Non-Residential Process Evaluation Study: Main Report

Final Report

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Southern California Gas Company

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The HMG team included the following firms and respective focus areas: HMG (overall project coordination, IT issues, Local Nonresidential Bid program), Energy Markets Innovation (Organizational issues, Best Practices), Evergreen Economics (Regulatory issues and Deemed program), Navigant Consulting (Regulatory issues and Calculated program), Research into Action (3rd party program integration, PREPs program, SaveGas program, including customer surveys for these programs), and Tetra Tech (Marketing, Audits program). Tetra Tech also conducted the main customer surveys.

This project was done in collaboration with the Energy Division, particularly Jean Lamming, and Christina Torok (at Itron).

In addition, we appreciate feedback provided by customers, vendors, and others in the study.

FOREWORD – THE MISSING SENSE OF SHARED MISSION

From the Hound of the Baskervilles, by Sir Arthur Conan Doyle:

Inspector: Is there any point to which you would wish to draw my attention?

Holmes: To the curious incident of the dog in the night-time.

Inspector: The dog did nothing in the night-time.

Holmes: That was the curious incident.

As a prologue to the findings and recommendations which follow, the evaluation team offers a higher level observation. Despite the considerable effort, money, regulations, and oversight devoted to energy efficiency programs,

California's energy efficiency enterprise lacks a *sense of shared mission.*

This observation is not directed solely at the program managers who are the primary subjects of this study. The sense of shared mission should extend upward from the programs to utility senior management, and outward to the vendors and customers. The regulators' and the utilities should also have a stronger sense of shared mission.

Of course, this presumes that there *should* be a sense of shared mission. California has ambitions for wide and deep energy efficiency, and our long range goals are tied to greenhouse gas emissions, zero net energy aspirations and increased use of renewables. California's Energy Efficiency Strategic Plan attempts to map the path from current programs to those future states. All of this *should* provide a sense of shared mission. However, this study found that there are often different versions of the mission, especially between the regulators and the regulated, and between program managers and their leaders. There are many instances where operational problems overshadow the larger mission.

This study offers specific recommendations for addressing those operational problems. But addressing the missing sense of shared mission will require leadership from the highest levels, both at the CPUC and at the utilities. Only those leaders can re-align their organizations, adjust their policies, and clarify the mission for their staff. That renewed sense of shared mission must then flow down through the organizations and people that share responsibility for moving energy efficiency forward in California.

Providing the institutional and policy-level recommendations to accomplish this is beyond the scope of this study. But we hope that the leaders and policymakers who read this report will find evidence to support our perception about the missing sense of shared mission. Look for that evidence, not in what people have said or in what we evaluators have observed, but in what was *not* said or observed. We hope that this insight will encourage our leaders to address the problem at the highest levels. Lacking a fix for the larger problem, our program-specific recommendations will only be temporary patches, and may not be sufficient to guide California's energy efficiency enterprise to the big goals on the horizon.

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- Comparison of issues identified during the 2006-08 process evaluation with the issues identified in this study
- Summary of issues and recommendations, for each portfolio-level evaluation
- Summary of issues and recommendations for each program evaluated
- Budget status table for all nonresidential programs, showing the budget spent and committed, compared with budget allocated
- Energy savings status tables for all nonresidential programs, showing savings installed and committed, compared with projected

1.1 PORTFOLIO LEVEL FINDINGS AND RECOMMENDATIONS

The following figure compares issues identified in the last process evaluation (conducted during the 2006-08 cycle) with the issues identified in this study.

Issue raised in 06-08 process evaluation, and Recommendation(s)	Effort to Address since 06-08	Progress Made	Current status of issue (2010-12 process eval findings)
Organizational			
Ambiguity around roles and responsibilities	Unknown	Although most of the programs appear to be running smoothly, many still lack the program management tools (RACI chart, etc.) to insulate them from the negative effects of staff turnover	Persists
Disconnect between program logic and actual market barriers	New programs aimed at new customers, discontinuation of underperforming programs	Only one program had significant flaws in its logic in regards to market barriers.	Mostly Resolved
IT and Data Tracking			
Poorly defined data needs	Implementation and customization of CRM	Staff know what they need, but cannot access it with CRM for reporting	Partially Resolved
Process bottlenecks: long applications, lack of documentation, status updates	Investigating online applications	Application processing is still viewed as overly complex and time-consuming by most program staff, and the lack of application status updates persists	Persists
Regulatory and Statewide Coordination			
Lack of a clearly-defined template for reporting and compliance requirements	Unknown	Additional reporting and compliance requirements have been added and change over time,, and staff are still unclear on regulatory requirements	Persists
Marketing			
Lack of a strategic marketing plan and overall portfolio “road map” around marketing	Unknown	Many program marketing groups continue to operate in isolation and lack a unified, high-level marketing strategy	Persists
AE’s lack of awareness/motivation surrounding EE program offerings	Revised compensation for AEs	AEs still do not appear to be properly informed or motivated to successfully promote EE programs	Persists

Issue raised in 06-08 process evaluation, and Recommendation(s)	Effort to Address since 06-08	Progress Made	Current status of issue (2010-12 process eval findings)
3rd party implementer integration			
Under promotion of 3rd party programs by AEs due to lack of knowledge/awareness of 3rd party programs and the lack of an incentive to do so	Allowing AEs to count 3P savings toward their goals, training lunches with AEs	AEs still do not have a good working relationship with 3P implementers	Persists
Lack of co-branding and ineffective use of targeted marketing lists	Creation of SoCalGas style sheets for 3P implementers' use	Unclear legal barriers mean that 3P implementers still cannot fully leverage SoCalGas's name and credibility to aid in the delivery/marketing of programs, and report lack of co-branding as a challenge	Persists

Figure 1: SoCalGas Progress and Remaining Challenges for Issues Raised in 06-08 Process Evaluation

In addition to evaluating specific programs, we evaluated several portfolio-level issues. The following figure summarizes the main findings and recommendations for these cross-cutting evaluations, with values denoted as Low, Medium, or High (L/M/H).

Issue raised in current process evaluation	Recommendation(s)	Obstacle(s) to Addressing Issue	Difficulty in Addressing (L/M/H)	Value of addressing (L/M/H)
Organizational				
Vulnerability to Staff Turnover and Transition	Perform a program resource inventory: · Program manual · Process flow diagram · Responsibility matrix (RACI chart)	Lack of defined program processes	M	H

Issue raised in current process evaluation	Recommendation(s)	Obstacle(s) to Addressing Issue	Difficulty in Addressing (L/M/H)	Value of addressing (L/M/H)
Cumbersome program processes and unclear roles and responsibilities	Develop responsibility matrix (RACI chart) at portfolio level, and for programs and functions (e.g., marketing)	Department silos	M	H
Legal constraints	Review major obstacles identified here, and re-consider legal interpretations	Legal Risk	H	H
IT and Data Tracking				
Data Tracking Silos	Continue transfer of legacy applications and "work-around spreadsheets" into CRM	Staff familiarity with CRM usage is still rudimentary	H	H
	Hire additional skilled programmers to create staff data analysis reports and respond to program changes	Resources (staff and funding) for energy efficiency programs' IT needs is limited	M	M
CRM defects	Continue transition from customized to standard CRM	Sunk costs in customized version	H	H
Online Application Requests	Develop online application and tracking status for nonresidential programs	Resources (staff and funding) for energy efficiency programs' IT needs is limited	H	H
Regulatory and Statewide Coordination				
Individual requirements are not overly burdensome, but they add up in combination and have “costs” to the program	Improve collaboration with CPUC to maximize value of requirements, minimize resource cost to meet them	Existing tension between program staff and regulatory requirements, complexity and size of portfolio, staff turnover (see Organizational chapter)	H	H
	Discuss with CPUC the potential to pilot test new requirements to identify burden and value, and to streamline before fully launching		M	M
	Provide feedback to CPUC only on the most burdensome requirements to focus attention on the most resource-intensive		L	M

Issue raised in current process evaluation	Recommendation(s)	Obstacle(s) to Addressing Issue	Difficulty in Addressing (L/M/H)	Value of addressing (L/M/H)
Requirements (benchmarking, PPMs) are symptomatic of the complexity of linking Strategic Plan to programs	Program staff: Improve understanding of the rationale for CPUC requirements and try to address the spirit of the recommendations in line with the shared mission	CPUC and SoCalGas priorities are not aligned: CPUC regulatory requirements in place to ensure transparency of programs that align with California's long-term strategic interests, while SoCalGas focuses on customer experience and program delivery, and energy savings	M	H
	CPUC: Continue building understanding of day-to-day program implementation and impact of requirements, and work with IOUs to minimize resource cost of meeting requirements and increase value		M	H
Regulatory requirements are not well understood by program staff	Ensure clear communication channels between program managers and policy advisors		L	M
	Develop internal "crash course" for regulatory requirements for new staff. Use a neutral tone to improve the current negative or dismissive perceptions of regulatory requirements.		M	M
	Enable program management to communicate significant regulatory burdens to policy advisors who can discuss issues directly with CPUC		L	L
Marketing				
Lack of an "overall portfolio marketing roadmap"	Create a comprehensive plan and share with all staff. Clearly outline the roles and responsibilities of key players, including Segment Advisors, mass marketing staff, AE representative, vendor relations staff, via a RACI chart. Document metrics or milestones to track performance	Staff are already time constrained	M	H
	Develop plan as a collaborative initiative amongst all internal groups involved in implementing or marketing the program.		M	H

Issue raised in current process evaluation	Recommendation(s)	Obstacle(s) to Addressing Issue	Difficulty in Addressing (L/M/H)	Value of addressing (L/M/H)
	Implement periodic (semi-annual) marketing meetings for all staff involved in marketing, including Segment Advisors, mass marketing staff, vendor relations staff, AE representative, to share marketing activities		L	M
Lack of program awareness among many unassigned customers, compounded by erroneous and missing fields in databases	Leverage vendors to reach unassigned accounts by incenting with referral fees, provide awards (and an awards ceremony/ press event), offer sales/outreach training	Identifying specific vendors	M	H
	Strategically target both nonparticipating vendors and those that sell/install high efficiency equipment via networking events, quarterly newsletters, free technical trainings, referrals from customers		M	M
	Prioritize keeping program website up-to-date with correct information	Marketing budgets	M	H
	Add new field in program and customer databases for customer emails, and identify a few key fields (customer phone, email, NAICS, contractor) for staff to enter accurately		M	H
	Coordinate a portfolio marketing campaign that includes all programs (both SoCalGas and 3P) to raise awareness and lend credibility to others promoting programs (e.g. 3P implementers, possibly vendors)		H	M
3rd party implementer integration				
Lack of coordination among AEs, PMs, and 3P implementer	Increase training lunches for AEs on 3P programs	AEs resistant to attending follow-up meetings on 3P programs, AEs have no formal role in 3P program marketing, some AEs do not have good	M	M

Issue raised in current process evaluation	Recommendation(s)	Obstacle(s) to Addressing Issue	Difficulty in Addressing (L/M/H)	Value of addressing (L/M/H)
	Invite AEs to participate in key program contacts with assigned customers.	relationship with some 3Ps, AEs lack confidence/trust in some 3P implementers	L	M
SoCalGas restricts co-branding, and some policies unclear	Revisit co-branding policies to see if any can be relaxed. Clarify co-branding policies ≤ 6 months after start of program cycle	Legal restrictions, and multiple departments involved in designing policy and template regulations	M	M
	Include 3P program content on SoCalGas's website		M	M

Figure 2 - Summary of Portfolio-level Issues and Recommendations

1.2 PROGRAM FINDINGS AND RECOMMENDATIONS

The tables below summarize the final findings and recommendations for each program evaluated.

Program ID(s)	Program Name	Main Issues Identified	Main Recommendations	Difficulty in addressing (H/M/L)	Value of addressing (H/M/L)
SCG3603 SCG3608 SCG3612	Energy Efficiency Rebates for Business (Deemed – Ag, Comm, Ind)	Projected gas savings may not be achieved	Increase program mass-marketing and targeted segment marketing for gas measures and industrial segment	M	M
		Low program awareness among non-participants	Create incentives for service technicians (CSTs/ISTs) to promote program	M	M
		Missed customer marketing opportunities	Integrate 3Ps to recruit large retailers	M	M
		Not enough vendors promoting program	Hire additional staff to assist Vendor Relations outreach	M	M
SCG3602 SCG3607 SCG3611	Energy Efficiency Business Incentives (Calculated)	Data management challenges, and many applications include errors. (Note: Streamlined application was released in early 2012).	Automate the application process with drop-down menus (to reduce errors), enhance data tracking and to help the utility fulfill regulatory requirements	H	H
			Provide training to vendors and AEs to reduce incomplete applications. Engineering should notify AEs when an application is returned due to errors/incompleteness.	M	H
		Vendors would like to be more involved in the program and could be used to help AEs recruit customers and reach unassigned customers	Provide vendor participation process, so vendors can supplement AE recruitment.	H	H
			Create a vendor database and send periodic program updates. Start with Vendor Equipment Directory	M	M
			Create case studies and other marketing materials to help vendors and AEs market the program	M	M
		Capital is obstacle for customers (ROI is shorter than in previous years)	Cross market financing programs, particularly OBF	L	L

Program ID(s)	Program Name	Main Issues Identified	Main Recommendations	Difficulty in addressing (H/M/L)	Value of addressing (H/M/L)
		Program database lists customer in IOUContractor field, so contractor is not tracked for later marketing (e.g., for recruitment as participating vendor)	Track contractor/vendor data in database for marketing purposes	L	L
SCG3601	Local Non-Residential BID	Program design not flexible (staff reports this would conflicts with program goals of incenting very large energy savings projects): participant meets/exceeds entire program budget and savings goals, and large savings projects are rare	Consider reducing minimum threshold savings for BID for some project type (e.g., emerging technology), and/or allowing vendors to aggregate across customers to achieve savings threshold	L	M
		While PIP promotes features specific to BID (collaboration with other agencies, SoCalGas technical assistance), these may not be occurring to the extent envisioned	Provide vendor participation process	H	H
			Identify mechanisms for improving collaboration with other agencies: make contacts, check in periodically	L	M
			Identify technical assistance SoCalGas could provide beyond norm	L	L
SCG3604 SCG3609 SCG3613	Nonresidential Audits (Ag, Comm, Ind)	AEs are not held to specific goals (including conversion rate)	Establish more specific metrics or goals for AEs. Tie AE incentives to specific PPMs, such as conversion rate.	L	H
		AEs wear multiple hats, and the Nonresidential Audit Program is not a priority	Devote several SoCalGas staff or a third party implementer to deliver the program, continuing to engage AEs as the face to the customer	M	H
		Audit quality varies	Train the staff sufficiently so that all audits are high quality	M	H
		Customers do not consistently receive follow-up to audit	Require that follow-up take place by those providing the audit in an established period of time	M	H
SCG3663	Program for Resource Efficiency in	Some AEs not helping 3P target and contact key customers; consequently, 3P cannot leverage SoCalGas's customer leads	Support 3P with updated list of AEs, provide lunch and learn meetings between AEs and 3P	M	H

Program ID(s)	Program Name	Main Issues Identified	Main Recommendations	Difficulty in addressing (H/M/L)	Value of addressing (H/M/L)
	Private Schools (PREPS)	SoCalGas's co-branding policies have slowed 3P's marketing strategy and production of program collateral	Revisit co-branding policies, and clarify policies within first 6 months of program cycle	M	M
SCG3672	SaveGas (Hot Water Control)	Projected gas savings are not being met	Re-evaluate savings goals to create more accurate savings estimates for coming program cycle	L	M
			Implementer work with SoCalGas and SDG&E (since same program at both) marketing departments to prepare case studies to show savings. Consider using data gathered here (participant reported bill savings, satisfaction).	M	M
		Hotels do not recall EDC marketing	Review implementer's marketing strategy, and have implementer provide "warm" contacts to SoCalGas AEs, so that AEs can be prepared to answer their customers' questions	L	M
			Incent more effective marketing by re-structuring future contract so depends more on performance (energy savings), less on time and materials	L	M
		Poor coordination and communication between 3P and AEs	Implementer should notify AEs about all planned contacts with assigned customers, invite AEs to attend, and provide information on outcome of contacts, to build confidence and trust	M	M
		EDC lacks credibility with hotels	As part of effort to build confidence and trust, implementer conducts bi-annual SaveGas lunch meetings for AEs to advise them of program activities	L	M

Figure 3: Summary of Program Findings and Recommendations

The following figure shows the budget status relative to allocated for all nonresidential programs, based on the Q3 2011 database.

Program ID	Program Name	Budget Allocated	Budget Spent	Committed Budget	% Budget Spent
SCG3602	SW-AgA - Calculated	$ 5,886,576	$ 1,132,920	$ 1,734,210	19%
SCG3603	SW-AgB - Deemed	$ 4,561,000	$ 789,728	$ 1,620	17%
SCG3604	SW-AgC - Nonresidential Audits	$ 176,521	$ 15,701	-	9%
SCG3605	SW-AgD - Pump Test & Repair	$ 266,539	$ 9,665	-	4%
SCG3606	SW-AgE - Continuous Energy Improvement	$ 64,223	$ 41,008	-	64%
SCG3607	SW-ComA - Calculated	$ 7,970,900	$ 3,175,279	$ 2,317,196	40%
SCG3608	SW-ComB - Deemed	$ 15,253,471	$ 5,197,059	$ 15,510	34%
SCG3609	SW-ComC - Nonresidential Audits	$ 1,833,302	$ 282,802	-	15%
SCG3610	SW-ComD - Continuous Energy Improvement	$ 1,029,118	$ 139,150	-	14%
SCG3611	SW-IndA - Calculated	$ 52,350,450	$12,197,756	$ 8,495,654	23%
SCG3612	SW-IndB - Deemed	$ 10,067,596	$ 1,789,670	$ 55,004	18%
SCG3613	SW-IndC - Nonresidential Audits	$ 1,909,380	$ 718,131	-	38%
SCG3614	SW-IndD - Continuous Energy Improvement	$ 1,337,885	$ 84,774	-	6%
SCG3652	SW-HVACB - Commercial Quality Installation	$ 55,996	$ 5,682	-	10%
SCG3653	SW-HVACC - Commercial Upstream Equipment	$ 42,013	$ 5,768	-	14%
SCG3654	SW-HVACD - Quality Maintenance Program	$ 203,209	$ 7,789	-	4%
SCG3655	SW-HVACE - Technology & Systems Diagnostics	$ 463,264	$ 7,292	-	2%
SCG3657	SW-HVACG - HVAC Core	$ 55,003	$ 15,258	-	28%
SCG3601	Local05 - Local Non-Residential BID	$ 3,114,801	$ 208,182	$ 2,700,000	7%
SCG3644	Local01 - OBF	$ 2,590,871	$ 532,570	-	21%
SCG3646	Local04 - Local Strategic Develop & Integ	$ 853,187	$ 302,376	-	35%

Program ID	Program Name	Budget Allocated	Budget Spent	Committed Budget	% Budget Spent
SCG3660	3P-NRes1 - Steam Trap and Compressed Air Survey	$ 3,176,259	$ 765,347	-	24%
SCG3661	3P-NRes2 - Energy Challenger	$ 481,414	$ 238,091	-	49%
SCG3662	3P-NRes3 - Small Industrial Facility Upgrades	$ 2,084,620	$ 157,015	-	8%
SCG3663	3P-NRes4 - Program for Resource Efficiency in Private Schools	$ 1,939,519	$ 159,964	-	8%
SCG3672	3P-Xc01 - Gas Cooling Retrofit	$ 1,623,716	$ 393,141	-	24%
SCG3673	3P-Xc02 - SaveGas – Hot Water Control	$ 4,583,364	$ 1,027,966	-	22%
SCG3675	3P-Xc04 - California Sustainability Alliance	$ 3,657,212	$ 1,533,639	-	42%
SCG3676	3P-Xc05 - Portfolio of the Future (PoF)	$ 4,512,437	$ 1,786,551	-	40%
	Total for nonresidential programs	**$132,143,845**	**$32,720,272**	**$15,319,194**	**25%**

Figure 4: Budget status of all Non-residential SoCalGas Programs through Q3 2011.

The following figure shows projected, installed, committed energy savings, based on EEGA Q3 filings. These are based on the most current version of DEER, which will soon be updated. The values will change once the CPUC finalizes DEER.

Program ID	Program Name	Gas Savings (Annual Therms x 1000)		
		Projected	Installed	Committed
SCG3602	SW-AgA - Calculated	3457	631	2491
SCG3603	SW-AgB - Deemed	4050	488	2
SCG3604	SW-AgC - Nonresidential Audits	-	-	-
SCG3605	SW-AgD - Pump Test & Repair	-	-	-
SCG3606	SW-AgE - Continuous Energy Improvement	-	-	-
SCG3607	SW-ComA - Calculated	5460	2413	4455

Program ID	Program Name	Gas Savings (Annual Therms x 1000)		
		Projected	Installed	Committed
SCG3608	SW-ComB - Deemed	12,346	2133	21
SCG3609	SW-ComC - Nonresidential Audits	-	-	-
SCG3610	SW-ComD - Continuous Energy Improvement	-	-	-
SCG3611	SW-IndA - Calculated	34,491	14,707	16,576
SCG3612	SW-IndB - Deemed	7207	5926	310
SCG3613	SW-IndC - Nonresidential Audits	-	-	-
SCG3614	SW-IndD - Continuous Energy Improvement	-	-	-
SCG3652	SW-HVACB - Commercial Quality Installation	-	-	-
SCG3653	SW-HVACC - Commercial Upstream Equipment	-	-	-
SCG3654	SW-HVACD - Quality Maintenance Program	-	-	-
SCG3655	SW-HVACE - Technology & Systems Diagnostics	-	-	-
SCG3657	SW-HVACG - HVAC Core	-	-	-
SCG3601	Local05 - Local Non-Residential BID	1310	-	3180
SCG3644	Local01 – OBF	-	-	-
SCG3646	Local04 - Local Strategic Develop & Integ	-	-	-
SCG3660	3P-NRes1 - Steam Trap and Compressed Air Survey	-	-	-
SCG3661	3P-NRes2 - Energy Challenger	-	-	-
SCG3662	3P-NRes3 - Small Industrial Facility Upgrades	1143	-	-
SCG3663	3P-NRes4 - Program for Resource Efficiency in Private Schools	905	-	-
SCG3672	3P-Xc01 - Gas Cooling Retrofit	53	58	-
SCG3673	3P-Xc02 - SaveGas – Hot Water Control	933	235	-
SCG3675	3P-Xc04 - California Sustainability Alliance	-	-	-
SCG3676	3P-Xc05 - Portfolio of the Future (PoF)	-	-	-

Program ID	Program Name	Gas Savings (Annual Therms x 1000)		
		Projected	Installed	Committed
	Total for Nonres Programs	**71,357**	**26,592**	**27,035**

Figure 5: SoCalGas Energy savings status for non-residential programs from EEGA Q3 2011 filings (DEER-based).

2. INTRODUCTION

On behalf of SoCalGas, the evaluation team conducted a process evaluation of SoCalGas' nonresidential programs to provide feedback on the 2010-12 Energy Efficiency programs. The findings are intended to serve as a midpoint check-up to provide feedback, and to inform filings for bridge funding and the next program cycle.

This report presents the findings of the evaluation. We encourage all stakeholders to read the entire report. But because of its length, we structured it based on intended audiences, as follows:

- Main Report: This is intended for all interested stakeholders, including all SoCalGas staff, the CPUC, 3P implementers, vendors, and others. It includes:
  - Executive Summary: Describes the main issues identified and recommendations for the portfolio-level evaluations, and for program-specific evaluations. We also provide the budget and energy savings status for each program.
  - Introduction: Describes the structure of the report.
  - Overview of Methodology: Summarizes data collection activities.
  - Best Practices: Summarizes how nonresidential programs compare to best practices. (The best practice comparison is described for each program in more detail in Attachment 2.)
  - Regulatory and Statewide Initiative evaluation – We include this portfolio-level evaluation here (as opposed to in Attachment 1), because the Main Report's intended audience includes the CPUC.

- Attachment 1: This is intended primarily for all SoCalGas staff, particularly senior-level staff, and those involved in the utility practices described in each chapter. One chapter is dedicated to each portfolio-level issue evaluated. Each chapter begins with an overview of the issue; presents results from staff interviews, and other relevant data collection activities (e.g., customer surveys, vendor interviews, interviews with other stakeholders); and presents final conclusions and recommendations. We evaluated:
  - Organizational issues
  - IT issues
  - Marketing
  - Effectiveness of Third Party implementation
  - Appendix – Third Party Co-Branding Examples and Issues

  As noted above, the Regulatory and Statewide Initiative evaluation is presented in the Main Report.

- Attachment 2 – Program Evaluations. This is intended primarily for SoCalGas program managers and senior-level staff. One chapter is dedicated to each

program evaluated. It includes a program overview; program status (budget, energy savings, number of participants and vendors); review of end-of-cycle PPMs and other potentially useful metrics; results from staff interviews, customer surveys, vendor interviews and other data collection activities; and final conclusions and recommendations. We evaluated:

- Calculated
- Local Nonresidential Bid
- Deemed (EERB)
- SaveGas
- Program for Resource Efficiency in Private Schools (PREPS)
- Nonresidential Audits
- Appendix – Early Feedback Memo: Recommended Programs for Critical Review

- Attachment 3 - Data Collection Resources (including customer survey frequency tables). It is broken into 3A (the main attachment, providing resources for most programs) and 3B (presenting data collection resources for the following third party programs: SaveGas, PREPS). Data collection resources include:
  - Program staff Interview Guides
  - Vendor interview guides
  - Customer survey resources, including survey codebooks and sampling methodologies
  - Account Executive (AE) forum guide
  - Segment advisor forum guide

  Customer survey resposes (frequency tables) are provided in separate files

- Attachment 4 - Work Plan and Evaluability Assessment. We developed these at the beginning of the study, and used them to guide research activities. Both files were developed based on limited data collection. The information they contain should be considered with much less weight than the information provided in the main volumes of the report (Main Report, Attachment 1, and Attachment 2), which are based on far more extensive data collection.
  - The work plan described the identified research topics and planned research activities.
  - The evaluability assessment (developed in conjunction with the work plan) describes key characteristics for all nonresidential programs, and identifies which programs would be evaluated in more detail through the study.

3. Overview of Methodology

We present an overview of research activities in the figure below.

In brief, we began our data collection activities with an in-person kick off meeting and interviews with program managers and other SoCalGas staff. With their input, we developed goals for the process evaluation, gained an overview of the programs and portfolio-level issues, and identified possible data collection activities. Based on these initial findings, we conducted an evaluability assessment and developed a work plan, which identified specific programs and portfolio-level issues for evaluation.

We then held a forum with AEs, followed immediately by a forum with segment advisors, to discuss their roles, experiences, and challenges.

Based on these SoCalGas interviews, we developed and administered two surveys for customers – 1) for those currently participating in nonresidential energy efficiency programs, to gather marketing information and program satisfaction and feedback, and 2) those not participating, to gather marketing information and reasons for not participating. We also conducted a few in-depth-interviews with customers (participants and near participants). In sampling customers for the survey, we were limited by several constraints, including: We could not survey customers that had been recently surveyed, or would soon be surveyed, by SoCalGas; many assigned customers were thus unavailable. Some segments have only a few, large customers (e.g., petroleum). Also, AEs requested we remove some customers from the sample. Thus, the surveys were biased more towards unassigned accounts (e.g., nonparticipant survey sample had 24% assigned, and 76% assigned), and segments with only a few respondents (e.g., petroleum facilities) were not well represented. When reviewing survey analysis, note that respondents could provide more than one answer to some questions. Consequently, percentages may exceed 100% or the number of responses in all categories may exceed the total 'n' value.

We then conducted interviews with participating vendors, to understand their role, experience with program processes, and coordination with SoCal Gas staff.

Throughout the process, we spoke with various SoCalGas staff for program-specific and portfolio-level evaluations. This included follow-up interviews with program managers, and interviews with others involved in program processes, including application processing, inspections, savings calculations, M&V, vendor coordination, CPUC coordination, database management, and website development. We also reviewed various materials, including program-specific documents (e.g., policy manuals, program implementation plans, logic models), and other related documents (e.g., 2006-08 Process Evaluation report, CA Strategic Plan).

Finally, we spoke with stakeholders outside of SoCalGas, including implementation contractors and CPUC staff.

Data Collection Activity	Timeframe	Key Research Issues	No. of Data Points[1]
General kick off meeting, followed by small group or one-on-one interviews with program managers and assistants, policy advisors, M&V manager, C/I markets manager, and other SoCalGas staff	May 3-4 2011	Goals of process evaluation, overview of programs and portfolio-level issues, current challenges, research questions, references, additional interviews to obtain	25 unique staff
Account executive forums	Sept. 2011	Marketing, coordination with other departments, program processes, challenges	8 AEs in forum
Segment advisor forum	Sept. 2011	Roles, marketing analysis, challenges, coordination with other SoCalGas staff	5 in forum (2 interviewed at kick-off)
Participating customer surveys	Oct. – Nov. 2011	Program awareness and interest, satisfaction with program elements and overall	241
Nonparticipating customer surveys and near participant interviews	Oct. – Nov. 2011	Program awareness, interest in participating in programs	160
Participating and nonparticipating vendor interviews	Nov. 2011 – Jan. 2012	Reasons for vendor and customer participation, marketing, program processes, awareness of programs	~12 unique vendors
Follow-up interviews with program managers	May 2011 – Jan. 2012	Portfolio-level issues, details on program specifics	6
Interviews with other SoCalGas staff, including engineers, IT, vendor coordinator, rebate processing manager, measure developer	May 2011 – Dec. 2011	Portfolio-level issues, role, challenges, recommendations	~9
Interview with CPUC regulatory staff	Jan. 2012	Review CPUC perspective of regulatory requirements	1
Review of program materials, including PIPs, policy manuals, logic models, application flowcharts, 2006-08 process evaluation results	May 2011 – Jan. 2012	Understanding program processes	Various
Review of portfolio related documents: PPMs, Strategic Plan, Potential Goals and Targets draft	May 2011 – Jan. 2012	Understanding portfolio-level processes and context	Various

Figure 6 – Summary of SoCalGas Data Collection Activities

[1] For interviews, refers to total number of people we spoke with. The total number of interviews was greater, because we spoke with some interviewees (e.g., program managers, implementation contractors) multiple times.

4. BEST PRACTICES RESULTS SUMMARY

The evaluation team assessed each of the 6 programs against industry defined best practices. The term "Best Practice" refers to the business practices that, when compared with other business practices used to address similar processes, produces superior results.

This assessment is an update to the best practices review from the SoCalGas 2006-2008 Non-Residential Evaluation. As each evaluation chapter of this report contains an updated best practice review assessing individual adherence to industry best practices, this section will also include programs not covered in the 2006-2008 review.

The National Best Practices Study[2] identified eighteen cross-cutting best practices developed from analysis of nonresidential programs across the country, described in 4.1. These best practices are grouped into three main areas: Program theory and design, program management (including reporting and tracking and Quality Control), and program implementation (including the participation process and marketing). Under each area, the evaluation team briefly describes each applicable best practice questions and subsequent reasoning. Following these brief descriptions, the evaluation team also provide a description of the data collection activities used to support the best practices assessment. This section concludes with an overview of the best practices findings at the SoCalGas portfolio level, including a summary table.

We present a more detailed assessment of best practices in each program chapter in Attachment 2, including our reasoning supporting the assessment in the summary table and a comparison to the "Historical" best practices assessment conducted as part of the 2006-08 process evaluation.

4.1 DESCRIPTIONS OF BEST PRACTICES

4.1.1 Program Theory and Design

Is the program design effective and based on sound rationale? Is the local market well understood?

Programs should have a clear stated program theory to facilitate efficient program evaluation and evolution by providing a foundation for assessing progress towards

[2] Volume S – Crosscutting Best Practices and Project Summary. Quantum Consulting. December 2004. This study was managed by Pacific Gas and Electric Company under the auspices of the California Public Utility Commission in association with the California Energy Commission, San Diego Gas and Electric, Southern California Edison, and Southern California Gas Company.

goals. Likewise, programs should strive to understand the market within which the program operates. This understanding will allow programs to develop a more effective relationship with relevant market actors and recognize which lessons from other areas transfer to the local market and which ones do not.

4.1.2 Program Management

Are responsibilities defined and understood? Is there adequate staffing?

Programs with multiple entities involved, such as technical support contractors, must provide clear lines of responsibility and communication protocols. As much as possible, processes should appear integrated and seamless. In addition, programs should ensure that adequate staff support exists to properly manage program activities, regardless of whether the program relies on in-house staff or contractors to provide that support.

Are data easy to track and report? Are all routine functions automated as practical?

Programs should clearly articulate the data requirements needed to measure success and develop useful reporting and tracking systems in a cost-effective manner. Likewise, automated routine tasks (e.g. standardized reports, automated notification procedures) build in quality control checks and allow staff time for more strategically important tasks. Programs should utilize regular check-in and progress milestones to ensure that project status is known on a timely basis.

Does the program manager have a strong relationship with vendors involved in the project? Does the program verify the accuracy of application data, invoices, and incentives to ensure the reporting system is recording actual installations by target market? Are customers satisfied with the product?

Programs should vary the level of inspection or quality assurance depending on complexity of the project and past relationship with the vendor. Standard measures installed by known vendors are likely to need less rigorous quality control and verification than higher risk measures. Programs with no control over vendors may need more quality control-oriented inspection. Also, programs should ensure that quality products are incented through the program. For example, energy efficiency programs in California and throughout the U.S. have installed poor quality lighting fixtures, resulting in dissatisfied customers that are more wary of high efficiency lighting in the future. Programs should utilize customer satisfaction surveys to identify unanticipated problems or benefits related to a particular product. Timely implementation of these surveys is important in order to quickly correct any identified problems.

4.1.3 Program Implementation

Is participation simple? Are participation strategies multi-pronged and inclusive? Does program provide quick, timely feedback to participants? Is participation part of routine transactions?

Programs should implement an easy, simplified participation process, as this will facilitate participation of both customers and vendors. Both customers and vendors commonly choose not to participate in eligible programs due to the perceived complexity of the participation process.

Likewise, programs that implement multi-pronged outreach strategies are more likely to allow market actors to participate in a variety of ways. The exact mix of activities will vary depending on the unique circumstances of an individual program's environment. Programs that make participation part of an existing transaction or creating one-stop shopping for an energy efficiency measure help integrate energy efficiency into the market. Finally, fast turnaround and good service often drive both vendors' and participants' satisfaction with the program.

Does the program facilitate participation through the use of Internet/electronic means? Does the program offer a single point of contact for their customers?

Programs that leverage the Internet (i.e. online downloads, electronic application processing, installation reports) can improve program responsiveness and reduce administration cost. In addition, projects are more effectively managed through a single point of contact, particularly those involving complex system upgrades or long timelines.

Are incentive levels well understood and appropriate?

Programs should set incentive levels to maximize net program impacts (i.e., program impacts attributable to the program interventions and adjusted for measure realization) and adjust incentive levels based on market demand and tie incentives to performance.

Does the program use targeted marketing strategies? Are products stocked and advertised? Are vendors and utility staff trained to enhance marketing?

Programs should use targeted messages at particular customers and vendors and alternative information delivery channels in order to maximize participation. In addition, for measures that are typically installed by customers, programs should provide marketing support to retail channels (e.g., in-store advertising materials, co-operative advertising funds). Likewise, in many markets, consumers rely on vendors as their chief source of information about products. These vendors can be an effective "on-the-ground" sales force for the program. To keep private sector marketing efforts effective, programs should provide outreach and offer training on program details to the applicable vendors.

4.2 DATA COLLECTION ACTIVITIES

Our Best Practice review of the current SoCalGas programs consisted of a detailed review of several Best Practice frameworks. These included the 2004 National EE Best Practices Study, the 2006-2008 Non-Residential Evaluation, and materials from www.eebestpractices.com website. After our review, we matched the current programs to those assessed in the previous 2006-2008 evaluation in order to provide a historical

comparison of program performance. In addition, we used these resources to determine best practices for those programs not previously assessed.

Using the evaluation team interviews with program staff (including program managers, account managers, and vendor outreach specialists), interviews with participating vendors, and program participants, we assessed whether each program was currently meeting the best practice standard (noting, as necessary, where the standard was not applicable or the practice was not researched given the information available).

4.3 BEST PRACTICE RESEARCH FINDINGS

The best practice research findings are summarized for the portfolio in Figure 7.

Program design: The SoCalGas programs evaluated are generally well-designed. They have clear, rational models for achieving their goals and understand their markets. The only clear exception to this is the BID program; this program should conduct additional market research to better understand its target market.

Program management: The programs are not consistently managing their functions according to best practices. While roles are understood and quality control (QC) procedures are in place and practiced, several programs are understaffed and have difficulties with data tracking and subsequently, automating routine functions. All programs except the SaveGas program and the BID program reported that data tracking and reporting causes internal inefficiencies.

Program implementation: Program implementation can be split into the participation process and the marketing approach. Overall, SoCalGas programs implement marketing strategies in accordance to best practices. These include targeted marketing materials, and outreach and education to both utility staff and vendors (the availability of products was largely not evaluated). However, there are some gaps in how the programs are operating in regards to the participation process. While most programs offer a single point of contact and facilitate reasonable electronic participation means (e.g., downloadable applications online), others struggle to provide quick and timely feedback to participants, or to educate participants and vendors about the available incentives.

Detailed discussions of each program and its comparison to best practices are contained in the program-specific sections.

Best Practice	Yes	No	Maybe	Not Applicable	Not Researched
Is the program design effective and based on sound rationale?	Deemed Audits PREPS SaveGas Calculated BID				
Is the local market well understood?	Audits PREPS Calculated	BID	Deemed SaveGas		
Are responsibilities defined and understood?	Deemed Audits Calculated BID	PREPS SaveGas			
Is there adequate staffing?	PREPS SaveGas	Deemed Audits Calculated		BID	
Are data easy to track and report?	SaveGas	Deemed Audits PREPS Calculated	BID		
Are all routine functions automated as practical?	Deemed	Audits Calculated	SaveGas	PREPS BID	
Does the program manager have a strong relationship with vendors involved in the project?	Deemed	Calculated BID	PREPS SaveGas	Audits	
Does the program verify the accuracy of application data, invoices, and incentives to ensure reporting system is recording actual installations by target market?	Deemed Calculated BID			Audits PREPS	SaveGas

Best Practice	Yes	No	Maybe	Not Applicable	Not Researched
Are customers satisfied with the product?	Calculated			PREPS	Deemed Audits SaveGas BID
Is participation simple?	Audits SaveGas	Deemed PREPS	Calculated	BID	
Are participation strategies multi-pronged and inclusive?	Audits	SaveGas BID	Deemed Calculated	PREPS	
Does program provide quick, timely feedback to participants?	BID	Deemed SaveGas Calculated		PREPS	Audits
Is participation part of routine transactions?	Deemed Calculated	PREPS SaveGas		Audits BID	
Does the program facilitate participation through the use of Internet/electronic means?	Calculated BID	Audits PREPS	Deemed SaveGas		
Does the program offer a single point of contact for their customers?	Audits SaveGas Calculated	PREPS			Deemed BID
Are incentive levels well understood and appropriate?	Deemed	Calculated	BID PREPS	Audits SaveGas	
Does the program use targeted marketing strategies?	Deemed Audits	BID	PREPS Calculated		SaveGas
Are products stocked and advertised?				Audits PREPS SaveGas Calculated BID	Deemed
Are vendors and utility staff trained to enhance marketing?	Deemed Audits	PREPS BID	Calculated		SaveGas

Figure 7: Best Practices Findings Summary for SoCalGas Nonresidential Programs

5. Regulatory Requirements and Statewide Initiatives

This chapter presents regulatory requirements and how they affect day-to-day operations at SoCalGas. It also presents how the following statewide initiatives impact day-to-day operations, and how they could be used to guide portfolio and/or program changes in the future.

5.1 Overview

Across the Demand Side Management (DSM) portfolio, the CPUC has set forth regulatory requirements to which Sempra program managers and other program staff must adhere. These requirements are in addition to requirements set forth by the Sempra legal department. The requirements are in place to ensure public transparency of the DSM programs and have a range of objectives, including ensuring the programs are consistent across the IOUs; facilitating regular, accurate and consistent reporting of program accomplishments programs; support broader statewide energy efficiency initiatives; and report on progress toward statewide strategic goals and objectives.

The resource intensity of compliance with regulatory requirements arose as a portfolio-level research issue during initial interviews with Sempra staff. Sempra policy advisors indicated the complexity of the requirements creates difficulties and confusion for program staff. Program staff expressed meeting the regulatory requirements involves extensive time and effort, and often questioned the value of this time and level of work commitment. CPUC staff indicated the requirements are necessary for that state's long-term energy efficiency goals. The CPUC does not see the requests as extraordinary to the daily activities of the programs.

5.2 Data collection activities

The evaluation team undertook some focused research to explore the rationale, resource commitments, and benefits of the requirements with Sempra program staff and CPUC ED staff. Because regulatory issues affect both SoCalGas and SDG&E, we researched this topic concurrently at both utilities. The team focused on two programs, SoCalGas Calculated and SDG&E Deemed, by conducting two project case studies in each program. The analyses included review of application materials, interviews with program management staff, AEs, engineers, and customers, and four-week resource logs of the two program managers' time spent on all regulatory requirements. We also reviewed findings from interviews conducted with program staff for the other programs addressed by the broader nonresidential portfolio evaluation. Finally, we interviewed one representative from the CPUC. We also attempted to interview an additional CPUC representative, but were unsuccessful.

Through the process evaluation, our research included:

- Understanding the regulatory requirements and priorities that impact program staff, AEs, engineering, and customers

- Determining the objective/intent of the requirements, and to what extent those are being met through these requirements
- Estimating the amount of time spent by program managers on regulatory requirements
- Weighing the benefits of each regulatory requirement versus the resources consumed by the IOUs (and others) to track requirements
- Identifying recommendations for improving the regulatory reporting process to increase the benefits associated with them and/or reduce the burden on SoCalGas staff of tracking them

The following table summarizes data collection activities, including interviews conducted and materials reviewed.

Target for Data Collection	Data Collection Mode	Date)	Key Research Issues	No. of Data Points	Source of Sample
SoCalGas Policy Advisors	Interview	5/3/11 and 11/16/11	Regulatory requirements, communicating these to program staff	4 advisors interviewed (1 twice)	Sempra process evaluation manager
SDG&E Policy Advisors	Interview	5/4/11	Regulatory requirements, communicating these to program staff	3 advisors interviewed	Sempra process evaluation manager
SoCalGas Calculated Program Manager	Interview	11/17/11	Review internal application process update; Document regulatory requirement demands; Track completed project through current process	3	Sempra process evaluation manager
SoCalGas Calculated Program Manager	Time Entry	11/14/11to 12/16/11	Daily time required to complete regulatory tasks	1	Sempra process evaluation manager
SoCalGas Calculated Program Manager	Document Review	11/17/11	Review documentation of two completed SoCalGas calculated program projects	2	Sempra process evaluation manager

Target for Data Collection	Data Collection Mode	Date)	Key Research Issues	No. of Data Points	Source of Sample
SDG&E Deemed Program Manager	Interview	11/17/11	Review internal application process update; Document regulatory requirement demands; Track completed project through current process	2	Sempra process evaluation manager
SDG&E Deemed Program Manager	Time Entry	11/14/11 to 12/16/11	Daily time required to complete regulatory tasks	1	Sempra process evaluation manager
SDG&E Segment Supervisor	Interview	12/7/11	Review "Customer Experience Process Map" initiative	1	SoCalGas Policy Advisor
SoCalGas Calculated Program Customer	Interview	12/8/11 and 12/21/11	Document application process demands	2	SoCalGas Calculated Program Manager
SoCalGas Calculated Program AE	Interview	12/16/11	Document application process and regulatory requirement demands	2	SoCalGas Calculated Program Manager
SoCalGas Engineering Staff	Interview	12/14/11	Document application process and regulatory requirement demands	1	SoCalGas Calculated Program Manager
CPUC Energy Division Representative	Interview	1/19/12	Review CPUC perspective of regulatory requirements	1	Sempra process evaluation manager

Figure 8 – Regulatory Data Collection Activities (done concurrently at SoCalGas and SDG&E)

5.3 RESULTS AND FINDINGS

Results of our research are presented here. We selected a subset of requirements that are the most time consuming for staff to fulfill and/or present the opportunity to streamline to allow more time to directly serve customers and improve programs. Overall, the regulatory requirements are well intended, but the execution of the requirements does not always fulfill the original goal. Likewise, there is a tension between meeting regulatory requirements while maintaining efficiently functioning programs. This tension is exemplified by the program implementation plans (PIPs), which have become incrementally overloaded with important

strategic and regulatory information, making it difficult to use them as a tool to understand the basics about how a program is being run.

Below we present details around our investigation of several of the regulatory reporting requirements with which program staff routinely deal.

5.3.1 Benchmarking

Background

In Decision 09-09-047 in September 2009, the CPUC required the IOUs to include benchmarking as standard practice in the commercial and governmental energy efficiency programs. The requirement supports the July 2012 implementation of AB 531 which requires the benchmarking of all commercial buildings involved in real estate transactions. The CPUC believes accurate, thorough benchmarking can yield a powerful database which will help improve the overall energy efficiency portfolio. In the decision, the CPUC increased program budgets to accommodate the requirement.

Following the decision, the CPUC clarified that the IOUs should exclusively use EPA's Energy Star Portfolio Manager for all benchmarking. Portfolio Manager is an interactive energy management tool that tracks and assesses energy and water usage in a building or across many buildings. It contains a built-in financial tool that compares cost savings across buildings and calculates cost savings for energy conservation projects. Customers can also track changes in energy consumption over time and can apply for awards for increasing energy efficiency at their facilities. In addition, customers can enter their account numbers, so that billing data is automatically uploaded, facilitating energy tracking. Another party (e.g., vendor, AE) could also set this up on behalf of the customer, if the customer fills out a form to allow this.

Currently, the CPUC is undergoing a broader study of benchmarking. Consequently, the evaluation team reduced the scope of research on this topic. Of outstanding note in the team's findings, confusion exists as to whether benchmarking is actually a CPUC requirement. According to most reports from staff, SoCalGas has dropped the benchmarking requirement for participation in programs, but SDG&E still requires it. However, at least one vendor we interviewed that participates in both SDG&E and SoCalGas programs reported that SDG&E has dropped benchmarking, but SoCalGas still requires it. Because this is the reverse of our understanding, the policy is not clear to stakeholders.

Benchmarking Tool

The database that informs Portfolio Manager's default values is EIA's Commercial Building Energy Consumption Survey (CBECS). The survey is conducted on a quadrennial basis collecting the characteristics and energy use information of commercial buildings with a sample size of

5000-7000 buildings. In April 2011, EIA announced that it will not publish complete data tables from the 2007 CBECS or release a public use file, as the data collected was not considered credible. Further, EIA has suspended work on the 2011 CBECS due to FY 2011 funding cuts[3]. This means that the Portfolio Manager will continue to use 2003 data for default values until 2014, when the results of 2012 CBECS are expected to be first available. This time gap is likely to make the default values even less relevant, and further increase the necessity of reliable reporting from customers.

SDG&E requires all customers to submit a copy of their "Statement of Energy Performance" from ENERGY STAR® to receive rebates or incentives. To facilitate the process, SDG&E held nine (9) benchmarking workshops across the service territory. In addition SDG&E has setup a helpdesk to answer questions and facilitate the process. Employees that interface with customers have been trained on the ENERGY STAR® Portfolio Manager.

According to SoCalGas senior staff, SoCalGas encourages customers to benchmark their facilities but does not require it. Six benchmarking workshops were held across the service territory. SoCalGas has developed and distributed a benchmarking factsheet and a step-by-step guide to commercial customers. A helpdesk has been setup to answer questions and facilitate the process. Employees that interface with customers have been trained on the ENERGY STAR® Portfolio Manager.

The evaluation team notes that the Portfolio Manager is currently undergoing an upgrade with a forecasted rollout of early 2013. The EPA has proposed that the upgrade include a more user-friendly interface and added web services. The new user interface will mimic TurboTax® by fluidly guiding users through the data entry process, effectively eliminating the need for training on and understanding of the process[4]. These updates should mitigate some data entry issues.

However, gathering and entering data will likely still be a significant effort. The information required for the benchmarking tool is fairly streamlined and simple. However, collecting accurate information requires a significant amount of time. For example, the following inputs are required for a retail store[5]:

_____ Gross floor area (SF)

_____ Weekly operating hours

_____ # of workers on main shift

_____ # of personal computers

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[3] Energy Information Administration. "CBECS Status." Web access Feb 2012; <http://www.eia.gov/emeu/cbecs/>

[4] Zatz, Mike. "A First Look at EPA's Portfolio Manager Upgrade." EPA. December 2011. Web access Jan 2012 ; <http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager_upgrade>

[5] Downloaded from http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager_benchmarking

_____ # of cash registers

_____ # of walk-in refrigeration/freezer units

_____ # of open & closed refrigeration/freezer cases

_____ Percent of floor area that is cooled in 10% increments (10%, 20%, 30%, etc.)

_____ Percent of floor area that is heated in 10% increments (10%, 20%, 30%, etc.)

_____ Exterior entrance to the public – yes or no

While this information may be available, it is generally not at the fingertips of the person filling out the benchmarking tool. For example, the user may need to determine this information for smaller buildings; for larger buildings, some of this information may be available, but inputs that are not already known will take longer to gather. Also, the benchmarking tool user may not be present at the facility (e.g., property management company staff). Some aspects are challenging or confusing (e.g., parking energy should be excluded if the area is not included on the meter), which take time to understand or lead to inaccurate results if misunderstood. Overall, the customer may not think it is worth spending the time to collect accurate information, particularly for a small rebate or incentive.

Benchmarking Feedback

Benchmarking is considered a challenge for most program staff and vendors. According to AEs and vendors, they (either AEs or vendors) generally enter the benchmarking data into the tool for customers. Staff and vendor feedback was centered on data entry difficulty and results validity. The issues identified by SoCalGas and SDG&E staff and vendors are listed below:

- Energy Star Portfolio Manager can be difficult to use and does not comprehensively address all relevant building types. Users can enter data for all building types and view reports of energy intensity; however, users in excluded building types cannot receive an Energy Star score, which compares energy intensity of other buildings of the same type.
- The data entry is complicated. Most customers do not have an inventory of their equipment needed for data input. Gathering the data is time consuming and can be difficult to obtain.
- Customers turn to AEs and vendors when they struggle to complete the benchmarking. AEs and vendors input default values into the tool, because the actual data is not easily accessible.
- Some customers are reluctant to sign the permission form to grant permission to a 3rd party to access to their billing data. A vendor serving multi-family buildings noted, “The way the [permission forms] are worded does not generate trust from a tenant’s perspective, so they do not always get filled out.”
- Inputting default values into the tool takes at least 30 minutes; inputting actual data can take several hours per facility.
- The benchmarking score is meaningless when customers input default values into the tool. The results often make little sense and are rarely used again.
- Benchmarking has stopped at least a few customers from participating in the programs.

- Portfolio Manager is not well equipped to handle gas equipment.
- There is no method of tracking which sites have been benchmarked, so customers may have to submit again for additional EE projects. However, one SDG&E staff noted there is a field in CRM to track which accounts have been benchmarked, and that SDG&E processing staff have been instructed to mark it. We do not know if the same instructions have been given to SoCalGas processing staff.

As positive feedback on benchmarking from SDG&E staff and vendors: One SDG&E AE noted that one of her "big box" chain accounts found benchmarking useful, because it allowed them to compare across facilities. The Retrocommissioning 3P implementer and the RCx providers indicate that the ENERGY STAR® Performance Benchmark is a positive program requirement, as it allows for more meaningful comparison between projects. The 3P implementer also feels that the requirement forces the facility owner to take responsibility early on in the project development – leading to more customer engagement and commitment. However, the RCx program implementer reported some multi-family projects are not able to complete the benchmarking requirement, because they cannot access individually metered data.

We asked customers about benchmarking during our participant surveys. Half of respondents (48% and 49% for SDG&E and SoCalGas, respectively) set up the benchmarking tool themselves, while 52% and 51% reported that "someone else" did it (N=193 and 121, respectively, for the completed survey question). Across both SDG&E and SoCalGas participant respondents, a higher fraction reported "someone else" for incentive type programs (ESB, Calculated) than for Direct Install and Deemed, likely because AEs and vendors are more involved in these programs.

Regarding Portfolio Manager's usefulness among customers, high percentages of both SDG&E and SoCalGas participants(64% and 74%, respectively) reported that they had reviewed results provided by the benchmarking tool established for their property (N=188 SDG&E, N=114 SoCalGas). For each program addressed in our survey, more participants had than had not reviewed benchmarking results. This trend was most dramatic for incentive-type programs at SDG&E and the Comprehensive Audit and Calculated programs at SoCalGas. A breakdown of responses to this question addressing benchmarking results review, in total and by program, is provided below in Figure 9 (SDG&E) and Figure 10 (SoCalGas).

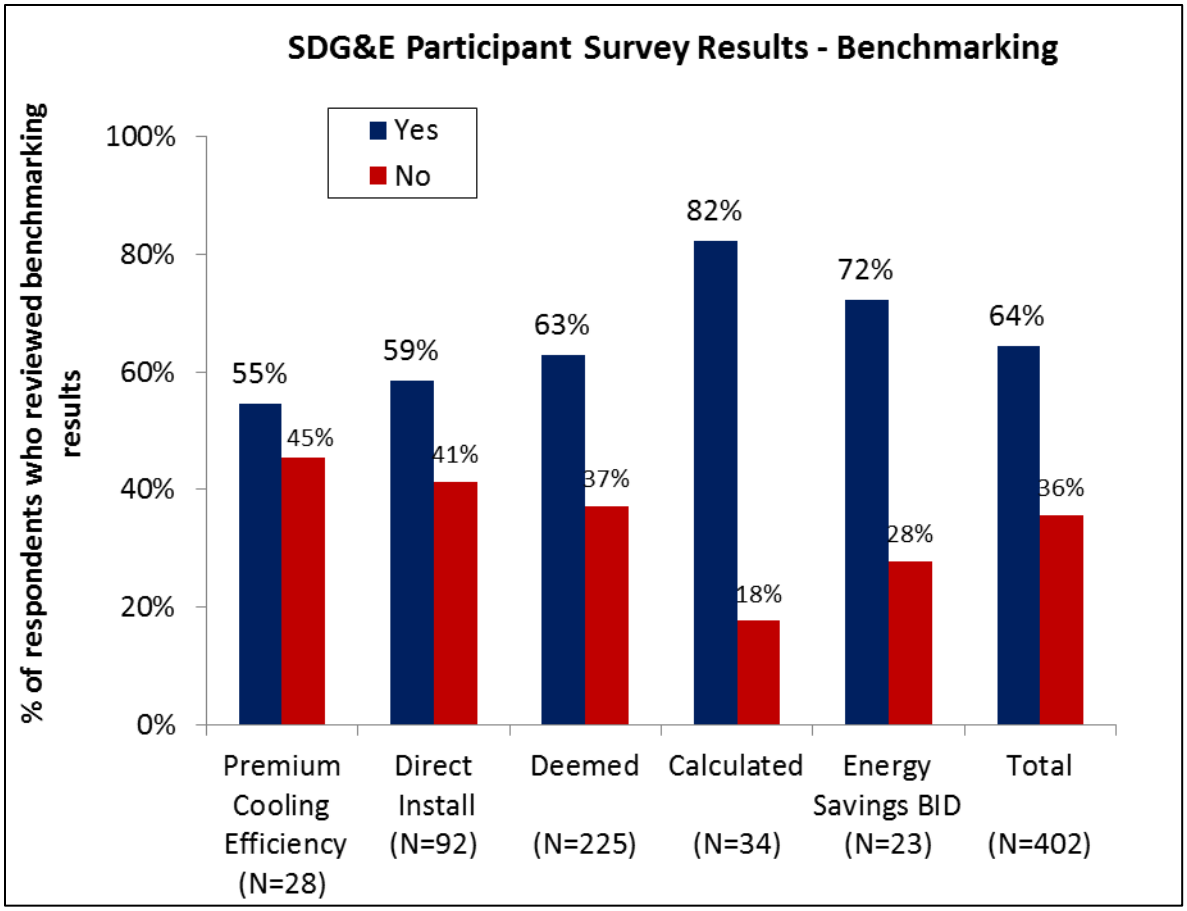

Figure 9 – SDG&E Participant Review of Benchmarking Results, by Program

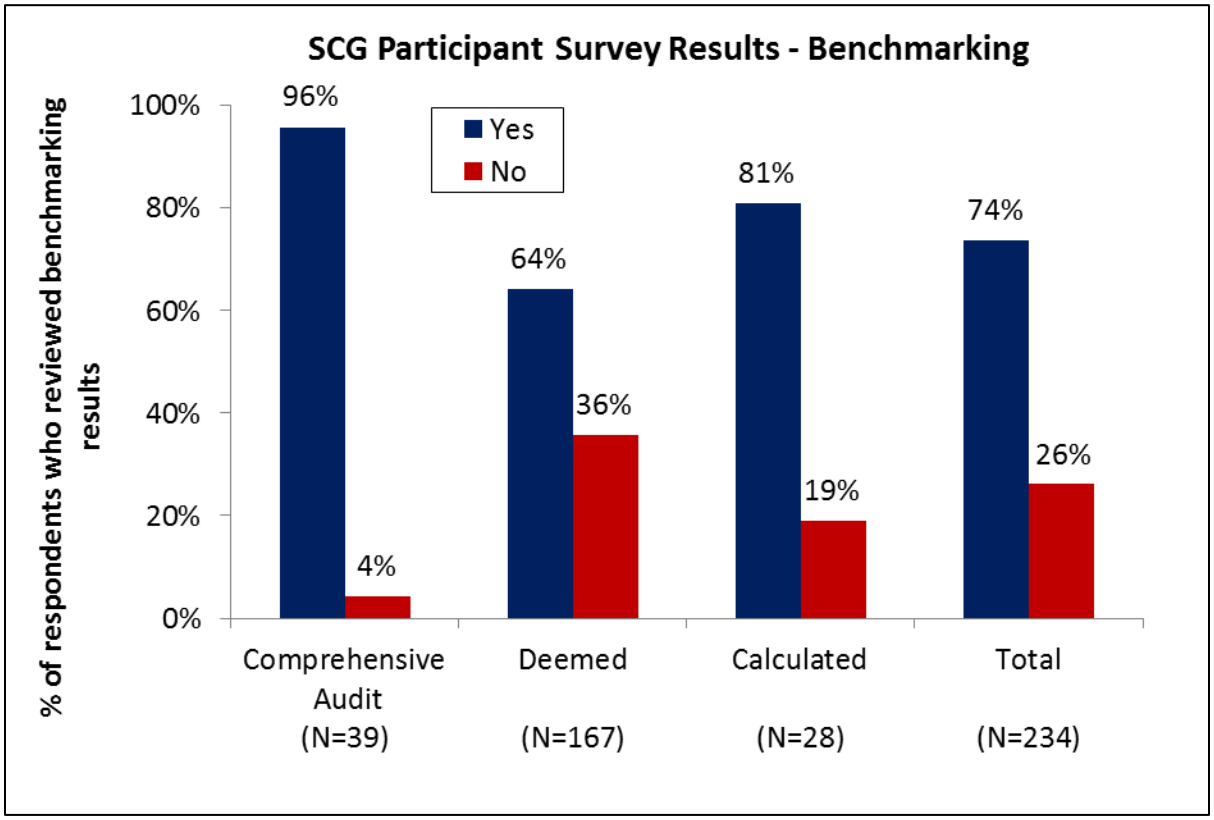

Figure 10: SoCalGas Participant Review of Benchmarking Results, by Program

Benchmarking Conclusions and Recommendations

Our findings of customer interest in their property's benchmarking results are encouraging, and the CPUC benchmarking study will provide more comprehensive data on the value of benchmarking to customers. On the implementation side, our findings indicate that vendors, AEs and program staff see benchmarking as an additional burden and do not see its benefit to their customers. There may be improvements that can be made to Portfolio Manager to streamline necessary data entry efforts, as well as to increase proficiency in its use among utility staff that provide benchmarking support to customers, together reducing burdens on program personnel while increasing benefits and value to customers.

Benchmarking can be a very useful tool for customers (for tracking their energy savings and facility energy usage), and for utilities and the State (to understand energy use, savings potential, the results of codes, standards, and programs, and more). Many customers expressed interest in the results of the benchmarking tool.

However, the benchmarking tool is complex and cumbersome, and it takes significant time to complete accurately. Consequently, it is not enthusiastically encouraged by the utility and is currently a lost opportunity. Most customers benchmark their facility to complete the requirement to receive the rebate or incentive. Many pass the task to AEs or vendors, and

default values are often used (instead of actual values), because of lack of information or time. Unless customers have bought into the idea of benchmarking *and* want to incorporate the information into their facility management practices, it is not a useful tool to them.

For customers that want to participate in benchmarking, SDG&E and SoCalGas could include the benchmarking data entry into audit programs. For comprehensive audit programs, much of the necessary data should be collected during the audit phase. An automatic upload of the data would facilitate the process for the customer.

Technical assistance incentives could be offered for customers that pay to have their facilities benchmarked. This facilitates accurate data collection and meaningful benchmarking scores for a reasonable cost.

For customers that are actively using the benchmarking tool to increase energy savings over an extended period of time, SDG&E and SoCalGas could offer incentives or awards for reducing their energy consumption by 20%.

All of these recommendations would help build up the database for specific types of facilities and climate zones, and identify some of the more cumbersome aspects of the tool for improvement.

Reliable benchmarking data would be of great value for the utility as well, and could help to focus future program outreach activities. Regular education and training workshops to communicate its true value could be offered to customers, as well SoCalGas internal staff, AEs, and vendors. This would help break some of the barriers mentioned earlier and create a more accepting environment for the revised user interface when it is rolled out in 2013.

5.3.2 Statewide Coordination

Around the early to mid-2000s, the CPUC ordered the utilities to more formally coordinate their programs and offer statewide consistent programs. The CPUC decided the program portfolios of the four IOUs were too complex and proposed the IOUs participate in a select number of core statewide programs consistent with the Strategic Plan. After several incarnations, the statewide program offerings include Deemed and Calculated programs for commercial, agricultural, and industrial customers for the nonresidential sector. There are some basic requirements that the programs stay consistent across the utilities, including rebate levels, savings calculation methodology, and prescriptive savings values. Utilities maintain some flexibility to serve the unique needs of their customer base. For example, the utilities can tailor their marketing strategies and application processes.

In theory, the coordination would promote customer participation through clearer, simpler, and more consistent core program processes. The coordination would also enhance and normalize the experience of customers with locations across the service territories. The utility collaboration would also foster efficiency in program design and delivery, as well as efficiency for vendors that serve customers across service territories.

The utilities have used statewide coordination meetings as one method to maintain consistency. Some programs, such as HVAC, have stronger coordination than others by necessity of the program. For the nonresidential programs, there are separate Commercial, Agricultural and Industrial calls. For Sempra utilities, that structure does not align with how they run their programs. For example, at both SoCalGas and SDG&E, Deemed and Calculated cross sectors, creating redundancy. The extent to which utilities effectively coordinate their programs is a function of the length of time utility staff have held their jobs and worked together, how the utility is structured, and if staff from each utility hold similar roles and levels of authority.

The statewide coordination has advantages and disadvantages. Some Sempra staff members find that the extra time they spend preparing for and attending meetings does not justify the value that is created for the programs. Coordinating across utilities can also be difficult, since the IOUs have differing corporate structures and interpretations of the CPUC directives. Although the IOUs have standardized incentives and measure mixes, each IOU has its own application documents, process, and program marketing and branding. Moreover, some IOUs do not implement certain programs. For example, SoCalGas does not have a direct install program. IOU coordination breaks down and is often nonexistent for such programs.

Some Sempra staff question the purpose and effectiveness of the statewide coordination meetings. Though they are helpful for reviewing the status of each IOU's program, the meetings often lack leadership and direction and occur too frequently. For each meeting, the program managers must prepare discussions of the PPMs and any measure-specific issues. Gathering the data takes resources away from program management and implementation, which is already stretched thin. Some program staff believes that monthly meetings are unnecessary. Some suggested quarterly or as-needed meetings as a solution, because the IOUs will have more information to share, and the meetings will be more productive.

Within each Sempra utility, program staff are not always clear who should participate in and lead the statewide coordination meetings. Some of the programs have a lead IOU who prepares agendas and action items, but others, such as the Calculated programs, do not. For SoCalGas, the program managers pull the PPM data out of the CRM database prior to the calls. However, program managers will sometimes skip the meetings if conflicts arise and delegate assistant staff as representatives. According to the SoCalGas Deemed program staff, the meetings tend to focus on electric savings, and SoCalGas often has no contribution to the discussions. Within SDG&E, the program managers give the PPM information to segment advisors prior to the calls. One program manager is not sure who from SDG&E actually participates in the calls, and the program manager does not receive feedback following the calls.

Program staff feel limited by the requirement that they must offer the same incentive levels, since they feel that their markets differ and may justify higher incentives in some cases. In addition, the inflexibility of the statewide programs makes it more difficult to properly adjust program roles of non-statewide programs (which are generally different at each IOU). For example, one suggestion made by this evaluation team for the SDG&E Energy Savings Bid program was to move simple lighting measures to Deemed, but increase rebate levels for large energy savings projects; this last component of the recommendation is restricted by statewide

rules. There are also hurdles to adding measures in one utility that the others do not offer. In the SDG&E Deemed program, if the program wants to add a measure that other IOUs have not included, SDG&E must formally document the rationale, costs, and savings; and track the differences in program reporting.

Staff generally view coordination as a burden that limits flexibility. There are incremental improvements that could be made to ease the burden and improve the value of statewide coordination that we offer in the recommendations section below. We did not resolve the question of whether the benefits of maintaining consistent programs across the IOUs warrants the limitations on flexibility within service territories, but it is a question that may warrant further investigation.

5.3.3 Program Reporting (DEER)

The Database for Energy Efficiency Resources (DEER) dates back many years and offers the state and energy efficiency programs nationwide a valuable resource for deemed savings values. Over time, programs across the nation have begun building their own similar databases, and the use of "deemed" savings has become more routine.

In Decision 10-12-054, the CPUC established protocol to freeze the DEER 2008.2.05 *ex ante* measure savings. With a pending DEER update, the CPUC decided to use the "best available information" for current program cycle. The changes to the DEER database have caused several issues for the Sempra program portfolios.

To date, the DEER database remains unrevised. In the absence of the updated measure savings data, Sempra cannot accurately analyze program performance. Sempra calculated program cost-effectiveness based on the current DEER values. According to one portfolio manager, Sempra cannot readily do mid-program cost-effectiveness evaluations. The Sempra tracking system requires manual updates, and one solution would be an automated process. However, many Sempra staff members find the program processes overly complex, and the greater complexity decreases the efficacy of the programs. Despite the lack of internal IT capability for an automated process, Sempra staff believe the issues have arisen because of the frequent changes imposed by the CPUC.

The increased complexity of the programs also increases Sempra's administrative costs. The CPUC has required IOUs to capture additional data fields to align with the level of detail in the DEER data. In the SDG&E Deemed program, SDG&E has modified the application to capture the additional data (e.g., actual Wattages of lighting, equipment serial numbers). The program has attempted to incorporate the additional data collection while considering the experience of the customers. Across the portfolio, the increase in collected data leads to more time spent on QA/QC of the applications and training of program staff and vendors.

Both Sempra staff and vendors question the accuracy and applicability of the DEER data. The vendors need reliable savings and incentive estimates when selling energy efficiency projects. The updates to DEER data create uncertainty in savings values. Additionally, despite having about 40,000 measures, the DEER savings values are often inaccurate. Various Sempra staff and vendors pointed out the operating hours within DEER do not apply consistently to all projects

and often lead to unrealistic reductions in energy savings. Similarly, the types of facilities in DEER are limited, so facilities are often "shoehorned" into the closest fit, leading to inaccuracies in operating hours and other characteristics.

Senior-level program management believes the data requirements and changes shift much of the program burden onto the vendors. As a result, vendors are less likely to participate in the programs, because they do not always understand the appropriate data to use for their savings calculations. The vendors are removed from the CPUC decision and become frustrated with Sempra. The vendors, who are the initial and ongoing contact with customers for many programs, express their dissatisfaction with Sempra and the programs to the customers.

Other utility staff generally view DEER as an increasingly complex database with uncertain values. The intentions of the CPUC to use the best available data are justified, but the uncertainty has created apprehension regarding portfolio performance. Additional investigation may look into the effect of DEER complexity and uncertainty on program performance, specifically vendor and customer participation levels.

5.3.4 Application and Review Process

Previous evaluations have classified the application processes as a significant barrier to program participation. The applications are complex, tedious, and completed manually, and the processes take a long time. For instance, the application process for Calculated program projects often takes a more than a year from initial site audit to incentive payout.

During the course of this evaluation, SoCalGas implemented an update to program application processes. SoCalGas initiated internal reviews of the application processes to evaluate and find the balance between the CPUC requirements and the customer experience. Teams of AEs, program staff, and regulatory staff at each utility worked to develop processes focusing on a positive experience of the customers while meeting regulatory requirements. The teams met regularly through the year and coordinated with various program groups, including engineering, inspection, and QA/QC.

The 2012 application processes will have fewer documents and customer signatures. SoCalGas can accept electronic signatures on all documentation. For example in the Calculated program, SoCalGas has combined the Letter of Interest document with the Customer Application, eliminated the Final Incentive Worksheet, and no longer requires wet signatures.

Although SoCalGas has addressed some of the issues, program staff at this utility (as well as at SDG&E) feels the application process is burdensome in general. For Deemed projects, the customers and vendors do not always understand the necessary specifications required for certain measures. Customers have complained about the process, and senior program staff agrees the rebate process should be straightforward with quick turnaround. Sempra is considering development of a specifications database, which could mitigate much of the misunderstanding in the Deemed process.

Calculated projects require significantly more documentation and review. As one senior program manager noted, in order to meet CPUC EM&V requirements, Calculated project

applications can be 100 or more pages, regardless of project size and incentive level. The additional requirements are in part an effort to address the issues surrounding ex post energy savings. The actual energy calculations are a relatively small portion of applications. AEs and vendors must compile the supporting documentation, including invoices, specification sheets, and, when applicable, M&V plans. Compiling the necessary paperwork can cause delays in the application process. According to a vendor coordinator, the vendors sometimes do not think the application burden is worth the incentive.

One SDG&E AE noted application reviews use an iterative error resolution process. The reviews may only capture one error at a time, so the system can reject an application several times for misspellings, missing specification sheets, or unrecognizable model numbers. (The rebate processing department at SDG&E disagreed, and reported that all errors were identified before rejecting the application.) Despite a vendor or AE often leading the customer through the application, the processing department sometimes sends the disqualified application directly to the customer, as opposed to the AE or vendor. The customer does not always proactively correct the application or notify the appropriate party. SDG&E staff believe that both issues are compounded by the high staff turnover rate in rebate processing, noted in the Organizational chapter.

Project Case Study Findings

The evaluation team reviewed two calculated program project case studies at SoCalGas for overall application process and regulatory activities. While this was only done for SoCalGas projects, the Calculated application processes are similar at both utilities, and the regulatory review is the same. The evaluation team interviewed the program manager, AE, customer, and engineering staff associated with each project. The program manager selected two representative projects that have completed the application process. Both projects are completed retrofit projects with savings less than 200,000 therms, thus M&V was not needed. The evaluation team noted SoCalGas recently modified the application process to enhance the customer experience while meeting all regulatory requirements. SoCalGas completed the case studies using the now outdated process.

According to the program manager, most projects do not encounter many regulatory barriers during the application process. However, AEs and vendors must collect a significant amount of data and documentation from the customers. The documents include invoices and specification sheets, of which one of the case studies had over 100 pages from several vendors. The AEs must review the invoices prior to submitting the applications, and the QA/QC staff checks them again for accuracy.

The customers did not experience any unusual project delays and the CPUC did not select either project for in-process review. For the two case studies, the customers were pleased with the process and the level of communication and commitment from SoCalGas staff. One of the customers did express his surprise that the analysis only looked at a snapshot of the equipment and operations to calculate savings. He had expected a more rigorous measurement plan and some longer-term verification. Again, SoCalGas did not require M&V because the project was less than 200,000 therms.

The engineering team reviewed the projects and approved the energy savings calculations. Typically, the AEs will reach out to the engineering team via email to initiate projects. Because projects vary in size and scope, the engineering team does not have specific timelines for completion of reviews. According to one engineer, the workload generally is manageable, but the coordination with the various parties (e.g., vendors, AEs, 3rd parties) throughout the process can be cumbersome. Now, the engineers must coordinate with the CPUC on selected projects as well. Although the amount of time the coordination will take is unclear at this time, Sempra staff indicated it could be significant and cause project delays. However, a misunderstanding may exist between the CPUC and Sempra staff regarding the directive. Sempra staff members expressed the hassle in coordinating logistics and timing with the ED. In proceeding A.08-07-021, the CPUC states the IOU must only notify the ED of certain project events (e.g., pre-installation inspections, spot measurements) during the project. After receiving notification, the ED notifies the IOU whether a representative will attend the event. The proceeding does not explicitly state the IOUs are responsible for coordinating event timing and logistics. The CPUC requires that the utility create a custom measure and project archive (CMPA) as soon as possible after the project is either identified in the pre-application stage or the date of the customer's application to the IOU, whichever is earlier. The CPUC may choose projects from this list at any time for review and the review duration is indeterminate.

The CPUC did not select the custom project in our review for inspection, and the customers received their incentive checks for project completion. At the end of a project, the engineering team archives the project data. Because of the increased level of EM&V scrutiny in place with the new process, the engineering team now archives all project information, including email and telephone correspondence with AEs, customers, vendors, and the CPUC. Engineering must keep the records for several years, in case the CPUC requires the information for post-cycle evaluations.

During the CPUC's in-process reviews, the project disqualifications generally come from technicalities, as opposed to inaccurate engineering calculations. This indicates that Sempra should attempt to recognize technicalities prior to developing a potential project. The CPUC can classify projects as free riders, and the engineers cannot appeal those decisions. The engineering team does see the earlier decision on project qualification as perhaps one benefit to the CPUC discretionary reviews.

5.3.5 California Long Term Energy Efficiency Strategic Plan

Background

In 2008, the CPUC approved the California Long Term Energy Efficiency Strategic Plan (Strategic Plan) in Decision 08-09-040. Last updated in January 2011, the state's EE strategic plan was conceived in late 2007 as a "framework for making energy efficiency a way of life in California

by refocusing ratepayer-funded energy efficiency programs on achieving long-term savings through structural changes in the way CA's use energy."[6] The Strategic Plan reflects broad stakeholder input and lays out a roadmap for energy efficiency through 2020 and beyond for broad economic sectors – residential, commercial, industrial, agricultural.

Integration of Strategic Plan with Programs: in Theory and in Practice

The following describes how SoCalGas nonresidential program efforts fit into the Strategic Plan[7].

Strategic Plan Goal	Strategies	Current Efforts	Potential Next Steps
50% of existing buildings will be equivalent to zero net energy buildings by 2030 through achievement of deep levels of energy efficiency and clean distributed generation.	Establish Mandatory energy and Carbon Labeling & Benchmarking	Mandatory Benchmarking for all Commercial Programs	Instructional help for customers attempting to benchmark their facility or facilities.
			"Office hours" available for customers attempting to benchmark their facilities.
			Service offering with a set fee per sq. ft. to input the data into Energy Star Portfolio Manager
			Incentives or awards for customers that increase their ES benchmarking score by 20% over their base case
	Develop Effective Financial Tools for EE Improvements to Existing Buildings	On-Bill Financing	Work with lending agencies to create low-cost financing for longer term projects, similar to AARA funding sources.
			Advertise current financing success stories in industry publications and local newspapers
			Utility program that will incentive energy finance consultants to help businesses secure low cost financing.
	Develop Business Models and Supplier Infrastructure to Deliver Integrated and Comprehensive "One-Stop" Energy Management Solutions	SaveGas	Create kickers for projects that install 3 or more measure types.
			For Large Projects (Greater than $750k), Allow Customers to Reserve funds for 9-12 months
Support California industry's adoption of energy efficiency by integrating energy efficiency savings with achievement of GHG goals and other resource management objectives	Develop Coordinated Energy & Resource Management Program for CA's Industrial Sector, to Enhance Use of Energy Efficiency	BID, Collaboration with the Food Processing Consortium	Create a Pilot Program for the Food Processing Sector.

Figure 11 – SoCalGas Nonresidential Program Alignment with CA Energy Efficiency Strategic Plan

[6] CA Energy Efficiency Strategic Plan: January 2011 update, for the CPUC, by Engage 360.

[7] California Energy Efficiency Strategic Plan. January 2011 update http://www.energy.ca.gov/ab758/documents/CAEnergyEfficiencyStrategicPlan_Jan2011.pdf .

In practice, program staff at the IOUs have varying degrees of knowledge regarding the Strategic Plan in general. Some are not familiar with it at all, others do not know how it relates to their program, and yet others are precisely aware of the Strategic Plan's goals for their sector or market. Few are in compliance and actively engaged with the goals outlined in the Strategic Plan.

However, when the CPUC approved the Strategic Plan, it directed the Energy Division (not the IOUs) to develop a "process to track progress towards end points for program efforts and progress metrics." A later decision (D. 09-09-047) noted that "defined end points" in this context refers to the "time-bound and quantitative milestones and targets included in the Strategic Plan, specifically the Big Bold Programmatic Initiatives on zero net energy buildings, as well as the other quantitative targets contained in the Strategic Plan" (D. 09-09-047 at 89).

We also discuss how the Nonresidential Audit program relates to the Strategic Plan, in the chapter on this program in Attachment 2.

5.3.6 Program Performance Metrics

Background

Decision 09-09-047 defined Program Performance Metrics (PPMs) as "objective, quantitative indicators of the progress of a program toward the short and long-term market transformation goals and objectives in the Strategic Plan" (D. 09-09-047 at 91). It identified PPMs as essential to track the progress of each program towards the Commission's market transformation goals (D. 09-09-047 at 98).

Decision 09-09-047 identifies several purposes for PPMs. These are:

- To track California's progress towards achievement of Strategic Plan objectives, specifically the Big Bold Programmatic Initiatives and other key Plan goals and objectives (D. 09-09-047 at 98);
- To inform portfolio development and necessary modifications in future portfolio decisions, including improving program design or eliminating non-performing programs (D. 09-09-047 at 98);
- To target the next generation of improvements, and thus, continue the cycle of market transformation (D. 09-09-047 at 98); and
- To evaluate program-specific quantitative and qualitative measures through EM&V activities (D. 09-09-047 at 300).

Decision 09-09-047 states that Program Performance Metrics shall comply with the following principles:

- The metrics shall be designed for simplicity and cost effectiveness when considering data collection and reporting requirements (D. 09-09-047 at 92);
- Integrated metrics shall be developed for programs that employ more than one technology or approach, such as whole building programs (D. 09-09-047 at 92);
- The metrics shall link short-term and long-term strategic planning goals and objectives to identified program logic models (D. 09-09-047 at 92);

- The metrics shall track progress towards Commission-adopted market transformation goals (D. 09-09-047 at 91);
- The metrics shall allow the Commission to evaluate progress toward market transformation as a factor in determining whether the programs should be continued, modified or eliminated in future portfolios (D. 09-09-047 at 98); and
- Performance metrics shall be maintained and tracked in the Energy Efficiency Groupware Application (EEGA) database (or a similar database to be determined under the guidance of Energy Division) (D. 09-09-047 at 92).

Impact of PPMs: in Theory and in Practice

In contrast to the Strategic Plan where there was different levels of awareness among program staff, all program staff interviewed were aware of PPMs. This may in part stem from the requirement that some programs report PPMs on an annual basis.

Despite the Decision 09-09-047 stated principle that "metrics shall be designed for simplicity and cost effectiveness when considering data collection and reporting requirements" (D. 09-09-047 at 92), some IOU program staff report that tracking of PPMs is not simple and requires a lot of extra time. These staff state that the data to report on PPMs was not being tracked prior to Decision 09-09-047, and is not easily produced by the existing tracking databases. Therefore, in order to report on PPMs, they have had to create parallel databases or rely on manually recording and reporting the data needed. Other program staff report that PPM tracking is relatively straightforward, although it does minimally increase their workload. Where the infrastructure to track program-specific PPMs existed prior to Decision 09-09-047 existed, this process is going well. Where the infrastructure did not exist, program staff must devote additional resources and time to track the metrics.

Program staff also mention that they are unaware of the reasons for tracking PPMs, other than to fulfill compliance requirements. Three staff members explicitly stated that the PPMs are not used to inform their program implementation. Many of the metrics are reported by the reporting group at the end of each program year or the end of the program cycle, and not used on an ongoing basis by program staff to monitor program progress. There are no explicit goals associated with metrics. Policy advisors work with program staff to collect the data and explain the requirement, but there is no emphasis on trying to use the metric to monitor program progress or otherwise improve the programs. There is a disconnect between the intent of PPMs and the implementation of their tracking and reporting.

PPMs are illustrative of the disconnect that sometimes exists between the original intent of a regulatory requirement and the day to day implementation of that requirement. It becomes another item to report, and is not meaningfully being used to improve programs at the level of implementation. Though it offers to value to CPUC staff and stakeholders who may use the data to track progress towards the Strategic Plan, make decisions about programs or to inform market strategies related to statewide goals. It is unresolved whether the additional tracking burden on the IOUs is warranted by the value offered to the CPUC. This is the first program cycle where PPMs were developed and tracked. Future cycles could build on the experience

and improve the value of tracking PPMs and reduce the tracking burden by making incremental modifications and clarifications to some of the metrics that cause the majority of the burden.

Where applicable, we report progress towards end-of-cycle PPMs, and suggest additional metrics for a program to track *internally* to assess progress, in each program chapter of Attachment 2.

5.3.7 CPUC Revised EM&V Protocol and Discretionary Project Review (CMPA)

In Decision 11-07-030, the CPUC implemented procedures for non-DEER deemed measures ex ante reviews and custom project application (aka calculated savings) ex ante savings values reviews. Previously, the CPUC withheld review of measures until the evaluation, measurement and verification period, a period known as the ex post review. The CPUC now reviews and approves non-DEER deemed measures and custom project applications prior to freezing those ex ante values. Sempra believes this requirement impairs program innovation and growth, because the review process for new measures takes too long and generally is not worth the effort. On the other hand, CPUC staff noted the CPUC implemented the change as a result of the utilities requesting that the Commission freeze measures ex ante parameters values prior to the start of a program cycle, and that the risk/reward incentive mechanism be calculated based on verified installation applied to frozen ex ante savings parameters values.

Additionally, the CPUC has implemented project discretionary reviews of calculated projects (e.g., for Calculated and Energy Savings Bid programs), through the Custom Measure Project Archive (CMPA) process. The process was developed in part to address a criticism of the 2006-08 impact evaluation, that much of the evaluation data collection happened retroactively. Through CMPA, program staff submit projects twice per month to CPUC, and allow 2 weeks for the CPUC to decide which projects (if any) it will review. As needed, IOUs can request an expedited review decision. According to both SoCalGas and SDG&E staff, the CPUC has not yet developed clear protocols for what happens if a project is selected for review, and some projects that have been selected have been severely delayed in the pre-inspection step. On a positive note, SDG&E staff reported in March 2012 that the process has improved due to direct communication with CPUC staff, and that some projects are moving forward again.

As a secondary challenge posed by CMPA, program staff must also maintain a separate project database to submit to the CPUC, which is time consuming. (It does not interface with CRM or Track It Fast.) According to time and resources tracked for a Sempra calculated program manager, the data pulls take approximately one hour every two weeks. While this is a small amount of time, it is just one of many reporting requirements that add up. The CPUC does not think the data requirement is extraordinary, as Sempra should already track and maintain the necessary data. Also, one AE noted he is not concerned with providing the additional upfront data, because the two additional data points are only imprecise estimates at such early stages in the process. He does not think the data will take any extra effort to produce.

Sempra is concerned the CPUC can review any project at any time during the process and delay processing for an undefined time. A review can lead to reduced savings, project delays, and logistical hassles with the coordination of site visits, customer interviews, and energy

calculation reviews. However, according to the CPUC staff, the CPUC only selects projects that are in pre-installation stages. The CPUC wants to see projects with probable applications, and the ideal is to review the project in parallel with the utility.

Sempra staff expressed the concern that the CPUC did not consider the vendors and customers in the decision to review selected projects. AEs noted the difficulty involved in managing customer expectations during the waiting period. The vendor alliance / relations staff worry the CPUC will classify more projects as free riders. Vendors see this as Sempra's responsibility, and as a result, the vendors are less likely to run projects through the programs. The customers also see any project delays caused by the EM&V procedures as the fault of Sempra. The extended timeline could discourage customers from applying for incentives. At the time of this evaluation, no CPUC-selected projects were available for review. CPUC staff expressed that after it has selected projects for review, Sempra would reply that the projects were already signed. Those projects not signed were missing critical data for review, and CPUC had to send data request to Sempra requesting additional information. Sempra has not provided CPUC the parallel review opportunity as directed in D.11-07-030. CPUC staff reviews have made no impact on any Sempra custom projects' ex ante savings at this point.

5.3.8 Free Ridership

Because this was a process (not impact) evaluation, we did not evaluate free ridership. However, during the SoCalGas AE forum, AEs described that it can take years to finally convince a customer to install an energy efficiency project. At times, they have discussions with customers quite a bit earlier than the decision is made to install the high efficiency equipment. It is that information – more so than the rebate check – that AEs believe move customers to purchase the high efficiency equipment. Consequently, this customer may answer that he/she would have installed the project without the program, and thus be counted as a "free rider", even though it was the continuous work of the AE that drove the decision.

Also, at both SoCalGas and SDG&E, AEs mentioned that customers are often dubious of new technology, and it takes some positive examples in the marketplace for a program or measure to gain a foothold. "Nobody wants to be the first," reported a SoCalGas AE. However, these customers in the later part of the market adoption curve are often deemed free riders.

5.3.9 Potential Goals and Targets study

A team led by Navigant Consulting is developing the Potential Goals and Targets study. Goals of the project include assessing savings potential (e.g., technical, market, and economic potential) from voluntary programs and codes and standards.

As of February 2012, this study is still a work in progress, and only preliminary, high-level results were available. Some of these could be useful at the portfolio level. For example, findings show increasing potential for commercial emerging technologies, and for commercial codes and standards.

Later versions of the draft will provide detail that could inform portfolio and program design. For example, the study is looking at some measure types in detail, such as some lighting measures (and bundles of lighting measures), to analyze current and future energy savings potential. These findings could be useful in guiding program filings for the next program cycle.

5.4 SUMMARY

During the course of this evaluation, the application processes underwent revisions to enhance the experience of the customers and reduce administrative costs. The new processes became effective in January 2012. As of August 2011, the CPUC began discretionary reviews of projects in pre-installation stages. By necessitating biweekly project reports, the requirement created some additional administrative costs to the program. The evaluation team was unable to review any selected projects, and as such could not assess the actual versus perceived implications of the requirement on the programs.

5.4.1 EM&V Reporting / Data Requests

Since 2006, management of impact evaluations of SoCalGas programs has been done by the CPUC. In the past, SoCalGas EM&V staff managed the efforts. With the transition to CPUC management, requests from the IOUs for a variety of program data and information have increased. Both the CPUC and their evaluation contractors require significant data, and often expect quick turnarounds.

According to IOU staff, there used to be a 10 day standard turnaround expectation for all data requests. However, data requests with two or three days turnarounds are normal for program managers. Program and policy advisor staff report that some requests are very time consuming and are difficult to turn around in a short period of time. Further complicating the quick turnaround time are mandatory internal review of data request responses, vague data requests, and terminology not used by the program. Internal review of data requests is standard practice and should be accounted for in the expectations of the requestors. This ensures that program staff are generating reports and providing data in compliance with their contracts and other legal requirements. The issue with vagueness and terminology issues can be overcome through practical means. Many program managers believe that the data request would improve if they were able to meet with the requestor upon receiving a request.

In addition to data requests, the CPUC requires regular program reporting. The CPUC has always required the utilities to report regularly on the accomplishments of their programs on a monthly, quarterly and annual basis. During the 2010-12 program cycle, the CPUC has attempted to improve upon the tracking in order to collect more information in a consistent fashion to allow for better oversight. This transition has required the IOUs to adjust the way they report on the accomplishments of their programs, but has not had a significant impact on program processes.

We offer ways to improve the data request process in the recommendations section below, which would allow for more time spent on running programs and better data for regulators and evaluators.

5.5 Conclusions and Recommendations

There is an obvious need for rigorous regulatory oversight of publicly-funded programs. However, it is apparent that the CPUC and SoCalGas program staff share different views on the scale, purpose, and effect of the current set of regulations and their implicit demands of energy efficiency programs. We believe there are opportunities to reduce the burden and improve the value of reporting by improving the communication between the CPUC and the IOUs, increasing the understanding of how requirements impact program implementation (both positively and negatively) and for the IOUs to embrace the ultimate purpose of requirements. Improving the spirit of cooperation between the two parties could prove mutually beneficial, working towards the shared mission that we recommend in the Forward. Below, we offer some specific recommendations for making incremental improvements to the requirements to either increase their value and/or reduce the resource requirement to fulfill them.

Issue	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in addressing (H/M/L)	Value in Addressing (H/M/L)
Overall: Individual requirements are not overly burdensome, but they add up and have "costs" to programs	• Frustration and low morale of program staff • Tendency toward non-compliance	• Existing tension between program staff and regulatory requirements, complexity and size of portfolio, staff turnover	• Improve collaboration with CPUC to maximize value of requirements, minimize resource cost to meet them • Discuss with CPUC the potential to pilot test requirements to identify the burden and potential value • Provide feedback to CPUC only on the most burdensome requirements to focus attention on the most resource-intensive	High	High
Overall: Requirements (benchmarking, PPMs) are symptomatic of the complexity of linking Strategic Plan to programs	• CPUC and Sempra priorities are not aligned • Sempra staff unclear how the requirements help their day-to-day program activities		• Program staff: Improve understanding of the rationale for CPUC requirements and try to address the spirit of the recommendations • CPUC: Continue building understanding of day-to-day program implementation and impact of requirements, and attempt to work with SoCalGas to 1. minimize resource cost of meeting requirements and 2. to increase value	High	High
Overall: Regulatory requirements are not well understood by	• Loss of integrity of the regulatory requirements • Excessive resources	• Communication disconnect from CPUC to Policy Advisors to	• Ensure clear understanding of ultimate purpose of requirements to program	Medium	High

Issue	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in addressing (H/M/L)	Value in Addressing (H/M/L)
program staff	required to fulfill requests in some cases	Program Staff	staff. • Ensure communication link between Policy Advisors and Program staff • Develop internal "crash course" for regulatory requirement knowledge transfer to new staff. Use a neutral tone to improve the current negative or dismissive perceptions of regulatory requirement. • Enable program management to communicate significant regulatory burdens to policy advisors who can discuss issues directly with CPUC		
Overall: All requirements have a cost to the program	• Time spent on requirements is time taken away from program implementation and progress toward energy savings goals	• Sempra has looked into ways to reduce time spent on requirements and to streamline the reporting processes	• Consider proposing to CPUC development of non-energy related program goals and rewards to help programs more explicitly focus on broader strategic goals	Medium	Medium
Benchmarking: Unclear understanding of the requirement and difficulty entering data	• Benchmarking is not taken seriously • Program staff uncertain when benchmarking is required • AEs, vendors, and program staff feel that benchmarking is an extra		• Review the CPUC benchmarking study findings to determine future benchmarking plan • Provide additional training on rationale for benchmarking to AEs, program staff and vendors	High	Medium

Issue	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in addressing (H/M/L)	Value in Addressing (H/M/L)
	burden to enticing customer participation and the value is not great to customers • Default values are used in some cases, decreasing the value of the results for customers		• Provide clear understanding of the benefits of accurate data • Provide technical support for the Energy Star tool to vendors and customers • Work with the CPUC to adjust requirements for benchmarking (e.g., for projects of certain size or type [e.g., audits, custom incentive programs])		
SW Coordination: Unclear understanding of who is required for statewide meetings	• Ineffective coordination with other IOUs • Loss of information exchange and action items from meetings		• Host internal meeting to discuss resourcing for statewide meetings • Formally delegate persons to participate and a person to lead the group	Low	Medium
SW coordination: meetings are too frequent and often not valuable	• Further resource (time) drain on program staff	• Program staff have suggested less frequent meetings to the evaluation team	• Have program managers, with support of senior Sempra staff, recommend meetings be quarterly or on as-needed basis. • Consider co-funding meeting coordinator (3rd Party) with other IOUs • Discuss with the CPUC the possibility of streamlining the nonresidential meetings to cover all sectors (commercial, industrial and agricultural)	Medium	Medium

Issue	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in addressing (H/M/L)	Value in Addressing (H/M/L)
SW Coordination: Few discussions about gas projects	• SoCalGas does not feel they are a valued participant		• Coordinate with other IOUs or meeting lead prior to meeting to see if gas issues will be discussed • Suggest agenda items related to gas, including potential marketing strategies to increase gas savings (vendors, measures, types of facilities to target), to share successful strategies among IOUs	Low	Medium
Application/Review: Lengthy, manual applications	• AEs and vendors, not customers, complete the bulk of the application • Customers do not always know where in the process their application stands • Application review places large burden on utility staff	• SoCalGas underwent a customer experience review and rolled out a streamlined application process, including changing language in the application form, shortening the application form, and requiring fewer signatures	• Automate the application process (as discussed in IT and Data Management chapter). • Provide an express application for smaller items (with less savings and incentives) to ensure it is worth the customer's time to participate • Continue training to contractors about the program and how to fill out the application appropriately	High	High
PPMs: PPMs have increased SoCalGas program staff workload	• Delays program processes • Increases program staff frustration • Staff have created ad hoc parallel databases for tracking PPMs	• Program staff communicate with CPUC staff about requirements that are unclear, and difficult to measure	• Continue building systems to increase ease in reporting • Add additional skilled programmers to respond to changing program requirements	High	High

Issue	Consequences	Steps SoCalGas is taking to address Issue (if any)	Additional steps we recommend	Difficulty in addressing (H/M/L)	Value in Addressing (H/M/L)
			• Continue to communicate with CPUC about PPMs that are the most difficult to track and suggest improvements for the next cycle		
PPMs: Some program staff are unaware of the reasons for tracking PPMs, and PPMs are not being used to improve or monitor programs	• Increases program staff frustration • Reduces value of tracking PPMs		• Ensure clear understanding of PPM context for all program staff	Low	High
Data Requests: Short turnaround time and complicated requests	• Delays program processes • Increases program staff frustration • Inaccurate and unfulfilled data request responses		• Request a 10-day minimum response time for data requests • Provide early and direct channels between SoCalGas staff and requestor, to determine the highest value/lowest resource way to meet the data need • Allow for CPUC and program staff discussion of major data requests to clarify uncertainties, discuss options, and identify ways to most cost-effectively meet the request	Medium	High

Figure 12. Regulatory Requirements and Statewide Initiatives: Summary of Issues and Recommendations