Working Toward Market Transformation Through Residential and Non-Residential Standard Performance Contract (SPC) Programs – Lessons Learned on Delivery, Design, Participation, and Needs

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ABSTRACT

In 1998, the state's investor-owned energy utilities in conjunction with the California Public Utilities Commission (CPUC) and advised by the California Board for Energy Efficiency (CBEE), offered two Standard Performance Contract (SPC) programs – one for the Non-Residential sector and one for the Residential sector. Although these programs have been discussed within the State of California, information about the programs and the lessons learned can provide guidance for SPC programs being implemented in other areas of the country. This paper summarizes:

- design and major features of the two programs;
- steps for participants,
- deviations from the program plans, and
- results of the evaluation of impacts, program satisfaction, and recommendations.

The SPC programs were offered with several objectives in mind, including helping transform the market by enhancing the number and types of firms providing service in each of the sectors. The programs were designed to provide opportunities for energy efficiency service providers (EESPs) to submit a variety of efficiency services (lighting, HVAC, refrigeration, and other services) for residential and non-residential buildings. Reimbursement for participation was based on measured performance, or an alternative – deemed savings – was made available for participants in the residential program.

Because the programs were to be redesigned quickly, real-time evaluation was needed, and for both programs the authors conducted detailed interviews with participants and non-participants from a variety of types and sizes of firms. Responses on program design elements, forms and documentation, eligible measures, incentive levels, measurement and verification approaches, and participation decision drivers were analyzed. The evaluation results, recommendations, and implemented design changes are summarized.

Design of the PY98 Residential and Non-Residential SPC Programs

The California Board for Energy Efficiency (CBEE, or the Board) was established to advise the California Public Utilities Commission (CPUC, or the Commission) on the development of the next generation of energy efficiency efforts at a statewide level, and provided advice to the Commission on methods to transform the energy efficiency market in the State. Among the goals the CPUC established were: privatizing the delivery of energy

efficiency services, encouraging the growth and expansion of the energy service provider industry (ESP), and helping to reduce customer-related market barriers.

The initial goal was to provide fairly uniform programs statewide, under the guidance of a statewide administrator(s) to be selected via competitive processes. For the first year, however, it was not possible to contract quickly enough for new independent statewide central administrators, so the utilities served as interim administrators for the program. Ultimately, governmental hiring restrictions and other considerations led to the utilities being designated as the program administrators.

As a key part of its transformation efforts, the CPUC directed the utilities to develop programs designed to help transfer delivery of energy efficiency services from the utilities to the open market. A Nonresidential Standard Performance Contract Program, and a Residential Standard Performance Contract Program (SPC) were part of a portfolio designed to provide financial incentives for installing efficiency equipment in residential and non-residential buildings across the State in 1998.

The authors conducted an evaluation of these statewide programs. The Residential evaluation was managed by the Pacific Gas and Electric Company (PG&E), and Southern California Edison managed the Non-Residential evaluation, in both cases funded through the Public Goods Charge.

Program Planning Process

Program planning was conducted relatively quickly considering the size of the programs. The program design process involved input from a number of sources – including the utilities, the California Board for Energy Efficiency (CBEE)'s Technical Advisory Committee (TAC) and its subcommittees, consultants, and public comment.

Initial planning work focused on the commercial sector SPC. However, in recognition that of the fact that some of the public goods charge funds were coming from the residential sector, it was determined that some form of residential program should be developed. As a result, the residential program was planned more quickly and because of time limitations, the program largely copied the non-residential program. This introduced some program aspects that may not have been the best "fit" for the residential sector.

A great deal of input to program design throughout the planning process (through the TAC and other mechanisms) came from firms that had strong financial interests in the program – who had the time and financial incentive to do so. The planning process was compressed and intensive. Groups with less financial interest had a harder time committing volunteer time to contribute to the process, and consequently there was relatively less input by public interest groups, uninterested parties, and governmental and other agencies than was desired.[1] In fact, the interviews indicated that several program participants (and non-participants) stated that, although they would have liked to, they were not able to participate in the development of the program.

Design of the PY98 California SPC Programs

The elements of the programs, as originally offered for Program Year 1998 (PY98),

[1] However, significant efforts were spent trying to encourage customers, governmental and other agencies to participate.

are summarized in Table 1 below:

Table 1. Elements of the PY98 Non-Residential and Residential SPC Program Designs

	Non-Residential SPC	Residential SPC
Application deadline	Started 1/30/98 and closed 9/30/99. Funds were committed as of 10/98.	Submittals were accepted beginning February 13, 1998 and continued until funds were gone. All funds were committed at start and a lottery determined selections.
Measures Allowed	Variety: lighting, HVAC, refrigeration, motors, and a variety of others.	Variety: lighting, HVAC, thermostats, shell measures, water heater measures, refrigerators, horizontal washers, other.
Incentive Design	Standardized levels of incentives by end use. Lighting measures were reimbursed at 7.5 cents per kWh, HVAC and refrigerators at 21 cents/kWh, and other at 11 cents/kWh. The mix of measures proposed led to a 15 cents/kWh average for the program.	Direct install had standardized levels of incentives by short- vs. long-lived measures (under vs. over 10 years) and by single- vs. multi-family dwellings. Incentives were: short-lived at $0.18/kWh or $0.50/therm; long-lived at $0.35/kWh and $0.80/therm. Multifamily and mobile home values were $0.25/kWh, $0.80/therm, $0.44/kWh, and $1.00/therm, respectively. Incentives rates for retail projects were $0.11/kWh for CFLs, refrigerators, and washers and $0.40/therm for washers.
Eligibility	Customers could "sign up" directly, or could use engineering firms, ESCO, or other firms as the principal "energy efficiency service provider" (EESP) or sponsor. Commercial or industrial customers, single or multiple sites were eligible for funding	Energy efficiency service providers (EESPs) could submit a variety of efficiency services for the single- and multi-family sectors. Single family or multi-family projects were eligible, as were "retail" programs with sales targeted at single or multifamily purchasers.
Project types	Single or multiple projects or sites	Two types: direct install projects in which the sponsors would install measures in target households; and retail programs, in which sponsors work with manufacturers or retailers to provide efficient measures through retail outlets.
Administered by	Utility administrators – 3 service areas: PG&E, SCE, SDG&E	Utility administrators – 4 utility service areas: PG&E, SCE, SDG&E, SCG
Project Size Limits	Minimum of 200 kWh. The maximum incentives were set at: 1/3 maximum of total statewide funds ($37 million) for any one EESP; customers were limited to 15% statewide.	Maximum project size was 30% of the $1.2 million in funds available at each utility
Standard contract	Yes, with some variations by utility	Yes, with some variations by utility

Program Participation Steps

There were a number of basic steps involved in participating in the programs. While several were very similar, later stages of the program differed. These similarities and differences are summarized in Table 2.

Table 2. Planned Steps in the PY98 Residential And Non-Residential SPC Programs

<table>
<tr><td colspan="2">"Similar" Steps</td></tr>
<tr><td colspan="2">• Workshop/ Outreach: All utilities sent notices to interested parties, internal lists, participants in previous programs, and others. Workshops were held explaining the program, eligibility, and submittal requirements.
• Basic Project Application: Filing for fungi required completion of a Basic Project Application (BPA), which requested information on the proposed project. For non-residential projects, it required information on the submitting firm, the customer site, the types of measures to be installed, the kilowatt-hours projected to be saved, and the amount of incentive funding requested. The forms also required an authorization signature by the participating firm. For residential SPC applications, information was requested on the submitting firm, the measures and type of program (retail, direct install, etc.), the target residential market(s), projected kilowatt-hours saved and incentives requested.
• Review: The BPAs were reviewed to make sure all required forms and supplemental information was submitted. Applications were "qualified" and selected.
• Detailed Project Application (DPA): Each project was required to submit a DPA including more detailed information about the measures, sites, and a measurement and verification (M&V) plan.
• Review: The utility and/or its designee would review and check the DPA, and potentially work with the applicant to revise the proposal prior to approval.
• Standard Contract: The applicant and utility sign a standard performance contract.</td></tr>
<tr><td colspan="2">Steps that Differed</td></tr>
<tr><td>Non-Residential Program
• Inspection and Baseline Monitoring: A pre-installation inspection was required, as well as plans for baseline monitoring – prior to the installation of new measures.
• Installation: Installation of the measures by the applicant was the next stage.
• Ongoing Monitoring: A period of monitoring according to the specifications agreed in the M&V plan in the DPA was required, sufficient to support measurement of savings. Two years of monitoring was required.
• Payment: Payments were received in three portions over the two-year period. 40% was paid when measure installation was verified; 30% after monitoring for each of two 1-year performance periods.</td><td>Residential Program
• Installation: The selected applicants recruit participants and install measures.
• Inspection: After installation, the utility (or its agent) inspects a percentage of the installations.
• Monitoring: Projects could be compensated based on the basis of monitored performance, or on the basis of "deemed savings", which used a priori estimates of the savings for the measures / services implemented. Measured savings required some monitoring.
• Payment: Direct install projects were paid on the basis of 40% at the end of the first year, and 60% after M&V requirements were met. Retail projects were paid 30% when the goods were stocked, and 70% after sales were demonstrated.</td></tr>
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Deviations from Expectations in the First Year's Operation

Based on a review of the program documentation and the interviews, we found that, in practice, the programs operated somewhat differently than originally planned.

- ***Administration***: It had been planned that at some point, program administration duties would be carried out by one (or possibly more) independent statewide administrators. However, timing for the first year of the program could not accommodate the selection process necessary, so the utilities were asked to serve as interim administrators for the program.[2]
- ***Timing***: Many of the interim administrators undertook significant efforts to notify potential program applicants about the program, funding, and workshops. However, the outreach and timing was hurried, and many firms (particularly those not involved in the planning process) may not have heard about the program, or heard about it too late to participate. Some of the workshops were only two days or two weeks prior to the submittal deadline.
- ***Selection Process***: Both programs were popular. For the non-residential program, the available funding was committed quickly in some utility areas and the remaining applicants were placed on a wait list to see if additional program funds would be allocated or earlier projects would become unfunded. For the residential program, a more complex issue came up. Prior to the application deadline it became clear that more applications would be received than could be funded. It was announced that a lottery would be used to select among the submittals. A review of the applications shows that multiple applications with various combinations of lead and associated firms were submitted to increase the chances of selection.
- ***Application Review, Approval, and Timing***: The application review process took longer than anticipated, particularly at the DPA stage. Despite timelines for submittals and reviews, Agreement on M&V plans was a particular issue in the non-residential program. In some cases, submitting firms disagreed with the level of monitoring required; in other cases, the submitting firms were less familiar with M&V protocols and needed significant assistance designing sufficient plans. On the residential side, clarifications on requirements, on M&V, deemed savings values, and other modifications took several months.
- ***Project Timing and Duration***: Despite the "standard" aspects of the programs, the design and operation did not lead to "immediate" savings – getting projects verified, approved, and installed takes time. Regardless of the source of delays, the projects were slow to get through the various approval and contracting stages. On the non-residential side, a year after applications began to be accepted, only 7% of the programs had gotten as far as an initial payment, 20% were in some stage of installation, 30% had DPAs under review, and 40% had been cancelled, deemed ineligible, or died waiting for funds. As of September 1998, only one residential retail program was underway, and two direct install projects had retrofitted 70 dwelling. Further, many of the projects were "back-loaded", and it was expected to take 6-9 months for significant portions of the residential measures to be installed. Projects were also expected to last 1-1/2 to 2 years, including the M&V.

[2] As mentioned above, the utilities ultimately served as the program administrators on an on-going basis.

Participants, Measures Installed, and Types of Projects for PY98

The types of measures installed in the first rounds of funding are shown in Table 3 below.

Table 3. First Round Projects for the PY98 SPC Programs

	Non-Residential SPC	Residential SPC
Number of Projects Funded (first round)	Funding at the end of the first round (10/98) included 92 customers, 144 applications, and 605 sites.	14 for $12 million
Measures installed	Virtually all had lighting or were lighting only HVAC measures were installed in about 1/3 Projects also included refrigeration, chillers, and VSDs.	Lighting represented ½ of measures Showerheads and thermostats were 1/3 of measures Water heater, appliances, and infiltration were 1/6 of measures
Types of Projects	All were direct install	Of first round projects, 1/8 were retail, almost 90% were direct installation of measures
Lead actors	Of the non-customer leads, 2/3 were traditional ESCOs, ¼ by engineering firms and contractors, and the remainder were submitted by Retail ESCOs. In addition, customers could apply themselves; as an example, at SCE 40% of the applications were from customers.	¾ submitted by ESCOs, remainder non-profit, manufacturing, engineering firms

Results of the Detailed Evaluation Interviews

In conducting these evaluations, the authors interviewed a number of Board and utility staff, consultants, program participants, and non-participants. For the non-residential evaluation, we interviewed staff and consultants, participants (one round several months after program start, and again a year after the program started), and non-participants. The interviews included the variety of types of Energy Service Providers, including ESCOs, engineering firms, and others. A total of 53 interviews with participants and non-participants for the non-residential program were conducted. For the residential program, the authors also interviewed Board and utility staff, and samples of participating and non-participant firms. A total of 32 interviews with participants and non-participants were conducted for this program.

For both programs, large and small firms were interviewed, including ESCOs, contractors and engineering firms, and other types of eligible firms. These actors were asked for their comments about the program's design and administration, feedback on program elements, program strengths and weaknesses, and program suggestions. The strengths and weaknesses as reported by the interviewees are summarized in Table 4.

Table 4. Non-Residential and Residential SPC Program Strengths and Weaknesses

	Non-Residential SPC	Residential SPC
Program Strengths		
• Funding available, good incentives	X	X
• Led to significant customer interest and participation	X	
• M&V shorter than some types of past programs	X	
• Programs are designed with a customer focus	X	
• The program allowed retail programs, not just direct install		X
• Residential SPC allowed "deemed" savings approach as well as measured		X
• Programs get customers to look to other energy service providers than the utility for these types of services		X
• The program planning process was inclusive -- many could participate		X
• Utility staff were helpful		X
• Workshops and outreach helpful; utility staff helpful		X
• Couldn't identify any strengths	X	
Weaknesses		
• Paperwork and application forms were too onerous	X	X
• The program(s) were slow, time lags, leading to costs or lost savings for customers	X	
• Money ran out too quickly	X	
• The project was on the street too fast – rushed, short notice	X	X
• The M&V requirements are too detailed	X	X
• The program led to repeats of the "same old" programs / services and measures		X
• Lottery was poor method for selecting among applicants – merits should have been used		X
• Program didn't "fit" projects or the sector very well		X
• Administration is status quo – still the utilities in the lead	X	

Feedback on "Needs" of the Market and Suggested Program Changes

Interviews with a range of participants and non-participants provided feedback on the current program and suggestions for program changes. These are summarized below and in Table 5.

Non-Residential Program. The firms were asked for feedback about the kinds of obstacles that they face when trying to in increase the efficiency of equipment in the marketplace. Respondents noted that customers don't purchase energy efficiency – efficiency is more rightly considered a financing method. The timing aspects of the program also had particular impacts on the customers – the rushed program delivery, the hurry up and wait, and delays led to reduced interest on the part of customers and led some to drop out. Program complexity is also a barrier to participation, including bureaucracy, paperwork, measurement, and other requirements.

Table 5. Perceived Market or Program "Needs" to Increase Energy Efficiency

	Non-Residential	Residential
Financial	Project economics need to increase paybacks to ROIs that will compete with other investment opportunities for the businesses.	Specifically mentioned were rebates, tax rebates, low / no interest loans or delayed payments. It was suggested that fairly large rebates might be needed to get customers to move toward much more efficient equipment.
Marketing	Getting to the right decision-maker or set of decision makers is important – for the program or for the service providers – in order to get buy in and follow through on projects.	Contractors feel the provision of qualified customer leads to firms would be helpful; another suggested that cooperative advertising budgets (potentially involving the Board, contractors, and manufacturers) would lead to a much bigger bang and a more integrated outreach strategy;
Education	Information is valued – including reliable (third party?) information about new measures, performance, and reliability. In addition, education helping to allay concerns about marketplace upheaval and promises of future low rates with deregulation was perceived as potentially helpful.	Specifically general education, information packets, information about new energy efficient equipment was suggested. Others suggested that information was useless if customers didn't have something direct to act on.
Program Issues	Relatively speedy (and predictable) timing of programs is very important, as well as low hassle, and minimal bureaucracy and paperwork.	Simple programs that are suited to smaller firms as well are desirable.

Project economics was cited as a primary barrier, and providing incentives to improve the payback to the ROI levels available from other business investment opportunities is needed to help get businesses interested in getting projects going. Efficiency measures are also "invisible", and firms often ignore facility maintenance and upgrading (especially if it isn't "broken") unless the payback is very strong. Addressing the decision-maker was noted a crucial to getting buy-in; several points of (tailored) intervention at multiple levels of management in the participant firm reportedly helps get measures installed. Information is valued and high quality information on efficiency, saving potential, and technologies can be useful in reducing barriers. One firm also suggested that demonstration projects or "insurance" products of some kind might be helpful in gaining greater acceptance of new technologies. Finally, turmoil in the industry, including recent "propaganda about lower rates" was cited as a barrier to additional efficiency in the market.

Residential Program. The authors asked a series of questions to solicit information about the key "needs and barriers" that residential customers have related to purchases of more efficient equipment. Also, early in each interview, respondents were asked what types of services or incentives the CBEE could provide or facilitate that would enable their company's

ability to sell more energy efficient products to residential customers. Reflecting the popularity of earlier programs sponsored by the utilities, the most common response to this was the suggestion of a rebate program. Many interviewees stressed the importance of keeping any program as simple and prescriptive in nature as possible. Broadly speaking, suggested program elements centered on the following three items:[3] financial incentives, marketing, and education.

Feedback and Suggestions for Changes to Program Elements:

Both the non-residential and residential program participants had especially strong feelings about several program elements. M&V elicited some of the strongest sentiments. The residential sector noted that uncertainties and complexity of the M&V led them to avoid some types of measures (controls and day lighting measures were specifically noted). Non-residential EESPs noted that the M&V did not encourage creativity in measures because of uncertainties of recovering costs. Feedback on other key issues is summarized in Table 6.

On the residential side, a few interviewees noted programs that had worked well in the past, or the evaluation research uncovered interesting programs that might be appropriate for piggybacking or integration with future CBEE programs in the residential sector. Some of these options could also be adapted or used for programs outside the State of California.

- EPA Energy Star: an appliance labeling and contractor listing program with good outreach, information, and awareness. CBEE could focus customer awareness of the Energy Star label on specific efforts and program elements that the CBEE is endeavoring to support.
- PG&E / EGIA Program (contractor certification and referral): Many of the contractors and other interviewees referred to this former program as a model they liked, including lead generation and distribution (via 3rd party); third party certification; financing; and rebates.
- Energy Efficient Mortgage Program (long-term financing for energy efficiency): The nationwide Energy Efficient Mortgage Program from HUD encourages investment in new energy efficiency technology. This program provides strong opportunities to transform markets, since the program could work through fairly centralized groups (lenders) to affect the millions of homes that turn over every year in California. Many of the larger lenders are reportedly already in the program, including Fannie Mae.
- Performance 4 Program (certification for older homes): Another suggested program is a pilot certification program for older homes. Those having particular sets of efficiency retrofits are "certified", and appraisers are recognizing the certification. Third party certification is identified as a key component of the program.

[3] Additional elements mentioned by individual firms, although less consistently, included energy audits, clearinghouses for certification, and assistance locating and selecting an independent laboratory for testing of new measures.

Table 6. Summary of Findings

	Non-residential	Residential
Impacts	Relatively low perceived estimates of market impacts from the program. The overall program's budget was too small to affect the market, and too few were implemented to lead to measurable changes during the evaluation.	For a number of reasons, the projects had only led to a few retrofits even by September 1998. Only a small percentage of the firms that were notified about the program applied for the available project funds.
Program Design	M&V considered too expensive and out of proportion by many. Perception existed that a simpler program would have delivered more efficiency and savings.	"Fit" for retail programs under the SPC design was questioned. Revisions would be appropriate. Moving the market may require "moving" the contractors, who play a crucial role in delivery of service. The variety of sizes and skills of firms imply they have very different needs.
Equity	Program perceived to be designed to benefit ESCOs and not other potential EESP types or service deliverers. Although some noted the program reflected a higher level for the industry, others felt the program didn't meet the needs of the newer, evolving service industry.[4] Smaller firms generally felt the programs (and administrative requirements) were more tailored for large efficiency service delivery firms.	Smaller firms were concerned about their lack of notice about the program – particularly those not included in the program design "loop". Notice is complicated because there are no "umbrella" organizations for notice or organization. Smaller firms generally felt the programs (and administrative requirements) were more tailored for large efficiency service delivery firms.
Delivery	Delays in paperwork and approval costs difficulties – few projects were underway a year after submittal. Timing was a big issue. Some recommended "express" rebate programs or lower paperwork / M&V requirements. Negative customer impacts were cited. Residential and non-residential comments were similar.	
Future participa -tion	Most plan to participate, but wanted to see changes for PY99	Not specifically asked.
Suggest ed program changes	Suggested changes included: reduction in the cap, modified/ enhanced BPA requirements[5], simpler M&V – especially simplifications for lighting M&V requirements, faster paperwork, among other changes	Contractors are interested in financial incentives, marketing assistance (and a "fair" referrals system), and customer education. There was strong sentiment to simplify the program, reduce paperwork and risk. Feedback was fairly positive for contractor certification and mixed for training. However, they added that certification must be strongly marketed to lead customer to request certified firms to make it worth their while.

[4] Particular elements causing problems included: paperwork requirements, M&V, project size thresholds, and other features.

[5] The changes suggested included a site visit in conjunction with the BPA, and additional computations to assure that the BPA was not just a "placeholder" for funds for projects that were not well specified.

Summary of SPC Program Changes from PY98 to PY99 and Beyond

The Non-residential program was "tweaked" for PY99; more wholesale changes were made to the residential program.

Non-Residential Program. Feedback on initial trial balloon changes to the non-residential program is summarized below. Respondents noted the following items as important changes that were being considered for PY99.

- *Lower Incentives*: Proposals to lower the incentives were viewed negatively, but none thought the reductions would "kill" deals. However, it was mentioned that reducing incentives might lead to even less innovation in measures proposed.
- *Simplifying M&V*: Most reacted very positively to the possibility of simplified M&V requirements – particularly for lighting.
- *Lowering the cap*: There was strong support for reducing the maximum project size, which was expected to increase project number and variety.
- *Getting paperwork flowing more quickly*: There were positive reactions to initiatives to streamline paperwork, with the caveat "if it works…"
- *Increasing BPA requirements*: Adding a site visit requirement to the BPA was generally viewed as a positive change. It was felt this would make the BPA more substantial and make sure they weren't submitted as "placeholders" for money.
- *Wattage changes*: Lowering baseline wattages for lighting was viewed as a negative change for the program, because it meant it would reduce the calculated savings (and incentives) from projects.

In PY99, the Non-Residential SPC Program was modified in the following ways: pricing was reduced to $0.05/kWh for lighting; $0.165 for HVAC; and $0.08 for other end uses. The Basic Project Application form was modified to include a site survey or audit, a preliminary M&V plan, and identification of the "ultimate" ownership (i.e. parent) of the EESP and customer. Submittal times for the DPAs were changed to 45 days after BPA approval for lighting measures, and 100 days for non-lighting programs. Separate large and small programs were established. Minimum project sizes were set at 200,000 kWh or 20,000 therms per year in annual savings for the large program, and 20,000 kWh or 2,000 therms for the small program. New funding caps were also established. For the large program, they were $400,000 per customer site within each utility territory, $1.5 million statewide for corporate parents and government parents (e.g. state and federal agencies), and $6.0 million for all State government and Federal government. For the small program, caps are $40,000.

As of press time, program changes for PY 2000 have not been officially rolled out. Items under consideration include: simplification of the M&V (especially for lighting); combined project application forms (with the BPA made optional), reduction in the minimum eligible project size, flexibility in the contract terms, introduction of an installation release to allow construction prior to a signed agreement, elimination of the $250 application fee (the $100 application fee for the small program had been waived), and elimination of the security deposit (2.5% of incentives) for projects smaller than $100,000, and for all projects in the small program. The payment structure for the small program was modified from 40% at installation and 60% after first year performance, to 60% / 40%.

Residential SPC Program. There were significant differences between the PY98 and PY99 Residential SPC programs, as delivered. The program evolved into a contractor certification and training program. Overwhelmingly, a program similar to PG&E/EGIA's leads generation, certification, financing, and rebate program was the preference of the contractors and other firms contacted. The program was redesigned to promote whole-system approaches to energy efficiency, to offer incentives for measures, providing training for contractors, and customer incentives. The key elements of the updated single-family PY99 program included: customer vouchers for payment; a set of relatively simple and consistent measure specific incentives (HVAC diagnostics and tune-up, and duct-testing and sealing); linking measure-specific incentive eligibility to diagnostic requirements; training requirements for contractor eligibility; and listing/directories of eligible contractors. Note that the multifamily component of the residential contractor program is different, and more closely mirrors the Small Business SPC program. The retail component was eliminated, and a separate Multi-family program was established.

For PY2000, several modifications are being considered, but are not yet final. These include increased incentive levels for some measures and requirements for Energy Star® certification for some or additional fixtures. Changes under consideration for the PY2000 multi-family program include increased incentive levels; accelerated payment schedule (70% at installation and 30% after a year instead of 50%/50%); elimination of the application fee and limited installation deposit; simplified application procedures with use of calculated savings; reductions in the incentive limits and other changes.

Summary

The Standard Performance Contract Programs offered in California provided valuable experience in successful and less successful features. Although these programs have been discussed within the State of California, feedback on these programs and the organizational, program design/operation, and targeting lessons learned can provide guidance for SPC programs being considered or implemented elsewhere. Due to a combination of factors, the programs were not as fast to deliver savings into the field as might have been expected *a priori*. Outreach and up-front contact with potentially eligible firms probably should not be rushed, or else the program may not be effective at enhancing the types of participants providing service. Participants and non-participants alike indicated that residential and non-residential EESPs and customers have different needs, as do large vs. small EESPs. Some degree of tailoring or flexibility in the program(s) seems essential to meet these needs. If the SPC program is meant to "grow" the number and types of firms providing services, the program may need special features designed to recognize the different needs and relative sophistication of the EESPs. This might include "small" versions, simpler M&V options (for a short term), or other features. Finally, the clear differences between the residential and nonresidential "needs" indicate that program designs will probably need to be more tailored to these sectors than the first year SPCs offered. Revisions from the PY98 programs addressed some of these issues, and may provide additional lessons for programs being considered outside the state.

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