research/into/action inc

Final Report

Process Evaluation of 2006-2008 IDEEA & InDEE Programs with Lessons for 2009-2011 Programs

Volume 1

Funded By:

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Prepared By:

research/into/action inc

Jane S. Peters, Ph.D.
Susan Lutzenhiser
Robert Scholl, J.D.
Research Into Action, Inc.

September 9, 2009

research/into/action inc

RESEARCHINTOACTION.COM

503.287.9136

PO BOX 12312
PORTLAND OR, 97212

3934 NE MARTIN LUTHER KING JR BLVD, STE 203
PORTLAND, OR 97212 *(DELIVERY)*

888.492.9100 *(TOLL-FREE)*

503.281.7375 *(FAX)*

CONTACT:

JANE S. PETERS, PRESIDENT

JANEP@RESEARCHINTOACTION.COM

ACKNOWLEDGEMENTS

The evaluation team would like to thank Shahana Samiullah, Tonya Owl Bear, and Caroline Chen of Southern California Edison for the direction they provided to this study. We also wish to thank Anne West and Ulrike Mengelberg at The Cadmus Group, Inc., and Argene McDowell and Mark Thornsjo of Summit Blue Consulting, LLC, for their kind assistance in drawing crosscutting lessons from their evaluations of 2006-2008 IDEEA and InDEE programs. And we are grateful for the contributions made by Research Into Action staff Ryan Bliss, Ned Harris, Dulane Moran, and Jun Suzuki to the identification of global lessons in the IDEEA programs they evaluated.

The evaluation team also wishes to thank Marnie McPhee and Laurie Lago, who provided report editing and production support.

This five-volume study was conducted at the request of the Southern California Edison. It was funded through the public goods charge for energy efficiency and is available for download at www.calmac.org.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This document reports the findings from two tasks undertaken to assure the persistence of lessons learned and the effectiveness of recommendations made for program improvement in evaluations of 25 Southern California Edison (SCE) 2006-2008 Innovative Designs for Energy Efficiency Activities (IDEEA) and Innovative Designs For Energy Efficiency (InDEE) Programs. One task was to identify the extent to which lessons and recommendations from the evaluations of the 2006-2008 IDEEA and InDEE Programs had been incorporated into SCE's 2009-2011 Program Implementation Plans (PIPs). The other task was to research findings across the 25 process evaluations to identify recurring cross-program issues. In addition to the 13 IDEEA program evaluations conducted by Research Into Action, the expanded set of evaluations included those conducted by The Cadmus Group, Inc. and Summit Blue Consulting, LLC of seven other IDEEA programs and of five InDEE programs. The following summarizes our findings.

CONTINUING PROGRAMS AND PROGRAM ELEMENTS IN 2009-2011 PIPS

Fourteen of the twenty-five 2006-2008 IDEEA and InDEE programs are continuing or were incorporated as elements of 14 broader, third-party and core programs for the 2009-2011 cycle. However, the continuing 2006-2008 programs do not map one-to-one into corresponding 2009-2011 programs. Four 2006-2008 programs were consolidated into two programs and one earlier program appears as a minor component of three 2009-2011 programs.

For the most part, the recommendations and lessons from the 2006-2008 program cycle are not reflected in the 2009-2011 PIPs. In most instances, this is appropriate, because the recommendations and lessons address internal utility processes or program details, such as marketing tactics that are beyond the scope of the PIPs. However, in some cases, the lessons and recommendations could be addressed at the time of program implementation. In any event, the 2006-2008 IDEEA and InDEE program experiences offer to program and implementation staff a rich source of lessons learned to inform and improve the performance of 2009-2011 programs.

2009-2011 Third-Party Programs

Efficient Affordable Housing (SCE-TP-001)

Efficient Affordable Housing consolidates two of the 2006-2008 IDEEA offerings – Designed for Comfort - Efficient Affordable Housing and Affordable Housing Energy Efficiency Alliance.

Designed for Comfort – Efficient Affordable Housing

The 2006-2008 Designed for Comfort process evaluation made eight recommendations for program improvement. Two of those recommendations (continued Affordable Housing Energy

Efficiency Alliance marketing support, and pursuit of a more diverse mix of project sizes and types) are addressed by the 2009-2011 program. The other six recommendations are not addressed. Those recommendations were:

- To simplify property owner contracting
- To incentivize delivery of the final California Energy Efficiency Rating Services (CHEERS®) report
- To recruit only energy consultants trained in the use of reporting tools
- To simplify the incentive structure
- To encourage or require models of alternative packages of measures
- To adopt mandatory participant training

Affordable Housing Energy Efficiency Alliance (AHEEA)

The AHEEA evaluation recommended that the program offer a mix of larger general information conferences at the beginning of the program cycle, and smaller tailored workshops during the rest of the program cycle. The 2009-2011 PIP suggests the adoption of this highly targeted approach.

Comprehensive Home Performance (SCE-TP-003)

Lessons and recommendations from the evaluation of the antecedent program – Southern California Home Performance Program – addressed incentives, program marketing, trainee qualifications, and program forms. The PIP for the 2009-2011 program incorporates the incentives recommendation, but does not respond to the lessons and recommendations regarding marketing and trainee qualifications. The PIP is unclear regarding adoption of a recommendation for electronic forms.

Healthcare Energy Efficiency Program (SCE-TP-006)

Subjects addressed by recommendations and lessons from the identically named 2006-2008 program included program purchase orders, utility staff resources, and marketing approaches. The issues arising from purchase orders and staff resources are internal SCE matters and are not addressed in the 2009-2011 PIP. The marketing lessons from the earlier program include: 1) the target market typically requires long lead times to plan and budget for capital improvements; 2) participation at conferences and trade associations was found to be ineffective in generating leads for the 2006-2008 program; and 3) the decision-making process for the large hospital systems targeted by the program is often devolved to the individual facilities within the system. Marketing at this level of detail is not addressed in the PIP, but awareness of these insights may facilitate marketing for the 2009-2011 program.

Management Affiliates Program (SCE-TP-031)

The 2009-2011 Management Affiliates Program is a renewal of the preceding cycle's Management Affiliates Partnership Energy Efficiency Program, targeting commercial property-management companies to encourage the installation of emerging, but proven, energy efficiency technologies in commercial office buildings, retail department stores, and other buildings. The evaluation of the 2006-2008 program offered seven recommendations for program improvement, including a recommendation for program continuation, which has occurred. The remaining six recommendations address specifics of program delivery, marketing, and recordkeeping, and of internal SCE processes that are typically outside the scope of a PIP, and none of these six recommendations are directly addressed by it.

Private College Campus Housing (SCE-TP-032)

The 2006-008 evaluation made recommendations for the program's goal setting, for scheduling of program activities, and regarding utility staff support. The 2006-2008 program's energy savings goal was found to be too aggressive. The 2009-2011 goal is even more aggressive. Nothing in the PIP or in the experience of the antecedent program supports such an aggressive savings goal. Another issue for the predecessor program was inadequate appreciation of the limits imposed on campus activities by the academic calendar. Nor did the program recognize the protracted nature of this market segment's decision-making processes. These marketing details are not addressed in the PIP. As in other 2006-2008 programs, the campus housing program also suffered from the unavailability of adequate utility staff resources. Careful consideration should be given to the utility management needs and utility resources required to support the 2009-2011 programs, especially the third-party programs.

Automatic Energy Review for Schools (SCE-TP-033)

Automatic Energy Review for Schools renews the Modernization and New Construction Efficiency Enhancement Program for Schools from the 2006-2008 program cycle. The evaluation of the earlier program offered six recommendations for program improvement. The recommendations touch on the need for additional market research, additional financial incentives, and additional program marketing and enhanced communication with schools and other market actors. The PIP is not responsive to the recommendations about market research and financial incentives. It responds in part to the marketing and communication recommendations by addressing customer confusion over different programs and the establishment of closer ties with the Department of State Architects. But, regarding recommendations to reach out more intensively to customers and certain other market actors, and to improve marketing generally, the PIP is unclear. Without further attention to those recommendations, the renewed program appears poised to encounter some of the same key difficulties encountered by the 2006-2008 program.

2009-2011 Core Programs

Business and Consumer Electronics

The new 2009-2011 Business and Consumer Electronics (BCE) program incorporates technologies promoted by two 2006-2008 programs: the 80 Plus program, which promoted energy efficient computer power supplies, and Plugging the Consumer Electronics Gap, which promoted ultra-high-efficiency LCD computer monitors. Although these measures are not explicitly named in the 2009-2011 BCE PIP, the lessons learned from both programs expressly inform BCE's approach. In particular, the PIP incorporates lessons about the importance of having a statewide program and the need for cohesive support of ENERGY STAR® standards.

California Preschools

Recommendations and lessons from the 2006-2008 California Preschool Energy Efficiency program (CPEEP) mentioned program overlap, marketing approaches, and participant training. Overlapping activities of programs that target preschools appears to be even more extensive in the 2009-2011 cycle, to the extent that this core program is entirely redundant. The PIP describes procedures to avoid duplicating program efforts in overlapping utility service territories, but it offers no guidance for navigating overlapping activities from programs within SCE's own portfolio. Regarding other lessons, the PIP describes employing an array of marketing and outreach activities by the 2009-2011 program, which proved to be an effective strategy for the predecessor program. However, while the PIP does not specifically mention account representative participation, one of the most effective marketing conduits during the 2006-2008 cycle, it does list "participation at conferences and trade associations," a marketing conduit found to be ineffective for the 2006-2008 program.

Commercial, Industrial, and Agricultural Continuous Energy Improvement Programs

The 2006-2008 Sustainable Energy Efficiency Development program (SEED) offered EnVINTA's *One-2-Five® Energy* diagnostic tool to food processing firms. The program's evaluation indicated two needs: 1) a need to package the program's *One-2-Five® Energy* diagnostic tool with more extensive support and even project management services to help organizations make energy efficiency investments; and 2) a need for active account executive involvement in program marketing. The three core 2009-2011 Commercial, Industrial, and Agricultural Continuous Energy Improvement Programs incorporate the *One-2-Five® Energy* diagnostic tool and in doing so, address both of those needs.

Energy Efficiency for Entertainment Centers

The 2006-2008 Energy Efficiency Program for Entertainment Centers was a retrofit program offering demand-controlled ventilation and coil-cleaning services to commercial movie theater complexes at a discounted price. That program has been incorporated into a statewide core

program, targeting an expanded market – including amusement parks, bowling alleys, concert halls, auditoriums, exercise/recreation centers, and night clubs, as well as movie theaters – and offering a broader list of measures and services.

The earlier program encountered difficulties: 1) when it was expanded to a joint utility program with Sothern California Gas Company; 2) in reaching decision-makers in its targeted market segment; 3) with communication from the implementation contractor; and 4) as a result of the perceived inadequacy of the program's incentive. By becoming statewide, the program addresses the difficulties encountered when its predecessor became a joint utility program. However, the three remaining difficulties of the previous program, and their corresponding lessons and recommendations, are not addressed in the 2009-2011 program's PIP.

ENERGY STAR® Manufactured Homes

The 2009-2011, core ENERGY STAR® Manufactured Homes program is a sub-program of the statewide Residential New Construction program and incorporates a 2006-2008 IDEEA program: Transforming the Market for New ENERGY STAR® Manufactured Homes. Both programs are efforts to move the manufactured housing market from HUD construction standards to the more energy-efficient ENERGY STAR® standards.

The 2006-2008 evaluation made five recommendations for program improvement:

- Continue the program structure to recruit both manufacturers and retailers.
- Conduct market research to identify the process by which HVAC equipment is marketed, purchased, and installed, and to determine which market actors, including HVAC contractors and homebuyers, are the most appropriate recipients of rebates.
- Include HVAC contractors among the program's targeted market actors.
- Establish processes to verify that participating manufacturers have ENERGY STAR® certification and to establish systematic, scheduled home-site inspections.
- Create additional material and discussions about the benefits of ENERGY STAR® homes, and about the differences between ENERGY STAR® homes and homes built to HUD standards.

In addition to these recommendations, the evaluation found recording and tracking of homebuyer information to be difficult for the 2006-2008 program.

The incorporation of the earlier program into the 2009-2011 statewide program addresses the evaluation's first recommendation. However, the remaining recommendations from the evaluation of the 2006-2008 program are not specifically addressed in the 2009-2011 PIP.

Home Energy Efficiency Rebate

The 2009-2011 Home Energy Efficiency Rebate (HEER) program is a continuation of an existing statewide core program that encourages the adoption of energy-efficient choices when purchasing and installing household appliances and equipment. Among the measures supported through this program in the 2009-2011 cycle are variable-speed pool pumps, the measure promoted by the 2006-2008 IDEEA Innovative Pool Pump Technology Delivers Radical Efficiency Gains program. The incorporation of variable-speed pool pumps in HEER substantially addresses the recommendations made in the evaluation of the 2006-2008 program.

However, pool pump issues arising from current building and health code standards remain unaddressed in the 2009-2011 PIP. Those issues are the appropriateness of offering a rebate for code-mandated equipment (two-speed pool pumps) and uncertainty about whether variable-speed pool pumps will circulate water sufficiently to meet health-code requirements for public pools.

CROSS-PROGRAM FINDINGS FROM 2006-2008 IDEEA AND INDEE PROGRAMS

This section summarizes the lessons drawn from experiences that were common to multiple programs. Those lessons relate to program startup, utility staff resources, quarterly reports and recordkeeping, the SMART database, program overlap, and defining program goals.

Program Startup

Almost all of the 25 evaluated programs experienced slower than expected startups. Although many factors contributed to slow startups, the failure to consider these programs' novelty almost universally exacerbated delays in their early progress. Other circumstances causing delays included implementers' incomplete understanding of their target markets (19 programs), belated program approval by the CPUC and purchase order signing (at least 16 programs), insufficient or competing account executive support (7 programs), and new technology issues (6 programs). Many programs experienced multiple delaying factors. The following recommendations address the issues raised by those circumstances.

- ***Recommendation:*** **For programs offering new or unfamiliar technologies, require a current market assessment**. As a component of the market assessment, include an assessment of manufacturers and supply chains. Where a market assessment of manufacturers and supply chains is not available, include a program component to work with manufacturers, distributors, and retailers to assure equipment standards and availability.

- ***Recommendation*****: Require the following language in all third-party-program statements of work: "Consultant may request changes to the implementation timeline or program goals based on the Purchase Order effective date."**

- ***Recommendation:* When purchase orders cannot be executed at the beginning of a program cycle, require a review of program goals to determine whether they are achievable in the time remaining for program implementation.**
- ***Recommendation:* Incorporate metrics into purchase orders to document progress on ramping up new programs**, which typically require at least a year to obtain significant recruitment results, especially programs offering new or generally unknown services or technologies, or targeting new markets.

Utility Staff Resources

New third-party programs often require ongoing support and management from utility program staff and can suffer from program-staff inexperience, inattention, or turnover. More than one-third (10 of 25, or 40%) of the evaluated programs revealed difficulties arising from such circumstances.

- ***Recommendation:* Provide adequate staff resources to provide engaged direction and support to third-party programs, and to avoid staff turnover during program cycles**.
- ***Recommendation:* To increase the expertise and transfer of lessons learned by program managers to other appropriate programs, assign managers to programs based on market segment or technology.**
- ***Recommendation:* Require training for new program staff that includes all aspects of the program** from its theory to its measurement and evaluation requirements, that identifies other programs with the same measures or overlapping target markets, and that employs utility managers and implementers of programs that target similar market segments or technologies as trainers and mentors.
- ***Recommendation:* Clearly define the relationship of third-party and core programs, and account executives' respective roles in those programs. Train customer service staff to respond accurately and appropriately to telephone inquiries about the programs**.

Quarterly Reports and Recordkeeping

The informational content of the evaluated programs' quarterly reports ranged from adequate to unsatisfactory. In general, all of the programs could improve their use of quarterly reports to document progress milestones, program challenges, and program changes. Data recordkeeping on participants for 10 of the 25 programs was also poor to nonexistent, and was sometimes delivered with inconsistent and meaningless labels, and in inconsistent formats. Some implementers were very slow, and even reluctant, to share their customer information with evaluators.

- ***Recommendation:* Require training for implementation staff that includes all aspects of the program** from its theory to its measurement and evaluation requirements, that identifies other programs with the same measures or overlapping target markets, and that employs utility managers and implementers of programs that target similar market segments or technologies as trainers and mentors.

- ***Recommendation:* Require third-party program implementation contractors to keep uniform, detailed records of contact information** (business name, individual contact name, address, telephone number, email address) for all program contacts including both participants and nonparticipants. Consider having a payment metric associated with the provision of these data sources to evaluation contractors.

- ***Recommendation:* Emphasize to third-party program implementation contractors the importance of using the quarterly reports to document program progress, challenges, and changes**.

SMART Database

SCE uses a reporting and tracking system called the Subcontractor Management and Reporting Tool (SMART), in part, to enable implementers (subcontractors) to upload program reports. However, uploading subcontractors' reports was problematic for 10 of the 25 reviewed programs, causing delays in recording program results. Implementers' difficulties with the database ranged from vague difficulties ("bugs" and "technical problems") to compatibility issues with implementers' reporting formats, and issues suggesting inadequate utility staff resources.

- ***Recommendation:* Provide adequate staffing to allow the timely addition to the SMART database of measures added to programs after their start dates, to keep program data current, to assist implementers who have limited or incompatible database formats, and to address more promptly issues such as the need for joint-utility procedures**.

- ***Recommendation:* Provide more intensive training to implementation contractors in the use of the SMART database**.

Program Overlap

At least five of the reviewed programs reported difficulties arising from activities of other SCE programs that offered activities and incentives to the same market segments served by the evaluated programs. Program overlap also created customer confusion. Confusion and duplication are likely to be continuing problems for at least two of the 2001-2009 programs: the core California Preschools program, and SCE-TP-006 – Healthcare Energy Efficiency, which targets a market segment also served by business and commercial retrofit programs.

- ***Recommendation:*** **Review program PIPs to identify programs with activities serving overlapping market segments, and where feasible, redefine or eliminate duplicative programs and program elements**. Where program overlap cannot be eliminated, develop a plan for program coordination to avoid program duplication or fragmentation. To minimize or avoid multiple programs offering the same services to the same customers, the plan should establish communication procedures, including periodic meetings, for programs serving overlapping market segments. Include the market segment manager in these communications and meetings.

- ***Recommendation:*** **In the interest of full disclosure, include in program purchase orders explicit descriptions of other third-party and core utility programs with measures, target markets, activities, or incentives that overlap those of the program for which the purchase order is issued**.

Defining Program Goals

Program implementation contractors frequently commented about a heavy focus by SCE on energy savings, rather than on issues arising from the marketing and delivery of programs. While savings are important, achieving savings is only part of what innovative programs seek to demonstrate. Such programs would benefit from a clear stage-gate framework that allows SCE staff and program implementers to determine whether a program has achieved sufficient demonstrated effectiveness or whether additional market testing is needed or worthwhile. Such a framework could help determine at what stage of development program savings are the most critical program target.

- ***Recommendation:*** **In coordination with the Technology Research Incubation and Outreach program, and the Emerging Technology program, develop clear stage-gate criteria that measure whether untried program technologies: 1) require more market development and evaluation before a decision to terminate or mainstream is made; 2) does not have potential and should not be developed further; 3) has demonstrated potential, but needs further testing to determine savings potential; or 4) has demonstrated potential and is ready for incorporation into core program offerings.**

1 INTRODUCTION

During 2008, Research Into Action, Inc. conducted process evaluations of 13 programs funded through the Southern California Edison (SCE) 2006-2008 Innovative Designs for Energy Efficiency Activities (IDEEA) Program. In addition to the 13 evaluations conducted by Research Into Action, two other firms, Cadmus Group, Inc. and Summit Blue Consulting, LLC, evaluated 12 additional programs. The twelve additional evaluations addressed seven IDEEA and five Innovative Designs For Energy Efficiency (InDEE) Programs.

Subsequent to completion of the 25 program evaluations, SCE staff asked Research Into Action to complete two additional tasks to assure the effectiveness of the lessons learned and of the recommendations made for program improvement in those evaluations. The first task was to identify the extent to which the recommendations and lessons from the 25 evaluations of the 2006-2008 IDEEA and InDEE programs had been incorporated into SCE's 2009-2011 Program Implementation Plans (PIPs). The second task was to revisit the findings from the 25 evaluations to identify recurring cross-program issues.

The second chapter of this document describes the results of our review of SCE's 2009-2011 PIPs for incorporation of lessons from the 2008 evaluations. Chapter 3 describes cross-program lessons drawn from a review of all 25 IDEEA and InDEE program evaluations.

This document and the evaluations of the 25 IDEEA and InDEE programs comprise five volumes. This report of lessons learned and cross-program findings is volume one. Volume two is Research Into Action's evaluation of 13 IDEEA programs. Cadmus Group's six evaluation reports are volume three, and volume four is Summit Blue's six evaluation reports (Table 1). Volume five is the Evaluability Assessment report completed by Quantec, LLC (now Cadmus) as a first phase to the full process evaluations of the 25 IDEEA programs.

Table 1: Programs by Volume and Page Number

PROGRAM	VOLUME NUMBER	PAGE NUMBER
SCE 2532 – Coin Operated Laundry Program	III	10
SCE 2534 – Demand Response Emerging Technologies Program	II	7
SCE 2535 – 80 Plus Program	IV	13
SCE 2536 – Energy Efficiency / Demand Response Flex Program	II	17
SCE 2537 – Management Affiliates Partnership Program	III	42
SCE 2538 – Lighting Energy Efficiency with Demand Response Program	II	35
SCE 2540 – Sustainable Energy Efficiency Development Program	II	59
SCE 2542 – Affordable Housing Energy Efficiency Alliance Program	II	82
SCE 2543 – Designed for Comfort: Efficient Affordable Housing Program	II	100
SCE 2544 – California Preschool Energy Efficiency Program	II	129
SCE 2545 – E-mail Based Energy Efficiency Program	II	149
SCE 2546 – Lights for Learning CFL Fundraiser Program	II	163
SCE 2547 – Housing Energy Program	II	175
SCE 2548 – Southern California Home Performance Program	II	201
SCE 2550 – Variable Speed Pool Pump Program	IV	36
SCE 2552 – NightBreeze Program	IV	66
SCE 2557 – Transforming the Market for ENERGY STAR® Manufactured Homes	III	75
SCE 2558 – Automatic Energy Review for Schools	III	107
SCE 2559 – Lighting Energy-Efficiency Par 38/30	III	139
SCE 2560 – Healthcare Energy Efficiency Program	II	243
SCE 2561 – Energy-Efficiency Program for Entertainment Centers	III	167
SCE 2562 – Campus Housing Energy Efficiency Retrofit Program	II	255
SCE 2563 – Plugging the Consumer Electronics Gap Program	IV	86
SCE 2564 – Grocery Area Energy Network	IV	101
SCE 2565 – Escalator PowerGenius™ Program	IV	121

2 REVIEW OF 2009-2011 PIPS

The 25 evaluated 2006-2008 IDEEA and InDEE programs included both resource and non-resource programs, as well as ones that had been terminated or were nearing termination, and those being considered for future funding. Of the 25 programs: 11 are not continued in the 2009-2011 PIPs; 7 others are continued in third-party programs; and the remaining 7 programs are continued as core programs, or as elements of broader core programs in the 2009-2011 PIPs (Table 2).

Table 2: 2006-2008 Program Status in 2009-2011

2009-2011 STATUS	COUNT	PERCENT (n=25)
Discontinued	11	44%
Core	7	28%
Third-Party	7	28%

Two of the 2006-2008 programs – Affordable Housing Energy Efficiency Alliance (SCE 2542) and Designed for Comfort (SCE 2543) – were consolidated into a single third-party program, Efficient Affordable Housing (SCE-TP-001).

Six of the seven 2006-2008 IDEEA or InDEE programs that appear in 2009-2011 core programs show up only as elements of broader efforts. These six include 80 Plus (SCE 2535) and Plugging the Consumer Power Gap (SCE 2563). The target markets and technologies promoted by both of these programs are included among the target markets and measures of the 2009-2011 Business and Consumer Electronics program. The energy efficiency tool promoted by Sustainable Energy Efficiency Development (SEED – SCE 2540) is available through three core programs in 2009-2011: the Commercial, Industrial, and Agricultural Continuous Energy Improvement programs.

Other programs with target markets and/or technologies picked up as components of core programs are: Innovative Pool Pump Technology Delivers Radical Efficiency Gains (Variable Speed Pool Pump – SCE 2550), included as a measure in the Home Energy Efficiency Rebate program; Transforming the Market for New ENERGY STAR® Manufactured Homes (SCE 2557), the target market and measures of which are parts of the ENERGY STAR® Manufactured Homes program; and Energy Efficiency Program for Entertainment Centers (SCE 2561), with a target market and measures included in the expanded approach taken by the 2009-2011 Energy Efficiency for Entertainment Centers program.

Six other 2006-2008 programs were renewed as directly corresponding 2009-2011 third-party or core programs (Table 3).

Table 3: 2006-2008 Programs Continued in 2009-2011

2006-2008 PROGRAM	2009-2011 PROGRAM
SCE 2535 – 80 Plus*	Core – Business and Consumer Electronics
SCE 2563 – Plugging the Consumer Electronics Gap*	
SCE 2537 – Management Affiliates Partnership (MAP) Energy Efficiency Program	SCE-TP-031 – Management Affiliates Program
SCE 2540 – Sustainable Energy Efficiency Development Program (One-2-Five® Energy Program)*	Core – Commercial Energy Efficiency
	Core – Industrial Energy Efficiency
	Core – Agricultural Energy Efficiency
SCE 2542 – Affordable Housing Energy Efficiency Alliance	SCE-TP-001 – Efficient Affordable Housing
SCE 2543 – Designed for Comfort: Efficient Affordable Housing	
SCE 2544 – California Preschool Energy Efficiency Program	Core – California Preschools
SCE 2548 – Southern California Home Performance Program	SCE-TP-003 – Comprehensive Home Performance
SCE 2550 – Innovative Pool Pump Technology Delivers Radical Efficiency Gains (Variable Speed Pool Pump)*	Core – Home Energy Efficiency Rebate
SCE 2557 – Transforming the Market for New ENERGY STAR® Manufactured Homes*	Core – ENERGY STAR® Manufactured Homes
SCE 2558 – Modernization and New Construction Efficiency Enhancement Program for Schools	SCE-TP-033 – Automatic Energy Review for Schools
SCE 2560 – Healthcare Energy Efficiency Program	SCE-TP-006 – Healthcare Energy Efficiency Program
SCE 2561 – Energy Efficiency Program for Entertainment Centers*	Core – Energy Efficiency for Entertainment Centers
SCE 2562 – Campus Housing Energy Efficiency Program	SCE-TP-032 – Private College Campus Housing

* Tool, technology, and/or target market carried forward as a component of a broader program in 2009-2011.

The focus of this review was on those fourteen 2006-2008 IDEEA and InDEE programs that were continued or that have descendants in the 2009-2011 third-party or core programs. Our review examined whether recommendations made and lessons learned from the evaluations of the 2006-2008 programs are reflected in the corresponding 2009-2011 PIPs.

2009-2011 THIRD-PARTY PROGRAMS

SCE-TP-001 – Efficient Affordable Housing

The 2009-2011 Efficient Affordable Housing (EAH) program advances comprehensive energy efficiency measures in the affordable housing retrofit market by instituting whole-building solutions. The program combines two 2006-2008 IDEEA programs: Designed for Comfort – Efficient Affordable Housing (DfC – SCE 2543) and Affordable Housing Energy Efficiency Alliance (AHEEA – SCE 2542). This section first describes the DfC recommendations, followed by a discussion of the program improvement recommendation made for AHEEA.

DfC Recommendations

The 2006-2008 Designed for Comfort program evaluation offered eight recommendations.

- ***Recommendation 1:*** Continue AHEEA marketing support for DfC or, in the absence of AHEEA, adjust the DfC budget to ensure ongoing program marketing and outreach.
- ***Recommendation 2:*** Try to achieve a mix of project sizes and types.
- ***Recommendation 3:*** Simplify program referrals, the project owners' contracting processes, and the program's incentive payment process by eliminating the need for property owners to contract with multiple parties.
- ***Recommendation 4:*** Provide program participants with an energy consultant contract template stipulating that some portion of the service fee be payable upon the final California Energy Efficiency Rating Services (CHEERS®) upload.
- ***Recommendation 5:*** Recruit energy consultants trained in the latest reporting technology (such as the CHEERS® Rate Tool) to streamline the reporting process.
- ***Recommendation 6:*** The implementer and utility partners should consider a per-unit incentive payment approach and explore incentive structures that challenge and reward maximum savings rates, such as a per-therm or per-kWh approach above the 20% minimum.
- ***Recommendation 7:*** Consider offering two or more alternative packages with lower and higher long-term savings potentials. This will expand the knowledge of integrated design, increase awareness of and coordination with existing programs, and educate affordable housing developers on the upper limits of energy-efficient design. A maximum-savings design may also promote, and potentially influence, the early adoption of new technologies, such as photovoltaics.
- ***Recommendation 8:*** In the future, DfC should make some form of manager and tenant training mandatory. Because on-site trainings are not always possible, optional delivery mechanisms, training methods, and materials may need to be developed.

DfC Recommendations 1 (Marketing Support) and 2 (Diverse Project Mix)

The 2009-2011 PIP's program description for EAH addresses DfC recommendations 1 and 2. Recommendation 1 (continued marketing support from AHEEA) will occur through the combination of AHEEA and DfC. The PIP responds to recommendation 2 (to try to achieve a mix of large and small affordable housing and of supportive housing projects) by stating the program will strive to increase the number of smaller (3-to-8 unit) multifamily buildings and the number of supportive housing projects (housing for tenants with special needs).

However, other recommendations or program elements that were problematic for the two antecedent 2006-2008 programs are not fully addressed in the 2009-2011 PIP.

DfC Recommendation 3 (Simplify Property Owner Contracting)

The 2006-2008 DfC inspection and modeling processes typically required property owners to contract both with a Home Energy Rating System (HERS) rater to access the buildings and with an energy consultant to recommend the most cost-effective measures to achieve a 20% energy improvement. This double-contracting requirement was found to be cumbersome. To simplify program referrals, the project owners' contracting processes, and the program's incentive-payment process, the evaluation recommended streamlining the process by assigning a single energy consultant per qualified project. However, the PIP for the 2009-2011 program continues the double-contracting approach.

DfC Recommendations 4 (Incentivize Final Report) and 5 (Recruit Trained Energy Consultants)

DfC included flexible, fee-for-service payment options, one of which was the option to prepay HERS raters prior to the uploading of final inspection results. While prepayment may offer advantages to HERS raters and energy consultants, prepayment provides no incentive for raters to upload the final CHEERS® report in a timely fashion. To facilitate timely uploads, the evaluation made two recommendations: first, that program participants be provided an energy consultant contract template stipulating that a portion of the service fee be payable upon the final upload of the CHEERS® report; second, it recommended only energy consultants trained in the latest reporting technology be recruited. The 2009-2011 PIP makes no reference to such program features.

DfC Recommendation 6 (Incentive Structure)

The 2006-2008 evaluation found a variety of problems in the administration of incentives, which resulted in a loss of transparency between program staff and participants, and caused budget tracking difficulties. The evaluation also found it was easy for participants to achieve energy savings of 20% over current conditions, suggesting an opportunity to achieve even greater savings. To address those circumstances, the evaluation recommended a straightforward, per-unit incentive payment approach, and an incentive structure that rewards maximum savings, such as a

per-therm or per-kWh approach for savings above the 20% minimum. The 2009-2011 program will *assess* the impact of higher per-property savings goals on program cost-effectiveness and participant affordability, but the PIP does not describe the specific incentive structure the program will employ.

DfC Recommendation 7 (Models of Alternative Measure Packages)

In the 2006-2008 program, performance-based savings for up to five program-recommended measures were modeled per project. This approach gave the energy consultant enough flexibility to construct an alternative model to meet minimum savings goals and it provided a simple model for introducing affordable housing participants to the concept of integrated design. However, this approach, implying only a single option, also effectively limited the program's ability to influence participants' future rehab design decisions and savings rates. For this reason, the evaluation recommended modeling alternative packages of measures to provide a "maximum savings design" as well. There is no reference in the 2009-2011 PIP to additional modeling requirements or encouragement.

DfC Recommendation 8 (Participant Training)

The 2006-2008 evaluation recommended mandatory manager, on-site staff, and tenant training to replace the optional training available through the 2006-2008 program. The 2009-2011 PIP says on-site maintenance staffs will have an *opportunity* to walk the site and ask questions about long-term maintenance of new equipment, suggesting training will be limited, informal, and remain optional.

AHEEA Recommendation (Marketing Channels)

The 2009-2011 PIP lists "Addressing the Market" as a program barrier to Efficient Affordable Housing, but the program is to continue "through proven marketing channels, including presentations, exhibits at trade shows, and other appropriate training and workshops" to reach the market's property owners. The 2006-2008 evaluation made a recommendation about delivery of program information to market actors. Specifically, it was recommended that the program offer a mix of larger, general-information conferences at the beginning of the program cycle and smaller, tailored workshops during the rest of the program cycle to meet the specific needs of the diverse market actors involved in energy efficiency design and construction in the affordable housing market.

The final design of the 2009-2011 program should include a mix of larger general conference presentations, as well as smaller information workshops tailored to meet the specific needs of building owners, architects/designers, engineers, and other market actors. To reach and recruit supportive-housing market actors, an even more specifically targeted approach may be needed – one that differs from the approach used to reach affordable-housing market actors.

SCE-TP-003 – Comprehensive Home Performance

The 2009-2011 Comprehensive Home Performance program derives from the design of its 2006-2008 counterpart – the Southern California Home Performance (SCHP) Program. However, the 2009-2011 program design modifies its predecessor with changes such as the addition of incentives to help offset homeowner costs for home performance improvements, and joint program implementation in SCE and Southern California Gas territories. Review of the 2009-2011 PIP focused on evaluation recommendations addressing incentives, marketing, forms, and trainee qualifications.

Incentives

The 2006-2008 evaluation found the program was challenged to document program savings. Assessment reports that set baselines were initially required, but later the focus shifted to obtaining remediation reports only. The remediation report is used to determine savings over baseline. The evaluation recommended incentives for both assessment reports and remediation reports be tied to an external leverage point, such as delaying homeowner rebates or incentives until the implementer has received the reports from the contractors. The 2009-2011 program description incorporates this recommendation.

The 2009-2011 PIP describes plans to improve demand for, and "to overcome the broad lack of market awareness of" comprehensive home retrofits by offering a range of incentives to residential home performance customers. Although incentive levels sufficient to drive demand for program services were not specifically addressed in the evaluation, it should be noted that comprehensive retrofit packages that include insulation, HVAC replacement, and duct sealing may cost homeowners $20,000 or more if windows are replaced. While incentives for retrofits will help homeowners defray some of that cost, it may be overstating to assume incentives will drive sufficient demand for home performance services to meet program goals.

Marketing

During the 2006-2008 IDEEA cycle, the program generated about 200 residential leads with marketing efforts such as exhibits at trade shows. Many of those leads did not result in program work being completed. Moreover, during that cycle, program-trained contractors reported there was not a ready residential market for home performance services. To accelerate the demand for those services, the 2006-2008 evaluation recommended an investment in public marketing of their benefits by the utility and state and local governments. The 2009-2011 PIP does not incorporate that recommendation.

In the 2006-2008 program cycle, to help educate building trades contractors and homeowners about program benefits and to generate customer leads for trained contractors, SCHP conducted marketing activities by exhibiting at trade shows and workshops. The 2009-2011 program continues this approach. Although not a recommendation in the evaluation, the experience of the

2006-2008 program suggests this approach will not generate sufficient homeowner demand to meet program goals.

Forms

During 2006-2008, the program implementer tried to make reporting requirements user-friendly by accepting assessment and remediation project results in various formats. However, this created uncertainty about reporting requirements. Thus, the evaluation recommended the development of standard electronic report forms, including a short form to itemize existing dwelling conditions and the pre- and post-test results needed for estimating post-retrofit savings, and a longer form for detailed client reports. The 2009-2011 PIP description of data collection and reporting templates may be a response to this recommendation, but it is not specific. It is suggested standardized formats be considered during program implementation.

Trainee Qualifications

The 2006-2008 program did not meet its goals for the number of home remediations or for energy saved, in part because many of the program trainees were not licensed general contractors and were unable to sell comprehensive home performance services. Therefore, the evaluation recommended only licensed general contractors who are capable of deploying full-scale home performance services should be trained. In spite of this recommendation, the 2009-2011 program again proposes to recruit contractors from a broad range of trades, including remodeling contractors and HVAC, insulation, and solar installers. Installers generally work as subcontractors to the general contractor responsible for comprehensive home remediation. The program design should acknowledge and work with existing networks within the trades where general contractors hire subcontractors. By recruiting existing teams made up of a general contractor and its preferred subcontractors, the program could address the resource issue created by training subcontractors who conduct single-measure jobs.

SCE-TP-006 – Healthcare Energy Efficiency Program

The 2009-2011 Healthcare Energy Efficiency Program is a continuation and statewide expansion of the 2006-2008 IDEEA Healthcare Energy Efficiency Program (HEEP – SCE 2560). The continuing program targets the same four large hospital systems initially targeted by the previous program, even though the earlier program expanded its scope to other healthcare facilities. The PIP's description of the continuing program also perpetuates the 2006-2008 program's initial distinction between facilities subject to the Office of Statewide Health Planning and Development (OSHPD) requirements and facilities not subject to OSHPD requirements, even though that distinction was found not to be useful and was disregarded by the earlier program.

Other lessons from the predecessor program that may be instructive for the ongoing program relate to the signing of the program's purchase order, utility staff resources, and program marketing.

Program Purchase Order

The 2006-2008 HEEP started up slowly, in part because of belated execution of the program's purchase order. The program's evaluation recommended earlier signing of program purchase orders. The date of the 2009-2011 PIP suggests belated purchase order signing is likely to occur again. We recommend consideration of appropriate amendments to the program's goals to reflect the shortened time in which they can be achieved.

Utility Staff Resources

Program staff turnover was also a problem for the 2006-2008 HEEP (and for several other 2006-2008 programs as well). Third-party programs often require ongoing support and management from utility program staff. Such programs are not necessarily turnkey operations, as utility staffing levels suggest. Although no corresponding recommendation was made in the evaluation, careful consideration should be given to the utility management needs and utility resources required to support the 2009-2011 efforts, especially for the third-party programs.

Marketing

While the evaluation offered no marketing recommendations for the HEEP, some marketing circumstances noted in the evaluation may be instructive for the 2009-2011 program. For example, a factor in the 2006-2008 program's slow development was the nature of the target market, which typically requires long lead times to plan and budget for capital improvements. That market lesson should be borne in mind by the implementer of the 2009-2011 program.

Two additional marketing lessons from the 2006-2008 program experience may be useful to program and implementation staff for the continuing effort as well. The PIP's description of marketing for the 2009-2011 program includes "participation at conferences and trade associations." This marketing conduit was found to be ineffective in the 2006-2008 program.

The 2006-2008 program also found the decision-making process for the large hospital systems targeted by the 2009-2011 program is not necessarily centralized, but is often devolved to the individual facilities within the system. The marketing approach for the 2009-2011 program should incorporate that lesson as well.

SCE-TP-031 – Management Affiliates Program

The 2009-2011 Management Affiliates Program (MAP) is a renewal of the preceding cycle's Management Affiliates Partnership Energy Efficiency Program (SCE 2537), targeting commercial property-management companies to encourage the installation of emerging, but proven, energy efficiency technologies in commercial office buildings, retail department stores, and other buildings. The evaluation of the 2006-2008 program offered seven recommendations for improvement, including program continuation and mainstreaming. Although the MAP has

not become a core program in 2009-2011, it has been continued in accordance with the recommendation.

The remaining six recommendations address specifics of program delivery, marketing, and recordkeeping, and of internal SCE processes that are typically outside the scope of a PIP. Specifically, recommendations for program features and activities included:

- Continued program delivery by two complementary implementation contractors: one a marketer and the other an installer
- Continued direct face-to-face marketing, building of personal relationships with the target market, and expansion of the targeted contacts to include building engineers
- Assessment of the effect on program participation of the lower incentives implemented during the previous program cycle
- Communication with participants about the program's expectations for their cooperation with program evaluators
- Communication with implementers regarding the program's expectations for the collection and retention of data about participants and others contacted by the program

The recommendation regarding SCE processes suggested accelerating the procedures for establishing savings calculation methodologies and for the review of proposed mid-program modifications to the list of measures offered.

None of these six recommendations are directly addressed in the 2009-2011 PIP. However, they may provide useful guidance for program and implementation staff as the program rolls out.

SCE-TP-032 – Private College Campus Housing

The 2009-2011 Private College Campus Housing program continues the 2006-2008 IDEEA Campus Housing Energy Efficiency (Retrofit) Program (CHEER – SCE 2562) and expands it to off-campus buildings that house high densities of students and other young adults. The new program otherwise continues its predecessor's activities, including the components for student audits and compact fluorescent lighting retrofits, and for green residence hall demonstration projects.

The 2006-008 evaluation made three recommendations for the program:

- To avoid establishment of an unrealistically aggressive energy savings goal, conduct a market assessment of the remaining potential in this target population before expanding efforts in this sector
- To work more effectively with this market segment, integrate program timelines with the academic calendar

➡ To facilitate program activities, increase utility program staff to meet the needs of this and other third-party programs for active support and direction

Goal Setting

The 2006-2008 Campus Housing program's goals included enrollment of seven campuses in the program and delivery of energy savings of approximately 4.6 million gross kWh – or approximately 700,000 kWh per campus. The 2006-2008 program's energy savings fell far short of the program goal and the evaluation found the goal was unrealistically aggressive. The 2006-2008 program savings goal was based on an inappropriate model (large public colleges and universities) and on an over-estimation of the savings opportunities remaining in the targeted facilities. Thus, the evaluation recommended that an assessment of the remaining potential in this target population should occur prior to expanding efforts in this sector.

However, the 2009-2011 program description does not include a market assessment. On the contrary, the PIP describes marketing research as "not applicable" to this program. Nonetheless, the 2009-2011 program goals once again include enrolling seven campuses in the program and the delivery of even more energy savings than called for by the aggressive 2006-2008 goal. Specifically, the 2009-2011 program calls for delivery of approximately 5.8 million kWh, for an average goal of more than 825,000 kWh per campus. Nothing in the PIP, or in the experience of the antecedent program, supports such an aggressive goal.

Knowledge and Understanding of Target Market

Other problems for the 2006-2008 program arose from incomplete knowledge and understanding of its targeted market segment. For example, the CHEER program did not fully appreciate the limits imposed on campus activities by the academic calendar. Additionally, the decision-making processes of this market segment were found to be more protracted than anticipated, further exacerbating difficulties in scheduling and completing program activities within the program cycle.

The details of scheduling program activities are not addressed in the 2009-2011 PIP. But to work effectively with this market segment, the 2009-2011 program will need to integrate program timelines with the academic calendar and account for this market segment's decision-making processes.

Utility Staff Resources

As with the 2006-2008 hospital and other programs, an issue for the CHEER program arose from inadequate, utility-program-staff resources. Specifically, there were utility delays in uploading new measures and in updating information to the SMART database. As stated previously, careful consideration should be given to the utility management needs and utility resources required to support the 2009-2011 programs, especially the third-party programs.

SCE-TP-033 – Automatic Energy Review for Schools

Automatic Energy Review for Schools renews the Modernization and New Construction Efficiency Enhancement Program for Schools (SCE 2558) from the 2006-2008 program cycle. The evaluation of the earlier program offered six recommendations for program improvement. The recommendations touch on the need for additional market research, additional program marketing and enhanced communication with schools and market actors, and additional financial incentives. Only some of these recommendations are reflected in the 2009-2011 PIP for the program.

Market Research

The 2006-2008 program encountered unexpected market barriers regarding: the timing of its interventions in school projects; schools' decision-making processes; and the willingness of architects and designers to support late-stage design changes. Consequently, the evaluation recommended that the program conduct additional market research to determine ways to overcome these barriers. However, the 2009-2011 PIP states market research is "Not applicable to this program."

Marketing and Communication

Four of the six evaluation recommendations addressed a need for better program marketing and communication with its target market and various market actors. Specific recommendations included:

- Better marketing to increase program participation by educating market actors about the benefits of participation
- Better communication of the program's objectives, eligibility, and benefits to diminish customer confusion with other programs, and to enhance customers' and market actors' willingness to participate in the program
- Reaching out one-on-one to certain architectural firms to increase their willingness to encourage client participation in the program
- Cultivating a relationship with the Department of State Architects (DSA) and exploring other means to improve the efficiency with which the DSA database is mined

The PIP responds to customer confusion about programs found in the 2006-2008 cycle by stating the renewed program, "Will offer information about SCE core programs such as Savings By Design and Standard Performance Contracting." The PIP is also responsive to the recommendation for the establishment of closer ties with DSA, saying, "The program will work with DSA to automate a referral system using a web service." Regarding the recommendations to improve marketing generally, and to reach out more intensively to customers and certain market

actors, the PIP is more nebulous, saying only, "The marketing campaign will include lessons learned that will help educate others for future projects."

Financial Incentives

The program evaluation found the 2006-2008 program's design-cost incentives to be weak, and recommended enhancing them and adding incentives for the purchase and installation of energy-efficient equipment. However, the renewed program offers no new or additional financial incentives.

Thus, the 2009-2011 PIP incorporates some, but not all, of the recommendations from the evaluation of its predecessor program. Without further attention to those recommendations, the renewed program appears poised to encounter some of the same key difficulties undergone by the 2006-2008 program.

2009-2011 CORE PROGRAMS

Business and Consumer Electronics

The new 2009-2011 Business and Consumer Electronics program (BCE) incorporates technologies promoted by two 2006-2008 programs: the 80 Plus program (SCE 2535), which promoted energy-efficient computer power supplies, and Plugging the Consumer Electronics Gap (SCE 2563), which promoted ultra-high-efficiency LCD computer monitors. The lessons learned from both programs expressly inform BCE's approach. In particular, the PIP incorporates lessons about the importance of having a statewide program and the need for cohesive support of ENERGY STAR® standards.

Both antecedent programs suffered from offering only local (SCE service territory) support for changes, addressing only a single computer-system component. The lessons from, and recommendations for the two programs centered on the cost ineffectiveness of making localized changes to products and labels with national and international distribution. BCE is responsive to the lessons and recommendations arising from the earlier pilot programs by: including these products in a statewide program; coordinating nationally with ENERGY STAR® and the TopTen USA project; targeting an array of national and international retailers; and including a broad spectrum of business and consumer electronics among its measures.

California Preschools

The 2009-2011 California Preschool Program, a core program, is the successor to SCE's IDEEA California Preschool Energy Efficiency Program (CPEEP – SCE 2544). It is a statewide effort intended to bring cost-effective energy and demand electric savings to preschool facilities and to organizations that operate preschools. Both stand-alone and shared-space facilities that educate and provide care for prekindergarten-age children in the service territories of the three largest investor-owned utilities (IOUs) are included in the program. To deliver these savings, the

program offers a comprehensive strategy that includes detailed audits, technical assistance, and financial analyses. It also provides direct installation of a comprehensive list of measures, including retrofits with T8 lamps, LED exit signs, compact fluorescent lamps (CFLs), high-intensity-discharge lighting, time clocks, lighting controls, programmable thermostats, and HVAC tune-ups. Other capital retrofit measures can qualify for deemed or calculated incentives as well. The program also includes post-installation quality-control procedures.

Overlapping Programs

For the 2006-2008 CPEEP, overlapping activities from another program were a problem. Unfortunately, program overlap continues for the 2009-2011 cycle. In fact, the activities of the 2009-2011 California Preschools program are so completely overlapped by other programs described in the 2009-2011 PIP that this core program appears to be wholly redundant.

Two other programs described in the 2009-2011 PIPs offer identical services and measures to preschools. Those programs are the Private Schools and Colleges Program, a core program that includes private preschools, and the Public Pre-Schools, Elementary Schools and High Schools program (SCE-TP-024). All preschools fall within the purview of one of those two programs.

There is a third 2009-2011 program that may offer services to preschools as well, namely, the Cool Schools program (SCE-TP-023). While the PIP's description of Cool Schools does not specifically mention preschools, neither is it clear that preschools are excluded from that program.

The 2006-2008 evaluation recommended that SCE "clarify and/or combine programs targeted at narrow market segments to avoid overlapping activities and customer confusion." As described in the 2009-2011 PIPs, it will be difficult for programs serving preschools to observe that recommendation. While the PIP describes procedures to avoid duplicating program efforts in overlapping utility service territories, it offers no guidance for navigating overlapping activities from programs within SCE's own portfolio. This issue needs to be addressed by SCE.

Marketing

The PIP describes an array of marketing and outreach activities for the 2009-2011 program, which combined, proved to be an effective approach for the predecessor program. However, the PIP does not specifically mention account representative participation in program outreach. Account rep activity was one of the most effective marketing conduits for generating 2006-2008 program leads. Account reps should again be actively involved in marketing the 2009-2011 program.

On the other hand, marketing activities for the 2009-2011 program include "participation at conferences and trade associations." This marketing conduit was found to be ineffective for the 2006-2008 program, because teachers more often attended the conferences than did administrators. While the evaluation made no specific recommendation to drop this marketing

approach, it is suggested that the 2009-2011 program devote few, if any, resources to that form of program marketing.

Participant Training

Another shortcoming of the 2006-2008 program was its customer training component. The program design included workshops for building owners and facility staff in maintenance procedures that would improve energy efficiency. Such training did not occur. Although the PIP for the 2009-2011 program mentions several approaches to provide customer "education and information," including workshops, the earlier program's customer training in maintenance procedures is not specifically included in the 2009-2011 program. If elimination of this program component is intended, it may be useful to delete the reference to workshops from the 2009-2011 program description.

Commercial, Industrial, and Agricultural Continuous Energy Improvement Programs

The 2006-2008 Sustainable Energy Efficiency Development (SEED – SCE 2540) program (also known as the One-2-Five Energy Program) was an energy management program for Southern California's food processing industry. SEED was implemented by EnVINTA Corporation and provided access to EnVINTA's *One-2-Five® Energy* diagnostic tool. This tool assesses an organization's procedures for managing energy costs and risks, and can be a component of continuous improvement methodologies and business consulting techniques to improve energy management policies and practices, and to identify opportunities for energy-efficient equipment upgrades. However, offering only this stand-alone service limited the program's success.

Lack of account executive support also hampered the success of the program. In cases where an account executive embraced the program and arranged meetings for implementation staff, the program was able to sign up participants. Without this support, the program recruited few participants.

Lessons from the program and recommendations from its evaluation addressed two needs: 1) a need to package the *One-2-Five® Energy* diagnostic tool with more extensive support, and even project management services to help organizations make energy efficiency investments; and 2) a need for active account executive involvement in program marketing.

The three core 2009-2011 Commercial, Industrial, and Agricultural Continuous Energy Improvement Programs address both of those needs. They incorporate EnVINTA's *One-2-Five® Energy* diagnostic tool among their lists of tools and resources available to support comprehensive customer energy assessment in their respective market segments. Additionally, the programs expand on the services offered by SEED, offering integrated energy audits, strategic plan development support, and measure implementation incentives among other services. The three programs also employ utility service and sales representatives as a primary program delivery medium.

However, one aspect of the SEED recommendations is not explicitly adopted by these programs. Their PIPs do not list project management among the programs' services. While this absence is not necessarily a program flaw, it may be useful for the programs' managers to monitor customer feedback for indications of a need for this additional support.

Energy Efficiency for Entertainment Centers

The 2006-2008 Energy Efficiency Program for Entertainment Centers (SCE 2561) was a retrofit program offering demand-controlled ventilation and coil-cleaning services to commercial movie theater complexes at a discounted price. That program encountered difficulties:

- When it was expanded to a joint utility program with Southern California Gas Company;
- In reaching decision-makers in the targeted market segment;
- With communication from the implementation contractor; and
- As a result of the perceived inadequacy of the program's incentive.

For 2009-2011, the earlier program has been incorporated into a statewide core program, targeting an expanded market, including amusement parks, bowling alleys, concert halls, auditoriums, exercise/recreation centers, and night clubs, as well as movie theaters, and offering a broader list of measures and services. By becoming statewide, the program addresses the difficulties encountered when its predecessor became a joint utility program. However, the three remaining difficulties of the previous program, and their corresponding lessons and recommendations do not appear to be addressed in the 2009-2011 program's PIP.

Marketing to Decision-Makers

The 2006-2008 pilot program found many entertainment centers (movie theaters) had no phone number or address. For other theaters, the only listed number connected to an automated show-time message. The implementer tried to remedy the problem by sending marketers out on foot, but this was a very time-consuming process. The 2009-2011 PIP indicates the expanded program will employ, among other things, one-to-one marketing by telephone and personal meetings. It is not clear whether knocking on doors is contemplated by the program, but the lessons from the earlier program regarding the difficulty in reaching decision-makers for movie theaters can be instructive to program staff in any case.

Marketing for the 2009-2011 program must be nimble, patient, and persevering for another reason as well. The program's expanded market includes the greatest possible diversity of owner types, from "mom-and-pop" businesses, to regional, national, and international corporations, to government agencies and nonprofit organizations. Reaching the respective decision-makers and accommodating their diverse decision-making structures could prove challenging to the most experienced sales staff.

Communication with Contractors

Inasmuch as the 2009-2011 program is a core program, it may not contract with third-parties to provide program services; thus, obviating the concern from the earlier pilot program about contractor communications. However, the PIP refers to a contractor involved in program marketing. If a contractor is employed (and this may have merit, given the complexity of the program's marketing task), program staff should acknowledge the recommendation from the earlier program by requiring regular communications from the contractor with account executives and program staff.

Adequacy of Incentives

During the 2006-2008 program, the participant per-unit copayment for the demand-controlled ventilation equipment was reduced from $300 to $150. While the reduction was a spur to program participation, there was continued resistance to participation, even at this less-expensive level from some prospects, especially those with multiple theaters under a single roof.

Copayments and incentives are not specified in the 2009-2011 program's PIP. Nevertheless, a program service is the development of a financial plan for the customer with an agreement that no-cost/low-cost measures will be installed at no charge to the customer in exchange for a customer commitment to install retrofit capital measures. In addition, the program offers to develop an investment strategy for any retrofit capital items, and assistance in locating other funds from private and public sources. By providing these combined services, the 2009-2011 program is responsive to the earlier program's concerns about incentive adequacy.

ENERGY STAR® Manufactured Homes

The 2009-2011 core ENERGY STAR® Manufactured Homes program is a sub-program of the statewide Residential New Construction program. The 2009-2011 program incorporates the 2006-2008 IDEEA program known as Transforming the Market for New ENERGY STAR® Manufactured Homes (SCE 2557). Both programs are efforts to move the manufactured housing market from HUD construction standards to the more energy-efficient ENERGY STAR® standards. Recommendations for program improvement from the evaluation of the earlier program included:

- Continue the program structure to recruit both manufacturers and retailers.
- Conduct market research to identify the process by which HVAC equipment is marketed, purchased, and installed, and to determine which market actors, including HVAC contractors and homebuyers, are the most appropriate recipients of rebates.
- Include HVAC contractors among the program's targeted market actors.
- Establish processes to verify participating manufacturers have ENERGY STAR® certification and to establish systematic, scheduled home site inspections.

- Create additional materials and discussions about the benefits of ENERGY STAR® homes, and about the differences between ENERGY STAR® homes and homes built to HUD standards.

In addition to these recommendations, the evaluation found recording and tracking homebuyer information to be difficult for the 2006-2008 program.

The incorporation of the earlier program into the 2009-2011 statewide program addresses the evaluation's first recommendation. However, the remaining recommendations from the evaluation of the 2006-2008 program are not specifically addressed in the 2009-2011 PIP.

Market Research

Although the 2009-2011 program does not include the market research component recommended by the evaluation of the earlier program, it does respond to the evaluation's findings regarding rebates to manufacturers. The previous program found the $1,000 federal tax credit was sufficient to motivate manufacturers to retool their plants to build homes to ENERGY STAR® standards and an additional rebate was unnecessary. Accordingly, the new program discontinues manufacturers' rebates. However, other issues for which market research was recommended (appropriateness of rebates to HVAC contractors and homebuyers) remain unaddressed.

Targeted Market Actors

The evaluation of the 2006-2008 program recommended inclusion of HVAC contractors among the program's target market, even going so far as to suggest the creation of financial incentives for these market actors. However, HVAC contractors are not included in the 2009-2011 PIP for the program.

ENERGY STAR® Certification Verification

During the evaluation of the 2006-2008 program, a manufacturer whose homes met ENERGY STAR® standards was found not to have ENERGY STAR® certification. These homes had to be certified and rebates paid retroactively. Certifying sited homes were program-qualified proved difficult. Thus, the evaluation recommended establishment of a process to verify that participating manufacturers have ENERGY STAR® certification, and of a process for systematic scheduled home-site inspections.

The 2009-2011 program is responsive to those recommendations. It will include a quality assurance plan with a field inspection component to verify manufactured homes meet ENERGY STAR® and program requirements. The program will also have a mechanism to verify the assembly of the home is in accordance with these standards.

Distinguishing ENERGY STAR® from HUD standards

The evaluation also found many retailers did not know the difference between manufactured homes built to HUD standards and those built to ENERGY STAR® standards. Some retailers believed HUD standards were more energy-efficient than ENERGY STAR® standards.

In accordance with the evaluation's recommendation, the 2009-2011 program will expand its manufacturer and retailer outreach to increase overall awareness and understanding of ENERGY STAR® manufactured homes. It will strengthen information and support materials, focusing on the value to the retailer of making the sale to the homebuyer. Communication tools will include account representative meetings and presentations, targeted customer mailings, trade organization affiliations, and builder award recognition.

The 2009-2011 program will also include an education and outreach component as a means to promote awareness of energy-efficient practices in the construction of ENERGY STAR® manufactured homes. All segments related to the sale and construction of a manufactured home – including retailers, customers, and manufacturers – will be engaged. The marketing plan will also target new retailers to inform them of the program benefits and encourage their participation in the program.

Data Tracking

To improve the ability of the 2009-2011 program to record and track customer data, customer information will be captured to allow SCE to integrate delivery of other program offerings to these customers, as well as to track information on parties receiving incentives.

Home Energy Efficiency Rebate

The 2009-2011 Home Energy Efficiency Rebate (HEER) program is a continuation of an existing, statewide, core program that encourages the adoption of energy-efficient choices when purchasing and installing household appliances and equipment. Among the measures supported through this program in the 2009-2011 cycle are variable-speed pool pumps. During the 2006-2008 program cycle, variable-speed pool pumps were promoted by the IDEEA Variable Speed Pool Pump program (Innovative Pool Pump Technology Delivers Radical Efficiency Gains – SCE 2550).

The incorporation of variable-speed pool pumps in the HEER program substantially addresses the recommendations made in the evaluation of the 2006-2008 program. In particular, the following recommendations are addressed:

- ➡ Create different levels of training targeted to market actors of different knowledge levels – HEER will include a retail management component to support retailers in training staff about energy efficiency and in providing collateral educational materials to promote rebates for qualified products; the SCE training center will also offer free classes for customers and trade professionals.

- Market the program to pool owners – HEER will be marketed directly to customers through the SCE website, call center, bill inserts, direct mail, and email.
- Improve call center staff training – HEER will provide program administration support that includes marketing and sales training for utility staff.
- Improve (speedup) the rebate redemption process – HEER includes a point-of-sale approach that offers instant incentive discounts directly through the retailer at the point-of-purchase.
- Bring distributors into the program – HEER will be coordinated with an array of market actors, including retailers and distributors.
- Limit the amount of information installers must provide to customers – by including retailers and distributors, and by directly targeting customers, HEER diminishes installers' customer-information burden.

The thorniest remaining evaluation lessons and recommendations from the Pool Pump program arise from code standards. The evaluation found code standards currently require the installation of two-speed pool pumps. The incremental cost for a variable-speed pump remains, but the incremental savings from them are not as great. Consequently, pool owners may be less likely to install variable-speed pool pumps.

Another code issue concerns public pools, which include hotel and motel pools. Health code standards for public pools require the water to be turned over every four to six hours. The evaluation found health officials were not sure whether a variable-speed pump can meet that requirement.

Finally, HEER offers rebates for two-speed, as well as for variable-speed, pool pumps. Program staff should reconsider the appropriateness of offering a rebate for equipment that is required by applicable codes.

3 CROSS-PROGRAM FINDINGS FROM 2006-2008 EVALUATIONS

Research Into Action revisited both its own evaluations of thirteen 2006-2008 IDEEA programs, and evaluations conducted by The Cadmus Group, Inc. and Summit Blue Consulting, LLC, of seven more IDEEA programs and five InDEE programs. The purpose of this review was to identify and draw lessons from experiences that were common to multiple programs. This chapter describes the lessons drawn from those common experiences. In particular, the chapter addresses issues related to program startup, quarterly reports and recordkeeping, utility staff resources, the SMART database, program overlap, and defining program metrics.

PROGRAM STARTUP

Slower than expected startups were experienced by almost all of the 25 evaluated programs. By definition, these programs were new and innovative, with no established "buzz" or record of success to which prospective participants could be directed. Program planning as reflected in the programs' Statements of Work, especially in regard to goal-setting, neglected to account for this fundamental circumstance. This inattention is likely a reflection of the desire to present a positive image of the programs in order to succeed in the selection process. Although many factors contributed to slow starts by these programs, the failure to consider the programs' novelty typically exacerbated the appearance of the programs starting slowly relative to their goals.

Other important factors contributing to program delays were: implementation contractors' incomplete understanding of their target markets; belated signing of program purchase orders; insufficient support, or competition, from SCE account representatives in promoting the programs; and the novelty of the technologies promoted by the programs (Table 4).

Table 4: Reasons for Slow Program Startups

CAUSE OF DELAY	COUNT	PERCENT (N=25)
Incomplete Understanding of Target Market	18	72%
Belated Purchase Order Signing	16+	64%+
Insufficient or Competing Account Rep Activity	7	28%
New Technology Issues	6	24%
Other (Economic Downturn & Joint-Utility Program Negotiations)	5*	20%

* Economic downturn: DRET (SCE 2534), NightBreeze® (SCE 2552), and ENERGY STAR® Manufactured Homes (SCE 2557);
Joint-utility program negotiations: Coin-op Laundry (SCE 2532), and Entertainment Centers (SCE 2561).

Implementer Knowledge of Target Market

The most common cause of slow program starts was the implementation contractors' incomplete understanding of their target markets. For 18 of the 25 programs, this factor provided a drag on recruitment efforts. In particular, examples of targeted markets' unique characteristics that were not fully understood or heeded in the program designs included:

- **Seasonal Activity and Budget Cycles** – Lights for Learning CFL Fundraiser (SCE 2546); Modernization and New Construction Efficiency Enhancement Program for Schools (SCE 2558); Campus Housing Energy Efficiency Program (SCE 2562); and Grocery Area Energy Network (SCE 2564)
- **Acceptance of, or Resistance to the Adoption of Unfamiliar Technologies** – Demand Response Emerging Technologies (SCE 2534); Grocery Area Energy Network (SCE 2564); and Escalator PowerGenius™ Program (SCE 2565)
- **Level of Energy Savings Opportunities** – Coin-Operated Laundry Program (SCE 2532); and Campus Housing Energy Efficiency Program (SCE 2562)
- **Inadequacy of the Rebate in the Eyes of the Intended Recipient** – Coin-Operated Laundry Program (SCE 2532); 80 Plus (SCE 2535); NightBreeze® Energy Efficiency Program (SCE 2552); Modernization and New Construction Efficiency Enhancement Program for Schools (SCE 2558); Energy Efficiency Program for Entertainment Centers (SCE 2561); and Plugging the Consumer Electronics Gap (SCE 2563)
- **Communication and Decision-Making Structures** – Modernization and New Construction Efficiency Enhancement Program for Schools (SCE 2558); Healthcare Energy Efficiency Program (SCE 2560); Energy Efficiency Program for Entertainment Centers (SCE 2561); and Plugging the Consumer Electronics Gap (SCE 2563)
- **Most Effective Marketing Conduits** – Southern California Home Performance Program (SCE 2548); Transforming the Market for New ENERGY STAR® Manufactured Homes (SCE 2557); The Lighting Energy Efficiency PAR 38/30 CFL (LEEP 38/30 CFL) Program (SCE 2559); and Grocery Area Energy Network (SCE 2564)

The evaluations of several of the programs revealed poor understanding of multiple characteristics of their target markets (Table 5).

Table 5: Cross-Program Findings – Inadequate Acquaintance with Target Market

PROGRAM	UNKNOWN, MARKET CHARACTERISTIC
Coin Operated Laundry Program (SCE 2532)	Fewer electric (more gas) water heaters, retailer inventory, and adequacy of rebate
Demand Response Emerging Technologies (SCE 2534)	Industry practices and risk aversion
80 Plus (SCE 2535)	Industry practices and adequacy of rebate
Lighting Energy Efficiency with Demand Response (LEEDR)	Industry risk aversion and competing program
Sustainable Energy Efficiency Development / One-2-Five Energy Program (SCE 2540)	Identifying and obtaining attention of decision-makers
Email Based Energy Efficiency Program (SCE 2545)	Utility policies & procedures and utility customer awareness of account number
Lights for Learning CFL Fundraiser (SCE 2546)	Market timing (academic calendar)
Southern California Home Performance Program (SCE 2548)	Appropriate marketing conduit
NightBreeze® Energy Efficiency Program (SCE 2552)	Industry practices, technology issues, and adequacy of rebate
Transforming the Market for New ENERGY STAR® Manufactured Homes (SCE 2557)	Industry and consumer practices
Modernization and New Construction Efficiency Enhancement Program for Schools (SCE 2558)	Decision-making process, timing (academic calendar), and adequacy of rebate
The Lighting Energy Efficiency PAR 38/30 CFL (LEEP 38/30 CFL) Program (SCE 2559)	Industry preferences and appropriate marketing conduit
Healthcare Energy Efficiency Program (SCE 2560)	Decision-making process
Energy Efficiency Program for Entertainment Centers (SCE 2561)	Means of reaching decision-makers and adequacy of rebate
Campus Housing Energy Efficiency Program (SCE 2562)	Decision-making process and timing (academic calendar)
Plugging the Consumer Electronics Gap (SCE 2563)	Decision-making process and adequacy of rebate
Grocery Area Energy Network (SCE 2564)	Timing (holiday periods), industry practices (UL certification), and risk aversion
Escalator PowerGenius™ Program (SCE 2565)	Industry practices and risk aversion

➡ ***Recommendation:*** **For programs offering new or unfamiliar technologies, require a current market assessment.**

California Public Utilities Commission (CPUC) Approval and Purchase Orders

The next most common cause of delayed program startup was belated California Public Utilities Commission (CPUC) approval of programs, which caused program purchase orders to be signed

and notices to proceed to be issued later than program implementers anticipated. The program implementers proposed programs with the expectation they would start January 1, 2006. In fact, the earliest purchase orders among the 13 programs evaluated by Research Into Action were signed for two programs at the end of the first quarter 2006. The remaining 11 programs launched subsequently throughout 2006, with the last of them kicking off in late February 2007. An unknown number, but at least four, of the 12 programs evaluated by Cadmus and Summit Blue also experienced belated signing of their purchase orders. In most cases, belated CPUC approval and purchase order signing delayed the achievement of program results, a delay exacerbated by the novelty of the programs and of the technologies promoted by the programs.

- ***Recommendation:*** **Require the following language in all third-party-program statements of work: "Consultant may request changes to the implementation timeline or program goals based on the Purchase Order effective date."**
- ***Recommendation:*** **When purchase orders cannot be executed at the beginning of a program cycle, require a review of program goals to determine whether they are achievable in the time remaining for program implementation.**
- ***Recommendation:*** **Incorporate metrics into purchase orders to document progress on ramping up new programs**, which typically require at least a year to obtain significant recruitment results, especially programs offering new or generally unknown services or technologies, or targeting new markets.

Account Representative Involvement

Another factor that delayed program results was limited or non-involvement of utility account representatives in program recruitment efforts. It is not clear how account representatives balance their sometimes competing work for core programs with the needs of third-party programs. But programs that enjoyed the active support of account representatives – Management Affiliates Partnership Energy Efficiency Program (SCE 2537), The Lighting Energy Efficiency PAR 38/30 CFL (LEEP 38/30 CFL) Program (SCE 2559), Healthcare Energy Efficiency Program (SCE 2560), and Energy Efficiency Program for Entertainment Centers (SCE 2561)[1] – generally had greater recruitment success than did those programs with little or no account representative involvement – Demand Response Emerging Technologies (SCE 2534), 80 Plus (SCE 2535), Energy Efficiency / Demand Response Flex Program (SCE 2536), Lighting Energy Efficiency with Demand Response (SCE 2538), Sustainable Energy Efficiency Development / One-2-Five Energy Program (SCE 2540), Lights for Learning CFL Fundraiser (SCE 2546), and Escalator PowerGenius™ Program (SCE 2565).

[1] Even though active account representative involvement assisted the Entertainment Centers' recruitment efforts, other problems limited the program's success. Active assistance from account reps was unplanned for the Management Affiliates Partnership Energy Efficiency Program (SCE 2537) and The Lighting Energy Efficiency PAR 38/30 CFL (LEEP 38/30 CFL) Program (SCE 2559), but ultimately proved effective.

➡ ***Recommendation:*** **Clearly define the relationship of third-party and core programs, and account executives' respective roles in those programs. Train customer service staff to respond accurately and appropriately to telephone inquiries about the programs.**

New Technologies

The start-up difficulties of these programs were sometimes compounded by their new or unfamiliar technologies. At least 6 of the 25 programs were delayed in-part by the technologies they offered – Demand Response Emerging Technologies (SCE 2534), NightBreeze® Energy Efficiency Program (SCE 2552), Grocery Area Energy Network (SCE 2564), and Escalator PowerGenius™ Program (SCE 2565) – by equipment unavailability – 80 Plus (SCE 2535) – or by equipment manufacturing issues – Lighting Energy Efficiency with Demand Response (SCE 2538).

➡ ***Recommendation:*** **For programs offering new or unfamiliar technologies, expand the market-assessment component of the program to include manufacturers and supply chains, or include a program component to work with manufacturers, distributors, and retailers to assure equipment standards and availability.**

Other issues appearing across multiple programs relate to utility staff resources, quarterly reports and recordkeeping, the SMART database, and program overlap (Table 6). Additionally, a discussion of an issue that was problematic for all 25 programs – the definition of program goals – concludes this chapter.

Table 6: Cross-Program Findings: Other Program Issues

PROGRAM ISSUES	COUNT	PERCENT
Quarterly Reports & Recordkeeping	13+	52%+
Utility Staff Resources	10	40%
SMART Database	10	40%
Program Overlap	7	28%

UTILITY STAFF RESOURCES

New third-party programs often require ongoing support and management from utility program staff. Such programs are not necessarily turnkey operations, as utility staffing levels suggest. Program continuity can also be disrupted when there is turnover in utility staff. New program managers often require additional effort from program implementers to acquaint them with program progress, difficulties, and idiosyncrasies.

More than one-third (10 of 25, or 40%) of the evaluated programs revealed difficulties arising from utility program staff resources. In some cases, utility staff turnover disrupted program

management. In other cases, utility staff management or direction was simply inadequate (Table 7). Even though the day-to-day management of third-party programs is delegated to implementation contractors, these programs still need active engagement and support by utility staff, and will require utilities to continue to assign sufficient staff to meet these needs.

Table 7: Cross-Program Findings: Utility Staff Issues

PROGRAM	PROBLEM
Coin Operated Laundry Program (SCE 2532)	Turnover
Demand Response Emerging Technologies (SCE 2534)	Insufficient support
Energy Efficiency / Demand Response Flex Program (SCE 2536)	Turnover
Sustainable Energy Efficiency Development / One-2-Five Energy Program (SCE 2540)	Insufficient support
Innovative Pool Pump Technology Delivers Radical Efficiency Gains (SCE 2550)	Turnover
Healthcare Energy Efficiency Program (SCE 2560)	Turnover
Energy Efficiency Program for Entertainment Centers (SCE 2561)	Turnover
Campus Housing Energy Efficiency Program (SCE 2562)	Insufficient support
Grocery Area Energy Network (SCE 2564)	Insufficient support
Escalator PowerGenius™ Program (SCE 2565)	Insufficient support

The following recommendations are in addition to the earlier recommendation for the roles of account executives.

- ***Recommendation:*** **Provide adequate staff resources and training to provide engaged direction and support to third-party programs, and to avoid staff turnover during program cycles.**
- ***Recommendation:*** **To increase the expertise and transfer of lessons learned by program managers to other appropriate programs, assign managers to programs based on market segment or technology**.
- ***Recommendation:*** **Require training for new program staff that includes all aspects of the program** from its theory to its measurement and evaluation requirements, that identifies other programs with the same measures or overlapping target markets, and that employs utility managers and implementers of programs that target similar market segments or technologies as trainers and mentors.

QUARTERLY REPORTS AND RECORDKEEPING

The informational content of the evaluated programs' quarterly reports ranged from adequate to unsatisfactory. In general, all of the programs could improve their use of quarterly reports to document progress milestones, program challenges, and program changes. In particular, quarterly reports for the 13 programs evaluated by Research Into Action appeared to be little more than hastily copied and pasted versions of earlier reports.

Participant data recordkeeping for 10 of the 25 programs was also poor to nonexistent.[2] In spite of recommendations made in evaluability assessments of the programs, some implementation contractors were unable to provide complete contact information for program participants. Contact information for customers who had been approached, but declined to participate, was also often unavailable; and when provided, some customer contact data arrived with inconsistent and meaningless labels, and in inconsistent formats.

- ***Recommendation:*** **Require training for implementation staff that includes all aspects of the program** from its theory to its measurement and evaluation requirements, that identifies other programs with the same measures or overlapping target markets, and that employs utility managers and implementers of programs that target similar market segments or technologies as trainers and mentors.
- ***Recommendation:*** **Require third-party program implementation contractors to keep uniform, detailed records of contact information** (business name, individual contact name, address, telephone number, email address) for all program contacts including both participants and nonparticipants. Consider having a payment metric associated with the provision of these data sources to evaluation contractors.
- ***Recommendation:*** **Emphasize to third-party program implementation contractors the importance of using the quarterly reports to document program progress, challenges, and changes.**

SMART DATABASE

SCE uses a reporting and tracking system called the Subcontractor Management and Reporting Tool (SMART) to track the utility's entire portfolio of programs. According to SCE's website:

> "SMART serves three primary purposes:

[2] Coin Operated Laundry Program (SCE 2532), 80 Plus (SCE 2535), Management Affiliates Partnership Energy Efficiency Program (SCE 2537), Sustainable Energy Efficiency Development / One-2-Five Energy Program (SCE 2540), Affordable Housing Energy Efficiency Alliance (SCE 2542), Aggregation of Housing Agencies for Energy Retrofit and Management Projects (SCE 2547), Southern California Home Performance Program (SCE 2548), Transforming the Market for New Energy Star® Manufactured Homes (SCE 2557), The Lighting Energy Efficiency PAR 38/30 CFL (LEEP 38/30 CFL) Program (SCE 2559),and Plugging the Consumer Electronics Gap (SCE 2563).

- Enable implementers (subcontractors) to upload program reports.
- Provide SCE's Program Managers the capability to download and approve implementer reports.
- Provide comprehensive reporting to support SCE's internal and CPUC reporting requirements."

The first stated purpose for the database, uploading subcontractors' reports, was problematic for 10 of the 25 reviewed programs, causing delays in recording program results.[3] Implementers' difficulties with the database ranged from vague difficulties ("bugs" and "technical problems") to compatibility issues with implementers' reporting formats, to issues suggesting inadequate utility staff resources (delays in adding new measures and updating information, and resulting from addressing joint-utility procedures). The many difficulties experienced with the database by program implementers reinforce the earlier recommendation that the utility provide adequate staff support for third-party programs.

- ***Recommendation:* Provide adequate staffing to allow the timely addition to the SMART database of measures added to programs after their start dates, to keep program data current, to assist implementers who have limited or incompatible database formats, and to address more promptly issues such as the need for joint-utility procedures**.
- ***Recommendation:* Provide more intensive training to implementation contractors in the use of the SMART database.**

PROGRAM OVERLAP

At least seven of the reviewed programs – Demand Response Emerging Technologies (SCE 2534), Lighting Energy Efficiency with Demand Response (SCE 2538), California Preschool Energy Efficiency Program (SCE 2544), Aggregation of Housing Agencies for Energy Retrofit and Management Projects (SCE 2547), Innovative Pool Pump Technology Delivers Radical Efficiency Gains (SCE2550), Modernization and New Construction Efficiency Enhancement Program for Schools (SCE 2558), and The Lighting Energy Efficiency PAR 38/30 CFL (LEEP 38/30 CFL) Program (SCE 2559) – reported difficulties arising from activities of other SCE programs that offered activities and incentives to the same market segments served by the evaluated programs. In one case, anticipated complementary incentives from another program

[3] Coin Operated Laundry Program (SCE 2532), Lighting Energy Efficiency with Demand Response (SCE 2538), Sustainable Energy Efficiency Development / One-2-Five Energy Program (SCE 2540), Designed for Comfort - Efficient Affordable Housing (SCE 2543), Lights for Learning CFL Fundraiser (SCE 2546), Southern California Home Performance Program (SCE 2548), NightBreeze® Energy Efficiency Program (SCE 2552), Campus Housing Energy Efficiency Program (SCE 2562), Plugging the Consumer Electronics Gap (SCE 2563), and Grocery Area Energy Network (SCE 2564).

were not available. In other cases, implementers were surprised to learn of the overlapping programs. Program overlap also created customer confusion.

Duplication and confusion are likely to be continuing problems for at least two of the 2001-2009 programs: the core California Preschools program, as described in the previous chapter, and SCE-TP-006 – Healthcare Energy Efficiency, which targets a market segment also served by business and commercial retrofit programs.

- ***Recommendation:*** **Review program PIPs to identify programs with activities serving overlapping market segments, and where feasible, redefine or eliminate duplicative programs and program elements**. Where program overlap cannot be eliminated, develop a plan for program coordination to avoid program duplication or fragmentation. To minimize or avoid multiple programs offering the same services to the same customers, the plan should establish communication procedures, including periodic meetings, for programs serving overlapping market segments. Include the market segment manager in these communications and meetings.

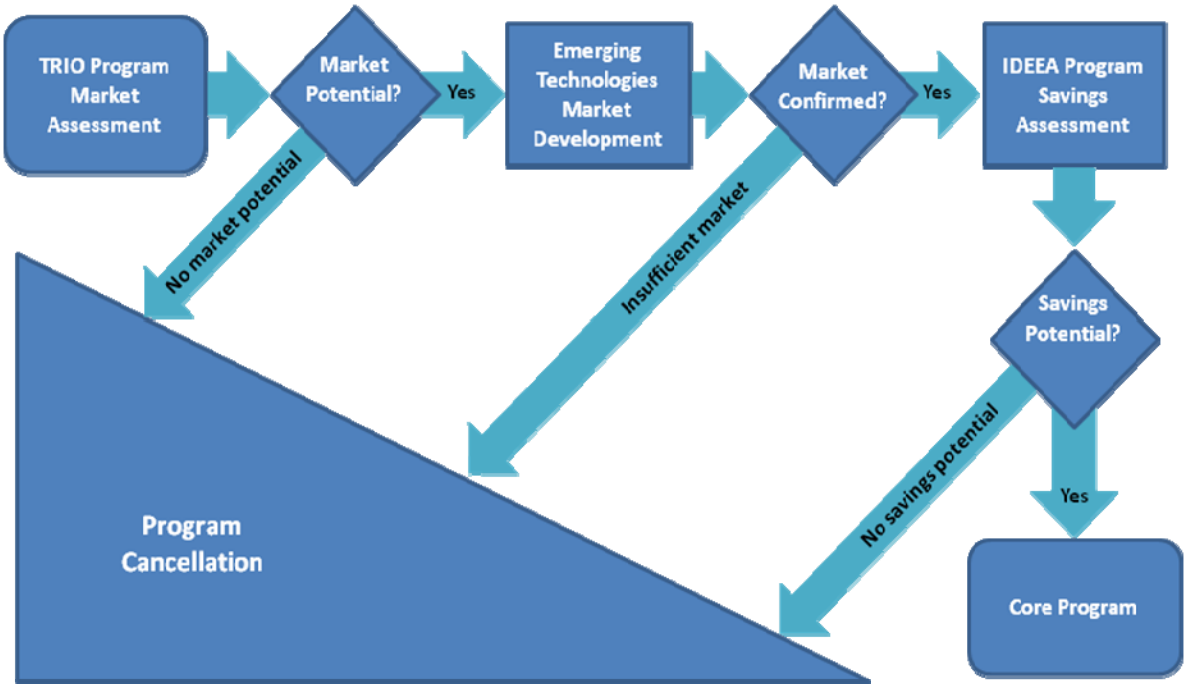
- ***Recommendation:*** **In the interest of full disclosure, include in program purchase orders explicit descriptions of other third-party and core utility programs with measures, target markets, activities, or incentives that overlap those of the program for which the purchase order is issued.**

DEFINING PROGRAM GOALS

Finally, there is an issue underlying all of the IDEEA and InDEE programs. Program implementation contractors frequently commented about a heavy focus by SCE on energy savings, rather than on issues arising from the marketing and delivery of programs. SCE's focus reflects its hope to improve the energy savings for each of the programs and to include program savings in its overall goals. However, the problems discussed earlier in this chapter limited the ability of the programs to generate expected savings. Because these programs are designed to test innovative ideas for program marketing and delivery, as well as for technology implementation, it is not surprising they sometimes fail to achieve their initial targets; it is probably more surprising that so many of them succeed as well as they do. Simply relying on the pass-fail metric of program savings does not necessarily provide the best measure of a program's potential.

The IDEEA and InDEE program structures did not have a clear stage-gate framework that allowed SCE staff and program implementers to assess whether a program had achieved sufficient demonstrated effectiveness, or whether additional market testing was needed or worthwhile. The advent of the Technology Resource Incubator Outreach program (TRIO) in 2010 provides an opportunity, along with the statewide Emerging Technologies program, to support a stage-gate framework. In particular, they define what activities need to be completed before a program is offered in IDEEA, then as shown in Figure 1, there are three stages for an IDEEA program to complete before consideration for inclusion in the core programs.

Figure 1: Stage Gate Framework for Program Progress



➡ ***Recommendation:*** **In coordination with the planned TRIO program and the statewide Emerging Technologies program, develop clear stage-gate criteria that measure whether untried program technologies: 1) require more market development and evaluation before a decision to terminate or mainstream is made; 2) does not have potential and should not be developed further; 3) has demonstrated potential but needs further testing to determine savings potential; or 4) has demonstrated potential and is ready for incorporation into core program offerings.**