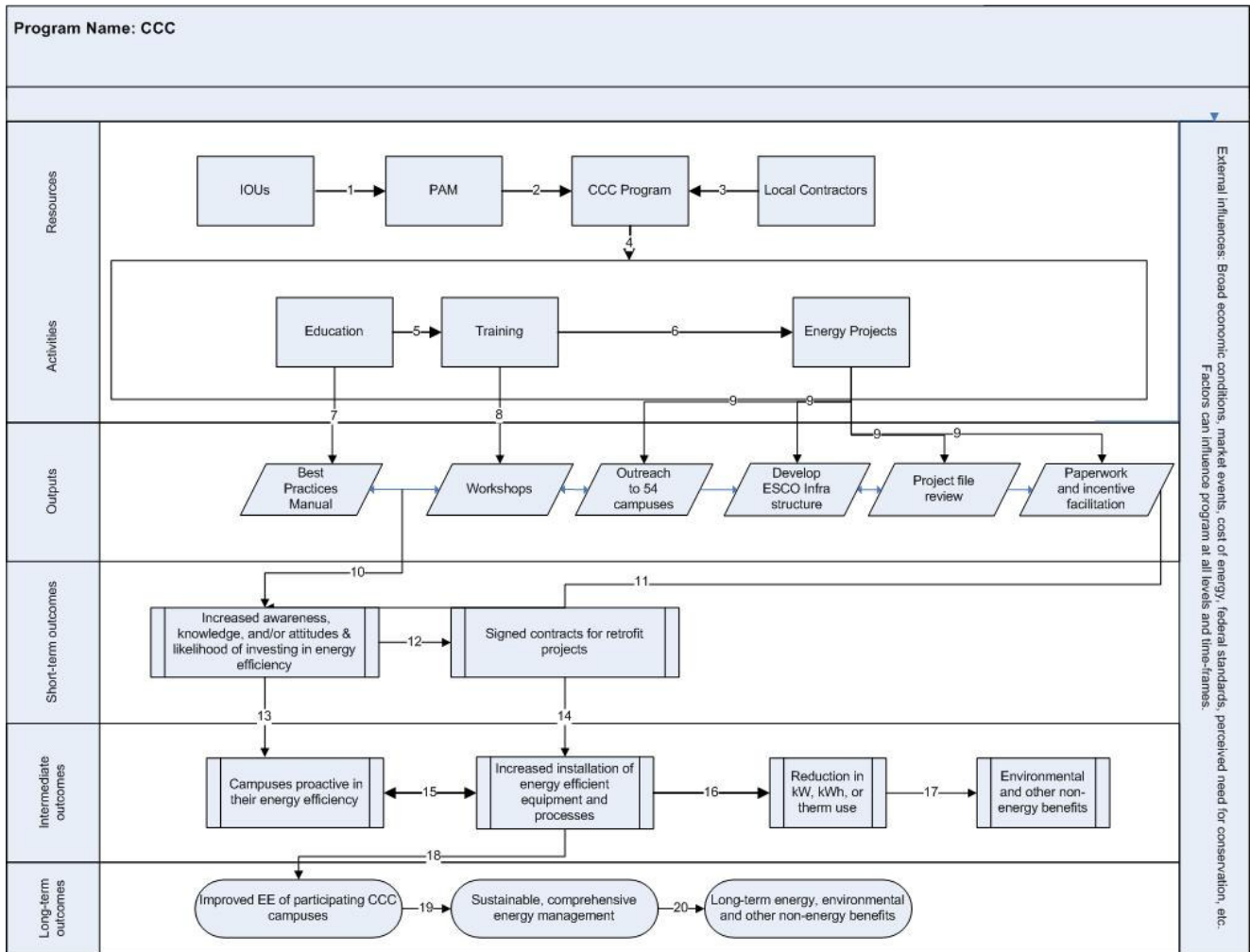


## 6.3    KEY FINDINGS

***SDG&E is not on target to meet its energy, demand, and gas-savings goals by the end of the program cycle. The evaluation found that SDG&E's goals were unreasonable, as they did not consider campus energy use.***

The SDG&E CCC Partnership goal for the 2006–2008 cycle is energy savings of 12.1 million kWh, 1.9 MW of peak demand, and nearly 470,000 therms. As of May 2008, the program reported energy savings of 1.9 million kWh, which amounts to 16 percent of the total program goal. An additional 1.4 million kWh are committed. The program will reach 27 percent of its kWh goals if these committed savings are realized in this program cycle.

The program also claimed 651 kW and 31,000 therms savings as of May 2008. This figure takes into account both committed and installed savings. If all these savings are realized,

the program will reach 35 percent of demand and seven percent therms savings by the end of the program cycle.

SDG&E's goals for this program were not reasonable, and appear to have been set using the UC/CSU goals as a reference rather than by considering the community college campus' actual energy use. For example, for SDG&E to meet its goals, all the community colleges in its service territory would need to save 25 percent of their total electricity usage and 30 percent of their total gas usage. SDG&E is working with the community colleges to save as much as possible within the program period, but will not reach these unrealistic goals.

***Time and staffing constraints within the community colleges hinder the ability for facility managers to support project opportunities through the program. Interviews identified that having a single point of contact would be help support these overtaxed community colleges.***

Community college staff with whom PA spoke indicated that they are pulled in too many directions to devote significant time or resources to exploring energy-efficiency projects. While some community colleges cited financial constraints, most campuses are constrained by the demands on the facility manager. Not only are these facility managers responsible for any projects requiring capital investment, but they are generally also responsible for maintenance projects. The staff constraints, along with the additional funding for community college upgrades, means that there is not significant time to devote to the program. Therefore, it is not surprising that nearly all said that they could not participate in the program without extensive utility support.

Whereas the UC/CSU usually have dedicated energy managers for each campus, the community college campuses tend to have one facilities manager whose job includes, but is not focused on, energy issues. Additionally, community college campuses tend to be more expansive in terms of the physical space they encompass and the location of their buildings, which creates additional time constraints on the facility managers. Therefore, it is often the case that they have difficulty even completing the administration processes.

The result is that the CCC program needs much more time and effort from the program manager for fewer energy savings than does the UC/CSU program. Facility managers voiced that it would be beneficial to them if utility program staff provided a greater level of assistance, particularly early in the planning process.

Interviewed colleges and SDG&E indicate that SDG&E is involved in the process and helps to minimize the administrative burden on the participating community colleges. Once a campus in SDG&E's territory expresses interest in participating, the SDG&E program manager works closely with them to complete all the program paperwork. Because the chief business officers and District Boards are the financial decision makers, the program manager must obtain agreement from both, as well as from the facilities manager, before a project can progress. In many cases, SDG&E's program manager has had to complete the paperwork for them.

**PA**

***Program marketing and outreach has continually evolved throughout the program cycle.***

Program marketing to the community college campuses has evolved since program inception. In 2006, the partnership management team contracted with a non-profit group called the Foundation for Community Colleges to market the program across the state. The rationale was that because the Foundation works with many community colleges on issues like bulk purchasing, its existing relationships could be leveraged to market the partnership. However, at the end of the first year, the Foundation had done little to market the program and the management team had to develop a statewide new marketing and outreach approach.

SDG&E and PG&E relied heavily on the Foundation for marketing and outreach, whereas SCE took a more proactive approach and had an account representative who was dedicated to working with community colleges. This account representative serves as a single point of contact for all the community colleges' needs, including their participation in this partnership. The account representative was able to quickly build on her existing relationship with the community colleges to enroll them in the program. As a result, SCE is the only one of the four utility partners that is likely to meet its 2006–2008 CCC Partnership goals. SCG has benefited from SCE's proactive approach and has revised its own program implementation approach to also involve its key account representatives' more directly.

The outreach efforts are somewhat thwarted by the relatively low value of funds compared to the $18 billion in public funding that the state voted to use for community college upgrades and expansions. Overall, partnership program funding ($22 million total for the state) is a "drop in the bucket" compared to the public funding. In recognition of the greater challenge associated with getting the community colleges involved, the program offers a higher incentive rate than the UC/CSU Partnership, but that rate has not been sufficient to engage the community colleges.

Beginning in 2007, much of the partnership program's statewide marketing and outreach has been done by a representative from the CCCO. SDG&E's program manager[15] also has become more active in reaching out to the community colleges within the utility's service territory in 2007 because of the Foundations failure to market the program. However, the program manager did not start until 8 months into the program and has not had sufficient support from the account managers. The Chancellor's office has helped set up meetings at campuses, but SDG&E staff have assumed most of the burden of helping campuses develop and submit project applications.

***There has been little activity within the training and education component of the program; resource efforts have taken a higher priority.***

The CCC Partnership includes a training and education component similar the UC/CSU Partnership. However, training has been a relatively low priority during this program period compared to meeting resource goals.

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[15] The SDG&E program manager is responsible for both the CCC and UC-CSU Partnerships.

In one example, the management team spent a year working on getting community college districts to adopt the California High Performance Schools system[16], which covers every aspect of operations from landscaping to equipment maintenance and ties in with overall state sustainability and energy-efficiency goals. It became clear after a year that it would take longer than one partnership program cycle for the community colleges to adopt this system, so the management team has instead focused on enrolling community college facility managers in programs offered through IOU-funded Energy Centers. Management team members anticipate that the training will be a greater focus in the partnership's next phase.

Representatives from the community colleges have participated in a large number of sustainability conferences during the 2006–2008 partnership. Facility staff members from the community colleges have attended the annual UC Santa Barbara UC/CSU Sustainability conferences and energy-efficiency related presentations at the annual Community Colleges Facilities Coalition conferences in Sacramento.

Additionally, the management team is discussing how the partnership might be integrated into curriculum development at the individual campus level. One example being considered is training HVAC technicians on energy efficient maintenance.

While training has not played as great a role in this initial CCC Partnership program as initially conceived, several of the staff interviewed strongly believe that the partnership has successfully increased awareness about energy-efficiency issues at the individual district and campus level. They believe this increased awareness will make project implementation easier in the next program cycle.

***Interviews report resource barriers to incorporating partnership and project information into the program tracking database in a timely manner. The program is considering alternative means for collecting and documenting project data, potentially piggy-backing on the current community college database system.***

As is the case with UC/CSU, NAM maintains the program tracking system and database. All partners have access to the project tracking system, but its use varies by utility. The online tracking system includes a document library with all program records and a system that tracks each project's progress from design to completion. Partners can use it to run a variety of reports at any time.

NAM has found it difficult to get timely information from the campuses to put into the database. The original thinking was that the campuses would maintain their own information on the website, but that has not happened because campus facility managers are overextended. The utilities have taken on the responsibility for getting information updates from the campuses, but the campuses do not always respond quickly to requests for updates. Therefore, the information is not as current as is the data on the UC/CSU system.

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[16] "The mission of the Collaborative of High Performance Schools is to facilitate the design of high performance schools; environments that are energy and resource efficient, healthy, comfortable, well lit; and contain the amenities needed for a quality education. CHPS developed the nation's first green building rating program especially for schools." See website for further details: http://www.chps.net/.

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The community colleges have developed their own database system for tracking campus maintenance. The system does not include energy efficiency at this time but does have significant information on campus facilities. CCCO is working with the utilities to get access to this system, which will provide the utilities with information about their local campuses' needs.

***Interviews expressed satisfaction with their relationship with SDG&E. However, these interviews identified barriers to program implementation and/or achieving higher level of savings. The barriers include staffing, funding levels, program cycle, project duration, and new construction.***

The two community colleges interviewed as part of this evaluation expressed their pleasure with their working relationship with the program and SDG&E. They spoke highly about both of the excellent communication and hard work that SDG&E's program manager puts in.

However, interviews also identified barriers to program implementation and/or achieving a higher level of savings. These barriers are similar to those identified for the UC/CSU program. However, it is important to note that while the barriers are similar, due to the high resource constraints discussed earlier in this chapter the barriers tend to be more pronounced for the CCC Partnership.

- Inadequate internal staffing for community colleges. Community colleges are expansive and include many buildings more than the UC and CSU campuses. Interviews with each community college staff confirmed how overextended they are. Therefore, they would like to see more technical assistance from utilities.

- Getting money from the campuses to cover portion of project that the partnership does not cover. The community colleges have a fixed amount of money to spend on capital improvements annually, so energy projects compete with other non-energy investments for that funding. Also, an advanced/early notification by the utility about the amount of funding available for the next program cycle will help facility managers plan for future energy-efficiency projects.

- Length of program cycle. The process findings from the CCC Partnership interviews illustrates why community colleges would prefer the program cycle to be lengthened. It takes time to understand the market it is serving and the culture of the partners and, though the program is modeled after the UC/CSU, the culture and organization of community colleges differs from UC and CSU campuses. By the time the program begins to make progress or work out any issues it will begin to ramp down.

- Inability to address new construction needs. New construction is provided by a separate program—Savings by Design. According to interviewees, there is significant opportunity for the program to address and achieve greater savings from these new construction projects. Interviewees suggested that new construction be an active component of the program. The program identified this as an area in need of change for the next program cycle and is planning to incorporate new construction into its program offerings.

## 6.4    CONCLUSIONS AND OPPORTUNITIES FOR IMPROVEMENT

All parties believe that one of the most effective aspects of this program is the regular and ongoing communication among all the partners. While the partnership continues to identify and address various issues, the strong communication between the partners makes such work possible.

Campuses need help with developing energy-efficiency plans, and with understanding how to incorporate energy efficiency into their existing plans. Building in this type of assistance will increase program effectiveness overall. The Community College central office hopes to work with districts to develop an energy plan that will be reviewed and approved at the central level.

The evaluation process identified several issues that the partnership needs to address for the 2009–2011 program cycle. First, partnership funding levels are not yet high enough to attract community college attention on a large scale. This is not so much an incentive-level issue; rather, it is an issue of whether the funds available to the community colleges are significant enough to get their attention. When they have the extensive funds available and encouraging upgrades to facilities via the public bonds funding, the level of funding offered through the CCC Partnership is not enough to either capture or retain the community colleges' attention.

At the time of this evaluation, the program was developing their 5–7 year maintenance and capital improvement plans. The program uses these plans to develop the 2009–2011 partnership program goals. The colleges expressed that it would be useful to have an understanding of what their budgets would be for the next program cycle so they could plan their energy-efficiency projects accordingly.

Second, community colleges have significantly less resource capacity to implement this partnership than do the UC and CSU campuses on which the program was modeled. This means the utility is required to provide more assistance to the program to help support the resource-constrained facility managers.

Program partners are working together to revise the program for the 2009–2011 program period. The program is already addressing several of the issues identified during the 2006–2008 CCC Partnership in designing the 2009–2011 program.

- The partnership plans to increase education opportunities and provide assistance in developing energy-efficiency plans. The evaluation found campus need for greater assistance with their energy-efficiency plans and direction for how to integrate those activities into their existing plans. Building in this type of assistance will increase program effectiveness overall. The CCCO hopes to work with districts to develop an energy plan that will be reviewed and approved at the central level.

- The 2009–2011 program will include new construction opportunities. Incorporating new construction into the program profile will introduce greater savings opportunities for the partnership.

Program partners are working together to revise the program for the 2009–2011 program period. In addition to the issues mentioned above, PA recommends SDG&E consider the following at the program-level:

1. Increase Community College Account Representative Involvement in the Program. SCE, with its active account representative, is the only utility on track to meet its 2006–2008 CCC Partnership goals. While SDG&E's program manager has done an excellent job of increasing community college involvement since she took over the program in late 2006, SDG&E would benefit from increasing its community college account representative's involvement in the program. If that individual can work with the community colleges to actively identify potential projects, then SDG&E should be able in increase its program energy savings during the 2009–2011 program cycle.

2. Consider adding a program assistant. While the program is considered to be a partnership program, the reality is that the nine community colleges in SDG&E's service territory still need more hand-holding and assistance than one part-time program manager can provide. Having an additional person to support the program manager will help facilitate data gathering and maintenance both at the utility and statewide levels.

At the statewide level, PA offers two suggestions, in addition to those already under consideration, for improving the program in the next cycle:

1. Work with community colleges within each utility service territory to develop and deliver the program's training and education component. Using community colleges to provide training will ensure capacity is built locally, and will provide a model other colleges can adopt.

2. Implement a Peer-to-Peer program similar to the one that is part of the City of Chula Vista Partnership. The CCC Partnership already offers community colleges an opportunity to learn from each other through its participation in the UC/CSU Sustainability conference and the annual Community Colleges Facilities Coalition conference. The partnership can build on that base by matching colleges within utility service territories so that those that are active in the program can provide advice to others that are less active. Such a program will also help to reduce the overall burden on the utility to provide ongoing support to the community colleges, thus helping the program to move in the direction of a more even partnership.

## 7. *CDCR PARTNERSHIP PROGRAM*

### 7.1 INTRODUCTION

The California Department of Corrections and Rehabilitation (CDCR) partnership was a new statewide partnership under the 2006—2008 program cycle, filed by SDG&E with the CPUC as a nonresidential program similar to the existing SDG&E UC/CSU Partnership program. The program offers incentives for retrofit projects, continuous commissioning, and educational training for the facility managers of the prisons and youth facilities.

The CDCR operates 34 adult facilities, 8 youth facilities, and 16 parole offices throughout California, with a combined conditioned space of almost 50 million square feet. One facility is located in the SDG&E service territory, the R. J. Donovan Correctional Facility located south of San Diego. This facility has a capacity of 2,200 inmates and was built in 1987.

The CDCR program for SDG&E has 3-year net goals of 3.57M kWh, 576 kW, and 28,512 therms. (Annual goals are 1,192,956 kWh, 192 kW, and 9,504 therms). The March 2008 monthly program report indicates that these goals have not been achieved and that there are no commitments on board for SDG&E. However, the SDG&E program report to the CPUC lists it as on target to achieve its goals for SDG&E.

According to the PIP, the CDCR program budget for SDG&E is $1.2M over the three-year period, and of this, only $46,000 has been spent as of March 2008, less than one percent (0.38 percent) of the budget. Of the $12 million, $9M was set aside for incentives under the program. One interviewee noted that "It will be very helpful that the CPUC will allow up to 20 percent of projects from this cycle's activities to be rolled over into the next one," especially important given that no projects had been completed at the time of this report.

### 7.2 PROGRAM BACKGROUND AND STRUCTURE

#### 7.2.1 Program Description

The CDCR Partnership promotes energy-efficiency projects and best practices at the correctional facilities and offices run by the CDCR. The CDCR Partnership is new, established for the 2006–2008 rate cycle.

The CDCR Partnership is a centrally managed program. The Department has a Director of Energy Management who oversees the facilities management operations of all California correctional facility campuses (over 130 campuses, some with multiple buildings). This individual identifies energy-efficiency opportunities, trains facility managers, and coordinates project work. Using a central management approach eliminates the need for each individual campus to pursue its own facilities' maintenance, improvement, and construction projects.

SDG&E has a part-time project manager (who also is involved in the Green Buildings Initiative for the utility) who works with a regional account team. This differs slightly from the other IOUs who have a dedicated account manager for state facilities. Since SDG&E has only one prison facility in its service territory, this level of attention to the program

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appears appropriate. In addition, the program is managed by an outside firm and has strong partner leadership, resulting in less of a need for a high level of IOU oversight.

The program implementation plans developed by the four IOUs for the CDCR Partnership envisioned at least three major components—retrofit projects, retro-commissioning, and education and training:

1. **Energy-efficiency retrofits.** ESCOs work with the CDCR to update early feasibility studies with their own detailed assessments, and install measures using incentives from the program. The projects, capped at $1 million, were required to fall within a five-year payback. ESCOs install the measures and the IOUs provide incentives based on first-year savings at the following rates: 24¢/kWh for lighting, 24¢/kWh for motors, 24¢/kWh for HVAC and $1.00/Therm.

2. **Monitoring-based commissioning.** This program component was designed using the 2004–2005 UC/CSU commissioning program as a basis. The program defined this offering as going beyond the standard commissioning program in that (a) the installation will ensure an extensive and comprehensive built-in measurement and verification capability, (b) the commissioning will be combined with education and training to optimize and sustain the energy savings, and (c) the program will use the institution's facility management to identify additional opportunities.

3. **Education and training.** The program was designed to offer training opportunities to CDCR project managers and facilities staff on energy efficiency and best practices, building upon work that was done during the 2004–2005 cycle for UC/CSU modified to the CDCR facility environment.

The partnership focused almost completely on developing retrofit projects during the 2006–2008 program cycle. The retrofit component of the program was viewed as having the greatest energy-savings potential; therefore, the CDCR and IOUs decided to devote their resources and energies to honing the process for this program element.

In 2006, the four IOUs commissioned audits of the major CDCR facilities. Those audits provided a preliminary list of cost-effective retrofit measures at each of the institutions. In the same period, the CDCR issued a Request for Qualifications to energy service companies, lighting contractors, and energy management companies to develop energy-efficiency projects for the CDCR. Eleven ESCOs were selected through this process.

The CDCR provided selected ESCOs initial audit results and instructed them to perform an investment grade audit of the facilities assigned to them. Based on this audit, ESCOs proposed to the CDCR a project plan that passed several financial criteria. Specifically, the project was required to (1) have a maximum payback of five years, (2) provide a positive cash flow from savings in the first year, and (3) cost less than $1 million.

The partners hired Newcomb, Anderson, McCormick (NAM) to act as an "owner's representative" for the program. NAM is responsible for conducting technical assessments, verifying the financial calculations, and supporting the partners in processing and approving the projects.

The Management Committee for the project—CDCR, NAM, the IOU representatives—meets monthly on most occasions to address partnership issues, review and approve

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projects. The regular monthly meetings and conference calls have provided a useful forum for the parties to discuss broader issues than those covered by the partnership. That has helped the CDCR raise issues regarding efficiency initiatives outside the scope of the program, and for the utilities to refer the CDCR to other programs.

The financing of the capital investment retrofit projects comes from two sources. First, utility-offered rebates offset the initial cost. The value of the rebates is determined based on the first year kWh savings. The Energy $mart financing program offered by the California Department of General Services, provides another financing option. Through the Energy $mart program, California government entities can obtain financing at rates that are typically half those of commercial loans.

### 7.2.2    Program Logic Model and Implementation Theory

As shown in Figure 7-1, the main activities of the CDCR program are marketing, education and training, identification of retrofit projects, and continuous commissioning. These activities are to result in six outputs: (1) energy management staff communications, (2) best practices, (3) trainings and workshops, (4) project approval, (5) develop ESCO infrastructure, and (6) installation of metering equipment.

Based on this process evaluation, there is only one element of the program logic that can be confirmed for SDG&E—the Retrofit Project element—since this is the only program element that achieved any level of implementation to date. Based on our research, there are two elements that were not reflected in the original logic model that we have now included in the logic model in this final report.

- Technical review of work scope proposals. All projects experience a technical review, whereby recommended retrofits must pass a five-year payback criteria. ESCOs comment that this was not originally articulated as a requirement but, based on interviews, it is a confirmed element of the approval process for projects to proceed.

- Financial package. The securing of financing for the project was not reflected in the original logic model, and yet this became a critical factor in the program process. Projects that receive approval for the financing step can proceed to implementation.

**Figure 7-1 CDCR Logic Model**
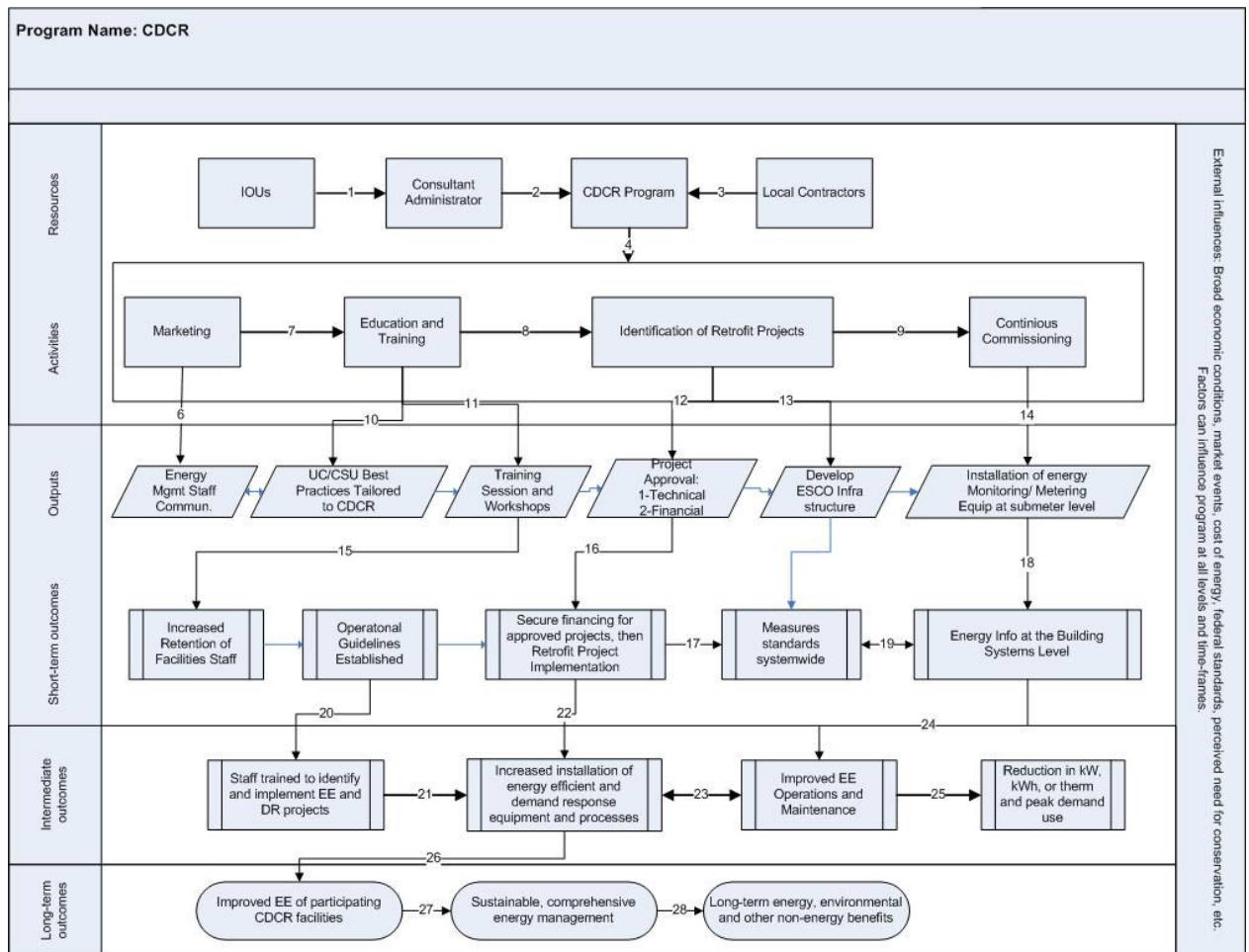


## 7.3    KEY FINDINGS

***The program has made no progress toward its energy saving goals based on reported savings, and even with the commitment to the R.J. Donovan Facility it does not appear the program will meet its targets. The delay in achieving savings was attributed to financing issues at the state level.***

The CDCR program for SDG&E has a three-year net goal of 3.5 million kWh energy savings, 576 kW demand reduction, and 28,500 therms savings. The May 2008 monthly program report indicates that there has been no progress made towards these goals. This finding is consistent with the progress for other IOUs, and is not unique to SDG&E.

Staff interviewed believe that the program has suffered from stalled project implementation due to financing issues for the State's portion of the costs. Those issues, which were only recently resolved, have resulted in a significant backlog of projects awaiting implementation. The partnership expected that those projects would move forward quickly

from the point of the resolution. Because state financing for specific projects has only recently been put in place, projects have just begun to progress through the system.

The program does show progress, though, and approved retrofit projects for one facility— the R.J. Donovan Facility— which is projected to yield savings in 2008. According to the NAM database, the ESCO plan indicates a 16-week anticipated construction schedule for completing the retrofits. The schedule in the NAM database as of January 2008 indicates installation is planned for SDG&E projects in October 2008. Table 7-1 details the estimated savings and costs of the project.

**Table 7-1 RJ Donovan Facility—Approved Project Characteristics**
*(All Figures are Estimates)*

| Project | kW Savings | kWh Savings | Therms Savings | Project Costs | Incentives |
|---|---|---|---|---|---|
| HID Lighting | 119 | 607,871 | | $392,228 | $145,889 |
| T12 to T8 Lighting | 144 | 547,513 | | $401,032 | $131,403 |
| Ozone Laundry | | | 52,884 | $135,514 | $52,884 |
| **Total** | **263** | **1,155,384** | **52,884** | **$928,774** | **$330,176** |

Source: NAM CDCR database.

There has been no activity on retro-commissioning under the SDG&E partnership, and it appears that none is envisioned for the Donovan facility, according to the latest NAM database. Instead the program consists primarily of retrofit type projects. According to database documentation, this one project, when implemented, will achieve the following percentages toward the overall SDG&E goals for the partnership:

**Table 7-2 Comparison of RJ Donovan Project and CDCR Goals for SDG&E**

| | kW Savings | kWh Savings | Therms Savings | Funding |
|---|---|---|---|---|
| RJ Donovan Facility Totals | 263 | 1,155,384 | 52,884 | $330,176 |
| SDG&E CDCR Goals | 576 | 3,578,868 | 28,512 | $1,200,000 |
| Project Totals as a Percent of SDG&E CDCR Goals | 46% | 32% | 185% | 28% |
| **Remaining** | **313** | **2,423,484** | **(24,372)** | **$1,269,824** |

Sources: NAM CDCR database and *2006-2008 Monthly Energy Efficiency Program Data Report* (May 2008)

In contrast to the information from the NAM database, as of March 2008[17], there were no achievements under this program for SDG&E. Given the above information, this is not accurate. There is lag as well as a lack of accuracy in reporting on the SDG&E-specific achievements of the program.

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[17] According to the monthly progress report submitted by SDG&E to the CPUC.

Contrary to the finding that only one project was approved, the *Quarterly Report Narrative* submitted to EEGA in 2007 indicates that up to 12 projects were submitted and pending funding. It is not possible to tell from the SDG&E report to the CPUC what 12 projects have been submitted or are pending funding, or specifically, whether the SDG&E facility was among these 12.

> *"Submitted projects pending and approved by the Management Team to the State of California's funding program, Energy$Mart, to finance CDCR projects. Through the end of the third quarter, 12 projects have been submitted and are pending funding by Energy$Mart. Once funding is established, CDCR may issue Notice to Proceeds to the ESCOs. NTP is expected in first quarter of 2008."*

Absent any additional SDG&E facilities approved for this program, it appears the utility will not meet its kWh or kW goals. It is unclear the extent to which SDG&E will be rewarded for overachievement of its therms goals on the Donovan project while the electric kWh and kW goals are below target.

***Establishing a means for providing financing to participating facilities is seen as a primary success for the partnership program. With that said, the process took longer than expected and was an initial barrier to project implementation.***

As described above, the program provides a financing option to participating facilities through the Energy $mart program. The partners worked closely with the California Department of General Services to integrate the financing option into the CDCR Partnership program.

The partnership members, particularly the IOUs, believe that the collective pressure to establish the process to provide financing to participating facilities was a primary success for this program. It provides a means for facilities to address program costs not covered by IOU rebates at a rate discounted from those traditionally offered to commercial customers.

Unfortunately, this process took longer than anticipated and, in turn, was a significant barrier to project implementation. The financing needed to be in place to approve the projects and, without the financing option being in place, projects stalled. Since securing the financing, the management team has been reviewing project applications and processing them on a regular schedule.

With the mechanism for financing established, an additional barrier arose—the financing approval process for projects. The financing has to be approved for a project before it can move forward. As an example, one ESCO expressed incredulity that a project with almost 90 percent covered by IOU incentive money was not allowed to proceed without the balance of financing worked out and approved. In this case, waiting for the financing details delayed the project for several weeks.

The resolution of the financing problem—using Energy $mart—has far-reaching implications for energy-efficiency projects in state facilities well beyond those included in this partnership. These funds will allow state facilities beyond prison facilities to be upgraded. CDCR provided the impetus for establishing a system to finance facilities such as correctional facilities. As such, the evaluation credits the partnership for its contribution to breaking down that significant barrier to energy savings in the government sector.

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**PA**

***Program partners believe that the early feasibility studies were useful for informing the program in the planning process; however, ESCOs are not as satisfied with the process as considerable investment was required to review the initial feasibility studies in light of facility changes. Even so, they are excited about productively moving the program forward.***

Early in the program cycle, the program partners conducted preliminary feasibility studies. These studies were then provided to ESCOs when they were assigned to a facility.

Although the audits did not result in project plans as quickly as anticipated due to the delays in securing the financing option, program partners believed that conducting these feasibility studies was a useful activity. The information obtained allowed the program to develop a reasonable plan for budgeting, assess the capacity needed to address the opportunities, and estimate potential energy savings and demand reduction. Also, the audits provided the program with the information necessary to develop a program database.

Unfortunately, partners did not anticipate such a long delay between the original audits and project implementation, and the feasibility studies had to be redone by the individual ESCOs to verify the audit findings and assess any changes in the facility. These audits took a considerable amount of time and expense to complete.

Given the delays in project approval, and the possibility of project rejection by the management team, some ESCOs do not want to incur these costs and wanted the program to reimburse them for these investment grade audits. The program will have to deal with this issue going forward. Otherwise, the earlier audits have been useful in establishing the scope and potential savings for the overall program.

ESCOs' initial contract values were based on the early feasibility reviews. As project plans at times changed considerably based on a follow-up audit, the contract values needed to change. As such, ESCOs interviewed voiced the desire to have their own review of the facilities be the basis of their contractual agreement to deliver savings.

Aside from the audit issue, most ESCOs expressed their excitement that the program is moving forward and much needed work is getting done. They were pleased that the program had finally passed the financial hurdles and contracts were being released. They also reported that the CDCR Partnership communicated with them and the other stakeholders regularly and effectively.

At the same time, some of the work is structural or systems based, like rewiring a facility, so it is not clear how this should be treated under the program, and consequently it falls outside of the scope of the partnership projects.

***Project management, particularly the champion model, is reported effective. However, ESCOs and facility managers expressed some frustration with the central management model. They would like to communicate directly with each other and the utilities rather than explicitly through the Director of Energy Management.***

It is clear that the program enjoys a strong central champion in the CDCR Program Manager. The program champion is the head of facilities for the entire CDCR operation.

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This central leadership and strong champion model was particularly useful during the first phase of the program at the point of establishing processes and procedures. The nature of the work required, such as the political and organizational tasks of working through policy and procedural mechanisms, reportedly pulled from the champion's strengths. Additionally, the champion was in the position to entreat individual facility managers to actively participate in the program.

However, securing financing options consumed the champion's time to the exclusion of other activities (e.g., facility manager training). A less centralized management structure may have resulted in more activities being addressed; it is possible that other tasks could have proceeded while the financing issue was being worked out.

One ESCO expressed incredulity that a project costing $1M with almost 90 percent covered by IOU incentive money was not allowed to proceed without the balance of financing worked out. The financing issue proved to effectively shut down progress for several weeks. Although a significant effort was brought to bear by the IOUs to resolve the financing issues, the involvement of this one central individual was a major distraction to other important tasks.

Some ESCOs interviewed (beyond the SDG&E specific team) registered some frustration at the centralized management model in that they would prefer to interact directly with the individual facility management teams rather than communicate via the CDCR. These ESCOs commented that there were times when it would be more efficient to follow up directly with facilities managers on project progress and issues; however, they are required to communicate through the CDCR.

Like the ESCOs who would like more opportunity to communicate directly with the facility managers, the facility managers would like to see the utilities work directly with CDCR individual sites more regularly, rather than communicate exclusively through the Director of Energy Management. They commented that there is a relationship building opportunity between the utility and themselves that is missed by this lack of direct communication. There are utilities that do have representatives that interact directly with correctional facility managers; these facility managers expressed high satisfaction in their relationship with the utility.

***Interviews reveal that the multi-utility model has been fairly effective for this program.***

The four IOUS have worked collectively to organize the program, get stakeholders involved, secure statewide approvals regarding procedures, and hired and deployed NAM. They meet monthly where they review all submitted projects as a team, regardless of which utility service territory is served by the particular project under review.

This approach serves to eliminate favoritism and helps to ensure that the program is not dominated by one utility. Based on the interviews, this model appears to have been effective in several ways, already noted above. The ways in which this model has been less effective is in the reporting of IOU achievement of their individual goals and in the pursuit of training and educational activities.

***Program partners and ESCOs believe NAM is effective as a project administrator.***

Initially, the project due diligence and management was to be completed in-house by CDCR. The process was more cumbersome than anticipated, and CDCR was quickly overwhelmed and looked to outside contractors for assistance.

The management team selected NAM to serve as project administrator. NAM was hired to provide assistance to CDCR especially in the areas of ESCO coordination and technical evaluation and oversight. The contractor performs the due diligence for CDCR and packages the projects for financing.

The management team seems generally pleased with NAM's performance and believes using NAM is a cost-effective solution to the internal lack of staff time. Interviews estimate that using NAM saves the CDCR a considerable amount in personnel costs. Additionally, the management team reported that NAM greatly facilitated project flow by standardizing project submission forms, simplifying costing, and providing cost-benefit analysis. One ESCO lauded the efforts of NAM to standardize the project documentation, claiming it was very useful and a necessary change. NAM also created a projects database that serves to support IOU reporting to the commission, which created time efficiencies.

***Several ESCOs believed that the $1 million cap for facility projects was too low and that the 5-year payback was too limiting. A facility can consist of multiple buildings, and the project funding limit can be quickly expended without tending to all the possible cost-effective retrofits. One ESCO suggested allowing higher budgets for a facility and completing fewer projects.***

A single CDCR participating facility can consist of multiple buildings at one site or campus (e.g., residential facilities, garages, warehouses, workhouses). Therefore, any one CDCR facility could provide the opportunity for any number of energy-efficiency upgrade projects throughout multiple buildings.

Thus, while $1 million seems like an adequate amount for a facility, due to the size and complexity of each campus, this amount was a constraint given the size of potential projects. ESCOs reported that this cap prevented excluded retrofit opportunities from being part of the project package.

Another potential issue facing the program is the imposition of 5-year payback requirement on projects. Most of the ESCOs interviewed, collectively believe that this is very limiting, and that there is much more work that could and should be done. The one ESCO working on the Donovan facility, however, felt this was fairly standard.

> *"Yes, it's a reasonable request. The 5-year payback is really standard. Some are 2-3 year, most are 5 year, and some 10-year. One for PG&E was a 20 year payback."*

One ESCO respondent suggested that it might be more cost effective to devote adequate funding for capturing all the energy-savings opportunities at a few campuses rather than try to do a few things at many CDCR campuses. Contractors are already allocating resources to the facility, so this approach may be more cost effective. As the program

currently stands, ESCOs would have to return to the facility to capture the additional energy savings not captured through the program.

***The education component of the program was virtually non-existent in this program cycle as the program focused on reaching resource goals.***

Due to the delays in implementing projects none of the training has taken place. The focus of the program for the remaining program cycle is to get as many projects completed as possible to contribute to the resource energy-savings goals. While the program had intended to tap into energy-efficiency training for facilities manages that had been planned for the UC/CSU program, that initiative did not materialize.

However, the project partner at the CDCR believes that education and training for on-site staff is critical to increasing maintenance and improving operation. He believes it is a key component to the retrofit process and sustaining the savings. The intent and future hope is that there will be three prongs of outreach and education within the partnership:

1. Promoting energy efficiency by illustrating the cost-effectiveness and benefits to the facilities.

2. Educating the trade allies, including mechanics and facility engineers who are responsible for the day-to-day maintenance and operations who need training to implement improvements.

3. Educating correctional officers who are responsible for the day to day correctional aspects of the facility. Providing information to this group can provide the means for additional energy efficiency through behavioral changes such as turning off lights during the day, reducing light at night, and minimizing the use of HVAC equipment.

While these elements were not implemented this past cycle, the recognition exists that they are important aspects of realizing the energy-savings potential in these facilities.

## 7.4 CONCLUSIONS AND OPPORTUNITIES FOR IMPROVEMENT

The project management team on this program appears to be effective and have resulted in significant policy changes that will have long lasting effects beyond just the CDCR facilities. For example, the commitment of the management team for the CDCR program—including the IOU members, the CDCR project manager and the administrative contractor NAM—enabled the team to develop and apply a financing program that will also enable other state facilities to move ahead with energy-efficiency opportunities. Unique among the partnership programs, the CDCR program uses ESCOs to deliver services. The management team successfully secured a pool of ESCOs for implementation of projects with an effective oversight and quality control team in NAM. This ESCO model could be replicated for other state projects where there is a similar oversight mechanism.

The collaboration on this program appears to be going very well and the program is planning to address barriers that hampered it during the 2006–2008 cycle for the 2009–2011 program. However, interviews with facilities managers suggest that they would like utilities to continue to interact directly with facilities managers at the sites, rather than exclusively through the central office of CDCR. This may be a missed opportunity for the

utility to build relationships with these important contacts that should be strengthened going forward.

ESCOs commented that the $1 million facility cap impairs the program's potential. One ESCO suggested that the partnership would have been more successful if it provided more services to fewer facilities  Presuming that targeting a select few CDCR facilities would be politically feasible, doing more work in fewer facilities might have achieved the same energy savings in a more cost and time-effective manner.

Evaluation activities identified six opportunities for improvement for the CDCR Partnership program.

1. Be clear about funding sources. The program lacks critical branding or name recognition. Facilities managers and ESCOs in the state deal with several pots of money, and as such, may not be clear about the source of funding for these energy-efficiency retrofit projects under the CDCR partnership. For example, the one ESCO receiving funds through the CDCR program for SDG&E confused a cogeneration project now being completed with the upcoming energy-efficiency retrofit project being funded through CDCR. After describing their satisfaction with their current (non-partnership) project process, they referred to their next planned project, noting, "we've been on hold for long while for work through an Energy Conservation Measures Program." The only link they could make to the partnership was that the program was coming "through Sacramento."

2. Strengthen individual IOU reporting. SDG&E should provide more SDG&E-specific reporting to the CPUC on EEGA on activities under the Statewide and multi-partner programs so that status for SDG&E specific activities can be easily determined. More accurate and specific on-line reporting would reduce the amount of follow-up informational calls that are required for evaluation purposes, and thus reduce the data request burden on IOU staff.

3. Pursue individual IOU commitments. The multiple IOU partner structure for partnerships such as the CDCR or other statewide programs works on some levels, but not on others. It is recommended that SDG&E not wait when they see their individual goals slipping because of a lack of collective action, but rather that they develop contingency plans and/or pursue specific actions within the utility's control to achieve goals, or articulate clearly as to why they are not being met. Ultimately, individual IOUs will be judged as to their portfolio's performance regardless of which elements are part of multiple-utility partnerships. An example of this point for CDCR is that SDG&E might have considered conducting a correctional facility manager training event for SDG&E's customers (or Sempra's) in spite of the lack of collective action on this element from the CDCR Program.

4. Reduce cycle time between identifying opportunities and implementing projects. This is the most obvious recommendation and one that everyone would have liked to have seen happen. The long delays between the initial audits (2006) and the eventual project approvals (caused by the financing issues) caused significant problems for the ESCOs, although the one involved with SDG&E was busy with another project at the same site so did not experience as much hardship. The recommendation from the ESCO is to "Expedite approval processes, because costs go up over time and estimates go by the wayside."

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5.  Provide less centralized control under construction phase. While the centralized approach may have been necessary for setting up the program and overcoming the initial albeit substantial barriers, the 2009–2011 program might benefit from a less centralized approach. Once projects have been fleshed out, submitted and approved, it would appear that a more decentralized model might be appropriate to enable the ESCOs to communicate and work directly with the facilities managers as projects proceed.

6.  Consider the five-year payback criteria. Although the ESCO interviewed for SDG&E felt the requirement was fairly standard, once the first round of projects is complete, the program may need to reconsider this payback threshold. ESCOs seemed to believe that many energy-savings opportunities were being left on the table because of this restriction.

## 8.   CITY OF SAN DIEGO PARTNERSHIP PROGRAM

### 8.1   INTRODUCTION

The partnership between SDG&E and the City of San Diego is designed to leverage municipal operations to capture energy-efficiency opportunities. The partnership has an educational component that includes presentations, energy information, peer-to-peer exchange, and workshops. Technically, the partnership also provides audits and installs CFLs and energy efficient spray valves. The City of San Diego partnership has goals of 399.1 summer peak kW, 3,832,877 kWh, and 109,778 therms for the 2006–2008 cycle. As of March 2008, the partnership is on track to meet or surpass its goals.

### 8.2   PROGRAM BACKGROUND AND STRUCTURE

### 8.2.1   Program Description

The City of San Diego has a long history of work in the area of energy conservation independent of the CPUC, and has implemented energy-efficiency "third-party" programs directly for the CPUC in the past.[18] The city side of the partnership is implemented and operated by the City of San Diego Energy Conservation & Management Division within the City's Environmental Services Department.

The city's Energy Conservation & Management Division was formed in response to the 2001 energy crisis to pursue the city's long-term goal of energy independence. Its mission is "To pursue energy independence and make San Diego a model city for energy conservation and the use of renewable energy resources." The strategic objectives of the division are:

- Management of energy use

- Conservation of energy

- Enhanced energy efficiency in existing city facilities

- Pursuing energy independence in city facilities through self-generation of electrical energy using renewable resources

- Ensuring energy efficiency in new facilities and major remodels.

With this background, this mission, and these objectives, the city's Energy Conservation & Management Division is a natural partner for SDG&E.

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[18] Staff see "pluses and minuses" in the partnership vs. the third-party program approach. In a third-party approach they control their budget, while in the partnership the utility may spend budget (for example for kiosks) resulting in some surprise to city staff. Also, there was an initial problem getting activities reported when a Partnership consultant was not reporting through city staff. At the same time, according to city staff, working directly with SDG&E brings additional resources to planning and carrying out public events and working with management and staff at SDG&E has been an overall good experience.

The partnership includes four components:

1. Education and outreach provides information about energy efficiency to residents and businesses

2. Business spray valve/CFL program works to reduce energy consumption in the community by replacing pre-rinse spray valves and incandescent lighting with more efficient models

3. City of San Diego Project Facilitation assigns a project manager to facilitate energy-efficient retrofits, installation of energy management systems, and installations of generation systems at municipal facilities

4. Peer-to-Peer, which provides training and assistance for other local governments and agencies in the region that would like to implement energy-efficiency programs.

The City of San Diego Partnership program is also piloting a new component that provides incentives to developers who install energy-efficiency measures by offering them the chance to participate in the City's Sustainable Building Expedite Program free of charge.

### 8.2.2 Program Logic Model and Implementation Theory

As the logic model shows, the partnership's primary activities include the provision of information, training, city facility technical assistance, and the light bulb exchange and energy-efficient spray valve program. These five activities result in seven outputs; (1) presentations, (2) energy information, (3) peer-to-peer exchange, (4) workshops, (5) city facilities audits, (6) audits and technology and incentives assistance, and (7) the installation of CFLs and energy-efficient spray valves. These direct outputs then lead to short-term, intermediate, and long-term outcomes of the overall partnership effort.

The initial logic model for the partnership effort (not shown) is similar to the final logic model (Figure 8-1), except that the initial plan was to facilitate condo conversions rather than to provide a lighting exchange and the installation of energy-efficient spray values. Originally, as a legacy of the "dot-com" bubble, there was a strong market movement in California to turn rental housing into condominiums.[19] There was so much conversion that a substantial backlog (approximately two-years) developed in the City of San Diego approval process for these conversions.

Given this situation, the initial plan was to leverage the city processing resource to allow units that would meet energy-efficiency targets to jump ahead in the approval process. However, this plan had to be abandoned due to a drop in the market for condo conversion that eliminated the backlog plus increased political interest for the city to protect tenants and maintain a sufficient stock of rental housing.

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[19] The sudden accumulation of wealth during the bubble created market forces that caused owners of apartment buildings to seek to turn out the tenants and convert apartments to condos. Given that this was happening, the idea was to leverage city services and procedures to at least see that the new condos were energy-efficient.

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City staff plus key staff-counterparts at SDG&E cooperatively worked through the process of developing replacement energy-savings programs. This required developing new programs that did not overlap with existing programs in the San Diego area. The new programs selected were the lighting exchanges and the energy-efficient spray valve installations. In contrast to the initial plan, the actual partnership programs provide efficient *spray valves* for food processing facilities (primarily restaurants) and *lighting exchanges* (an assortment of CFLs plus LED holiday lights for the residential sector plus CFLs for the business sector, including hotels).

The success of this process of adaptation to unanticipated development indicates the vitality and strength of the City of San Diego and SDG&E Partnership.

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**Figure 8-1 City of San Diego Logic Model**
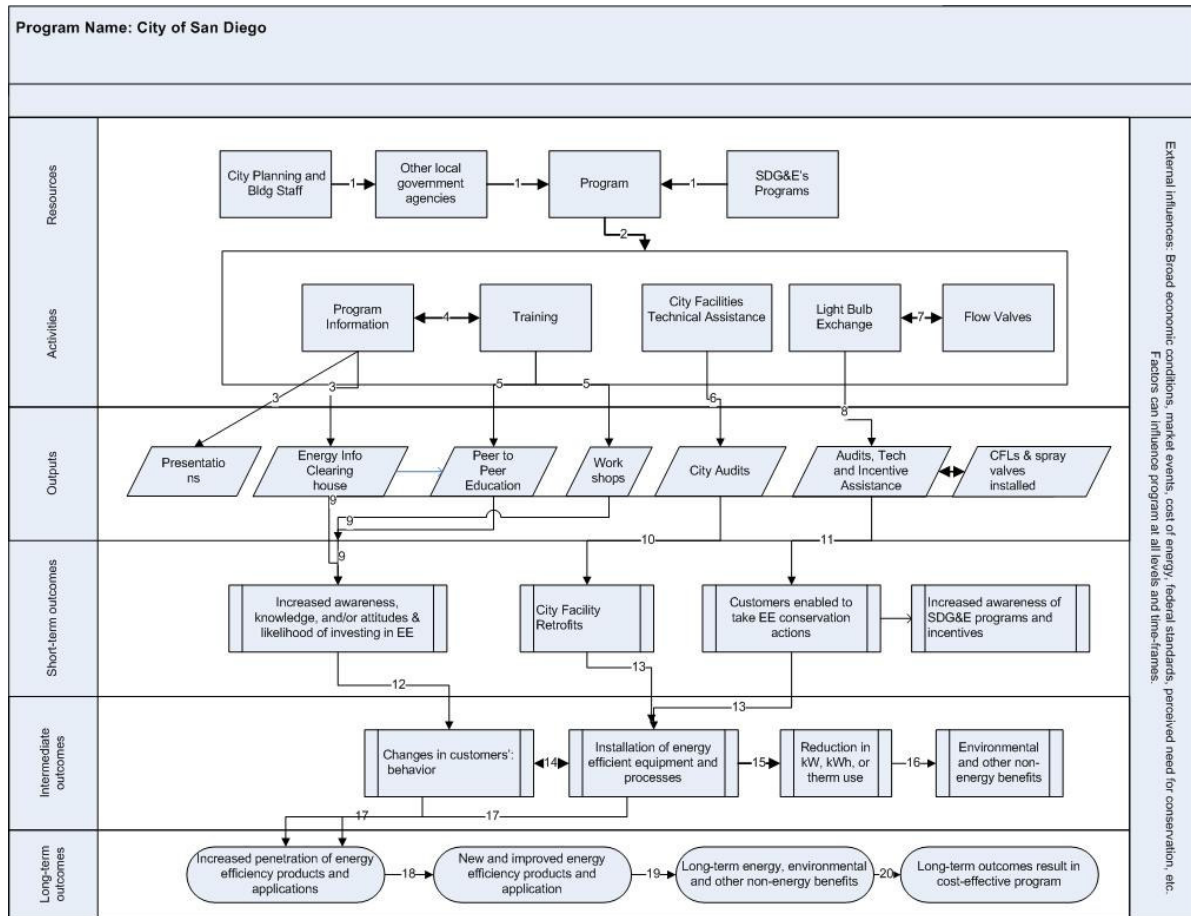


## 8.3     KEY FINDINGS

***The City of San Diego Partnership is projected to reach its goals within the 2006-2008 program cycle.***

The City of San Diego partnership projected a savings of 399.1 summer peak kW, 3,832,877 kWh, and 109,778 therms for the 2006–2008 cycle. As of May 2008, the program claimed to have nearly reached the summer peak kW savings (93 percent of savings toward goal claimed), and exceeded the therms savings targets. The program was slower to claim kWh savings (55 percent of goal); however, it claimed to be on target for reaching this goal as of the first *Quarterly Report Narrative* for 2008.

The city also claims to be on track with other activities included in the project plan. On the city side, the partnership builds on the city's existing "green program" emphasis and commitments through outreach and education. This outreach includes a component to promote long-term and progressively advanced energy project facilitation for municipal buildings (the partnership funds participation of a city staff member in plan review), and a

peer-to-peer outreach, communications, and training component to promote energy efficiency in other municipalities.

***The focus on energy-resource acquisition is seen as silo-thinking in relation to their broader concern, climate change. City staff would like the CPUC to consider climate impacts within the cost-benefit analysis of a program and promote programs with more climate-change emphasis.***

San Diego is a lead city in the wider concerns of the "green movement" and working on climate change (global warming). The city side of the partnership has been placed within the Environmental Services Department.

Within this context, the focus on energy resource acquisition is seen as silo-thinking by city staff in relation to the broader concerns of climate change (global warming).[20] City management in the partnership thoroughly understands the 1980s resource acquisition perspective, is well versed in the operation of the regulatory system, and is active in CPUC planning processes.

However, although they understand accounting for targeted energy-savings, they would like the CPUC to move up from the accounting perspective of resource acquisition and its limited benefit-cost calculus (reflected in the current "California Tests" for cost-benefit) to a wider perspective of climate change. This would change the benefit-cost calculation to include carbon accounting and to enable *more intensive* and *longer-term* program efforts that would allow longer program-funding cycles.

While the current partnership effort is supported, a wider vision based on climate change is seen as a progressive step that would introduce more challenging partnership projects that require a longer time horizon. Key city staff-members say they believe the CPUC is moving in the right direction in current proceedings.

***The data-tracking system is sufficient for program needs and is updated regularly with program data.***

The City of San Diego Partnership uses Fast Track as its data-tracking system. The City of Chula Vista Partnership also use this data system.

Initially, there were problems getting Fast Track to work. These problems delayed some of the earlier partnership reporting. However, once the software was functioning correctly, reporting became clear, consistent, and complete. The software package appears to cover the data-tracking needs of the City of San Diego Partnership effectively.

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[20] In this perspective, city staff members are properly expressing allegiance to the official perspective of their organization (The City of San Diego) as shown in Environmental Services materials and website (http://www.sandiego.gov/environmental-services/sustainable/index.shtml) and to the leadership of the mayor as indicated in his pronouncements on public occasions. The mayor has committed the city to follow the Kyoto Protocol (http://www.sandiego.gov/mayor/pdf/mayor_climate_factsheet_10_27.pdf) and to green purchasing (http://www.sandiego.gov/mayor/pdf/ep3_factsheet_4_4.pdf). In addition, the city has won several awards for their efforts on climate change.

As a part of their concern for meeting the needs of SDG&E and the CPUC, city managers and staff are diligent record keepers of CFL exchanges and spray valve installations. The documentation, when reviewed, was found to be complete and excellent.

***The staffing, management structure, and support for the program has proven to be effective for the partnership. City program-management expressed their satisfaction and appreciation for SDG&E, and SDG&E similarly voiced their appreciation of city staff.***

A defining aspect of the City of San Diego Partnership is that the program is primarily reliant on staff in official civil service positions while having a provision for using interns. This differs from the City of Chula Vista, which does not use civil service positions. This means that program activities and perspectives are securely integrated into the work and outlook of long-term city staff.

City program management is appreciative of the relationship with management and staff at SDG&E. There is a close working relationship among city and utility management and staff in support of the partnership effort. City program management expresses respect and appreciation for their SDG&E counterparts; they say that informal communication is frequent, formal communication is regular, work on problems is shared, and relationships are working well.

Key SDG&E staff members similarly express enthusiasm for the good working relationships with city staff and a partnership that is working well. This positive relationship was confirmed by every interview and hours of observation of staff at work. There were no indications of anything other than good faith efforts on the part of the city or SDG&E management and staff.

Although the form of city government changed to a "strong mayor" system during this program cycle, the mayor has emerged as a strong advocate for energy efficiency and has become a supporter of the program effort. The change in the form of government means that there is less autonomy in the department in which the program is placed, but more energy is being put into communications and relationships within the city government.

***Program members collaborate well at events. The program provides information to direct customers into other SDG&E programs.***

SDG&E utility management and staff, and San Diego management and staff, work well together at program events. This finding was uncovered through interviews and evidenced when observing the parties at the tree-lighting holiday exchange.

In addition to providing exchange services, program members directed customers to other SDG&E programs. The evaluation team at the tree-lighting holiday exchange observed this activity. At this event, city staff members, cooperatively with SDG&E staff, consistently explained other SDG&E programs to attendees and provided brochures and sign-up information for both DSM and low-income programs. They noted that they have been successful in channeling residences and businesses into other SDG&E programs (for which they do not get savings credit).

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### *The program implements the peer-to-peer program component in several ways.*

The Peer-to-Peer component is provided in two ways. First, program staff participates in meetings with other municipalities to encourage thinking and activity in energy-efficiency areas. The City of San Diego Partnership coordinates with the City of Chula Vista Partnership in this peer-to-peer effort.

Second, the program arranged to help other cities with light bulb exchanges and spray valves. This particular peer-to-peer component would require additional focus and funding if the program desired to develop it in a systematic way. Workshops have been found to be useful in drawing participation.

## 8.4     SURVEY FINDINGS

When reviewing survey findings based on the participant survey, note the small sample sizes. Given these small sample sizes, the information is intended to be descriptive and cannot be generalized to the population.

### 8.4.1     Energy-efficient Spray Valve Program

PA interviewed participants that received pre-rinse spray valves through the program—37 commercial customers in total. These participants heard about the program through a city employee (27 percent), SDG&E (16 percent), a flyer (14 percent), and other sources (49 percent). The most prevalent reasons for participation were to 1) save water and 2) save energy (80 percent and 30 percent, respectively).

Only three of thirty-seven businesses, or eight percent of respondents, said they needed a new spray valve at the time. This suggests that the program induced the installation of more efficient equipment earlier than would have been installed in the absence of the program. This also indicates that the free-ridership rate for the program—which is the rate in which customers would install the equipment in the absence of the program—would be low.

Nearly all businesses responding said the program representative installed the spray valve. Two of the respondents said they installed the valve themselves (Figure 8-2).

**Figure 8-2 Self-installed and Program Installed Energy Efficient Spray Valves (n=36)**
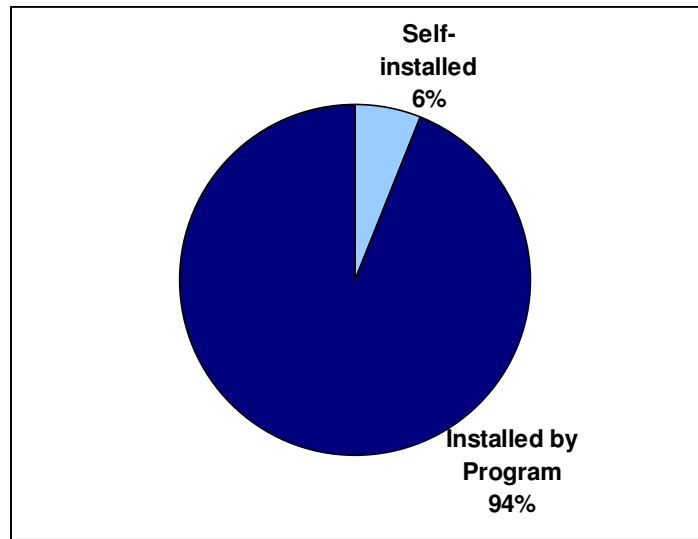


The majority of these respondents (94 percent) said the valve is still installed. The few who said they removed the valve said they did so because it was not operating properly.

Only four San Diego businesses in the sample said they had purchased additional spray valves since the program. Of these, two said they purchased the more-efficient spray valves and two said they purchased less-efficient spray valves. The two who said that they purchased the more-efficient spray valves said the program was very influential in that choice.

Overall, participants were satisfied with the program. Thirty-three of thirty-five participants surveyed said they were satisfied or very satisfied with the program.

**8.4.2    CLF Lighting Exchange Program[21]**

Interviewers also spoke with 38 residential participants that received CFLs through the program's lighting exchange component. Of the thirty-eight survey respondents who were participants in the residential CFL lighting exchange, over half (53 percent) exchanged five bulbs.

Forty percent of households said that the CFLs helped them save money on electric bills, and almost one-half (47 percent) mentioned energy savings. An additional 24 percent mentioned environmental benefits. Three of thirty-eight, or eight percent, said they did not see a benefit from the CFLs.

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[21] City of San Diego staff are very clear with clients that these are light bulb exchanges, not light bulb giveaways. Some city staff were concerned any impact assessment should clearly understand the difference.

### 8.5    CONCLUSIONS AND OPPORTUNITIES FOR IMPROVEMENT

From a process evaluation perspective, the City of San Diego Partnership program is a complete success. The City of San Diego Partnership is a well-structured and well-run cooperative organizational effort between the City of San Diego and SDG&E. Observation of activities confirmed good-faith effort and high spiritedness from both partners.

Key staff members have a sophisticated understanding of the CPUC's interests in the partnership and are implementing work that reflects the CPUC's goals. While the city's outlook proceeds from an all-encompassing environmental perspective towards combating global warming (rather than a more narrow energy-savings and demand-reduction perspective), key staff have an understanding of energy-efficiency goals and program operations. The depth of this understanding and respect for CPUC guidance has been demonstrated, in part, in careful attention to record keeping and quality control for the lighting exchange and energy-efficient spray valve programs sponsored by the partnership.

The working relationship among City of San Diego staff and key staff of SDG&E is consistently constructive, mutually supportive in carrying out the work of the partnership, and as successful as a cooperative multi-year relationship could be. This was demonstrated, in part, through the successful resolution of the switch between the initial condo conversion program plan, and the selection and refinement of the lighting exchange and energy-efficient spray valve programs. The City of San Diego Partnership Program managed to reassess its initial plan regarding condo conversions and place heavier emphasis on the installation of CFL lighting energy-efficient spray valves, while staying on course with its other activities and strengthened staff relationships.

While the City of San Diego Partnership program was successful, the process evaluation offers two avenues for continued improvement:

1.  Staff commitment to the partnership program has been the key to the success of this program and needs to be continued and strengthened. In the next program cycle, Partnership staff will be included within the buildings area and planning functions. Although it will take time to fully implement, having more permanent program staff will increase municipal participation in energy-efficiency programs. Both City of San Diego staff and SDG&E staff are working to develop this proposal.

2.  As expressed by some key city staff, more profound change could be accomplished if the program periods were longer. Some programs simply do not have immediate impact but rather take longer to see the results. Furthermore, the implementation of programs involves many factors and those related to changing city policies and processes take a significant input of time. Placing partnership funded staff within the relevant departments will improve the chances of the city adopting new policies, but large cities take time to change processes and for new processes to become ingrained. At a minimum, this would be at least a five-year effort and a longer effort would be better.

## 9.    CITY OF CHULA VISTA PARTNERSHIP PROGRAM

### 9.1    INTRODUCTION

The City of Chula Vista partnership includes many of the same components that are part of the City of San Diego partnership. The main difference is that the City of Chula Vista does not have the same availability of permanent staff to work on the partnership activities, thus it uses interns to manage much of the work. Despite this, the partnership is on track to meets its goals of 399.1 summer peak kW, 3832876.8 kWh, and 109,778 therms for the 2006–2008 cycle.

### 9.2    PROGRAM BACKGROUND AND STRUCTURE

#### 9.2.1    Program Description

The City of Chula Vista has a long history of work in the area of energy conservation. Since the early 1990s, Chula Vista has been engaged in multiple climate change forums including the United Nations Framework Convention on Climate Change and the Kyoto Protocol Conference. As a result of this initial involvement, the city was the first local government with fewer than 1 million residents to become a founding member of the International Council for Local Environmental Initiatives (ICLEI) and its Cities for Climate Protection Campaign. Through the Campaign, Chula Vista adopted and implemented a Carbon Dioxide ($CO_2$) Reduction Plan. This plan assessed its 1990 greenhouse gas (GHG) emissions and outlined actions to decrease emissions by 20 percent by 2010.

Against this background of progressive participation in the movement to mitigate global climate change, the city side of the partnership with SDG&E is implemented and operated by the City of Chula Vista Department of Conservation and Environmental Services. The main components of the program include:

- Peer-to-Peer

- City Facilities Energy Efficiency Program

- Energy Efficiency and Conservation Outreach Programs, which includes the CFL and Spray Valve installations

- Green Urban Infill Program, which promotes energy efficient and sustainable building practices for all new urban infill projects.

#### 9.2.2    Program Logic Model and Implementation Theory

As shown in the logic model (Figure 9-1), the partnership's primary activities include (1) marketing, (2) exhibits, (3) residential and business energy assessments, (4) the light bulb exchange (both residential and commercial), (5) energy-efficient spray valves, (6) the municipal energy BMPS Education Project, and (7) the city energy-efficient facilities showcase.

These seven activities result in eight outputs: (1) distribution of marketing material, (2) exhibits in high-traffic areas, (3) energy audits and referrals, (4) the installation of CFLs

and energy-efficient spray valves, (5) audits & technology & incentives assistance, (6) workshops, and (7) incentive documentation. The city also participates in (8) Peer-to-Peer assistance (coordinated with the City of San Diego) with other local governments. These direct outputs then lead to short-term, intermediate, and long-term outcomes of the overall partnership effort.

**Figure 9-1 City of Chula Vista Logic Model**
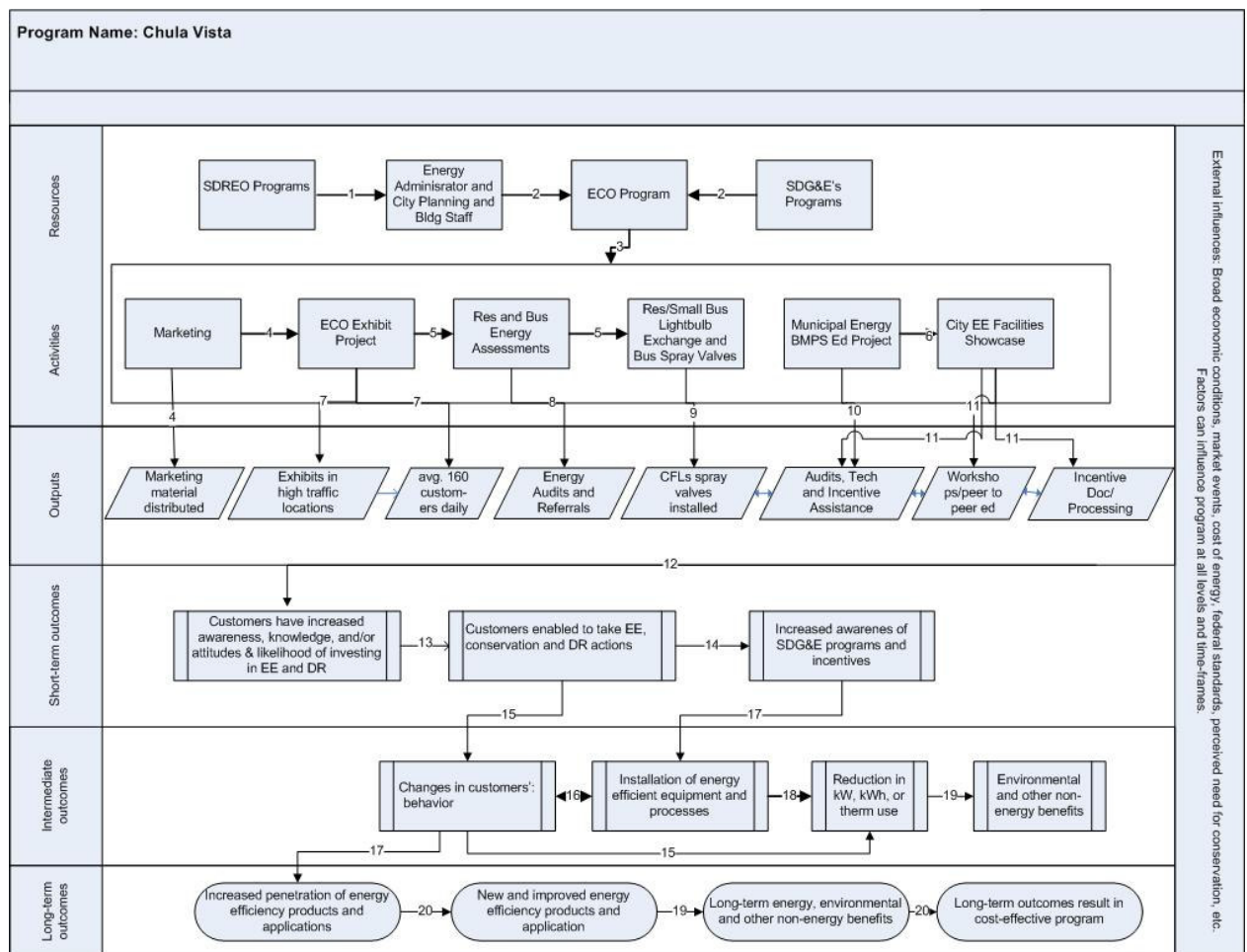


As discussed for the City of San Diego, the initial partnership logic model (not shown) is similar to the final logic model (Figure 9-1), except that the initial plan was to facilitate condo conversions rather than to provide a lighting exchange and the installation of energy-efficient spray values. Originally, as a legacy of the "dot-com bubble", there was a strong market movement in California to turn rental housing into condominiums.[22] In nearby San Diego, there was so much conversion that a substantial backlog

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[22] The sudden accumulation of wealth during the bubble created market forces that caused owners of apartment buildings in California to seek to turn out the tenants and convert apartments to condos. Given that this was happening, the program idea was to leverage city services and procedures to at least see that the new condos were energy-efficient.

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(approximately two-years) developed in the City of San Diego approval process for these conversions.

However, there was never really a backlog in Chula Vista. Also, as the dot-com bubble became history, the intense market forces pushing conversion of rental properties to condos receded. Plus, as a "push back," there was stronger political interest in protecting tenants and maintaining a sufficient stock of rental housing.

City staff plus key staff-counterparts at SDG&E cooperatively worked through the process of developing replacement energy-savings programs.[23] This required developing new programs.

One of the constraints on this program development effort was to find programs that did not overlap with existing programs in the Chula Vista area. The new programs selected were the lighting exchanges plus the energy-efficient spray valve installations. In contrast to the initial plan, the actual partnership programs provide efficient *spray valves* for food processing facilities (primarily restaurants) and *lighting exchanges* (an assortment of CFLs plus LED holiday lights for the residential sector plus CFLs for the business sector, including hotels). The success of this process of adaptation to unanticipated development indicates the vitality and strength of the City of Chula Vista partnership.

## 9.3    KEY FINDINGS

***The City of Chula Vista Partnership is projected to reach its goals within the 2006-2008 program cycle. The City of Chula Vista is also taking action to promote additional savings through LEED building efforts.***

The City of Chula Vista Partnership program projected a savings 399.1 summer peak kW, 3,832,876.8 kWh, and 109,778 therms for the 2006–2008 cycle. As of May 2008, the program claimed to have exceeded the summer peak kW and therms savings. The program was slower to claim kWh savings (79 percent of goal), however, it claimed to be on target for reaching this goal as of the first *Quarterly Report Narrative* for 2008.

The city also claims to be on track with other activities included in the project plan. On the city side, the partnership builds on the city's existing climate change emphasis and commitments through outreach and education. This outreach includes a component to promote long term and progressively advanced energy project facilitation for municipal buildings, and includes a peer-to-peer outreach, communications, and training component to promote energy efficiency in other municipalities. This element was developed in cooperation with the City of San Diego Partnership.

Chula Vista has a history of being involved in LEED building efforts, and the newer city buildings represent "beyond LEED" standards for the year they were built. Long term, the project has been working with the planners and building inspectors to introduce trained project staff in the processes to influence construction practices for city and non-city buildings.

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[23] A parallel process occurred in Chula Vista's twin—the City of San Diego/SDG&E Partnership.

SDG&E is developing effectively in these areas and will reap the benefits as the green-buildings focus matures. At the same time, the city and SDG&E are at the forefront of holding a series of public events that educate residents and businesses on energy conservation.

***The focus on energy resource acquisition is seen as silo-thinking in relation to their broader concern, climate change. City staff would like the CPUC to consider climate impacts within the cost-benefit analysis of a program and promote programs with more climate change emphasis.***

Chula Vista is a lead city in the wider concerns of climate change (global warming).[24] The city side of the partnership has been placed within the Department of Conservation and Environmental Services.

Within this context, the focus on energy resource acquisition is seen as silo-thinking by city staff in relation to the broader concerns of climate change (global warming) and international responsibility. Yet, city management thoroughly understands the 1980s resource acquisition perspective, is well versed in the operation of the regulatory system, and is active in CPUC planning processes that have been opened for local government participation.

However, although they understand accounting for targeted energy savings, they would like the CPUC to move up from the accounting perspective of resource acquisition and its limited benefit-cost calculus (reflected in the current "California Tests" for cost-benefit) to a wider perspective of climate change. This would change the benefit-cost calculation to include carbon accounting and to enable *more intensive* and *longer-term* program efforts that would allow longer program funding cycles.

While the current partnership effort is supported, a wider vision based on climate change is seen as a progressive step that would introduce more challenging partnership projects that require a longer time horizon. Key city staff members say they believe the CPUC is moving in the right direction in current proceedings.

***The data-tracking system is sufficient for program needs and is updated regularly with program and verification data.***

The City of Chula Vista Partnership program uses Fast Track as its data-tracking system. The City of San Diego Partnership program also uses this data system.

Initially, there were problems getting Fast Track to work. These problems delayed some of the earlier partnership reporting. However, once the software was functioning correctly, reporting became clear, consistent, and complete. The software package appears to cover the data-tracking needs of the City of San Diego Partnership completely.

As a part of their concern for meeting the needs of SDG&E and the CPUC city management and staff are diligent record keepers. In fact, the success of the partnership is due, in part, to this careful attention to record keeping and quality control for the lighting

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[24] See: http://www.chulavistaca.gov/clean/conservation/PDF/GHG_InventoryReport_Final.pdf.

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exchange and energy-efficient spray valve programs. The documentation, when reviewed, was found to be complete and excellent.

In addition to detailed record keeping, in many cases, staff members visit homes and commercial establishments to ensure that the CFLs are used in the correct sockets.[25]

***The City of Chula Vista Partnership staffing is defined by its use of temporary city interns, a creative solution during a hiring freeze. City program-management expressed their satisfaction and appreciation for SDG&E and SDG&E similarly voiced their appreciation of city staff.***

A defining aspect of the City of Chula Vista Partnership is that, with the exception of the partnership manager, all staff members on the city side of the partnership are temporary city interns. From a practical perspective, it is difficult to use interns to make long-term changes in how city policies and procedures are carried out (even if policies and procedures are modified) since senior civil-service staff have to change ingrained behaviors.

At the same time, using interns was a creative solution to keep the partnership moving forward on its timetable during a city hiring freeze. And, from a wider perspective, Chula Vista is providing invaluable experience to interns who will take their experience and the understandings that come from their partnership work into other organizations when they move on.

City program management is appreciative of the relationship with management and staff at SDG&E. City program management expressed respect and appreciation for their SDG&E counterparts. They commented that informal communication is frequent, formal communication is regular, work on problems is shared, and relationships are working well.

Key SDG&E staff members similarly express enthusiasm for the good working relationships with city management and staff and a partnership that is working well. This positive relationship was confirmed by every interview and hours of observation of staff at work. There were no indications of anything other than good faith efforts on the part of City of Chula Vista or SDG&E management and staff.

***Program members collaborate well at events. The program provides information to direct customers into other SDG&E programs.***

SDG&E utility management and staff, and San Diego management and staff, work well together at program events. This finding was uncovered through interviews and evidenced when observing the parties at the tree-lighting holiday exchange.

In addition to providing exchange services, program members directed customers to other SDG&E programs. The evaluation team at the tree-lighting holiday exchange observed this activity. At this event, city staff members, cooperatively with SDG&E staff, consistently explained other SDG&E programs to attendees and provided brochures and sign-up

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[25] The City of Chula Vista/SDG&E Partnership supplies several types of CFLs, suitable for different types of lighting situations.

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information for both DSM and low-income programs. They noted that they have been successful in channeling residences and businesses into other SDG&E programs (for which they do not get savings credit).

***The program implements the Peer-to-Peer program component in several ways.***

The Peer-to-Peer component is provided in two ways. First, program staff participates in meetings with other municipalities to encourage thinking and activity in energy-efficiency areas. The City of San Diego Partnership coordinates with the City of Chula Vista Partnership in this peer-to-peer effort.

Second, the program arranged to help other cities with light bulb exchanges and spray valves. This particular peer-to-peer component would require additional focus and funding if the program desired to develop it in a systematic way. Workshops have been found to be useful in drawing participation.

## 9.4    SURVEY FINDINGS

When reviewing the data related to the participant surveys, note the small sample sizes. Given these small sample sizes, the information is intended to be descriptive and cannot be generalized to the population.

### 9.4.1    Energy-efficient Spray Valve Program

PA interviewed thirty businesses that received energy-efficient spray valve nozzles through the program. Of these respondents, nearly half (47 percent) of respondents heard of the program from a city employee and an additional seventeen percent heard about the program through SDG&E. The majority of respondents said they participated to save water or energy (63 percent and 37 percent, respectively).

None of the thirty businesses responding said they needed a new spray valve at the time. Although not a scientific assessment of free-ridership, the response to this question indicates a very low free-ridership rate.

Twenty-six of twenty-nine businesses responding (90 percent) said the program representative installed the spray valve, while three (10 percent) self-installed (Figure 9-2).

**Figure 9-2 Self-installed and Program Installed Energy Efficient Spray Valves**
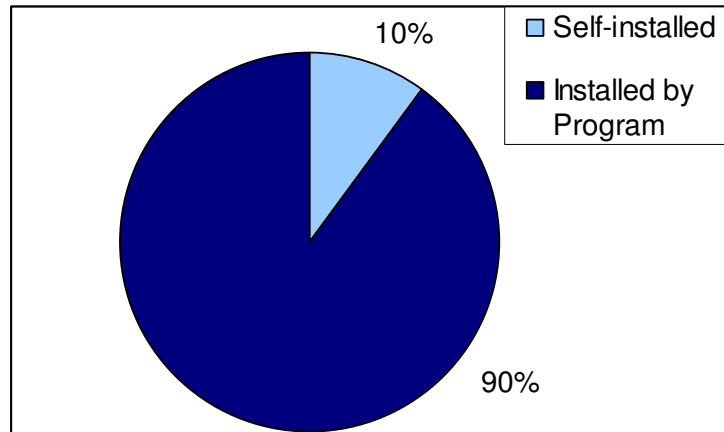


Nearly all businesses said the valve remained installed at the time of the interview (96 percent). Four percent said they had removed the valve because it was damaged.

Only three of the businesses interviewed, or eleven percent, said they had purchased additional spray valves since the program. Of these, two said they purchased the more efficient spray valves and one did not. The two respondents who purchased the more efficient spray valves said the program was very influential in their decision.

Respondents expressed satisfaction for the program. Overall satisfaction with the installation was 90 percent (twenty-five of twenty-eight responding). Two respondents (seven percent) said they were not at all satisfied.

### 9.4.2    CFL Lighting Exchange Program[26]

Interviewers spoke with 41 residential customers that participated in the CFL lighting exchange component of the program. Of these respondents, about half (51 percent) exchanged five bulbs.

Most (59 percent) said that the CFLs helped them save money on electric bills and others (34 percent) mentioned that they saved energy. Only two percent mentioned environmental benefits.

Most respondents said they were satisfied or very satisfied with the program (93 percent). Additionally, the majority of respondents saw installing CFLs as being beneficial (91 percent).

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[26] City staff are very clear with clients that these are light bulb exchanges, not light bulb giveaways. Some city staff were concerned any impact assessment should clearly understand the difference.

**9.5　　CONCLUSIONS AND OPPORTUNITIES FOR IMPROVEMENT**

From a process evaluation perspective, the City of Chula Vista Partnership program is a complete success. The City of Chula Vista Partnership is a well-structured and well-run cooperative organizational effort between the City of Chula Vista and SDG&E. Observation of activities confirmed good-faith effort and high spiritedness from both partners.

Key staff members have a sophisticated understanding of the CPUC's interests in the partnership and are implementing work that reflects the CPUC's goals. While the city's outlook proceeds from an all-encompassing environmental perspective towards combating global warming (rather than a more narrow energy-savings and demand-reduction perspective), key staff have an understanding of energy-efficiency goals and program operations. The depth of understanding and respect for CPUC guidance has been demonstrated, in part, in careful attention to record keeping and quality control for the lighting exchange and energy-efficient spray valve programs sponsored by the partnership.

The City of Chula Vista Partnership staff, with the exception of the partnership manager, is composed of interns rather than regular civil servants. However, this has not negatively affected the program. Field visits to home and commercial buildings confirmed that the interns were highly capable of implementing partnership activities.

The working relationship among City of Chula Vista staff and key staff of SDG&E is consistently constructive, mutually supportive in carrying out the work of the partnership, and as successful as a cooperative multi-year relationship could be. This is shown, in part, through the successful resolution of the switch between the initial condo conversion program plan, and the selection and refinement of the lighting exchange and energy-efficient spray valve programs. The City of Chula Vista Partnership program managed to reassess its initial plan regarding condo conversions and place heavier emphasis on the installation of CFL lighting energy-efficient spray valves, while staying on course with its other activities and strengthened staff relationships.

The process evaluation identified three opportunities for improvement.

1. According to city partnership management, planning for the next program cycle will include steps to put staff in the planning functions. Although it will take time to fully implement, this effort appears to be a potentially effective way to leverage municipal processes to increase participation in energy-efficiency programs. This component of the program will require additional focus and funding in forthcoming program cycles, and is likely to become a major focus in the next program cycle. Both the City of Chula Vista staff and SDG&E staff are working to develop this proposal.

2. As expressed by the city partnership manager, the program could accomplish more sustainable change with longer program periods because changes in policy and official processes must overcome inertia in established city departments. Placing partnership funded staff in relevant departments seems an excellent strategy, but cities take time to functionally change. At a minimum, this would be at least a five-year effort, and a longer effort would be better.

**PA**

3. To help secure continuity of effort, perhaps the partnership could find some way to create an exception to the city hiring freeze and convert at least one or two positions to civil service.

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## 10.    COUNTY OF SAN DIEGO PARTNERSHIP PROGRAM

### 10.1    INTRODUCTION

The County of San Diego partnership is a non-resource program. This program has a large educational component, which feeds customers into other SDG&E resource programs.

The program theory is based on the fact that the County has a large, untapped potential to achieve energy efficiency and demand response. The County has more than 7 million square feet of commercial space and public housing units.

The County of San Diego partnership experienced challenges due to staffing changes that took place in 2007. The evaluation plan, which reported in the second *Quarterly Report Narrative* noted that the program met initial targets in terms of feeding county facilities into other SDG&E programs but that they no longer had a full-time Energy Manager. In fact, the Energy Manager position was not filled until late March of 2008. The staffing transition affected much of the partnership program progress and, while some program components were not implemented as designed, all parties are optimistic that the new contract period will yield better results with the new Energy Manager staffed.

### 10.2    PROGRAM BACKGROUND AND STRUCTURE

#### 10.2.1    Program Description

The County of San Diego Partnership program with SDG&E was first established in the 2006–2008 program cycle. Prior to this partnership, the County of San Diego worked with the California Center for Sustainable Energy to provide energy-efficiency services. The partnership's stated goals are (1) to facilitate energy projects; (2) to provide outreach to County employees via a website and County intranet; (3) to provide peer-to-peer education; and (4) to promote a green building program.

The County employs a full-time project manager, or referred to as the Energy Manager, to oversee the program. The Energy Manager facilitates the retrofit projects, directs the education components, and works with SDG&E staff to achieve the objectives of the program. In addition to the Energy Manager, the partnership works with a core group of County facilities and project management staff, SDG&E and the programs offered by SDG&E through which projects are funneled, and higher level County level staff who approve projects.

Savings from this program are included in the Energy Savings Bid Program. This program, which targets small and large commercial county government facilities and residential public housing units, attempts to overcome barriers that limit participation in energy-efficiency projects, including the administrative burdens, staffing requirements to educate and train employees, and funding demands. The program also targets the County's Green Building program.

The program design includes a significant education and outreach component. This non-resource element of the partnership is multi-faceted, and includes energy-efficiency

10-1

brochures distributed throughout County facilities. The outreach component also includes an energy webpage to further promote energy efficiency and serve as a portal for energy efficiency and renewable technology information for County employees and residents.

The County contracted with SDG&E for the next program cycle. The SDG&E program manager shared her optimism of the program moving forward, which she believes will be strengthened by increased communication, program structure, and education of staff. As of April, the two parties were already setting up planning meetings to discuss the future direction of the partnership.

### 10.2.2    Program Logic Model and Implementation Theory

According to the logic model illustrated in Figure 10-1 below, the County of San Diego's main activities include peer-to-peer education, demand response program outreach, the green building program, and energy project facilitation. These activities are to result in six outputs: (1) a best practices manual, (2) technical assistance, (3) county and staff education and training, (4) customer outreach and education, (5) projects exceeding Title 24 standards, and (6) energy efficiency and demand response programs.

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**Figure 10-1 County of San Diego Logic Model**
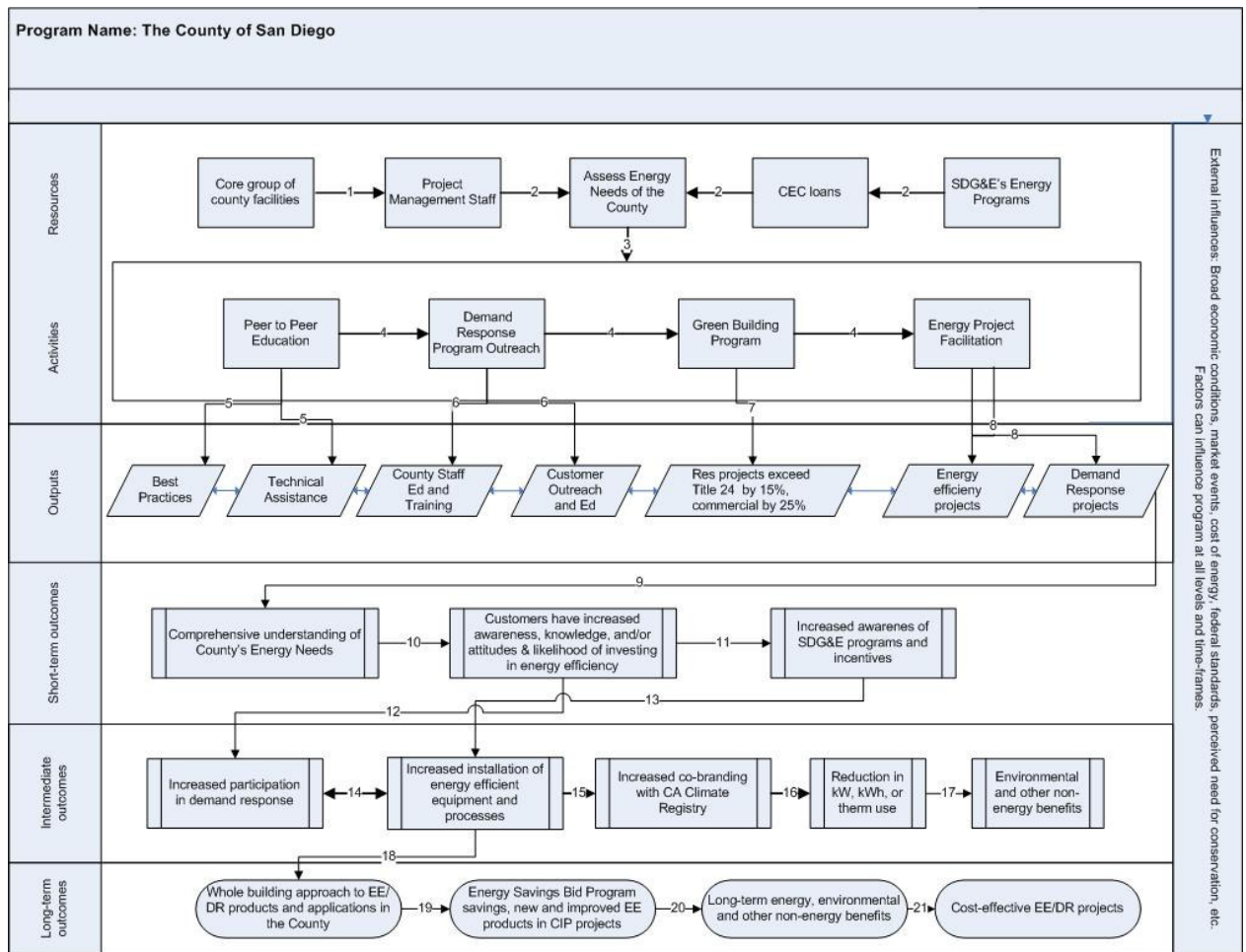


### 10.2.3    Data Tracking

The project tracking system retains information related to all projects completed or projected to be completed by the County of San Diego Partnership Program. The tracking system records the project name as well as the project scope of work. Additionally, the tracking system captures estimated project savings and expense data, such as: estimated annual energy savings (kWh); estimated peak-demand savings (kW); estimated annual gas-savings (therms); rebate or incentive amount; project costs; and simple payback period in years.

### 10.3    KEY FINDINGS

***While the County has progressed nicely toward the retrofit goals, other goals of the program will not be met.***

The partnership's stated goals are (1) to facilitate energy projects; (2) to provide outreach to County employees via a website and County intranet; (3) to provide peer-to-peer

10-3

education; and (4) to promote a green building program. The partnership also tries to involve other County departments, an area in which it has been successful.

While the County has progressed nicely toward the retrofit goals, other goals of the program will not be met. All of those interviewed have expressed concern that the partnership may not meet its 2006–2008 goals during that timeframe.

The utility believes the County has progressed well in completing energy projects. The education and outreach components are the goals that need the most attention at this point. The utility interview noted that this is a program component that needs to be readdressed as they enter the next program cycle. The utility also believes the County needs to use their capabilities do more outreach to other departments and use the existing infrastructure to funnel more facility managers and their projects to SDG&E programs. They believe the partnership is missing energy saving opportunities.

That said, County staff are not concerned about the partnership's not meeting its goals, and indicated, "the ability to meet all goals is indicative that the goals were set too low." This is a reflection of the interim Energy Manager interviewed, and may not be indicative of how the program progresses toward goals with the new Energy Manager on staff.

Education and outreach are a significant component to the partnership. Therefore, it is problematic for SDG&E that the goals outlined by the partnership related to education and outreach were not attained. Specific education and outreach action items were outlined in the program reporting, but there is little evidence that the plans came to full fruition. Only one facility manager interviewed mentioned that he was offered any training (in this case to become LEED certified). No one else mentioned training in conjunction with this program.

Facility managers also viewed the lack of outreach as a hindrance to the partnership. The Goodan Ranch project seemed to be an exception to this rule. The project manager stumbled across the partnership's website and inquired about assistance for the project. As a result, those who were involved are now much more aware and educated on sustainable building design and technologies. They know where to look for resources, and applied for and won several awards (including one with a grant) that they otherwise would not have.

***Staffing changes limited the program's progress and affected communication between the County and SDG&E; however, the utility is pleased to see significant progress was made in terms of retrofit projects.***

In 2007 the County saw significant staffing changes which resulted in the loss of the full-time Energy Manager along with other County staff. According to interviews, the significant staffing changes led to a structural problem within the partnership and thwarted program progress, particularly in the outreach and education efforts.

The loss of a dedicated Energy Manager introduced communication barriers within the partnership, which further slowed program progress. Utility program managers were instructed by the Director of General Services to hold off on communicating with the County facility managers until a new Energy Manager could be hired. Since this took a considerable amount of time (which both the utility and County attribute to the culture of

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the County), program targets were missed. Specifically, the education, outreach, and marketing component of the program were not implemented as consistently as the utility originally hoped.

With this said, the utility was very pleased to see that even amidst the staffing transition, not all activities ceased in the absence of a full-time energy manager. The County is moving forward steadily in terms of retrofit projects, and have funneled significant savings. As of April 15, 2008 their projects account for savings of 1.2 million kWh, about 100 kW peak energy consumption and 15,000 therms of gas[27]. And they have been able to do all this with little to no contact with SDG&E.

The Energy Manager position was permanently filled in late-March, significantly later than the initial projection of January 2008. This Energy Manager, who has an engineering background, was previously an employee of SDG&E and is familiar to SDG&E staff. Both the County interviewee and utility staff are optimistic about this new individual, saying he should be a "good fit for the program."

***There is a disconnect between SDG&E's role in the partnership and what the County and facility managers would like to see SDG&E's role to be. The County would like to see SDG&E become more involved in the partnership process; however, interviews with SDG&E indicate that they were not provided the opportunity to engage with the County as they normally would.***

Both SDG&E and County staff indicated that their partnership relationship is not as strong as other partnership programs. There was a tension among the two parties, which primarily precipitated from the staff turn-over. Since SDG&E was asked to essentially wait to engage the County until the new Energy Manager was in place, there was little direct communication with the partner. This, in turn, gave the impression that the utility was not engaged in the partnership, and the only connection the facility managers had to the utility was for reporting purposes.

Additionally, County staff would like SDG&E to provide a higher level of technical assistance. Specifically, they would like assistance in terms of providing more education for County staff, assisting with the administrative end of the program, and project development. The interviewee cited the relationship with a previous entity, and noted that the organization provided a different level of support, which they appreciated and would like to see from SDG&E. *"It was one-stop shopping. They not only helped us develop the projects, but also put in the paperwork, told us what incentives would be, hired someone to do the M&V… that was really nice."*

Interviews with facility managers revealed that they, too, were hoping SDG&E could provide greater assistance in terms of engineering support with their projects. They also used the example of the previous firm they worked with as a model for which they would like SDG&E to follow. The previous firm, which was a third-party contract, offered a variety of services to facilities including engineering assistance which may not be explicitly included in the current contract.

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[27] Per interview with SDG&E program manager on April 15, 2008.

Nearly all interviewees commented that they noted the lack of technical peer review in the current incarnation of this partnership. One facility manager specifically commented that SDG&E used to be much more proactive and helpful—inquiring where the County needed support and/or assistance with project development, funding or incentives.

It is difficult to determine whether these comments reflected a lack of understanding about partnership parameters or simply the lament of losing a service to which the users became accustomed. Regardless, all facility managers interviewed suggested that greater access to peer review would make projects more cost-effective and energy efficient and they would take better advantage of available incentives.

The difference between expectations and level of services received further exacerbated the fact that the SDG&E program manager did not believe the utility was able to offer a greater level of support to the County. This is because they were asked by County management to wait until the new Energy Manager was hired and integrated into the program to engage fully with the partnership.

The County staffing change offers an opportunity for SDG&E and the County to redefine their existing relationship with the goal of improving both the relationship and overall partnership performance. Such redefinition will be important if the partnership is to move forward both during this program period and into the next. Prior to the next program cycle, the utility and County should explicitly discuss roles among each other and communicate that information with the facility managers. This communication should lead to a higher level of understanding of each parties' needs and limitations, and promote a more positive relationship between the utility, County, and facilities.

**Facility managers claim they would undertake the projects regardless of program benefits; however, collaboration between SDG&E and the County is seen as a benefit.**

Overall, the facility managers interviewed stated that these projects would go ahead regardless of the partnership's existence. However, they also stated a desire to work more closely with SDG&E, signaling that considerable opportunity still exists for the partnership and the County facility/project managers, as facility managers would like to obtain the greatest amount of energy savings or energy efficiency possible in their projects. Facility managers view the partnership in a positive light, stating participating looks good for them, the project, and the County; and helps SDG&E and the state achieve their goals.

**There is confusion among facility managers related to sponsorship of the program; this finding confirms SDG&E concerns that participants and partners do not fully understand how the partnership is funded and how SDG&E fits into the picture.**

Funding was raised throughout interviews with the utility program manager and facility managers. The utility program manager commented that she does not believe other parties fully understand how the program is funded. An interview with a facility manager provided evidence that this is the case by commenting that the utility is receiving money for the projects they're completing.

Additionally, interviews with facility managers revealed that there is confusion about which partnership program they are participating in. They confuse the County of San Diego

10-6

partnership with other energy-efficiency programs (e.g. Savings by Design, Sustainable Communities, etc). Only one knew of the partnership by name, although he was not certain how he benefited directly from the program.

Last, facility manager interviews revealed uncertainty surrounding the partnership's purpose and the role and responsibilities of each of the stakeholders (County, Project managers, SDG&E, San Diego Sustainable Energy Center (SDSEC)) in the program. This uncertainty likely includes the funding stream.

***Lack of engagement from high-level groups is noted as a barrier to program success.***

All of those interviewed noted that senior County management has not bought into the program. Several expressed concern that the Energy Manager position is not senior enough to change this situation. One person suggested that including energy-savings goals as part of the employee incentive process. However, such a change cannot take place without commitment from the County Board of Supervisors.

***The reporting and incentive procedures are areas noted for improvement through County and facility managers interviews.***

The partnership works with SDG&E to facilitate overall participation, but has found the process to be onerous. While the incentives are not technically part of the partnership program, the County does not distinguish between the different program groups within SDG&E, and the County is dissatisfied with the support it has received during the incentive application process.

However, this finding is based on one individual's experience, and also based on a period of time where communication was at a low point for reasons discussed above. The utility should revisit this issue with the current County Energy Manager to determine if the reporting processes remain cumbersome and what can be done to simplify the process.

One of the facility managers interviewed discussed his frustration with the reimbursement process through SDG&E. He believes he has to go through a "convoluted process" of monitoring and verification (M&V), and does not trust that SDG&E will fulfill their promise to provide an incentive for energy savings, even when he installs the equipment that they say is appropriate. The timeline for getting the reimbursement is long and uncertain.

***The County of San Diego partnership provides services that support SDG&E's energy-efficiency portfolio.***

As the program funnels projects into SDG&E programs, the partnership program is providing services that support SDG&E's energy-efficiency portfolio. Beyond funneling commercial customers through the REAP's customized incentive and rebate program, the partnership supports SDG&E's energy-efficiency portfolio in other regards. The program supports projects that meet LEED certification specifications. The County completed one project recently, and has several additional projects either in progress or in the planning stages. One of these projects, the construction of a building over 1 million square feet, hopes to achieve Gold LEED certification. It is unclear from interviews, however, what additional projects are designed to meet Title 24, or LEED certification.

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**The County program and facility mangers voiced a need for a higher level of support in terms of outreach and education from SDG&E.**

In addition to the project management support, the County Program and Facility Managers voiced the need for a higher level of support from SDG&E in terms of education and outreach. County staff interviewed as part of this evaluation indicated that it would be very helpful for SDG&E to help educate the incoming Energy Manager and other staff about SDG&E's core programs and procedures. While such education is not technically part of the partnership, staff believes the County project managers' poor understanding of the potential incentives available and how to apply for them means missed opportunities.

Follow-up interviews with SDG&E explicitly addressed the issue of outreach and education support. SDG&E noted they provide support in this domain by providing County staff with materials and verbiage for email campaigns to assist in the education efforts. With this in mind, it appears there is a disconnect between the two parties in terms of what education assistance has been provided by the utility and what the County believes would be useful for improving education and outreach. The County either is not familiar with this information, or said they need different or more direction from the utility. All these points indicate that the roles, responsibilities, and expectations should be explicitly set and communicated to all parties involved in the partnership program.

The utility voiced commitment to the issue of education and outreach. At the time of the interviews, the utility program manager they are planning education opportunities for the County, including Building Operator Certification training. Improved communication between the two parties will be a key element to moving the partnership forward.

## 10.4    CONCLUSIONS AND OPPORTUNITIES FOR IMPROVEMENT

The County of San Diego Partnership program is on track to meet its goals regarding the retrofit programs. However, the education and outreach programs are not fulfilling their potential and need attention from both partners. Staffing changes are partly to blame but lack of clarity in the partners' roles and communication problems seem to be at the root of the challenges facing the partnership. The partnership is not working as well as either party would like with representatives from both sides complaining about communication problems. This program has the potential to be successful if the partners can come up with a better communication structure, which will ensure that the activities are moving successfully towards program goals.

The program began to ramp up for the next contract period in April. Interviews revealed optimism that the program will pick up activity with the new Energy Manager on staff and operating. Based on the key findings discussed above and further discussions with SDG&E program manager, we provide the following recommendations for the next contract period.

1. Clarify roles and responsibilities. The evaluation finds that the roles and responsibilities of all parties involved in the partnership are not well understood by each other. It is clear that the groups do not know what the roles and responsibilities are of each group, which therefore leads to a level of dissatisfaction with each other. For example, the questions "What is the role of the Energy Manager" and "What type and level of

support should SDG&E provide to the Energy Manager and facility managers," and "How is the partnership funded" were raised in the interviews.

2. Improve communication between the County and SDG&E. Both the County and the utility agree that the two entities were not communicating optimally throughout the 2006–2008 contract period. The evaluation team suggests the program set up a means for regular communication to discuss (1) program activities, (2) progress against goals and objectives, (3) partnership needs, and (4) future activities. Regular meetings could ensure issues are identified before the progress reports are filed. Also, meetings will give the utility an opportunity to be more present and proactively identify and address the needs of the partnership, which was communicated as an area for improvement by the County of San Diego.

   Discussions with the utility revealed that they are already on a path to improve communication. As of April, they had plans to establish regular meeting times for the County and utility to discuss these very issues.

3. Increase management involvement. One barrier identified by both the County and the utility was that higher-level management has not entirely bought into the partnership, which makes it difficult to implement components of the program. The interim Energy Manager, at the time of the interview, was hypothesizing about ways to engage management in the process, saying that the Energy Manager position was not high enough to command that level of buy-in. It would behoove both the utility and the County to identify a means for gaining buy-in from this level, so that the non-resource efforts are supported and information is propagated throughout the County facilities and beyond.

4. Continue to direct program efforts toward education and outreach while maintaining the facilitation of energy projects. SDG&E has several opportunities to help get the program back on track. The first option is to continue to provide more materials to the County to use in their education and outreach efforts. A second opportunity for the utility to assist the utility is to provide education to the staff delivering the program. The staff should be educated on a range of issues such as funding for the program so they understand the basis of the program (e.g., it is part of a portfolio, not a grant program), why the education is important, and how those funds should be directed.

   SDG&E agrees this is an important issue and that they are currently planning an education event for partnership staff. One goal is to have training (such as Building Operator Certification (BOC) training) for County employees. In addition, they are going to have BOC training for the local governments. They are hopeful this effort will yield greater retro commissioning projects.

   SDG&E would like to see the partnership redirect their efforts more to education and outreach and educate facilities staff on the importance of demand response. SDG&E said there are materials they created to help them implement education and outreach that were never used. They created an email campaign, for example, which they did not see administered. Another opportunity through their planning dept they have a green building, but they cut it due to budget and they would have liked to have used the money to keep the green building alive. But they did not have anyone to talk to about this and make it happen.

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5. Improve SDG&E visibility in the partnership. The education and outreach should also focus on improving the visibility of SDG&E and how the utility fits in the partnership. SDG&E needs to be more visibly involved and ensure that there is more comprehensive outreach for this partnership (and its benefits) to the County's project managers. Interviews with facility managers revealed that most of these facility managers could not say whom they could talk to at SDG&E about the partnership. As discussed above, many respondents did not understand the stakeholders' roles within the partnership, or the criteria against which the partnership measures itself. The communication problems are reflected by the fact that those facility managers most familiar with the partnership are only aware of the potential financial support for projects. They cannot attribute the identification or completion of any County project to the partnership.

6. Education all those involved in the M&V process. SDG&E and the County should educate all those who participate in the County program on the M&V procedures so they have a general understanding of how the savings values are estimated and what they would need to do to support the savings estimates during the M&V process. For example, during the M&V process, a County facility was asked to prove that earlier audits did not overestimate the inefficiency of original equipment. This facility needed to scramble to provide information to support the initial audit results. The interviewee reported that if they knew this information would be needed that they would have tracked or retained the information needed to support the M&V process.

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## 11. SAN DIEGO COUNTY WATER AUTHORITY PARTNERSHIP PROGRAM

### 11.1 INTRODUCTION

This partnership offers point-of purchase vouchers to encourage consumers to purchase high-efficiency clothes washers (HEW). Water customers of participating water agencies are eligible as long as vouchers are available for those agencies. Vouchers are provided to single-family and multi-family residences.

The San Diego County Water Authority (SDCWA) partnership gas-savings goals were high, approximately 600,000 net annual therms for the 2006–2008 cycle. These projected savings will not be met in this cycle considering as of February 2008 the partnership had not even reached 100,000 net annual therms.

### 11.2 PROGRAM BACKGROUND AND STRUCTURE

#### 11.2.1 Program Description

The SDCWA has operated water conservation programs for residential and commercial customers since the early 1990s. They have significant experience with programs with an energy component and have partnered with SDG&E before with good results. As one respondent put it, "There is no history of bad blood or problems: SDG&E needs energy savings, SDWCA needs water savings."

The Authority operates conservation programs on behalf of over twenty member agencies, including the City of San Diego, as well as SDG&E. Although not included in the partnership, SDCWA runs a voucher program for commercial customers that is structurally similar to the HEW residential program.[28] SDCWA reports it would be operating the HEW program with or without SDG&E, but say the small extra responsibilities (such as the monthly report to SDG&E and answering evaluator questions) are outweighed by the benefits (the $50 incentive that is added to their $125 incentive, co-branding, and extra marketing).

The current implementation contractor, Honeywell DMC (HDMC), has been operating the HEW program since 1995. HDMC and a marketing contractor (WSA) carry out most of the on-ground program functions. HDMC provides the Voucher Processing Center that takes informational and voucher requests from customers, qualifies them for participation, and supplies a voucher, either by mail (which is good for one month), or an instant voucher while a customer is shopping. They also receive and process the voucher packets from vendors and handle proof of purchase information that consumers are asked to send in. They submit dealer invoices SDCWA and pay incentives back to the vendors, with the goal of having a two-week turnaround.

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[28] The original program proposal included a commercial incentive, which would have increased an existing $150 voucher to $250 with SDG&E funding. The goal was to install 1,500 coin-operated washers through the SDG&E partnership. A commercial HEW incentive is not currently available through the partnership, but the utilities offer a $210 rebate on their own. In 2001, the commercial HEW program saved commercial customers an estimated 254,000 kWh.

11-1

HDMC also documents participation, inspects 15 percent of washer installations, collects customer feedback, and reports on various aspects of program progress in a monthly and annual report. SDWCA and SDG&E also conduct their own site inspections.

WSA coordinates marketing, including preparing press releases and bill inserts. They also foster long-term relationships with vendors, providing them with training and support. They also make sure the program maintains visibility through point of purchase brochures and signage, and voucher forms in the stores. SDCWA and/or its member agencies do mail stuffers, have website presence, conduct outreach at events, promote the program through public affairs channels, provide a speakers bureau, and have strong word of mouth, particularly through a very successful toilet voucher program. SDG&E provides in-kind marketing assistance for the program as well, including mailings to its customers and exposure as special events.

### 11.2.2    Program Logic Model and Implementation Theory

According to the logic model illustrated in Figure 11-1 below, the SDCWA's main activities include providing information; providing access to point of purchase vouchers that reduce the price of washers for consumers, thereby reducing a significant barrier to buying the higher price HEWs; and a quality assurance process that confirms qualifying washers are installed and that customers are satisfied. These activities are to result in five outputs: (1) marketing materials and effort to reach potential HEW buyers (2) retail vendor support, including training and point of purchase materials, (3) voucher processing, (4) inspections, and (5) monitoring of program requirements.

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**Figure 11-1 San Diego County Water Authority Logic Model**
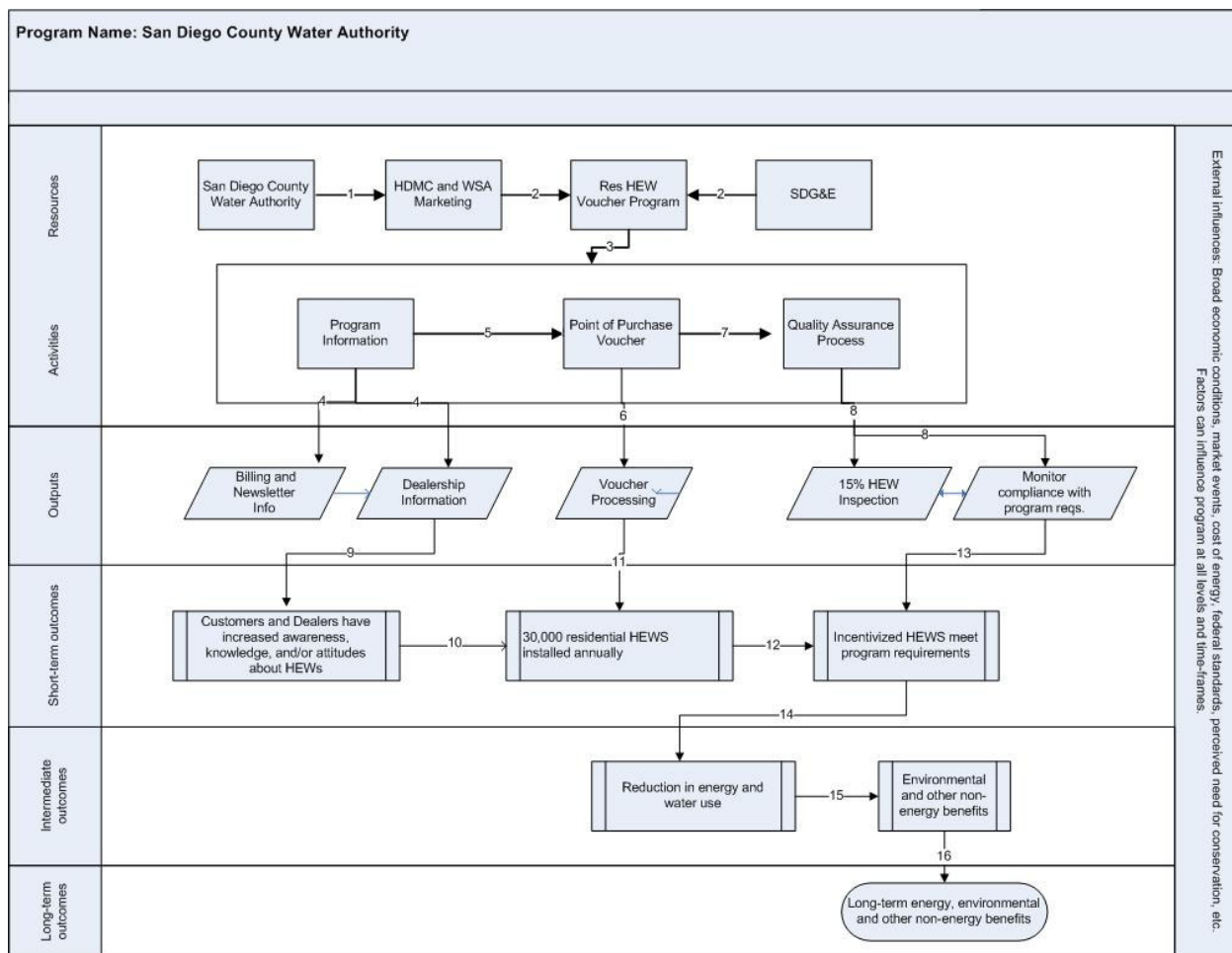


### 11.3    KEY FINDINGS

This section provides findings identified through evaluation efforts. HEW participant survey results are interjected throughout the analysis. When reviewing these findings, note the small sample sizes. Given these small sample sizes, the information is intended to be descriptive and cannot be generalized to the population.

***As of May 2008, the program reported being behind in its goals. Sponsors attributed this shortfall to a shift in program direction, but are optimistic they will reach their goals.***

The May 2008 *2006-2008 Monthly Energy Efficiency Program Data Report* indicated that the program was significantly behind in its goals for the program cycle. The program goal was to save 593,416 therms, but only achieved 70,453, or 11 percent of that goal.

The sponsors interviewed also noted that the program was initially behind in reaching its goals for this cycle. This was, in part, attributed to SDCWA's greater focus on a toilet

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program, which was in the process of being discontinued. However, both sponsors were very optimistic that the strong experience and marketing of the program, along with a current drought, would result in the program reaching and potentially exceeding its goals.

### *Interviews commented positively about the HEW program and the complimentary nature of the partners' relationship.*

The HEW Program sponsors agree the partnership between SDG&E and SDCWA is exemplary, both in terms of working relationships and program delivery. SDG&E and SDCWA have a long-standing working with each other, and interviews indicate the relationship between the two entities has always been a positive one.

The partnership complements the strengths and resources of both sponsors and of the products themselves. SDCWA brought a well-established program to the table and SDG&E added incentive and in-kind marketing muscle. For instance, at a Padres' game [they] handed out 40,000 flyers with voucher information, which resulted in quite a bump up in voucher redemption. They also sent bill stuffers to over 1 million accounts in support of the SDCWA's drought campaign—the 20 gallon challenge.

These partnership efforts, coupled with the fact that partners believe HEWs have the clear appeal of saving the most water and energy and as being better, higher quality washers, contribute to what they believe is a successful program. In fact, this partnership has worked so well that the CPUC is likely to approve further water/energy partnerships between SDG&E and SDCWA, particularly with commercial customers.

### *Program participants and vendors were satisfied with their participation in the program, and evaluators found the vendors visited to be well-versed in the program and machines promoted.*

Participant satisfaction with the HEW program was very high. All thirty-eight participants who were surveyed said they were satisfied, with 90 percent saying they were very satisfied and 10 percent saying they were somewhat satisfied.

Vendor satisfaction was also high: 76 percent of the 21 vendors surveyed rated the program's ability to help them sell HEWs as excellent, and another 19 percent said it was good; only one vendor gave the program a fair rating (Figure 11-2).

**Figure 11-2 Ability of Program to Help Sell HEWs (n=21)**
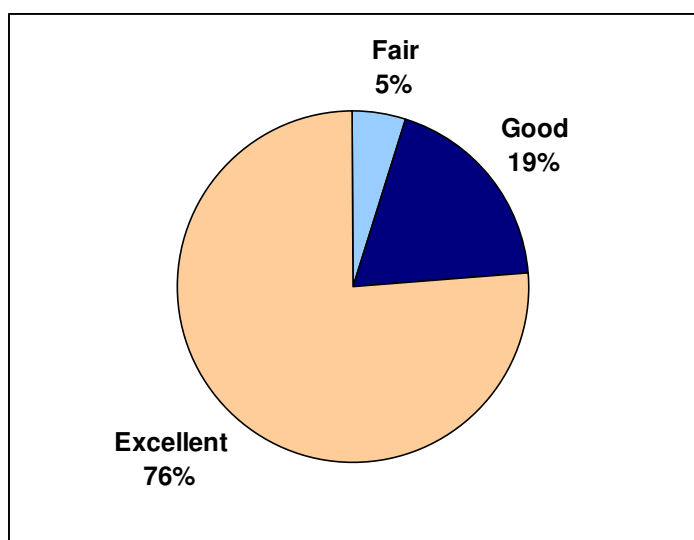


Vendors are enthusiastic about the program, with about one-third specifically saying it moves customers to buy the machines with the highest efficiency: *"Interaction with high end machines has increased."* Another one-third more generally extolled the power of the program to move sales: "*As soon as we told them about the incentive, they would jump through a 'fiery hoop' to get the voucher,"* and *"It created a wow factor for our customers."*

When asked about the quality of the washers covered by the program compared to non-qualifying washers, 71 percent of vendors said the quality of the program washers was much higher, 5 percent said they were somewhat higher, and 19 percent said the quality was the same. When asked why they gave these ratings of quality, they talked both about the efficiency of the washer and about other important benefits, including that they are gentler on clothes, use less detergent, and they are better made.

Evaluators visited three major appliance vendors that participated in the program. The brief "mystery shopping" visits to these vendors found the salespeople were well versed in how the program worked, especially the instant voucher approach.

***Both SDCWA and vendors agree that marketing is the greatest barrier to program success.***

SDCWA believes that while there are few barriers to program success, marketing is the *"hardest thing…and they would like to see more."* They report the switch to MWD as the overseer of the program will provide more and more flexible ("unlimited") funding and free up more dollars for marketing.

The vendors agree that program advertising and marketing needs improvement—only 19 percent rated this aspect of the program as excellent, and 48 percent as good (Figure 11-3). When probed for reasons behind low ratings, vendors consistently said few customers know about the program before coming to the store and that *"almost all knowledge about the program is told to the customer by our sales associates."*

**Figure 11-3 Vendor Ratings of Marketing to Customers (n=21)**
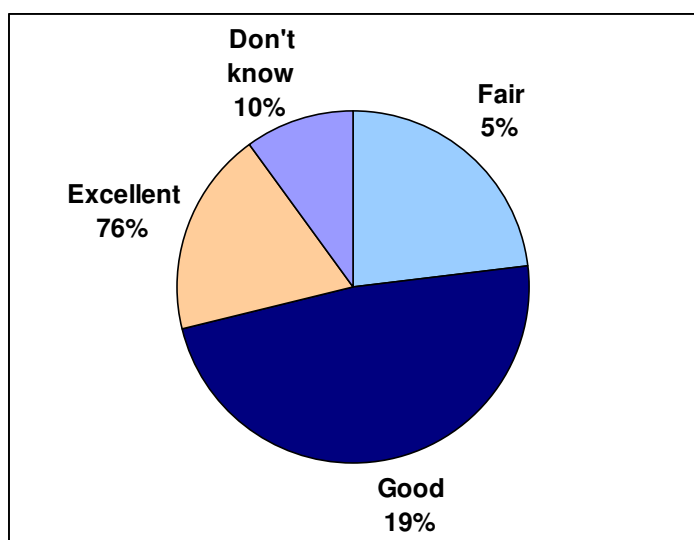


The thirty-eight participants surveyed support that they hear about the program from vendors: 79 percent say they heard about the program at retailers (Figure 11-4). Word of mouth is a distant second at 11 percent, and other sources are even smaller (bill stuffers, 5 percent; mailers, 3 percent).

**Figure 11-4 How Customers Learned about HEW Program (n=38)**
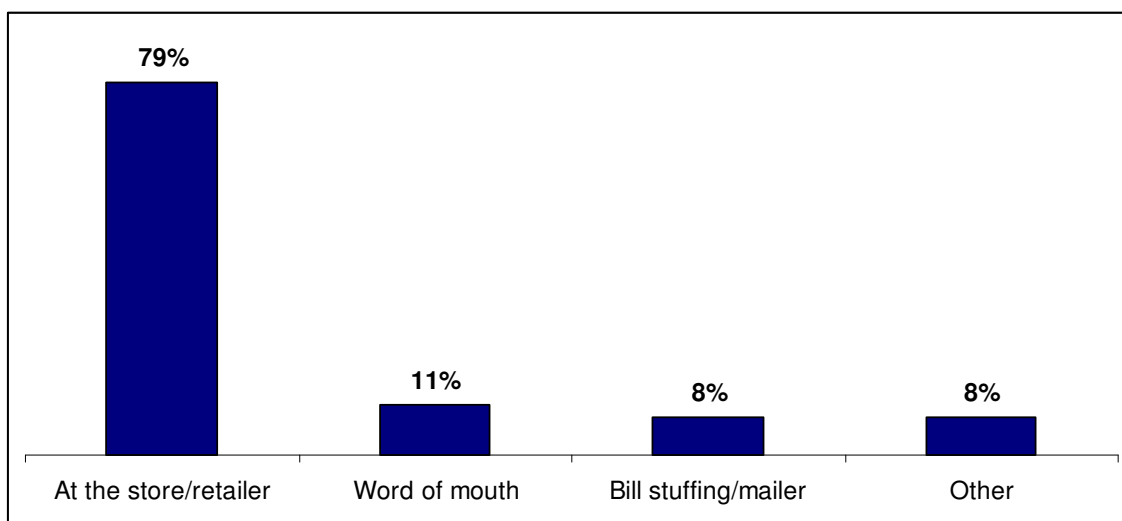


Another important aspect of marketing is the support for vendors. When asked to rate this aspect of the program, ratings were mixed: 38 percent rated their support as excellent, 33 percent as good, and 24 percent as fair or poor. When vendors who gave low raters were asked why, they gave various answers, including not keeping the model list updated, having a low supply of brochures and other materials, and some complaints about the processing center and the redundancy of the information required on the forms.

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**Program participants primarily redeemed an instant rather than pre-approved voucher. The voucher system received mixed reviews from vendors.**

There are two means for receiving a voucher: an instant voucher at the store, and a pre-approved voucher obtained prior to going to the store. Three-quarters of participants surveyed said they requested an instant voucher at the store rather than obtaining one beforehand (Figure 11-5). This finding indicates that most customers are not aware of the pre-approved voucher approach. A survey of the 21 vendors further supports this finding; vendors communicated that most customers do not know about the rebate before coming into the store and that they usually need to explain the program.

**Figure 11-5 Customer Use of Instant Voucher (n=38)**
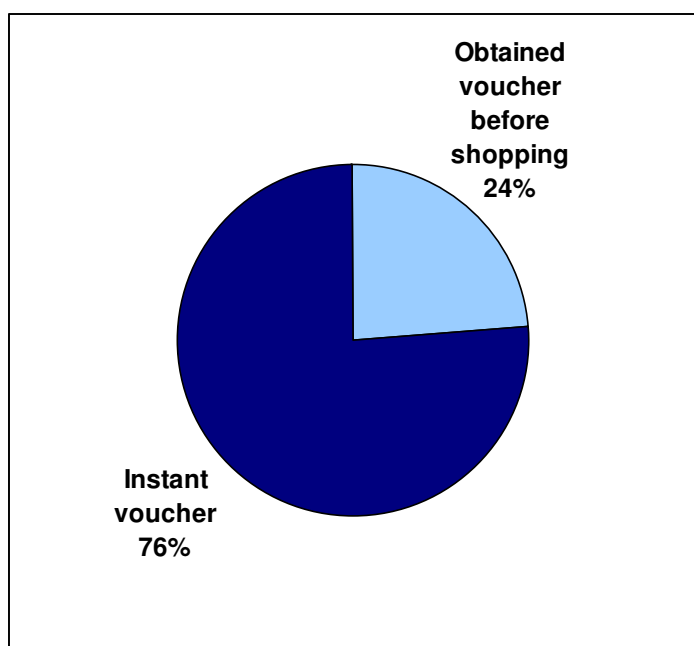


Overall, 77 percent of participants said obtaining the voucher was very convenient, with these ratings being significantly higher among those using the instant voucher than those using pre-approved vouchers (85 percent versus 50 percent very convenient). A strong majority of vendors thought both methods were quite convenient, but rated the instant voucher method as more convenient for customers. On the other hand, they gave lower ratings to the convenience of the paperwork for themselves, with 43 percent rating the process as excellent, 39 percent saying it was good, 29 percent saying it was fair or poor.

During the mystery shop, salespeople said the instant voucher generally worked well but that store hours did not always match the voucher processing center hours and that sometimes they encountered delays. The survey of vendors supported this finding: 57 percent rated the convenience of obtaining an instant voucher as excellent, while 33 percent said it was good, and 10 percent said it was fair. They cited processing center hours and back-ups as problems.

Vendors gave their lowest satisfaction ratings to the timeliness of receiving back their voucher payments: only 19 percent rated this system as good or excellent while 38 percent rated the system as fair or poor and 43 percent did not know, because they were not involved in this aspect of the program. They said the payments were slow, and that payments might take several months.

**HEW program partners hypothesized that switching to a mail-in rebate system would improve customer convenience. Customers surveyed did not support this hypothesis.**

Both HEW program partners felt switching to a mail-in rebate system would improve customer convenience, reduce inefficiencies in program delivery (since many customers order vouchers but don't use them), and have limited impact on customer response to the program.

Just over half of vendors supported the change. These vendors welcomed not having to do the paperwork (although some have their administrative staff take care of it) and that the hours of the processing center would no longer matter.

One-third of the 21 vendors surveyed opposed the change. Those who opposed the change said that customers did not like rebates and would not send them in. They also thought the voucher discount was a better sales tool to "close the deal." Notably, even those in favor of the change had concerns about the offer being less appealing to customers.

When asked to choose between the two approaches, 79 percent of participants preferred the current instant discount compared to an after-the-fact rebate. In addition, 66 percent of nonparticipants, when given the two choices, said they also preferred the voucher method.

**HEW recipients tend to be households with more occupants and those that believe their home is somewhat or very energy efficient.**

Survey data show that households with more occupants (and thus with more laundry and more potential savings) are buying HEWs. Data also suggest that the program serves a smaller proportion of lower income and a larger proportion of higher income households than in the nonparticipant sample.

Thirty-two percent of participants believe their homes are very energy efficient, while 62 percent believe they are somewhat efficient, and five percent believe they are not very efficient. On average, they report paying $124 per billing cycle for their electric bill. Sixty-one percent say it is very important for them to lower their electric bill, and another 18 percent say it is somewhat important.

Participants, for the most part, saw the benefits of the program being the ability to get a better washer (87 percent), followed by saving water and energy (71 percent and 68 percent, respectively). Two-thirds also said a benefit was they reduced their energy bill and reduced their water bill.

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**Most participants interviewed said they planned to purchase a high-efficiency washer prior to hearing about the voucher.**

The large majority of participants said they planned to purchase a new washer before hearing about the $125 voucher (87 percent). When asked how important the incentive was in purchasing an HEW instead of a less efficient washer, 34 percent said it was very important and 24 percent said it was somewhat important. Still, 81 percent said they would have purchased the same HEW at the same time without the incentive. Additionally, two-thirds of participants said they would still have purchased their washer if the voucher was $125 rather than $175.

While these findings suggest high free ridership, the sample is small. The questions do not—and were not intended to—capture a precise picture of the buying decision or of free ridership. Research shows that buyers looking back upon a purchase are quite invested in believing they made the right choice and would do it again, so this can also muddy perceptions of the role of an incentive. All vendors rated the $175 discount as very important (67 percent) or somewhat important (33 percent) and the majority thought most buyers would not have bought the same machine at the same time without the rebate.

## 11.4    CONCLUSIONS AND OPPORTUNITIES FOR IMPROVEMENT

SDG&E and SDCWA agree their partnership on the High-Efficiency Clothes Washer (HEW) Voucher Incentive Program has worked very well.[29] Given past positive partnering experience and the congruent resources and goals of SDCWA and SDG&E, the program has these earmarks of a successful partnership:

- Easy relationships and good communication mostly through email and regular reports

- A "similar mindset" between the two organizations

- A relatively simple program to operate, with easy-to-measure metrics

- A collaboration that leverages the credibility and resources of both entities— enhancing the messaging and product benefits, enlarging the audience, providing visibility to both sponsors, enhancing sales, and producing savings

- Clear sharing of responsibilities: primarily, SDCWA "runs it" and SDG&E "co-funds it." SDCWA oversees two experienced contractors who operate the program day to day. SDG&E enriches the incentives, contributes in-kind marketing, and conducts some of its own inspections

- Use of an implementation contractor who has been "doing this for 10 years" and whose delivery is a "well-oiled machine," and a marketing contractor who is well connected with vendors that sell HEWs

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[29] This write-up is based upon interviews with SDG&E and SDCWA staff, and surveys with 38 participants, 165 nonparticipants, and 21 participating vendors.

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- Regular reporting—monthly updates from the contractors and an annual report, so that sponsors can track participation, results of inspections, customer satisfaction, and energy and water savings according to their own calculations.;

At the time of the partnership interviews, SDCWA planned to change, ahead of the current partnership funding cycle, two key aspects of the program. The voucher system, where the incentive is deducted from the purchase price, would be changed to a rebate system, where the customer would receive the incentive in the mail after the purchase. The Metropolitan Water District (MWD) of Southern California would run the program and cover the costs of SDCWA and its member agencies.

SDCWA said this design makes the program consistent with other HEW programs, frees up funding for marketing, and will help the program reach its goals. SDG&E staff, while aware and supportive of the plan to change to a rebate system in the next cycle, had not been aware that the change would happen earlier or of the switch to MWD. Implications for the current partnership still needed to be worked out. At the time of this report, the SDCWA website reflects that the HEW Voucher Incentive Program is still in place.

Based on this process evaluation, evaluators provide the following issues for program consideration.

1. Improve marketing. Marketing does appear to be one of the weaker aspects of the HEW Program, with most purchases not knowing about it prior to shopping. Still, most consumers are not thinking about buying a washing machine most of the time, so the trick is to catch them when they are interested. The Padres game, the "20 gallons" bill stuffer, and news coverage shows that those types of avenues can work. Co-op advertising, spiffs (small, immediate bonuses) for sales people, and more visibility in stores and on store and sponsor websites are methods other programs have used to boost sales. Other outlets, such as having realtors give flyers to new homebuyers, who are often in the market for new appliances, should also be considered.

2. Carefully consider moving from an instant to post-purchase mail-in rebate. Customer resistance to changing to a post-purchase mail-in rebate approach makes sense. If instituted, customers would need to front the full purchase price, handle the paperwork and mail it in, and wait for the rebate to arrive. Vendor resistance also makes sense— their experience shows that rebates are not as attractive as instant discounts. However, many other programs operate successfully with this model and over half of the vendors were not opposed to the change. In addition, since most people find out about the program at point-of-purchase, there is not a widespread understanding among potential buyers that they need to obtain a voucher prior to buying.

   We believe the data do suggest that a transition to the rebate system will pose some challenges. Changes in program oversight and from the voucher to a rebate system will require careful attention to marketing, customer service, and retailer cooperation. If the transition is carefully handled, customers and vendors will adapt and the program will continue to be successful.

   The change to a post-purchase rebate system may negatively affect lower income households, who already appear to be underserved by the program, since they will need to pay the full cost at purchase. If a goal of the program is to expand reach into

this market segment, perhaps a separate path for low-income customers should be considered.

3.  Review the incentive levels offered in light of the high free-ridership indicators. Other HEW programs have faced the maturing nature of the HEW market and high levels of apparent free ridership. In many cases, they have decided to decrease their incentives, but to continue programs for other reasons such as good customer service and increased customer attention to resource efficiency. Other programs have focused more on focusing more funds on working with vendors and on marketing. The sponsors should review these evaluation findings, perhaps gather further data, and/or consult with other programs. One approach would be to lower the incentive and use the savings for targeted marketing efforts.

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## 12.    SAN DIEGO REGIONAL ENERGY OFFICE ENERGY RESOURCE CENTER PARTNERSHIP

### 12.1    INTRODUCTION

The San Diego Regional Energy Office Energy Resource Center (SDERC) Partnership is a non-resource program that provides education and outreach about the benefits of energy-efficiency and conservation. These efforts are completed in the form of workshops, specialized trainings, and industry collaboration.

The partnership is a collaborative effort that joins two successful organizations to provide these services: California Center for Sustainable Energy[30] (CCSE) and SDG&E. CCSE provides outreach and education through the Energy Resource Center and SDG&E offered these opportunities through the Statewide Education and Training Program.

SDERC calls upon considerable resources to conduct its work. It promotes its workshops, technical assistance, and lending library at strategic offsite events. SDG&E and CCSE websites promote and handle registration for workshops and events, provide access to a vendor database, and post-workshop support and follow up. Subcontractors and consultants with special expertise provide some training and education opportunities. SDERC maintains a database of 5,000 names used for quarterly marketing and outreach purposes.

### 12.2    PROGRAM BACKGROUND AND STRUCTURE

### 12.2.1    Program Description

Prior to the current funding cycle, CCSE ran the SDERC as a third-party implementer and SDG&E ran its Statewide Education and Training Program. For the 2006–2008 program cycle, with the CPUC encouraging partnerships, SDG&E and CCSE decided to partner as there was too much overlap in training.

In addition, SDG&E needed to find more (and less expensive) training space. Both parties agreed a single location would make it easier for businesses and the public to locate them. To accommodate SDG&E's larger training requirements, CCSE procured and outfitted a much larger space than it had previously held.

The partnership is structured with one overarching budget with a portion earmarked for CCSE and SDG&E. The budget for SDG&E is strictly for education, while the CCSE portion of the budget not only includes education, but also includes funding for a tool and resource lending library, physical space for workshops, and ownership and maintenance of energy-efficiency displays.

The partnership embraces a considerable number of diverse education and outreach activities. These activities include:

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[30] Formerly the San Diego Regional Energy Office (SDREO).

- Workshops in their multipurpose classrooms as well as at offsite locations. Topics include energy-efficiency, green building practices, building commissioning, sustainable design and other appropriate topics

- Customized trainings for public agencies, business, and other groups upon request

- Regional energy information forums

- Participation in local "energy fairs," trade shows, and other public forums appropriate for promoting energy efficiency

- Collaboration with professional/trade associations (e.g. AIA, ASHRAE), and local, regional, state and federal agencies that promote energy efficiency

- Partnerships with regional and local Chamber(s) of Commerce

- Oversight of the San Diego Excellence in Energy Awards (SANDEE)

- Event mailers and e-mail blasts to contacts

- A vendor database, energy-related links, and an online newsletter

- A Learning Center for technical workshops, educational programs and meetings

- A comprehensive energy resource library and Tool Lending program

- A Technology Center featuring energy-efficiency related equipment, displays, and exhibits

- Technical assistance sessions that "coach" customers through project design, equipment purchase and installation, commissioning, and ongoing operation and maintenance.

### 12.2.2    Program Logic Model and Implementation Theory

According to the logic model illustrated in Figure 12-1 below, the SDERC Partnership's main activities combine resources and past experiences from CCSE and SDG&E to create a single, regional education, training, and technical assistance program. These activities result in eight outputs: 1) marketing and events; 2) collaboration and partnerships; 3) SANDEE awards; 4) workshops and trainings; 5) information dissemination; 6) online resources; 7) center, library, and tool lending; and 8) technical center and technical assistance.

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**Figure 12-1 SDERC Logic Model**
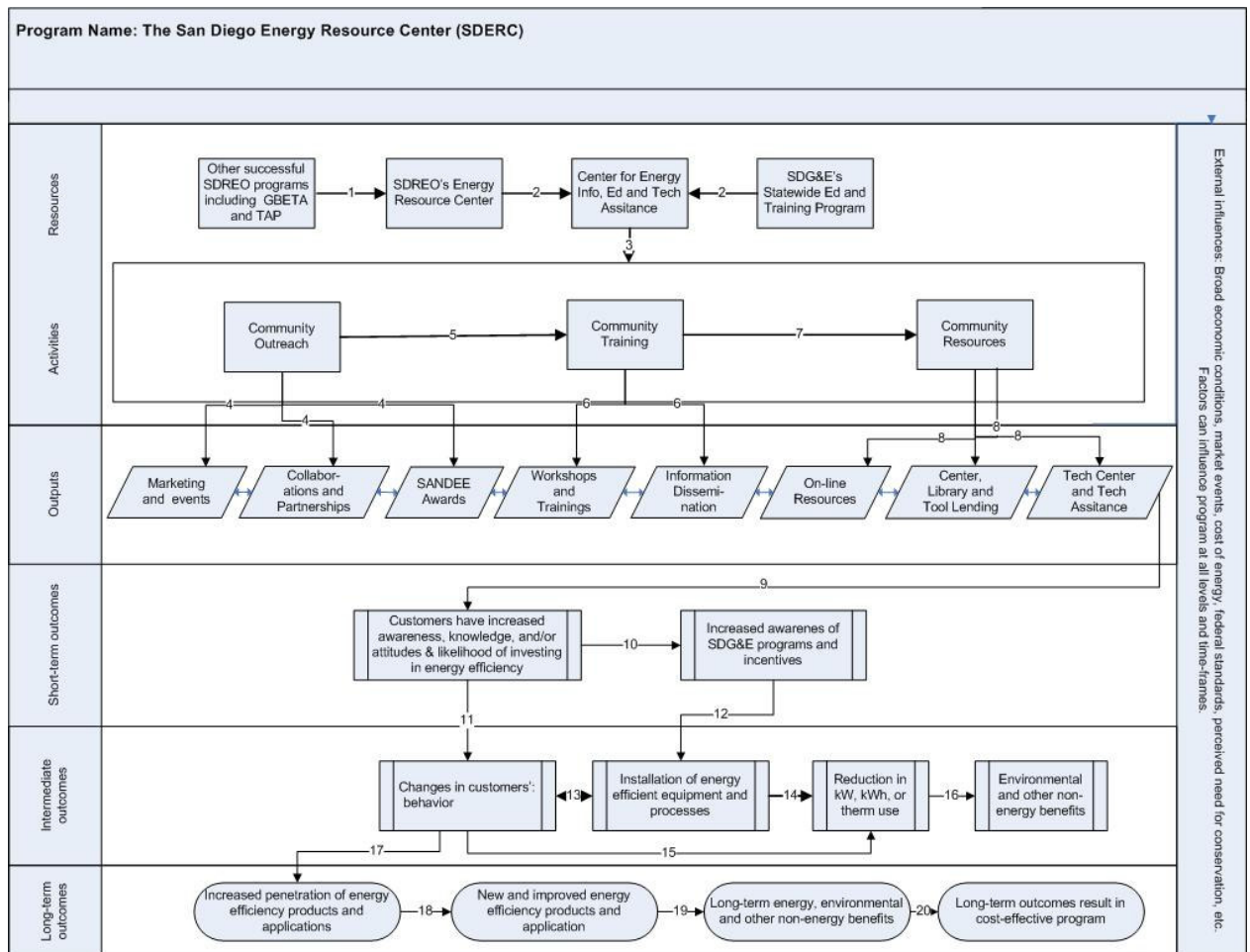


## 12.3    KEY FINDINGS

This section provides findings identified through evaluation efforts. Participant and nonparticipant survey results are interjected throughout the analysis. When reviewing these findings, note the small sample sizes. Given these small sample sizes, the information is intended to be descriptive and cannot be generalized to the population.

***The partnership, as a non-resource program, does not have savings goals. It claims to be on target for its non-resource goals.***

The program does not have resource goals; rather, the goals and expectations revolve around increasing awareness and education to commercial customers. In the long run, the partnership expects to increase energy efficiency, improve cost-effectiveness of delivering education over the individual efforts of SDG&E and CCSE, and deploy new and improved energy-efficiency products and applications.

According to the *Quarterly Report Narrative* from Quarter 1 2008, the program is on target to meet its non-resource goals. Progress against these goals are tracked by reviewing:

- the number of event mailers sent

- the number of workshop and outreach events conducted—(SDREO and SDG&E)

- the number of workshop attendees

- the number of technical assistance sessions and coaching

- the number of tools lent from the Tool Lending Library

- annual conduct of SANDEE Energy Awards.

***The partners communicate fairly regularly; however, interviews revealed challenges related to communication and operation between SDG&E and CCSE.***

Most communication occurs when SDG&E arranges with CCSE for workshop facilities and storage. Program managers communicate once every few weeks about the program, and discuss budget issues on a quarterly basis[31]. Further communication occurs when contracts are negotiated, or when disputes arise, higher-level interactions occur.

The process evaluation identified challenges reported either one or both parties related communications and operations. These challenges are as follows:

- The partners operate in parallel, rather than collaboratively. Because CCSE staff occupies the physical center, SDG&E believes their visibility as a partner is more limited than CCSE's. Both partners should try to recognize the other in its brochures, web sites, workshops, displays, or other outlets.

- Both partners commented that they would like greater access to each others' resources. CCSE voiced that they would like greater access to technical and marketing resources at SDG&E. SDG&E would like more presence in the physical space.

***In the next cycle, CCSE is planning to pursue funding separate from the SDG&E Partnership.***

While the SDERC Partnership is delivering high quality, well-attended services for the business community, the CCSE plans to diverge from the partnership in the next planning cycle. Interviews revealed that the CCSE strongly values its independence, wants to spread its wings, and therefore plans to pursue separate funding from the CPUC and elsewhere.

One concern for CCSE is the need to be seen as a credible organization to provide energy efficiency and conservation information. The organization believes its non-biased position is important to consumers.

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[31] SDERC is pre-paid on estimated expenses, then a true-up is done every quarter.

Interestingly, from a participant perspective, the credibility and desirability of having one or the other entity deliver energy-efficiency workshops to businesses appears to be mostly a non-issue, except among a small cadre of participants. Program participants surveyed were asked about their confidence in the credibility of energy-efficiency information from various sources. Their difference in confidence between their utility and local government or non-profit agency was statistically insignificant; 53 percent said they were very confident in the information provided by their utilities, and 50 percent said they were very confident in the information provided by their local government and/or non-profit agencies.

When asked what type of organization they preferred to receive energy-efficiency information from, again the answers were split (Figure 12-2). Twenty percent interviewed said it did not matter, 34 percent preferred utilities provide the information and 31 percent said they preferred local governments to provide this information.

**Figure 12-2 Preferred Source of Energy-efficiency Information (n=35)**
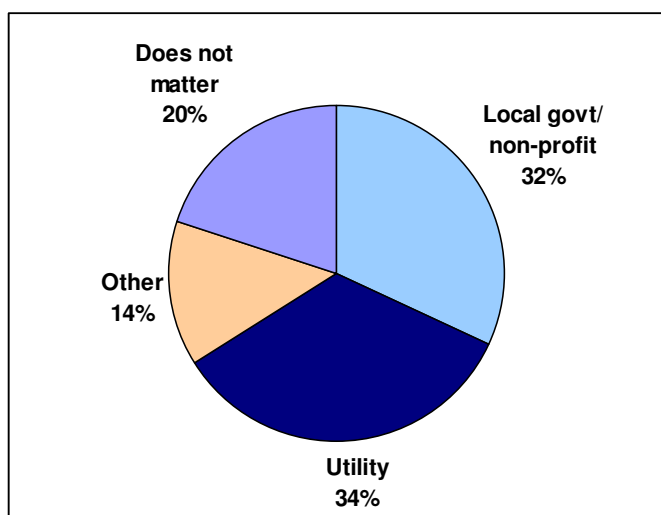


CCSE interviewees also discussed the desire to move from the partnership model because it is interested in delivering information and messages different from SDG&E. They believe that topics such as climate change have not been thoroughly vetted and that SDG&E has a more conservative, view of sponsoring these topics.

***The program markets the program relatively effectively; however cross-cutting opportunities may be missed.***

Interviews with staff suggest that marketing efforts are substantial and effective. They believe email blasts, in particular, have been effective with the current target audiences of businesses.

A survey of 38 SDERC workshop respondents supports this observation—the largest proportion of respondents (59 percent) said they were made aware of the workshop through a CCSE email contact. The next most frequently reported source of alert was word of mouth—24 percent. Only a smattering of participants found out through other means:

the SDG&E or CCSE website (13 percent), a CCSE flyer (eight percent), or through SDG&E (eight percent).

Due to the separate but parallel operation of the partnership, however, cross-marketing opportunities are missed. We could find very little evidence that either party gave the other credit for SDERC—in classrooms, on websites, or on brochures—although participants are referred to utility energy-efficiency programs. Results of participant interviews do show that 29 percent of participants went on to participate in (other) utility programs as "direct result" of their workshop experience (Figure 12-3).

**Figure 12-3 Participation in Other Energy-efficiency Programs due to Workshop Participation (n=34)**
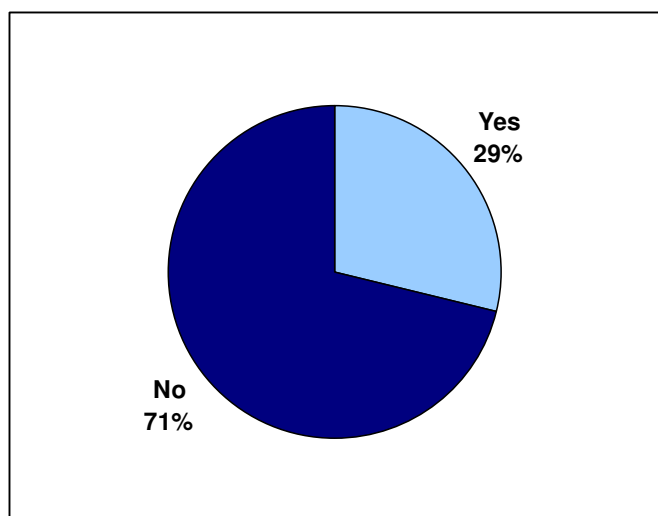


CCSE reports that it would like SDG&E to provide them with more customer contacts but due to SDG&E policy "customer confidentiality" SDG&E discourages that.

***Respondents primarily claimed they participated to learn to save energy and learn about new energy-efficiency technologies.***

SDERC promotes the program with a variety of messages, with considerable focus on saving energy, learning "best practices" and new technologies, and saving money. Participants report similar reasons to attend workshops, including:

- Saving energy (29 percent)

- Learning about new energy efficient technologies/staying current (26 percent)

- Saving money (21 percent)

- Learning to install energy-efficiency measures (18 percent)

- Learning to be more environmentally friendly (13 percent) and to understand green building issues (13 percent)

- Other reasons included needing to know the information for their jobs, finding out more about incentive programs, and finding sales leads

Nonparticipants were asked if they would be interested in attending workshops or education seminar to provide information on ways to save energy in their business. Sixty percent of nonparticipants said they would be interested in attending these types of events offered by SDERC. The majority of those who noted disinterest (not at all interested) said they do not have time (25 percent) or they believe their building is already energy efficient (13 percent)

***Half of program participants viewed the workshops favorably and said they used workshop information to make changes in their business, primarily changing behaviors.***

SDERC sponsors believe that participants are using workshop information to make energy-efficiency improvements. They report they regularly receive verbal and written feedback that demonstrates their effectiveness.

A portion of participants interviewed support this view of the center as well; half of participants interviewed (50 percent) report that they used workshop information to make changes in their facilities. Of the 19 participants who reported making changes, the most commonly reported energy-efficiency improvements are changing behaviors and installing more energy efficient lighting (Figure 12-4).

**Figure 12-4 Reported Changes as a Result of Workshop (n=19)**
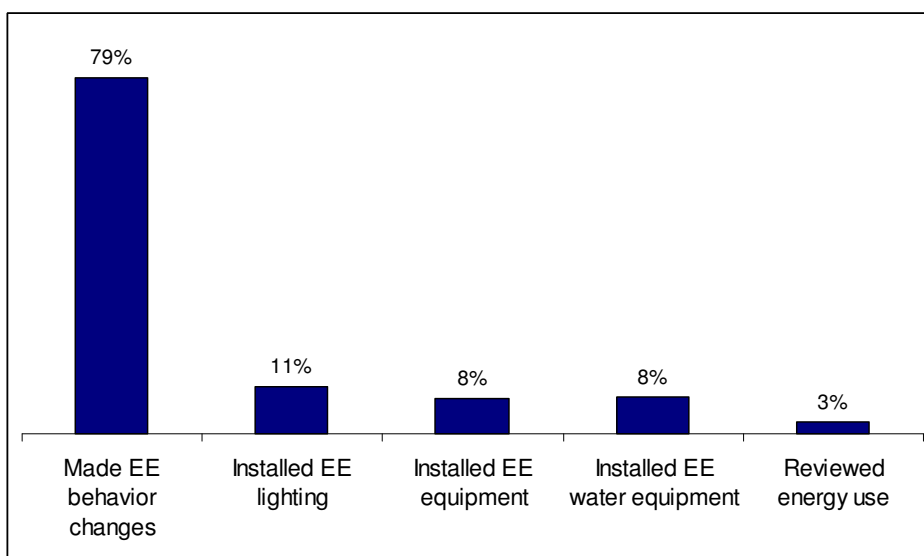


The majority of these respondents believed the workshop was influential in promoting the changes. When asked to rate how much influence attending the workshop had on their subsequent decisions to take action, 70 percent rated the influence 7 or above on a 1 to 10 scale where 10 was extremely influential. Nearly a fifth (18 percent) rated the influence as low (a rating of 3).

When asked how useful the workshop was in helping them understand ways to save energy, again the response was very positive—47 percent said the workshop was very useful and 45 percent said it was somewhat useful. Only 8 percent said their workshop experience did not effectively teach them about energy-efficiency strategies. A strong majority (81 percent) also reported that the information they received at the workshop would help their organization save energy.

A large majority of participants recalled that they had received brochures of literature as part of the workshop they attended (86 percent), and 93 percent of those participants said the literature was very (50 percent) or somewhat (42 percent) useful.

An overwhelmingly 94 percent of respondents said they benefited from the program. The ways they benefited included helping them understand how to change their energy behaviors (35 percent), share what they learned with others (29 percent), and saving energy (24 percent). Other benefits included simply increasing their understanding and knowledge, confirming things they already knew, and understanding the competition better.

## 12.4    CONCLUSIONS AND OPPORTUNITIES FOR IMPROVEMENT

Both partners report there are successes and challenges with the partnership. On the positive side, both partners report that the partnership has decreased the duplication and costs for outreach and education efforts. Additionally, both partners state that the quality and attendance at the SDERC workshops are high and the program is meeting its goals.

In many partnerships that find themselves at odds with one another, negotiations are possible that will help resolve disparate views on issues. The easiest types of issues to resolve are ones that are straightforward and not value-based, and where both partners are motivated to have open minds and/or are heavily invested in maintaining the partnership.

It would seem like a reasonable first step for the partners to work with an outside party to determine the best road ahead—first, in terms of how to complete the current cycle together and second, whether or not the partnership should continue past that point.

Finally, SDG&E has low visibility as a co-sponsor at the center and at workshops. A recommendation would be to add more signage to help support the SDERC partnership. In addition providing an office space at the center for SDG&E would give their customers the opportunity to speak to a representative regarding SDG&E programs and services.

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## 13.    PORTFOLIO-LEVEL FINDINGS AND RECOMMENDATIONS

### 13.1    KEY PORTFOLIO-LEVEL FINDINGS

Below summarizes the key portfolio-level findings. More detailed analysis to support these findings can be found throughout this chapter, as well as within program-specific chapters.

**Achievement of Goals**. While it has taken some time to put efficient tracking systems in place for the City of San Diego and the City of Chula Vista, SDG&E staff have worked with partners to ensure the programs' resource savings efforts are captured reliably. As shown in the previous section, most of SDG&E's resource programs are on track to meet or exceed their 2006–2008 goals. This accomplishment is even more impressive because many of the programs did not start in earnest until late in 2007, mainly because of prolonged contract negotiations.

**Long-term Capacity Building**. The potential for longer-term savings varies by program type. To varying degrees, the statewide partnerships provide training associated with energy retrofits and MBCx, and are working to impact campus/organizational purchasing policies and building practices. Some partner facilities have made greater commitments in these areas than others, and those that do, credit this more active pursuit of energy efficiency to their partnership participation.

**Local Government Programs**. The most successful partnerships are those in which all partners are fully engaged in the program. The term "engaged" is used to indicate both buy-in to the partnership concept and commitment to making its implementation work. The City of Chula Vista and the City of San Diego Partnership programs function as true partnerships—meaning that each partner brings its unique capabilities to the partnership. The two partnerships direct their activities to meet the program's articulated goals, and promise to deliver long-term energy savings by developing capacity within local government, and on local government policies and processes. Conversely, the County of San Diego has not worked as well to date (because staff turnover has meant that the government has not been able to fulfill its commitments).

**Statewide Programs.** The statewide partnerships work well in terms of policy development and collaboration between partners and utilities and, overall, partners are quite complimentary about SDG&E's implementation efforts. The challenges associated with the CDCR and Community College partnerships have, on the whole, been outside SDG&E's control. For CDCR, the key challenge faced by the program was the need to finalize the process for securing state financing for projects before they could proceed, which took several months to complete.

**Unrealized Value.** SDG&E staff and partners maintain that there are many important things that these programs do—helping local government decision makers move toward acting on projects, providing expertise to facilitate projects that otherwise would not happen, reaching customers who would not otherwise participate in core programs (hard-to-reach segments), and building public awareness. Excepting the statewide partnerships, most partners are concerned (as are many SDG&E staff) that the partnerships will not be given adequate credit for the role they play in stimulating energy saving behaviors and installation of measures beyond those that are easily counted. The concern is that, in the

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absence of a way to measure indirect program impacts, such as those that show up in the core DSM programs, partnership value to the overall efficiency portfolio will be underrepresented. At the same time, the utilities and most partners understand that the accurate measurement and verification of the statewide programs comes first in terms of CPUC reimbursement of costs and incentives for the utilities.

**Staffing Resources.** Staffing is an important issue on the local government level, particularly because partnership funds are not designed to fund staff in perpetuity. Local government staffs tend to have limited time to dedicate to partnership work, yet it is important that the partnership has adequate staff resources—at whatever level—to ensure the necessary work is accomplished to support the partnership's initiatives. For SDG&E's successful local government partnership programs, this means at least one dedicated local government staff person—or champion—as well as others throughout the local government who participate on some level. The local government itself must be present at the table to bring in their unique ideas and resources to make the partnership work. The County of San Diego partnership, which has not performed well to date, has lacked these ingredients.

**Program Maturity.** PA's evaluation indicates that the local government and institutional partnership concept has gained momentum from its first program cycle, 2004–2005. Clearly, those programs that had started under the earlier program cycle, had reached a level of maturity under the 2006–2008 cycle that allowed for more progress to be made. It is clear that both IOUs and the Commission underestimated the amount of time it takes to set up partnerships with their complex relationships, multi-party contractual documents, and range of services. Expectations for accomplishment have had to be adjusted in some cases. Those that have achieved their stated goals are the exception rather than the rule across the IOU programs, and SDG&E is to be lauded for achieving their goals in five of the six resource partnerships in their portfolio. These programs should just continue to get better with time.

**Clarity of Focus**. The partnership program model has two main dimensions: it is a resource acquisition vehicle, and it is a community outreach and engagement tool. The challenge is that the partnership program model assumes local governments have significant roles to play in delivering direct and indirect kWh, kW and therm energy savings—roles that are important but necessarily vary with each partnership based on the capacity and capabilities brought to the endeavor. This challenge is addressed in the program design documents, written commitments and contractual documents that articulate the responsibilities of the external partners that they must fulfill in exchange for the Public Goods Charge (PGC) funding provided.

As the next section discusses, PA's evaluation effort examined the extent to which SDG&E's external partners (1) fully understand and accept this obligation, (2) have the capacity (resources) and capability (skills) to fulfill this role, and (3) feel a direct obligation to fulfill the energy-savings commitments. Not surprisingly, the partners that are most fully engaged are those that meet all three of the above criteria. Every partnership that is not performing as well fails to meet at least one of these criteria.

**Balancing Resource and Non-Resource Objectives**. One potential risk associated with partnership programs is the dual-nature of resource and non-resource activities. Because the partnership program portfolio aims at delivering near-term energy savings as well as

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building capacity and capabilities necessary for long-term energy savings, it may be more appropriate to articulate a partnership's goals in terms of both near-term or immediate resource goals and long-term resource goals.

There is a tension that has existed in the partnership programs portfolio between delivering the energy-savings commitments related to the PGC incentive mechanism (achieving the metrics), and building local government capacity to deliver services over the long run. Programs are a reflection of the goals that are set for them. If partnership goals are articulated as annual energy savings, then the programs as designed will focus on obtaining energy savings. In order to obtain critically needed resources for the State, this is appropriate. However, with that kind of focus, much of the capacity and capability building for which the partnership program concept is so well suited could be marginalized. To balance the two objectives, partnership goals need to ensure that longer-term savings—as well as near-term energy-savings targets—are realized and that progress toward reaching both goals is measurable.

**Recording Non-Resource Activities.** The CPUC has recognized the potential value of non-resource activities by focusing attention on these partnership elements in the impact evaluation that was launched during the time of this study. Although regulatory documents point to the need for the IOUs to maintain information to allow for their evaluation, few of the IOUs, including SDG&E, maintain such data (e.g., contact information for participants in non-resource activities). The CPUC's decision to place more emphasis on indirect impacts and non-resource program elements than originally intended for the 2006–2008 program cycle has placed significant additional pressure on SDG&E program managers to document these activities and create databases for evaluation purposes.

**Length of Programs.** While most of those interviewed for this evaluation believe the partnership programs will lead to increased local government capacity to implement energy-efficiency actions and measures, they also believe that a three-year program cycle is insufficient time in which to achieve the results these programs can ultimately produce. The need for a longer program cycle becomes obvious when comparing those programs that began during the 2004–2005 cycle with those that started in 2006. More mature programs like the UC/CSU partnership are functioning more effectively and delivering greater savings. A longer program cycle might make sense for this type of program.

**Program Tracking.** Program databases are critical tools for reviewing and documenting program progress. Program managers and stakeholders can use databases to identify the populations they are serving, markets being underserved, and services provided through the programs. Databases are also critical for identifying and tracking energy impacts associated with programs and a means for optimizing program energy impacts. Key findings related to data tracking are:

- The CPUC-compliant databases for all of its Public Goods Surcharge (PGS) programs were not set up by SDG&E as of the end of 2007.

- As of the end of December 2007, partnership programs had not been included in that system, so partnership managers had to set up their own tracking systems to ensure data capture. Due to their individuality, partnerships do not lend themselves as easily to a central system, but even so, program managers have taken steps to ensure the necessary data is captured.

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- Utilities did not receive clear guidance from the CPUC regarding capturing indirect impacts, so there had been no formal tracking for non-resource programs or components until the issue was raised in mid 2008.

- While statewide partnerships are tracked at a central level by implementation contractors, SDG&E's program managers have put their own tracking system in place so that they can maintain a strong project pipeline system

## 13.2 RECOMMENDATIONS

This report provided a plethora of information regarding the different partnership programs independently, and findings and recommendations at the program-level. This section concludes the report by providing recommendations that emerge from this process evaluation for the portfolio of programs.

1. Create and increase the visibility of the partnerships program "brand" so that recipients of services understand who is sponsoring the work, and the source of program funding. Because of their nature, the government and institutional portfolio programs are easily lost in the mix of EE efforts in the state, and are thus vulnerable to being confused by participants and delivery groups alike with other programs or sources of funding. Without a clear brand, nor consistent name that is recognizable to recipients of services or funding, the potential for confusion with other efforts is significant. This makes evaluation of and attribution for energy savings difficult to assign.

2. Improve tracking of non-resource program activities. SDG&E should continue to develop its ability to track non-resource program activities so that evaluation of these elements can be facilitated in the future.

3. Articulate long-term goals and develop metrics for their attainment. To the extent that programs seek long-term capacity building either exclusively or in addition to near-term energy savings, metrics should be developed to clearly show progress so that programs can be given appropriate credit.

4. Set interim goals and/or longer program periods. This evaluation recognizes that some programs require longer amounts of time to accomplish their objectives. For large retrofit or new construction projects, as well as for policy oriented efforts that focus on improved enforcement of codes and standards, adoption of purchasing policies or capacity building, longer time periods are needed when program designs are filed. The alternative is to consider a phased approach with interim goals with the intention of filing a second phase for the next program cycle to realize the full impacts.

5. Reduce cycle times for large retrofit projects. For those projects that involve local or state government facilities where assessments are done followed by job scopes and financing packages, it is essential to reduce the cycle time for approvals. This should be less of a problem as the programs mature, however delays between audits and implementation can affect several factors including project pricing, costs of materials, availability of labor and even contracts expiring (as happened in the case of some ESCOs under CDCR).

6. Improve cross-program communications. One recommendation that cuts across the programs includes the possibility of improving internal communication practices within and between the partnerships, SDG&E program managers, and account managers to

help share lessons learned, best practices and common issues. Holding a bi-annual forum might be one way or tapping into other events where groups might come together more frequently, either formally or informally. The benefits of this shared communication between San Diego and Chula Vista might serve as a model for transferring information between partnerships for the mutual benefit of all.

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*APPENDIX A: IN-DEPTH INTERVIEW PROTOCOLS*

### A.1 COLLEGE/UNIVERSITY FACILITY MANAGERS INTERVIEW GUIDE (UC/CSU, CCC)

My name is ˍ from PA Consulting Group. Our company is under contract with the California utilities to evaluation their partnership programs with the UC/CSU and Community College systems. I am calling to speak to you about your campus' involvement in the **[name of] Partnership**. I understand you are the key individual on this campus who has been involved with the program. Is that correct?   I'd like to talk with you about a few topics related to this program and your campus' involvement. Is this a good time?  If not, can you suggest a more convenient time? ˍˍˍˍˍˍˍ. Your input to this study is very important to our clients, and your answers will be held in strict confidence. You responses will not be shared with either the UC/CSU/CCC main offices or the utilities but will rather be summarized in a report along with the responses of other facility managers.

LAST RESORT: If you prefer I can email you the questions and ask that you write in your responses.

**<u>My questions relate to the [name of] Partnership Program</u>**

**Participation**

- Are you familiar with this program?  <u>Y/N?</u>

- If yes, what services/aspects of this Partnership Program have you used and which ones have you found most useful?

- If participating, what is your primary motivation?  What are your expectations for the program?

- If not familiar with the program, do you use outside services/contractors to assist you in your facilities management?  Do you have unmet needs (capital constraints, training/education, difficulty reducing energy costs)?

- If familiar but not participating, why not?  What are the barriers to engagement?

**Program Goals**

- If participating, does the program as currently structured serve your biggest needs?  What needs are *not* being met?

- How could the program better serve you?  What existing barriers do you see to the program achieving its energy-savings goals?  What are some ways to overcome those barriers?

**Program Delivery**

- Have the outreach and support materials met your needs and been easy to use?

- Describe how you interact with program staff (UC/CSU/CCC head offices, NAM, utility).

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- How well do you think the program delivery process works? Has the program encouraged actual changes in behavior on your campus? How do you know? *Probe to see what changes, if any, have taken place in purchasing and approval processes.*

- What specific measures or actions result in energy savings and how are those savings tracked?

- How could the delivery process be improved?

- Is information management adequate (i.e. do you have access to the information and knowledge transfer/training that you need)?

- These Partnership Programs were set up to tap into skills and resources of both parties, in this case the [UC/CSU/CCC system] as one partner and the utility(ies) as the other partners. On scale of 1 to 10 where 5 is a true partnership where each party brings resources to the table, 1 means you have no capacity and need the utility to do it all, and 10 means you need the funding but want to or can do most of the work yourself , where does this partnership fall?

**Implementation and Response**

- Internal capacity building—what was pre-engagement capability vs. your current capabilities? Has the partnership improved your campus' capabilities? If so, how?

- Have you received any funding through the partnership? On what are these funds spent? (general categories and percentages)

- Staff/labor

  - Education/training

  - Measures (retrofits, retro-commissioning, monitoring-based commissioning, new construction)

  - Other (specify _____)

- How is the communication between you and the utility? You and the [Chancellor's Office/Office o the President]? Do you have recommendations on how to improve/optimize it?

**Utility Involvement (Differentiate as much as possible to get feedback on specific IOUs)**

- How much do you feel the utilities' presence in the partnership activities?

- How did you feel about SCE/SDGE/PGE and The Gas Co before your experience with this partnership? How do you feel about them now?

- How well do you feel the utility is doing its job in the partnership? Any problems?

- Have your expectations for this partnership been met? How and how not? What would you change?

- How likely would you be in the future to engage the utility directly to pursue these types of services?

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**Metrics**

- What metrics would you use to measure this program's success? Have these metrics been defined for you, and if so, how clearly have then been articulated?

- What do you think needs to be done to increase UC/CSU/CCC campus participation in the program?

- Do the program incentives address your (the facility manager's) needs effectively?

- What energy or demand reduction benefits have you seen as a result of this program? (direct attribution— percent of savings)

- How do you know?  Are these benefits tracked?  How so?

- What  percent of these demand reductions would have been implemented in the absence of this partnership?

**Conclusion**

- What is working well (top 3)?

- What is needs improvement (top 3 concerns)?

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### A.2 FACILITY MANAGERS INTERVIEW GUIDE (UC/CSU, CCC, SAN DIEGO COUNTY)

My name is ___ from PA Consulting Group. Our company is under contract with the California utilities to evaluation their Partnership Programs. I am calling to speak to you about your city/county/agency's involvement in the **[name of] Partnership**. I understand you are the key individual in your organization who has been involved with the program. Is that correct? I'd like to talk with you about a few topics related to this program and your agency's involvement. Is this a good time?  If not, can you suggest a more convenient time? _____. Your input to this study is very important to our clients, and your answers will be held in strict confidence. You responses will not be shared with either the partner organization or the utilities but will rather be summarized in a report along with the responses of other facility managers.

LAST RESORT: If you prefer I can email you the questions and ask that you write in your responses.

### My questions relate to the [name of] Partnership Program

**Participation**

- Are you familiar with this program?  <u>Y/N</u> ?

- If yes, what services/aspects of this Partnership Program have you used and which ones have you found most useful?

- If participating, what is your primary motivation?  What are your expectations for the program?

- If not familiar with the program, do you use outside services/contractors to assist you in your facilities management?  Do you have unmet needs (capital constraints, training/education, difficulty reducing energy costs)?

- If familiar but not participating, why not?  What are the barriers to engagement?

**Program Goals**

- If participating, does the program as currently structured serve your biggest needs? What needs are *not* being met?

- How could the program better serve you?  What existing barriers do you see to the program achieving its energy-savings goals?  What are some ways to overcome those barriers?

**Program Delivery**

- Have the outreach and support materials met your needs and been easy to use?

- Describe how you interact with program staff (Partnership organization/utility).

- How well do you think the program delivery process works? Has the program encouraged actual changes in behavior?  How do you know?

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- What specific measures or actions result in energy savings and how are those savings tracked?

- How could the delivery process be improved?

- Is information management adequate (i.e. do you have access to the information and knowledge transfer/training that you need)?

- On scale of 1 to 10 where 5 is a true partnership where each party brings resources to the table, 1 means you have no capacity and need the utility to do it all, and 10 means you need the funding but want to or do most of the work yourself , where does this partnership fall?

**Implementation and Response**

- Internal capacity building—what was pre-engagement capability vs. your current capabilities?  Did the partnership improve your organization's capabilities?  If so, how?

- Do you receive any funding through the partnership? On what are these funds spent? (general categories and percentages)

  - Staff/labor

  - Education/training

  - Measures (retrofits, retro-commissioning, monitoring-based commissioning, new construction)

  - Other (specify _____)

- How is the communication between you and the utility?  You and the partnership organization?  Do you have recommendations on how to improve/optimize it?

**Utility Involvement**

- How much do you feel the utilities presence in the partnership activities versus the presence of the [NGO]?

- How did you feel about SCE/SDGE/PGE and The Gas Co before your experience with this partnership?  How do you feel about them now?

- How well do you feel the utility is doing its job in the partnership?  Any problems?  How about the [partnership organization]?

- Have your expectations for this partnership been met?  How and how not?  What one thing would you change?

- How likely would you be in the future to engage the utility directly to pursue these types of services?  Or do you feel that the existence of the facilitator is important. If so, why?

**Metrics**

- How do you measure success with this Partnership program?  Are these metrics clearly articulated to the customers (or to you, as a customer)?

- How would you increase participation among the CCC and UC/CSU

- Do the program incentives address your (the facility manager's) needs effectively?

- What energy or demand reduction benefits have you seen as a result of this program? (direct attribution— percent of savings)

- How do you know?  Are these benefits tracked?  How so?

- What  percent of these demand reductions would have been implemented in the absence of this partnership?

**Conclusion**

- What is working well (top 3)?

- What is needs improvement (top 3 concerns)?

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### A.3      PARTNER INTERVIEW GUIDE

**Roles and Responsibilities**

1. What is your role in the _____Partnership Program?  How long have you held this position?  If less than one year, who is your predecessor?

2. Which **utility (IOU)** sponsors do you interact with?  Which is the lead utility for this partnership?  What is your level of interaction with the sponsoring utilities?

3. What **implementation contractors** do you work with?  Are they under contract to your organization or the IOU?

4. What responsibilities does your organization have in return for the funding provided? (Reporting?  Delivering savings?)

5. Whose responsibility is it to:

a)collect names and contact info on who is receiving services

b)document actions taken, measures installed

c)calculate energy savings

6. What resources does the program use and are they adequate?

   a. Budgets

   b. Measures

   c. Tools for analysis/audit software

   d. Contractors/vendors

7. Is the program or activity identified as a partnership with the IOU in any way? How prominent would you say the utility is in your marketing of the program or activity?  Very, somewhat not much, etc.  What is the reason for this strategy? (intentional downplaying of IOU involvement, unintentional, etc.)

8. Are roles and responsibilities among the key parties clear and effective?  Why/why not?

9.  Whose (or what organization's) role is the most essential to program success?

**Program Goals**

10. What are the objectives of the _____Partnership Program **for your organization**?

11. Did your organization initiate the partnership application? If not, what organization initiated the program?

12. To what extent did your organization already provide EE services prior to participating in the 2006-2008 partnership program:

    a.  To a large extent—several years of experience providing EE services to constituents

    b.  To some extent—recent or small amount of EE services to constituents

    c.  None—no prior experience or virtually none in providing EE services to constituents

13. Why did your organization elect to pursue a partnership with the IOU(s) through this vehicle?

14. Would you be providing these same services to the same degree without the partnership program?

15. I'd like to understand what the respective organizations bring to the partnership. On a scale of 1 to 10, where 10 means that you run the program with minimal utility involvement and 1 means the utility runs the program with minimal involvement from your organization, where would you place this partnership?   Why is that?

16. What metrics and/or goals are established by your organization to determine success? Do you have individual performance goals associated with the _____Partnership Program?  What are they?

17. What barriers exist that your partnership is trying to overcome?

18. Why are the IOU's conducting Partnership Programs?   Why is the CPUC?

19. Some programs are considered RESOURCE Programs. What does this mean? (Do they consider it their responsibility to deliver energy savings in return for the funding provided?)

20. In what ways is your organization/type of organization better able to influence energy-efficiency actions among the target markets than the IOUs? (will be compared against survey results)

**Program Delivery**

21. Let's envision a flow chart of this Partnership Program (process mapping activity). Tell me about:

   a. intake—ways in which a participant finds out about the services offered (includes marketing and outreach)

   b. services delivered

   c. data recorded and put into a database?

   d. decision-points in regard to what projects proceed? Are these points of control exercised by the IOU sponsors versus the implementation contractor?

   e. project completion—when is a project considered complete an recorded as such?

22. What **do you** feel are the weakest points of this process flow? Why is that?

23. How effective are the outreach and marketing activities associated with this partnership?

24. How is your program branded? By this I mean … Is there a NAME or LOGO that is associated with activities promoted by the program that customers would recognize?

25. From the **customer's perspective**, do you feel this process works well? What do you think they feel is the weakest point in the process from the customer's perspective?

26. What hard-to-serve markets are being targeted/reached/not being reached?

27. What level of action is being taken (measures installed on time)? Are you satisfied with the level of action being taken? What barriers are preventing more actions from being taken?

28. Which strategies have been most effective with the following groups (if targeted):

   a) Low income residents

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b)Local govt agencies (retrofitting LG buildings)

c)Small business

d)Non-English language groups

e)General residential

f)Elderly

g)Other hard to reach groups?

29. How do you feel the program delivery process could be improved?

**Program Administration**

30. Are administrative processes between your organization and the IOU sponsor(s) adequate, excessive or inadequate?

31. Is information easily and readily available for you to perform your duties under the program?  Why/why not?

32. What are the formal and informal communication procedures between your organization and the IOU sponsor(s)? Do you feel they are adequate? What could be improved?

33. How clear and useful are the systems in place for reporting and budgeting purposes?

34. Partnerships aim to leverage unique qualities of local government for delivering energy-efficiency services. What does your organization bring to the partnership that is unique and could not be delivered by an IOU?

35. What do you think of the effectiveness of this approach of using local governments to implement EE programs?  In what ways does it make sense, and in what ways not?

**Program Implementation and Customer Response**

36. Earlier we talked about participation levels. Are your levels of activity in the program consistent with where you expected to be in relation to goals or plans?  How about in terms of numbers of activities completed? (no. of trainings, no. of people trained?)  How about in terms of numbers of customers taking EE actions?

37. Beyond the measures and services provided under this partnership, what specific **other**

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**IOU programs** does this program promote or directly recruit customers for, if any? Do you feel the program coordinates adequately with other programs available to the customers? Do you track customers' participation in these other programs?

38. What do you think about the potential for this Partnership Program to achieve its targets for the 2006-2008 cycle? Why/why not?

39. What target market groups are you able to reach that others could not? What groups are still underserved?

40. How do you obtain feedback about this program from participants/customers? What formal and informal processes are in place to get feedback?

41. What stakeholders are critical to the success of this program?

42. What follow up activities or QC procedures, if any, are performed to check on installed measures or contractors' work?

**Program Issues**

43. What are your top 3 issues of concern regarding this program? What ideas can you suggest for resolving these issues?

44. What do you see as your organization's future with the Partnership Program in general going forward? How about with the services provided in this partnership specifically?

45. Will you applying to the program for the next cycle? What should change?

46. What, if anything, might affect future activities?

47. Do you feel the IOU(s) devotes adequate resources to provide good services under the partnership? What could they do better?

48. What needs to be done to increase program success in terms of achievement of goals? What of these actions are within your control? Some other group's control? (If the latter, whose?)

49. Will you reapply? With what changes? Any new initiatives?

**Evaluation Data**

50. We will be surveying _____as part of our evaluation of this

partnership. What do you feel are the key issues we should address when talking with them?  Ask for each.

51. Any other questions or issues you would like to raise regarding the Partnership Program as part of this process evaluation?

**Program-specific issues for SDG&E**

**SDGE 3001 Community Colleges**

1. Probe to determine whether the actual structure of the Community College system may have an impact on the program's ability to meet its goals?  Assuming the structure is not going to change, what can be done to counterbalance this issue?

2. We understand that most outreach is done by utility program staff on a facility by facility basis. Can this system be enhanced or improved?

3. Should the CCC program goals be re-examined given the almost unrealistic goals left to be attained at this point in the program cycle? What impact will the audits going on now have on the program in future years?

4. What can SDG&E do to motivate the Community Colleges to move forward with potential projects? What is the best way to overcome the existing paperwork barriers for community college facility managers?

5. Since the community colleges do not have a dedicated Energy Manager, would this program work more effectively in a format other than partnership?

**SDGE 3003 CDCR**

1. What is the status and effectiveness of the retro-commissioning feature?

2. How are previously-identified projects factored into the 2006-2008 goals?

3. How effective is the ESCO and engineering management consultant pool in implementing projects?

4. Is there any coordination with other IOU programs?

5. What are the decision-making processes for moving implementation forward, particularly regarding the role of the State General Services Administration? What is the role and status of the GS$mart financing component?

6. What is the status of the training component?  Has it been effective?  Is it reaching those who can actually affect change?

**SDGE 3005 City of San Diego**

1. How can municipal processes be leveraged to encourage energy efficiency?

2. Has the change in San Diego's municipal structure had an impact on program implementation?  If so, what?

3. How effective do you believe the Peer-to-Peer component has been?  On what do you base that opinion?

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**SDGE 3002 City of Chula Vista**

1. How can municipal processes be leveraged to encourage energy efficiency?

2. How effective do you believe the Peer-to-Peer component has been? On what do you base that opinion?

**SDGE 3022 County of San Diego**

1. How has staff turnover affected program progress?

2. How can county processes be leveraged to encourage energy efficiency?

3. Does the County plan to hold any outreach programs during the remainder of the 2006-2008 program period? If so, when and what type?

**SDGE 3023 San Diego Water Authority**

1. Do you think customers would prefer point-of-purchase rebates to the pre-approved vouchers? Why/why not?

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### A.4    UTILITY PROGRAM MANGERS INTERVIEW GUIDE

**Roles and Responsibilities**

1. What is your role in working with the Local Government Partnerships (LGP) program? What actions and activities do you perform in support of the program?

2. How many utility staff work on this program and what are their roles?  [Get names and contact information.]

3. Does your utility work on any other SDG&E/SOCALGAS programs for this population and if so what percentage of time is spent on LGP?

**Program Goals.**

4. Do you have specific numerical goals for your utility related to the LG program?  (no. of referrals, participants, improved payment behaviors, amount of energy arrearages reduced, etc.?)

5. How many customers did you serve the last year in SDG&E/SOCALGAS's Local Government Partnerships program?

6. What is the effectiveness of current program features at meeting goals:

    a. targeting and recruitment,

    b. management and administration,

    c. marketing, information dissemination, educational outreach

    d. program content in terms of benefits offered

7. Are there any prior and planned changes in Program design and delivery that we should know about?

8. What are the existing barriers to the Program achieving its goals? What are some ways to reduce those barriers?

**Program Delivery.**

9. How do you (or do you) track customers of yours that are referred to the program?

10. Describe the program delivery process (how you interact with the Partnership management). How well do you think the program delivery process is operating? How could it be improved?

11. What benefits and assistance does your company offer to Partners for participating in the program? What do they have to provide to you in return (documentation, delivered goals)?

12. How has the budgeting for this program worked? Can you provide a breakdown of planned versus actual expenditures by COMPANY and by Partnership? Do you feel budgets are adequate for the needs/opportunities?

13. Program Management—What reporting information do you <u>provide</u> on this program to your COMPANY management? To the CPUC/CEC?

14. What reporting or data do <u>you receive</u> from the Partnerships and is this adequate for your needs?

15. Describe the Program Databases. Yours and those used by the Partnerships. Are they linked? Who has access to the [master] database? What information do you typically pull on a regular basis?

16. Do you collect or append billing data on participants? Any other links to other databases?

17. Is the data collection process working well for you or do you have suggestions for improving the process?

18. Do you think communications between your utility, SDG&E/SOCALGAS and the Partnerships are adequate (or excessive or inadequate)? Probe for each. What could be improved?

**Program Implementation and Customer Response**

19. Is the program generally meeting the needs of your customers? (probe more specifically below)

20. What feedback do you get from customers, if any, regarding each program?

**Program Metrics**

21. What metrics do you employ to measure the success of these Partnerships? Are they clearly articulated to Partnership leads?

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22. To what extent have you seen results in terms of [metric 1, 2 3,etc.] because of the program?

23. How do you link causality?  How do you attribute these results to the program?

24. What energy or demand reduction benefits do you observe?

25. Any other benefits that you have seen from the program not addressed so far in this discussion?

26. Do you have any evaluation results from this program or for your customers that have participated in this program that you can share with me?

**Program Metrics**

27. What is going well?

28. What is not working as well?

29. Biggest issue on your mind today?

30. What specific questions or issues you would like to raise regarding the Local Government Partnerships program as part of this process evaluation?

**APPENDIX B: TELEPHONE SURVEY INSTRUMENTS**

**B.1     SAN DIEGO COUNTY WATER AUTHORITY PARTNERSHIP PROGRAM
         HEW VENDOR SURVEY**

**Introduction:**
Hello, I'm calling on behalf of the San Diego County Water Authority and San Diego Gas and Electric. I'd like to speak with a person at your store who is in charge of selling clothes washers. (Repeat intro as needed until you reach the right person).

**If participating:**  I understand you are participating in the High-Efficiency Clothes Washer Voucher Incentive Program, where customers can receive a $175 discount off a new qualifying High-Efficiency Washer, is that correct?  (If yes, continue. If no, ask:  Who would be the best person for me to talk with about this program?   Can I speak with that person?)

(Continue once the right person has been reached) Your input is very important to the success of this program. I have a just a few questions to ask you.

1.      Overall, how would you rate this program in terms of helping you/your store sell high-efficiency clothes washers?  Would you rate it as . . .

        1       Poor
        2       Fair
        3       Good
        4       Excellent
        5       Don't know


1a.     Why do you say (insert rating)?


2.      And overall how would you rate the quality of high-efficiency washers covered by this program compared to washers that don't qualify for the program?  Would you say the qualifying washers are. . .

        1 Much higher quality than non-qualifying washers
        2 Somewhat higher quality (than non-qualifying washers)
        3 About the same quality
        4 Somewhat lower quality (than non-qualifying washers)
        5 Much lower quality than non-qualifying washers
        6 Don't know


2a.     Why do you say (insert rating)?

3.  How would you rate the program on these specific elements, again using the Poor, Fair, Good, or Excellent scale?  (Note:  Probe reasons behind any "fair" or "poor" rating).

| How would you rate the program on these specific elements, again using the Poor, Fair, Good, or Excellent scale | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| How convenient it is for you to fill out and process the paperwork? | Poor | Fair | Good | Excellent | DK |
| How timely the voucher payments back to the store are? | Poor | Fair | Good | Excellent | DK |
| How convenient it is for customers to obtain the needed voucher before coming to the store? | Poor | Fair | Good | Excellent | DK |
| How convenient it is for the customers to obtain the needed voucher on an "instant" basis at the store? | Poor | Fair | Good | Excellent | DK |
| How convenient it is for the customer to fill out and send in the required paperwork? | Poor | Fair | Good | Excellent | DK |
| The voucher amount | Poor | Fair | Good | Excellent | DK |
| The level of support your store receives from the program, such as keeping you informed about it and supplying you with marketing materials? | Poor | Fair | Good | Excellent | DK |
| The level of marketing and advertising to customers about the  program | Poor | Fair | Good | Excellent | DK |

4.  Please give me your best estimate of what percent of customers know about the $175 voucher before they come to shop for high-efficiency washers at your store.

    _____ percent  who know about the voucher before shopping

5.  When customers purchase high-efficiency washers at your store, how often do they take advantage of the voucher discount?  Would you say they always, sometimes, seldom, or never use the voucher?

    1       Always use a voucher
    2       Sometimes use a voucher
    3       Seldom use a voucher
    4       Never use a voucher (Skip to 4b)
    5       DK

5a.  If Q5 was  sometimes/ seldom/never:  You said that not everyone uses a voucher when they purchase a qualifying machine. Why don't customers use the voucher?

5b.   Probe very nicely: If a customer doesn't know about the voucher, are you always able to offer the voucher discount, sometimes able to offer it, rarely able to offer it, or never able to offer it?

1      Always able to offer it
2      Sometimes able to offer it
3      Rarely able to offer it
4      Never able to offer it
5      DK

5 c.   Probe:  If answer is not "always" ask "What gets in the way of you offering a voucher?"

6.    How important is the $175 discount in terms of customers deciding to buy or not buy a high-efficiency washer?   Would you say it's not at all important, not important, somewhat important, or very important to their buying decision?.

1      Not at all important
2      Not too important
3      Somewhat important
4      Very Important
5      DK

7.    What proportion of customers, in your opinion, would have bought the same high-efficiency washer at the same time, without the rebate?

_____ percent who would have bought the same washer at the same time without the rebate

8.    The program is considering changing to a rebate system where the customer will not need a voucher prior to the sale and will not get the discount at the point of sale. Instead, the customer would pay you the full price at time of purchase, send in their receipt with a short application form, and then be reimbursed for the $175 discount. Would you favor this change, oppose it, or do you feel neutral about it?

1      Favor
2      Neutral
3      Oppose
4      Don't Know

8a.   Why?

9.    What would you say are the greatest strengths of this program?

10.    Are there any ways in which you think the program can be improved?

**Thank you for your time.**

**B.2    RESIDENTIAL SURVEY (PARTICIPANT AND NONPARTICIPANT)**

Hello, my name is [interviewer name], and I'm calling on behalf of **SDG&E.** May I speak with [named respondent]?

> 1    Yes
> 2    No    *[attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]*

I'm with PA Consulting Group, an independent research firm. We have been hired to evaluate services available to customers of **SDG&E**.  I'm not selling anything; I'd just like to ask your opinion about these types of services and whether you've taken advantage of them. I'd like to assure you that your responses will be kept confidential and your name will not be revealed to anyone.

(**Why are you conducting this study**: Studies like this help the utility and its partners better understand customers' awareness of and interest in energy programs and services.

(**Timing**: This survey should take less than 15 minutes of your time. Is this a good time for us to speak with you? *IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070*)

(**Sales concern**: I am not selling anything; we would simply like to learn about your awareness of services that could save energy in your home, and your opinions about these services. Your responses will be kept confidential. If you would like to talk with someone about this study, feel free to call **[Utility contact at SDG&E]**

*(NOTE: For all questions, "don't know" and "refused" will be coded if offered as a response.)*

**S1.**    First, do you own or rent your home?

> 1    Own
> 2    Rent

**S2.**    In which type of building do you live?

> 1    Single family home
> 2    Multi-family dwelling (2-4 units)
> 3    Apartment buildings (5 or more)
> 4    Other

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**S3.** Per our records, your zip code is [READ ZIP CODE]. Is this correct?

  1 Yes
  2 No—→ Could you please tell me the correct zip code?

**S4.** From what utility do you buy your electricity?

  1 San Diego Gas & Electric (SDG&E)
  2 Southern California Edison (SCE)
  3 Pacific Gas & Electric (PG&E)
  4 Los Angeles Department of Water and Power (LADWP)
  5 Sacramento Municipal Utility District (SMUD)
  6 Other (record)
  D Don't know

**S5.** From what utility do you buy natural gas?

  1 San Diego Gas & Electric (SDG&E)
  2 Southern California Gas
  3 Pacific Gas & Electric (PG&E)
  4 Other (record)
  D Don't know

---

### ATTITUDES TOWARD AND USE OF ENERGY-EFFICIENCY SERVICES

Thank you. I now have a few questions related to your home and energy use.

**U1A.** Would you say that your home is very energy efficient, somewhat energy efficient or not very energy efficient?

  1 Very energy efficient [SKIP TO U2]
  2 Somewhat energy efficient [SKIP TO U2]
  3 Not very energy efficient
  D Don't know

**U1B.** Why don't you think your home is very energy efficient [DO NOT READ; INDICATE ALL THAT APPLY]

      1      Home is old
      2      Home is drafty/does not feel tight
      3      Have not done anything to make the home energy efficient
      4      Have old, inefficient appliances
      5      Household behaviors (i.e., leave lights on)
      6      Other (record)
      7      Don't know

**U2.** On a scale of 1 to 5, with 1 being not at all important and 5 being very important, how important is lowering the cost of your energy bills to you?

      1      Not at all important
      2
      3
      4
      5      Very important
      D      Don't know

**U3.** How much, on average, are your monthly electric bills? _____

**IF NOT A PARTICIPANT IN PROGRAMS [FROM UTILITY SAMPLE] SKIP TO EE1.**

| SAN DIEGO WATER AUTHORITY EFFICIENCY CLOTHES WASHER MODULE |
|---|

ASK OF SAN DIEGO WATER AUTHORITY EFFICIENCY CLOTHES WASHER PARTICIPANTS.

**WA1.** Our records indicate you purchased a high-efficiency clothes washer and used a voucher to save up to $175 on your washer in [YEAR]. Is this correct?

      1      Yes
      2      No
      D      DK

**WA2.** [IF NO] What is incorrect? [Probe if necessary with below categories]

      1      Purchased a new washer but did not receive a voucher rebate
      2      Purchased a new washer, but did not redeem voucher rebate
      3      Received a voucher, but did not purchase a new washer
      4      Did not receive a voucher or purchase a new washer [EXIT SURVEY ]
      5      Other [RECORD]

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**WA3.** How did you hear about the voucher program for clothes washers? [DO NOT READ; RECORD ALL THAT APPLY]

1 Bill stuffing
2 Mailing
3 Friends/neighbors/relatives
4 Newspaper article
5 At the store or retailer
5 Other [RECORD]

IF WA2=1 OR WA2=5 EXIT SURVEY
IF WA2=2 SKIP TO WA12

**WA3a.** Did you request and receive a voucher for $175 before you went to the store to buy your washer, or did you get an "instant voucher" faxed to you at the time you bought your washer?

1 Received voucher before going to the store
2 Requested instant voucher at store
3 Don't know

**WA4.** How convenient was it for you to obtain the voucher? Please rate on a scale from 1 to 5, where 1 is not at all convenient and 5 is very convenient.

1 Not at all convenient
2
3
4
5 Very convenient
D Don't Know

**WA5.** The voucher system you used required you to be pre-approved by the water authority before buying your washer, and to send in a copy of the voucher form to the water utility. The voucher amount was deducted from the cost of the washer when you bought it and the store was reimbursed for the voucher amount. Other water utilities use a rebate system, where you are not pre-approved. You buy your washer, get a rebate form at the store or on-line, fill it out, send it in, and **then you—not the store—**are reimbursed for the amount of the rebate. If you had a choice, would you prefer the pre-approved voucher system or the rebate system?

1 Pre-approved voucher
2 Rebate system
3 No preference
D Don't know

**WA6.** [IF SAID POINT OF PURCHASE OR PRE-APPROVED VOUCHER] Why do you prefer this method? [RECORD RESPONSE]

**WA7.** Had you planned to purchase a new clothes washer before you heard about the $175 voucher?

- 1 Yes
- 2 No
- D Don't know

**WA8.** How important was the voucher in your decision to purchase a high-efficiency washer rather than a less efficient washer? Please rate on a scale of 1 to 5, where 1 is not at all important and 5 is very important.

- 1 Not at all important
- 2
- 3
- 4
- 5 Very important
- D Don't Know

IF WA2=3, SKIP TO WA12

**WA9.** Without the voucher offer, would you have purchased the same high-efficiency clothes washer at the time you did?

- 1 Yes
- 2 No
- D Don't know

**WA10.** [IF NO] Would you have purchased a lower efficiency clothes washer, a different high-efficiency clothes washer, the same washer at a later time, or not made a purchase at all?

- 1 Lower efficiency clothes washer
- 2 Different high-efficiency clothes washer
- 3 Same washer at a later time
- 4 Would not have made any purchase

**WA11.** [IF NO] Would you have purchased the clothes washer if the voucher was for $125 instead of $175?

- 1 Yes
- 2 No
- D Don't know

**WA12.** [IF PROGRAM DATABASE INDICATES DID NOT REDEEM THE VOUCHER, OR WA2=2] Why didn't you redeem the voucher? [DO NOT READ; RECORD ALL THAT APPLY]

1  Washer purchased was not eligible [SKIP TO WA14]
2  Voucher expired before customer could make the purchase
3  Lost the voucher [SKIP TO WA14]
4  Requested a new voucher be faxed into the dealer [SKIP TO WA14]
5  Voucher came too late
5  Other [record]
D  Don't know


**WA13.** [IF PROGRAM DATABASE INDICATES DID NOT REDEEM THE VOUCHER, OR WA2=2] Do you plan to [redeem the voucher/request a new voucher]?

1  Yes
2  No
D  Don't know


**WA14.** How satisfied have you been with the clothes washer voucher program? Please rate your satisfaction on a scale from 1 to 5, where 1 is not at all satisfied and 5 is more satisfied.

1  Not at all satisfied
2
3
4
5  Very satisfied
D  Don't Know


**WA15.** [IF RATE 3 OR LESS] How could you have been more satisfied with the program? [RECORD RESPONSE]

**PA**

**WA16.** How have you or your household benefited from participating in this program? [DO NOT READ; INDICATE ALL THAT APPLY]

1 Saved water
2 Saved energy
3 Reduced water bill
4 Reduced energy bill
5 Have a better washer
6 Was able to purchase a washer could not purchase before
7 Environmental benefits
8 Help the utilities or community
9 Other (specify_____)
10 No benefits
11 Don't know

---

### CITY OF CHULA VISTA AND CITY OF SAN DIEGO MODULE

ASK OF PARTICIPANTS WHO REDEEMED BULBS VIA CITY OF CHULA VISTA OR CITY OF SAN DIEGO

**C1.** Our records indicate you participated in a program where you exchanged incandescent light bulbs for efficient compact fluorescent light bulbs or CFLs. Is this accurate?

1 Yes
2 No [EXIT SURVEY]

**C2.** How did you hear about the exchange program?

1 Bill stuffing
2 Mailing
3 Friends/neighbors/relatives
4 Newspaper article
5 Other [RECORD]

**C3.** In total, how many CFLs did you exchange through this program? _____

**C4.** Of these, how many of these CFLs are currently installed in your home? _____

**C5.** [IF C4<C3] What happened to the [C3-C4] bulbs that you haven't had a chance to install? [RECORD RESPONSE]

    1       On the shelf
    2       Gave away
    3       Other [RECORD]

**C6.** If the exchange program had not been available, what would you have done when your light bulb(s) burned out? Would you have…

    1       Purchased an incandescent bulb(s) to replace it/them
    2       Purchased a CFL(s) to replace it/them
    3       Not have replaced it/them at all
    4       Something else? [RECORD]

**C7.** How have you or your household benefited from participating in this program? [DO NOT READ; INDICATE ALL THAT APPLY]

    1       Avoided purchasing new bulbs
    2       Was able to receive CFLs
    3       Learned about the benefits of CFLs over incandescent bulbs
    4       Saved energy
    5       Saved money on energy bills
    6       Environmental benefits
    7       Help the utilities or community
    8       Other (specify_____)
    9       No benefits
    10      Don't know

**C8.** How satisfied are you with this bulb exchange program? Please rate your satisfaction on a scale from 1 to 5, where 1 is not at all satisfied and 5 is more satisfied.

    1       Not at all satisfied
    2
    3
    4
    5       Very satisfied
    D       Don't Know

**C9.** [IF RATE 3 OR LESS] How could you have been more satisfied with the program? [RECORD RESPONSE]

<div style="border:1px solid black; text-align:center;">

**OTHER PROGRAM AWARENESS AND INTEREST**

</div>

*ASK M1 THROUGH M6 FOR EACH PROGRAM RESPONDENT DID NOT PARTICIPATE IN AND COULD BE ELIGIBLE FOR DETERMINED BY ZIP CODE*

**M1CFL.** Next I'd like to ask you about a CFL exchange program. This provides CFLs in exchange for your incandescent light bulbs.

**M2CFL.** Before today, had you heard of this program?

|   |   |   |
|---|---|---|
| 1 | Yes | |
| 2 | No | [SKIP TO EE1] |
| D | DK | [SKIP TO EE1] |

**M3CFL.** Have you participated in this program?

|   |   |   |
|---|---|---|
| 1 | Yes | |
| 2 | No | [SKIP TO EE1] |
| D | DK | [SKIP TO EE1] |

ROUTE TO MODULES SPECIFIC TO PROGRAM BEING ASKED ABOUT, THEN ASK M4 TO M7—This instruction was incorrectly programmed at fielding and the decision was made not to alter the instrument mid-field.

**M4CFL.** As part of participating in [this program/these programs], did you receive information about other utility programs that could help you save energy or other resources?

|   |   |
|---|---|
| 1 | Yes |
| 2 | No |
| D | DK |

**M5CFL.** [IF YES ABOVE] Did you participate in any of these other utility programs?

|   |   |
|---|---|
| 1 | Yes |
| 2 | No |
| D | DK |

**M6CFL.** [IF YES ABOVE] Which programs? [RECORD PROGRAM(S)]


**M7CFL**. Do you know of other organizations in your area where you could receive these types of services?

    1       Yes [What organization:_____]
    2       No


**M1HEW.** Now I would like to ask you about another program a clothes washer voucher program offered by the San Diego Water Authority. As part of this program, you would have received a $175 voucher to use toward the purchase of a high-efficiency clothes washer.


**M2HEW.** Before today, had you heard of this program?

    1       Yes
    2       No     [SKIP TO EE1]
    D      DK    [SKIP TO EE1]


**M3HEW.** Have you participated in this program?

    1       Yes
    2       No     [SKIP TO EE1]
    D      DK    [SKIP TO EE1]


ROUTE TO MODULES SPECIFIC TO PROGRAM BEING ASKED ABOUT, THEN ASK M4 TO M7


**M4HEW.** As part of participating in [this program/these programs], did you receive information about other utility programs that could help you save energy or other resources?

    1       Yes
    2       No
    D      DK


**M5HEW.** [IF YES ABOVE] Did you participate in any of these other utility programs?

    1       Yes
    2       No
    D      DK

**M6HEW.** [IF YES ABOVE] Which programs? [RECORD PROGRAM(S)

**M7HEW**. Do you know of other organizations in your area where you could receive these types of services?

    1       Yes [What organization:_____]
    2       No

---

### ENERGY-EFFICIENCY ACTIONS TAKEN

**EE1.** I'm going to read a list of things you can do to make your home more energy efficient. Please say "yes" or "no" to indicate whether you have made any of these efficiency improvements to your home in the past two years, since January 2006.

    1       Yes
    2       No
    D       Don't know

In the last two years, have you . . .

a.    Had an energy audit conducted of your home, where a professional walks through your home and identifies ways that you can improve the energy efficiency of your home or appliances?

b.    Had a hot water blanket or pipe wrap installed?

c.    Installed water conservation products such as a low flow showerhead or faucet flow restrictors?

d.    Installed compact fluorescent or other energy efficient lighting [IF CITY CHULA VISTA/SAN DIEGO: beside what you received through the lighting exchange]?

e.    Purchased an ENERGY STAR labeled appliance for your home [IF HEW PARTICIPANT: other than the clothes washer you purchased]? (**IF YES**, Which ones?_____)

f.    Purchased an ENERGY STAR labeled thermostat for your home?

g.    Had the efficiency of your heating, cooling or water heating equipment checked?

h.    Installed a high-efficiency furnace, heat pump, water heater or air conditioner? (**IF YES**, What type of equipment did you install_____?)

i.    Added insulation to the walls, ceilings or crawlspaces?

j.    Installed new energy efficient windows or doors?

k.   Made other improvements to increase the energy efficiency of your home? (**IF YES**, What have you done? _____)

**EE2.** [IF SAID MADE AT LEAST 1 IMPROVEMENT ABOVE] Why did you make these improvements? [DO NOT READ; RECORD ALL THAT APPLY]

1   To save energy/water
2   To save money on my utility/water bill
3   Environmental benefits
4   Information received from workshop or program
5   It is the right thing to do
6   Make home more comfortable
7   Everyone else is doing it
8   Other
9   Don't know

**EE2A.** [If any EE1=1 AND PARTICIPANT]  For the energy-efficiency improvement(s) you said you made in the past two years, did you do this based on your participation in the [LIST PROGRAM(S) PARTICIPATED IN]?

1   Yes → Which program? [LIST APPROPRIATE PROGRAMS PER SAMPLE]
2   No          [SKIP TO NEXT SECTION]
D   Don't Know   [SKIP TO NEXT SECTION]

**EE2B.** [If any EE1=1 AND NONPARTICIPANT SAMPLE]  For the energy-efficiency improvement(s) you said you made in the past two years, did you do this based on your participation in a community or utility-sponsored program?

1   Yes →       Which program? [RECORD]
2   No          [SKIP TO NEXT SECTION]
D   Don't Know   [SKIP TO NEXT SECTION]

*IF NON-PARTICIPANT, SKIP TO NP1*

**EE3.** [If EE2A=1] [ASK OF EACH PROGRAM NOTED ABOVE] How influential was the [SHOW NAMES OF PROGRAMS NOTED FROM EE2] in your decision to take that action? Please rate on a scale of 1 to 5, where 1 is not at all influential and 5 is very influential.

    1         Not at all influential
    2
    3
    4
    5         Very influential
    D        Don't Know

**EE4.** [If EE3=1] Would you have taken this action without participating in the [LIST NAMES OF PROGRAMS NOTED IN EE2]

    1         Yes
    2         No
    D        Don't know

**EE5.** [ASK IF ALL EE1=NO] What are some of the reasons you have NOT had the chance to make energy-efficiency improvements to your home?
[DO NOT READ; INDICATE ALL THAT APPLY]

    1         No reason given
    2         Home is new
    3         Can't afford/too costly
    4         Cost/benefit trade-off is too low
    5         Don't know what to do
    6         Plan to move soon
    7         Too difficult to do by myself
    8         Don't have the time
    9         Home is already energy efficient/I'm already doing everything I can
    10       Just haven't got around to it yet
    11       Don't know a reliable contractor
    12       I don't care
    13       Other  (please specify: _____)
    14       Don't know

| **GENERAL PARTNERSHIP QUESTIONS** |
|---|

*IF DID <u>NOT</u> PARTICIPATE IN ANY PARTNERSHIP PROGRAM, SKIP TO NEXT SECTION.*

**GP1.** On a scale from 1 to 5, where 1 is not at all satisfied and 5 is very satisfied, what would you rate your overall satisfaction with your involvement in the [PROGRAM NAME/WORKSHOP]?

    1        Not at all satisfied
    2
    3
    4
    5        Very satisfied
    D       Don't Know

**GP2.** What was most positive about your experience with this program? [RECORD RESPONSE]

**GP3.** What was the least effective part of your experience with this program? [RECORD RESPONSE]

**GP4.** [FOR LOCAL GOVERNMENT PARTNERS ONLY] Do you feel you are more satisfied, less satisfied, or have the same level of satisfaction with [LOCLA GOVERNMENT PARTNER] as a result of participating in the program?

    1        More satisfied
    2        Less satisfied
    3        Same satisfaction
    D       Don't know

**GP5.** Who sponsored this program? [UNPROMPTED, THEN PROMPTED. NOTE SPECIFIC NAME IF OFFERED]

    1        Electric utility
    2        Gas utility
    3        Water utility
    4        Environmental or non-profit group
    5        City or county government
    6        Other_____
    D       Don't know

| **NONPARTICIPANT QUESTIONS** |
|---|

*ASK IF NONPARTICIPANT SAMPLE. ASK SERIES FOR EACH PROGRAM APPROPRIATE TO ZIP CODE FROM SAMPLE.*

NP1CFL. I'd like to ask you a few questions about CFL Exchange Program . As part of this program, you would have received compact fluorescent light bulbs. This program may also have given you information on how to save energy.. Before today, have you heard of this program?

    1      Yes
    2      No     [SKIP TO NP3CFL]
    D      Don't know    [SKIP TO NP3CFL]

**NP2CFL** Have you participated in this program?

    1      Yes    [SKIP TO NP6CFL]
    2      No
    D      Don't know

**NP3CFL** Please tell me if you feel you would be very interested, somewhat interested, or not at all interested in receiving services through a program such as the CFL exchange program

    1      Very interested
    2      Somewhat interested
    3      Not at all interested
    D      Don't know

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**NP4CFL.** [IF REPLIED NOT AT ALL INTERESTED IN NP1] Why wouldn't you be interested in receiving these services? [DO NOT READ; INDICATE ALL THAT APPLY]

1 No reason
2 Home is new
3 Do not need equipment (washers/CFLs)
4 Can't afford/too costly
5 Don't know what to do
6 Plan to move soon
7 Too difficult to do by myself
8 Don't have the time
9 Home is already energy efficient/I'm already doing everything I can
10 Don't know a reliable contractor
11 I don't care
12 Other (please specify: _____)
13 Don't know

**NP5CFL.** [ASK IF SAID AWARE OF PROGRAM, BUT DID NOT PARTICIPATE] You said you heard of the program, but have not participated. Why haven't you participated in the program?  [DO NOT READ; INDICATE ALL THAT APPLY]

1 Do not need services provided by the program
2 Have not gotten around to participating
3 Do not know how to participate
4 Do not want to participate
5 Do not need equipment (washers/CFLs)
6 Other [RECORD]
D Don't know

**NP6CFL.** Do you know of other organizations in your area where you could receive these types of services?

1 Yes [What organization:_____]
2 No

**NP1HEW.** I'd like to ask you a few questions about a clothes washer voucher program offered by the San Diego Water Authority. Through this program, you can receive a $175 voucher toward the purchase of an energy-efficient qualified clothes washer. Before today, have you heard of this program?

1 Yes
2 No [SKIP TO NP3HEW]
D Don't know [SKIP TO NP3HEW]

**NP2CFL** Have you participated in this program?

    1      Yes    [SKIP TO NP6HEW]
    2      No
    D      Don't know

**NP3HEW** Please tell me if you feel you would be very interested, somewhat interested, or not at all interested in receiving services through a program such as [program name].

    1      Very interested
    2      Somewhat interested
    3      Not at all interested
    D      Don't know

**NP4HEW.** [IF REPLIED NOT AT ALL INTERESTED] Why wouldn't you be interested in receiving these services? [DO NOT READ; INDICATE ALL THAT APPLY]

    1      No reason
    2      Home is new
    3      Do not need equipment (washers/CFLs)
    4      Can't afford/too costly
    5      Don't know what to do
    6      Plan to move soon
    7      Too difficult to do by myself
    8      Don't have the time
    9      Home is already energy efficient/I'm already doing everything I can
    10    Don't know a reliable contractor
    11    I don't care
    12    Other  (please specify: _____)
    13    Don't know

**NP5HEW.** Given the choice, which rebate method would you prefer? The need to obtain a voucher before purchasing the appliance and receive the discount immediately, or redeem a rebate after the purchase in which case you may need to wait for the reimbursement?

    1      Voucher
    2      Rebate
    3      No preference
    D      Don't know

**NP6HEW.** [ASK IF SAID AWARE OF PROGRAM BUT DID NOT PARTICIPATE] You said you heard of the program, but have not participated. Why haven't you participated in the program? [DO NOT READ; INDICATE ALL THAT APPLY]

1   Do not need services provided by the program
2   Have not gotten around to participating
3   Do not know how to participate
4   Do not want to participate
5   Do not need equipment (washers/CFLs)
6   Other [RECORD]
D   Don't know

**NP7HEW.** Do you know of other organizations in your area where you could receive these types of services?

1   Yes [What organization:_____]
2   No

---

**FINAL PERCEPTION QUESTIONS**

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*ALL RESPONDENTS TO ANSWER*
EVALUATOR/SENIOR INTERVIEWER NOTES: CAREFULLY HOW HOUSEHOLDS ARE ABLE TO RESPOND TO THESE QUESTIONS, AND THE USEFULNESS OF THE QUESTIONS.

**PD1.** There are various organizations that provide information and services to help you save energy or water, such as local governments, nonprofit groups, and the utilities. From what types of organizations would you prefer to receive this type of information…. [READ CHOICES OTHER THAN DON'T KNOW]

1   Local government
2   Nonprofit organization
3   The utility
4   Other organization → Which organization (RECORD)
5   Does not matter
D   Don't know

**PD2.** Why is that? [RECORD RESPONSE]

**PD3A.** Do you feel these organizations differ in their ability to provide you with services to help you save energy or water?

1   Yes
2   No      [IF PART SKIP TO PD4, IF NONPART SKIP TO D1]
D   Don't know     [IF PART SKIP TO PD4, IF NONPART SKIP TO D1]

**PD3B** How do you think they differ? [RECORD RESPONSE]

IF NONPART SKIP TO D1

**PD4.** Finally, what do you believe is the source of funding for this program? [DO NOT READ; INDICATE ALL THAT APPLY]

    1       The City of San Diego/City of Chula Vista/ SDWA
    2       My local government
    3       My electric or gas utility
    4       My gas utility
    5       My water utility
    6       Ratepayers
    7       Taxes
    8       The State of California
    9       The federal government
    10     Other [RECORD]
    D       Don't know

| **DEMOGRAPHICS** |
|---|

I JUST HAVE A COUPLE MORE QUESTIONS ABOUT YOUR HOUSEHOLD.

D1[IF OWN] In what year was your home built?

    1 2000 or later
    2 1990 to 1999
    3 1985 to 1989
    4 1980 to 1984
    5 1970 to 1979
    6 1960 to 1969
    7 1950 to 1959
    8 1940 to 1949
    9 1939 or earlier
    D Don't know

D2    What condition do you feel your home is in? Excellent condition, good condition, fair condition, poor condition, or terrible condition?

    1 Excellent
    2 Good
    3 Fair
    4 Poor
    5 Terrible
    D Don't know

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D3 [IF POOR OR TERRIBLE] Why do you feel your home is in [terrible/poor] condition? [DO NOT READ; INDICATE ALL THAT APPLY]

1 Home is drafty/uncomfortable
2 In need of many repairs (roof, siding, etc)
3 Structure is bad
4 Home is just old
5 Other [SPECIFY]

D4 Including yourself, how many people are currently living in your household?

_____PEOPLE

D5 Do you have any….

| A. IF D4=1, SKIP Children under 6 living with you? | 1 Yes  2 No  D DK  R Refused |
|---|---|
| B. Adults over 60 in your household? | 1 Yes  2 No  D DK  R Refused |
| C. Disabled individuals in your household? | 1 Yes  2 No  D DK  R Refused |

D6. Are you currently…?

1 Married
2 Widowed
3 Divorced
4 Separated
5 Never married
R Refused

**D7** Are you Spanish, Hispanic, or Latino?

1 Yes
2 No
D Don't know
R Refused

**D8**  What is your racial classification? Is it…

1  American Indian
2  Alaskan Native
3  Asian or Pacific Islander
4  African American or Black
5  White
6  Other (Please specify):_____
D  Don't know
R  Refused

**D9**  I am going to read to you some income ranges. Please estimate your total gross annual household income, before taxes, for this year. Include all sources of income for including all earned wages in the household, all salary, financial assets, pensions, public assistance, or any other service. Will your total annual household income in 2007 be…

[IF NECESSARY, READ: We know that most people consider their income to be very private information. Your income and name will not be disclosed to anyone, for any purpose.]

1  Less than $15,000
2  $15,000-29,999
3  $30,000-39,999
4  $40,000-49,999
5  $50,000-59,999
6  $60,000-69,999
7  $70,000-79,999
8  $80,000-89,999
9  $90,000–99,999
10  $100,000–109,999
11  $110,000–149,999
12  $150,000–$200,000
12  Greater than $200,000
13  Don't know
14  Refused

End THANK YOU FOR YOUR TIME.

**B.3     COMMERCIAL SURVEY (PARTICIPANT AND NONPARTICIPANT)**

Hello, my name is [interviewer name], and I'm calling on behalf of **SDG&E.** May I speak with [named respondent]?

1     Yes
2     No     *[attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]*

I'm with PA Consulting Group, an independent research firm. We are conducting a study about some of the services available in California to commercial customers. I'd just like to ask about these types of services and [IF NONPARTICIPANT: whether you've taken advantage of them IF PARTICIPANT: your experiences with the programs that offer these services]. Your responses will be kept confidential and your name will not be revealed to anyone.

(**Why are you conducting this study**:  Studies like this help the utility and its partners better understand customers' awareness of and interest in energy programs and services.

(**Timing**: This survey should take less than 15 minutes of your time. Is this a good time for us to speak with you? *IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070*)

(**Sales concern**: I am not selling anything; we would simply like to learn about your awareness of services that could save energy in your business, and your opinions about these services. Your responses will be kept confidential. If you would like to talk with someone about this study, feel free to call **[Utility contact at SDG&E]**

*(NOTE: For all questions, "don't know" and "refused" will be coded if offered as a response.)*

NOTE:  Unless otherwise indicated, questions are asked of both participants and nonparticipants.

DK = DON'T KNOW
R = REFUSED


**S1.**     First, could you tell me if you help specify, recommend, or approve equipment purchases for your facilities?

1     Yes
2     No     [IF CITY OF CHULA VISTA/CITY OF SAN DIEGO NONPARTICIPANT: get other respondent contact info; thank and terminate]

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**S2.** What is your organization's primary building activity? Is it . . .

1 Education
2 Food sales
3 Food service
4 Health care
5 Lodging
6 Retail
7 Office
8 Public use building
9 Something else?

**S3.** What is your title?

1 Owner/operator
2 President
3 Manager
4 Purchasing agent
5 Other (RECORD)

*IF FOOD INDUSTRY AND NONPARTICIPANT SAMPLE, FLAG TO RECEIVE NONPARTICIPANT SPRAY VALVE QUESTIONS (NPSV=1).*

---

**PARTICIPATION CONFIRMATION**

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**IF SAMPLE SHOWS ATTENDED WORKSHOPS THROUGH SDERC**

**P1** According to our records, you attended a workshop through the California Center for Sustainable Energy (CCSE) or the San Diego Regional Energy Office. One of them was [FILL WITH WORKSHOP NAME]. Is this correct?

1 Yes [SKIP TO CC1 IF NOT IN CITY OF SV/CITY OF SD SAMPLE, ELSE P3]
2 No

**P2** Did you attend any workshops offered at CCSE?

1 Yes What workshops did you attend? [Record and continue]
2 No [Thank for time and terminate]

*IF CONFIRMS PARTICIPATION, WORKSHOP =1*

### IF SAMPLE SHOWS RECEIVED CFLS THROUGH EXHANGE

**P3**    According to our records, you received compact fluorescent light bulbs, such a mini-spiral 20 watt bulbs, torpedo 14 watt bulbs, 70 watt torchieres, through a program offered by the [CTY OF SAN DIEGO/CHULA VISTA]

You would have exchanged your standard bulbs for these energy-efficient CFLs.

1    Yes    [SKIP TO C1 IF DID NOT RECEIVE SPRAY NOZZLES]
2    No

**P4**    Is there someone else who would know about your organization's participation in the CFL Exchange program?

1    Yes    [Get information and call back new person]
2    No    [Thank for time and terminate]

*IF CONFIRMS PARTICIPATION, CFL=1*

### IF SAMPLE SHOWS RECEIVED SPRAY NOZZLES & EQUIPMENT

**P5**    According to our records, you received [#] pre-rinse spray nozzles through a program offered by the [City of San Diego/City of Chula Vista]. Do you remember participating in the program?

1    Yes    [SKIP TO CC1 or C1]
2    No

**P6**    Is there someone else who would know about your organization's participation in the spray valve program?

1    Yes    [Get information and call back new person]
2    No    [Thank for time and terminate]

*IF CONFIRMS PARTICIPATION, VALVE=1*

### NONPARTICIPANT SAMPLE

**P7.**    I would like to confirm that your business is located in [READ NAME OF CITY]. Is this correct?

1    Yes    [SKIP TO NP1]
2    No    [GET NAME OF CITY. IF SAMPLED FOR CITY OF CHULA VISTA/SAN DIEGO, DO NOT ASK CHULA VISTA/SAN DIEGO QUESTIONS]

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| **SDERC WORKSHOPS** |
| :---: |

**CC1**  How did you first hear about the workshops offered through CCSE?  [DO NOT READ; INDICATE ALL THAT APPLY]

1        Flyers from utility
2        Flyers from CCSE
3        Flyers from somewhere else (Probe on who)
4        Manufacturer/distributor
5        Tradeshow
6        Website (Which website?)
7        SDG&E
8        City of (San Diego/Chula Vista) employee
9        CCSE/SDREO Calendar of events
10       Other Utility (which utility: _____)
11       Other (specify: _____)

**CC1a**  [IF CC1=7] How did you hear from SDG&E?

1        Mailing
2        Bill insert
3        Account rep
4        Other (specify)

**CC2**  Why did your organization participate in the workshop(s)? [DO NOT READ; INDICATE ALL THAT APPLY]

1        To learn about ways to save energy in our business
2        To learn about ways to save money
3        To learn how to install energy-efficiency measures
4        To learn about new energy-efficiency technologies on the market
5        To learn about ways to be more environmentally friendly (Saving the planet)
6        To understand 'green' building issues and practices
7        Other (specify: _____)

**CC3**  Has your organization used any of the information from the workshops to make changes in your facility?

1        Yes
2        No       [SKIP TO CC6]
D        DK       [SKIP TO CC6]

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**CC4** What specifically have you done in your organization as a result of what you learned in this event? [DO NOT READ; RECORD ALL THAT APPLY]

1        Replaced less efficient lighting with more efficient lighting
2        Reviewed energy use in business
3        Reviewed water use in business
4        Purchased or Installed more energy efficient equipment
5        Purchased or installed more water efficient equipment
6        Changed behavior to be more efficient like turning off lights, turning down A/C or heat [how specific do we need to get?]
7        Tuning up HVAC
8        Other (specify: _____)
9        Nothing

**CC5** [IF CC4<9] Please On a scale of 1 to 10, with 1 being not at all influential and 10 being extremely influential, how influential was the information you received in the workshop in your decision to do that/these things?

\_\_\_\_\_

**CC6** Do you plan to use any (IF DID SOMETHING ALREADY: other) concepts and technologies you learned about from the workshop(s)?

1        Yes
2        No      [SKIP TO CC8]
D        DK      [SKIP TO CC8]

**CC7** What do you plan to do? [RECORD RESPONSE]

**CC8.** How useful was the event in helping you understand ways to save energy: Not at all useful, somewhat useful, or very useful?

1        Not at all useful
2        Somewhat useful
3        Very useful

**CC9.** Do you think the information you received will help your organization save energy?

1        Yes
2        No
D        Don't know

**CC10.** As part of this event, did you receive any brochures or literature to take with you?

    1       Yes
    2       No     [SKIP TO CC12]
    D       Don't know    [SKIP TO CC12]

**CC11.** How useful did you find the literature in helping you understand ways to save energy in your organization? Not at all useful, somewhat useful, or very useful.

    1       Not at all useful
    2       Somewhat useful
    3       Very useful

**CC12** Who sponsored the session?

    1       San Diego Gas & Electric/SDG&E
    2       California Center for Sustainable Energy/CCSE
    3       Other [RECORD]

**CC13** Have you participated in any other utility energy-efficiency programs as a direct result of your interactions with CCSE?

    1       Yes  (which utility and program: _____  _____)
    2       No
    D       DK

**CC14.** Do you feel your organization has benefited from participating in the program?

    1       Yes
    2       No          [SKIP TO CC16]
    D       DK          [SKIP TO CC16]

**CC15.** How has your organization benefited from participating in this program? [DO NOT READ; INDICATE ALL THAT APPLY]

    1       Learned how to change energy using behaviors/learned how to save energy
    2       Able to share what I learned with others
    3       Installed more measures on my own
    4       Saved energy
    5       Saved money on energy bills
    6       Other (specify_____)
    7       No benefits
    8       Don't know

**CC16.** How satisfied are you with this program? Please rate your satisfaction on a scale from 1 to 5, where 1 is not at all satisfied and 5 is more satisfied.

 1 Not at all satisfied
 2
 3
 4
 5 Very satisfied
 D Don't Know

**CC17.** [IF RATE 3 OR LESS] How could you have been more satisfied with the program? [RECORD RESPONSE]

| LIGHTING EXCHANGE |
|---|

**C1.** How did you hear about the lighting exchange program?

 1 Flyers from utility
 2 Flyers from somewhere else (Probe on who)
 3 Manufacturer/distributor
 4 Website (Which website?)
 5 SDG&E
 6 Email campaign
 7 Postcard/mailer
 8 Print advertisement in newspaper or newsletter
 9 Other Utility (which utility: _____)
 10 Other (specify: _____)

**C1a** [IF C1=5] How did you hear from SDG&E?

 1 Mailing
 2 Bill insert
 3 Account rep
 4 Other (specify)

**C2** Why did you participate in the program? [DO NOT READ, INDICATE ALL THAT APPLY]

    1      Needed new bulbs
    2      To save energy/have more efficient lighting
    3      To save money
    4      To help the environment/prevent global warming
    5      To get better lighting/lighting advice
    6      Needed to dispose of old bulbs
    7      Other (specify: _____)

**C3.** In total, how many efficient bulbs and fixtures did you receive through this program? _____

**C4.** Of these, how many are currently installed? _____

**C5.** [IF C4<C3] What happened to the [C3-C4] bulbs that aren't installed? [DO NOT READ; MARK ALL THAT APPLY

    1      Bulbs failed/no longer work
    2      Put them in storage/on the shelf
    3      Threw bulbs away
    4      Gave bulbs away
    5      Something else? [RECORD]

**C6A.** In general, how satisfied are you with the quality of the lighting from these bulbs? Please tell me on a 1 to 5 scale, where 1 is not at all satisfied, 3 is moderately satisfied, and 5 is very satisfied.

    1      Not at all satisfied
    2
    3
    4
    5      Very satisfied
    D     Don't Know

**C6B.** [IF C5>1 AND C6A<3] Was your dissatisfaction with the lighting quality a reason why some of the bulbs are not installed?

    1      Yes
    2      No
    D     Don't know

**C7.** If the program were not available, what would you have replaced these light bulbs with when they burned out? Would you have…

    1        Replaced the bulbs with ones that were similar to what you had
    2        Replaced the bulbs with more efficient light bulbs
    3        Not have replaced the bulbs at all
    4        Something else? [RECORD]

**C8.** Since the lighting exchange program, has your company purchased other lighting for your building outside of the program?

    1        Yes
    2        No    [SKIP TO C10]
    D        Don't know   [SKIP TO C10]

**C9.** Was the lighting you purchased more efficient, the same efficiency, or less efficient than the lighting you would have purchased before the CFL exchange?

    1        More efficient
    2        Same efficiency
    3        Less efficient
    4        Other [RECORD]
    D        Don't know

**C10.** [IF C9=MORE OR SAME EFFICIENCY] How influential was your experience with the program in your decision to purchase lighting that was high-efficiency? Very influential, somewhat influential, or not at all influential?

    1        Very influential
    2        Somewhat influential
    3        Not at all influential
    D        Don't know

**C11.** How has your organization benefited from participating in this program? [DO NOT READ; INDICATE ALL THAT APPLY]

    1        Learned how to change energy using behaviors/learned how to save energy
    2        Able to share what I learned with others
    3        Installed more measures on my own
    4        Saved energy
    5        Saved money on energy bills
    6        Other (specify_____)
    7        No benefits
    8        Don't know

**C12.** How satisfied are you with this program? Please rate your satisfaction on a scale from 1 to 5, where 1 is not at all satisfied and 5 is very satisfied.

    1        Not at all satisfied
    2
    3
    4
    5        Very satisfied
    D        Don't Know

**C13.** [IF RATE 3 OR LESS] How could you have been more satisfied with the program? [RECORD RESPONSE]

---

**PRE-RINSE VALVE INSTALLATION**

---

**SV1.** How did you hear about the program offered by the [City of San Diego/City of Chula Vista] to install pre-rinse nozzles?

    1        Flyers from utility
    2        Flyers from somewhere else (Probe on who)
    3        Manufacturer/distributor
    4        Tradeshow
    5        Website (Which website?)
    6        SDG&E
    7        City of ( San Diego/Chula Vista employee)
    8        Email campaign
    9        Other Utility (which utility: _____)
    10     Other (specify: _____)

**SV1a** [IF SV1=6] How did you hear from SDG&E?

    1        Mailing
    2        Bill insert
    3        Account rep
    4        Other (specify)

**PA**

**SV2**. Why did you participate in the program? [DO NOT READ, INDICATE ALL THAT APPLY]

1        Needed a new pre-rinse spray valve
2        To save energy
3        To save water
4        Program representative suggested we participate
5        Equipment dealer/retailer suggested we participate
6        Other (specify: _____)

**SV3.**   Did the program representative install the spray valve for you?

1        Yes        SKIP TO SV6
2        No
D        Don't know

**SV4.**   Did you install the spray valve?

1        Yes
2        No
D        Don't know

**SV5.**   [IF REP DID NOT INSTALL THE VALVE AND ORGANIZATION DID] Why didn't the representative install the valve? [RECORD RESPONSE]

[IF SV4=2, SKIP TO NEXT SECTION]

**SV6.**   Is the spray valve still installed?

1        Yes
2        No            [SKIP TO SV8]
D        Don't know    [SKIP TO SV8]

**SV7.**   Why was it removed? [DO NOT READ; RECORD ALL THAT APPLY]

1        It did not operate properly
2        It was damaged/broke
3        Did not like how it operated/did not work as well as the old spray valve
4        Other (specify: _____)
5        Don't know

**SV8.**   How satisfied were you with the installation process? Please tell me on a scale from 1 to 5, where 1 is not at all satisfied and 5 is very satisfied. _____

**SV9.** If the program had not been available, would you have installed or have someone else install a new spray valve?

1       Yes
2       No
D      Don't know

**SV10**. [IF YES] Would the equipment have been less efficient, more efficient, or the same level of efficiency as the one you received through the program?

1       Less
2       More
3       Same
D      Don't know

**SV11.** Since participating, have you purchased any other spray nozzles outside of the program?

1       Yes
2       No
D      Don't know

**SV12.** [IF YES] Were the nozzles you purchased more efficient, the same efficiency, or less efficient than the nozzles you would have purchased before the program?

1       More efficient
2       Same efficiency
3       Less efficient
4       Other (RECORD)
D      Don't know

**SV13.** [IF SV12=MORE OR SAME EFFICIENCY] How influential was your experience with the program in your decision to purchase nozzles that were high-efficiency? Very influential, somewhat influential, or not at all influential?

1       Very influential
2       Somewhat influential
3       Not at all influential
D      Don't know

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**SV14.** How has your organization benefited from participating in this program? [DO NOT READ; INDICATE ALL THAT APPLY]

    1        Learned how to change energy using behaviors/learned how to save energy
    2        Able to share what I learned with others
    3        Installed more measures on my own
    4        Saved energy
    5        Saved money on energy bills
    6        Other (specify_____)
    7        No benefits
    8        Don't know

**SV15.** How satisfied are you with this program? Please rate your satisfaction on a scale from 1 to 5, where 1 is not at all satisfied and 5 is more satisfied.

    1        Not at all satisfied
    2
    3
    4
    5        Very satisfied
    D       Don't Know

**SV16.** [IF RATE 3 OR LESS] How could you have been more satisfied with the program? [RECORD RESPONSE]

---

**OTHER PROGRAM AWARENESS**

---

**M1.** As part of your participation in [this program/these programs], did you receive materials or application forms for other utility programs?

    1       Yes
    2       No
    D      DK

**M2.** [IF YES ABOVE] Did you sign up for other utility programs?

    1       Yes
    2       No
    D      DK

**M3.** [IF YES ABOVE] Which programs? [RECORD PROGRAM(S)]

**M4**. Do you know of other organizations in your area where you could receive these types of services?

    1       Yes [What organization:_____]
    2       No

<div style="border:1px solid #000; background:#ccc; text-align:center;">

**GENERAL PARTNERSHIP QUESTIONS**

</div>

*IF NONPARTICIPANT, SKIP TO NEXT SECTION.*

**GP1.** On a scale from 1 to 5, where 1 is not at all satisfied and 5 is very satisfied, what would you rate your overall satisfaction with your involvement in the [CTY OF SAN DIEGO/CHULA VISTA] representative?

    1       Not at all satisfied
    2
    3
    4
    5       Very satisfied
    D      Don't Know

**GP2.** How do you feel the program could have been improved? [RECORD RESPONSE]

**GP3.** [For local government partners only] Do you feel you are more satisfied, less satisfied, or have the same level of satisfaction with [CTY OF SAN DIEGO/CHULA VISTA] as a result of participating in the program?

    1       More satisfied
    2       Less satisfied
    3       Same satisfaction
    D      Don't know

**GP4a.** Who sponsored the lighting exchange program? [UNPROMPTED, THEN PROMPTED. NOTE SPECIFIC NAME IF OFFERED]

    1       Electric utility
    2       Gas utility
    3       Water utility
    4       Environmental or non-profit group
    5       City or county government
    6       Other_____
    D      Don't know

**GP4b.** Who sponsored the pre-rinse nozzle installation program?  [UNPROMPTED, THEN PROMPTED. NOTE SPECIFIC NAME IF OFFERED]

       1       Electric utility
       2       Gas utility
       3       Water utility
       4       Environmental or non-profit group
       5       City or county government
       6       Other_____
       D       Don't know

**GP4c.** Who sponsored the workshop you attended?  [UNPROMPTED, THEN PROMPTED. NOTE SPECIFIC NAME IF OFFERED]

       1       Electric utility
       2       Gas utility
       3       Water utility
       4       Environmental or non-profit group
       5       City or county government
       6       Other_____
       D       Don't know

## NONPARTICIPANT QUESTIONS

*ASK IF FROM NONPARTICIPANT SAMPLE, ELSE SKIP TO NEXT SECTION.*

**NP1** [IF CITY OF CHULA VISTA/CITY OF SAN DIEGO AND IN FOOD INDUSTRY FROM S2] Has your company purchased, replaced, or installed spray nozzles in the past 12 months?

       1       Yes
       2       No          SKIP TO NP3
       D       Don't know   SKIP TO NP3

**NP2** [IF CITY OF CHULA VISTA/CITY OF SAN DIEGO AND IN FOOD INDUSTRY FROM S2] Do you know, were these spray nozzles high efficiency, especially designed to save water and energy, or were they standard efficiency nozzles?

       1       Standard efficiency
       2       High efficiency
       3       Both
       D       Don't know

**NP3**  [IF CITY OF CHULA VISTA/CITY OF SAN DIEGO] Has your company purchased lighting for your building in the past 12 months?

1  Yes
2  No        SKIP TO NP5
D  Don't know     SKIP TO NP5

**NP4**  Was the lighting you purchased standard efficiency or high-efficiency lighting, such as compact fluorescent lights and high-efficiency ballasts?

1  Standard efficiency
2  High efficiency
3  Both
D  Don't know

**NP5acity**  I'd like to ask you a few questions about a program offered by the [CITY OF SAN DIEGO/CITY OF CHULA VISTA]. This program provides efficient lighting, such as CFLs and ballasts, in exchange for your existing less efficient lighting. [IF IN FOOD INDUSTRY: This program also offers free spray nozzles that could save energy and water. Please tell me if you feel your organization would be very interested, somewhat interested, or not at all interested in receiving services through a program such as that offered by the [CITY OF SAN DIEGO/CITY OF CHULA VISTA].

Before today, have you heard of this program?

1  Yes
2  No               [SKIP TO NP5ccity]
D  Don't know          [SKIP TO NP5ccity]

**NP5bcity**  Have you participated in this program?

1  Yes                    [SKIP TO NP8city]
2  No
D  Don't know

**NP5ccity**  Please tell me if you feel you would be very interested, somewhat interested, or not at all interested in receiving services through a program such as the CFL exchange program?

1  Very interested       [skp to np7city]
2  Somewhat interested  [skp to np7city]
3  Not at all interested
D  Don't know            [skp to np7city]

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**NP6city**     Why wouldn't your organization be interested in receiving these services?
[DO NOT READ; INDICATE ALL THAT APPLY]

  1   No reason
  2   Building is new
  3   Do not need equipment (spray nozzles/CFLs)
  4   Can't afford/too costly
  5   Don't know what to do
  6   Building is already energy efficient/I'm already doing everything I can
  7   Don't know a reliable contractor
  8   Don't have time
  9   I don't care
  10  Other  (specify)
  11  Don't know


**NP7city**     Do you know of other organizations in your area where you could
receive these types of services?

  1       Yes [What organization]
  2       No


*if (NP5acity=1 & (NP5bcity=2 | NP5bcity="D")) skp NP5acou*
**NP8city**     You said you heard of the program, but have not participated. Why
haven't you participated in the program?
[DO NOT READ; INDICATE ALL THAT APPLY]

  1       Do not need services provided by the program
  2       Have not gotten around to participating
  3       Do not know how to participate
  4       Do not want to participate
  5       Company policy will not allow us to participate
  6       Do not need equipment
  7       Do not have time to participate
  8       Other [RECORD]
  9       Don't know

**NP5acou**    I'd like to ask you a few questions about a program offered by the California Center of Sustainable Energy. This program offers workshops to educate commercial customers on ways to save energy. Workshops discuss energy efficiency for equipment such as lighting, Heating, Ventilation, and Air Conditioning, and water heating.

Before today, have you heard of this program?

1    Yes
2    No                    [SKIP TO NP5ccou]
D    Don't know            [SKIP TO NP5ccou]


**NP5bcou**    Have you participated in this program?

1    Yes                   [SKIP TO NP8cou]
2    No
D    Don't know


**NP5ccou**    Please tell me if you feel you would be very interested, somewhat interested, or not at all interested in participating in an education program like this?

1    Very interested       [skp to NP7cou]
2    Somewhat interested   [skp to NP7cou]
3    Not at all interested
D    Don't know            [skp to NP7cou]


**NP6cou**    Why wouldn't your organization be interested in receiving these services? [DO NOT READ; INDICATE ALL THAT APPLY]

1 No reason
2 Building is new
3 Company will not allow us to participate
4 Don't know what to do
5 Building is already energy efficient/I'm already doing everything I can
6 Don't have time
7 I don't care
8 Other  (specify)
9 Don't know


**NP7cou**    Do you know of other organizations in your area where you could receive these types of services?

1    Yes [What organization]
2    No


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**NP8cou** [IF NP5acou=1 & NP5bcou=2 OR D] You said you heard of the program, but have not participated. Why haven't you participated in the program?

[DO NOT READ; INDICATE ALL THAT APPLY]

1. Do not need services provided by the program
2. Have not gotten around to participating
3. Do not know how to participate
4. Do not want to participate
5. Company policy will not allow us to participate
6. Do not need equipment
7. Do not have time to participate
8. Other [RECORD]
9. Don't know

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**PARTNERSHIP PERCEPTION QUESTIONS**

*ALL RESPONDENTS TO ANSWER*

**PP1.** How confident are you that you can receive credible energy-efficiency information from your utility? Very confident, somewhat confident, or not at all confident.

1. Very confident
2. Somewhat confident
3. Not at all confident
D. Don't know

**PP2.** How confident are you that you can receive credible energy-efficiency information from local government or local nonprofit groups? Again, please tell me if you are very confident, somewhat confident, or not at all confident.

1. Very confident
2. Somewhat confident
3. Not at all confident
D. Don't know

**PP3.** There are various organizations that provide information and services to help you save energy or water, such as local governments, nonprofit groups, and the utilities. From what types of organizations would you prefer to receive this type of information…. [READ CHOICES OTHER THAN DON'T KNOW]

1      Local government
2      Nonprofit organization
3      The utility
4      Other organization → Which organization [RECORD]
5      Does not matter
D      Don't know

**PP4.** Do you feel these organizations differ in their ability to provide you with services to help you save energy or water?

1      Yes
2      No           [SKIP TO PP6]
D      Don't know      [SKIP TO PP6]

**PP5** How do you think they differ? [RECORD RESPONSE]

**PP6.** Finally, what do you believe is the source of funding for the lighting exchange program? [DO NOT READ; INDICATE ALL THAT APPLY]

1      The City of San Diego/City of Chula Vista
2      California Center for Sustainable Energy (CCSE)
3      San Diego Regional Energy Office (SDREO)
4      My local government
5      My electric or gas utility
6      My gas utility
7      My water utility
8      Ratepayers
9      Taxes
10     The State of California
11     The Federal government
12     Other [RECORD]
13     Don't know

**PP6b.** What do you believe is the source of funding for the pre-rinse nozzle installation program? [DO NOT READ; INDICATE ALL THAT APPLY]

1      The City of San Diego/City of Chula Vista
2      California Center for Sustainable Energy (CCSE)
3      San Diego Regional Energy Office (SDREO)
4      My local government
5      My electric or gas utility
6      My gas utility
7      My water utility
8      Ratepayers
9      Taxes
10     The State of California
11     The Federal government
12     Other [RECORD]
13     Don't know

**PP6c.** What do you believe is the source of funding for the workshop you attended? [DO NOT READ; INDICATE ALL THAT APPLY]

1      The City of San Diego/City of Chula Vista
2      California Center for Sustainable Energy (CCSE)
3      San Diego Regional Energy Office (SDREO)
4      My local government
5      My electric or gas utility
6      My gas utility
7      My water utility
8      Ratepayers
9      Taxes
10     The State of California
11     The Federal government
12     Other [RECORD]
13     Don't know

---

### ORGANIZATIONAL QUESTIONS

My last questions for you are about your organization..

**O1**    How many locations does your company have? _____

**O2**   [IF ABOVE >1] Are decisions to purchase and install equipment made . . . [READ LIST]

1    At the corporate level?
2    At the regional level?
3    At the local level?
4    At the location level?
5    Other (specify: _____)


**O4**   [IF S1=1] What factors into the decision about the level of energy efficiency when purchasing new equipment or during a remodel or new construction?  (DO NOT READ; INDICATE ALL THAT APPLY)

1    Rebates available
2    Recommendation of experts
3    Manufacturer warranties
4    Energy savings
5    Being perceived as green company
6    Standard specifications for business
7    Required for business in other regions
8    Efficiency level of equipment available from manufacturers
9    Past experience with equipment brand
10   Building codes
11   Other (specify) _____


**O5**   I would like to understand how the following factors fit into your decision to purchase new energy using equipment. For each please rate on a 1 to 10 scale where 1 is not at all important and 10 is very important. How important is…
[READ EACH; ROTATE LIST]

a.    The amount of energy the equipment can save
b.    The price of the equipment, including installation costs
c.    The pay-back period
d.    Company culture or policies
e.    Its impact on the environment
f.    How well the equipment performs/does the job
g.    The recommendation of the distributor
h.    The recommendation of others in the same business


**Thank you for your time. Do you have any final comments or questions?**

### APPENDIX C: PROGRAM SPECIFIC SURVEY METHODOLOGY AND RESPONSE RATES

This study included a telephone survey initiative for three residential and three commercial programs. Table C-1 summarized the programs, sectors interviewed, sample source and target completes.

**Table C-1 Programs Specifications for the Survey**

| Program | Sector(s) Interviewed | Sample source | Target completes |
|---|---|---|---|
| City of San Diego | Residential<br>Small Commercial | Sempra | 38 Residential<br>38 Sm. Comm. |
| City of Chula Vista | Residential<br>Small Commercial | Sempra | 38 Residential<br>38 Sm. Comm. |
| California Center of Sustainable Energy | Small Commercial | Energy Center | 38 Sm. Comm. |
| High Energy Washer Program | Residential | Honeywell | 38 Residential |
| Nonparticipant | Residential<br>Small Commercial | Sempra | 37 for each program |

The response rates for the residential and small commercial studies are detailed in Table D-2 below. The response rate ranged from 42 percent for residential participants to a low of 17 percent for small commercial nonparticipants. Also included in the response rate table is the cooperation rate, which adjusts the response rate by taking out the bad telephone numbers.

**Table C-2 Response Rates**

| | Residential | | Commercial | |
|---|---|---|---|---|
| | *Participant* | *Nonparticipant* | *Participant* | *Nonparticipant* |
| | | | | |
| **Starting Sample** | 280 | 278 | 436 | 501 |
| Ineligible - Deceased | 0 | 0 | 0 | 0 |
| Ineligible - Other* | 2 | 6 | 24 | 42 |
| **Adjusted Sample** | 278 | 272 | 412 | 459 |
| Refused | 41 | 28 | 43 | 82 |
| Unavailable for duration | 5 | 1 | 9 | 10 |
| No/bad phone number | 26 | 44 | 93 | 110 |
| Incapable/language barrier | 2 | 3 | 16 | 10 |
| Unable to contact and complete interview | 88 | 109 | 137 | 166 |
| **Complete** | 116 | 87 | 114 | 80 |
| **Response Rate** | 41.7% | 32.0% | 27.7% | 17.4% |
| **Cooperation Rate**\*\* | 46.0% | 38.2% | 35.7% | 22.9% |

*Ineligible cases were either those who were 1) coded as participants but did not recall participation, or 2) coded as nonparticipants but said participated

\*\*Completions/(adjusted sample - bad phone number)

NOTE: numerous attempts were made to find a working phone number, including web tracing and NCOA/telephone append services.