CALIFORNIA STATEWIDE CODES AND STANDARDS COMPLIANCE ENHANCEMENT SUBPROGRAM 2010-2012 PILOT PROCESS EVALUATION

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The Cadmus Group, Inc.

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1. Executive Summary

The Compliance Enhancement Subprogram (CEP) is part of the California investor owned utilities' Codes and Standards (C&S) Program. The California investor owned utilities (IOUs) are Southern California Edison Company (SCE), Pacific Gas & Electric (PG&E), Southern California Gas Company (SCG), and San Diego Gas and Electric (SDG&E).

As a subcontractor to DNV KEMA (under a contract with the California Public Utilities Commission [CPUC]), Cadmus originally intended to evaluate the CEP. However, based on the findings from the evaluability assessment (see Appendix), it was determined that Cadmus would do a limited process evaluation of the implementation of the primary component of the CEP, the Best Practices Pilot (Pilot).

Implementation of the Pilot

The IOU's goal for the Pilot is to improve compliance with the California energy code, Title 24, Part 6, Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24). Thus, the IOUs implemented the Pilot to identify how they can help building departments improve enforcement of Title 24 in their jurisdictions and ultimately increase code compliance.

The consultant implementing the Pilot on behalf of the California IOUs performed a gap analysis at seven participating building departments to identify their best practices, gaps in energy-code enforcement, and barriers to improving compliance with Title 24. Based on the findings, the consultant identified a set of tools and resources that could potentially be applicable to both participating and other building departments to increase enforcement of the energy code in their jurisdictions. To address each participating building department's specific challenges, the consultant proposed one of these tools or resources to each and then worked with the building department to implement it. The types of tools and resources implemented included a public relations effort, trainings, and computer based tools.[1]

Upon completion of the Pilot, the consultant planned to analyze the effectiveness of the tools and resources provided and then combine those results with the Pilot's other findings in a report of best practices (Report). Completing the Report is the last activity in the Pilot funded under the 2010-2012 code cycle. However, the Pilot staff intends to disseminate the Report to all jurisdictions in California during the next program cycle.[2]

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[1]   As noted under Interviews in Methodology, the IOU staff and consultant did not want to share details regarding the tools and resources provided.

[2]   As noted in the Addendum, after Cadmus conducted this study, the IOUs decided to make the tools and resources developed during the Pilot available to all jurisdictions in California instead of disseminating the Report.

Background

Cadmus began the evaluation process with an evaluability assessment to identify whether necessary data were available for a full evaluation. Following this assessment, we developed an evaluation plan to guide the evaluation process.

During our evaluability assessment we determined that we could not implement a full process evaluation of the CEP because there was insufficient documentation available and the nature of the program as implemented was significantly different than originally planned. The only description of the CEP was in the Southern California Edison PY 2010–2012 Program Implementation Plan (PIP),[3] which describes the CEP as having these elements:

- A measure-based component consisting of trainings to support compliance with codes and standards not adopted as a result of the C&S Program;
- A component to support building departments in improving their operations and compliance processes through best practices (the Pilot);
- Role-based trainings that support compliance;
- A compliance improvement advisory group (CIAG).

Also, the PIP indicated the CEP team would work with the California Association of Building Energy Consultants (CABEC) to increase the stringency of the Title 24 Certified Energy Analyst test.

However, during our primary data collection Cadmus' found:

1. The measure-based activities and role-based trainings originally under the CEP subprogram had overlapped with and were subsequently moved to the Extension of Advocacy (EOA), another C&S subprogram.
2. SCE, SCG, and SDG&E categorize the CIAG and the work with the CABEC under the CEP; however, PG&E categorizes these efforts under the EOA activities.[4]

Although, it was determined, based on these findings, that a full evaluation could not be implemented, it was also determined that the Pilot is the primary component of the CEP. Through discussion with the CPUC evaluation management team, it was decided that because the Pilot had the potential for generating significant energy savings, Cadmus would document the Pilot activities and conduct a limited process evaluation. (The evaluation was limited both by the lack of documentation and by the fact that the evaluation activities had to be conducted before the end of the Pilot and, therefore, the results would be based on only the initial stages of the Pilot.)

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[3]   Southern California Edison, Program Implementation Plan, 2010 – 2012 Energy Efficiency Plans. January 2011.

[4]   Interviews with the Compliance Enhancement Subprogram staff, and staff and stakeholder interviews for the Extension of Advocacy process evaluations for the 2010- 2012 California Statewide Codes and Standards Program Process Evaluation.

Key Findings

Cadmus' limited process evaluation of the Pilot resulted in these key findings.

- The IOUs and the consultant effectively designed the Pilot to meet its goals and objectives. The consultant had identified the barriers to improving code compliance at the participating building departments and then provided tools and resources to help increase compliance with the energy code in those jurisdictions.

- There is not an adequate logic model for the Pilot. Although the CEP logic model includes an activity representing the Pilot, it does not accurately represent the Pilot's role in the CEP. Furthermore, the logic model does not explain how the Pilot will ultimately increase compliance with the energy code.

- It will be very difficult to quantitatively measure the effectiveness of the Pilot on improving the efficiency of enforcement activities or on improving code compliance because baselines for these activities do not exist and the building departments do not have the resources to track the data. However, many of the staff members interviewed at participating building departments said they could assess the Pilot's effects qualitatively, but none were doing so.

- The early phases of the Pilot's implementation took longer than planned and, as a result, the implementation consultant had less time in later phases to gather data and assess the effects of the Pilot activities. Due to the schedule that required the evaluation to be conducted before the end of the Pilot, Cadmus was unable to evaluate the effects of these delays on the success of the Pilot.

- For building departments that want to participate in the Pilot, the main challenge is that their staffs do not have sufficient time to support the Pilot's implementation. At the participating building departments, a majority of interviewees commented that they were not able to devote as much time as they would have liked to the Pilot process.

- The implementation consultant had the right combination of technical knowledge, project management, and interpersonal skills to deliver the Pilot effectively to the participating building departments. Several of the interviewees with the building departments said they enjoyed working with the consultant's staff, as that staff had shown the right level of persistence combined with a willingness to accommodate the departments' specific needs.

- One of the most important ways the Pilot may improve energy code enforcement is to help code officials understand the importance of the code in protecting the public interest. As one interviewee said, participating in the Pilot had helped the interviewee's staff members understand the role of the energy code in the overall public good, and this would impact how they enforce the energy code.

- The differences between jurisdictions and building departments may make it difficult to apply directly the Pilot's best practices, tools, and resources to other building departments without some customization.[5]

Recommendations

If the Pilot is continued, Cadmus recommends the following actions to improve the process and effectiveness:

- Develop a separate theory and logic model for the Pilot, clearly indicating the relationship between the activities and an increase in compliance with the energy code.

- Identify profiles of jurisdictions that share similar gaps in their enforcement processes and develop stock tools and resources appropriate for those groups of jurisdictions.

- Implement a process to document interim changes in the Pilot, as this will facilitate future evaluations.

- To identify methods for measuring the effectiveness of Pilot activities, investigate whether there are components of the enforcement process for which a baseline could be established through a survey or simple tracking system.

- Provide tools to the participating building departments for tracking the appropriate performance indicators.

- Require participating building departments to allow sharing of best practices and lessons learned from their departments anonymously in all relevant reports or other materials.

- An update of this evaluation should be conducted in 2014 after the participating jurisdictions have had the tools and resources in place long enough to have an effect on code enforcement and compliance.

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[5] As noted in the Addendum, since the Pilot's completion, several tools developed through the Pilot have been made available to jurisdictions without additional customization.

2. Introduction

California's investor-owned utilities (IOUs) co-manage and co-fund the Codes and Standards (C&S) Program, of which the Compliance Enhancement Subprogram (CEP) is a part. The California IOUs are these: Southern California Edison Company (SCE), Pacific Gas & Electric (PG&E), Southern California Gas Company (SCG), and San Diego Gas and Electric (SDG&E).

As a subcontractor to DNV KEMA (under a contract with the California Public Utilities Commission, [CPUC]), Cadmus originally intended to evaluate the CEP. However, based on the findings from the evaluability assessment[6], it was determined that Cadmus would do a limited process evaluation of the implementation of the primary component of the CEP, the Best Practices Pilot (Pilot).

Objectives for the Pilot and the Evaluation

The IOU's goal for the Pilot is to improve compliance with the California energy code, Title 24, Part 6, Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24).

The objectives for Cadmus' limited process evaluation of the Pilot were these:

- Document the Pilot's delivery and implementation with participating building departments.
- Perform an early assessment of the effectiveness of the Best Practices Pilot activities in supporting the participating building departments' ability to improve their code enforcement processes and increase code compliance.
- Document how the Pilot addressed compliance with code requirements to upgrade HVAC systems in existing buildings.

Evaluation Methodology

For this limited evaluation of the Pilot, Cadmus conducted interviews with three types of stakeholders and reviewed program-related materials.

Interviews

Cadmus interviewed members of the Pilot's steering committee, which consists of members of the CEP's co-management team, the head of SCE's codes and standards effort, and a representative of the Local Government Partnership (LGP). We also interviewed the implementation consultant's project manager and staff members from the participating building departments.

The evaluation team developed interview guides for each of the interviewee groups, interviewing the steering committee members and consultant first to gain a better understanding of the Pilot. Using the

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[6]   Compliance Enhancement Subprogram Evaluability Assessment, from Cadmus to CPUC, May, 2012, available through CPUC Basecamp.

information gathered in these interviews, Cadmus developed interview guides for the participating building departments.

The Interview guides for the steering committee members and the consultant focused on understanding the Pilot's activities, management, metrics, and participants. Interviews with staff members at the building departments focused on:

- Understanding their staffs' experiences with the Pilot's delivery;
- The strengths of its implementation;
- Areas for improvement; and
- Whether the Pilot identified and addressed gaps in enforcing the energy code and improving compliance in their jurisdictions.

Working from a list provided by the IOUs, Cadmus scheduled interviews with key contacts from six of the seven participating building departments. (We attempted to contact the designated staff person from the remaining building department numerous times over several weeks, by phone and e-mail, but did not receive a response.) During our interviews with the key contacts, we asked if additional staff should be included in the interview process. Key contacts at three of the building departments provided names, and we completed interviews with two additional staff members.

Table 1 summarizes the interviews Cadmus conducted for the limited process evaluation of the Pilot.

Table 1: Interview Summary

Interview Group	Interviews Conducted	Interviewees
Steering Committee	3	Staff members from each of the IOUs who were responsible for managing the Pilot
Implementation Consultant	1	The project manager for the consultant who implemented the Pilot at the participating building departments
Participating Building Departments	6	Staff at six out of seven of the participating building departments were interviewed
Number of Staff at Participating Building Departments	8	Interviewees included six primary contacts at the participating building departments, and one additional staff person at two of the building departments

Steering Committee and Consultant Interviews

Cadmus completed interviews with the three primary members of the steering committee and with the implementation consultant's project manager. The steering committee members and the consultant shared only limited information on how they were planning to assess the Pilot and what tools and resources they provided, explaining they needed to maintain the confidentiality of the participating

building departments. Also, these stakeholders chose not to share information about aspects of the Pilot that might change.

Participating Building Department Staff Interviews

As previously mentioned, Cadmus completed interviews with staff members at six of the seven participating building departments. We began the interview with two staff members from the sixth building department; however, one individual had to leave before we completed the interview and the other person provided only limited information. Consequently, although we completed interviews with staff at six building departments, the sample size for the interviewees ranges from six to eight, depending on the question asked.

Materials Review

To understand the Pilot goals and processes, Cadmus reviewed the following materials:

- Southern California Edison, Program Implementation Plan, 2010–2012 Energy Efficiency Plans. January 2011 (PIP).

- Southern California Edison, Compliance Enhancement Program Logic Model, Program Implementation Plan, 2010–2012 Energy Efficiency Plans. January 2011 (PIP)

- Codes and Standards PY2013–2014 Compliance Improvement Subprogram Logic Model

- Notes from the Extension of Advocacy process evaluation interviews with Jill Marver of PG&E, Javier Mariscal of SCE, and Misti Bruceri of Misti Bruceri and Associates, LLC, for 2010- 2012 California Statewide Codes and Standards Program Process Evaluation Final Report, May 28, 2012 CALMAC Study ID SCE0319.01.

- "How We're Approaching Compliance Improvement" slide deck by Jill Marver of PG&E.

- CPUC decision 09-09-047, dated 10/1/2009, page 207. Decision approving 2010 to 2012 Energy Efficiency Portfolios and Budgets.

- "Title 24 Best Practices Jurisdiction Selection Criteria Matrix" provided by the IOUs.

- Building Department interview notes provided by Architectural Energy Corporation.

- Example of the Program information packet distributed to participating building departments, provided by IOUs.

- Example of pre-site visit packet that was distributed to participating building departments, provided by IOUs.

- Work Progress Narratives for Title 24 Best Practices Memorandums from Consultant to IOUs for: January1, 2011–April 30, 2011; May 1, 2011–June 30, 2011; July 1, 2011–September 30, 2011; October 1, 2011–November 30, 2011; and January 1, 2012–February 29, 2012.

- Notes from Title 24 Scoping Study interviews conducted between August 2008 and February 2009, provided by the IOUs.

- "Best Practices and Gaps, All Pilot Cities" report by Architectural Energy Corporation, prepared on May 14, 2012.

- October 11, 2012 memo titled "Response to Data Request Number 8: C&S Program Evaluation PY 2010–2012," provided by Paula Gruendling of the CPUC.

- April 3, 2012 memo titled "Response to Data Request Number 8: C&S Program Evaluation PY 2010–2012," provided by Ayat Osman of the CPUC.

- List of building departments that chose not to participate in the Pilot, provided by the IOUs.

Assessing Pilot Effectiveness

As noted above, the schedule for Cadmus' evaluation of the Pilot resulted in the study to be completed too early to assess the effectiveness of the implemented tools and resources at improving code enforcement processes and increasing code compliance at the various participating building departments. Thus, we used the following evaluation approach, based on both the information from our interviews with building department staff and our industry experience:

1. We hypothesized how each type of tool or resource provided could affect code enforcement and compliance.
2. We then assessed whether the tools or resources provided would address the gaps and barriers to code enforcement and compliance indicated by the building department staff.

3. Description of Best Practices Pilot

The PIP did not adequately describe the Best Practices Pilot as it was implemented. Therefore, Cadmus' first evaluation objective was to describe the Pilot's design and implementation. In this chapter, we describe each facet of the Pilot and the findings related to its management and strategies.

Pilot Goals, Objectives and Design

The IOU's goal for the Pilot is to increase the number of customers who are complying with the energy code. Several steering committee members explained that the Pilot design is based on the premise that if the IOUs can help building departments work more efficiently, this will result in more resources being available for improving code enforcement. Further, the design assumed that once building departments improve code enforcement, the public's compliance with the energy code will increase. In the words of one steering committee member, "The more a building department is prepared to enforce (codes) and can share information with the building industry, the more buildings will be built in compliance."

The steering committee and consultant said that the Pilot is designed to achieve its objectives by:

- Identifying best practices for energy code enforcement currently being implemented at participating building departments;
- Sharing those practices with other building departments in the state;
- Identifying the gaps in energy code enforcement most common to building departments; and
- Providing effective tools and strategies to address them.

Pilot Timeline

The Pilot started in January 2011 and, according to the Work Progress Narratives,[7] the key activities were these: (1) Pilot planning and recruitment was ongoing through fall of 2011; (2) gap analyses were performed in fall 2011; and (3) assessment of the gap analysis and the identification of potential tools and resources occurred in early 2012.

Based on the interviews with the building staff, Cadmus determined that: (1) the tools and resources were implemented at the individual jurisdictions through fall of 2012; and (2) the Pilot was scheduled to be completed by the consultant at the end of December 2012, with the delivery of the Report.

Differences between the Pilot's Description and Implementation

The PIP describes the Pilot as the component of the CEP that was implemented to "… identify opportunities to streamline enforcement practices and improve consistency across jurisdictions."

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[7] Work Progress Narratives for Title 24 Best Practices Memorandums from Consultant to IOUs for: January 1, 2011–April 30, 2011; May 1, 2011–June 30, 2011; July 1, 2011–September 30, 2011; October 1, 2011–November 30, 2011; and January 1, 2012–February 29, 2012.

Although this is an accurate description of the purpose of the Pilot, some of the elements described in the PIP do not apply. Table 2 lists the most pertinent differences between the PIP's description and the Pilot as it was implemented.

Table 2: Differences Between the PIP Description and Pilot's Implementation

The PIP States That:	Best Practices Pilot as Implemented
Pilot staff will implement a comprehensive study to determine building departments' current level of code compliance.	The Pilot does not include a comprehensive study on building departments' current level of compliance.
The PIP denotes that the CEP /Best Practices Pilot will claim energy savings.	The IOUs did not claim savings for the CEP Subprogram/Best Practices Pilot. One steering committee member said that one reason the savings were not measured was because there was no compliance baseline to serve as a point of comparison for the participating jurisdictions.
The Pilot staff will distribute this report to 100% of local governments.	The last step in the Best Practices Pilot, under the 2010-2012 codes cycle, is the completion of the Best Practices Report. The intention is to distribute the report and continue the efforts of the Pilot into the 2013- 2014 cycle. However, at the time of Cadmus' evaluation, allocation of the funding for the 2013 -2014 cycle was not complete and there was no formal plan for the distribution of the Report.

Compliance Improvement Subprogram

Through interviews, Cadmus learned that during 2012, the IOUs moved several of the codes and standards subprograms (including the CEP) under the Compliance Improvement Subprogram. Thus, the codes and standards 2013-2014 logic models reflect this change.

Pilot Management

As noted earlier, the Pilot is a part of the CEP, which is co-managed and co-funded by the four IOUs. For most of the 2010–2012 cycle, the co-management team included staff from PG&E, SCE, and SoCalGas (representing both SoCalGas and SDG&E). Starting in late 2012, SDG&E added a staff member as well.

The Pilot is managed by a steering committee. The steering committee consists of the members of the co-management team for the CEP, the head of codes and standards for SCE, and a representative of the Local Government Partnership (LGP). Although all members of the steering committee participated in the Pilot's conception and were kept informed of the Pilot's status, the members of the CEP co-management team performed the ongoing oversight. The member of the steering committee from SCE with the CEP subprogram co-management group served as the administrative lead, managing the contract of the outside consultant (Architectural Energy Corporation) and administering the co-funding

agreement. Architectural Energy Corporation implemented the Pilot and reported to the steering committee.

All of the steering committee members and the consultant said that the Pilot's management was effective, and none of them had any suggestions for improvement.

Pilot Oversight

The consultant was responsible for delivering the Pilot to the participating building departments; keeping the steering committee informed of the Pilot's progress; and delivering the final Report. The consultant worked with the steering committee members to determine the strategies and processes for delivering the Pilot and recruiting participants. The steering committee provided oversight, direction, and support when needed.

Steering committee members noted that they received timely status updates from the consultant. The steering committee and the consultant held biweekly conference calls throughout the Pilot, and the consultant provided periodic work progress narratives. Interim communication was through e-mail and phone calls.

The consultant said that this oversight arrangement was effective and that having everyone's participation in the calls allowed the group to make decisions in a timely manner. The consultant's staff members also noted that the steering committee members "[were] involved, enthusiastic, responsive, and gave good feedback."

Pilot Delivery

Recruiting Building Departments

The steering committee and the consultant planned to implement the Pilot in building departments in approximately 12 jurisdictions. Ultimately, seven building departments were successfully recruited (six of which completed Cadmus' interviews). The steering committee members worked with the consultant to develop parameters for identifying a desired mix of jurisdictions, reflected in the "Title 24 Best Practices Jurisdiction Selection Criteria Matrix". The criteria included:

- *Jurisdiction culture*: mix of late adopters, neutral, or progressive, based on building programs within their planning and permitting departments.
- *Size:* mix of small, medium, and large—based on population—which was assumed to be indicative of potential number of building permits.
- *Likelihood to participate:* likely to participate based on their relationship with either staff at the IOUs or the LGP.

Best Practices and Gap Analysis

At each participating building department, the consultant's staff members conducted a comprehensive needs assessment and gap analysis, documenting best practices and identifying gaps in the enforcement processes. The consultant's staff interviewed building department staff (managers, permit counter staff, plan check staff, and field staff); reviewed permitting, inspection, and tracking processes; and accompanied department staff on field visits. The consultant's findings were summarized in a report titled "Best Practices and Gaps, All Pilot Cities," which was distributed to all of the participating building departments. (Cadmus addresses the findings on the consultant's work with the participating building departments in the section Delivery to Participating Building Departments.)

Tools and Resource Development and Implementation

Based on the findings from the gap analysis, the consultant identified common areas that presented challenges to code enforcement across multiple jurisdictions. The consultant then researched the existence and availability of tools that the participating building departments could apply and, when no tools were available, the consultant developed ideas for tools to address the challenges.

Working with the steering committee, the consultant identified tools and resources they could develop that would be applicable to both the participating and other building departments. The consultant then proposed tools and/or resource to each of the participating jurisdictions, based on their specific needs, and then worked with the departments' staff members to implement it.[8]

Addressing Code for Installing HVAC Systems

The steering committee and consultant reported that the Pilot specifically addresses improving code enforcement for the upgrading of HVAC systems. However, one steering committee member said that because there is also a statewide committee specifically looking at the code compliance challenges associated with upgrading HVAC systems, the steering committee had not wanted the Pilot to duplicate those efforts.

At five of the six participating building departments, the staff members interviewed said that the Pilot had addressed the issue of upgrading HVAC systems with their department in some way. One interviewee reported that it was included in the computer-based tool provided by the consultant. Two interviewees said that the consultant addressed this issue in a Pilot-sponsored training, and one of them noted that the discussion of the HVAC requirements had helped the industry stakeholders in attendance understand why they needed a permit and why their client should want them to have one when replacing an HVAC system.

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[8]   The interviewees indicated there were three types of tools and resources provided by the Pilot: public relations efforts, trainings, and computer-based tools.

Activity Tracking and Measuring Effectiveness

The work being implemented during the Pilot was documented by the consultant in Work Progress Narratives they periodically provided to the steering committee. The steering committee members and the consultant indicated that they also intended to track the effects of the implemented tools and strategies at the participating building departments, but would not share any further information about it during the interviews.

Best Practices Report

At the end of the Pilot, the consultant will deliver a report on the best practices and lessons learned from the participating building departments. The stated intention of the IOUs is to distribute the report to all building departments in the state.

At the time of our interviews, the consultant and steering committee members were still deciding what to include in the report, so they were reluctant to share information about its content. Two interviewees said that they preferred to not share what would be in the report in case there were changes, and two said that the participating building departments could still decide whether they wanted the findings from their departments included in the report.

Next Steps

At the time of Cadmus' evaluation, the IOUs had not allocated funding for the Pilot to continue past the initial phase; however, there were several indications that the IOUs did plan to continue it in some form. Specifically, the PIP implied that the Pilot would continue, saying "(t)he (element) will be implemented initially as a pilot program." Also, the compliance improvement logic model for the 2013– 2014 cycle contains a best-practices study.

The steering committee members said they were making preliminary plans to distribute the Report to all building departments across the state, and one member noted, "We have always intended that this was just to get things going and to feed into what we all feel needs to happen."

When asked what they saw as the next steps for the Pilot, members of the steering committee said:

- Distributing the Report;
- Helping other building departments apply the findings of the Report;
- Continuing to work with building departments to identify barriers to improving compliance with the energy code; and
- Expanding the tools and strategies available to jurisdictions to improve enforcement.

4. Findings on Pilot Implementation and Delivery

As noted earlier, a consultant implemented the Pilot with oversight provided by the steering committee. Cadmus' evaluation findings regarding the delivery of the Pilot to the participating building departments are described in this section.

Participant Recruitment

The recruitment process took longer than anticipated. One steering committee member said that he had originally anticipated that the outreach and recruitment would take a month. However, according to the work progress narratives, the efforts went on for approximately six months (from May or June—the actual month is not stated in the narrative—through November.) Members of the steering committee said that they had initially planned to connect with the targeted building departments through the LGP relationships, but they discovered that the LGP did not have relationships with the right people in most of the jurisdictions. As a result, identifying the right person at the jurisdictions took much longer than planned.

According to one steering committee member and the consultant, one reason that the recruitment process was so protracted was that six targeted building departments chose not to participate. The consultant said that building departments gave two reasons for not participating: (1) a concern that participation would require too much staff time; and (2) a reluctance to share their department's code enforcement processes. One steering committee interviewee reported that the staff at a building department that had chosen to not participate had told them that because their building department is a city and county operation, airing their gaps could impact the credibility of their department's enforcement efforts.

As a result of the long recruitment effort, only seven buildings departments participated in the Pilot. Although the steering committee did not share how closely the final mix of jurisdictions matched the targeted mix, the committee indicated that information would be in the final report.

Jurisdictions' Interviewee Profile

Cadmus interviewed eight staff members from six of the seven building departments that participated in the Pilot. All the interviewees work in their jurisdiction's building departments except one, who works in the planning department. Two interviewees have responsibilities as sustainability coordinators, and six interviewees said they had some level of supervisory responsibility in their departments.

Delivery to Participating Building Departments

Seven of the eight interviewees said the implementation of the Pilot had gone smoothly, and five of them reported that their experience working with the consultant's staff was "very good" or "excellent." The eighth interviewee said that the Pilot was not worth the time, but he said he would work with the consultant again.

When asked about the most effective aspects of the Pilot's implementation, the interviewees' responses fell into one of two categories: positive attributes of working with the consultant and specific pilot activities that were effective. Table 3 summarizes the interviewees' responses, and multiple responses were allowed.

Table 3: The Most Effective Activities of the Pilot

Component	# of Interviewees (n=8)*
Aspects of working with the consultant on the Pilot's delivery	8
Trainings that were a part of the implemented tools and resources	5
Receiving feedback from a third party	3
Getting input from the staff and industry stakeholders as part of the implementation of the tools and resources	2
Having the consultant in the field with staff	1
Consultant staff getting input from all of the stakeholders in the department prior to their developing and implementing the computer-based tool	1
Going through the needs assessment/ gap analysis process	1

* The evaluation team permitted multiple responses.

Regarding the effective aspects of working with the consultant, three interviewees specified the consultant's communication, and three specified the consultant's ability to relate to the field staff and building inspectors. Three interviewees also mentioned the consultant staff's willingness to accommodate their time and other limitations, and two said the most effective aspect was the consultant's tenacity and follow-up.

When asked whether the Pilot's implementation could have been improved, four interviewees responded. One said that the consultant's staff changed part way through the Pilot process, so some activities had to be repeated. Another interviewee said the consultant's staff did not seem entirely prepared at first (which the interviewee attributed to his building department being one of the first in the Pilot), but this improved over time.

Both the members of the steering committee and the consultant said they would have liked more time for the Pilot's delivery. One respondent felt that the time crunch had been an issue. Another two said that after the tools and resources had been implemented at the participating building departments, more time was needed to collect tracking data to assess their effects.

Tool and Resource Delivery

Based on the interviews with staff members at the participating building departments, Cadmus categorized the Pilot-provided tools and resources as computer-based tools, public relations efforts, and trainings.

Three interviewees from building departments said that the consultant's staff had implemented either a public relations effort or training. All of these efforts required outreach and marketing, and interviewees reported that the consultant had employed a variety of marketing channels: postings to department websites, sending e-mails, and providing flyers. The interviewees also reported that the quality of the materials provided was very good.

Two building department interviewees said that, although the consultant's staff held the trainings in the jurisdiction over lunchtime and offered a door prize to entice attendees, getting the prospective attendees to come was difficult. In addition, one interviewee commented that the public relations campaign implemented in their jurisdiction had not had the effect that the department had hoped for. However, the interviewee added that this was due in part to the department staff not being able to give sufficient time to the campaign.

Two interviewees said that the consultant's staff had implemented a computer-based tool that could generate the correct compliance forms or documents depending on the project. The interviewees also said that the implementation had gone smoothly and that their departments had been involved in refining the concept or implementing the process. One building department reported that the Pilot had not provided any tools or resources so far.

Challenges to Participating

When asked what the biggest challenges to participating in the Pilot were, five of eight interviewees with the building departments mentioned aspects relative to their staff's time: committing staff time to the Pilot process, having too many meetings, and finding times that staff could meet so they could be more involved. (The consultant also noted that finding the time was the biggest challenge for the participants).One interviewee said their staff had needed assurance that participating would be worth it. Two interviewees, however, responded that there had not been any challenges.

Areas for Improvement

When asked what could be done to make the implementation more effective, four of the building department interviewees said that it could not have been more effective. The other four interviewees offered these suggestions:

- The consultant should be more organized.
- The meetings should be shorter.
- The consultant should go out with the field team to fully understand their challenges.
- The Pilot should consider paying for the time spent by building department staff members so the departments could afford to allow their staff to be more involved.

- All of the building departments' staff members should be involved from the beginning to ensure they understand the goals and are more invested, and to reduce the chances that one person would become a bottleneck in the Pilot process.

5. Pilot Effects on Enforcement and Compliance Barriers

Cadmus' evaluation of the Pilot assessed if the Pilot's activities could improve code enforcement or help overcome the barriers to increasing compliance if they were in place for a long enough period of time.

Enforcement Gaps and Code Compliance Barriers

Cadmus asked interviewees in the participating building departments what they saw as the biggest barriers to improving building compliance with the energy code. Table 4 summarizes the responses.

Table 4: Barrier to Improving Energy Code Compliance

Barriers to Increasing Compliance	No. of Responses (n= 8)*
The energy code is too complicated and/or not written clearly.	6
The paperwork is too complicated for industry stakeholders to fill out correctly and for the inspectors to understand what is required.	5
Building departments are lacking the time /resources to focus on energy code compliance.	4
Stakeholders do not take the time to understand what is required.	2
The building department staff does not have the training they need.	2
Builders' field staffs do not pay attention to the energy requirements.	1
Building department staff's lack of interest in energy efficiency	1
Enforcement of codes is inconsistent between jurisdictions.	1

* The evaluation team permitted multiple responses.

With regard to building departments having enough resources, one interviewee specifically mentioned that the department was short-staffed, and another said staff members were simply not able to keep up with all of the regulations, not just the energy code. One interviewee noted, "We have too much to look at, so to have the energy code take up so much time is disproportionate to its value for the building." Another interviewee said that it was hard for staff to determine whether a project was cheating on the energy-efficiency scores because staff members were not familiar enough with how the energy calculation software worked.

A member of the steering committee pointed out that another barrier to increasing compliance is the lack of interest in energy efficiency among some building department staff members. An interviewee at one of the building departments corroborated this comment and noted that one of the long-term effects of the Pilot on increasing energy code compliance was that it had helped staff members understand the big-picture effects of the energy code on overall public good, which had a positive impact on the building department officials' enforcement of the energy code.

Identifying Enforcement Gaps

When asked whether the consultant had accurately identified the biggest gaps in enforcement and barriers to code compliance for their respective building department, six of seven interviewees responded in the affirmative. The seventh reported that the consultant had at least partially identified the gaps and barriers. In addition, two interviewees reported that the consultant had identified gaps in their enforcement that they had been unaware of.

Improving Code Enforcement

Based on our review and the information collected for this evaluation, the Pilot did target most of the key code enforcement gaps and barriers and addressed them effectively. The tools and resources provided during the Pilot fall into three categories:

- Computer-based tools
- Public relations efforts
- Trainings

As discussed in the Evaluation Methodology section, Cadmus' evaluation was completed too early to assess the Pilot's effects on improving code enforcement. However, based on information provided in the interviews with staff at the participating building departments and on our industry experience, we assessed whether each of the tools and resources provided through the Pilot addressed the barriers to code enforcement and compliance (see Table 5) and could increase code compliance over time.

Table 5: Assessment of Tools and Resources

Most Common Gaps and Barriers Identified by Participating Building Departments' Staff	Is Barrier or Gap Addressed?	Applicable Tool or Resource
Building departments are lacking the time /resources to focus on energy code compliance.	Indirectly	Computer-based tools and trainings
The paperwork is too complicated for industry stakeholders to fill out correctly and for the inspectors to understand what is required.	Yes	Computer-based tools and trainings
Stakeholders do not take the time to understand what is required.	Yes	Public relations effort and potentially trainings, if stakeholders attend.
Building department staff members do not have the training they need.	Yes	Trainings and computer-based tools
The energy code is too complicated and/or not written clearly.	Yes	Trainings and indirectly by the public relations effort
Enforcement of codes is inconsistent between jurisdictions.	Yes	Trainings
Builders' field staff does not pay attention to the energy requirements.	Yes but may not be effective*	Trainings
Attitude towards energy code	Yes	Participation in the Pilot and trainings

*See section below for additional information.

Computer-Based Tools

Several building department interviewees reported that the consultant provided them with a computer-based tool that automated some of the forms and generated required documents. By automatically generating the necessary forms, the tool should help alleviate some of the need for the inspectors to know what is required for each project. It could also help address the barrier of the permitting paperwork being too complicated for industry stakeholders. In addition, by simplifying aspects of the permitting process the tool could save the building department staff time that can then be focused on code enforcement.

Trainings

To address barriers based on a lack of understanding or appreciation for the energy code, the consultant worked with two of the building departments to implement trainings that attracted building department staff and stakeholders in the building industry. Educating industry stakeholders about the energy code requirements and paperwork increases their ability to comply with the code. Also, when the building officials are more knowledgeable about the code and the paperwork requirements, they are better able to enforce it and be more productive. In addition, trainings can give building officials a better

understanding of the public benefits of energy-efficient buildings that, in turn, should increase their interest in enforcing the energy codes.

To address the challenge of attracting the builders (specifically, their field staff), the consultant offered trainings during lunch and provided free food and door prizes. However, interviewees at both of the building departments where a training was held noted that representatives from certain industry roles (specifically project managers and site supervisors) were not in attendance.

Public Relations Effort

To encourage stakeholders to utilize the building department as a resource, the consultant implemented a public relations effort in one jurisdiction. The expectation is that if stakeholders see the building department as a benign and useful resource, they may be more inclined to come to the department for help in understanding the codes and filling out the paperwork. This would make the process smoother for both the applicants and the building officials because the applicant had followed the process correctly. These stakeholders may also be less inclined to build without a permit, thus increasing compliance with the codes.

Tracking and Assessing Improvement in Practices

When the steering committee members and consultant were asked how they would evaluate whether the Pilot was successful, they reported that the only established indicator of success was the delivery of the Report. However, several also said that they would unofficially evaluate the success of the Pilot based on feedback from the participating building departments. One member of the steering committee said that despite not being able to quantitatively measure the Pilot's effectiveness, "I have a feeling that this will be the most important [part of the CEP]."

The interviewees from the participating building departments corroborated the steering committees' general opinion that there was no reliable way to quantify the success of the Pilot, largely due to a lack of tracking data. When interviewees were asked how they would track the effectiveness of the Pilot, only one of the building department interviewees said they would be monitoring it—but only informally, based on feedback from staff. Four interviewees explicitly said their departments do not have the tools or resources to track the Pilot's effectiveness.

Four interviewees said that the effect could only be measured qualitatively; two said they would look for the effect on the building industry's performance; and two others indicated that the "metric" was the feedback from their staff. One interviewee said, "My gut tells me that participating was valuable, but we can't track anything regarding the impacts."

Effectiveness of Pilot on Improving Enforcement and Compliance

As noted earlier, at the time of Cadmus' research it was too soon to assess the effect of the Pilot on enforcement and compliance in the participating jurisdictions. When the building department interviewees were asked if the Pilot would have a long-term effect on code enforcement in their

jurisdictions, the results were mixed: four said it would; two said that it would not; and one said it was too soon to tell.

Those who said it would have a long-term effect gave the following reasons:

- "It provided us a foundation to build on, but we have to keep focused on keeping energy efficiency a priority in our enforcement."
- "The knowledge will trickle down through my staff. A good inspector is a teacher and they train the community."
- "The feedback will help us improve the overall review and inspection process, and our understanding of the process will increase compliance."
- "Because we have a better understanding of the greater public good that comes [from compliance with the energy code], we will pay more attention to it."
- "It made it a little easier for us to be able to explain the [energy code] requirements."
- "It allowed us to communicate that these requirement's aren't' going away, how to meet them, and what we need to make it easier for all of us."

One of the two interviewees who said that the Pilot would not have a long-term effect on code enforcement said that the Pilot just provided another tool to support the process, but it did not address the true barrier to enforcement, which would require more training and resources.

Transferring the Pilot to Other Building Departments

The interviewees indicated that the tools, best practices, and lessons learned from the Pilot may not be easily transferred to other building departments. Two members of the steering committee noted that it will be challenging to apply building department best practices and the tools and resources developed during the Pilot directly to other building departments without some customization because of the differences in both the building stock across jurisdiction's (and, therefore, the types of projects) and the building departments' processes and infrastructures.

Two building department interviewees said that smaller departments would not have the time to participate in something like the Pilot because of their limited resources.

6. Recommendations

This section contains recommendations from interviewees and from Cadmus.

Recommendations from Interviewees

Many of the interviewees with the participating building departments gave similar recommendations for the continuation of the Pilot, summarized in Table 6.

Table 6: Jurisdiction Interviewee Recommendations

Component	No. of Interviewees (n=8)*
Provide tools that streamline processes common to all building departments.	3
Deliver trainings on specific aspects of the energy code.	2
Work closely with the departments and provide direct feedback and coaching.	2
Involve stakeholders more in the process, including CEC, building departments, and industry stakeholders.	2

* The evaluation team permitted multiple responses.

The steering committee members' and consultant's suggestions primarily covered the implementation of the Best Practices Pilot. One interviewee said that it needed to be as easy as possible for the building departments to participate. Another interviewee suggested that other organizations like the International Code Council and California Association of Building Energy Consultants should be involved in identifying potential participants. All of the interviewed steering committee members indicated that they will continue the Pilot, and they gave these recommendations regarding what activities should be included:

- Distributing the Report ;
- Helping other building departments utilize the Report;
- Continuing to work with building departments to identify barriers to improved compliance with the energy code; and
- Expanding the tools and strategies that are provided to jurisdictions to improve enforcement.

Cadmus' Recommendations

Assuming the Pilot is continued or evolves into a program, we recommend the following:

- Develop a separate theory and logic model for the Pilot that shows the relationship between the Pilot activities and increasing compliance with the energy code. The logic model should describe the connections between the building departments' ability to work more efficiently (thus, improving their enforcement) and the increased compliance with the energy code.

- Implement a process to document interim changes in the Pilot to facilitate future evaluations. Consider requiring that the IOUs document changes to the Pilot's goals, activities, staff, and anything else of significance at specific interim dates.

- Investigate whether there are common characteristics shared by the participating building departments with similar gaps in their enforcement. Such characteristics could be used to target other building departments that would benefit from the same tools and resources provided to the participating ones. This could be done by recording specific metrics (e.g., ratio of employees in the building department to jurisdiction's population or the number of permits issued) and characteristics of participating building departments (e.g., prevalent permit types, structure of the building department, or the kinds of technology systems used by the department) and then looking for correlations between them and the gaps in the building department's enforcement. If effective, this method could both streamline the process for the IOUs and reduce the time required of the building department staff.

- Identify ways that the IOUs could support building departments in tracking the appropriate performance indicators. The majority of the building departments do not have the resources to track additional data, hindering the IOUs from measuring the Pilot's effect. The IOUs might consider providing tracking tools or software or creating a statewide system for building departments to use to record pertinent data.

- Require building departments to share anonymously the best practices and lessons learned from their departments as a condition of participating in the Pilot. It may have been necessary to give building department control over information from their department to recruit participants when the Pilot was new; however, going forward the IOUs can now show that participating in the Pilot is valuable for the participating building departments and that their confidentiality can be protected.

Subsequent to completing the study, Cadmus learned of the intention to disseminate some of the tools and resources developed for the Pilot, instead of providing the Report to the nonparticipating jurisdictions. Based on this new information, we provide this additional recommendation:

- An update of this evaluation should be conducted in 2014 after the participating jurisdictions have had the tools and resources in place long enough to have an effect on code enforcement and compliance.

Addendum

The consultant completed the Best Practices Report and delivered it to the IOUs at the end of December, 2012. In May, 2013, Cadmus staff had a brief conversation with the CEP staff regarding the status of the Pilot's activities. The IOU program staff members said that in March of 2013, they and the consultant had presented the Best Practices Report at the quarterly Compliance Improvement Advisory Group meeting, to both the committee members and invitees including CPUC staff.

Although the PIP stated that the Best Practices Report would be disseminated to all of the nonparticipating jurisdictions following completion of the Pilot, the CEP staff has since decided that it would not be the most effective way to leverage the Pilot. Instead, as a part of the effort to increase compliance, the IOUs are focusing on making available to all other jurisdictions in California those tools and resources found to be effective by the participating jurisdictions in the Pilot.

In an effort to leverage the IOUs' resources and to expand the positive effects of the Pilot across other programs, the CEP staff members are working with Energy Design Resources, using its website (http://www.energydesignresources.com/codes-and-standards.aspx) to feature these items developed during the Pilot:

- ***A public awareness effort to promote the benefits of permitting a project.*** This is based on the public relations effort implemented with one participating building department to educate stakeholders about the services and support available from their building department.

- ***A web-based version of the tool for generating the correct permit forms.*** This is being rolled out under the name of ACE Toolkit. This toolkit can be found at http://www.energydesignresources.com/codes-and-standards.aspx

- ***The Best Practices Report,*** which is also available on the Energy Design Resources web page.

Currently, the IOUs are working with a consultant to create a customized dissemination strategy for promoting the tools to the targeted jurisdictions most likely to benefit from them.

CADMUS

Appendix

Date: **Revised May 9, 2012**

To: **CPUC**

From: **Phi Filerman, Anne West, The Cadmus Group, Inc.**

Re: **Compliance Enhancement Subprogram Evaluability Assessment**

The Compliance Enhancement Program (CE) is a subprogram of the IOU's Codes and Standards (C&S) Program. A process evaluation of this subprogram is one component of the C&S Program impact evaluation. Cadmus is conducting this evaluation for the CPUC under a subcontract with DNV KEMA. This memorandum summarizes the results of Cadmus' evaluability assessment of this subprogram. This evaluability assessment is the first step in the subprogram's process evaluation. It determines whether necessary data are available, and identifies areas where additional data are needed to conduct the evaluation.

Evaluation Objectives

The CE subprogram, as described in the PIP, includes the original measure-based component, and a holistic component.

The measure-based component focuses on measures for existing regulations not adopted as a result of the C&S Program. The holistic component supports building departments to improve their operations and compliance processes. The CE subprogram has evolved since the PIP was written, maintaining aspects of the holistic component only. (These changes are outlined in the section below *CE Best Practices Subprogram Objectives and Approach*).

Currently, the primary activity of the holistic component of the subprogram is the Best Practices Pilot. Because the program has evolved, Cadmus will develop an accurate subprogram description, update the logic model, and document the program processes. If the data are available to support the evaluation of the Best Practices Pilot, the process evaluation's objective will be to determine if the Pilot is providing the support needed by building departments to improve their operations and code enforcement processes.

We will document the metrics used by the IOUs and jurisdictions to assess whether compliance improved as a result of participating in the program and implementing the Best Practices procedures. We will document the IOUs' progress toward the outcome goals, that is, the changes in activities and procedures, and perceived compliance changes. .

The jurisdictions do not plan to claim savings attributable to the subprogram in this program cycle. Therefore, only a process evaluation was included and budgeted in the Codes and Standards evaluation plan. This evaluation will not quantify savings attributable to the CE subprogram or quantitatively measure the subprogram's impact on the jurisdiction's compliance.

Evaluability Assessment Approach

The Cadmus Group developed an evaluability assessment protocol used for this assessment. The supporting table is used as a guideline to document the presence or absence of information critical to a successful process evaluation. (The evaluability assessment table can be found in Appendix A.) We populated the assessment table through the review of all program materials provided by the CPUC, by the IOUs in response to the June 2010 data request, and using notes from interviews with Javier Mariscal of SCE, Jill Marver of PG&E, and Misti Bruceri of Misti Bruceri and Associates, LLC. These interviews were conducted for the process evaluation of the Extension of Advocacy (EOA) subprogram, another subprogram of the IOU's C&S Program. SCE is overseeing that process evaluation conducted by Cadmus. Jill Marver and Javier Mariscal are on the management team for both the CE subprogram and the EOA subprogram. Misti Bruceri is a consultant. This initial review provided background information pertaining to the subprogram, its objectives, staffing, activities, stakeholders, and other information.

Documents reviewed included, but were not limited to, the following.

1. Program Implementation Plan (PIP)
2. Compliance Enhancement logic model provided in the PIP
3. Complete Program Performance Metrics (PPM) Worksheets for 2010-2012 Energy Efficiency Programs provided by the CPUC
4. Notes from EAO Interviews with Jill Marver, Javier Mariscal and Misti Bruceri
5. *How We're Approaching Compliance Improvement* slide presentation by Jill Marver of PG&E
6. Decision 09-09-047, dated 10/1/2009; page 207. Decision approving 2010 to 2012 Energy Efficiency Portfolios and Budgets.

CEP/Best Practices Subprogram Objectives and Approach

Subprogram Description

Original Subprogram Design

CE Subprogram

The CE subprogram recognizes that building departments do not have the resources to meet their building inspection workloads, which has a direct impact on their ability to ensure energy code compliance. The primary purpose of the CE subprogram is to increase code enforcement and

compliance. The CPUC Decision 09-09-047, directed the utilities to "ensure that the activities in CEP only target Federal Standards and pre-existing codes and standards (non-CASE measures) that have low compliance rates in the IOU's service territories."[9]

The CE subprogram, as described in the PIP, contains two components. First, the PIP describes a measure-based component consisting of trainings to support compliance with codes and standards not adopted as a result of the C&S Program. Second, the PIP describes a component designed to support building departments in improving their operations and compliance processes through best practices, initially planned for implementation as a pilot (Best Practices pilot). The component also includes role-based trainings that support compliance; the development of a compliance improvement advisory group (CIAG); and work with the California Association of Building Energy Consultants (CABEC) to increase the stringency of the Title 24 Certified Energy Analyst test. In addition, the PIP indicates that the program staff will conduct research to identify tactical solutions for improving code compliance, and use this information to inform program efforts.

EOA Subprogram

A similar subprogram described in the PIP is the Extension of Advocacy (EOA). The primary activity of the EOA, as described in the PIP, is conducting measure-based trainings that support compliance with codes and standards that were adopted as a result of the C&S Program.

Subprogram Savings Claims

At the time the PIP was written, the C&S Program intended to claim savings for both the EOA and CE subprograms. However, according to Program staff, it became evident that they could not effectively apply the savings protocol to the subprograms. Program staff decided that they would not attempt to claim savings for the subprograms for this cycle. Staff also indicated that, in winter of 2010, Heschong Mahone Group, Inc., submitted a white paper supporting this decision.[10]

Revised CE Subprogram Design

The CE subprogram has evolved greatly since the PIP was written. Some of differences between the PIP and the current program include the following.

- In 2010, the IOUs determined that attributing savings specifically to the EAO and/or CE activities would not be possible.

- Because the measure-based activities and role-based trainings under the CE subprogram overlapped with activities under the EOA, they were moved under the EOA.

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[9] Decision 09-09-047, dated 10/1/2009; page 207. Decision approving 2010 to 2012 Energy Efficiency Portfolios and Budgets.
[10] Cadmus does not have a copy of this document. This will be included in data request.

- The Best Practices pilot remained under the CE subprogram.

- SCE and Sempra continue to classify the CIAG and work with the CABEC under the CE subprogram. However, PG&E includes them under the EOA activities.

As indicated in the PIP, the CE subprogram staff conducted a comprehensive needs assessment/gap analysis, interviewing building industry market actors to determine how building departments' current code compliance compares to the IOUs' desired level of performance. The PIP indicates that the gap analysis was used to identify strategies that can be applied to reduce the gap between the jurisdictions' current energy code enforcement capabilities and target performance levels. The Program staff indicated that the results of this study informed the design of the Best Practices pilot.

The pilot works with participating building departments to examine their code enforcement processes, and identify opportunities to improve enforcement practices and increase consistency across jurisdictions. The pilot will develop process improvement interventions, best practices, and lessons learned in each jurisdiction. The pilot's findings will be used to create a report and/or package of performance improvement solutions that will be shared with all jurisdictions in California to help improve code compliance rates.

The objectives of the CE subprogram are to:

- Improve building departments' efficiencies around code compliance and enforcement.

- Develop building department best practices for enhancing energy code compliance and enforcement processes.

- Encourage the use of consistent tools, processes, and documentation across jurisdictions to simplify compliance for market actors.

The documentation indicates the CE subprogram will take several approaches to achieve these objectives. Activities include:

- The CE subprogram staff will oversee the implementation of a comprehensive needs assessment/gap analysis to determine how building departments' current code compliance compares to the desired performance, and identify strategies that might be applied to its improvement.

- The CE subprogram staff will implement a building department Best Practices pilot program.

    o From the findings of the pilot, a Best Practices report will be written.

    o The program staff will distribute this report to 100% of local governments.

- The CE subprogram staff will create tools to help building departments optimize existing processes and simplify enforcement.

- The CE subprogram staff will create a package of performance improvement solutions that can be implemented by building departments to improve code compliance rates.

Evaluability Assessment Findings

Evaluation Audience

The audience for the evaluation is the CPUC and C&S Program staff. Many of the individuals we plan to interview are also the audience for the evaluation results, and are aware that these evaluations are being conducted. To ensure the evaluation meets the needs of this audience, we will confirm evaluation objectives during the interviews.

Program Theory and Logic

There is a logic model for the CE subprogram that reflects its general activities and outputs as the subprogram is described in the PIP. It includes the best practices components as well as the components of the subprogram that are now implemented under the EAO. The logic model indicates how the subprogram was planned to interact with other IOU programs and state and local government agencies. The original logic model does not accurately represent the current subprogram.

Program Design and Implementation Activities

The documentation indicates a variety of activities that have been or will be implemented under the CE subprogram by the IOUs. These include:

- A comprehensive needs assessment/gap analysis to identify the barriers to more effective compliance enforcement and develop strategies to address them has been conducted. According to program staff, the study was composed of surveys and interviews with industry players including contracting officials and building inspectors. The study was conducted between 2009 and 2010 and was implemented by the program staff themselves.

- Implementing a Best Practices pilot program.

  o Selecting jurisdictions to participate.

  o Performing an onsite needs assessment to identify barriers to energy code enforcement and potential solutions. This assessment will be implemented by AEC, who will deliver a Best Practices Study.

  o Creating tools to increase the efficiency of processes and to simplify code enforcement.

- o Documenting process improvements, best practices, and lessons learned in each jurisdiction while working with the pilot.

- o Collecting action plans from participating building departments and measuring progress towards implementation.

- o Working with CALBO, the International Code Council (ICC), the CEC, and local government partners to encourage other jurisdictions to adopt successful practices and tools identified during the pilot.

- o Encouraging jurisdictions to implement online systems for submitting permitting paperwork for HVAC replacements, as well as other measures.

- o Delivering a Best Practices study to 100% of local governments.

Internal documents do not indicate how the needs assessment, conducted by AEC, informed a study of best practices. The materials provided did not indicate the next steps in the pilot after the needs assessment, the timeframe for the pilot, how the Best Practices pilot is being implemented, or what the subprogram is doing currently to improve practices. There is no explanation about how the pilot will be transformed into a full subprogram or whether the pilot is near completion. How the program will measure the progress toward the implementation of the jurisdictions' action plans is not documented in the internal documents, nor is how the improvement efforts made in each of the participating jurisdictions will be tracked. Furthermore, criteria for identifying best practices have not been provided. In addition, the program description in the PIP is inconsistent, indicating a focus on improving compliance in some instances, and on enforcement in other sections.

Program Management

The program manager of the CE subprogram is Javier Mariscal, with SCE. Each of the IOUs has a staff member on the management team. The roles of each member of the management team, and whether there is other staff involved in the CE subprogram are not documented in internal management material.

Program Trade Allies

The documentation describes that the CE subprogram will work with CALBO, the ICC, the CEC, and local government partners to encourage other jurisdictions to adopt successful practices and tools identified during the pilot. The internal documents do not indicate which of the organizations are currently involved, or their roles in the process. The documentation also refers to the needs assessment conducted by AEC.

Program Participants

Program participants are those jurisdictions selected to participate in the Best Practices pilot program. The program materials listed several criteria for selecting the participating jurisdictions. These included:

- Jurisdictions must have the support of the Chief Building Official and mayor or city council.

- Jurisdictions must be open to sharing records and other background materials.

- Staff must be willing to test new tools and processes.

The documentation indicated there are additional criteria, but no other criteria were included in the documentation.

The documentation indicated an estimated 12 jurisdictions will participate in the pilot program. Documentation also indicated there were at least five participating jurisdictions at the time the documents were prepared. During the EOA process evaluation interviews, we were told that the list of participating jurisdictions is not public and it might not be made available to us. The internal materials do not indicate if there is any tracking mechanism in place for the pilot, including participant jurisdictions' contact information.

Program Nonparticipants

The documentation reviewed did not provide a definition of a "nonparticipant." For our purposes, we defined a nonparticipant to be any jurisdiction who received the Best Practice study and did not participate in the pilot program. There are other types of nonparticipants, these are a jurisdiction that was either (1) approached to participate in the pilot program and chose not to, or (2) who would have liked to participate but was not selected. Existing documentation did not indicate whether the IOUs have a tracking mechanism in place to identify nonparticipant jurisdictions and document their contact information.

Program Impacts

The PIP denotes that savings will be claimed for the CE subprogram. At the time the PIP was written the Program staff believed that savings estimation and attribution methods could be applied to the activities under the CE subprogram. According to Program staff, however, it became evident that obtaining the baselines for the measures was too expensive and program staff decided not to pursue allocated savings to the CE and EOA subprograms. Staff also indicated that, in winter of 2010, Heschong Mahone Group, Inc., submitted a white paper to the CPUC supporting this decision.[11] Therefore, there are no savings

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[11] Cadmus does not have a copy of this document. This will be included in data request.

being claimed by the CE subprogram. The documentation does not indicate if there are plans to track and claim savings from the subprogram at a later time.

Evaluability Assessment Conclusions

This evaluability assessment identified data, existing and missing, that are necessary to conduct the process evaluation. The program has evolved considerably since the PIP was written. The current configuration is not adequately documented. However, the CE subprogram could have a large impact on energy savings by assisting jurisdictions to increase code compliance. Therefore, we conclude that the CE subprogram evolution, configuration, activities, and Best Practices pilot should be documented. An early and limited process evaluation will assess the pilot to determine whether it is meeting the needs of participants. The process evaluation will qualitatively assess achievements of the subprogram.

Recommendations

Because the current subprogram configuration has evolved since the PIP was written, and adequate documentation is not available, we recommend that Cadmus focus efforts on documenting the current configuration of the CE subprogram and conduct and early assessment of the Best Practices pilot. Toward that end, we recommend the following.

1. Document the Best Practices activities of the CE subprogram as they are being implemented today. Develop a full description of the current program configuration, including the Best Practices pilot. Update the logic model. Document indicators of success identified by the IOUs. Provide comment on these indicators if it appears the will not adequately describe success.

2. Identify and document subprogram management, administration, third-party organizations, and trade allies along with their roles and responsibilities.

3. To ensure the early evaluation meets the needs of this audience, we recommend confirming evaluation objectives during the interviews conducted for the evaluation.

4. Update the list of program participants.

5. Determine criteria for jurisdiction participation in the Best Practices pilot.

6. Work with IOUs to develop a definition of nonparticipants, develop a list of nonparticipants, and document any outreach or communication with these jurisdictions, along with barriers to participation.

7. Document how the needs assessment study conducted by AEC was used to inform the Best Practices pilot.

8. Assess the effectiveness of the Best Practices pilot activities in meeting the needs of participating jurisdictions.

9. Document the metrics used by the IOUs and jurisdictions to demonstrate changes in compliance after participating in the program and implementing the Best Practices procedures.

10. Document the IOUs' progress toward the outcome goals, that is, changes in activities and procedures, and perceived compliance changes.

11. Determine whether nonparticipants received the Best Practices manual, if they found it useful, and if they took any actions as a result.

12. The CPUC recommended the evaluation examine whether the Best Practices pilot addressed compliance with code requirements to upgrade HVAC systems in existing buildings.

Next Steps

1. We will submit a data request to the CPUC and IOUs, including supporting information not included in the existing documentation.

2. We will work with the CPUC and IOUs to develop a process that will permit us to identify and contact the participating jurisdictions.

3. We will request updated documentation listing the current number and names of participating jurisdictions.

4. We will develop interview guides for identified program staff and trade allies, participating jurisdictions, and consultants (including AEC) involved with the program. Interviews will review the roles of third-party organizations that help identify potential participants; the process by which potential participants are identified; and the successes and barriers of jurisdictions. These will be submitted for review and approval prior to conducting interviews. Once contact information is provided for key staff, we will develop the interview list and schedule the interviews. Depending on the total number of key staff, we will interview the census or a sample. If a sample is selected, we will document the process used to select the sample.

5. We will interview the program manager, the staff involved in the subprogram at the IOUs, other program staff, and consultants. Many individuals we plan to interview are also the audience for the evaluation results, and are aware that these evaluations are being conducted.

6. We will develop a complete picture of the Best Practices component of the CE subprogram and the Best Practices pilot, including staffing, trade allies, outreach, participants, activities, management, tracking and administration through interviews and additional documentation provided.

7. We will determine whether nonparticipants can be identified. A sample of identified nonparticipants will be interviewed to find out whether they received the Best Practices report, their response to it, and actions taken in response.

8. We will revise the logic model after conducting the interviews.

Data Request

Our next step is to confirm that we can obtain a list of the jurisdictions in the pilot program, followed by a data request for additional information. Data needed include, but are not limited to:

- List of the jurisdictions in the Pilot program and contact information for key staff at each jurisdiction.

- List of all IOU staff, consultants, and trade allies involved in the subprogram.

- Contact information for staff, consultants, and trade allies involved in the subprogram.

- The selection criteria used to choose participating jurisdictions.

- Documentation on participants considered, but not chosen for the Best Practices pilot (nonparticipants).

- Representative samples of standard operating procedures and documents utilized in the marketing, outreach, administration, tracking and implementation by each of the IOUs, where applicable.

- A copy of the needs assessment/gap analysis conducted by AEC.

- A copy of the Best Practices study and any follow up studies, plans, and summaries of pilot activities.

- A copy of the white paper by Heschong Mahone Group regarding the decision to not pursue energy savings for the EOA or CE subprograms.

- Applicable databases once identified. For example, an applicable database is one that documents the compliance improvements of the participating jurisdictions

Appendix A

The evaluability table below summarizes answers to key questions assessed through document reviews. The review, questions, and comments form the basis of the evaluability assessment.

Question	Comments
1. Who is the intended audience for the evaluation?	The CPUC and IOU staff
What are their information needs and how will they use the information?	This early program process evaluation will provide a complete picture of the Best Practices Pilot program, describing the market actors, along with their roles and contributions. In addition it will determine if the assistance offered by the Best Practices program is providing building departments the support and tools needed to increase compliance rates.
What are the evaluation timelines? When are the evaluation results required?	The final report is due in June, 2013
Does the evaluation audience include the same people impacted by or expected to be involved with evaluation activities?	Yes, we will interview many of the staff who will be impacted and expected be involved in the evaluation.
2. What type of evaluation is required or planned?	Early program process evaluation.
What data are needed to conduct this type of evaluation?	Subprogram staff and the contact information, a list of participating jurisdictions with contacts for key staff, list of consultants and government agencies who work with the program and contact information for key staff members. Background documentation, gap analyses, Best Practices and other material developed for, and provided to, jurisdictions.
3. Is there a description of the staff that will operate the program?	The program has evolved since the original PIP. There is no written description of the roles and responsibilities of staff operating the program. We do have a basic understanding of the program's staffing from interviews with Javier Mariscal and Jill Marver about the EOA programs.
How many staff and where are they located?	The program manager is Javier Mariscal with SCE. Each of the IOUs has a person on the management team. It is unknown whether there are other staff involved at each of the utilities.
Are staff responsibilities defined and understood by all who touch the program?	Unknown. We will interview many of the program staff as well as the consultants involved in calculating the program savings.
Are operational staff fully informed of the evaluation and purpose and activities?	Yes, and they will be participating in the interviews.

Question	Comments
4. **Is there a description of the program?**	There are several but they are inconsistent. The subprogram supports building departments to improve their operations and compliance improvement processes. Currently the Best Practices Pilot program is the primary activity under the subprogram. In addition, under SCE and Sempra, the Best Practices Pilot program include other activities, including the CEA exam (certified energy analyst), and the CIAG (Compliance Improvement Advisory Committee) activities. PG&E does not include these activities under the Pilot program.
5. **Is there an explicit program theory or logic model**	There is an explicit logic model that was provided with the PIP. However, the program has evolved since the PIP was written and the logic model needs to be revised.
Is there a clear definition of a program participant and nonparticipant? What are the definitions?	Participants would be on the list of building departments participating in the Best Practices Pilot program. The *How We're Approaching Compliance Improvement* presentation lists five jurisdictions. We do not know if this list is up-to-date. We have been told that the list of participating jurisdictions is not publically available.
What are the indicators of success	There is no clear, documented indicator of success. The indicator stated in the PIP (implementing 60 Title 24 role-based trainings) is no longer applicable since all of the trainings fall under the Extension of Advocacy program. Furthermore, the indicators listed on the Complete Program Performance Metrics Worksheet are nonspecific.
6. **Is there a description of the target market?**	The pilot program has criteria for selecting jurisdictions to participate. These include: proactive building departments that are pursuing operational and compliance improvements, must be willing and able to test new tools and procedures, and must have the support of the Mayor or city council. The full list is not documented.
Is it possible to identify the potential population of participants and nonparticipants?	No. It is not possible to identify the potential participants.
7. **Is there a marketing plan?**	Unknown
Was a marketing plan developed as an integral part of program design? Was it developed by another department?	Unknown. We do not know how the jurisdictions are identified, selected, or decide to participate in the pilot program.
Does the marketing plan target the intended market with the appropriate message that could elicit program participation?	Unknown. We have not seen any marketing or outreach information.
How will potential participants be recruited once identified?	Unknown

Question	Comments
Is there a way to track participants?	Unknown
Is there a way to track nonparticipants?	Unknown
8. Have proposers included an electronic tracking database in their plans?	No
Does it include the elements needed to contact participants & nonparticipants of various program activities?	Unknown
Does it include program forms, surveys and implementation back-up	Unknown
Are specific locations of measures being tracked? Can they be found?	Unknown
Are program assumptions being tracked on a site specific level (e.g., hours of operation)	Not Applicable
Is the delivered energy saving service and/or installed retrofit being recorded?	Not Applicable
Does it include the outcome/result of the activities?	Unknown
9. Will the program be delivered with trade allies?	Joint delivery by IOUs and trade allies.
What type of trade allies	The program will work with CALBO, the International Code Council (ICC), the CEC, and local government partners to encourage other jurisdictions to adopt successful practices and tools identified during the pilot.
Are the trade allies defined well enough to identify a potential group of participants and nonparticipants?	Yes, the trade allies involved are identified.
Is there a way to track participating trade allies?	Unknown
Is there a way to track nonparticipating trade allies?	Unknown
10. Are savings assumptions documented?	No
How are savings calculated?	N/A
DEER or other Technical Resource Manual	N/A
If not, is the source of savings assumptions specified?	N/A
Are the pre-retrofit or baseline parameters being recorded?	N/A
Does the database record the as-found values for parameters used to estimate ex-ante savings?	N/A

Question	Comments
Does baseline monitoring need to take place?	N/A
Can one of the impact evaluation methods specified in the CA Evaluation Protocols be used?	N/A
Are there code compliance or program overlap issues for savings estimation?	N/A