



Program Assessment Study: Local Government Partnership Programs – Final Report

CPUC Work Order 12

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List of Key Terms

Best Practice Coordinator:	This Statewide Local Government Energy Efficiency Best Practices Coordinator position is held by Pat Stoner and is overseen by ICLEI, LGC, and ILG. The Coordinator creates quarterly newsletters for the LGPs, creates best practice case studies, and tracks progress related to the Strategic Plan.
Best Practices Project:	The Energy Efficiency Best Practices Project is an on-going project designed to develop and communicate excellent practices nationwide in order to enhance the design, implementation, and evaluation of energy efficiency programs. The project uses a benchmarking methodology to identify best practices for a wide variety of program types. The project is managed by PG&E under the auspices of the CPUC in association with the California Energy Commission, SDG&E, SCE, and SoCalGas.
Core Program:	Energy efficiency programs implemented by the IOUs, usually statewide or at least covering an IOU service territory.
Deemed Savings:	Based on historical and verified data and are applied to conventional energy efficiency measures implemented in the program.
Direct Energy Savings:	Resource program activities that lead to energy savings that are directly claimed by the program in question (in this report, the LGP program).
Flight 5.6:	These solicitations are administered through the partnership, but are separate from the budget defined in the program's PIP.
Indirect Energy Savings:	Resource program activities that lead to energy savings that are claimed by another program, not the program in question (in this report, the LGP program).
LGP	Describes the combination of activities conducted by the members of the partnership, the IOU, LG and if applicable the 3P implementer. For some IOUs, the LGP activities may lead to savings outside what the LGP program claims.

Thus, LGP activities are sometimes broader than what the LGP program claims (see Indirect Energy Savings).

LGP program categories:

Categories of program activities that are used in the IOU's implementation plan to distinguish between types of activities

All of the IOUs' LGPs include the following program categories, which are used consistently in each IOU's PIPs per the template provided by the CPUC:

Strategic Plan Support:	Lead adoption and implementation of reach codes stronger than Title 24. Lend strong support for code compliance enforcement (ideally halving non-compliance by 2012 and halving that again by 2016).
Government Facilities:	Lead by example with their facilities and energy use practices.
IOU Core Program Coordination:	Lead their communities with innovative programs for energy efficiency, sustainability, and climate change.
Non-resource:	Program activities that may or may not lead to energy savings, but no energy savings are claimed.
On-bill financing:	A way for customers to finance energy efficiency upgrades without incurring any up-front financing.
Program Assessment Teams:	As part of Itron's 2010-2012 Non-residential Program Process Evaluation, teams address various programs in the portfolio. Each team assessment has a common structure set forth by the Project Coordination Group.
Resource:	Program activities that lead to energy savings that are claimed by a program.
Strategic Plan:	A roadmap for energy efficiency in California through the year 2020 and beyond that articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals.

Strategic Plan Elements:

Implementation plan goals that are set for market sectors and cross-cutting areas (such as local governments) to achieve the state's long-term strategic energy planning goals.

Acronyms and Abbreviations

3P	Third party - used specifically to refer to the group of IOU programs. Energy efficiency programs implemented by contractors hired by the IOUs, which may be offered to select customers, geographic regions and/or include only a subset of measures.
ARRA	American Recovery and Reinvestment Act
CAP	Climate action plan
CAPPA	Climate and Air Pollution Planning Assistance
CEC	California Energy Commission
CEM	Community Energy Management
CFL	Compact fluorescent lamp
CMAF	Climate Mitigation Action Plan
COG	Council of Government
CPUC	California Public Utilities Commission
DG	Distributed generation
DI	Direct Install
DR	Demand response
EAP	Energy action plan
ED	Energy Division
EEGA	Energy Efficiency Groupware Application
EEMIS	Enterprise Energy Management Information System
EEMS	Enterprise Energy Management Suite
ELPP	Energy Leader Partnership Program
EPA	Environmental Protection Agency
GP	Government Partnership

HTR	Hard to reach
ICLEI	Local Governments for Sustainability (note that the organization's name is 'ICLEI - Local Governments for Sustainability'. In 2003, ICLEI's members voted to revise the organization's mission, charter and name to better reflect the current challenges local governments are facing. The 'International Council for Local Environmental Initiatives' became 'ICLEI - Local Governments for Sustainability' with a broader mandate to address sustainability issues.)
IDSM	Integrated demand side management
ILG	Institute for Local Government
IOU	Investor-owned utility
JPA	Joint Powers Authority
LG	Local Government
LGC	Local Government Commission
LGP	Local Government Partnership
MIDI	Middle Income Direct Install
OBF	On-bill financing
PG&E	Pacific Gas and Electric Company
PIP	Program Implementation Plan
PM	Program manager
PRG	Peer Review Group (although note I don't think we are using this term any longer)
SCE	Southern California Edison
SoCalGas	Southern California Gas Company
SDG&E	San Diego Gas and Electric Company
SEEC	Statewide Energy Efficiency Collaborative



Strategic Plan

California Long-Term Energy Efficiency Strategic Plan

1 Executive Summary

1.1 Project Background

This report documents the results from research conducted by Evergreen Economics and Navigant Consulting (“Evergreen Team”) on the California Investor Owned Utilities’ (IOUs’) Local Government Partnership (LGP) programs. This research is part of the Nonresidential Program Assessments project, a joint effort of the California Public Utilities Commission (CPUC) and the California IOUs (Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E)). The project was managed by Itron, Inc., with guidance from the IOU-Energy Division Management Group, and assessed the performance of a large portion of the IOUs’ nonresidential program portfolio, including a non-representative sample of LGPs. The reviews leveraged the Best Practices framework established for the Energy Efficiency Best Practices Project¹ to the best extent possible and are designed to identify lessons learned and new best practices over a broad range of program attributes.

1.2 Program Overview

Since their introduction in the 2004-2005 program cycle, LGPs have represented an attempt to leverage the unique capabilities and resources of local governments and the IOUs through teaming them to help reach the state’s energy goals, as expressed in California’s Energy Action Plan,² the Governor’s Green Building Action Plan,³ the Assembly Bill 32-pursuant Climate Change Scoping Plan⁴ and California’s Long-Term Energy Efficiency Strategic Plan (Strategic Plan.)⁵ These partnerships have continued to underscore the CPUC’s recognition of the regulatory power of local governments to improve the efficiency of new and existing construction under their jurisdiction, their potential to reduce greenhouse gas (GHG) and energy usage within their public buildings and facilities, and the unique communications channels available to them to influence constituent energy-related attitudes and knowledge. IOUs are also recognized as being able to contribute significant expertise, information, resources, and administrative capabilities in partnering to achieve shared energy goals.

¹ The Energy Efficiency Best Practices Project is an on-going project designed to develop and communicate excellent practices nationwide in order to enhance the design, implementation, and evaluation of energy efficiency programs. The project uses a benchmarking methodology to identify best practices for a wide variety of program types. The project is managed by PG&E under the auspices of the CPUC in association with the California Energy Commission, SDG&E, SCE, and SoCalGas.
<http://www.eebestpractices.com/>

² As initially adopted May 8, 2003 and subsequently adopted in 2005.

³ As initially supplementing California EO S-20-04 and subsequent adoptions.

⁴ California Air Resources Board, *Climate Change Scoping Plan* (Sacramento: California Air Resources Board, 2008.)
http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf

⁵ California Energy Efficiency Strategic Plan, California Public Utilities Commission, September 2008.
<http://www.cpuc.ca.gov/NR/rdonlyres/D4321448-208C-48F9-9F62-1BBB14A8D717/0/EEStrategicPlan.pdf>

In D.09-09-047,⁶ the Strategic Plan provides the underpinnings for the CPUC’s approval of the LGPs proposed by the IOUs for the 2010-2012 program cycle (the subject partnerships of our research). The resource and non-resource⁷ activities of these LGPs encompass three broad areas: 1) Retrofit of local government buildings; 2) Promotion of utility core programs; and 3) Financial support for strategic energy efficiency activities prioritized for local governments in the Strategic Plan. More detailed information on the LGP program landscape and characterization is found in Section 3 and Appendix A.

1.3 Research Objectives and Approach

As discussed throughout this report, as well as in numerous state plans and regulatory proceedings, LGPs offer the opportunity to tap the distinct attributes of local governments and IOUs to create synergies that enable efficiency in ways other programs and single-provider “one-off” efforts cannot. Our research provides information that can aid in maximizing the potential power of these collaborations, better ensuring that the “whole” of the combination of the distinct attributes of IOUs and local governments is greater than the sum of its parts.

More specifically, the research objectives of this study include reviewing the operating landscape of the programs, characterizing LGP performance, identifying lessons learned (facilitating factors, limiting factors/challenges/barriers) and proposing potential best practices. While best practices have been developed for many program types (e.g., education and HVAC programs), a comprehensive set of best practices that pertains to the unique attributes of LGPs (e.g., city/IOU collaboration) does not yet exist. However, the California Statewide Best Practices Coordinator has made substantial progress developing best practices case studies and disseminating them to LGs. This research sought to find the levers—and combinations thereof—that best work to promote successful partnering and program delivery, which, in turn, helps meet the state’s goals. Moreover, a primary purpose of our research was intended to identify a more comprehensive set of potential best practices and facilitating factors that are consistent with higher performing LGPs to inform future LGP design and selection.

Findings from this research are not robust enough to yield conclusive best practices. Instead we offer factors (characteristics or practices) we observed that facilitate higher performance among one or more of the sampled LGPs, termed “facilitating factors”, and suggestions for overcoming barriers either based on our judgment or suggested by one or more sampled LGPs. Research efforts were complicated by the wide variation in context, activities, objectives, and approaches used by the LGPs. The LGP model does not lend itself easily to

⁶ California Public Utilities Commission Decision 09-09-047, September 24, 2009, 246.

<http://www.cpuc.ca.gov/NR/rdonlyres/A08D84B0-ECE4-463E-85F5-8C9E289340A7/0/D0909047.pdf>

⁷ Program activities are considered either “resource,” the energy savings of which maybe be claimed, or “non-resource,” which do not lead to energy savings that may be claimed. There are two types of “resource” savings discussed in this report: those that are claimed by the LGP (direct) and those that derive from LGP referrals to core or third-party programs that are claimed by the core or third-party program, rather than by the LGP (indirect). Section 3.3.1 provides a more detailed discussion of the resource and non-resource distinctions.

evaluation metrics of most kinds, including best practices. Paradoxically, it is precisely the attributes that create complexity in measurement that also give LGPs their unique and irreplaceable value.

A significant amount of our effort focused on developing an understanding of the key drivers of variation and reporting on those differences in a consistent manner. We developed classifications for the sampled LGPs that aided the analysis. These classifications offer a potential starting point for developing a more formal taxonomy to aid future EM&V, as well as program design and implementation. A detailed discussion of our LGP classifications is found in Section 5.

This report is based on a combination of primary and secondary research, including 67 in-depth interviews with LGP IOU program managers, partners and stakeholders that were conducted by senior Evergreen and Navigant staff from May through June 2012. More detailed information on our research methodology is found in Section 4.

1.4 Conclusions and Recommendations

Study conclusions, recommendations, observations of facilitating factors, and suggestions for how to overcome barriers are organized by topic area. The topics start from the highest level, which is providing the motivation to ensure that each partner's (IOU and LG) goals for participating in the partnership are aligned with maximizing energy savings opportunities. Next, we discuss how the partnerships are designed to tap each partner's strengths through effective resource allocation and attainment. Finally, we offer suggestions that relate to improving LGP program operations.

Facilitating factors were observed within a specific context(s) of one or more sampled LGP, and we are unable to assert whether those factors might facilitate success in different contexts. This precluded us from recommending that the IOUs broadly adopt the practices. Suggestions related to overcoming barriers are those offered by one or more LGP interviewee or stakeholder and/or based on our judgment. Collectively, we use the term "suggestions" to refer to observation of factors and suggestions for overcoming barriers.

Our intent is that the IOUs (for those suggestions directed at the IOU) consider our suggestions and explore those that might work in the various contexts present in each of their LGP portfolios, and that the CPUC consider those (directed at the CPUC) that might help them better guide and evaluate LGP program performance based on their needs and constraints.

Below we highlight 15 examples of the 51 total suggestions and recommendations provided in Section 7, along with the number for cross-referencing in Section 7. The recommendations included below are shown in bold type.

1.4.1 Motivation

There is no one right way to motivate and encourage LGPs to attain energy savings. There is a tradeoff between providing flexibility, and motivating and measuring progress. We do not offer any specific recommendations or suggestions related to the IOU models as a whole (such as suggesting one model should be offered over another) other than recommending that any changes that are made maintain the strengths of the existing models.

- **We find that the diversity in IOU LGP program models is a reflection and a response to the diversity of the state's local governments - no one size fits all. We recommend that any changes to the LGP program model seek to maintain the existing strengths each model offers. (1)**

Consistent with the best practice noted by the Energy Efficiency Best Practices Project of tying performance to verified results,⁸ we believe that it may be useful to develop, track, and report broader metrics of LGP success to motivate LGP progress and allow the IOUs and CPUC to provide more comprehensive and consistent oversight of resource (including direct LGP savings claims and indirect savings claimed by core programs related to “government facilities” and “IOU core program coordination” activities) and non-resource (“Strategic Plan support”) accomplishments. Additionally, it would aid the evaluation of the veracity of this supposition in the future.

- Based on suggestions from LGP interviewees and evaluator judgment, we suggest that the IOUs and CPUC consider developing metrics for measuring broad LGP success consistently across the state such as:
 - Number of cities within the region/county that have become engaged (e.g., appropriate contact has been identified and is participating in regular meetings);
 - The extent to which the partner has extended its unique authority in the partnership (see a related suggestion #11 that suggests a template could be filled out for each LGP that documents its strengths and weaknesses, which could include the reach of its authority);
 - The degree to which the LGP utilizes additional funding and financing sources such as ARRA, revolving loan funds, CEC loans, and/or IOU on-bill financing; and
 - Number of cities within a region/county that have initiated energy efficiency projects with LGP assistance. (2)

⁸ For example, the best practice report for the large non-residential comprehensive incentives program (http://www.eebestpractices.com/pdf/BP_NR5.PDF), lists as a best practice “Tie staff performance to independently verified results.” Giving as a rationale: “Tying performance reviews and bonuses of program staff to verified savings as reported through an independent M&V or impact evaluation process is likely to increase project quality and the accuracy of initial savings estimates. Marketing staff, in particular, should have any financial incentives tied to savings that are independently verified.”

We suggest that the IOUs also track referrals to core and third-party programs to measure outcomes and impacts, and motivate LGPs' indirect savings claims activities. This has been a recommendation in prior LGP program evaluations.

- Based on evaluator judgment (including from a prior evaluation), we suggest that the IOUs implement a tracking system such that projects that are originated through an LGP but implemented through core or third-party programs can be attributed to the originating LGP. (3)

Limitations on how LGP program funds may be spent (e.g., they cannot be used for renewable projects) can restrict broader efforts to meet Climate Action Plan goals, but some LGPs overcome those barriers by tapping broader IOU and other resources. Climate Action Plans are roadmaps that outline steps and goals that a local government will utilize to achieve greenhouse gas emissions (GHG) reductions. PG&E's Green Communities program is a good example of resources being provided to LGPs that can be used to support the planning and implementation of a Climate Action Plan. IOU account representatives can help link partners to additional IOU resources such as renewable programs, and state resources such as California Energy Commission loans and grants.

We noted that some local governments are enticed to engage with a partnership when they learn of other IOU resources they can obtain, such as solar rebates. By being willing to link local governments to additional resources, the IOU fulfills the vision of the partnership and increases integrated demand side management (IDSM) activity. To get the most benefit requires the IOU taking time to learn the comprehensive needs of the local government, and the appropriate IOU representatives being engaged that understand all potential resources that are available. There is inconsistency among the IOUs in the interpretation of the extent to which LGP IOU program managers can dedicate time to linking local governments with resources outside energy efficiency and demand response programs.

Based on evaluator judgment, we suggest that:

- The IOUs continue to or start to provide broader IOU support for climate action planning and implementation to local governments via the channels they have established by the LGPs, such as by encouraging account representatives to link partners with IDSM programs; (5) and
- The CPUC clarify the extent to which the IOUs are constrained from using LGP staff and resources to link local government partners to broader IDSM resources. (6)

1.4.2 Resource Allocation

We developed some preliminary classifications of LGPs that aided our analysis. These groupings could serve as a starting point for more formal classifications to support future program design and implementation, development of best practices by the Statewide Local

Government Best Practices Coordinator (who is tasked with developing a typology for LGPs), regulatory oversight, and program evaluation.

These classifications could support providing tailored resources to LGPs depending on their unique needs, advantages, and barriers. Since there are so many LGPs across the state, trying to treat each one in the same manner is difficult, and classifying them by two or three key drivers of variation may be an effective improvement.

- **We recommend that the CPUC and IOUs consider building from the classifications used in this study to differentiate LGP programs by existing energy efficiency infrastructure, progress made towards Strategic Plan goals, ability to tap resources and structure (implementation type and geography) and use the classifications to aid in program planning and oversight; (10)**
- Based on evaluator judgment, we suggest that the IOUs set realistic, short-term goals for new LGPs that lack energy efficiency infrastructure based on an understanding of their strengths, weaknesses and limitations (which could be based on a standard template that is filled out when new LGPs are developed and updated each program cycle); (11) and
- Based on our review of LGs in the sample that lack EE expertise, we suggest that the IOUs consider that LGPs that lack energy efficiency experience may benefit from performance-based approaches used by SCE's Energy Leader model, or close oversight such as direction on which Strategic Plan menu items they should select and what resources already exist (such as the Statewide LGP program resources – the Best Practices website, peer to peer forums, etc.) that they should leverage instead of each LGP starting from scratch. (12)

Through LGP programs and related services, the IOUs are uniquely situated to provide critical resources to local governments to achieve energy efficiency program goals. The IOUs provide training (e.g., on Title 24), technical support (e.g., on measure technology and such activities as developing CAPs), customer energy consumption and past program participation data, funding, and staff time (e.g., serving as project managers, doing technical analysis, developing contracts for partners). IOU account representatives provide key connections between the LGP and its municipal and commercial customers (via government reps and account reps, respectively), and also link customers to additional resources outside the LGP. Below are two suggestions related to maximizing IOU resources.

- Based on our observation of the PG&E and SCE LGP models, we suggest that the IOUs continue and increase involvement of IOU account representatives (government and commercial sector) in LGP programs to help achieve municipal and commercial retrofits, since they are able and often motivated by incentives to link partners with additional IOU resources such as non-residential or renewables rebate program rebates outside the LGP program; (13) and
- Based on evaluator judgment combined with positive feedback from LGP interviewees, we suggest that local governments continue to take advantage of IOU resources for CAP

development such as PG&E's Green Communities support (e.g., GHG inventories and CAPs) and SCE's technical resource documents (templates, public documents and examples for completing Strategic Plan Menu items). (15)

We offer additional suggestions for maximizing IOU resources in 7.2.2.

An effectively engaged local government can leverage many additional resources both internally and externally—including financing, additional funding, marketing and outreach channels, branding, promotion, access to facilities staff, information and data, knowledge of community (business and residential), ability to create and enforce laws, broad authority over land use planning and development, and insight into the motivations of staff and elected officials—to achieve measurable goals.

The most advanced LGPs in our study sample typically have a history of energy efficiency infrastructure and use IOU resources along with many other internal and external resources; sampled LGPs that had made the most progress towards Strategic Plan goals use IOU resources for maximum impact. While LGPs in our sample that typically conduct a broad array of activities have made the most progress towards Strategic Plan goals, we did not find that that is because of synergies of doing multiple activities. Instead, we believe that LGPs that are doing broad work are indicative of an existing energy efficiency foundation, where barriers have been overcome, sufficient internal resources exist, and external resources are harnessed. Such LGPs in our sample usually have made energy efficiency and sustainability a priority and have motivated staff and elected officials who are impelled to see results (typically because the constituency is asking for sustainability).

Local governments new to energy efficiency and sustainability typically have a long road to building the necessary foundation to achieving Strategic Plan goals, based on our review of the LGPs in our sample. This issue is currently exacerbated due to staff and resource shortages associated with the state's budget crisis. The IOUs can provide critical technical support and resources, but it may not be realistic to expect broad progress within all local governments in the near- or mid-term based on our sample, in which the LGPs that had made the most progress had been in place two or more program cycles. Instead, expectations for success in one or two targeted areas in the first program cycle are more reasonable. LGPs that lack energy efficiency infrastructure could leverage 3P (third party) or regional energy efficiency implementation infrastructure, at least in the near-term, which is what we observed many new LGPs that lacked experience with measurable progress doing. Below, we offer a suggestion related to the level at which energy efficiency infrastructure should be developed, and the extent to which it can be leveraged across a region.

- Based on our observation of multi-city LGPs, we suggest that the CPUC consider whether every city should create its own energy efficiency program implementation infrastructure (including individual Energy Action Plans), given the state's budget crisis and its impact on

local governments. A regional approach for areas that lack existing energy efficiency infrastructure may be more realistic, efficient and effective at least in the near and mid-term in order for local governments to realize Strategic Plan goals. Currently, the Strategic Plan indicates that all local governments individually should meet goals, but it may be more efficient and just as effective to develop energy efficiency infrastructure at a regional level, as long as it is leveraged effectively by all local governments so they can achieve the other Strategic Plan goals (e.g., retrofitting their municipal buildings, leveraging their community outreach channels, adopting reach codes, and increasing code enforcement). (16)

We offer additional suggestions related to LGP implementer structure and more generally for maximizing LG resources in the partnerships in Section 7.2.3.

The SEEC (Statewide Energy Efficiency Collaborative) (described in Section 3.8) facilitates peer sharing of resources across local governments, which is critical to disseminate the lessons learned and resources developed by more advanced local governments to those that lack energy expertise and resources. We offer suggestions related to sharing resources across LGPs in Section 7.2.4 including the following suggestion:

- Based on evaluator judgment and suggestions by LGP interviewees, we suggest that the IOUs continue encouraging local governments to learn from successful strategies of peer local governments for CAP development, such as sharing templates and technical resources including those provided by ICLEI. (31)

1.4.3 Program Operations

We offer conclusions and suggestions for improving program operations to increase energy savings and progress towards the Strategic Plan goals for local government in Section 7.3. We identified a few areas of concentration, including audience targeting and outreach, program services and measures, and data sharing. Suggestions include the following:

- Based on evaluator judgment and positive feedback from LGP interviewees, we suggest that LGPs target commercial retrofit campaigns to formal commercial districts (e.g., designated Business Improvement Districts), leveraging other city outreach efforts (e.g., “green streets” campaigns) and established communication channels; (35)
- Based on our observation of mid-sized city LGPs, we suggest that LGPs bundle measures for comprehensive projects. Systematically packaging more complex and less cost-effective measures with the most cost-effective measures allows for the development of comprehensive projects that are cost effective, overall; (42) and
- Based on evaluator judgment, we suggest that the CPUC and IOUs develop a set of data rules and protocols that are comprehensive, consistent, clear, fairly applied, and reflect current uses and benefits of data. (48)

2 Introduction

This report documents the results from research conducted by Evergreen Economics and Navigant Consulting (“Evergreen Team”⁹) on the California Investor Owned Utilities’ (IOUs’) Local Government Partnership (LGP) programs. This research is part of the Nonresidential Program Assessments project, a joint effort of the California Public Utilities Commission (CPUC) and the California IOUs (Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E). The project is managed by Itron, Inc., with guidance from the IOU-Energy Division Management Group, and is intended to assess the performance of a large portion of the IOUs’ nonresidential program portfolio, including a non-representative sample of LGPs. The reviews leverage the Best Practices framework established for the Energy Efficiency Best Practices Project¹⁰ to the extent possible and are designed to identify lessons learned and new best practices over a broad range of program attributes.

2.1 Program Overview

Introduced in the 2004-2005 program cycle, LGPs represent an attempt to leverage the unique capabilities and resources of local governments and the IOUs through teaming them to help reach the state’s energy goals.¹¹ Initially a program delivery strategy largely to tap local government outreach channels for municipal, commercial and residential energy efficiency programs, the LGPs have matured into more active partnerships with wide variation in program activities and models. Over the post-2005 program cycles, these partnerships have continued to underscore the CPUC’s recognition of local government participation in promoting energy efficiency at the local and regional level as a major market driver in support of the goals of:

- the state Energy Action Plan (EAP) to optimize energy conservation and resource efficiency,
- the Governor’s Green Building Action Plan goals to improve the energy performance of all state buildings, and
- the AB 32-pursuant Climate Change Scoping Plan acknowledgement of local governments as “essential partners in achieving California’s goals to reduce greenhouse gas emissions... [having] broad influence and, in some cases, exclusive

⁹ Betsy Wilkins of Wilkins Communications provided critical contributions to the structural organization of the report.

¹⁰ The Energy Efficiency Best Practices Project is an on-going project designed to develop and communicate excellent practices nationwide in order to enhance the design, implementation, and evaluation of energy efficiency programs. The project uses a benchmarking methodology to identify best practices for a wide variety of program types. The project is managed by PG&E under the auspices of the CPUC in association with the California Energy Commission, SDG&E, SCE, and SoCalGas. <http://www.eebestpractices.com/>

¹¹ As approved in California Public Utilities Commission Decision D.03.12.060, December 18, 2003, and consistent with California Public Utilities Commission Decision D.03.08.067, August 21, 2003 (available at http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/32828.PDF and http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/29216.PDF, respectively)

authority over activities that contribute to significant direct and indirect greenhouse gas emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations.”¹²

In energy efficiency program portfolio proceedings since the introduction of the LGPs, the CPUC has repeatedly pointed to the regulatory power of local governments to improve the efficiency of new and existing construction under their jurisdiction, their potential to reduce GHG and energy usage within their public buildings and facilities, and the unique communications channels available to them to influence constituent energy-related attitudes and knowledge. IOUs are also recognized as being able to contribute significant expertise, information, resources, and administrative capabilities in partnering to achieve shared energy goals. D.05-01-055 notes that “experience has demonstrated to us that IOUs can meet aggressive savings goals under an administrative structure that holds them directly accountable for program results”¹³ and that “current or future partnerships between IOUs and local governments can take advantage of the unique strengths that both parties bring to the table”¹⁴ to deliver cost-effective energy efficiency services, and optimize the opportunities for jurisdictions and their communities to work toward the common goal of achieving short and long-term energy savings.

In D.08-09-040¹⁵ the CPUC adopted California’s Long-Term Energy Efficiency Strategic Plan (Strategic Plan),¹⁶ further emphasizing the importance of local governments in reaching the state’s aggressive energy goals. And in D.09-09-047,¹⁷ the Strategic Plan provides the underpinnings for the CPUC’s approval of the LGPs proposed by the IOUs for the 2010-2012 program cycle (the subject partnerships of our research.)¹⁸ The resource and non-resource¹⁹ activities of these LGPs encompass three broad areas: 1) Retrofitting of local government buildings; 2) Promotion of utility core programs; and 3) Financial support for strategic energy

¹² California Air Resources Board, *Climate Change Scoping Plan* (Sacramento: California Air Resources Board, 2008), 26. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf

¹³ California Public Utilities Commission Decision 05-01-055, January 27, 2005, 10. http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/43628.PDF

¹⁴ California Public Utilities Commission Decision 05-01-055, January 27, 2005. 92. http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/43628.PDF

¹⁵ CPUC D.08-09-040. http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/91068.PDF

¹⁶ California Energy Efficiency Strategic Plan, California Public Utilities Commission, September 2008. <http://www.cpuc.ca.gov/NR/rdonlyres/D4321448-208C-48F9-9F62-1BBB14A8D717/0/EEStrategicPlan.pdf>

¹⁷ California Public Utilities Commission Decision 09-09-047, September 24, 2009, 246. <http://www.cpuc.ca.gov/NR/rdonlyres/A08D84B0-ECE4-463E-85F5-8C9E289340A7/0/D0909047.pdf>

¹⁸ The same Decision also approved additional initiatives involving local governments, including PG&E’s Green Communities Program, Innovator Pilot Program and Middle Income Direct Install programs, and SCE’s Energy Efficiency Local Government Strategic Plan Pilot. While these efforts are not the focus of this study, they are discussed when leveraged by the LGPs.

¹⁹ Program activities are considered either “resource,” the energy savings of which maybe be claimed, or “non-resource,” which do not lead to direct energy savings that may be claimed. There are two types of “resource” savings discussed in this report: those that are claimed by the LGP and those that derive from LGP referrals to core or third-party programs that are claimed by the core or third-party program (rather than by the LGP). Section 3.3.1 provides a more detailed discussion of the resource and non-resource distinctions.

efficiency activities prioritized for local governments in the Strategic Plan. A more detailed discussion of the Strategic Plan as related to the current LGP efforts is found in Section 3.1 below.

In order to give a sense of the scale of the current LGPs, Table 1 presents estimates of program budgets for the 2010-2012 program cycle and expenditures through August 2012 based on data from the CPUC's Energy Efficiency Groupware Application (EEGA). Further detail can be found in Appendix B, which also includes kWh savings and kW reduction savings goals and accomplishments for those IOUs that claim direct savings for LGP program activities.

Table 1 - 2010-2012 LGP Program Estimated Budgets and Expenditures Through August 2012

IOU	Budget	Expenditures through August 31st, 2012	% of Budget Spent through August 31st, 2012
PG&E	\$ 170,038,998	\$156,469,578	92%
SCE	\$78,354,889	\$32,474,935	41%
SoCalGas	\$5,494,005	\$2,567,803	47%
SDG&E	\$19,078,638	\$11,332,555	59%
Total	\$272,966,530	\$202,844,871	74%

While there have been shifts in the context in which the LGPs and their models, activities, and goals have evolved (Section 3.2 provides additional information on this), the critical and constant focus has remained the strength of *partnerships* in achieving common goals.

2.2 Research Objectives and Approach

Our research is meant to provide information that can aid in maximizing the potential power of these collaborations, better ensuring that the “whole” of the combination of the distinct attributes of IOUs and local governments is greater than the sum of its parts.

More specifically, our research objectives and approach are summarized below. Not all of the objectives were obtained, as noted.

- Program Group Operating Landscape Review: Considering market and technology trends, changes to codes and standards, policy objectives, and new and innovative programmatic strategies;

- Approach: We reviewed LGP program documents, data sources and websites and conducted research on state building codes, CAP legislation and LGP funding sources. We synthesized the information and prepared a memo (included herein as Appendix F) that described the context under which LGPs operate.
- Alignment to Best Practices: Examining the alignment of current program practices with known best practices, identifying opportunity for improvement in this area, analyzing the supposition that known best practices lead to success, suggesting updates or refinements to best practices, and providing recommendations for programs to rise to their highest potentials; and
 - Approach: While best practices have been developed for many program types (e.g., education and HVAC programs), a comprehensive set of best practices that pertain to the unique attributes of LGPs (e.g., city/IOU collaboration) does not yet exist. However, the California Statewide Best Practices Coordinator has made substantial progress developing best practices case studies and disseminating them to LGs. A primary purpose of our research was to identify a comprehensive set of potential best practices and facilitating factors that are consistent with higher performing LGPs. We also identified barriers to success and ways to overcome barriers to improve LGP performance.
- Performance Characterization, Lessons Learned and New Best Practices: Identifying generalized and transferable best practices, high-performing programs and the implications of newly-identified best practices on resource allocations, and providing recommendations for changes to program design and implementation, overall portfolio strategy and management, and policies governing portfolio design, evaluation and reporting requirements.
 - Approach: Due to the diversity of LGPs, the sampling approach (non-random), the context-dependence of the factors we identified during our research that were correlated with superior performance, and the difficulty of independently validating superior performance (i.e., typically relying on self-report), we were unable to develop robust best practices. Instead, we identified facilitating factors correlated with superior performance. The factors could be studied in more depth in a future study to attempt to establish best practices for LGPs.
 - We also identified limiting factors, challenges, and barriers that might be preventing LGPs from meeting their potential for energy savings. We looked broadly at the energy savings potential of LGPs, including savings that might not be directly claimed by the LGP.

For this LGP Program Assessment Study, we developed an approach that would cut across the high-priority research issues identified by the IOU-Energy Division Management Group while characterizing performance, identifying lessons learned (facilitating factors, limiting factors/challenges/barriers), and proposing potential best practices. However, the very thing that

gives LGPs the potential to provide a unique channel for achieving significant savings makes them difficult to evaluate consistently. A large part of the added value that local governments bring to energy efficiency programs is their locally focused nature, structure, and expertise. However, this regional specificity also means there is very broad variation in partnership models and levels of experience and expertise. Additionally, the IOUs have taken different approaches to the metrics they employ to set goals and measure program success. Classifying and evaluating such a wide range of program types on a level field, while still acknowledging the power of their unique qualities, added distinct complexity to this effort.

A more detailed discussion of research objectives and issues is found in Section 4. This report is based on a combination of primary and secondary research:

- **Primary research** – Evergreen and Navigant senior staff conducted in-depth interviews in the spring of 2012 with LGP IOU program managers and partners (both local government and third-party implementers) associated with 22 sampled LGP programs (for a total of 65 interviews); and
- **Secondary research** – our team reviewed biannual Strategic Plan Menu Updates (which indicate each partnership’s progress on selected Strategic Plan items), prior LGP program studies, program implementation plans, quarterly and annual reports, summaries of program tracking data provided by Itron, IOU and CPUC regulatory filings and other related resources and documents.

We also obtained feedback from the joint IOU-Energy Division Management Group and the California LGP Program Best Practices Coordinator regarding interim results. Their comments informed the study findings, conclusions, recommendations and suggestions.

2.3 Organization of Report

The remainder of this report is organized as follows:

- Section 3 – Program Characterization
- Section 4 – Research Methods
- Section 5 – LGP Classification
- Section 6 – Findings
- Section 7 – Conclusions and Recommendations
- Appendix A – Sampled LGP Characterization
- Appendix B – Program Data Analysis Detail
- Appendix C – Overview of LGP Program Manager In-Depth Research Instrument
- Appendix D – Detail on Non-resource Program Data Issues
- Appendix E – Operational Landscape
- Appendix F – Recommendations and Suggestions Table

3 Program Characterization

In this section, we provide a characterization of the LGP programs based on the Evergreen Team's review of IOU program implementation plans (PIPs), prior LGP program evaluations, the Strategic Plan, and program cycle accomplishments provided to the evaluators in January 2012. The results of this characterization informed the research scope and sampling plan.

3.1 Long-Term Strategic Goals for Local Governments

The Strategic Plan envisions that by 2020, California's local governments (LGs) will be leaders in using energy efficiency to reduce energy use and GHG emissions both in their own facilities and throughout their communities. LGs offer value in their policy-making, planning, coordination, and development authority roles as well as through their relationships with both residents and businesses. Goals for LGs, as defined in the Strategic Plan, are to:

1. Lead adoption and implementation of reach codes stronger than Title 24;
2. Lend strong support for code compliance enforcement (ideally halving non-compliance by 2012 and halving that again by 2016);
3. Lead by example with their facilities and energy use practices;
4. Lead their communities with innovative programs for energy efficiency, sustainability and climate change; and
5. Develop energy efficiency expertise such that it becomes widespread and typical.²⁰

Each LGP selects goals and strategies identified in the Strategic Plan and uses these markers to track and report progress to their respective IOUs once every six months in a Menu Update (the most recent of which we obtained during our research was dated March 2012). Each Menu Update details goals, milestones achieved, timelines, budgets and more for each LGP and for each utility. Each subsequent update also builds on the last in order to track program changes over the course of the program cycle. This iterative process encourages steady progress on a local level to support statewide goals.

3.2 LGP Program Context

As discussed in Section 2.1, LGPs were formally added as a delivery channel to the IOU energy efficiency program portfolio during the 2004-2005 program cycle. For that cycle, LGPs and 3P implementers submitted bids to the CPUC, which evaluated and selected bids based on their estimated cost-effective short-term energy savings as well as meeting other objectives, such as serving hard-to-reach (HTR) customers and creating long-term market effects.²¹ The utilities were the contract administrators for the 2004-2005 LGP and third-party contracts,

²⁰ California Public Utilities Commission, *California Energy Efficiency Strategic Plan*, 86.

²¹ California Public Utilities Commission, *Energy Efficiency Strategic Policy Manual, Version 2*. (San Francisco: California Public Utilities Commission, 2003), 6-9. <http://www.calmac.org/events/Policy%20Manual%20V2.pdf>

which essentially involved paying CPUC-approved invoices with funds collected via the public benefits charge.

The state's Energy Action Plan (EAP) determined that energy efficiency should be the first resource in the energy procurement loading order.²² In line with California's EAP, the CPUC determined that the IOUs are accountable for energy procurement, placing them back in the role as energy efficiency program administrators for all such programs, including 3P and LGPs. This decision to change responsibility is credited to issues extending from the state's energy crisis in 2000 and 2001.²³ This change in regulatory context placed the responsibility of program performance more squarely back on the IOUs and carried implications for the management of LGP programs. Developing a portfolio that delivered quantifiable cost-effective energy savings became the utilities' priority for the 2006-2008 cycle.

For the current cycle,²⁴ the IOUs have retained their position as LGP program administrators. Many of the 2006-2008 LGPs have been continued in the 2010-2012 program cycle and additional LGPs have been added. The current LGP program is designed such that the IOUs proactively work with LGs to promote and create energy efficiency, energy-conservation and demand response (DR) opportunities. This is done via the major LGP program activities focusing on government facilities, Strategic Plan support, and core IOU program coordination.

The CPUC approved the IOUs' 2013-2014 transition period programs on November 8, 2012. The programs reflected CPUC guidance to the IOUs in Decision 12-05-015 (May 10, 2012) including streamlining LGPs, concentrating on financing, and facilitating deeper retrofits. The CPUC's Energy Division (ED) suggested that the transition portfolio include outreach to LGs, which can then use their unique role to create mandatory energy upgrade requirements for home buyers as well as to suggest energy rating requirements for home sellers. The ED also suggested that the Direct Install (DI) program and the LGPs work closer together in order to reach underserved smaller commercial customers.²⁵ These developments reflect a desire to make greater progress towards achieving Strategic Plan goals and to reduce reliance on measures that will be impacted by energy codes and standards.

²² California Energy Commission, California Public Utilities Commission and Consumer Power and Conservation Financing Authority. *Energy Action Plan I*. (San Francisco: California Public Utilities Commission, 2003), 4.

http://www.energy.ca.gov/energy_action_plan/2003-05-08_ACTION_PLAN.PDF

²³ California Public Utilities Commission Decision 05-01-055, January 27, 2005, 154.

http://docs.cpuc.ca.gov/published/FINAL_DECISION/43628.htm

²⁴ While the current cycle is more accurately that of 2009-2011, as it did not officially commence until calendar year 2010 due to a delayed decision approving the program portfolio (with 2009 being a year of "Bridge Funding"), herein we refer to the current cycle as the 2010-2012 cycle.

²⁵ *Administrative Law Judge's Ruling Regarding Program Guidance for the 2013-2014 Energy Efficiency Portfolio, Attachment A: Proposed Changes to Utility Energy Efficiency Portfolios for the 2013-2014 Transition Period*, filed December 7, 2011 in Rulemaking 09-11-014. <http://docs.cpuc.ca.gov/efile/RULINGS/154861.pdf>

3.3 LGP Program Overview

All the LGP programs are designed so that IOUs may proactively work with municipalities to promote and create energy efficiency, energy-conservation, and DR opportunities. However, the specific characteristics and implementation strategies vary greatly as LGPs operate in a range of contexts, representing the diversity across the state in climate, geography, politics, demographics, and socioeconomics. Some LGPs operate in areas that have a relatively long legacy of energy efficiency initiatives and leadership, whereby local goals are well aligned with the state's strategic goals for LGs. Other LGPs operate in areas with little energy efficiency history, and/or where it is more challenging to align interests. Moreover, some LGPs operate within one city, while others are implemented at the county or regional level with a council of governments (COGs), the county, or nonprofit organization (e.g., regional energy authority/Joint Powers Authority (JPA) and chamber of commerce) as implementer. Additionally, while some LGPs are administered by a single IOU, others are joint partnerships with two or more IOUs. In the latter case, LGP names sometimes differ by IOU for the purposes of internal administration, but generally are consistent for external marketing and branding (e.g., the Kern County Energy Watch). Such collaborations are noted in the program lists in the IOU-specific sections to follow.

The IOUs also offer a related Statewide program called the Statewide Energy Efficiency Collaborative (SEEC) in collaboration with three LG non-profits that supports LGs.²⁶

All of the IOUs' LGPs include the following program categories, which are used consistently in each IOU's PIPs per the template provided by the CPUC:

- Strategic Plan Support;
- Government Facilities; and
- IOU Core Program Coordination.

Table 2 below summarizes how the LGP program categories map to Strategic Plan elements.

²⁶ For more information on SEEC, see: <http://californiaseec.org/>

Table 2 – Strategic Plan Elements and Program Category Definitions

LGP Program Category		
Strategic Plan Support	Government Facilities	IOU Core Program Coordination
1. Lead adoption and implementation of reach codes stronger than Title 24 2. Lend strong support for code compliance enforcement (ideally halving non-compliance by 2012 and halving that again by 2016)	3. Lead by example with their facilities and energy use practices	4. Lead their communities with innovative programs for energy efficiency, sustainability, and climate change

The fifth strategic plan goal, “Develop energy efficiency expertise such that it becomes widespread and typical”, is not explicitly linked to a specific LGP program category. Instead, all the support that the IOUs provide is intended to build energy efficiency expertise. The related IOU government programs (e.g., SEEC) also are intended to build LG expertise.

The IOUs differ in the specific activities they offer under the program categories and how they claim energy savings.

3.3.1 Resource and Non-resource Distinctions

Specific program initiatives and measures are classified as either “resource”, when the resulting energy savings are claimed, or “non-resource”, when no direct energy savings are claimed. There are two types of “resource” savings that we discuss in this report: those that are claimed by the LGPs and those that are from LGP referrals to core or 3P programs that are claimed by the core or 3P programs. We distinguish between LGP program activities throughout this report that do or do not lead to direct energy savings claims, referring to resource and non-resource activities. Where relevant, we also distinguish the *type* of resource claims – direct (by LGP) or indirect (by core/3P) programs.

IOU models themselves are also referred to as resource or non-resource, even though they all include a mix of resource and non-resource activities. The key determinant is whether the LGP directly claims any savings at all. Those that claim at least some savings are “resource” models, while those that claim no savings are “non-resource” under this convention. These conventions are used across the industry.

- The program model used by SDG&E and SoCalGas is considered “non-resource” because the LGP programs do not claim savings. Though the model does include resource program activities (that fall under the “Government Facilities and IOU Core Program Coordination” categories), savings result from referrals to the core programs and savings are claimed by

the core programs only to avoid duplication. While some LGPs have established savings goals, SDG&E/SoCalGas does not require progress tracking; this is not done systematically and no savings goals are included in the LGP Program Implementation Plans (PIPs).²⁷ The SDG&E/SoCalGas model also includes non-resource activities (that fall under the “Strategic Plan Support” category) that do not lead to claimable energy savings;

- PG&E’s overall model is considered “resource” even though it includes both resource (“Government Facilities and IOU Core Program Coordination”) and non-resource (“Strategic Plan Support”) activities; and
- SCE’s model is “resource”, as the activities conducted under the “Government Facilities” category result in claimed savings. Savings from “IOU Core Program Coordination” activities are claimed by core programs and like the other IOUs, “Strategic Plan Support” activities have no associated savings claims.

Table 3 below summarizes the IOU models and program categories based on the resource and non-resource distinctions.

Table 3 – Resource and Non-resource Model and Program Category Definitions

IOU Model	LGP Program Category		
	Strategic Plan Support	Government Facilities	IOU Core Program Coordination
SDG&E/SoCalGas (non-resource model)	Non-resource – no savings claims	Resource – claimed by core	Resource – claimed by core
PG&E (resource model)	Non-resource – no savings claims	Resource	Resource
SCE (resource model)	Non-resource – no savings claims	Resource	Resource – claimed by core

The remainder of this section provides descriptions of the unique features of each IOU’s LGP model and related offerings, followed by a discussion of the SEEC.

3.4 PG&E

Within PG&E’s service territory, LGP participants consist of cities, counties, government associations, or quasi-government bodies (e.g., Chambers of Commerce and JPAs). For the 2010-2012 program cycle, PG&E has 19 LGPs, including:

²⁷ Upon request, SDG&E and SoCalGas can identify municipal project savings since this is a distinct core program directly influenced by the LGPs. SANDAG tracks completed municipal projects and savings for its own purposes, and savings are still claimed by the SDG&E core program. Chula Vista also tracks municipal projects and savings, and works with SDG&E staff to try to identify new commercial projects that were likely influenced by LGP activities. The City of San Diego, however, does not attempt to track savings or report progress towards its LGP goals.

- Association of Monterey Bay Area Governments (AMBAG) Energy Watch;
- East Bay Energy Watch;
- Fresno City and County Energy Watch;
- Kern County Energy Watch (collaborates with SCE and SoCalGas);
- Madera Energy Watch;
- Marin County Energy Watch;
- Mendocino County Energy Watch;
- Napa County Energy Watch;
- Redwood Coast Energy Watch (RCEW);
- San Francisco Energy Watch;
- San Joaquin County Energy Watch (collaborates with SCE and SoCalGas);
- City of San Joaquin Energy Watch;
- San Luis Obispo Energy Watch (collaborates with SoCalGas);
- San Mateo County Energy Watch;
- Santa Barbara Energy Watch (collaborates with SoCalGas in the northern portion of the county);
- Sierra Nevada Energy Watch;
- Silicon Valley Energy Watch;
- Sonoma County Energy Watch; and
- Yolo County Energy Watch.

The PG&E LGP model claims savings from both municipal and commercial retrofits (including direct installs). The LGPs typically offer their own incentives, and they are also expected to coordinate with PG&E's many core and 3P programs that also offer incentives and DI services.

For 2010-2012, PG&E's LGPs uses two direct install models:

- **LG Partner DI Program** - implemented by the LG partner or a 3P under contract with the LG; and/or
- **Third-Party/Government Partnership (3P/ GP) DI Program** - implemented by a 3P contractor under contract with PG&E but paid for with LGP funds.

Under both of these models, the implementer takes on daily operational tasks of the DI projects – conducting audits, installing measures, and managing sub-contractors.

For the 2010-2012 cycle, the following PG&E LGPs implement the LG Partner DI model: AMBAG Energy Watch, East Bay Energy Watch, Marin Energy Watch, Redwood Coast Energy Watch, San Francisco Energy Watch, and Sierra Nevada Energy Watch. Table 4, from PG&E's



advice letter to the CPUC on DI delivery strategies,²⁸ shows the associations between the LGPs, LGs, implementation models, and the DI implementers.

²⁸ "Local Government Partnerships Direct Install Program Report in Compliance with D.09-09-047", submitted by Pacific Gas & Electric Company on January 22, 2010.

Table 4 - PG&E's LGP DI Delivery Strategies

LGP	Local Government Partner	Counties Served	Model	DI Implementer
AMBAG	Association of Monterey Bay Area Governments	Monterey, San Benito, and Santa Cruz	Local Partner/ 3P/GP	AMBAG and Ecology Action RightLights
CITY OF SAN JOAQUIN	City of San Joaquin	City of San Joaquin	3P/GP	RHA Energy Fitness
EAST BAY	QuEST	Alameda and Contra Costa	Local Partner	QuEST (Smart Lights & BEST)
FRESNO	City of Fresno/Fresno County	Fresno	3P/GP	RHA Energy Fitness
KERN	Kern Council of Governments	Kern	3P/GP	Staples & Associates
MADERA	County of Madera	Madera	3P/GP	RHA Energy Fitness
MARIN	Marin County Community Develop. Agency (CMCDA)	Marin	Local Partner	CMCDA (Smart Lights)
MENDOCINO	Community Develop. Commission of Mendocino Co. (CDCMC)	Mendocino	3P/GP	TEAA Energy Savers
NAPA	Sustainable Napa County	Napa	3P/GP	TEAA Energy Savers
REDWOOD	Redwood Coast Energy Authority (RCEA)	Humboldt	Local Partner	RCEA
SAN FRANCISCO	San Francisco Dept. of Environment (SFDOE)	San Francisco	Local Partner	SFDOE (ICF)
SAN JOAQUIN COUNTY	TBD	San Joaquin	3P/GP	Synergy
SAN LUIS OBISPO	San Luis Obispo Economic Vitality Corp.	San Luis Obispo	3P/GP	Staples & Associates
SAN MATEO	City/County Assoc. of Governments of San Mateo Co. (C/CAG)	San Mateo	3P/GP	Ecology Action RightLights
SANTA BARBARA	Santa Maria Chamber of Commerce	Santa Barbara	3P/GP	Staples & Associates
SIERRA NEVADA	Sierra Business Council (SBC)	Alpine, Amador, Butte, Calaveras, El Dorado, Lassen, Mariposa, Nevada, Placer, Plumas, Sierra, Sutter, Tuolumne, Yuba	Local Partner and 3P/GP	SBC, Staples & Associates, and RHA Energy Fitness

LGP	Local Government Partner	Counties Served	Model	DI Implementer
SILICON VALLEY	City of San Jose Environ. Services Dept.	Santa Clara	3P/GP	Ecology Action RightLights
SONOMA	County of Sonoma General Services Dept.	Sonoma	3P/GP	TEAA Energy Savers
YOLO	County of Yolo	Yolo	3P/GP	RHA Energy Fitness

Importantly, there is high variety among the contracts that the DI implementers operate under. Some contracts are more inclusive, allowing firms to serve wineries, schools, municipal facilities and furniture stores. Other contracts disallow these sectors or require special exceptions. A similar issue exists regarding the allowable measures mix; some firms cannot do HVAC, motors and/or boilers while other can. Most DI contractors have narrowly-based performance-based contracts (i.e., they are reimbursed based on verified kWh savings), and some contracts cover time and materials, while others do not.

In addition to the Strategic Plan Support, Government Facilities and IOU Core Program Coordination program categories, PG&E offers two other non-resource programs for LGs in the 2010-2012 program cycle: the Innovator Pilots Program and the Green Communities Program. The focus of our research is on the LGPs, but the offerings from these two other programs are often used by LGPs simultaneously. These programs are coordinated and some LGs use funding from more than one program to fund Strategic Plan-related activities.

The Green Communities Program was developed based on findings from the CPUC Strategic Plan workshops, and its primary objective is to strengthen the ability of LGs to participate in energy efficiency activities and to assist LGs and communities reach the state's energy use and GHG reduction goals. In particular, the Climate Program sub-element "provides funding, training and energy usage data to LGs, regardless of whether they are part of a LGP, to help them complete GHG inventories and Climate Action Plans (CAPs). Work is closely coordinated with the LGP to leverage LGP Strategic Plan Menu work with the Climate Program efforts." As part of the Climate Program, PG&E also collaborated with Local Governments for Sustainability (ICLEI) to develop standardized reports to provide LGs with data on the GHG emissions associated with their energy use at the municipal level and aggregated non-customer specific data at the communitywide scale.²⁹

The Innovator Pilots Program is a non-resource pilot program that, like the Green Communities Program, assists communities in reaching their GHG reduction goals. The broader goal of the program is to develop and test innovative approaches to comply with the long-term objectives of the state's Strategic Plan. A basic function of the program is to enhance

²⁹ Pacific Gas and Electric Company. 2010-2012 ENERGY EFFICIENCY PORTFOLIO. Pilot Program Target Updates for Program Year 2011. May 1, 2012.

the creativity of LGs and develop new methods of energy use and GHG reduction tactics that set standards for all local California governments.

According to PG&E's 2010-12 LGP program implementation plan, the Government Facilities program category includes:

- Retrofit of county and municipal buildings;
- Retro-commissioning;
- Integrating DR;
- Technical assistance; and
- On-bill financing (OBF).

The Strategic Plan Support category includes:

- Code compliance;
- Reach code support;
- Guiding document support;
- Financing for the community; and
- Peer to peer support.

PG&E's LGPs work towards the goals of the Strategic Plan through a variety of program activities. For example, cities with a history of energy efficiency leadership develop reach codes, work to enforce existing codes, provide training on energy efficiency to government staff and community members, and work to build the government's energy efficiency capacity. East Bay Energy Watch is an example of a leading LGP where two cities with a relatively long history of energy efficiency leadership (Berkeley and Oakland) collaborate with the rest of the cities in Alameda and Contra Costa counties, which have varying degrees of energy efficiency resources and motivations, to help achieve state targets. Conversely, other LGPs without a strong history of energy efficiency efforts may struggle to advance Strategic Plan goals, and are more likely to focus on sending only a few city staff (e.g., inspectors or facility staff, there typically being no dedicated energy manager in such cases) to IOU training seminars on current code.

The Core Program Coordination category includes:

- Outreach education;
- Residential and small business DI;
- 3P program coordination;
- Retrofits for Just Above LIEE; and
- Technical assistance.

PG&E's LGPs encourage energy efficient retrofits among their municipal, business, and residential customers through rebates and direct installation of energy efficiency measures. LGPs typically offer their own programs tailored to the community, but they also are coordinated with utility core, LIEE, and 3P programs that also offer incentives and DI services. PG&E coordinates programs in each local area using various models, with different entities holding contracts with PG&E to deliver DI and rebate programs to customers.

3.5 SCE

SCE's partnerships with LGs are primarily directed through the utility's Energy Leader Partnership Program (ELPP), which is how SCE refers to its LGP program. The model is unique in that it explicitly tracks the activities and progress of each individual LG that comprise each LGP.

The geographic mix of LGs in the ELPP includes eight cities, seven regions (multiple cities and counties) and four individual counties. 2010-2012 SCE LGPs include:

- Adelanto Energy Leader Partnership;
- Beaumont Energy Leader Partnership;
- Community Energy Leader Partnership;
- Desert Cities Energy Leader Partnership (collaborates with SoCalGas);
- Eastern Sierra Energy Leader Partnership;
- Kern County Energy Leader Partnership (collaborates with SoCalGas and PG&E);
- Long Beach Energy Leader Partnership;
- Orange County Cities Energy Leader Partnership (collaborates with SoCalGas);
- Redlands Energy Leader Partnership;
- Ridgecrest Energy Leader Partnership;
- San Gabriel Valley Energy Leader Partnership;
- San Joaquin Valley Energy Leader Partnership (collaborates with SoCalGas);
- Santa Ana Energy Leader Partnership;
- Santa Barbara County Energy Leader Partnership (collaborates with SoCalGas in the southern portion of the county);
- Simi Valley Energy Leader Partnership;
- South Bay Energy Leader Partnership (collaborates with SoCalGas);
- South Gate Energy Leader Partnership;
- Ventura County Energy Leader Partnership (collaborates with SoCalGas);
- West Side Energy Leader Partnership; and
- Western Riverside Energy Leader Partnership.

Some of the above LGPs are joint partnerships with other IOUs, such as the Kern County Energy Leader Partnership, which is administered by PG&E, SoCalGas and SCE, and the Desert Cities and Ventura County partnerships, which are jointly administered by SCE and SoCalGas.

Many cities, like Ridgecrest of the Ridgecrest Energy Leader Partnership, are legacy partners that have incorporated their activities as per the Energy Leader model.

Along with the ELPP, SCE offers its government and institutional sector customers the option to participate in its Business Energy Management Solutions program, which offers incentives for customized, express and DR projects.³⁰

While SCE's ELPP conducts resource as well as non-resource activities, overall, the program focus is on promoting longer-term efficiency and building institutional capacity as opposed to short-term, broad-based resource acquisition.

As seen in Figure 1,³¹ the three program categories are uniquely integrated entirely under SCE's ELP model, which recognizes and distinguishes LGs for achieving their energy efficiency goals in their municipal facilities via their stewardship of their communities, and for addressing the Strategic Plan.³²

³⁰ SCE Government and Institutional webpage.

<http://www.sce.com/business/ems/governmentandinstitutional/act/default.htm>.

³¹ Robert Brunn, *Southern California Edison's Energy Leader Partnerships*, (presentation given at the Green California Summit 2011, Sacramento, CA, April 19, 2011), 8. <http://www.green-technology.org/gcsummit/images/Energy-Efficient-Part-3.pdf>.

³² Importantly, explicit recognition as an energy efficiency leader is a key goal for many cities and counties.

Figure 1 – Energy Leader Partnership Categories



Individual cities within Energy Leader partnerships attain different ratings/tiers, starting with the “Valued” tier and potentially progressing through three higher tiers of recognition—“Silver,” “Gold,” and “Platinum”—based on the partner’s achievements relative to a current program cycle baseline³³ in:

- Energy efficiency – primarily via energy reduction through municipal building retrofits (for which partners receive incentives);
- DR – primarily via community outreach regarding and municipal facility participation in DR programs to fulfill the vision of IDSM; and
- Community outreach – primarily via marketing and education at outreach events, as well as public process CAP/ EAP development activities, to complete Strategic Plan

³³ Baselines were initially based on 2004 energy consumption data. Robert Brunn, *Southern California Edison’s Energy Leader Partnerships*, (presentation given at the Green California Summit 2011, Sacramento, CA, April 19, 2011), 8. <http://www.green-technology.org/gcsummit/images/Energy-Efficient-Part-3.pdf>.

coordination requirements.

Partners can be recognized for higher participation and activity by SCE anytime during the program year. We provide more information on SCE's ELP model in Section 6.1.3.

Figure 2 below, from SCE's program implementation plan, indicates the sub-programs within each program category and identifies whether the program is resource, non-resource or DR.

Figure 2 – Structure of the ELPP's Core Categories and Program Types

Core Program Categories	Sub-Programs		Type of Program
A - Government Facilities	A1	Government Facilities Retrofits	Resource
	A2	Government Facilities Retro-commissioning	Resource
	A3	Integrated DR	DR
	A4	Technical Assistance	Non-resource (technical assistance for project management, training and audits)
	A5	OBF	Non-resource
B – Strategic Support	B1	Code Compliance Support	Non-resource
	B2	Reach Code Support	Non-resource
	B3	Guiding Document(s) Support	Non-resource
	B4	Financing for the Community	Non-resource
	B5	Peer-to-Peer Support	Non-resource
C – Core Program Coordination	C1	Community Outreach & Education	Non-resource
	C2	Residential & Small Business DI	Resource
	C3	3P Program Coordination	Non-resource
	C4	Retrofits for just-above LIEE-qualified customers	Resource
	C5	Technical assistance for program management, training and audits.	Non-resource

According to SCE's 2010-12 LGP program implementation plan, the Government Facilities program category includes:

- Identifying potential projects;
- Conducting technical audits and assessments;
- Implementing retrofits and retro-commissioning for existing facilities;
- Integrating cleaner energy design and technologies into new facilities;
- Identifying equipment and service providers; and
- Providing enhanced incentives, OBF, and information about financing strategies being deployed by other LGs.

ELPP resource activities are strictly limited to the Government Facilities element, as stated in SCE's PIP,³⁴ which includes retrofits and retrocommissioning of municipal facilities.

The Strategic Support category includes:

- Support LGs in their efforts to comply with Titles 20 and 24 and other codes and standards;
- Help compute carbon footprints;
- Help establish cleaner energy and GHG reduction goals;
- Integrate GHG perspectives into LGs' energy portfolios and other energy initiatives;
- Help evaluate the impact of potential GHG reduction strategies;
- Identify mitigation and adaptation strategies for reducing both municipal and community GHG
- Recognize LGs that achieve their energy and climate goals; and
- Encourage adoption of reach codes.

Strategic Plan Support non-resource activities that focus on training, outreach, and education of LG staff and community members are key components of the ELPP model. For SCE, there are two types of strategic plan support activities, those that are “embedded” in the ELPP agreement, and those that are “solicited” through two competitive solicitation process. The specific “embedded” activities differ depending on each LGP and are detailed in their ELPP agreement. In addition to these “embedded” strategic plan support activities, the CPUC allocated an additional \$32 million to SCE to solicit additional strategic plan support from the LGs;³⁵ the utility distributed \$27 million to partners through two competitive solicitation processes. These solicitations requested LGs to provide SCE with proposals for achieving specific Strategic Plan goals of the partner's choosing.³⁶

³⁴ Southern California Edison Company, Energy Efficiency Division, Program Implementation Plans 2009-2011 Exhibit 4, pages 39 - 303.

³⁵ Advice 2473-E. *Southern California Edison Company's 2010-2012 Energy Efficiency Local Government Strategic Plan Strategies Solicitation and Pilot Program*. Filed with the CPUC May 18, 2010. This document's supplement, filed by SCE on February 1, 2011, is available online at <http://www.sce.com/NR/sc3/tm2/pdf/2473-E-A.pdf>.

³⁶ Information provided by SCE Program Managers during Evergreen Team's preliminary interview with SCE on February 8, 2012.

In order to support a long-term integrated vision as set forth in the Strategic Plan and SCE's IDSM program application,³⁷ SCE mandates that its LGPs, at minimum, develop an EAP, and encourages and supports all its partners in creating a CAP. While energy efficiency is one aspect of CAPs, EAPs focus entirely on energy efficiency. SCE funds all partners in creating either type of plan, but only funds the implementation of EAPs.

SCE also supports LGs, particularly cities, in their efforts to realize reach codes. The SEEC has set up workshops on reach codes and CAPs at various municipalities throughout SCE's service territory.³⁸

The Core Program Coordination category integrates technical and financial assistance from multiple energy programs to help communities learn about and implement clean energy and GHG reduction options. Similar to the Government Facilities program category, the Core Program Coordination category provides comprehensive support, including leveraging outreach and education, technical audits and assessments, residential and small business DI programs, and improved access to Savings by Design and other SCE programs.

SCE's ELPPs offer Core Program Coordination activities via its "Community Programs" component providing outreach and education to community members about energy savings and best practices, coordination with 3P programs, and the IOU DR and small business DI programs. Partners' community outreach is currently restricted to education regarding energy efficiency in general, marketing other SCE core program offerings, and those public process activities that fall under CAP/EAP development. SCE's ELPPs currently do not track or achieve energy savings through Core Program Coordination activities, which is a strictly non-resource program category.

3.6 SoCalGas

The geographic mix of SoCalGas' LGPs includes eight counties and five regions (i.e., combinations of counties, cities, and tribal governments).

SoCalGas' 2010-2012 LGPs include:

- County of Los Angeles Partnership (collaborates with SCE);
- Bakersfield Kern County Energy Watch (collaborates with SCE and PG&E);
- Community Energy Partnership (collaborates with SCE);
- Orange County Cities Partnership (collaborates with SCE);
- Palm Desert Partnership Energy Efficiency Demonstration Program (through 2010 only);

³⁷ SCE 2012-2014 Integrated Demand-Side Management Activities (U338-E) – Application A.11-03-003. Filed with the CPUC March 1, 2011.

[http://www3.sce.com/sscc/law/dis/dbattach10.nsf/0/AD428E4EEF2D0F298825784700749D1A/\\$FILE/A.11-03-003+DR+2012-14+-+SCE-1+Volume+3+-+Management+Activities.pdf](http://www3.sce.com/sscc/law/dis/dbattach10.nsf/0/AD428E4EEF2D0F298825784700749D1A/$FILE/A.11-03-003+DR+2012-14+-+SCE-1+Volume+3+-+Management+Activities.pdf).

³⁸ SCE Energy Efficiency Partnerships webpage. <http://www.sce.com/business/energy-solutions/energy-efficiency-partnerships.htm>. And Strategic Plan Menu Update (Sep 2011) provided by CPUC representative Jean Lamming.

- Riverside County Partnership (collaborates with SCE);
- San Bernardino County Partnership (collaborates with SCE);
- San Joaquin Valley Partnership (collaborates with SCE);
- San Luis Obispo County Energy Watch Partnership (collaborates with PG&E);
- South County Santa Barbara Partnership (collaborates with SCE);
- North County Santa Barbara Partnership (collaborates with PG&E);
- South Bay Partnership (collaborates with SCE);
- Ventura County Regional Energy Alliance Partnership (collaborates with SCE); and
- Desert Cities Energy Partnership (collaborates with SCE).

As with SCE, some of the above LGPs are joint partnerships with other IOUs, such as the Kern County Energy Watch, which is administered by PG&E, SoCalGas, and SCE, and the Community Energy Partnership, Palm Desert Partnership³⁹ Energy Efficiency Demonstration Program and Ventura County Regional Energy Assistance Partnership, which are jointly administered by SCE and SoCalGas.

According to SoCalGas' 2010-12 LGP program implementation plan, the Government Facilities program category includes:

- Retrofit of county and municipal Buildings;
- Retro-commissioning;
- Technical assistance; and
- OBF.

While the Government Facilities projects are considered as resource activities, SoCalGas' LGPs do not claim savings from them.

The Strategic Plan Support category includes:

- Code compliance;
- Reach code support;
- Guiding document support;
- Financing for the community; and
- Peer to peer support.

Strategic Plan Support activities are strictly non-resource and focus on training, outreach, and education. In order to support a long-term integrated vision as indicated in the Strategic Plan and Integrated Demand Side Management (IDSMS) program, SoCalGas encourages and supports its partners in creating a CAP and/or EAP. While energy efficiency is one item in

³⁹ This partnership was not continued for the current program cycle.

CAPs, EAPs focus entirely on energy efficiency. SoCalGas supports all partners in creating either type of plan, but only funds the implementation of EAPs. SoCalGas also supports LGs, particularly cities, in their efforts to develop and implement reach codes.

The Core Program Coordination category includes:

- Outreach education;
- 3P program coordination; and
- Technical assistance.

Core Program Coordination activities are strictly non-resource and focus on training, outreach, and education. However, the Energy Community Partnership, a core program, does offer direct installation of energy efficient products for homes and small businesses, which are associated with direct energy savings claims through core programs as the LGPs do not claim savings.

3.7 SDG&E

The geographic mix of SDG&E's LGP includes three cities, one county, and a region covered by the San Diego Association of Governments including 18 cities and two counties.

SDG&E's 2010-2012 LGPs include:

- City of Chula Vista Partnership;
- City of San Diego Partnership;
- City of San Juan Capistrano Partnership;⁴⁰
- County of San Diego Partnership;
- San Diego Association of Governments (SANDAG) Partnership; and
- Unified Port of San Diego Partnership.

The LGPs include both older (or legacy) and newer programs. The City of Chula Vista Partnership and City of San Diego Partnership started in 2006, whereas the City of San Juan Capistrano partnership started in the current program cycle. As expected, levels of knowledge and accomplishment vary accordingly. For example, the City of Chula Vista Partnership has had a CAP in place since 2006 (which has been revised twice) to guide many of its other LGP activities, whereas the City of San Juan Capistrano Partnership has made little progress on this front to date.

The role that SDG&E plays with its LGPs varies, ranging from service provider to supporter to equal partner. However, most of SDG&E's LGPs are implemented by the LGs, and they conduct

⁴⁰ This partnership was not continued for the current program cycle.

a wide range of activities that promote direct energy savings (e.g., retrofits and CFL exchanges) and indirect energy savings from training, outreach, and education. However, none of the LGPs are considered resource programs and none claim direct energy savings.

ICLEI plays a large role in the delivery of services to LG participants in SDG&E's service territory, including providing templates and tools, and conducting in-person and online training to facilitate understanding of AB32 requirements, GHG inventories and the development and implementation of CAPs.

The primary objectives for SDG&E's LGPs are creating awareness and spreading knowledge of energy efficiency, designing energy efficiency programs, informing target markets, reducing environmental impacts, and providing referrals to SDG&E core programs. Additionally, the LGPs are leveraging the relationships the LG agencies have with residential and commercial utility customers, reaping the benefits of the knowledge agencies have of their communities and delivering some of the energy efficiency services and initiatives to government sectors and underserved regions.

According to SDG&E's 2010-12 LGP program implementation plan, the Government Facilities program category includes:

- Retrofit of county and municipal buildings;
- Retro-commissioning;
- Integrating DR;
- Technical assistance; and
- OBF.

Government Facilities activities are implemented by the LGP-participating cities themselves. LGPs do not claim energy savings for these activities. Individual LGPs target LG facilities and sites that are owned or leased by the city, including city halls, recreation centers, fire stations, libraries, police and correctional facilities, hospitals, bridges and roads, animal shelters, and other public works facilities. The program fosters energy savings by placing city projects within parameters of sustainability and climate change initiatives. This program category includes five sub-categories:

- Government facilities retrofits – provides technical, financial, managerial and administrative support to the government point-of-contact who initiates and implements energy-efficiency retrofit projects. Retrofitting activities and measures include consultation, building audits, retrofit lighting, HVAC, water heating, pumps, and motors;
- Government facilities retrocommissioning – identifies less-than-optimal performance in existing equipment, lighting, and control systems, and makes necessary improvements (rather than replacing outdated equipment);
- Integrated DR – manages LGPs' consumption of electricity in response to supply

conditions. This is done by determining DR potential, referring DR programs, and identifying self-generation opportunities such as solar;

- Technical assistance – provides training and access to benchmarking technologies such as Energy Star to identify the facilities with the highest energy-efficiency potential. It also provides city staff resources for building operator certification, certified energy management, LEED accreditation, GreenPoint Rating and other applicable trainings; and
- OBF – provides \$250,000 of interest-free financing for up to 10 years to fund energy-efficiency improvements for qualified taxpayer-funded customers such as schools and city offices. The program offers cash rebates on more than 140 energy-efficiency measures, including lighting retrofits, HVAC upgrades, water pumps, and food-service equipment replacement.

The Strategic Plan Support category includes:

- Code compliance;
- Reach code support;
- Guiding document support;
- Financing for the community; and
- Peer to peer support.

Strategic Plan Support activities form the core of SDG&E's LGPs initiatives, including providing outreach, planning, and technical assistance to the community to reduce energy consumption and mitigate climate change. Through the SANDAG partnership, SDG&E provides an integrated suite of program offerings geared toward Strategic Plan support to all cities in its service area. The Strategic Plan support tools and technical assistance include code compliance, reach-code support (local codes that exceed Title 24 requirements), guiding document support, peer-to-peer support, and financing for the community such as low-interest loans through the California Energy Commission (CEC).

The Core Program Coordination category includes:

- Outreach education;
- 3P program coordination; and
- Technical assistance.

Providing information about and referrals to IOU core programs is one of the primary objectives of SDG&E's LGPs. Starting in 2009 all of SDG&E's programs are coordinated via a customer segment planning team that includes SDG&E staff from the core program, 3P and government partnerships, DR, customer generation, and others. The planning team is drawn from SDG&E, LGP and 3Ps to coordinate the outreach and education to customer groups. Through these means, retrofits, retrocommissioning, integrated DR s, technical assistance

(such as audits) and OBF are provided to customers. However, the LGPs do not claim any energy savings from such activities and measures.

3.8 Statewide Energy Efficiency Collaborative

California's four IOUs have teamed with three non-profit groups to create the SEEC, which supports LGs in their efforts to reduce greenhouse gas emissions and to reduce energy usage. The three non-profits are ICLEI, Institute for Local Government (ILG), and the Local Government Commission (LGC). The mission of these organizations is to promote networking, education, and technical knowledge related to the SEEC goal of reduced greenhouse gas emissions and energy savings.

As part of the IOUs' 2010-2012 energy efficiency program portfolio, each IOU supports the position of the Statewide Local Government Energy Efficiency Best Practices Coordinator. This Statewide Local Government Energy Efficiency Best Practices Coordinator position is held by Pat Stoner and is overseen by ICLEI, LGC, and ILG. The Coordinator creates quarterly newsletters for the LGPs, creates best practice case studies, and tracks progress related to the Strategic Plan. Additionally, the Coordinator produces two annual reports,⁴¹ both of which were reviewed for our research. The Coordinator's knowledge spans many LGPs and is a resource for LGPs that are looking to find out who has attempted similar projects and how they were successful in their efforts.

ICLEI is a non-profit composed of 600 nationwide LGs that focus on CAPs, technical workshops, and greenhouse gas inventories. Their offerings through SEEC include free Climate and Air Pollution Planning Assistance (CAPPA), a municipal clean energy tool kit, guides for creating CAPs, and educational materials on how to reduce emissions for new development.

ILG has a recognition program known as Beacon Award, in which cities and counties are recognized for reducing emissions, reducing energy use, adopting climate change policies, and promoting sustainability. Agencies can participate by submitting an application that notes progress or commitments related to climate action planning. Awards levels are silver, gold, and platinum and fall into the categories of best practice areas, energy efficiency, or greenhouse gas emissions.

LGC helps to connect LGPs through networking meetings, an annual statewide conference on energy efficiency and climate planning best practices, and free educational webinars.

⁴¹ Pat Stoner, *Statewide Local Government Energy Efficiency Best Practices Coordinator's 2011 and 2010 Annual Reports*, <http://eecoordinator.info/coordinator-reports/>

4 Research Methods

This section describes the methods used to conduct the study.

4.1 Research Issues

Before we developed the study research plan, we solicited input from the IOU-Energy Division Management Group on priority research issues for both the IOUs and the CPUC, which are categorized below.

- **Context** – How important is the context of each LGP in determining its success, regarding meeting cost-effectiveness targets and advancing Strategic Plan goals? Assessing the link between context and success can provide insights on how LGPs can utilize their unique resources to meet the state’s goals better than other models (3P core), and within the range of LGPs, which local contexts are more or less supportive for making progress on specific LGP program activities.
- **Comparative advantage** – What practices are LGPs uniquely able to do, that they can do relatively better than other administrative models (i.e., 3Ps, core programs)? This issue is closely related to context, with the same research activities addressing it, but the results will relate to specific program categories and activities.

Identifying the comparative advantages of LGPs can provide insights into the tradeoffs of deploying the LGP model versus other models to achieve greater success on various dimensions - from the perspective of strict cost-effectiveness, achieving greater comprehensiveness across measures/projects, ability to serve HTR sectors and conducting of non-resource activities. For example, LGPs as a delivery model may be found to be less cost-effective than some 3P programs in delivering DI programs. That could be due to extra administrative layers or complex contracting arrangements, or more likely due to the fact that most LGPs try to address HTR segments. They may be trying to meet local needs or be using a non-profit implementer whose goals are to reach isolated segments of the population. The state/IOU may decide those are worthy goals and accept lower cost-effectiveness, or that the LGP has gone too far afield from its original mission.

The assessment also provides insight into how individual LGPs may have a comparative advantage over other LGPs to be more successful in delivering resource and non-resource program activities, to help shape decisions around what types of program activities each LGP should deploy. For example, some LGPs may excel at doing a variety of Strategic Plan support activities, and have gained significant traction within one or two program cycles. Other LGPs may be trying to work on too many activities and are not gaining traction, and should focus their efforts where they are best suited. In some cases, they might adopt practices that other more advanced LGPs have already developed instead of creating their own local version. On the resource side, some LGPs may be best at delivering 3P or core programs locally through tapping local marketing and outreach resources, increasing participation and broadening penetration among HTR segments. Other LGPs may not be

adding any value to existing 3P programs and probably should not add a layer to that existing activity.

- **Management and structural issues** – To what extent is LGP program success determined by its management and structure? This issue pertains to LGPs as a delivery model, so they may be compared to 3P and core programs in the administrative model comparison study, and to other LGPs.

This assessment will help to determine whether the management and structural issues associated with LGPs help or hinder progress towards Strategic Plan energy savings goals (and whether those challenges are greater or less than those associated with core and 3P program delivery models), and inform strategies for improving the LGP delivery model.

Across individual LGPs, we assess the variation in management and structural designs to facilitate decisions around how best to structure individual LGPs.

- **Success metrics** – How is success measured beyond short-term energy savings? How do LGPs attempt to prioritize what can be competing goals of cost-effective energy savings and Strategic Plan support? And for resource activities, how is measure comprehensiveness and serving HTR customers balanced with achieving cost-effectiveness and freeing up resources to address Strategic Plan goals? This assessment will catalog how LGPs measure success—at the CPUC, IOU and individual LGP level—to show the range of opinions on how to judge a successful LGP. There is likely to be uncertainty about how to balance competing goals and how to judge whether activities are leading to successful outcomes, since beyond cost-effectiveness there are few common metrics for individual LGPs to measure success. The findings can be used to compare to 3P and core programs, where measuring success is likely more straightforward. It will also show how uncertainty about balancing disparate LGP goals impacts LGPs' activities and how they focus their efforts. We look at how the different IOU models might help or hinder LGPs to balance their goals and what are the characteristics of LGPs that seem to achieve an appropriate balance.

4.2 Research Objectives and Overview of Approach

The overarching Program Assessment Study Work Plan⁴² identified three categories of study objectives, which are described below along with an overview of our approach to addressing them. We were unable to meet all of the original objectives, as noted below. A more detailed description of the study approach is provided in Section 4.3 below.

4.2.1 Program Group Operating Landscape

The research objectives under the Operating Landscape category are listed below, followed by an overview of our study approach to addressing them.

⁴² Program Assessment Study Work Plan – 2010-2012 Nonresidential Program Process Evaluation, submitted to Energy Division of the CPUC, submitted by Itron, Inc. on November 10, 2011.

Objectives:

- What are the recent trends in markets and within technologies that may change the relative importance of the barriers to energy efficiency addressed by this Program Group?
- What are the projected or recent changes in codes and standards that may alter the design objectives or efficacy of design strategies?
 - What implications do these have on optimal program design?
 - What are the critical policy objectives supported by the programs?
- What are the new and innovative programmatic strategies and do they represent improved adaptation to markets or recent trends?

Overview of Approach:

We reviewed LGP program documents, data sources, and websites, and conducted research on state building codes, CAP legislation, and LGP funding sources. We synthesized the information and prepared a memo (included herein as Appendix F) that described the context under which LGPs operate.

4.2.2 Alignment to Best Practices

The research objectives under the Alignment to Best Practices category are listed below, followed by an explanation of why we did not address them.

Objectives:

- For each Program Group, program category, and individual program examined:
 - How do program practices align to the known set of best practices?
 - What are the areas of most opportunity for improvement with respect to best practices?
 - What are the important differentiating program context characteristics?
 - What evidence emerges from a review of practices, outcomes, and contextual data that confirm or contradict the supposition that known best practices lead to success?
 - What, if any, updates or refinements of best practices are implied by these findings?
- What changes are recommended for programs to rise to their highest potentials?

Overview of Approach:

While best practices have been developed for many program types (e.g., education and HVAC programs), a comprehensive set of best practices that pertain to the unique attributes of LGPs (e.g., city/IOU collaboration) does not yet exist. However, the California Statewide Best Practices Coordinator has made substantial progress developing best practices case studies

and disseminating them to LGs. A primary purpose of our research was to attempt to identify a more comprehensive set of potential best practices and facilitating factors that are consistent with higher performing LGPs to inform future LGP design and selection. We also identified barriers to success and ways to overcome barriers to improve LGP performance.

4.2.3 Performance Characterization, Lessons Learned, and New Best Practices

The research objectives under the Development of Best Practices category are listed below, followed by an explanation of how we partially addressed them.

Objectives:

- For each Program Group or category, what are the generalized and transferable best practices implied by reviews of program practices, outcomes, and contextual data?
- Who is excellent at what they do? How are they doing it and why does it work?
- What are the implications of newly identified best practices on resource allocations to programs by category and type?
- Based on these findings:
 - What, if any, changes are recommended to the design and implementation of specific programs and program groups?
 - What, if any, changes are recommended to overall portfolio strategy and management?
 - What, if any, changes are recommended to policies governing portfolio design, evaluation, and reporting requirements?

Overview of Approach:

Due to the diversity of LGPs, the sampling approach (non-random), the context-dependence of the factors we identified during our research that were correlated with superior performance and the difficulty of independently validating superior performance (i.e., typically relying on self-report), we were unable to develop definitive best practices. Instead, we identified facilitating factors correlated with superior performance. The factors could be studied in more depth in a future study to attempt to establish best practices for LGPs.

We also identified limiting factors, challenges, and barriers that might be preventing LGPs from meeting their potential for energy savings. We looked broadly at the energy savings potential of LGPs, including savings that might not be directly claimed by the LGP.

4.3 Research Approach

In attempting to meet the study objectives, we used a combination of primary and secondary research. We reviewed existing data sources and documents and conducted in-depth interviews with LGP stakeholders and program/partner staff during the first half of 2012.

4.3.1 Program Document and Data Review

We reviewed a variety of LGP-related documents and data sources to inform our research approach and support our findings:

- LGP program evaluations and studies (2006-2008 SCE, PG&E and SDG&E/SoCalGas program process evaluations);
- LGP and related PIPs filed by the IOUs for the 2010-2012 program cycle;
- The LG portion of the state's Strategic Plan;
- IOU regular reports to the CPUC on program progress (monthly, quarterly, and annual);
- The IOUs' LGP Strategic Plan biannual menu reports;
- LGP program and program component resources (e.g., the Statewide LGP Best Practices website, individual LGP websites, benchmarking tools, CAP templates and legislation, IOU LGP and related internal program planning documents);
- Broader policy documents (e.g., CPUC proposed program decisions, California potential study update reports, LG comments on recent policy proposed decisions);
- LGP program savings by customer segment and program for 2010-2012 provided in summary format by Itron;⁴³
- LGP program budget and expenditures from Energy Efficiency Groupware Application⁴⁴ (EEGA); and
- Statewide Local Government Energy Efficiency Best Practices Coordinator's 2011 and 2010 Annual Report.

The secondary data also supported sample development and informed analysis. In particular, at the start of the study design phase we developed a characterization matrix using the secondary data to build an understanding of the range of LGP characteristics and the key drivers of variation. The matrix was used to inform the sample plan and analysis approach. Key components of the characterization are included in the tables for each sampled LGP in Appendix A.

4.3.2 In-depth Interviews

We conducted dozens of in-depth interviews with LGP IOU and partner program staff, 3P implementers, and stakeholders in April through June 2012. Senior staff from Evergreen and Navigant conducted the vast majority of interviews. Each interview was recorded and the respondents were assured that recordings will be kept confidential, to be used solely by the Evergreen Team. The Team entered notes from each interview into a standard template that was approved by the Itron project manager. A version of the notes without identifying factors will be submitted to the joint IOU-Energy Division Management Group. We worked closely

⁴³ Itron had detailed IOU energy efficiency program savings data, and we were authorized to obtain summaries from it. There were restrictions related to customer confidentiality that precluded us from obtaining detailed (customer-specific) program data.

⁴⁴ www.eega.cpuc.ca.gov

with the IOU-Energy Division Management Group to develop the list of target interviewees and collect updated contact information.

4.3.2.1 Sample Approach

The sampling approach reflects input from the joint IOU-Energy Division Management Group, with initial suggestions provided by each IOU, discussion and input provided by CPUC Senior Analyst Jean Lamming and the Statewide Local Government Energy Efficiency Best Practices Coordinator, and the Evergreen Team's independent review to ensure that the sample would allow us to meet the study research needs as outlined in Itron's November 10, 2011 *Program Assessment Study Work Plan* and a preliminary version of the Evergreen Team's LGP research plan (delivered to the CPUC on January 31, 2012).

After reviewing the preliminary LGP research plan with the joint IOU-Energy Division Management Group via a conference call on February 3, 2012, we requested that the IOUs separately nominate for additional study LGPs that have achieved varying levels of performance in different resource and non-resource activities that are key focus areas for the individual IOUs. In addition, we asked that they nominate stronger and weaker performers across the whole portfolio of activities that they conduct. We received input from utilities until March 8, 2012.

After receiving IOU nominations, the Evergreen Team reviewed the selections with CPUC and other LGP experts. Our team also reviewed each proposed LGP individually and the group as a whole to ensure the sample would meet our research needs, for example, ensuring an even mix across utilities and by key LGP characteristics. Below we present the LGP sample along with brief descriptive information for each, and program activities that we addressed among the three categories of assessment that we conducted: resource, non-resource, and portfolio.

Sample Selection

Our sample consists of 22 unique LGPs that became the focus of our research. Overall, the nominations reflect a broad range of operating contexts, and include regional partnerships, partnerships with single cities (large and small), COGs, JPA partners, and cities that received ARRA funding. Some partnerships are newer, some more established, some have benefitted from very engaged partner staff, and some have extended their reach to leverage the efforts of other regional agencies. The information below was gathered at the time that the sample was selected. The number of cities and counties covered by each LGP can be found in Table 7 in the next report section.

PG&E

Of the 19 LGPs operating in PG&E's service territory, there are eight in our sample – six were selected by PG&E and two more were added as a result of our follow-up discussions and assessment. The PG&E sample varies by geography (e.g., urban versus rural settings), age (i.e., long-established or newer), partner type (e.g., local county and non-profit entity) and direct installation model.

- **Association of Monterey Bay Area Governments Energy Watch (AMBAG EW)** – AMBAG EW, established during the 2004-2005 program cycle, was formed by a JPA and serves three counties. In addition to creating a CAP, the partnership targets the hospitality sector for DIs and will be expanding to reach small businesses and non-profit organizations.
- **East Bay Energy Watch (EBEW)** - EBEW has been in existence since the 2004-2005 program cycle and continues to build upon its offerings. EBEW has adopted a CAP, delivered direct installations and is adding an HVAC retirement program.
- **Santa Barbara Energy Watch (SBEW) (with SoCalGas)**⁴⁵ - SBEW includes DI, CAP development, marketing and outreach, audits, retrofits, and education and training. SBEW also collaborates with the County Green Business Certification Program to assist small business customers with completion of the energy portion of the green business certification process.
- **Redwood Coast Energy Watch (RCEW)** - RCEW focuses on a rural and HTR geographical region (Humboldt County) and facilitates energy efficiency efforts across all sectors. In addition to DIs, RCEW has developed a CAP template and offers consumer education and training activities.
- **San Luis Obispo Energy Watch (SLOEW) (with SoCalGas)** - SLOEW is implemented by an economic development organization and includes retrofits to municipal buildings and small businesses. The partnership is taking the lead in the region to develop a CAP.
- **Yolo Energy Watch (YEW)** - YEW is a relatively new LGP that assists small to medium businesses and non-profits with DIs in Yolo County.
- **Sonoma County Energy Watch (SCEW)** - SCEW is a new partnership, begun in the current program cycle, which offers audits to County-owned buildings in order to find rebate opportunities. The partnership is also developing an energy and sustainability policy, in addition to their CAP, meant to govern County operations.
- **Sierra Nevada Energy Watch (SNEW)** - SNEW is working to develop Energy Action and Demand Reduction Plans to improve codes and standards in 14 counties (including Alpine, El Dorado, Butte, and Sutter). In addition to their codes work, they use local sub-contractors and regional 3P firms to conduct direct installations of energy efficiency measures for local customers. The LGP has also used a specialized subcontractor to lead municipal retrofits across the broad LGP territory.

SCE

Following are SCE's nominations for partnerships based on discussions with IOU PMs, CPUC staff, and the Statewide Local Government Energy Efficiency Best Practices Coordinator. SCE's sample includes seven of its 20 LGPs and reflects differences in SCE Energy Leader tier, municipal retrofit accomplishments, benchmarking, CAP development, and reach code work.

- **San Gabriel Valley Energy Leader Partnership** - This partnership began with the 2006-

⁴⁵ This LGP is distinct from the South County Santa Barbara partnership that is jointly implemented by SCE and SoCalGas.

2008 program cycle and has two “Platinum” cities (the highest distinction in SCE’s Energy Leader Model), due to their participation in DR programs and use of ARRA funding for multiple retrofit projects. The City of West Covina in the San Gabriel Valley Energy Leader Partnership was the first city to achieve Platinum status in the SCE service territory.

- **San Joaquin Valley Energy Leader Partnership (VIEW) (with SoCalGas)** - The San Joaquin Valley Energy Leader Partnership, also marketed as the Valley Innovative Energy Watch (VIEW) Partnership, is a joint SCE and SoCalGas partnership with the cities in Tulare and Kings counties, as well as with the counties themselves. Implemented by a regional non-profit organization and supported by many others in the area, VIEW is dedicated to Strategic Plan goals and municipal retrofits. Tulare County has already achieved “Silver” while three cities are on track to achieving “Gold”.
- **Kern County Energy Leader Partnership (with PG&E and SoCalGas)** - This LGP is jointly administered by SCE, PG&E, and SoCalGas. Despite having participated in an LGP since 2004, all cities in this county of about 900,000 residents still maintain a “Valued” partners status and SCE believes that there are differences in city and county participation under the Energy Leader model as compared with PG&E’s Energy Watch program.
- **Orange County Cities Energy Leader Partnership (with SoCalGas)** - The participating Orange County cities began their partnership with SCE in 2008 as a joint partnership with SoCalGas. While none of the cities have progressed past the “Valued” level, their relationship with LA County for Strategic Plan implementation (by creating a regional energy network) is an innovative method of excelling in non-resource activities.
- **Desert Cities Energy Leader Partnership (with SoCalGas)** - The Desert Cities are part of a larger region that is under the JPA of the Coachella Valley Association of Governments (CVAG). Despite being a relatively new partner, the City of Palm Springs has already achieved “Silver” Partner status. SCE also highly recommended this partnership for its non-resource activity achievements in writing CAPs.
- **South Bay Energy Leader Partnership (with SoCalGas)** - The South Bay Energy Leader Partnership is a group of 15 cities in the County of Los Angeles that began its joint partnership with SCE and SoCalGas during the 2006-2008 program cycle. This partnership is also highly recommended by SCE for its non-resource activity achievements in drafting EAPs for all participating cities and completing baseline emission assessments.
- **South County Energy Leader Partnership (with SoCalGas)⁴⁶** - The South County partnership is a joint one with SCE and SoCalGas, and includes the County of Santa Barbara and the Cities of Carpinteria, Goleta, and Santa Barbara. Begun in 2006, the partnership has one “Silver” city, Goleta, and many activities designed to achieve Strategic Plan goals.

SoCalGas

Our sample includes five of the LGPs operating in SoCalGas service territory, all of which are jointly administered with SCE. Three of these partnerships (South County Santa Barbara,

⁴⁶ This LGP is distinct from the Santa Barbara Energy Watch partnership that is jointly implemented by PG&E and SoCalGas, which is in the northern portion of the county.

Orange County, and San Joaquin Valley) are described in the SCE sample section and are not included here. The choice to list the San Bernardino County LGP and Ventura County LGP here was made because only SoCalGas selected them as a partnership to be assessed (SCE did not select them). SoCalGas' sample includes LGPs that offer IDSM, support of LG long-term planning through EAPs, and recognition for community accomplishments. SoCalGas (similar to SDG&E) files all programs as non-resource, though many partnerships funnel participants into the core programs. The selection below is based on utility input and was independently validated by our team.

- **San Bernardino County Partnership (with SCE)** - The San Bernardino County Partnership is administered jointly by SCE and SoCalGas. SoCalGas staff considers this partnership a leader due to its accomplishments in the Government Facilities category. It is the opinion of SoCalGas staff that this may be due in part to the supportive upper management at the county level. The partnership works with many county staff members who help to keep goals on track. In particular, the county's program managers for capital improvement projects and deferred maintenance have a strong understanding of utility programs and meet regularly with SoCalGas staff. This detailed working knowledge of utility core programs appears to translate into higher rates of customer participation. This partnership does not currently focus on community education or outreach.
- **Ventura County Energy Leader Partnership (with SCE)** - The Ventura County partnership is an alliance between SoCalGas, SCE, and the Ventura County Regional Energy Alliance (VCREA, a JPA). A partner since 2004, VCREA "has been instrumental in building an ethic of energy efficiency in the region that has led to friendly competition among public agencies and greater desire among community activists to have their own local 'green councils' to take action."⁴⁷

SDG&E

Our sample includes five LGPs operating in SDG&E's service territory. All of the SDG&E LGPs are considered non-resource programs, which do not claim direct energy savings. Instead, SDG&E's LGPs are coordinated with their core programs, and projects promoted by LGPs that lead to energy savings are reported by the core programs. In particular, SDG&E's sample was selected to analyze the City of San Diego Partnership's municipal retrofits and financing efforts, the City of Chula Vista Partnership's reach code development and local energy efficiency capacity efforts, SANDAG's Energy Roadmap Program, and the Port of San Diego's Green Business Challenge. The selections below are based on utility input and were independently validated by our team.

- **City of Chula Vista Partnership** - This partnership has been in existence for over ten years and includes reach code development and connections to municipal and commercial direct installations. The city uses Portfolio Manager to benchmark buildings and as of

⁴⁷ SCE 2010-2012 PIP, 294.

- September 2011, 24 municipal buildings had been benchmarked in the current cycle;
- **City of San Diego Partnership** - The City of San Diego Partnership began with the 2006-2008 program cycle and focuses on municipal retrofits and financing efforts. The city is also developing a CAP and has integrated energy efficiency language into its general plan.
 - **Unified Port of San Diego Partnership** - The Port of San Diego Partnership has a Green Business Challenge component that gives a green score to any of the 600 participating tenants. The Challenge encourages participants to increase their energy efficiency efforts using trainings, tools and resources provided by the partnership.
 - **San Diego Association of Governments (SANDAG) Partnership** - SANDAG is a regional planning agency that helps create energy management plans for 18 cities and counties. Through the partnership with SDG&E, SANDAG uses these energy management plans as a base for energy efficiency projects.
 - **City of San Juan Capistrano Partnership**⁴⁸ - This partnership uses the role of the city's Environmental Division Manager to work towards the goals of code compliance and creation of an Energy Master Plan (for municipal facilities). The city will also have an education program, website, and will hold community events to reach out to commercial customers that may benefit from utility programs.

Selected Program Activities

As mentioned previously, we selected three types of program activities for our study. We conducted separate assessments for each component instead of trying to conduct one assessment across LGPs, each of which encompass a different set of activities. Based on feedback from the IOUs and the CPUC, we addressed the following program activities:

- Resource activities - municipal and nonresidential retrofits (including direct installations), including retrofits where the core program claims savings (under the SDG&E/SoCalGas "non-resource" model and for SCE's commercial retrofits);
- Non-resource activities - climate action planning, benchmarking, and reach codes, that are not associated with energy savings claims; and
- Portfolio - selected LGPs that have a broad array of components that constitute a local portfolio of energy efficiency resources are compared and assessed in terms of how effective they are in delivering a comprehensive set of services to their locality. These LGPs may achieve more than the sum of their parts, and we intended this category to address this issue.

Table 5 presents a matrix of program activities that will be assessed by the LGP sample. This is based on the information that we had at the time the sample was selected. In the next table, the rows are the sample of LGPs and the columns are the selected program activities that are offered by the LGP. For the resource category, "D" indicates that the LGP implements the

⁴⁸ This partnership was not continued for the current program cycle.

projects and directly claims those savings. An “I” indicates that the LGP refers the commercial or municipal customer to core utility programs where the savings are claimed (indirectly). An asterisk (“*”) indicates that the LGP is a joint partnership of multiple utilities.

Table 5 - LGP Sample Matrix

		Program Element					Characterization			
		Resource	Non-Resource			Portfolio	Type			
		Municipal or Commercial Retrofit or Direct Install	Benchmarking	Climate/ Energy Action Plans	Reach Codes	Portfolio	City	County	Regional	Other
PG&E	AMBAG	D		x		x			x	
	EBEW	D	x	x	x	x				x
	SBEW*	D		x		x		x		
	RCEW	D	x	x	x	x				x
	SLOEW*	D		x	x	x		x		
	YEW	D	x	x	x	x		x		
	Sonoma County	D	x	x	x	x		x		
	Sierra Nevada Energy Watch	D		x	x	x			x	
SDG&E	City of Chula Vista	I	x		x	x	x			
	City of San Diego	I	x	x	x		x			
	Port of San Diego		x	x						x
	SANDAG		x	x	x				x	
	City of San Juan Capistrano		x	x	x		x			
SoCalGas	South County Santa Barbara*	I			x	x		x		
	Orange County*	I			x	x		x		
	San Bernadino County*	I	x	x	x	x		x		
	San Joaquin Valley*	I	x	x					x	
SCE	San Gabriel Valley Partnership	I			x				x	
	San Joaquin Valley (VIEW)*	I	x	x					x	
	Kern County*	I	x	x	x	x		x		
	Orange County Partnership*	I			x	x			x	
	Ventura County*	I		x	x			x		
	Desert Cities Partnership*	I		x	x	x			x	
	South Bay Partnership*	I		x		x			x	
	South County Santa Barbara*	I			x	x		x		

“*”: LGPs that are administered by multiple IOUs

“D”: the LGP implements the projects and directly claims those savings

“I”: the LGP refers the commercial or municipal customer to core utility programs where the savings are claimed (indirectly)

4.3.2.2 Instrument design

We worked closely with the IOU-Energy Division Management Group on instrument design, attempting to leverage the more generic best practices instruments that were used for the other Program Assessments, while also addressing the issues unique to LGPs (i.e., the LGP research issues described previously in this section). After numerous iterations, the interview guide was adapted to a more high-level open-ended guide that the team felt would appropriately address the uniqueness of LGPs. A spreadsheet was used for entering data during interviews, and a high-level Microsoft Word document that summarizes the instrument is provided in Appendix C.

4.3.2.3 Implementation

After finalizing the sample of LGPs and obtaining contact information from the IOUs, we began scheduling interviews on April 17, 2012. Interviews were staggered so that the first interview for each LGP was with the PM at the utility level. The team emailed contacts in order to get availability for a one-on-one and a half hour interview. The contact was then emailed a confirmation of interview date, time, and phone number. Each interview was recorded (to be used by the evaluation team only) and notes were filled in after the interview in the spreadsheet instrument. Sixty-seven interviews were conducted during the months of May and June 2012 (Table 6). Senior staff at Evergreen and Navigant conducted the vast majority of interviews.

Table 6 - Interviews Completed by Utility and Stakeholder

LGPs by IOU	Interview Completes			
	IOU Program Managers	LGP Staff	Other	Total
PG&E				
Association of Monterey Bay Area Governments (AMBAG) Energy Watch	1	1	1	3
East Bay Energy Watch	1	1	3	5
Santa Barbara County Energy Watch (with SoCalGas)	1	1	0	2
Sonoma County Energy Watch	1	1	1	3
San Luis Obispo County Energy Watch (with SoCalGas)	1	1	0	2
Sierra Nevada Energy Watch	1	1	2	4
Yolo County Energy Watch	1	1	1	3
Redwood Coast Energy Watch	1	1	0	2
SDG&E				
City of Chula Vista Partnership	1	1	0	2
City of San Diego Partnership	1	1	0	2

City of San Juan Capistrano Partnership	1	1	0	2
Unified Port of San Diego Partnership	1	1	0	2
San Diego Association of Governments (SANDAG) Partnership	1	1	0	2
SCE Independent of SoCalGas				
San Gabriel Valley Energy Leader Partnership	1	1	0	2
SoCalGas and SCE				
San Bernardino County Partnership	1	1	0	2
Ventura County Energy Leader Partnership	1	1	0	2
Kern County Energy Leader Partnership (collaboration is with PG&E as well)	1	1	0	2
Desert Cities Energy Leader Partnership	1	1	0	2
South Bay Energy Leader Partnership	1	1	0	2
San Joaquin Valley Energy Leader Partnership	2	1	0	3
Orange County Cities Energy Leader Partnership	2	2	1	5
South Santa Barbara County Energy Leader Partnership	2	1	1	4
Stakeholders				
California Statewide Best Practices Coordinator	0	0	1	1
CEC ARRA Fund Managers	0	0	1	1
Local Government Sustainable Energy Coalition	0	0	1	1
ICLEI	0	0	1	1
Los Angeles County (regarding data availability)	0	0	3	3
IOU PMs	2	0	0	2
Total	27	22	16	67

4.4 Research Challenges and Limitations

As mentioned previously, the IOUs' LGPs are complex and varied greatly across the state. Each LGP in itself is a mini-portfolio of energy efficiency programs.

4.4.1 Difficulty Developing Best Practices

While we had a sample of 22 LGPs, we found that was not enough to support the development of conclusive best practices. Many of the factors associated with superior results cited by respondents were very context-dependent, rendering the relevant sample size for most findings much smaller than the original sample size of 22.

As a result, we focused on identifying facilitating factors that were correlated with superior results. We also captured barriers to achieving results, and opportunities for expanding savings opportunities and greater progress towards meeting Strategic Plan goals.

4.4.2 Complicated Programs

Another challenge was attempting to gain a sufficient understanding of each sampled LGP. Our original approach was to conduct about three interviews per LGP, with a focus on the IOU PM and the implementer—usually one local government partner. For many LGPs that span groups of cities and counties, we later attempted to conduct more interviews to gain responses from additional partners. However, we were unable to do in-depth research for each LGP to ensure we understood all of its offerings and achievements.

4.4.3 Sample Representativeness

Another complicating factor is that our sample was not statistically selected to represent the population of LGPs. As a result, we are unable to generalize our findings beyond the sample. Where the evaluation team feels that the sample results are likely representative, we state as much, but we note that it is the evaluator's opinion that the findings are likely generalizable.

4.4.4 Classifying LGPs

After we had collected the majority of the data, we realized that it would be useful to attempt to classify the LGPs so that useful findings could be developed. Without classifications, it would be difficult to address the issue described previously—that most facilitating factors appear to be very context dependent. We developed a number of classifications to allow us to compare groups of LGPs:

- IOU LGP model;
- How long the LGP has been implemented;
- Structure of the LGP;
- Geographic range of the LGP; and
- Number of cities and counties (if applicable) included.

We also attempted to apply a framework that captures how advanced an LG or groups of LGs are in terms of Strategic Plan goals. This framework does not assess LGP program effectiveness; instead it attempts to rank LG progress such that LGP program activities may be assessed, holding constant the progress of the LG(s). While LGP program effectiveness can be measured based on an LGP's progress during a program cycle (or more), our classification was based on where the LGP was at the time we conducted the research.

The next section presents the results of our attempts at classifying LGPs, and offers a framework to build on in the future. Note that our classification is not complete since we did not evaluate the full suite of program activities that LGPs offer.

4.4.5 Isolating LGP Program Activities

Another complicating factor was attempting to isolate LG activities strictly related to the LGP program. For instance, LGs often use a variety of funding sources and resources to promote LGP and separate local initiatives and it was sometimes difficult for respondents to differentiate between activities and their funding sources. LGPs may use a combination of sources to fund staff and activities.

5 LGP Classification

This section presents the results of our efforts to classify the groups of LGs (or for single-city or county LGPs, the single cities or counties) that comprise each LGP. As mentioned in the previous section, LGPs vary extensively across the state. The study was challenging given the diversity of LGPs, with almost as many variations in LGPs as the number of LGPs in our sample. Most LGPs are also complex to understand, and our research approach was limited by schedule and scope (e.g., number of interviews per sampled LGP) making it difficult to gain a comprehensive understanding of each LGP. The data reported by LGPs is also challenging to analyze and compare across LGPs given the variation and complexity. These challenges informed our approach to analyzing the research results and structuring the findings in this report.

Readers should note that we developed and applied the classifications in this section after we had designed and implemented the research. This is an initial effort at addressing the complexities of the LGP programs using data collected for the Program Assessment study. Future studies could improve upon these efforts and fill gaps that existed in the data we used.

The classifications are not an evaluation of the effectiveness of the LGP programs. The next section presents findings related to the LGP programs.

5.1 LGP Structure

As presented in Section 3, all the IOUs' LGPs are intended to produce outcomes related to government facility retrofits, Strategic Plan support, and core IOU program coordination. There is variation in IOU LGP models, including whether IOUs directly or indirectly claim savings. LGPs also vary in structure across the state depending on the type of implementer and the geographic area covered:

- **Single-city or county** – many LGPs are implemented by a single city or county;
- **Associations or COGs** – there are several LGPs implemented by an association or COGs, with many LGs serving on the board of directors, usually covering a region of multiple cities and counties (e.g., Association of Monterey Bay Area Governments) and with broad authority over transportation planning and funding, housing development, water/wastewater, and air quality;
- **Energy-related organization** – some LGPs are implemented by nonprofit organizations such as Sustainable Napa County and San Joaquin Valley Clean Energy Organization or by energy organizations created by cities and counties (Redwood Coast Energy Authority and Ventura County Regional Energy Alliance) to support clean energy;
- **Business-related organization** – a small number of LGPs are implemented by a Business Chambers of Commerce or Economic Development Organization, typically where a LG such as a county was unwilling or unable to serve as implementer, or where the

organization has a particularly broad regional reach;⁴⁹ and

- **JPA**s – some COGs/AOGs and energy-related organizations are also JPAs, which could extend the authority and reach of the organization. We did not have a large enough sample to determine whether organizations that were also JPAs were able to have greater success, but we include this variable in the classification to show the diversity of implementer types.

Table 7 below lists each sampled LGP by how they are structured. We also indicate the number of cities and counties included in each LGP and for LGPs not implemented by a city or a county, whether the implementing organization is a JPA. Note that determining the number of jurisdictions included in each LGP is not straightforward or consistent across IOUs. For SCE, it is an explicit number of cities (not necessarily equal to the number of cities or counties in the geographic area indicated) since each individual city is engaged and needs to show progress under the ELP framework. For PG&E, it is the total number of cities and counties in the geographic region, which is the upper limit on which jurisdictions may be engaged in the partnership and making progress towards Strategic Plan goals. For SDG&E, it is similar to PG&E with the distinction that there are overlapping LGPs where a regional entity (limited to the County of San Diego) implements an LGP and individual cities within that same geographic area have individual city LGPs.

Table 7 – LGP Structure

LGP Sample by Structure and Region	Geography	Implementer Type	JPA	City & County Numbers
PG&E				
Association of Monterey Bay Area Governments (AMBAG) Energy Watch	Regional	COG	Yes	3 counties, 19 cities
East Bay Energy Watch	Regional	3P	No	2 counties, 33 cities
Santa Barbara County Energy Watch (with SoCalGas)	County	Business Organization	No	1 county, 6 cities
Sonoma County Energy Watch	County	County	NA	1 county, 9 cities
San Luis Obispo County Energy Watch (with SoCalGas)	County	Business Organization	No	1 county, 7 cities
Sierra Nevada Energy Watch	Regional	Business Organization	No	14 counties, 15 cities
Yolo County Energy Watch	County	County	NA	1 county, 4 cities

⁴⁹ There is one LGP implemented by a for-profit 3P contractor, the East Bay Energy Watch, which includes Alameda, Contra Costa, and Solano Counties.

LGP Sample by Structure and Region	Geography	Implementer Type	JPA	City & County Numbers
Redwood Coast Energy Watch	Regional	Energy Organization	Yes	1 county, 7 cities
SCE Independent of SoCalGas				
San Gabriel Valley Energy Leader Partnership	Regional	COG	Yes	31 cities
SoCalGas and SCE				
San Bernardino County Partnership	County	County	NA	1 county
Ventura County Energy Leader Partnership	County	Energy Organization	Yes	1 county, 9 cities
Kern County Energy Leader Partnership (collaboration is with PG&E as well)	County	COG	Yes	1 county, 11 cities
Desert Cities Energy Leader Partnership	Regional	Association of Governments	Yes	1 county, 10 cities
South Bay Energy Leader Partnership	Regional	COG	Yes	17 cities
San Joaquin Valley Energy Leader Partnership	Regional	Energy Organization	No	2 counties, 6 cities
Orange County Cities Energy Leader Partnership	Group of cities within a county	Bundle of Cities	NA	4 cities
South Santa Barbara County Energy Leader Partnership	Group of cities within a county	Bundle of Cities	NA	1 county, 3 cities
SDG&E				
City of Chula Vista Partnership	City	City	NA	1 city
City of San Diego Partnership	City	City	NA	1 city
City of San Juan Capistrano Partnership ⁵⁰	City	City	NA	1 city
Unified Port of San Diego Partnership	Port District	Special District	NA	N/A
San Diego Association of Governments (SANDAG) Partnership	County	COG	No	1 county, 18 cities (count includes those with own LGP)

⁵⁰ This partnership was not continued for the current program cycle.

5.2 Progress Towards Strategic Plan

As we were analyzing the research results, we found it useful to classify the groups of LGs (or single cities and counties, for single-LGPs) that comprised each LGP based on their progress towards the Strategic Plan goals to support the study analysis. By being able to isolate LGPs based on the extent to which the LGs have progressed towards Strategic Plan goals, we could look for common factors that might facilitate greater progress. Conversely, we could look at LGPs where the LGs had made less progress and look for factors that might be barriers to progress.

Table 8 below maps the Strategic Plan goals to the LGP program categories (the “Strategic Plan Elements” row), and how the IOUs claim savings for each category (the final three rows). This table combines information presented previously in Section 3. We continue to mention the distinctions in how savings are claimed because of the relation to motivation and priorities. Having to meet savings goals can be a motivator for programs to achieve measurable results, impacting partnership (IOU and LG) behavior. It also impacts priorities, especially for programs that include a mix of activities that result in direct, indirect, or no savings claims.

Table 8– LGP Program Categories, Strategic Plan Goals and IOU Savings Claims

IOU Model	LGP Program Category		
	Strategic Plan Support	Government Facilities	IOU Core Program Coordination
Strategic Plan Elements	1. Lead adoption and implementation of reach codes stronger than Title 24 2. Lend strong support for code compliance enforcement (ideally halving non-compliance by 2012 and halving that again by 2016)	3. Lead by example with their facilities and energy use practices	4. Lead their communities with innovative programs for energy efficiency, sustainability, and climate change
SDG&E/SoCalGas (non-resource model)	Non-resource – no savings claims	Resource – claimed by core (indirect)	Resource – claimed by core (indirect)
PG&E (resource model)	Non-resource – no savings claims	Resource (direct)	Resource (direct)
SCE (resource model)	Non-resource – no savings claims	Resource (direct)	Resource – claimed by core (indirect)

As stated in Section 3, the fifth Strategic Plan goal, “Develop energy efficiency expertise such that it becomes widespread and typical”, is not mapped to any specific program category.

We created three categories that indicate the extent to which LGPs have progressed towards each Strategic Plan element:

- **Advanced** – LGPs that have made substantial progress laying the foundation for long-term broad progress towards a Strategic Plan element; and
- **Foundational** – LGPs that are either in the early or late stages of building the foundation for long-term broad progress on a Strategic Plan element.
 - **Early-stage** – LGPs that are in the early stages of building a foundation to achieve broad progress on a Strategic Plan element, because they are a very new LGP or an existing LGP that has encountered significant barriers such as lack of resources or authority; and
 - **Late-stage** – LGPs that have begun to lay the foundation to achieve broader success in the near-term; may also include groups of cities where one city has achieved progress and the other cities are lagging but have sufficient resources to leverage the leading city’s successes in the near-term.

Table 9 below presents initial definitions for each stage of progress. We observed that the stage of development can be time dependent (new LGPs versus legacy), but more often is reflective of the existing resources and facilitating structure the LG implementer is able to leverage for the partnership. While some partnerships have been around for more than one program cycle, current progress is closely related to existing resources. We believe that the earliest LGPs were created including LGs that already had some energy efficiency infrastructure in place. The continuum of development is fluid, where LGPs may undergo changes such as staff turnover or major changes in resources that move them backward or forward.

Table 9 –Initial Definitions of LGP Progress Towards Strategic Plan Goals

Strategic Plan Element	Early-stage foundational	Late-stage foundational	Advanced
Reach Codes	Considering adopting a reach code	Significant effort made to adopt or has adopted a reach code; no code development work	Developing new reach codes that are inputs to state/ federal code updates
Code Compliance	May be exploring code enforcement training	Offering trainings to code enforcement staff	Offering Title 24 trainings to code enforcement staff, improving compliance processes

Strategic Plan Element	Early-stage foundational	Late-stage foundational	Advanced
Municipal Retrofit	Laying groundwork to do municipal retrofits (e.g., analyzing data, preparing to benchmark) including developing a CAP/EAP	CAP/EAP in place; leveraging groundwork (e.g., data analysis, audits, benchmarking) to do municipal retrofits that include energy efficiency and possibly DR	CAP/EAP in place and being implemented; doing comprehensive municipal facility retrofits that typically go beyond EE/DR to include renewables and water; typically has benchmarked all major buildings and/or conducted audits
Community-wide Programs	Laying groundwork to leverage IOU core and 3P programs and/or developing expertise to offer some services directly through the LGP	Leveraging IOU core and 3P programs and/or offering some direct services through the LGP to offer energy efficiency programs to some commercial and residential segments; may be looking into increasing comprehensiveness of measures, customer segments, addressing under-served customers	Offering comprehensive EE programs to the community (whether through the LGP directly or by coordinating with core programs), including under-served residents and businesses across the local area, leveraging the LGs' unique outreach
Local Energy Efficiency Infrastructure	LGP has identified appropriate staff contacts at the LG, and they are starting to engage with the LGP regularly and explore opportunities to build in-house expertise	Appropriate staff at LG are engaged regularly with LGP activities, and are building their expertise, taking advantage of training opportunities and IOU and 3P technical resources	In-house energy efficiency expertise with dedicated staff working exclusively on energy/ sustainability; if a county or regional LGP, individual cities (and counties, if applicable) are able to leverage the infrastructure effectively

We summarized the interview results (provided under separate cover) and Strategic Plan Menu updates (see Appendix B – B.2.1) for each sampled LGP by Strategic Plan element, attempting to classify each LGP as either advanced, foundational or “no activity” where an LGP is not doing any activities that would lead to progress. Note that we did not distinguish between early and late-stage foundational categories, given the complexity of attempting to evaluate individual LGPs and the limitations of our approach and the analysis framework. The study sample size also was not robust enough, once the variations are taken into account, to

support the additional resolution. As mentioned above, this effort is intended as a starting point that can be built on by future efforts.

Table 10 below lists specific challenges we encountered in applying our classifications along with approaches we used to address these challenges.

Table 10 – Classification Challenges and Approaches

Challenge	Description	Approach
Variations in IOU models	Each IOU's LGP model is different, making it difficult to consistently classify across IOUs.	Where IOU approaches were fairly similar, we used consistent definitions of progress; where substantially different, we explain how we used a different approach for each IOU.
Variations in LGP structure	The variation in LGP structure also makes it difficult to create rankings that apply to all – e.g., individual city LGPs are much simpler to classify than a group of cities or a regional LGP.	Ideally, LGPs that span more than a single city could be classified in two stages – at the individual LG level and across all LGs in the county/region; however, our research was focused at the LGPs and not the individual cities so we attempted to classify LGPs based on the range of progress across all the individual cities and counties.
Variation in how LGP program activities are aligned with the Strategic Plan	The alignment of each IOU's LGP program activities to Strategic Plan elements is not consistent.	We explain for each Strategic Plan element what group of LGP program activities we considered.
Sampling of LGP activities	We did not collect data on all LGP program activities due to our sampling approach.	We caveat the elements that were not included in our sample where data are limited.
Limitations to the in-depth interview approach for comprehensive and robust classifications	Our primary objective was to identify best practices. Our interview guides were oriented to solicit program strategies that were working well, and to identify barriers, where we collected information on problem areas; the interview results were not intended to support a comprehensive evaluation of the LGP programs;	The initial classifications are somewhat subjective, and the notes in the table are highlights from the information collected.

Challenge	Description	Approach
	we also had difficulty validating the self-reports.	
Distinguishing between LG and LGP progress	There was sometimes confusion about whether we were looking at broader LG progress or just progress that the LGP had made – even if we tried to distinguish between the two, sometimes that was challenging given the mix of funding LGs use to work on Strategic Plan goals.	We tried to focus on LGP progress but that was not always possible.
Complex LGP programs	We allocated on average 3 interviews per LGP, though some LGPs were groups of 10 or more cities and counties, making it difficult to develop a full understanding of individual city/county progress towards the Strategic Plan.	We caveat classifications that are based on incomplete data, or indicate “unknown” where we were unable to support a classification.
Uncertainty around Strategic Plan goals whether progress is desired at every jurisdiction and how much a county or regional entity can provide the energy efficiency infrastructure	Uncertainty in the Strategic Plan goals on whether progress is desired within every city and county, or can regional progress that is disseminated or leveraged by individual cities and counties be sufficient; challenges assessing different IOU models that focus on individual cities (SCE model) versus regional and county approaches (PG&E).	We attempt to classify LGPs based on progress across the county/region, including individual cities and counties, acknowledging that our data was sometimes limited at the individual city/county level; future efforts could create a second set of classifications for individual LGs.
Measuring progress to-date or over a program cycle	Difficulty determining how progress should be measured, where the LG (or LGP) is currently or how far they have come, and from when.	We classified LGPs based on their progress to-date, not measured against a particular baseline; we chose this approach since the overall goal is for all LGs, regardless of their starting point, to achieve the same set of Strategic Plan goals (the metrics and implementation timeline is consistent for all LGs). However, this distinction is important to note going forward in this section since the rankings do

Challenge	Description	Approach
		not necessarily reflect the effectiveness of the LGP programs. The next two report sections more directly address the LGP programs.

The series of tables below presents the initial LGP classifications in a table for each Strategic Plan Element with a summary of the relevant interview notes. We provide some discussion of the results, but the next section explores the issues in greater depth for the sampled program activities. As noted in Table 10 above, the interview results were not intended to support a comprehensive evaluation of the LGP programs. The initial classifications are somewhat subjective, and the notes in the table are highlights from the information collected.

5.2.1 Reach Codes

LGP may adopt reach codes that exceed Title 24 (such as LEED or GreenBuilt), conduct research to support development of new reach codes that may get incorporated into future code updates, and/or revise local codes or ordinances to make it easier for residents and businesses to install energy efficiency or renewable equipment.

The reach code classifications are:

- **Foundational** - LGPs that have made some effort to adopt reach codes, and for county or regional LGPs, if a small fraction of individual LGs have adopted a reach code; and
- **Advanced** - LGPs that have adopted a reach code (most or all individual LGs for county/regional LGPs) and/or made progress towards developing a new reach code.

Less than half of all the sampled LGPs have adopted reach codes and only Sonoma County is actively pursuing the development of new reach codes. The major barriers cited were staff and budget shortages, not placing a high priority on reach codes among other potential LGP areas of focus, and local political climate not supportive of adopting reach codes.

- Two of PG&E's sampled LGPs are classified as advanced (AMBAG Energy Watch and Sonoma County Energy Watch). Two AMBAG Energy Watch counties (of the three in the region) have adopted reach codes. Sonoma County has also adopted reach codes and additionally is working to develop new reach codes. Two PG&E LGPs are not actively doing any activities related to reach codes, and the remainder are foundational – making some progress towards adopting a reach code, or for regional LGPs with only one or two cities doing significant activity (e.g., East Bay).
- Two of SCE/SoCalGas's LGPs are categorized as foundational while the remainder is not doing any reach code activities. Some are new LGPs that are beginning to plan “non-resource” activities and have not yet begun to make progress. Others have staffing or other

barriers that prevent the LG from attempting to adopt reach codes.

- Two of SDG&E's LGPs (single-cities) have adopted reach codes and are classified as advanced. The city of San Diego has begun work on reach codes and is foundational.

Table 11 below summarizes the interview results for reach codes for each sampled LGP.

Table 11 – LGP Progress Towards the Reach Code Strategic Plan Element

Sampled LGP	Stage of Development	Supporting Evidence
PG&E		
Association of Monterey Bay Area Governments (AMBAG) Energy Watch	Advanced	<ul style="list-style-type: none"> • Two counties have adopted existing green building codes. AMBAG staff sit on board of Green Building Energy Advisory Committee and present importance of green building to LGs. • There is a lack of resources within the LGs to develop codes, and the focus is on promoting existing Title 24 and Green Building Codes.
East Bay Energy Watch	Foundational	<ul style="list-style-type: none"> • Progressive large cities in area are active in adopting reach codes and developing new codes, but not currently part of the focus of the LGP. The remainder of the cities lack city staff to work on code enforcement/reach codes across most of the other cities and counties. • The LGP presents information from the Savings by Design program with the intention that cities incorporate those parameters into their new construction (City of Berkeley does, other cities are considering it).
Santa Barbara County Energy Watch (with SoCalGas)	No activity	<ul style="list-style-type: none"> • Cities not pursuing; no resources to develop or implement.
Sonoma County Energy Watch	Advanced	<ul style="list-style-type: none"> • County adopted Cal Green Tier 2 for Residential New Construction. County is updating the planning and permitting process for renewables (LGP staff are working with the County Permit and Resource Management Department to update the code using Strategic Plan funds). • Have grant from CEC to replicate PACE program (contractor training). They hope to provide input into state code so that it becomes statewide. • Staff are educated and motivated and disseminate lessons learned on reach codes to cities.

Sampled LGP	Stage of Development	Supporting Evidence
		<ul style="list-style-type: none"> LGP funds County dedicated staff time to work with County staff to develop new reach codes. Goal is to disseminate codes throughout county/state. Updating the planning and permit process to remove barriers that impede installation of ground-based renewable projects, which take a long time with current code.
San Luis Obispo County Energy Watch (with SoCalGas)	Foundational	<ul style="list-style-type: none"> County trying to adopt CalGreen Tier 1 Ordinance but strong Home Builders Association opposing. Cities may develop reach codes next cycle after cost of inadequate Title 24 inspections estimated. New building codes are not a high priority in current economy with little construction.
Sierra Nevada Energy Watch	Foundational	<ul style="list-style-type: none"> SBC is conducting some educational forums and webinars but no serious new codes planning is occurring. Local politics do not support additional constraints on development
Yolo County Energy Watch	Foundational	<ul style="list-style-type: none"> Has formed Climate Change Compact of County, which has elected official and staff from each city and schools. Meets every two months to discuss energy efficiency and have committed to ICLEI Model 5 steps.
Redwood Coast Energy Watch	No activity	<ul style="list-style-type: none"> Reach codes not a priority; cannot enforce existing codes with budget cuts and rural areas.
SCE and SoCalGas		
San Gabriel Valley Energy Leader Partnership	No activity	<ul style="list-style-type: none"> No reach code activity
San Bernardino County Partnership	No activity	<ul style="list-style-type: none"> Not pursuing currently through strategic action plan.
Ventura County Energy Leader Partnership	No activity	<ul style="list-style-type: none"> Focus is on code compliance.
Kern County Energy Leader Partnership (collaboration is with PG&E as well)	No activity	<ul style="list-style-type: none"> COG does not focus on new codes. Cities prefer to focus on code compliance for appliances.

Sampled LGP	Stage of Development	Supporting Evidence
SCE Independent of SoCalGas		
Desert Cities Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> Elected officials cautious about new codes; voluntary green building policy adopted. LGP has only recently started pursuing non-resource activities and are still deciding what to adopt/accomplish. They are talking to cities and contractors to educate them on what is most cost effective way to go 15 percent over Title 24. Green for Life is promoted within the COGs as part of the Sustainability package.
South Bay Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> Exploring possible reach codes with cities.
San Joaquin Valley Energy Leader Partnership	No activity	<ul style="list-style-type: none"> Not pursuing reach codes.
Orange County Cities Energy Leader Partnership	No activity	<ul style="list-style-type: none"> No longer doing reach codes due to expected political opposition.
South Santa Barbara County Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> One city (out of the three partner cities) has implemented a Reach Code since 2010. Another city started to develop a reach code but stopped following the 2010 fall elections and a change in city leadership. The third city was awaiting the previously mentioned city to complete its Reach Code, and thus did not start or complete its Reach Code. Barriers include: Frequent Title 24 updates and revisions, resource constraints, and contractor difficulties covering various areas with differing codes. Strong collaborative effort with the IOU Codes and Standards group to support its reach codes efforts and aid in the cost effectiveness analysis.
SDG&E		

Sampled LGP	Stage of Development	Supporting Evidence
City of Chula Vista Partnership	Advanced	<ul style="list-style-type: none"> • Worked well with development community to develop and adopt reach code; new construction must be 15 to 20 percent more energy efficient than Title 24. • Trainings given to builders so reach codes are easier to meet. • Separate secondary reach inspections conducted by expert staff; findings communicated to permit staff to develop continuous improvement with builders. • New Construction must also be solar ready.
City of San Diego Partnership	Foundational	<ul style="list-style-type: none"> • Consultant is reviewing current, proposed codes and policies to measure "gap" from desired Net Zero buildings in 2020. Is slow and comprehensive process. • Reach codes may happen next cycle pending identified need from study above.
City of San Juan Capistrano Partnership	Advanced	<ul style="list-style-type: none"> • Adopted Calgreen Tier 1 in 2010, but likely not affecting state codes.
Unified Port of San Diego Partnership	No activity	<ul style="list-style-type: none"> • Not doing
San Diego Association of Governments (SANDAG) Partnership	Foundational	<ul style="list-style-type: none"> • No cities have indicated they are interested in Reach Codes yet, but SANDAG has made materials and training resources available. • Information is also provided in their Energy Roadmaps, which have a chapter to help integrate energy efficiency into city plans (e.g., out how they can support reach codes, trainings, supporting smart grids).

5.2.2 Code Compliance

LGPs may train their code enforcement staff on the existing code (e.g., Title 24) by sending them to IOU-sponsored training held at their respective Energy Centers, or coordinate with the IOU to hold a local version of the training (e.g., in more remote areas), and/or improve code compliance.

In our sample of LGPs, few data on code compliance are available at the local level to be able to measure code enforcement by LGPs and changes in enforcement over time (e.g., over a program cycle to determine the impact of LGP program activities related to code compliance).

We classified LGPs based on whether they had “activity” or had “no activity”:

- **Activity** - LGPs that are actively pursuing increases in code enforcement through training or placing emphasis on enforcement (e.g., staff time outreaching and educating code enforcement staff); and
- **No activity** - LGPs that are not doing any activities related to code enforcement.

Twelve of the 17 sampled LGPs are doing some activity (typically offering training to code enforcement officials on Title 24), and five are doing nothing related to increasing code compliance.

The results are shown in Table 12 below.

Table 12 – LGP Progress Towards the Code Compliance Strategic Plan Element

	Stage of Development	Supporting evidence
PG&E		
Association of Monterey Bay Area Governments (AMBAG) Energy Watch	Activity	<ul style="list-style-type: none"> • Coordinate with PG&E to offer PG&E Title 24 training locally for cities and counties. The goal is to increase enforcement since fewer inspection staff remains. • Focus on promoting existing Title 24 and green building codes.
East Bay Energy Watch	Activity	<ul style="list-style-type: none"> • Connect LGs to PG&E training centers and promote the Codes and Standards program. • Lack of city staff to work on code enforcement.
Santa Barbara County Energy Watch (with SoCalGas)	Activity	<ul style="list-style-type: none"> • Cities have received Title 24 training from state. • Chamber has given some solar inspections trainings.
Sonoma County Energy Watch	Activity	<ul style="list-style-type: none"> • Offer local trainings on Title 24 in coordination with PG&E. • Communicate regularly with code enforcement staff. • Prioritize enforcement of reach codes.

	Stage of Development	Supporting evidence
San Luis Obispo County Energy Watch (with SoCalGas)	Activity	<ul style="list-style-type: none"> Economic Development implementer giving some Title 24 training to retailers, so they can sell appropriate equipment (and promote PG&E rebates). International Codes staff delivered Title 24 training to county – was delayed initially due to unavailability of training and enforcement staff. City inspectors are focused on safety issues (not energy) due to time constraints.
Sierra Nevada Energy Watch	No activity	<ul style="list-style-type: none"> Regular compliance problematic for these rural counties.
Yolo County Energy Watch	Activity	<ul style="list-style-type: none"> Holding Title 24 training in partnership with libraries.
Redwood Coast Energy Watch	Activity	<ul style="list-style-type: none"> Offers Title 24 training in coordination with PG&E. Still lots of unpermitted work and cities have little budget for inspections.
SCE Independent of SoCalGas		
San Gabriel Valley Energy Leader Partnership	Activity	<ul style="list-style-type: none"> Partnership created a library for all the energy efficiency policies in the San Gabriel Valley. Under the embedded component, a policy library of codes and policies has been created for the 29 member cities. The COGs maintain the library.
SoCalGas and SCE		
San Bernardino County Partnership	Unknown	<ul style="list-style-type: none"> Did not ask about code compliance.
Ventura County Energy Leader Partnership	Activity	<ul style="list-style-type: none"> Have goal to present annual code compliance workshops. Provide training on ordinances and energy efficiency codes in ten annual group meetings. Assisted in promotion of T24 PEBI Simi Partnership Workshop.
Kern County Energy Leader Partnership (collaboration is with PG&E as well)	Activity	<ul style="list-style-type: none"> The focus is on training with code compliance.

	Stage of Development	Supporting evidence
Desert Cities Energy Leader Partnership	No activity	<ul style="list-style-type: none"> Only recently started pursuing the LGP non-resource activities. The cities are still deciding what actions they are able to adopt and accomplish.
South Bay Energy Leader Partnership	Activity	<ul style="list-style-type: none"> Developing and offering training for city code compliance officials.
San Joaquin Valley Energy Leader Partnership	No activity	<ul style="list-style-type: none"> Not currently pursuing.
Orange County Cities Energy Leader Partnership	No activity	<ul style="list-style-type: none"> Not currently pursuing.
South Santa Barbara County Energy Leader Partnership	No activity	<ul style="list-style-type: none"> Not currently pursuing.
SDG&E		
City of Chula Vista Partnership	Activity	<ul style="list-style-type: none"> Have highly trained code checkers and one-stop shop for builders and architects for plan reviews.
City of San Diego Partnership	Unknown	<ul style="list-style-type: none"> Did not ask about regular code compliance.
City of San Juan Capistrano Partnership	Activity	<ul style="list-style-type: none"> Inspections staff get annual training and are able to enforce codes; there is little development and they have enough time.
Unified Port of San Diego Partnership	No activity	<ul style="list-style-type: none"> Not currently pursuing.
San Diego Association of Governments (SANDAG) Partnership	Activity	<ul style="list-style-type: none"> Brings code trainings to multiple sub-areas to improve accessibility. They are partnering with CCSE to hold meetings in additional locations.

5.2.3 Municipal Retrofits

LGPs may conduct audits and/or benchmark their municipal facilities to learn where the energy efficiency potential lies and develop priorities and retrofit their facilities; they may

also develop a CAP or an EAP to improve energy efficiency in municipal facilities and/or lower greenhouse gas emissions in the community (including transportation and other sectors).

We classified each sampled LGP on its progress towards retrofitting its municipal buildings by the extent to which the LGs had progressed towards retrofitting all of their buildings, including conducting audits, benchmarking, developing priorities and plans such as CAPs and EAPs. For all but SCE, it is difficult to measure municipal sector savings over time or for a given program period given the nature of how the programs track their savings.⁵¹ SCE's model tracks municipal sector savings relative to a consistent baseline.

The municipal retrofit classifications are:

- **Foundational** - LGPs that have some progress towards retrofitting its municipal buildings, having developed a plan and beginning to implement it; and
- **Advanced** - LGPs where almost all LG buildings have been retrofitted or many have been and extensive groundwork has been done and a plan is in place and being implemented to retrofit the remainder.

Four of the sampled LGPs are classified as advanced. Most LGPs are foundational, having made some progress, having developed a plan, and having begun to implement it. The advanced LGPs had already made significant progress on retrofitting their buildings before the current program cycle began, suggesting it may be very difficult to make significant progress on municipal retrofits in one program cycle.

For SCE, there were three cities (Huntington Beach, within the Orange County Cities LGP, and Lomita and Hawthorne, within the South Bay LGP) that had the ELP Gold ranking (see Appendix A – A.2 for SCE's ELP Award Level Status for individual cities). One of the criteria is that 50 percent of cities are targeted for energy efficient retrofits. These cities would likely be classified as "advanced" based on our rankings. However, the LGPs encompass many other individual cities that have not achieved as much progress within municipal retrofits category and these two LGPs are ranked as foundational.

We noted that benchmarking, while useful for some LGPs, is not a required step to achieve significant progress towards this Strategic Plan goal. Sonoma County intended to retrofit all of its county buildings and did not need to benchmark since prioritization of buildings was not applicable. There were other anecdotes where benchmarking had been done on many buildings but the results had been "shelved". Conversely, there were anecdotes that benchmarking was valuable to identify the needs and develop priorities. These issues are explored more in the next Section with benchmarking findings. Table 13 below presents the results of the classification.

⁵¹ For example, PG&E reports overall LGP savings, but not municipal sector savings. SDG&E/SoCalGas utility savings are reported by the core programs.

Table 13 – LGP Progress Towards the Municipal Retrofit Strategic Plan Element

	Stage of Development	Supporting evidence
PG&E		
Association of Monterey Bay Area Governments (AMBAG) Energy Watch	Advanced	<ul style="list-style-type: none"> • Each LG did a 2005 GHG Baseline CAP and they are doing a 2009 update. • AMBAG is working on the GHG/EE portion of the CAP, using the ICLEI tool. • Hired an intern to do benchmarking on all muni buildings (except the very smallest buildings); plan to use it to identify energy efficiency retrofit opportunities and educate LGs on their largest buildings and where the greatest potential lies. • They are training the elected officials and then senior staff and then facility staff on benchmarking. • They inventory muni buildings and identify comprehensive projects; if LG comes with a project like an old boiler, they routinely bundle it with other short-term payback measures. If LGs want energy efficiency retrofits, Energy Watch will help to fund retrofits, help to meet CAP goals, and help address resource constraints.
East Bay Energy Watch	Foundational	<ul style="list-style-type: none"> • Implementer (QuEST) handles retrofits and has hired an intern to provide GHG inventories and write an energy efficiency chapter for the CAPs of 6-8 cities. • Use local nonprofits or entities who can help determine regional CAP status (i.e. 4CL for Contra Costa County, the northern half of the LGP region, and they are pursuing another non-profit to address Alameda County, the southern portion of the region) so that the Energy Watch knows where to prioritize services. • Require city staff to attend benchmarking training before benchmarking begins. Buildings are identified for audits and retrofit projects. • It has been challenging getting city staff to dedicate time and resources to attend the benchmarking training and follow through on results.
Santa Barbara County Energy Watch (with	Foundational	<ul style="list-style-type: none"> • No CAPs completed. • All county agencies and four cities have pursued retrofits.

	Stage of Development	Supporting evidence
SoCalGas)		<ul style="list-style-type: none"> • Most buildings have been audited by LGP or PG&E. • Many lighting projects completed. • County has program for annual projects, but cities (except one) do not have budget or staff to do projects other than DIs with low co-pays. Cities only budgeting for maintenance now.
Sonoma County Energy Watch	Advanced	<ul style="list-style-type: none"> • County already had a CAP for 2010; exceeded those goals; developing another one for the future. • They are working on an informal roadmap of how to meet the goals of each of their Muni CAPs. • Many comprehensive retrofits of county, and some city, facilities - ZNE, renewables, complex measures, utilizing a variety of financing options, no out of pocket/general fund expenditures required. • Political will, long-term focus of the LG, willingness to accept risk of financing, implementer tool, desire to reduce operating costs through EE to meet budget cuts, effectiveness of the team (e.g., PG&E local sales and service staff, govt. reps) to identify rebates outside of the DI program to cover other measures. • Very little benchmarking: the county intended to treat all its buildings anyhow, so it didn't need that step; a progressive city within the county had it done and again the audit was much more useful and actionable.
San Luis Obispo County Energy Watch (with SoCalGas)	Foundational	<ul style="list-style-type: none"> • County CAP is done. • Making progress - DIs have been used in every facility, through Staples. • Most buildings have been audited. • Cities have little money and limited staff to complete additional projects.

	Stage of Development	Supporting evidence
Sierra Nevada Energy Watch	Foundational	<ul style="list-style-type: none"> Counties are working on CAPs – are primarily “minor language updates” to existing General Plans. PG&E helping with GHG inventories. SBC goal is to develop an energy chapter for one city or county. Cities have significantly reduced budgets and staff—have to contract out muni retrofits (at higher cost). Some cities utilized ARRA \$ and/or CEC technical scoping assistance with help from contractor to LGP. 4 million kWh saved in 2011. Munis contractor budget cut back in 2012; will be fewer future projects.
Yolo County Energy Watch	Foundational	<ul style="list-style-type: none"> Each city has baseline and plan for municipal projects. Created CAP through University extension class for two cities in the county. Eventual goal is to have all incorporated cities and the county with a CAP.
Redwood Coast Energy Watch	Foundational	<ul style="list-style-type: none"> CAPs in development and not approved yet. Cities have no funding for retrofits. Finding more muni projects not a city priority. Cities have struggled to finish ARRA projects, little benchmarking occurring. RCEA working to get access to real-time interval data to improve cities' monitoring to prioritize future retrofits.
SCE Independent of SoCalGas		
San Gabriel Valley Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> Using SGVCOG money to do EAP for the cities. A large proportion of the cities are building their understanding of their municipal buildings' energy efficiency potential. Cities have their choice of outside firm doing audits on an average of three buildings each.
SoCalGas and SCE		
San Bernardino County Partnership	Foundational	<ul style="list-style-type: none"> The LGP provides critical resources that the county uses to understand their facilities and energy usage and energy efficiency potential. Many muni retrofits completed. SoCalGas engages with several county departments, though there is no dedicated energy manager.

	Stage of Development	Supporting evidence
Ventura County Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • Many small retrofits. • Benchmarking is occurring. • ARRA funds are helping to advance projects.
Kern County Energy Leader Partnership (collaboration is with PG&E as well)	Foundational	<ul style="list-style-type: none"> • Have received community data (after initial delays) to inform EAPs and CAPs. • All cities participating in benchmarking at some level (all expected to be done by end of November, 2012). • Identifying OBF opportunities and having walkthrough audits of 11 facilities. • Recent staff layoffs and reduced budget.
Desert Cities Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • Doing benchmarking and receiving help from SCE for municipal retrofit applications. • Doing some audits. • There is interest but lack of funds. • Consultants providing assistance with EAP and benchmarking.
South Bay Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • COG hired a staff member to write CAP for cities and region through a city assessment. • The COG provides centralized resources and support for the member cities. • Two South Bay cities are “Gold” status – Lomita and Hawthorne.
San Joaquin Valley Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • The city that pursued competitive solicitation is doing an enhanced and advanced EAP, which is expected to enhance their CAP (which has evolved over five years). • EAPs are easier to complete (compared to CAPs). • Pursuing EAPs for the other seven partners using embedded dollars. • Working to incorporate EE into general plan. • Energy Leader model gave them valuable template and allowed them to tailor it to individual city’s needs. • Doing facilities benchmarking, technical audits, and installations. • All cities are doing some benchmarking and are using Energy Star’s Portfolio manager. • Mostly lighting in municipal buildings. • Having trouble getting necessary financing and council support for financing activities.

	Stage of Development	Supporting evidence
Orange County Cities Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> City was funded to do a CAP but turned down the opportunity due to political resistance. Currently pursuing an Enterprise Energy Management Information System (EEMIS) benchmarking system completion with LA County. Has delayed projects scoping and implementation. OBf application has faced obstacles. Huntington Beach is a “Gold” city under the Energy Leader model (1 of 4).
South Santa Barbara County Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> Cities are working on EAPs individually; Both the planning and the facilities divisions of the county are working on an EAP. Few municipal retrofits to date because most buildings are leased. Have list of future retrofits when (if) budget becomes available. Most cities have a financial management system that records utility invoices, but they are unsure how much energy they are using.
SDG&E		
City of Chula Vista Partnership	Advanced	<ul style="list-style-type: none"> 90 percent of buildings were retrofitted with ARRA money. 100 percent of buildings are getting full audits; Long history of benchmarking, assessing and auditing muni buildings. Muni retrofits are driven by CMAP (Climate Mitigation Action Plan).
City of San Diego Partnership	Foundational	<ul style="list-style-type: none"> CAP update is still in development. Have done many retrofits in past cycles. Was leader of regional LED streetlights program. 80-90 percent of buildings expected to have current audits before end of cycle. Having difficulty benchmarking 40 buildings (Portfolio Manager issues) and are reviewing accuracy of previous benchmarking.
City of San Juan Capistrano Partnership	Foundational	<ul style="list-style-type: none"> Benchmarked and audited all buildings for Draft Energy Plan but actual retrofits are modest to date. Plan will guide future retrofits depending on funding. Have completed first phase of their streetlights projects with ARRA funds. Need grants for subsequent phases.

	Stage of Development	Supporting evidence
Unified Port of San Diego Partnership	Advanced	<ul style="list-style-type: none"> All five Port buildings are benchmarked and audited. RFP out for retrofits and possible completion by end of 2012.
San Diego Association of Governments (SANDAG) Partnership	Advanced	<ul style="list-style-type: none"> Use piggyback procurement for LED street light project allowing multiple smaller cities to join efforts to get LED street lights. Create Energy Roadmap customized for each city's needs and strengths. Includes data on building usage. Energy Roadmap gives suggestions for building changes and programs.

5.2.4 Communitywide Programs

LGPs make progress towards the Communitywide Program Strategic Plan element either by offering new programs or effectively marketing and identifying target markets for existing (core and 3P) retrofit programs to residents and businesses.

We classified LGPs based on the degree to which they are supporting the delivery of energy efficiency programs tailored to the needs of the community, via unique LGP program offerings and/or linkages to core programs.

We classified PG&E's sampled LGPs based on the degree to which they are offering targeted services to the residents and businesses in their area, whether that consists of leveraging existing 3P program models or developing new programs implemented by the LG.

LGPs were classified as follows:

- **Foundational** - LGPs that are just getting started in offering retrofit programs or referring to core programs in their communities or have historically focused only on one sector are ranked as foundational; and
- **Advanced** - LGPs that are offering a tailored set of services or referring the relevant core programs to the residents and businesses in their area, covering the range of needs (business segments and sizes, residential moderate and low-income).

As shown in Table 14 below, three of PG&E's eight sampled LGPs were classified as advanced. These LGPs have existed for more than one program cycle and have had time to develop more diverse and wide-ranging offerings. The foundational LGPs have launched an initial offering and are typically developing plans to offer more comprehensive services (either more measures, going into more remote areas, or addressing more customer segments.)

Three SDG&E LGPs were ranked as "advanced" based on the extent to which the LGP is effectively coordinating the core programs to address their specific targets (the Port addresses the district's small businesses, and both the Chula Vista Partnership and San Diego Partnership address the residents and businesses in their respective cities). The city of San Juan Capistrano Partnership is "foundational" because its efforts are not as comprehensive in covering all the needs of the community. SANDAG Partnership was ranked as "foundational" because while it provides roadmaps that may include community programs, its efforts to-date have been more focused on the municipal sector.

Most of SCE's LGPs are ranked as foundational, where they have developed a marketing and outreach campaign and are coordinating with the DI program. The two SCE LGPs that we ranked as advanced (Orange County Cities Energy Leader Partnership and South Bay Energy Leader Partnership) have developed more extensive marketing and outreach campaigns, with Orange County addressing non-English speakers (engaging with the Vietnamese Chamber of Commerce), and South Bay Energy Leader Partnership dedicating extensive resources to conducting community outreach from its Environmental Services Center.

Table 14 – LGP Progress Towards the Communitywide Program Strategic Plan Element

	Stage of Development	Supporting evidence
PG&E		
Association of Monterey Bay Area Governments (AMBAG) Energy Watch	Advanced	<ul style="list-style-type: none"> • Offering Middle Income Direct Install (MIDI) Program. • Plan program mix based on identifying community needs and available programs and resources. • By bundling programs, they can offer lower performing programs and still work towards their TRC target.
East Bay Energy Watch	Advanced	<ul style="list-style-type: none"> • More projects occurring in new cities has led to increased participation in municipal and small/medium business programs. • They have an M&O campaign tailored to city needs which leverages city staff for business retrofits. • They connect cities with renewable programs (i.e., solar) to assist them in launching initiatives.
Santa Barbara County Energy Watch (with SoCalGas)	Foundational	<ul style="list-style-type: none"> • County has focused on the Empower residential financing program. • Chamber of Commerce has difficulty serving remote/incorporated areas. • Outreach exists for commercial sector in urban areas. • Outreach also exists for low-income groups through food banks.
Sonoma County Energy Watch	Foundational	<ul style="list-style-type: none"> • They are limited to lighting and HVAC projects and refer to other programs for remaining measures.
San Luis Obispo County Energy Watch (with SoCalGas)	Foundational	<ul style="list-style-type: none"> • Commercial outreach is through Economic Development agency. • 3P DI contractor is focused on urbanized areas. • Promoting P&GE programs to special water districts. • County is doing outreach through the Planning Department. Working with city elected officials and County Community Development staff. • Do regular mailers to residents for many topics. Would like to expand to topic of AB32.
Sierra Nevada Energy Watch	Foundational	<ul style="list-style-type: none"> • PG&E currently coordinating low income and MIDI residential efforts. • Business group implementer not doing

	Stage of Development	Supporting evidence
		residential work, rather are focusing on commercial retrofits.
Yolo County Energy Watch	Foundational	<ul style="list-style-type: none"> • Generate leads for PG&E by doing door-to-door outreach. • Reaching out to agricultural customers to get pumps installed. • Utilize libraries to hold meetings for small business customers.
Redwood Coast Energy Watch	Advanced	<ul style="list-style-type: none"> • Trying to serve all sectors including HTR groups. • Regularly recruits businesses and residents to attend PG&E specific training center events and classes.
SCE Independent of SoCalGas		
San Gabriel Valley Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • The COG regularly promotes energy efficiency and energy efficiency programs through its “Energy Wise” website to businesses, municipalities, and residential customers. • Multiple home-energy performance workshops to residents of cities during spring and summer. • COG sponsors events and conferences such as the “Energy Efficiency & Climate Change Conference,” to discuss current issues in energy efficiency, and “San Gabriel Valley Energy Efficiency Awards,” to celebrate cities that have pursued energy efficiency.
SoCalGas and SCE		
San Bernardino County Partnership	No activity	<ul style="list-style-type: none"> • Main LGP focus is municipal retrofits.
Ventura County Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • SCE and the cities’ mayors co-sponsored a letter to eligible small business owners that promoted the Small Business DI program. • Bi-monthly newsletter (partnership updates and energy efficiency promotion/tips) is printed and distributed electronically as well as placed in city halls and libraries. • Mobile Education Unit (MEU) (ME&O van) promotes core programs at cities’ events throughout the year.
Kern County Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • Regular advertising in regional and local newspapers, cable TV and newspaper interviews about energy efficiency opportunities as well as

	Stage of Development	Supporting evidence
(collaboration is with PG&E as well)		<p>community exhibits with an attendance of 1,500-3,000 people.</p> <ul style="list-style-type: none"> • Training workshops held by the utilities are promoted through the Kern COG website.
Desert Cities Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • SCE and the cities' mayors co-sponsored a letter to eligible small business owners that promoted the Small Business DI program. • Regular marketing and outreach to the community regarding residential, low income, and business programs through its Association of Governments' Energy & Environmental Resources Committee. • Annual Coachella Valley Energy Summits include educational sessions, panel discussions, cutting-edge technology exhibits, and promotion of energy efficiency programs.
South Bay Energy Leader Partnership	Advanced	<ul style="list-style-type: none"> • SCE and the cities' mayors co-sponsored a letter to eligible small business owners that promoted the Small Business DI program. • Sponsored a "Community Walk" (door-to-door canvassing) in the business district to promote the Small Business DI program. • The COG (and electric and water utilities) funds the "South Bay Environmental Services Center," a clearinghouse of information, marketing materials, outreach, and services. The staff members are dedicated to community outreach, in addition to the large, committed group of volunteers who regularly help promote energy efficiency in the community. Most program promotion occurs at events held at the center, or at citywide festivals and other events. • COG also has a large group of volunteers to outreach to community.
San Joaquin Valley Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> • SCE and the cities' mayors co-sponsored a letter to eligible small business owners that promoted the Small Business DI program. • This partnership also sponsored door-to-door canvassing in business sections of towns to promote the Small Business DI program. • Coordinated a holiday light exchange in all eight jurisdictions, which allowed residential customers to replace incandescent lights with efficient LED strands.

	Stage of Development	Supporting evidence
		<ul style="list-style-type: none"> The holiday light giveaway success and audience participation also allowed the partnership to promote SCE's CARE (low income) program.
Orange County Cities Energy Leader Partnership	Advanced	<ul style="list-style-type: none"> SCE and the cities' mayors co-sponsored a letter to eligible small business owners that promoted the Small Business DI program. There was a big push to address the small business community. In addition to the letter from the mayor, materials were printed in different languages; many cities' chambers of commerce were involved to help spread the word (e.g. Vietnamese Chamber of Commerce in one city volunteered to promote the program to its network); door to door canvassing was also conducted to promote the program. ME&O activities and events for other programs are held in places like the community park and city offices.
South Santa Barbara County Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> Promote residential and commercial core programs to help customers recycle refrigerators, and upgrade mobile/manufactured homes. Staff present at booths during events such as Earth Day and Home and Garden Expos; give away free CFLs while educating event attendees.
SDG&E		
City of Chula Vista Partnership	Advanced	<ul style="list-style-type: none"> Experienced outreach staff go to festivals, farmers markets, and other community events in order to promote SDG&E programs. Foreclosed low-income homes are being renovated with energy efficient measures and are then resold to low-income residents. Permit staff link builders to SDG&E programs. Business must get a free energy assessment during licensing or every four years. Referrals to SDG&E programs institutionalized throughout the city.
City of San Diego Partnership	Advanced	<ul style="list-style-type: none"> Including low income in their residential focus. New PACE programs along with revolving loan fund. Will begin targeting 10 or more official business districts. Very active US Green Building Council that

	Stage of Development	Supporting evidence
		promotes commercial retrofits.
City of San Juan Capistrano Partnership	Foundational	<ul style="list-style-type: none"> • Have been mostly focused on municipal work. • Also do outreach to commercial, residential, and low-income. Inform these groups about SDG&E programs and rebates. • Looking at a new local CCSE initiative to increase education to all sectors.
Unified Port of San Diego Partnership	Advanced	<ul style="list-style-type: none"> • LGP does not have a residential component. • All commercial tenants are given information about how to use core programs after benchmarking and assessments. • More personalized technical assistance is desired and planned for participants of the Green Business Challenge.
San Diego Association of Governments (SANDAG) Partnership	Foundational	<ul style="list-style-type: none"> • Create energy roadmaps for all cities that do not already have their own LGPs. • These roadmaps are focused on the municipal sector, and some city roadmaps also include commercial and residential sections.

5.2.5 Energy Efficiency Infrastructure

LGP offer opportunities to add staff and provide training and resources to build the LGs' ability to implement energy efficiency projects in their own buildings and promote them to their community. LGPs that are regional or countywide may build infrastructure and disseminate resources and knowledge to individual cities and counties and/or facilitate leveraging and/or sharing of centralized resources.

There is an added layer of complexity when attempting to assess LGP progress towards this Strategic Plan element. The goal is to add energy efficiency infrastructure within LGs, acknowledging that JPAs and regional entities can help address gaps. It is unclear whether every city and county needs to have its own energy efficiency infrastructure and to what extent it is acceptable to leverage regional infrastructure. Likewise other programs such as the SEEC offered by ICLEI, ILG and LGC are expected to provide training and technical assistance to LGs to build infrastructure.

The way in which each IOUs' LGP model addresses this Strategic Plan element differs. The SCE model measures progress for each individual city and county towards municipal retrofits and marketing the core programs. Both SCE and SCG have explicit mechanisms to track and reward individual cities and counties for making progress. These LGP program activities indirectly lead to increases in LG infrastructure. The Statewide Energy Efficiency

Collaborative programs, as mentioned above, are expected to provide training and technical assistance to LGs, which develops and builds on existing energy efficiency infrastructure.

For PG&E and SDG&E, the IOU selects an implementer that already has infrastructure that can be disseminated to nearby LGs that lack it. For example, PG&E works with a county that is implementing an LGP and encourages the county to disseminate expertise and lessons learned to cities within the county. However, the LGP is not set up like SCE where each individual city in the county is contracting with the IOU and trying to achieve its own goals.

We based our classifications on the degree to which the lead implementer has developed energy efficiency infrastructure and whether that has been disseminated to individual cities (and counties, if applicable) for LGPs that encompass more than a single city.

The classifications are:

- **Foundational** - the LGP has begun to build energy efficiency capacity at the implementer (if there is one) – gaining expertise and leveraging internal and external resources; for multiple LG LGPs, the implementer may have substantial capacity but has not yet disseminated or effectively allowed for leveraging by the individual LGs; and
- **Advanced** - the LGP has dedicated staff working on energy efficiency with the necessary expertise and the ability to leverage internal and external resources; for multiple LG LGPs, the implementer disseminates and facilitates effective leveraging and sharing of resources by the individual LGs.

For SCE's bundled-city LGPs (which lack a lead implementer), we attempted to assess the progress of developing infrastructure across the cities. We considered number of staff dedicated to working on the LGP, energy, energy efficiency and/or sustainability, the degree to which staff have received training and taken advantage of resources offered by others (e.g., IOUs, 3P implementers, regional and statewide entities). As mentioned previously in this section, our interview approach did not include talking to every LG in the geographic range covered by each LGP, so our data was sometimes limited for certain LGPs. Our analysis approach is limited when we attempt to rank SCE LGPs since SCE approaches its model with a focus on individual city progress, whereas our rankings are based at the LGP level.

Based on our approach, single-city LGPs have an easier time becoming “advanced” because they need only build infrastructure within their own LG. In contrast, single-county LGPs have to build infrastructure at the county-level while also engaging with individual cities to disseminate, share, and allow them to leverage their resources and expertise. Among our sample, one single-city LGP (Chula Vista), the Port of San Diego LGP (similar to a single-city with one layer of infrastructure to address) and three COG/AOGs LGPs were rated as “advanced”. The COG/AOGs LGPs were rated as advanced if they were able to effectively share energy efficiency resources across the region, which was the case for AMBAG LGP, SANDAG LGP, and Desert Cities LGP. One LGP that is implemented by an energy organization (Redwood

Coast Energy Watch) is ranked as “advanced” because of the degree to which it is able to outreach to all the cities and the county (they have seven full-time staff) and provide the necessary resources.

The remainder of the sample was rated as “foundational”. In some cases, the lead implementer has advanced infrastructure, but this has not been effectively disseminated across the individual cities – such as for county-lead LGPs such as Sonoma County Energy Watch and Ventura County Energy Watch. In other cases, LGPs were new to the current program cycle and had begun to create energy efficiency infrastructure – such as Orange County Cities Energy Leader Partnership, Yolo County Energy Watch, and Sierra Nevada Energy Watch. Table 15 presents the results of our classification of the study sample of LGPs.

Table 15 – LGP Progress Towards the Local Energy Efficiency Infrastructure Strategic Plan Element

	Stage of Development	Supporting Evidence
PG&E		
Association of Monterey Bay Area Governments (AMBAG) Energy Watch	Advanced	<ul style="list-style-type: none"> • Three dedicated staff at AMBAG work full time on the LGP, leveraging expertise built over more than one program cycle. • AMBAG goes to LG finance meetings and applies for grants on LGs’ behalf. • AMBAG developed CAPs for 20 of the 21 jurisdictions (the 21st already had one in place). • AMBAG gets energy efficiency projects done in all 21 jurisdictions with engagement from the LGs. • Elected officials often follow the example of other cities once successful projects have been completed.
East Bay Energy Watch	Foundational	<ul style="list-style-type: none"> • No lead exists within the cities or counties. Rather QuEST (the 3P implementer) provides project management assistance and supplements lack of city staff, resources, and engineering expertise. • When city has more internal resources, potential in buildings, sustainability efforts, and engaged staff, QuEST has an easier time. • Cultural and size differences across the cities impacts involvement of the city in CAP. • Implementer is attempting to engage with each of the cities and counties, but they are also seeking assistance from non-profit organizations that know the counties better to help them prioritize who most needs assistance.

	Stage of Development	Supporting Evidence
Santa Barbara County Energy Watch (with SoCalGas)	Foundational	<ul style="list-style-type: none"> • No mention of energy efficiency training for county staff. • Staff are constrained. • Chamber of Commerce implementer staff have received general energy efficiency training. • PG&E Green Communities and SCG initiatives to advance LGP strategic plan goals and objectives and are helping to start a county CAP plan.
Sonoma County Energy Watch	Foundational	<ul style="list-style-type: none"> • IOU account representative is very engaged and PM is very helpful in connecting the LG to other PG&E services. • County uses LGP funds to dedicate one full time employee who is very committed and is able to bring sustainability and energy efficiency focus to all county projects/initiatives. • There is political will to reduce GHG with an aggressive countywide CAP. • County geographical coverage and as implementer allows them to identify opportunities broadly (i.e. waste, transport, water). • Can collaborate with many departments and staff. • Can bring long-term sustainability to the table (e.g. going beyond LEED and looking at zero net energy). • Local community is progressive and drives politicians to focus on energy efficiency and sustainability. • County has outreached to several cities within the county and has begun to lend expertise and resources; many cities get energy efficiency projects done with support from PG&E's government representatives and the local 3P implementer, not necessarily as a result of the County pushing projects.

	Stage of Development	Supporting Evidence
San Luis Obispo County Energy Watch (with SoCalGas)	Foundational	<ul style="list-style-type: none"> • No mention of trainings attended by economic development staff. • Meeting with all mayors and city council members as part of a plan to engage elected officials. • Started Business Energy Certification Program to increase efficiency awareness among business owners (and to increase positive public relations). • Commercial sector can get Green Business training. • Gave regional training on renewables to officials, installers, and makers because of varied permit fees and requirements.
Sierra Nevada Energy Watch	Foundational	<ul style="list-style-type: none"> • Sierra Business Council received extensive energy efficiency training from PG&E. • SBC's auditors have been trained by Staples. • Have a "green drinks" group with stakeholders to discuss current/new activities. • Strong connections with local community and have long-term sustainability focus. • Local contractors have received technical training through LGP; looking for investment-grade audits training. • LGP offers municipal benchmarking training but cities usually do not attend due to staff constraints. • The individual cities are very short staffed and are lacking resources, and have not built energy efficiency capacity.
Yolo County Energy Watch	Foundational	<ul style="list-style-type: none"> • Staff expertise supported by training information. • Good local political leadership driven by mandatory state level directives (e.g., AB32). • The county has formed a Climate Change Compact that has elected officials and staff from each city and from schools. This group meets to discuss energy efficiency and has committed to the ICLEI Model five steps. They meet every two months at UC Davis. • The county is engaging with the cities, with some cities further along in developing CAPs.

	Stage of Development	Supporting Evidence
Redwood Coast Energy Watch	Advanced	<ul style="list-style-type: none"> Implementing agency was formed in 2003 and is focused on energy efficiency, climate change, green building, and renewables. There are 7 FTE. The individual cities are very short staffed and lacking resources and have not built energy efficiency capacity, but the energy organization that implements the partnership effectively outreaches to all cities and the county to address lack of resources.
SCE Independent of SoCalGas		
San Gabriel Valley Energy Leader Partnership	Unknown	<ul style="list-style-type: none"> Did not cover during the interview.
SoCalGas and SCE		
San Bernardino County Partnership	Foundational	<ul style="list-style-type: none"> Run by County A&E director who focuses mainly on municipal retrofits.
Ventura County Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> The County has the only FTE Energy Manager across the county and 10 cities. The implementer does not have an employee that is exclusively assigned to the partnership. Not covered during interview to extent at which the individual cities are effectively engaged with the COG.
Kern County Energy Leader Partnership (collaboration is with PG&E as well)	Foundational	<ul style="list-style-type: none"> The COG has an intern who devotes most of his time to the partnership in addition to 1.1 FTE. Implementation staff has a history of work in energy. The County has an energy manager. Extent to which the individual cities are effectively engaged with the COG was not covered during interview.

	Stage of Development	Supporting Evidence
Desert Cities Energy Leader Partnership	Advanced	<ul style="list-style-type: none"> Two of the cities (Palm Desert and Cathedral City) were part of the previous SCE partnership. Of the 10 cities, there are several leaders that are very focused on energy efficiency and climate change. Recognize a need for action, and cities are motivated to promote ideas but are limited by funds. Staff size is a challenge, but there is information sharing. Staff differs by city. Some have sustainability managers and a green team and others do not. The COG effectively engages with the county and 10 cities.
South Bay Energy Leader Partnership	Advanced	<ul style="list-style-type: none"> The Environmental Services Center has comprehensive energy efficiency infrastructure and disseminates resources to the individual cities in the region.
San Joaquin Valley Energy Leader Partnership	Advanced	<ul style="list-style-type: none"> Working with local public affairs in hopes of seeing changes in attitudes and willingness to adopt energy efficiency policies. One staff member with 85 percent of their time dedicated to the LGP, and 95 percent of time for two other staff. The community energy JPA effectively engages with the two counties and six cities.
Orange County Cities Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> Staff varies by city. Huntington Beach has an energy manager and before this position existed, energy efficiency was vendor led. Most Orange County mayors rotate annually and are motivated by cost savings (eliminating energy waste). Huntington Beach helps other cities come up to speed on activities.
South Santa Barbara County Energy Leader Partnership	Foundational	<ul style="list-style-type: none"> One staff member dedicates 10 percent of their time and has a relevant graduate degree.
SDG&E		

	Stage of Development	Supporting Evidence
City of Chula Vista Partnership	Advanced	<ul style="list-style-type: none"> • City staff are considered regional experts and are often presenting to other LGPs in the region. • They may serve as a mentor municipality to the new South Bay Collaborative of small municipalities with no LGP experience.
City of San Diego Partnership	Foundational	<ul style="list-style-type: none"> • Four part time staff with many other responsibilities. • City staff are receiving energy efficiency training but consultants increasingly are used.
City of San Juan Capistrano Partnership	Foundational	<ul style="list-style-type: none"> • Very limited staff resources. • One person with 10 percent of availability for LGP.
Unified Port of San Diego Partnership	Advanced	<ul style="list-style-type: none"> • Two part time staff are very engaged and are getting training in energy efficiency through the LGP. • Additional/exclusive staff is not possible due to Port budget. • Relatively small LGP/district size may not warrant full time or exclusive staff.
San Diego Association of Governments (SANDAG) Partnership	Advanced	<ul style="list-style-type: none"> • Has one person in house to work on energy efficiency. • Past experience with a pilot program very similar to the current Energy Roadmap program. • Because it is an Association of Governments, it has support from elected officials.

5.2.6 Summary of Progress Towards Strategic Plan

Table 15 below summarizes the initial LGP classifications presented in the previous section for the study sample. We also added structure variables (geography and implementer type variables and whether COG/AOGs and organization implementation types are JPA), which were previously introduced in Section 5.1. Recall that for code compliance, we only used “activity” or “no activity”, with “activity” being the highest ranking. We used bold font in the table to indicate LGPs that had reached the highest ranking within each Strategic Plan element classification.

5.2.6.1 PG&E

PG&E’s LGPs usually cover at least a county if not a whole region.

One of PG&E’s sampled LGPs, AMBAG Partnership, is classified as “advanced” (or “activity” for code compliance – the highest level for that category) for all Strategic Plan elements. This LGP has been in place for three program cycles. It is also implemented by a COG that proactively facilitates progress on multiple fronts across the individual cities and counties in the region. AMBAG LGP has also worked closely with PG&E to develop tailored offerings for the community, and works well with the local 3P implementers to coordinate comprehensive offerings to the community. Sonoma County Energy Watch Partnership is ranked as “advanced” (or “activity” for code compliance) for three of the five Strategic Plan elements. If it were ranked only based on the County, it would be “advanced” for local energy efficiency infrastructure. However, it is “foundational” in that category since it lacks the COG implementation structure of AMBAG, and the engagement of the individual cities and counties is not at the level of those in the AMBAG Energy Watch.

The East Bay Energy Watch, also in place for three program cycles, is more often ranked as “foundational”. Had we ranked this LGP based on the cities of Oakland and Berkeley, the LGP would be more advanced. Instead, it is “foundational” since it is attempting to engage a large number of cities (33) and two counties, many of which lack energy efficiency infrastructure and require a great deal of assistance.

The remaining PG&E LGPs are ranked as mostly foundational. These are LGPs implemented by counties or more often business organizations, encompassing single counties or larger regions, and are new to the current program cycle. The cities in these LGPs are typically very resource constrained and not able to replicate progress that may be occurring at the County level (e.g., municipal retrofits using OBF, utilizing ARRA funds for multiple purposes). The Redwoods Coast LGP is somewhat of an exception, and further demonstrates the magnitude of the staff and financial constraints currently affecting small and rural cities. The Redwoods Coast Energy Authority has been focused on energy efficiency since 2003 and its multiple full-time staff (and contractors and interns) regularly offers services to all sectors (often in person). While this LGP has “advanced” ratings for energy infrastructure and community-wide assistance, local municipal staff and funding reductions have hindered CAP development, reach codes development, and municipal retrofits.

All but one of PG&E's LGPs have activity towards code compliance, suggesting effective coordination with PG&E in ensuring that the Title 24 seminars and other trainings are being disseminated widely.

5.2.6.2 SCE and SoCalGas

SCE's partnerships are unique because of the Energy Leader Model structure that LGs work with. The Energy Leader Model, described in Section 3, incentivizes LGs to participate in a variety of activities that increase municipal energy efficiency retrofits and that prove their leadership to their communities.

All SCE/SoCalGas partners interviewed are not only identifying municipal retrofit projects but also working on completing EAPs/CAPs. Most cities in these LGPs are pursuing benchmarking in an attempt to complete comprehensive EAPs; many are taking the next step by incorporating their communities' greenhouse gas emissions into CAPs.

Most SCE/SoCalGas partners sampled have not signed up for reach code activities due to political issues, staffing barriers, or are only beginning to work on reach code activities. Some SCE partners indicated in their interviews that code compliance is much more effective to pursue given the barriers in their communities. Many SCE partners are providing training or creating resources to train city staff members on ordinances and code compliance.

Overall, the SCE/SoCalGas LGs sampled have all developed marketing and outreach campaigns to coordinate with core programs. The unique strategy that many SCE LGs have taken advantage of in promoting the Small Business DI program is to encourage mayors of each city to co-sign a letter with SCE urging small business owners to educate themselves about the program. A few LGs have outranked their peers because of the extensive resources they provide (as the South Bay COG has developed in its South Bay Environmental Services Center) or the customized outreach they conduct (as one Orange County city did with its Vietnamese Chamber of Commerce).

Many SCE/SoCalGas LGs are able to accomplish goals set because of the dedicated staff at COGs or JPAs that coordinate between multiple cities in a partnership. Especially because city staff do not always have the time to devote only to the IOU partnership, these dedicated coordinators have been able to not only provide options to each city (as offered by the IOUs) but to also turn intentions into actions. Many of these coordinators and other partners interviewed also noted the city council leadership support to help fulfill partnership goals.

The one SoCalGas LGP that is independent of the SCE focuses mostly on municipal retrofits as requested by the partner.

5.2.6.3 SDG&E

SDG&E is unique in that it has several LGPs within a single county, two cities that have a legacy of energy efficiency (San Diego and Chula Vista), an association of governments that

works with the remaining cities, and a Port District that focuses on a subset of businesses located in the district and the County.

One of SDG&E's LGPs is ranked as "advanced" (or "activity" for code compliance) for all five Strategic Plan elements. As mentioned previously, it is easier for a single city to advance towards Strategic Plan goals, particularly when LGP funding has been stable over time and the LGP can build on staff continuity and past success. Chula Vista LGP started during the 2006-2008 program cycle, and has a dedicated staff person with knowledge about energy efficiency. In addition, the city council and the city manager are progressive and amenable to adopting reach codes, and reducing greenhouse gas emissions.

SANDAG is an LGP implemented by an association of governments that addresses the cities in San Diego County besides San Diego City and Chula Vista, which are seen as relatively advanced. They disseminate expertise and resources to the other cities. SANDAG is "advanced" (or "activity" for code compliance) for all but reach codes.

The City of San Diego Partnership has a history of support for energy efficiency, with the nation's first ENERGY STAR building. The mayor strongly supports the partnership, which has been in place since the 2006-2008 program cycle. We ranked the city's progress as "advanced" for its communitywide programs and "foundational" for reach codes, municipal retrofits, and local energy efficiency infrastructure. The city has faced staff cutbacks recently that have impacted its ability to prioritize LGP program activities. Due to the city's larger size, staff that support the LGP are also spread throughout different departments and require a significant amount of coordination. The City of San Juan Capistrano Partnership, a new LGP in this program cycle, was ranked similarly and staff suggested that due to its closeness to the coast the constituency is generally supportive of energy efficiency and the mayor is motivated to show progress towards GHG reductions. However, their staff of one is stretched thin and finds it difficult to make much progress.

The Port of San Diego Partnership is ranked "advanced" in the three areas in which it is focusing its efforts (municipal retrofits, communitywide programs, and local energy efficiency infrastructure.) It is new this program cycle, and with few government buildings to retrofit, focuses primarily on the businesses within the Port District.

Table 15 – Summary of Initial LGP Classifications

IOU/LGP	Geography/ Implementer Type	Reach Codes	Code Compliance	Municipal Retrofits	Community- wide Programs	Local Energy Efficiency Structure
PG&E						
Association of Monterey Bay Area Governments (AMBAG) Energy Watch	Regional/COG (JPA)	Advanced	Activity	Advanced	Advanced	Advanced
East Bay Energy Watch	Regional/3P	Foundational	Activity	Foundational	Advanced	Foundational
Santa Barbara County Energy Watch (with SoCalGas)	County/Business Organization	No Activity	Activity	Foundational	Foundational	Foundational
Sonoma County Energy Watch	County/County	Advanced	Activity	Advanced	Foundational	Foundational
San Luis Obispo County Energy Watch (with SoCalGas)	County/Business Organization	Foundational	Activity	Foundational	Foundational	Foundational
Sierra Nevada Energy Watch	Regional/ Business Organization	Foundational	Unknown	Foundational	Foundational	Foundational
Yolo County Energy Watch	County/County	Foundational	Activity	Foundational	Foundational	Foundational
Redwood Coast Energy Watch	Regional/Energy Organization (JPA)	No Activity	Activity	Foundational	Advanced	Advanced
SCE Independent of SoCalGas						
San Gabriel Valley Energy Leader Partnership	Regional/COG (JPA)	No Activity	Activity	Foundational	Foundational	Unknown
SoCalGas and SCE						

IOU/LGP	Geography/ Implementer Type	Reach Codes	Code Compliance	Municipal Retrofits	Community- wide Programs	Local Energy Efficiency Structure
San Bernardino County Partnership	County/County	No Activity	Unknown	Foundational	No Activity	Foundational
Ventura County Energy Leader Partnership	County/COG (JPA)	No Activity	Activity	Foundational	Foundational	Foundational
Kern County Energy Leader Partnership (collaboration is with PG&E as well)	County/COG (JPA)	No Activity	Activity	Foundational	Foundational	Foundational
Desert Cities Energy Leader Partnership	Regional/AOG (JPA)	Foundational	No Activity	Foundational	Foundational	Advanced
South Bay Energy Leader Partnership	Regional/COG (JPA)	Foundational	Activity	Foundational	Advanced	Advanced
San Joaquin Valley Energy Leader Partnership	Regional/Energy Organization	No Activity	No Activity	Foundational	Foundational	Advanced
Orange County Cities Energy Leader Partnership	Bundled Cities	No Activity	No Activity	Foundational	Advanced	Foundational
South Santa Barbara County Energy Leader Partnership	Bundled Cities	Foundational	No Activity	Foundational	Foundational	Foundational
SDG&E						
City of Chula Vista Partnership	City/City	Advanced	Activity	Advanced	Advanced	Advanced
City of San Diego Partnership	City/City	Foundational	Unknown	Foundational	Advanced	Foundational
City of San Juan Capistrano Partnership	City/City	Advanced	Activity	Foundational	Foundational	Foundational

IOU/LGP	Geography/ Implementer Type	Reach Codes	Code Compliance	Municipal Retrofits	Community- wide Programs	Local Energy Efficiency Structure
Unified Port of San Diego Partnership	Port District/ Special District	No Activity	No Activity	Advanced	Advanced	Advanced
San Diego Association of Governments (SANDAG) Partnership	County/COG	Foundational	Activity	Advanced	Foundational	Advanced

6 Findings

This section presents the study findings. We present findings related to the resource portion of the programs, with a focus on delivery strategies and issues that are unique to LGPs, and then present findings on non-resource LGP activities. Next, we present findings related to overarching issues such as the structure of LGPs and how they are managed. We conclude with a section related to tracking and oversight of LGP program success, including presenting metrics that interviewees recommended.

We report findings below only for the LGP program activities that we sampled (see Section 4.3.2.1). We continue to distinguish between resource and non-resource activities in this section.⁵²

⁵² Note that we tangentially discuss marketing and outreach where it relates to the effectiveness of municipal and commercial retrofits (which fall under the government facilities and IOU core program coordination categories) under the resource section. This is a different convention than has been used in some prior LGP reports, which have categorized marketing and outreach as a distinct non-resource program activity.

Table 16 below builds on Table 8 presented in Section 5 that maps the Strategic Plan goals to the LGP program categories (the “Strategic Plan Element” row), and how the IOUs claim savings for each category (the final three rows). We added the sampled program activities to the table (the “Sampled Program Activities row”) to preface the findings presented below.

Table 16- LGP Program Categories, Strategic Plan Goals, IOU Savings Claims and Sampled Program Activities

IOU Model	LGP Program Category		
	Strategic Plan Support	Government Facilities	IOU Core Program Coordination
Strategic Plan Elements	1. Lead adoption and implementation of reach codes stronger than Title 24 2. Lend strong support for code compliance enforcement (ideally halving non-compliance by 2012 and halving that again by 2016)	3. Lead by example with their facilities and energy use practices	4. Lead their communities with innovative programs for energy efficiency, sustainability, and climate change
Sampled Program Activities	Climate and energy action planning, reach code development, and benchmarking	Municipal retrofits	Commercial retrofits
SDG&E/ SoCalGas (non-resource model)	Non-resource – no savings claims	Resource – claimed by core (indirect)	Resource – claimed by core (indirect)
PG&E (resource model)	Non-resource – no savings claims	Resource (direct)	Resource (direct)
SCE (resource model)	Non-resource – no savings claims	Resource (direct)	Resource – claimed by core (indirect)

Throughout this section, we present facilitating factors, barriers, and opportunities that we identified:

- **Facilitating factors** – while the study mission was to identify best practices, our research findings were typically not robust enough to support a best practice,⁵³ so instead we offer factors (characteristics or practices) that we believe facilitate higher performance; and
- **Barriers** – we identify barriers to success and suggestions for how to overcome or at least reduce the barrier to improve LGP program performance; we also identify opportunities for addressing barriers that are associated with the existing LGP and regulatory framework to promote LGP success in the future.

⁵³ As noted in Section 4, the California Statewide Best Practices Coordinator has made substantial progress developing best practices case studies and disseminating those to local governments. We reviewed those case studies as part of our research.

Note that we broadly assessed LGP successes and potential based on all the activities the partnership could engage in to achieve energy savings, whether that would be directly claimed by the LGP or another IOU program, including DR and IDSM programs. We did not strictly limit ourselves to the specific contractual activities in which each LGP engages, which widely range across LGPs, making comparisons difficult. Instead, we felt that the full potential for LGP success was a more consistent comparison. Throughout, we attempted to characterize factors that might lead to indirect savings (for PG&E, SCE, and SoCalGas LGPs) as opportunities rather than missed opportunities, since the LGPs' primary focus is on meeting their explicit savings goals.

6.1 Resource Activities

Below, we present findings related to LGP resource program activities, where savings are claimed (either directly or indirectly). We discuss each IOU's model separately, since the way in which they address retrofits differs substantially. We conclude with some findings that span the different models.

6.1.1 SDG&E/SoCalGas

All of the regular (non-pilot) SDG&E and SoCalGas LGPs are non-resource programs, and savings achieved through municipal and commercial retrofits are claimed by the standard core programs. The primary role of the LGPs is to lay the groundwork for these projects via outreach and education, facilities benchmarking, and audits. Most SoCalGas LGPs focus on savings from municipal retrofits first, before any outreach or coordination is conducted for other core programs.

LG partners like the non-resource design, noting that it gives them operational flexibility, allows them to have a long-term focus on the partnership by emphasizing robust outreach and education, and can support more comprehensive projects in the long-term.

That said, the non-resource design makes it more difficult to attribute LGP activities to resource outcomes, to conclusively demonstrate the value of the LGPs. SDG&E PMs admit having difficulty in effectively tracking and comparing LGP progress, which is discussed later in the report. Moreover, the lack of specific savings goals can potentially reduce local partner engagement with the LGPs since energy savings are deemphasized. As mentioned previously, direct energy savings goals can help motivate LGPs to achieve measurable progress within a program cycle, establishing priorities among competing objectives.

6.1.1.1 *Municipal Retrofits*

SDG&E/SoCalGas' LGPs do not claim energy savings, and we did not analyze municipal retrofit projects and savings that are claimed by the core programs, in an attempt to link savings back to specific LGP activities. That said, our in-depth interviews with LGP partners and managers included topics to learn more about factors that encourage and hinder municipal retrofits.

Facilitating Factors

Following are bulleted factors that have lent themselves to successful municipal retrofit outcomes for SDG&E, based on the completed interviews. Supporting research findings follow each facilitating factor. Some of these practices have already been designated as “best practices” by the LGC Statewide Coordinator, while others are potential best practices pending additional research.

- Completion of “basic” facilities inventories lends itself to successful municipal retrofit outcomes.

Before it could complete benchmarking of all its municipal facilities, the City of Chula Vista Partnership initially linked and mapped all its municipal meters to specific uses, which allowed it to develop a relatively quick understanding of energy usage and provided basic information needed to apply for project funding grants. This type of basic “energy management” can be completed with relatively little staff investment (except for very large cities or counties) and can position cities to obtain some types of retrofit funding without completing comprehensive audits or benchmarking.

- Consolidated municipal projects identification lends itself to successful municipal retrofit outcomes.

SANDAG LGP, an SDG&E LGP implemented by a regional COG, provides significant guidance to 16 member cities without their own LGPs by developing energy “roadmaps” that include preliminary assessments and (sometimes) detailed energy audits, and project opportunities with estimated costs and payback periods. SANDAG has also helped nine cities to benchmark over 150 municipal facilities using the Energy Star Portfolio Manager software and consumption data provided by SDG&E Energy Waves.⁵⁴

- The ability to tap into a range of funding sources (e.g., ARRA, OBF, CEC loans, energy efficiency bonds) lends itself to successful municipal retrofit outcomes.

Many cities and counties have reduced capital budgets in the current economy, and LGPs that have dedicated staff, finance experience, and/or significant assistance have utilized these (multiple) resources most effectively. In SDG&E territory, the City of Chula Vista Partnership has used all of these funding sources (for streetlight retrofits, HVAC upgrades, new boilers at pools, and citywide exterior building lighting), as dedicated LGP staff had availability to apply for funding (i.e., they are not “overextended” with other City work) and had already identified project opportunities. The City of San Diego LGP has experienced finance procurement staff, ARRA funding has been used to develop CMAP, and CEC loans are anticipated to fund future municipal retrofits.

⁵⁴ Ibid.

- Revolving Energy Funds to provide internal financing for municipal retrofit projects lends itself to successful municipal retrofit outcomes.

According to the Statewide Local Governments Energy Efficiency Best Practice Coordinator's Annual Report, at least 10 LGs, statewide, have created or are considering creating these funds.⁵⁵ Revolving (replenishing) funds allow energy efficiency project savings to fund future projects instead of reverting to the general fund or loans, and have been identified as a best practice by the Coordinator. Cities have used different methods to "seed" and replenish the funds, and the City of San Diego has utilized accumulated IOU rebates and ARRA funding. It was beyond the scope of this study to evaluate alternative methods (e.g., local city surcharges) in detail.

This type of financing requires a forward thinking LG willing to accept some risk, since future savings cannot be precisely estimated. Starting up the fund is the most difficult aspect, since special arrangements and approvals may be required of various auditor and accounting departments. That said, these funds have been established by very small cities and also large counties with widely varying funding amounts (\$15,000 to \$400,000).

- Strong municipal buildings knowledge lends itself to successful municipal retrofit outcomes.

Proactive IOU account managers have provided significant assistance to LGP staff to inventory municipal facilities and identify potential projects (in addition, older LGPs that have received stable funding over time to identify municipal projects (e.g., Chula Vista LGP) have an advantage when new funding sources like ARRA become available). All SDG&E cities (and large users) have dedicated Account Executives. The LGP managers work in tandem with them, and their primary task is on the energy project level; they facilitate rebate/incentive applications, ensure the customers are engaging SDG&E at the right time, and facilitate enrollment in SDG&E programs (such as pump efficiency audits). They are not involved in projects/programs that do not save energy directly.

- Regional collaboration on product standards and procurement lends itself to successful municipal retrofit outcomes.

The San Diego region's development of LED streetlight specifications is a well-known example of this strategy. Initiated by the City of San Diego, a regional working group sponsored by

⁵⁵ Second Annual Report from Statewide Local Government Energy Efficiency Best Practices Coordinator's 2011 Annual Report, <http://eecoordinator.info/coordinator-reports/> March 2012.

SDG&E's LGPs Program was convened to test and observe different lighting products, agree to common standards, and develop contract templates for procurement and installations.⁵⁶ Transitioning to LED streetlights is estimated to save \$2 million annually just in the City of San Diego, and the working group is now studying other outdoor lighting opportunities (e.g., parking lots). This strategy has been identified as a best practice by the Local Government Best Practices Coordinator.

Challenges and Barriers

In the interviews, we identified a major barrier to doing more municipal retrofits.

- Insufficient local staff capacity and resources is a barrier to doing more municipal retrofits.

At the (small) City of San Juan Capistrano, the local LGP partner is only able to dedicate about 10 percent of their time to the LGP, as they are now also responsible for leading several other municipal functions (wastewater, air quality, recycling and fire safety). In addition, two previous "LGP assistants" are no longer available. Similarly, staff reductions at the (large) City of San Diego have significantly slowed the pace of verifying and updating historic municipal buildings benchmarking data, which is needed to prioritize retrofits and ground new policy direction (e.g., reach codes for municipal buildings, EAP elements).

Overall, SDG&E LGPs are increasingly using consultants to undertake specific activities as LG staffs are reduced. Multiple partners noted that SDG&E's financial assistance, through the LGPs, has been invaluable in keeping a range of activities "afloat" (e.g., municipal retrofits procurements, CAP development), although partner staffs have been less able to develop their own expertise. SDG&E contracting is noted to be much faster than the local cities' contracting, which is another important "added value" to the LGs.

In the portion of Orange County not served by SCE, SDG&E and the City of San Juan Capistrano are establishing a new regional entity with the California Center for Sustainable Energy (CCSE) in San Diego, since several smaller local cities lack sufficient municipal staff to run robust LGP programs. The new center will operate for at least two to three years, and will conduct education and demonstrations on energy efficiency, renewables, and green building (e.g., LEED). San Juan Capistrano will host the new center for neighboring cities and businesses, and information will be in multiple community centers. The new center will have dedicated staff and a comprehensive scope, including: energy efficiency, city building inspections and maintenance, benchmarking, and commercial opportunities/available rebates. The center will conduct outreach to cities, chambers of commerce, and building officials. (It is also hoped that some local businesses will become center "champions".) Importantly, the center will solicit ideas for needed courses from the member cities, to help build up their staff energy efficiency capacity.

⁵⁶ The City of San Diego paid all of the meeting and facilitator costs. More detailed information about this program, and other LGP best practices summarized here, can be found at: http://www.lgc.org/freepub/energy/case_studies.html.

6.1.1.2 Commercial retrofits

Facilitating Factors

Following are bulleted factors that have lent themselves to successful commercial retrofit outcomes for SDG&E, based on the completed interviews. Supporting research findings follow each facilitating factor. Some of these practices have already been designated as “best practices” by the LGC Statewide Coordinator, while others are potential best practices pending additional research.

- Using contest formats and public recognition of efficiency progress is a facilitating factor for commercial retrofits.

SDG&E has found this strategy to be successful in a pilot implementation, and is spreading this model to other LGPs (e.g., Chula Vista LGP, City of San Diego LGP). The Green Business Challenge (GBC), implemented first at the Port of San Diego LGP, capitalized on businesses’ desire for positive public relations, and was facilitated by easy-to-use benchmarking software, free energy efficiency training for business staff (e.g., LEED, Certified Energy Manager) and significant involvement by account representatives and public relations staff. The initiative was modeled after an ICLEI program in Chicago, and also addresses waste materials, water conservation and air quality. Almost 50 percent of initial program participants have completed at least one energy efficiency recommendation, and additional projects are expected in the next two years.⁵⁷

- Required commercial energy assessments are a facilitating factor for commercial retrofits.

Chula Vista LGP’s Free Resource and Energy Business Evaluations (FREBE) program is already recognized as a best practice by the LGC, by making commercial energy assessments part of the standard business licensing process to generate baseline understanding of energy consumption and inform businesses of SDG&E programs. During the assessments, businesses receive low cost measures (e.g., “smart” power strips, water aerators), training on ways to track energy and water consumption, and information regarding SDG&Es rebate programs and potential financing options. According to past surveys administered by the LGP, 60 percent of businesses then go on to install at least one measure noted in the assessments.

⁵⁷ The initiative included kickoff and awards ceremonies, press releases, short videos for local news features, blogs, tweets, and educational events to promote networking among participants. Going forward, LGP staff intend to provide additional “hands-on” technical assistance to help participants use the core programs, which can seem somewhat “anonymous” after the personalized attention delivered through GBC. Overall, however, completing projects through the core programs was reported to be going well.

- Focus on special districts (e.g., Ports, Business Improvement Districts) is a facilitating factor for commercial retrofits.

LGP partners can have strong established connections with these specific constituents, the districts may be a particularly “manageable size” so traction can be gained quickly, and there may be fewer “competing” activities (e.g., residential programs outreach). These and other factors contributed to the success of the aforementioned Green Business Challenge at the Port of San Diego Partnership. In the past, the City of San Diego LGP has generally promoted commercial retrofits through “standard” channels—community events, press releases, and codes and standards. Going forward, the Green Business Challenge will become a key retrofits driver, and at least 10 Business Improvement Districts in the city will be primary participation targets. The GBC will also be a formal implementation tool for the commercial goals of the city’s updated Climate Mitigation and Adaptation Plan.

- Commercial property tax-based financing programs are a facilitating factor for commercial retrofits.

Some LGPs (Chula Vista LGP, City of San Diego LGP, City of Berkeley as part of the East Bay Energy Watch) are working with their local taxing jurisdictions to develop new commercial Property Assessed Clean Energy (PACE) programs, which would allow commercial businesses to finance improvements via their property taxes.⁵⁸ A similar program has been implemented in Sonoma County—the Sonoma County Energy Independence Program (SCEIP)—that has been recognized as a best practice by the LGC. This program allows owners of existing buildings to get voluntary assessments and finance energy efficiency, renewable energy, and water efficiency projects through additional property taxes.⁵⁹

- Engagement of city mayors and other elected officials factor into the success for commercial retrofits.

In the City of Chula Vista, elected officials and the City Manager have historically been very supportive of energy efficiency, and have utilized their strong relationships with the Chamber of Commerce and realtor groups to promote retrofits and code/policy changes to drive future retrofits. In the City of San Diego, the Mayor is very supportive of energy efficiency (the city has a strong mayor system), and was instrumental in getting very successful residential PACE and loan loss reserve programs established (and also conversion of the municipal fleet to electric vehicles). The Mayor’s support for new commercial initiatives (Green Business Challenge, districts outreach) is expected to be influential.

⁵⁸ San Diego’s program will allow financing for energy efficiency and renewables projects.

⁵⁹ Additional SCEIP details are available at: http://www.lgc.org/freepub/energy/case_studies.html.

Challenges and Barriers

Besides the LGP partner staff constraints described earlier, the primary challenge for commercial retrofits is SDG&E/SoCalGas' non-resource orientation and program tracking systems (and confidentiality policies), which make it difficult for LGPs to understand their progress on resource activities.

- Non-resource program model makes it difficult to track progress.

When working with the DI program, the LGPs often walk the customer through the enrollment process so they will know for sure if the customer did or did not enroll, and if the LGP has a strong tracking mechanism, SDG&E can provide aggregated savings data. In other cases where the LGP is engaged in general program referral activities (e.g., community events), SDG&E can provide data such as the number of businesses that enroll into a program during the event, which helps LGPs to understand the impact of the event. In most cases, however, the LGPs do not get information indicating whether customers referred to programs actually participated.

Overall, savings estimation is dependent on the LGPs tracking capabilities and proactivity. In this regard, the Chula Vista FREBE (Free Resource & Energy Business Evaluation) program has a robust tracking mechanism and local LGP staff have established relationships with SDG&E staff that run the core and DI programs, allowing them to understand and track the impacts they are having. Programs that utilize more general, non-personal interactions such as direct mailings, general marketing, or that do not track their customer interactions have a much harder time correlating savings with their programs.⁶⁰

6.1.2 PG&E

The PG&E model claims savings from both municipal and commercial retrofits (including DIs). The LGPs typically offer their own incentives, and they are also expected to coordinate with PG&E's many core and 3P programs that also offer incentives and DI services.

As noted in Section 3, PG&E's LGPs have used two DI program models for the 2010-2012 cycle:

- **LG Partner DI Program** - implemented by the LG partner or a 3P under contract with the LG; and/or
- **3P/GP DI Program** - implemented by a 3P contractor under contract with PG&E but paid for with LGP funds.

Under both of these models, the implementer assumes the daily operational tasks of the DI

⁶⁰ An earlier assessment of the 2006-2008 LGP programs also reported that most LGPs have difficulty systematically linking non-resource activities (e.g., audit recommendations) to actual energy savings realized through core programs. For more details see: *Effectiveness and Impacts for Non-Resource Elements of the 2006-2008 Government Partnerships Programs*. Prepared by Summit Blue Consulting and PA Consulting Group for the CPUC. January 26, 2010.

projects—conducting audits, installing measures and managing sub-contractors. See Section 3 for additional details about PG&E’s DI framework.

Most of PG&E’s partnerships utilize the 3P/GP model. PG&E has considered multiple factors in using the different models including: the size of each LGP area, the age of the LGPs (i.e., newer LGPs in particular may benefit initially by utilizing an established 3P firm), the geographic proximity of different 3P firms, the pool of local installers, and the cost of local installers versus 3Ps.

Regarding the benefits of PG&E’s resource-based model, partners and IOU PMs reported that energy savings goals motivate and focus LGP efforts, establish priorities on measurable progress (subject to constraints), and is an effective way of demonstrating LGPs’ ability to produce results. In addition, most 3P installation firms have unique expertise with complex measures and know the market for those measures well. 3Ps can be especially well suited to serve larger customers with complex needs. As not all LGPs can be expected to have deep technical expertise and specialized market knowledge, contracting with 3P installation firms can help them make quick progress towards savings goals.

6.1.2.1 Municipal retrofits

Table 17 shows municipal projects and electric savings performance for the PG&E LGPs in our sample.⁶¹ The data show that Advanced LGPs tend to achieve more savings per site (there are additional tables in Appendix B (B.1) that present electric, gas and demand savings for each LGP). Advanced LGPs, however, have the experience and staff resources (and use outside expertise) to complete a high number of projects with high savings per project. On average, the Advanced LGPs have served 18 sites each, and the Foundational LGPs have served an average of 27 municipal sites. Foundational LGPs are focused on “lower hanging” projects. Once low hanging projects are completed, more Advanced LGPs look for more difficult projects that require additional projects for deeper savings.

While the Advanced LGPs show higher rates of savings attainment, it is difficult to make conclusive statements, since better performing LGPs are presumably given higher goals over time. Importantly, we have no baseline against which to measure savings progress, such as a measure of recent or past municipal energy consumption, or a quantitative goal for only the municipal sector (i.e., not combined with residential and commercial). In this respect, the SCE Energy Leader model provides more explicit goals and performance criteria (see subsequent section).

⁶¹ The PG&E data include the Kern County LGP, which is not in the PG&E evaluation sample, but is in the SCE/SoCalGas evaluation sample. Our in-depth interviews focused on issues pertaining to SCE and SoCalGas.

**Table 17 - Municipal Savings (kWh) in PG&E Sample LGPs by Level of Advancement
(Includes Savings from LGEAR, Energy Savers, Energy Fitness, and Right Lights)**

Level of Advancement	LGP Sample Size	Muni Savings (kWh)	% Muni Savings*	Muni Sites	Savings per Site (kWh)
No Activity	-	-	-	-	-
Foundational	7	8,190,893	31%	187	43,802
Advanced	2	2,770,310	25%	36	76,953
Total	9	10,961,203	29%	223	49,153

*This is the percent of municipal savings divided by municipal + commercial savings; residential savings are not included.

In order to assess how and if the LGPs are approaching deeper savings, Table 18 presents reported kWh savings for each LGP in our sample by the following categories:

- **T8s and CFLs:** new federal lighting standards began phasing in in 2011, and will impact savings claims for T8 and CFL measures;
- **Other lighting:** other lighting includes all lighting that is not a CFL or a T8. Examples include metal halide lamps, T5s, T12s, lighting sensors, and LEDs;
- **Heating, Ventilation and Air Conditioning (HVAC):** this includes HVAC coil cleaning, boilers, chillers, controls, rooftop split systems, and other HVAC related measures;
- **Refrigeration:** this includes refrigeration controls, door closers and gaskets, night covers, strip curtain, and other refrigeration related measures; and
- **Other:** includes measures excluded from the above categories, including process, ventilation, building shell, and appliances.

**Table 18 - Municipal Savings (kWh) in PG&E Sample LGPs by Measure Category
(Includes Savings from LGEAR, Energy Savers, Energy Fitness, and Right Lights)**

Local Government Partnership	T8 or CFL	Other Lighting	HVAC	Refrigeration	Other	Total
Association of Monterey Bay Area Governments Energy Watch	1%	57%	16%	1%	25%	100%
East Bay Energy Watch	0%	95%	2%	0%	2%	100%
Kern County Energy Watch (with SCE and SoCalGas)	55%	28%		4%	13%	100%
Redwood Coast Energy Watch	44%	1%		2%	52%	100%
San Luis Obispo Energy Watch (with SoCalGas)	57%	39%		4%		100%
Santa Barbara Energy Watch (with SoCalGas)	82%	7%		9%	3%	100%
Sierra Nevada Energy Watch	35%	55%	9%	1%		100%
Sonoma County Energy Watch	46%	6%	48%	0%	0%	100%
Yolo County Energy Watch	25%	73%		1%	1%	100%
Total	18%	65%	13%	0%	3%	100%

Table 19 contains the same categories used in Table 18 but the LGPs in our sample are grouped by our foundational and advanced ratings assigned to the municipal efforts of each partnership. As we would expect to see, advanced lighting plays a higher role in the savings totals for the Advanced category and T8s or CFLs play a larger role in the total savings for the Foundational category. It is likely that the Advanced category group has to look beyond T8s and CFLs in order to achieve higher savings levels.

Table 19 - Municipal Savings (kWh) in PG&E Sample LGPs by Level of Advancement (Includes Savings from LGEAR, Energy Savers, Energy Fitness, and Right Lights)

Level of Advancement	Number in Category	T8 or CFL		Other Lighting		HVAC		Refrigeration		Other	
		kWh	%	kWh	%	kWh	%	kWh	%	kWh	%
No Activity	-										
Foundational	7	987,138	36%	488,498	18%	1,133,580	41%	4,836	0%	156,258	6%
Advanced	2	976,519	12%	6,663,231	81%	287,479	4%	44,398	1%	219,265	3%
Total	9	1,963,657	18%	7,151,730	65%	1,421,059	13%	49,234	0%	375,523	3%

Facilitating Factors

Following are bulleted factors that have lent themselves to successful municipal retrofit outcomes for PG&E, based on the completed interviews. Supporting research findings follows each facilitating factor. Some of these practices have already been designated as “best practices” by the LGC Statewide Coordinator, while others are potential best practices pending additional research.

- The ability to utilize a range of funding sources (e.g., ARRA, OBF, CEC loans, energy efficiency bonds) is a facilitating factor for PG&E municipal retrofits.

Almost all cities and counties have reduced capital budgets, and LGPs that have dedicated staff, finance experience and/or significant assistance have used these (multiple) resources most effectively. In PG&E territory, the AMBAG Energy Watch and Sonoma County Energy Watch partnerships have used both ARRA and OBF (and low-interest local bank loans to fund energy service company identified projects) to fund boilers, chillers, variable frequency drives (VFDs), and other projects. Notably, the AMBAG, San Joaquin Valley, and Redwoods Coast Energy Watch LGPs all helped to pool small cities with limited staff resources into collaborative Energy Efficiency and Conservation Block Grant applications to the CEC. OBF funding is expected to become more important after the expiration of AARA, and one manager of two PG&E LGPs noted that counties have been more active than cities in considering/utilizing OBF, perceiving that there is high, untapped potential among partner cities.

- Revolving Energy Funds to provide internal financing for retrofit projects are a facilitating factor for PG&E municipal retrofits.

According to the Statewide Local Governments Energy Efficiency Best Practice Coordinator’s Annual Report, at least 10 LGs have created or are considering creating these funds, including El Cerrito, Mendocino, Alameda County, and Sonoma County. San Luis Obispo is considering this option and presenting information to member cities upon which to develop draft models. Revolving (replenishing) funds allow energy efficiency project savings to fund future projects instead of reverting to the general fund or loans, and have been identified as a best practice by the Coordinator. Cities have used different methods to “seed” and replenish the funds, including accumulated IOU rebates, local city surcharges and ARRA funding (used by Sonoma County); it was beyond the scope of this study to evaluate these alternative methods in detail.

As mentioned above under the SDG&E/SoCalGas section, this type of financing requires a forward thinking LG willing to accept some risk, since future savings cannot be precisely estimated. Starting up the fund is the most difficult aspect, since special arrangements and approvals may be required of various auditor and accounting departments. That said, these

funds have been established by very small cities and also large counties with widely varying funding amounts (\$15,000 to \$400,000).

- Consolidated municipal projects identification is a facilitating factor for PG&E municipal retrofits.

Similar to what SANDAG does in SDG&E territory through its Energy Roadmaps, AMBAG also assists all its member cities and counties by inventorying all municipal buildings and bundling and identifying funding for energy efficiency projects using LGP and other resources.

- Strong municipal buildings knowledge is a facilitating factor for PG&E municipal retrofits.

For some LGPs (e.g., AMBAG Energy Watch, Sonoma County Energy Watch, East Bay Energy Watch), proactive IOU account managers and sector sales representatives have provided significant assistance to LGP staff to inventory municipal facilities and identify potential projects. Not all LGPs receive consistent, high levels of initial IOU assistance, however. One LGP implementation contractor serving multiple smaller rural cities across a large geographic area noted that while some regional account and sales staff were very engaged with their municipal customers, others are “overwhelmed” with large customer bases (e.g., they have too many small commercial accounts, or a few very large ones) or not particularly “motivated” to prioritize small jurisdictions. This contractor was able to help “fill the gap” by providing basic and detailed assessments and grants funding assistance to several rural cities and counties, although these rural jurisdictions are typically hindered by municipal staff constraints (discussed subsequently).

- Projects bundling is a facilitating factor for PG&E municipal retrofits.

AMBAG Energy Watch uses a comprehensive approach to bundling energy efficiency projects to include long-payback measures with short-payback, so that the harder measures such as boiler retrofits can be done now. AMBAG Energy Watch uses this approach for its many LG buildings, using CEC loans and OBF, which require around a 10 to 12 year payback. AMBAG Energy Watch implementation staff inventory municipal buildings and identify comprehensive energy efficiency opportunities. Where long-term payback measures are identified (such as old boilers), they are bundled with short-term payback measures such as lighting. AMBAG Energy Watch’s member LGs all have CAP goals, and they understand that the Energy Watch program provides funds they can use to do energy efficiency projects to help meet those goals.

Sonoma County Energy Watch is very advanced in how it bundles its municipal projects (and special districts and nonprofits), including a zero net energy county campus. The county has a long-term approach to energy efficiency and sustainability, with elected officials setting aggressive CAP goals. The partnership provides funding for a dedicated staff person at the county, who is able to incorporate sustainability into many county initiatives. The Energy Watch program provides funding for energy efficiency projects, and PG&E account representatives facilitate using other IOU resources (e.g., for renewable projects). The county implementation staff also seek out other funding sources such as CEC loans, Energy Service Company (ESCO) local bank loans, and OBF, as well as internal county creative financing mechanisms such as revolving loan funds. The Sonoma County 3P implementer has developed a pilot concept, with a tool that models energy project return on investments, including all the available funding opportunities, which facilitates comprehensive measure treatment.

- Outreach and technical assistance from IOU staff is a facilitating factor for PG&E municipal retrofits.

For LGPs implemented by a non-governmental entity, IOU government representatives can help to identify and engage appropriate facilities contacts within cities. Moreover, some LGPs have benefitted from significant IOU staff assistance in filtering and prioritizing feasible projects. East Bay Energy Watch, where a for-profit company is the implementer, makes use of extensive in-house engineering resources to scope retrofit projects. Other LGPs that are newer or are in remote areas (e.g., Sierra Nevada) rely heavily on 3P implementer or contractor energy expertise.

Challenges and Barriers

Following are some of the main barriers and challenges related to municipal retrofits. The barriers are bulleted, and followed by research findings that supported their identification.

- Insufficient local staff capacity and resources is a challenge to doing municipal retrofits.

This was the main barrier mentioned by multiple interviewees, and has impacted municipal projects in diverse ways. Municipal facilities staffs across the state have been reduced significantly during the recession, and many staff members can only perform equipment maintenance, versus planning and implementing upgrades. Rural cities in particular suffer from a lack of regular energy managers, and many cities cannot even complete municipal benchmarking, even if the LGPs provide training on this. Remaining city staffs have recently been overwhelmed completing ARRA block grant documentation, while other cities do not have the staff capacity/expertise to ensure that ARRA projects are ready to proceed or meet requirements (e.g., that products be manufactured in the U.S.). For example, one PG&E county could not utilize a \$500,000 block grant due to “documentation hassles”, and other rural cities in PG&E territory did not apply for similar reasons. Not surprisingly, LGPs and cities with dedicated energy managers have achieved greater progress.

- LGP implementers that are less familiar with or focused on municipal facilities are a barrier to doing municipal retrofits.

These may include non-profit energy-related organizations and local business advocacy groups that have strong ties to the commercial community, but have weaker connections with city facilities staff and minimal leverage (compared to counties) to ensure city projects get completed. In some cases (e.g., Santa Barbara, San Luis Obispo), 3P installation contractors have used their strong municipal connections to complete basic retrofits to mitigate this challenge.

- Competing priorities are a barrier to doing municipal retrofits.

One PG&E PM perceived that facilities benchmarking became less of a priority for IOU staff when PG&E rolled out its Time Variable Pricing program. Another interviewee noted that the LGPs have been “competing with” PG&E’s LED turnkey streetlamp program, and some cities, particularly those with few staff resources, just give PG&E their funding to install LEDs without really considering alternative projects. This same interviewee (a municipal retrofits subcontractor) also had their budget reduced due to high start up/training costs to bring a new (business oriented) local implementer on board. At another LGP, county staff were highly focused on implementing a new residential retrofits loan program and could not take on the LGP leadership (implementer) role, leaving nearby cities with no local municipal retrofits leader to learn from. Implementers are motivated to meet energy savings goals, and will typically prioritize activities that lead to direct savings.

- Specific project opportunity “gaps” are a barrier to doing municipal retrofits.

One municipal retrofits contractor noted that PG&E’s retrocommissioning program is focused on large facilities, whereas most municipal facilities in this rural LGP are less than 100,000 square feet and not eligible for the standard program. Expanding the core program eligibility could potentially allow many more projects to be completed for some LGPs.

- Inability of cities to assume more debt is a barrier to doing municipal retrofits.

Multiple interviewees perceived that OBF is becoming a less feasible funding option because some cities consider OBF to be “debt” based on the typical loan terms and conditions. This finding was also noted in the recent statewide OBF Process and Market Evaluation completed

by Cadmus. Moreover, some LGPs noted that maximum OBF repayment periods are not long enough to provide significant financial relief.⁶²

We identified an additional barrier that we present as an opportunity for expanding PG&E's LGP municipal retrofit progress.

- Special districts exclusions (e.g., schools, libraries, water, recreational) are a barrier to doing municipal retrofits.

PG&E has some LGPs that are excluded from addressing special districts (where a 3P program has first right of refusal), and this is emphasized as a lost opportunity given LGs' special connections within this segment. One of PG&E's more experienced LGPs is prevented contractually from treating quasi-governmental sectors such as schools and fire stations, where it has a natural advantage to identifying contacts and energy efficiency opportunities. Another more experienced PG&E LGP was recently granted the ability to serve quasi-governmental facilities, and reports significant progress by leveraging its existing contacts. The ability to claim direct savings is a motivator and usually leads to the implementer placing a higher priority on those activities. Both LGPs and 3P implementers bring value to the partnership. LGPs often have unique outreach channels and knowledge of quasi-governmental sectors, while 3P implementers may have specialized technical expertise. PG&E could consider developing joint goals to encourage LGPs and 3Ps to collaborate and to maximize the value they both offer.

6.1.2.2 Commercial Retrofits

Table 20 presents commercial electric savings for the PG&E program in our LGP. Commercial savings, on average, make up 71 percent of the non-residential savings for our sample LGPs. (There are additional tables in Appendix B (B.1) that present electric, gas, and demand savings for each LGP.) We did not break out savings by Advanced or Foundational LGPs, since the Strategic Plan element that is most relevant, Communitywide Programs, is broader and the classifications encompass more than just commercial retrofits. However, we did find that the three LGPs that are ranked as Advanced have a much lower percentage of savings from T8s/CFLs versus the average. On a per site basis, the average savings of commercial projects is much lower than the average per site savings of municipal projects.

⁶² For additional details on OBF designs and constraints, see: 2010-2012 CA IOU On-Bill Financing Process Evaluation and Market Assessment. Prepared for California Public Utilities Commission. March 2012. The Cadmus Group.

Table 20 - Commercial Savings (kWh) in PG&E Sample LGPs (Includes Savings from LGEAR, Energy Savers, Energy Fitness, and Right Lights)

Local Government Partnership	Commercial Savings (kWh)	% Commercial Savings*	Commercial Sites	Savings per Commercial Site (kWh)
Association Of Monterey Bay Area Governments Energy Watch (Right Lights)	7,908,004	93%	189	41,841
East Bay Energy Watch (Energy Fitness, Energy Savers, LGEAR)	5,370,142	49%	398	13,493
Kern County Energy Watch (with SCE and SoCalGas)	4,696,584	94%	334	14,062
Redwood Coast Energy Watch (Energy Fitness)	408,532	83%	73	5,596
San Luis Obispo County Energy Watch (with SoCalGas)	1,511,634	91%	159	9,507
Santa Barbara County Energy Watch (with SoCalGas)	891,850	94%	88	10,135
Sierra Nevada Energy Watch (Energy Savers)	3,081,386	64%	248	12,425
Sonoma County Energy Watch (Energy Savers, LGEAR)	409,782	16%	15	27,319
Yolo County Energy Watch (Energy Fitness, LGEAR)	2,557,893	94%	96	26,645
Total	26,835,809	71%	1,600	16,772

*This is the percent of commercial savings divided by municipal + commercial savings; residential savings are not included.

In order to assess how and if the LGPs are achieving deeper savings, Table 21 presents reported kWh savings for each LGP in our sample by the following categories:

- **T8s and CFLs:** new federal lighting standards began phasing in in 2011 and will impact savings claims for T8 and CFL measures;
- **Other lighting:** other lighting includes all lighting that is not a CFL or a T8. Examples include, metal halide lamps, T5s, T12s, lighting sensors, and LEDs;
- **Heating, Ventilation, and Air Conditioning (HVAC):** this includes HVAC coil cleaning, boilers, chillers, controls, rooftop split systems and other HVAC related measures;
- **Refrigeration:** this includes refrigeration controls, door closers and gaskets, night covers, strip curtain and other refrigeration related measures; and
- **Other:** includes measures excluded from the above categories, including process, ventilation, building shell, and appliances.

**Table 21 - Commercial Savings (kWh) in PG&E Sample LGPs by Measure Category
(Includes Savings from LGEAR, Energy Savers, Energy Fitness, and Right Lights)**

Local Government Partnership	T8 or CFL	Other Lighting	HVAC	Refrigeration	Other	Total
Association of Monterey Bay Area Governments Energy Watch	33%	12%	3%	49%	4%	100%
East Bay Energy Watch	16%	30%	1%	51%	2%	100%
Kern County Energy Watch (with SCE and SoCalGas)	82%	4%	0%	13%	1%	100%
Redwood Coast Energy Watch (Energy Fitness)	18%	16%	4%	19%	44%	100%
San Luis Obispo County Energy Watch (with SoCalGas)	82%	11%	0%	7%	0%	100%
Santa Barbara County Energy Watch (with SoCalGas)	69%	20%		12%	0%	100%
Sierra Nevada Energy Watch	64%	23%	0%	12%	1%	100%
Sonoma County Energy Watch	52%	28%		1%	19%	100%
Yolo County Energy Watch	61%	37%	2%	0%	0%	100%
Total	49%	18%	1%	29%	3%	100%

Facilitating Factors

Following are bulleted factors that have lent themselves to successful commercial retrofit outcomes for PG&E, based on the completed interviews. Supporting research findings follow each facilitating factor. Some of these practices have already been designated as “best practices” by the LGC Statewide Coordinator, while others are potential best practices pending additional research.

- Door-to-door customer recruitment facilitates commercial retrofits.

PG&E LGP staff and partners and PG&E DI firms noted that this is the most effective way to get business owners interested in retrofits, and can sometimes lead to immediate contracting for direct installs.⁶³

- Combining IOU data and resources with LG knowledge of the community facilitates commercial retrofits.

In PG&E territory, DI firms noted that having PG&E sales and service staff along with them, with co-branded materials, increases customer interest and engagement. Notably, the DI firms

⁶³ One LGP noted that trained college interns are perceived to be more trustworthy than other professional/organizational staff.

do not usually conduct “saturation” outreach as a matter of general practice (one does), unless new measures have been added. Rather, they tend to focus on leads provided by the LG partners, customer account managers, and other community contacts. PG&E also provides participation data indicating which customers have not completed comprehensive projects, and subcontractors sometimes also provide information regarding audit recommendations that have not been implemented during their site work. For new LGs getting involved with an LGP, the IOU often meets with the elected officials and uses IOU data and LG staff to identify appropriate targets for outreach campaigns. The combination of IOU data and expertise and LG knowledge of the community is especially effective.

- Leveraging 3P energy efficiency expertise for newer LGPs that lack energy efficiency infrastructure facilitates commercial retrofits.

The Yolo County LGP is relatively new, and according to interviewees, using a regional 3P DI firm that contracts with PG&E was an appropriate choice for this specific LGP. In particular, the area is characterized by a large supply of local vendors, and choosing one or a few “lead” firms to manage the group would be politically problematic and logistically challenging. Moreover, using a local DI firm would likely have resulted in much higher costs to the LGP. That said, the 3P that is serving the area has lacked some measures that are currently needed (e.g., occupancy sensors for combined lights/fans in bathrooms), as the County has a long history of being “progressive on energy efficiency” prior to forming an LGP.

- Engagement of city mayors and other elected officials facilitates commercial retrofits.

LGPs engage elected officials in various ways, including presentations at business events, door-to-door canvassing, and even “cold-calling” business owners. PG&E also works directly with LG staff and attempts to get mayoral letters of support. East Bay Energy Watch in particular seeks to get mayoral letters of support to launch new marketing and outreach campaigns when it outreaches to cities that have not yet engaged with the partnership. Often as a result of such outreach, the mayor and city council help to identify appropriate targets (e.g., small business districts) and any special needs (such as non-English speakers) and promote a commercial retrofit neighborhood campaigns.

- Focus on special districts (e.g., Ports, Business Improvement Districts) facilitates commercial retrofits.

LGP partners can have strong established connections with these specific constituents, the districts may be a particularly “manageable size” so traction can be gained quickly, and there may be fewer “competing” activities (e.g., residential programs outreach). These and other factors contributed to the success of the aforementioned Green Business Challenge at the Port

of San Diego LGP. PG&E's AMBAG LGP has also had success targeting special districts such as libraries and schools after PG&E allowed them to, and Sonoma County has also recently added specific districts. As mentioned above under the municipal retrofit discussion, both LGPs and 3P implementers bring value to the partnership. LGPs often have unique outreach channels and knowledge of quasi-governmental sectors, while 3P implementers may have specialized technical expertise. PG&E could consider developing joint goals to encourage LGPs and 3Ps to collaborate and to maximize the value they both offer.

- High involvement by economic development organizations and business chambers of commerce facilitates commercial retrofits.

These organizations are well placed to conduct comprehensive outreach to all their business members and sometimes to municipal city staff. Conversely, these groups are usually not as well positioned to lead policy, codes, and climate-change related initiatives, fulfilling the role of implementer (which usually happens when there is not a COG or LG willing and able to take on that role). Business related organizations at three of PG&E's LGPs (Santa Barbara Energy Watch, San Luis Obispo Energy Watch, and Sierra Nevada Energy Watch) have made extensive use of their existing constituent networks to promote commercial retrofits.

- PG&E "overlapping audits" facilitate commercial retrofits.

As part of an East Bay Energy Watch pilot program, one locally contracted DI firm provides training to auditor sub-contractors on how to identify measures offered by the 3P programs, which are then recorded so that *all* recommended measures are recorded in one audit. The prime contractor then follows up with the customers *and* the relevant 3P(s) to ensure that everyone is aware of the broad set of recommended measures, to help ensure a seamless transition. In addition, they track the (expected) savings associated with the referrals to 3P programs and report these as "indirect" savings to PG&E to inform future LGP planning.

- Measures bundling for comprehensive projects facilitates commercial retrofits.

At least four PG&E LGPs use locally contracted DI firms to identify measures they can contractually do (typically lighting), and then work with consultants and PG&E staff to identify and package other more complex and less cost effective measures, to develop comprehensive projects that are cost effective, overall. This approach is also used for municipal projects, with one LGP (Sonoma County Energy Watch) testing a pilot program with innovative software to model varying project paybacks with multiple funding options. Projects typically include renewable installations as well. LGPs that have motivated elected officials with a history of energy efficiency tend to use this approach. This allows them to

address longer payback measures such as old boilers by including short-term payback lighting measures.

- Measure co-pays facilitate commercial retrofits.

Multiple PG&E LGP managers and DI firms noted that the trend towards increasing customer co-pays makes it easier for DI firms to do more comprehensive projects and maintain cost effectiveness (the co-pays also increase customers' stake in the projects, so failed measures are more likely to be reported and replaced, increasing savings). In addition, since 3Ps contracted by PG&E are paid by the total energy savings they create (so projects can be a hybrid of custom and deemed), there is additional incentive to look for deeper retrofits, and customers perceive a more "turn-key" solution. As noted earlier, however, the 3P contracts with PG&E usually still include many measures and/or sectors restrictions, and contracts without time and materials reimbursement work against looking for marginal savings among very unique or more remote projects.

- Commercial property tax-based financing programs facilitate commercial retrofits.

Some LGPs in the state are working with their local taxing jurisdictions to implement new commercial Property Assessed Clean Energy (PACE) programs, which would allow commercial businesses to finance improvements via their property taxes.⁶⁴ A similar program has been implemented in Sonoma County—the Sonoma County Energy Independence Program (SCEIP)—that has been recognized as a best practice by the LGC. This program allows owners of existing buildings to get voluntary assessments and finance energy efficiency, renewable energy, and water efficiency projects through additional property taxes.⁶⁵

Challenges and Barriers

Below we describe some of the main challenges and barriers pertaining to commercial retrofits, which primarily pertain to PG&E's coordinated delivery model for direct installs.

- Contract implementation firms cannot always provide the full range of measures required and complete comprehensive retrofits.

In some areas, contracted implementation firms cannot always provide the full range of measures required by customers (particularly in areas with a strong history of efficiency upgrades), and the LGP manager must work with PG&E's 3P contractor managers to update the measures that can be provided. Based on the interviews, this process often seems to work

⁶⁴ San Diego's program will allow financing for energy efficiency and renewables projects.

⁶⁵ Additional SCEIP details are available at: http://www.lgc.org/freepub/energy/case_studies.html.

without any major problems, although this can delay projects on the customer end while they wait for new measures to be approved.⁶⁶

- Large, regional 3P firms do not always focus on HTR customers or closely coordinate with other 3Ps and local DI firms.

Large, regional 3P firms have many trained staff on hand (on a well-defined set of measures) and can quickly help new LGPs to “get up and running.” However, these firms tend to focus on the largest projects, cannot provide comprehensive projects to customers, and have reduced incentive to coordinate and follow up with other 3Ps to fill gaps (e.g., specific measures and sectors they cannot serve). (One interviewed DI firm explicitly reported that some customers do not like the delays caused by coordination, and would prefer a single, consolidated approach and not additional complexity.) In addition, these firms often focus their efforts on the more urbanized (i.e., cost effective) areas of the LGPs (and expend their budgets), and service to rural and HTR customers can suffer.

In contrast, local implementation firms usually have more contractual flexibility to complete more comprehensive projects and serve a more diverse range of customers. Similarly, one interviewed DI firm noted that their performance goals are primarily linked to the number of customers served and general energy efficiency progress, rather than narrowly defined kWh savings (and they appreciated having this operational flexibility).

For one LGP, some 3P service territory has transitioned to the local LGP implementer, which is able to make more comprehensive retrofits because they are contractually focused on overall demand reduction and not specific measures. For example, this local implementer was able to convert a disused rural barn with unique equipment needs to a new commercial business, after another 3P was not able to provide some of the specific measures required.

In another LGP, the local partner (who does installs) is charged with resolving conflicts among itself and the other 3Ps operating in the area, and has successfully collaborated with 3P implementers to jointly serve a new large winery customer. This model can work effectively, but relies heavily on the different vendors knowing who is in the area and what they are doing. In particular, it has been difficult for this implementer to obtain 3Ps’ project pipelines to reduce conflicts and enhance coordination. For another LGP, both the implementer and PG&E’s wine industry 3P have conducted outreach to the same winery customer, resulting in confusion and frustration for the local account representative.

⁶⁶ On the Central Coast, the Santa Barbara and San Luis Obispo Energy Watch partnerships are making effective use of 3P expertise to achieve savings results. The 3P organizations have local offices with staff based in the area. Both the partners and the IOU report satisfaction with the 3P efforts to outreach to commercial and municipal sectors.

- Multiple 3Ps and/or local installation firms serve customers in the same LGP.

In areas served by multiple 3Ps and/or local installation firms (e.g., Sierra Nevada, Redwoods Coast), customers in the same LGP may receive different incentives, and PG&E regional sales staff sometimes have difficulty tracking the different DI policies, as there are no “master” incentives sheets. Some sales representatives may also inadvertently refer customers to a standard, established 3P program, although the implementation firm is now working under separate contract to the LGP.

- 3P programs have first right of refusal to customer segments and measures, so that the LGP cannot provide comprehensive sets of measures to the whole community.

Some more sophisticated LGPs with a history of successful implementation cite lost opportunities and inability to provide comprehensive services to the community due to PG&E’s coordinated model. 3P programs have first right of refusal to customer segments and measures, so that the LGP cannot provide comprehensive sets of measures to the whole community. In one example, the LGP was working with local wineries but was unable to offer comprehensive treatment without significant hassle due to the overlapping “territories” of 3P programs that handled certain customer segments, geographic boundaries, and measure mixes. The LGP can refer to these programs, but the 3Ps are typically focused on the largest customers and may be underfunded. In any case, there is often a “drop of the baton” with no explicit incentives for LGP or 3P implementer to follow up on referrals. Another example is an LGP implemented by a county that wants to serve its special districts (libraries, fire stations) but cannot due to how the territory is carved up. The LG implementer has unique ties to the special district customers, and those connections are not being used. The more advanced LGPs in our PG&E sample feel that they have the knowledge of the customer base and the drive to treat small to medium and remote customers that they say 3Ps often neglect.

In response to these issues, PG&E is currently working with its LG partners and 3P implementation partners to develop a more comprehensive base measures package that would allow its more “constrained” contractors to complete more comprehensive projects like some other contractors can do (e.g., Ecology Action/Right Lights).⁶⁷ This transition will reflect the latest code changes and coincide with PG&E’s efforts to consolidate its overall measures catalogue, and is also expected to facilitate work papers updates and reduce overall administration costs. The new package will have 17 core technologies (e.g., refrigeration controls, LEDs, reflective lighting film, advanced energy management systems (EMS) with Packaged Terminal AC/HP) and around 180 total measures (130 deemed). In particular, the package will include new HVAC and refrigeration measures, although not all measures have high demand in all areas (e.g., the coastal LGPs have less need for air conditioning). The

⁶⁷ PG&E Presentation to Government Partners: Non Residential Direct Install for 2013-14. May 31, 2012.

package was expected to be refined through August 2012, and PG&E will still have 3P programs to serve specialized segments like wineries.

Some of the other delivery challenges reported by PG&E's DI contractors include:

- **Customer size limitations** – restrictions to serve only customers using less than 200 kW excludes some small businesses with shared meters and small-to-medium municipal facilities (e.g., a courthouse with ancillary facilities);
- **Changes to available measures and rebates** – some measures were eliminated in the middle of program cycle (e.g., strip curtains, gaskets, de-lamping), which was very disruptive to program activities planning and forecasting;
- **Expiration of program funding** – this has happened for some PG&E LGPs (for some, multiple times) and it is “hard to get train moving again” after marketing and outreach has been suspended; and
- **Difficulty adding new measures** – according to one interviewee, all new measures were “put on hold” by PG&E (for an unspecified time period) and potential new customer opportunities (e.g., pool pumps) could not be considered or marketed to PG&E customers. A Study Team reviewer noted that the measures were put on hold by PG&E, not the CPUC.

6.1.2.3 PG&E Overarching Resource Facilitating Factor

There was a facilitating factor that we identified among one sampled PG&E LGP that cuts across their resource offerings.

- Designing resource program offerings like a stock portfolio to balance priorities facilitates resource offerings.

AMBAG Energy Watch designs its program offerings like a stock portfolio, using very cost-effective offerings to subsidize less cost-effective offerings. It also makes use of non-resource funds from PG&E's Green Communities program to fund its non-resource Strategic Plan work, freeing up LGP program funds for resource activities. At the start of the program cycle, AMBAG Energy Watch implementation staff assess the community needs and evaluate the cost-effectiveness associated with the various programs that they would like to offer. For example, they recently introduced the Moderate Income DI program, which has relatively lower cost-effectiveness, which is balanced by their hospitality programs that have relatively higher cost-effectiveness. This approach is also intended to achieve parity across the region, since AMBAG's board of directors desire services to be spread equally. There are parts of the region that lack tourism and a significant hospitality sector (which also have higher concentrations of low and moderate income residents), and in those areas AMBAG Energy Watch targets the MIDI program. AMBAG is uniquely poised to understand its community and municipal sector needs, and PG&E provides resources and flexibility to enable portfolio planning.

6.1.3 SCE

SCE's Energy Leader Model is designed to hold LGs accountable for energy efficiency and DR actions, with tiered incentives to reward partners who meet more requirements. The model focuses partners on comprehensive actions across energy efficiency and DR that are aligned with the Strategic Plan. Furthermore, the model provides cities with multiple prescriptive options to advance tier levels. Due to the comprehensive nature of the activities required to advance tier levels, the model is also designed to elicit strong support from the LGs to engage with the community, leading by example, as envisioned by the Strategic Plan. The following diagram gives an overview of the model, and additional background information is in Section 3 earlier in this report.⁶⁸

⁶⁸ Regarding municipal retrofits, this Energy Leader model diagram can potentially be misunderstood. For instance, at the Gold level, the Energy Efficiency Criteria row indicates that cities should be targeting 10 percent savings for municipal projects, while above, the Stepped Levels of Support row could be interpreted to mean that 10 percent savings are actually required, when actually these cities only need to have achieved the five percent savings for the Silver level according to SCE staff. SCE intends to make changes to this graphic.

Figure 3 - Energy Leader Partnership Model

Energy Leader Partnership Model



Stepped Levels of Support	Achieving threshold criteria* in city facilities and community-wide triggers advancement to next tier			
	Valued Partner	Silver Level 5% kWh Savings	Gold Level 10% kWh Savings	Platinum Level 20% kWh Savings
Offerings	<ul style="list-style-type: none"> Valued Partner Level enhanced incentives Technical Support Strategic Plan Support Co-Branded Marketing & Outreach Support 	<ul style="list-style-type: none"> Silver Level enhanced incentives Technical Support Strategic Plan Support Co-Branded Marketing & Outreach Support 	<ul style="list-style-type: none"> Gold Level enhanced incentives Technical Support Strategic Plan Support Co-Branded Marketing & Outreach Support 	<ul style="list-style-type: none"> Platinum Level enhanced incentives Technical Support Strategic Plan Support Co-Branded Marketing & Outreach Support Incentives for customized city/community offering
Energy Efficiency Criteria	Basic EE Criteria: <ul style="list-style-type: none"> Commitment to Long Term Energy Efficiency Leadership Commitment to Partnership goals including energy savings in municipal facilities 	Basic EE Criteria Plus: <ul style="list-style-type: none"> City initiates Energy Action Plan Target at least 25% of city facilities to complete specified EE upgrades Target 5% kWh reduction for city facilities Co-sponsor marketing & outreach to the community on EE programs 	Basic EE Criteria Plus: <ul style="list-style-type: none"> City completes Energy Action Plan Target at least 50% of city facilities to complete specified EE upgrades Target 10% kWh reduction for city facilities Co-sponsor marketing & outreach to the community on EE programs 	Basic EE Criteria Plus: <ul style="list-style-type: none"> City implements Energy Action Plan (policies, ordinances and procedures) Target 100% of city facilities to complete specified EE upgrades Target 20% kWh reduction for city facilities Co-sponsor marketing & outreach to the community on EE programs
Demand Response Criteria	Basic DR Criteria: <ul style="list-style-type: none"> Enroll in California's Statewide Flex Alert and implement an internal educational campaign 	Basic DR Criteria Plus: <ul style="list-style-type: none"> At least one (1) eligible facility to participate in one (1) SCE Demand Response program At least one (1) eligible facility to develop a Demand Reduction Action Plan to be followed during a Flex Alert event Distribute Energy Solutions brochure to partner employees Complete an integrated Demand Side Management (DSM) audit at all eligible facilities 	Basic DR Criteria Plus: <ul style="list-style-type: none"> Have at least 25% of eligible facilities participate in an SCE Demand Response program Conduct co-branded marketing and outreach to residential customers on SCE's Demand Response programs At least one (1) eligible facility implement a DR measure recommended from the DSM audit 	Basic DR Criteria Plus: <ul style="list-style-type: none"> At least one (1) eligible facility must participate in SCE's Auto Demand Response program Have at least 50% of eligible facilities participate in an SCE Demand Response program and develop a Demand Reduction Action Plan for the participating facilities Organize a local outreach event during the Spring/Summer season to promote Demand Response/DSM

* Based on cumulative kWh savings from 2004 (Percentage of total city-wide energy use)

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Benefits of the Energy Leader Model include:

- Compared to the other IOUs, the Energy Leader model is uniquely designed to incentivize individual LGs to participate in energy efficiency activities, measure their progress relative to well-defined baselines, and achieve increasing energy savings over time. This increases the LGs' motivation and prioritizes and focuses their activities towards achieving ELP program goals so they may obtain additional incentives.

Notably, as LGs achieve higher tier levels, the incentive received from SCE per kWh saved increases as well in order to support deeper and comprehensive retrofits.

- As part of the model, there are a number of different objective requirements for moving up the tiers, as shown in Figure 3.

For example, cities must actually obtain five percent energy savings in the municipal sector—relative to a current program cycle baseline—in order to move up from the Silver to Gold tier, where they would now be targeting 10 percent savings.⁶⁹

- Local partners are accountable to provide SCE with lists of municipal facilities (existing and planned) that provide opportunities for energy savings.

In return, dedicated SCE staff identify and qualify projects through technical audits and reviews, and provide a formal list of feasible, prioritized projects. They also help to complete the rebate applications as projects are completed.

- One of the benefits of the model structure is that it promotes IDSM and leadership in a way that partnerships can develop the tools and knowledge to sustain long-term energy efficiency practices.

The model includes DR program participation, but that was not covered in this study.

⁶⁹ Figure 3 indicates that baselines from 2004 are used; however the baselines are actually updated each program cycle. Cities do not have to formally prove that they are “targeting” specific municipal facilities or energy savings by submitting lists of projects to SCE. It is an informal target versus a verified goal, which partners work towards in collaboration with their SCE account representatives.

- Although measuring progress through the model requires significant tracking and reporting, it has been achievable through the close coordination of SCE and LG representatives.

Each city is unique in their economic, geographic and political surroundings; as such, SCE works with its partners on a one-on-one basis to develop discrete milestones.

Some of the challenges associated with the model include:

- Partners who have already achieved large energy efficiency reductions can find it difficult to progress through higher tiers.

According to SCE staff, new cities entering the Energy Leader model typically start as a Valued partner, but past projects can be recognized and credited in the model based on several documentation and performance criteria. The LGP baselines are adjusted at the start of each programs cycle, which are then used to determine the amount of energy savings needed to reach each tier. The adjustments also assume that implemented projects have a EUL of nine years. Thus, partners can regress to lower tiers at the start of a new cycle if their baseline increased or enough have savings expired. To mitigate this, SCE gives LGPs a 12-month tier "guarantee" so that any partner that moved up a tier in 2012 cannot revert backwards for 12 months as a result of new cycle adjustments.

- Some partners perceive that outreach activities are required and not elective.

Partners are allowed to choose specific outreach activities, and when they do, SCE will give LGPs non-resource funding specifically for marketing and outreach (i.e., not for retrofits). In this regard, a few local partners were in the process of coordinating with SCE to plan new commercial outreach efforts (e.g., rebates training for local contractors). One interviewed local partner, however, perceived that marketing and outreach to special districts are *required*, while another local partner stated that the model *assumes* public agency staff are available and willing to promote SCE's commercial programs (i.e., "corporate customers"), and the LG partner stated that they did not want public agency staff doing this.

An additional potential barrier to evaluating the ELP as part of a statewide evaluation is that the ELP is designed to influence individual LGs, while the other IOU models (excluding single-city LGPs) are typically focused at the LGP implementer (which may be a COG, county, or organization). There is not a right or wrong approach, as we discuss in the next section. However this nuance adds an additional layer of complexity when attempting to assess LGPs across the state. As we mention in the next section, there is some lack of clarity in terms of the Strategic Plan in terms of whether energy efficiency expertise and implementation infrastructure is needed at every single LG, and whether it is sufficient to build it at a regional

level as long as it may be effectively leveraged by the individual LGs in the region. The different IOU models may be a reflection of this lack of clarity.

6.1.3.1 *Municipal Retrofits*

Table 22 below shows the SCE LGPs in our sample and their municipal kWh savings per site. (there are additional tables in Appendix B (B.1) that present electric and demand savings for each LGP). This table is not broken down by level of advancement as done for PG&E because each of the SCE LGPs were rated in the same Foundational category for their work on Municipal Retrofits.

Table 22 – 2010-2012 LGP Program Municipal Savings (kWh) in SCE Sample LGPs ⁷⁰

Local Government Partnership	Municipal Savings (kWh)	Municipal Sites	Savings per Muni Site (kWh)
San Gabriel Valley Energy Leader Partnership	4,885,357	131	37,293
Kern County Energy Leader Partnership (with SoCalGas and PG&E)	No data available		
Ventura County Energy Leader Partnership	621,818	4	155,455
Desert Cities Energy Leader Partnership	Cannot distinguish muni from commercial		
South Bay Energy Leader Partnership	2,202,322	41	53,715
San Joaquin Valley Energy Leader Partnership	4,680,083	163	28,712
Orange County Cities Energy Leader Partnership	832,873	12	69,406
South Santa Barbara County Energy Leader Partnership	298,966	41	7,292
Total	13,521,420	392	34,493

The data above are useful to compare savings achievements across some of SCE's LGPs, at the LGP level. As noted previously, however, each city within any given LGP has its own objective targets (depending on current tier level) and baseline (i.e., 2004 consumption), and progress towards these goals is a better indicator of achievements. Figure 1 in our Appendices shows the status of our sampled LGP cities as of January 2012, and suggests that the high savings per site for the Orange Counties LGP is largely driven by Huntington Beach, which has achieved

⁷⁰ It is our understanding that SCE LGP program savings claims are exclusively for municipal projects (excluding the Desert Cities Partnership). After removing that partnership we still found a few anomalies in the data including ten residential buildings in the San Joaquin Valley Energy Leader Partnership, one lodging building in the South Bay Energy Leader Partnership and 66 agricultural building types across the board (including non-sampled LGPs). We were not able to separate municipal savings from commercial savings for the Desert Cities Energy Leader Partnership and Kern County had no claimed savings in the database.

Gold status (and contributing factors are described subsequently). Similarly, the South Bay LGP has relatively high savings per site, and includes two Gold level cities—Hawthorne and Lomita. We were not able to complete interviews with these cities, however, to learn about specific factors that may be driving local progress.

In order to assess if the LGPs are achieving comprehensive projects and “deeper” savings, Table 23 below presents reported kWh savings for each LGP in our sample by the following categories:

- **T8s and CFLs:** new federal lighting standards began phasing in in 2011, and will impact savings claims for T8 and CFL measures;
- **Other lighting:** other lighting, including all lighting that is not a CFL or a T8. Examples include metal halide lamps, T5s, T12s, lighting sensors, and LEDs;
- **Heating, Ventilation, and Air Conditioning (HVAC):** this includes HVAC coil cleaning, boilers, chillers, controls, rooftop split systems, and other HVAC-related measures;
- **Refrigeration:** this includes refrigeration controls, door closers and gaskets, night covers, strip curtain and other refrigeration related measures; and
- **Other:** includes measures excluded from the above categories, including process, ventilation, building shell, and appliances.

3P savings from LGPs are not incorporated in this table. Only one partnership (San Joaquin Valley Energy Leader Partnership) reports any advanced lighting savings. HVAC and Refrigeration are not as common as lighting measures and are only approached by a handful of LGPs.

Table 23 - 2010-2012 LGP Program Municipal Savings (kWh) in SCE Sample LGPs by Measure Type⁷¹

Local Government Partnership	T8 or CFL	Other Lighting	HVAC	Refrigeration	Other	Total
San Gabriel Valley Energy Leader Partnership	2%	60%	18%	0%	20%	100%
Kern County Energy Leader Partnership (with SoCalGas and PG&E)	No data available					
Ventura County Energy Leader Partnership	0%	3%	0%	0%	97%	100%
Desert Cities Energy Leader Partnership	No data available					
South Bay Energy Leader Partnership	2%	52%	0%	0%	46%	100%
San Joaquin Valley Energy Leader Partnership	1%	6%	0%	0%	92%	100%
Orange County Cities Energy Leader Partnership	0%	22%	57%	0%	21%	100%
Santa Barbara Energy Leader Partnership	4%	15%	19%	0%	62%	100%

Facilitating Factors

Following are bulleted factors that have lent themselves to successful municipal retrofit outcomes for SCE, based on the completed interviews. Supporting research findings follows each facilitating factor.

- Consolidated technical assistance from IOU staff facilitates municipal retrofits.

All of the LGPs have benefitted from significant SCE staff assistance in developing and prioritizing feasible projects. As noted previously, SCE has institutionalized this assistance, and has a core team of municipal “technical service” staff with expertise in various sub-regions that specialize in walk-through assessments and technical audits to help its Energy Leader LGPs identify viable retrofit projects. One SCE LPG manager reported, “Getting the facility manager to understand energy consumption through reading the bill and audits helps make a case for the executive level much better.” Regarding a large number of retrofits that were actually completed for another LGP, the SCE LPG manager noted that “This was a huge undertaking because most (projects) were small; capturing all these projects would not have

⁷¹ It is our understanding that the data includes only municipal savings if we exclude Desert Cities Partnership. After removing that partnership we still found a few possible anomalies in the data including ten residential buildings in the San Joaquin Valley Energy Leader Partnership, one lodging building in the South Bay Energy Leader Partnership and 66 agricultural building types across the board (including non-sampled LGPs).

happened through normal SCE account representative/project application processes because of the intensity to identify, develop, bid, implement, and document each project.” A general theme across the interviews was that SCE’s initial project identification and prioritization assistance gives the cities a solid foundation upon which to plan—but it is still up to the individual cities to dedicate staff time and find funding to complete potential projects.

- Dedicated city energy efficiency staff facilitates municipal retrofits.

Most cities can no longer fund full-time energy efficiency staff. In contrast, the City of Huntington Beach has a full-time energy manager on staff that is able to dedicate significant time to the LGP (and also help other Orange County cities), and has completed many retrofit projects. Furthermore, SCE LGPs led by dedicated energy staff at JPAs or COGs (e.g., San Gabriel Valley Energy Watch, San Joaquin Valley Energy Watch) have also completed more retrofit projects or have achieved high energy savings per site (e.g., Ventura County Energy Watch).

- Engagement of city mayors and other elected officials facilitates municipal retrofits.

According to SCE’s LGP manager, another reason Huntington Beach has achieved Gold status is because the energy manager of that city has had strong support and relationships with the elected officials of the city council (no additional details were provided during the local partner interview).

- Templates and tools to facilitate projects implementation facilitate municipal retrofits.

SCE’s Orange County Cities Energy Watch partnership is one of few SCE multi-city LGPs not led by a COG or JPA. Because the member cities do not receive coordinated assistance through a “central administrator”, the SCE PM for this LGP has created templates that partner cities can use to estimate energy savings, fill out applications and develop RFPs for projects implementation.

Challenges and Barriers

Given that the sample may have some limitations in scope, the following section mentions some of the barriers and challenges related to municipal retrofits for the LGPs in our sample. These may not be faced by all LGPs, and may not include all of the challenges faced by LGPs not in the sample. The barriers are bulleted, and followed by research findings that supported their identification.

- Insufficient local staff capacity and financial resources are a barrier to municipal retrofits.

Virtually all of the interviewed LGPs cited local staff and budget reductions as the primary barrier to completing municipal retrofits, as most staff can only perform equipment maintenance, versus planning and implementing upgrades. Overall, a general theme was that these resource constraints have tended to outweigh the significant resources and effective program design offered by SCE. There are multiple related issues that are contributing to this general problem:

- **Grouped procurements:** one LGP hopes to implement regional group procurements as city EAPs get finalized. Another interviewee, however, reported that “The development of a ‘regional’ approach has been limited by the SCE PEPMA⁷² (Proposal Evaluation and Proposal Management Application)/Strategic Planning program that encouraged individual cities/counties to apply for funds outside the partnership program and develop their own strategies. This approach supported the larger/capable agencies but keeps the smaller organizations under served.” A different local partner noted that SCE does not provide group procurements assistance, and perceived that SCE prefers that cities do their procurements individually. None of the interviewees reported that they were using group equipment procurements.
- **Large cities staff scopes:** although smaller cities have been most impacted, larger cities with larger staffs are also experiencing layoffs, and these cities also have more facilities/departments (e.g., water, sewer), which makes it even more difficult to coordinate activities and achieve the higher energy savings (because of a higher baseline) required to advance.
- **Insufficient involvement of facilities managers:** one SCE LGP manager noted that city facilities managers may sometimes be able to divert operating funds to capital projects, but this funding typically goes unutilized when these specific staff are not included in initial high-level LGP planning and management.
- **Inability to tap into non-LGP funding sources (e.g., ARRA):** few of the interviewees cited additional financial resources that they were able to secure

⁷² PEPMA is a Proposal Evaluation and Proposal Management Application web site. The California Investor Owned Utilities (IOUs) designed this website as a tool for energy efficiency management, and administrators to post, receive and evaluate: Request for proposal (RFP), request for information, (RFI), and request for qualification or quote (RFQ). PEPMA allows users to download and/or upload as required all documents and notifications related to a bid, such as scope of work, bid schedules, bid questions and answers, addendums and additional bid related documents, diversified business enterprises (DBE) forms, Environmental, Health & Safety (EH&S) handbook and forms, meeting notices, bid conferences, and any other critical information connected with the bidding/request of a RFP, RFI, or RFQ. It is also a tool for individuals and organizations as potential IOU energy efficiency work Bidders to login on-line and self-register their company information as well as self-qualify to receive invitations to bid any upcoming energy efficiency third-party implementer program work or IOU program professional services support work.

for municipal retrofits, and as noted previously, it has been difficult for small cities with small staffs to apply for ARRA funds. There are a few exceptions where additional funds were obtained. For example, Ventura County has used ARRA funds to complete municipal projects, and Kern County is using Flight 5.6 funding⁷³ for additional walk-through audits. Other cities, however, have used ARRA and other funding for project types that were not a focus of this study (e.g., San Bernardino used ARRA for solar projects, other cities have used grants for electric vehicles, and South Santa Barbara used ARRA funds for a residential loan program). While one city had used OBF to complete at least one project (details not provided), other interviewees reported that they lack city council support for loans and/or on-bill financing (or any additional debt).

- Problems with contracted technical resources are a barrier to municipal retrofits.

According to one interviewee, “The SCE selected engineering consulting contractors provided audits that only addressed incentivized opportunities; these were not comprehensive, nor based on the needs of the public agency.” A different interviewee reported that, “They have no clue what public sector energy project development requires and cannot write a simple performance specification for a specific measure. Without a competitive performance spec capability they aren’t in the business of public sector energy efficiency.”

- Inconsistent involvement by account representatives is a barrier to municipal retrofits.

While some local partners reported high engagement and assistance by account representatives (e.g., with audits, applications), an equal number perceived that account managers were disconnected with the activities of the dedicated sector staff (that do the projects identification and prioritization) and specialized contractors that may be used, or simply “spread too thin” to give any particular city sufficient attention.

⁷³ Flight 5.6 is a Local Government Strategic Plan Strategies Solicitation. In D.09-09-047, issued September 24, 2009, the California Public Utilities Commission (Commission) adopted SCE’s 2010-2012 energy efficiency program plans effective January 1, 2010. This Decision required that SCE execute a competitive solicitation process for city, county, and regional governments to pilot innovative local government strategic plan strategies and authorized \$32,000,000 to fund this new activity. Under this solicitation, titled *Flight 5.6: Local Government Strategic Plan Strategies Solicitation*, bidder’s proposals were intended to conduct strategic plan activities centered on energy efficiency and addressing the “Big, Bold” strategies and related local government goals found in the CPUC’s California’s Long-Term Energy Efficiency Strategic Plan1 (CEESP).

- Cumbersome application processes is a barrier to municipal retrofits.

One interviewee stated that the SCE incentives and OBF applications are difficult to work with. As an example, they offered that for “balance of intersection (lit street name signs and intersection lights) measures...two incentive applications and two OBF applications would be required for every signalized intersection resulting in 400 applications to be managed.”

- Leased municipal buildings are a barrier to municipal retrofits.

One city has many more leased than owned buildings, which has limited retrofit opportunities.

We identified an additional barrier that we present as an opportunity to expand SCE’s success with its resource activities.

- Special districts exclusions are a barrier to municipal retrofits.

Currently, SCE only allows savings to be claimed from retrofits of municipally owned facilities. This was not the case before 2010 as all public agency facilities (like school and water district buildings) were eligible for LGP projects and energy savings. Three local partners stated that there are significant efficiency opportunities with special districts and desired the ability to work with districts directly. PG&E also has some LGPs that are excluded from addressing special districts (where a 3P program has first right of refusal), and this is emphasized as a lost opportunity given LGs’ close connections within this segment.

6.1.3.2 Commercial Retrofits

SCE’S LGPs do not claim commercial energy savings, and we did not analyze commercial retrofits projects and savings that are claimed by the core programs, in an attempt to link savings back to specific LGP activities. That said, our in-depth interviews with LGP partners and managers included topics to learn more about factors that encourage and hinder commercial retrofits.

Notably, most of the LGPs in our sample focus on referring customers to the Small Business DI program. They generally do not promote other IOU commercial retrofit programs.

Facilitating Factors

We identified two facilitating factors that were associated with SCE’s commercial retrofit activities.

- Engagement of city mayors and other elected officials facilitates commercial retrofits.

SCE's LGPs can partner with SCE's contracted small business DI firms to promote commercial retrofits. Typically, the DI firms first present their services to local city Mayors and officials, and then they collaborate on outreach strategies. SCE's focus on mailing letters signed by SCE and city Mayors to small businesses was described as being "effective" by some LGPs, although two LGPs said they cannot utilize this approach due to local policy constraints (e.g., cannot "promote" for-profit companies/utilities, mail distribution size limitations). Another local partner perceived that this strategy did not work in their city, however, because the letters included text about "free" measures, and customers are skeptical of the value of free goods.

- Door-to-door customer recruitment facilitates commercial retrofits.

One SCE LGP manager reported that door-to-door canvassing among the Vietnamese small business community in one city was an effective way to follow up on the co-branded letters (in Vietnamese) from SCE, the local Vietnamese Chamber of Commerce and the Mayor's office.

Challenges and Barriers

Except for the caveats to the approaches described above, no significant commercial outreach/retrofits challenges were noted in the interviews.

6.2 Non-resource Activities

One of the core categories of the LGP PIPs is Strategic Plan support. As such, all IOUs allocate part of the overall budget for LGPs to achieving Strategic Plan goals (which are non-resource activities), in addition to their resource activities. LGPs undertake these activities in a fairly similar manner across LGPs, without the fundamental differences described above in the Resource Section. We discuss our findings below across IOUs.

We focused on three specific activities among the non-resource activities that LGPs offer, per our sampling strategy (Section 4.3.2.1) climate action planning, reach code activities, and benchmarking. These activities are selected by LGPs through their selection of various tasks within each of the five Strategic Plan goals. Updates on tasks elected by LGs are provided biannually through the Strategic Plan Menu Updates. As of the March 2012 Strategic Plan Menu Update, LGPs in this program assessment's sample committed to fulfilling goals of many menu items under Reach Codes, Benchmarking, and CAP/EAPs, as agreed through the LGP research plan. Table 24 below details the number of menu items elected by the sample of LGPs. As of March 2012, 13 out of the 82 menu items had been reported as completed. Details of the menu items elected by partnerships are presented in Appendix B (B.2.1).

Table 24 - Number of Strategic Plan Menu Items Committed To By Sample of LGPs*

IOU Area	Reach Codes	Benchmarking	CAP/EAP
PG&E	6	4	18
SCE	6	1	12
SoCalGas	4	1	1
SDG&E	11	6	12

*There is some overlap; i.e., Kern County will be represented under PG&E service territory as well as SCE's.

Some IOUs have additional sources of funding to help LGPs with Strategic Plan support work. CPUC decision D.09-09-047 provided SCE with \$32 million dollars to solicit proposals from LGPs to pursue further tasks under the Strategic Plan goals.⁷⁴ PG&E uses resources from the Green Communities and Innovative Pilots programs. Some LG partners use ARRA funding to support their Strategic Plan work.

McKinstry EEMS and Environmental Protection Agency (EPA) Portfolio Manager are the two main systems used by LGs for benchmarking.

McKinstry EEMS is a web-based software tool that allows users to analyze monthly utility billing information as well as interval meter and sub-meter consumption data. Energy, water, and wastewater consumption and expenditures can be tracked through direct data feeds from the utility at set intervals or real-time. EEMS can also track/calculate greenhouse gas emissions and non-building operational parameters such as fleet consumption (miles traveled, gallons pumped), among other things. Once data is in EEMS, users can create custom reports and graphs that help analyze consumption and expenditures of one or a set of "buildings" (as defined by the user at one or more meters). The system can also export raw data to other analysis software (such as Microsoft Excel).

EPA Portfolio Manager is a free online energy management tool that helps users track building energy, water, and wastewater consumption and expenditures. Users can input consumption and cost data by building, as well as greenhouse gas emissions into the Portfolio Manager. Data is entered from monthly utility statement (as the smallest interval), manually or through electronic data transfers from the utility (once specific software is installed). Entered data can be analyzed through standard pre-populated performance views (e.g. water use or emissions over time) or downloaded into Microsoft Excel. EPA Portfolio Manager also helps rate building energy performance for facilities to gain EPA recognition through ENERGY STAR label, ENERGY STAR Leaders, or ENERGY STAR Partner of the Year programs.

6.2.1 Climate Action Planning

Partnerships decide how much emphasis to place on developing or updating CAPs or EAPs based on the motivations of the LG, requirements of the IOU administering the partnership,

⁷⁴ SCE LGP partners access these funds through solicitations known as 'Flight 5.6 Solicitations'. These funds are administered through the partnership, but are separate from the budget defined in the program's PIP.

the funding provided by the IOU(s), as well as the funding that the LGPs are able to acquire on their own. As a result, some partnerships may work to develop a plan to improve energy efficiency in municipal facilities, while others strive to lower greenhouse gas emissions in other sectors such as housing and transportation.

The outcomes of these efforts result in the creation or updates to the following types of documents:

- EAPs: a subset of CAPs, these plans usually focus on decreasing greenhouse gas emissions by increase energy efficiency in municipal facilities and/or businesses and homes; and
- CAPs/General Plan: a comprehensive plan that lowers greenhouse gas emissions through energy reduction, improving transportation, pollution reduction in industrial sectors, and implementing renewable sources of energy.

Key activities that help to inform CAPs/EAPs under the Strategic Plan menu items include conducting energy efficiency savings analysis for Greenhouse Gas inventories; developing policies for retrocommissioning (RCx), revolving funds, or requiring certain building standards for municipal facilities; or educating key stakeholders in the community and government to facilitate the adoption of CAPs/EAPs. These interrelated activities are tools for final development and adoption of CAPs and EAPs.

The State of California Governor's Office of Planning and Research published its 2012 Annual Planning Survey Results,⁷⁵ which included a status of CAP developing and adoption across all cities and counties in California. Table 25 and Table 26 characterize LG actions by electric IOU service territory; the highest percent of LGs that have adopted CAPs are in the PG&E service territory. A more detailed list by city and county of progress and status can be found in Appendix B.2.2. Data was not available to categorize SoCalGas service territory.

⁷⁵ http://www.opr.ca.gov/docs/2012_APSR.pdf

Table 25 - Local Government CAP Development and Adoption Status (Phase)* (n=374)

Territory	Phase		
	Adopted	In Progress	Planned
PG&E	29%	48%	23%
SCE	19%	54%	28%
SDG&E	28%	50%	22%
County	25%	56%	19%

*Information was not available to categorize SoCalGas service territory. PG&E, SCE, and SDG&E categories do not include county-level⁷⁶ information.

Table 26 – Percentage of Local Government CAPs Including Program / Policy Component, by IOU (Program/Policy Type)* (n=374)

Territory	Program/Policy Type							
	General Plan Policies	Greenhouse Gas Reduction Plan	General Plan Implementation Measure(s)	Climate Action Plan	Sustainability Plan	Ordinances	To be Determined	Other
PG&E	39%	19%	21%	52%	11%	11%	1%	10%
SCE	43%	23%	28%	42%	21%	10%	0%	9%
SDG&E	56%	17%	33%	44%	11%	6%	6%	17%
County	54%	24%	44%	47%	17%	15%	0%	15%

*Information was not available to categorize cities/counties in SoCalGas service territory. PG&E, SCE, and SDG&E categories do not include county-level information.

⁷⁶ The LGC report provided CAP status on 330 cities and 44 counties. Table 26 include the results of the analysis on cities only because it was possible to clearly identify cities operating within IOU specific territories. Counties were excluded because service territories often overlapped with CMUA operation and an accurate analysis of CAP performance at the county/IOU level would not have been possible.

6.2.1.1 Facilitating Factors

Interviews with LG partners and IOU PMs identified the following potential best practices that have led to the successful creation of CAPs/EAPs within certain LGPs. Facilitating factors and best practices are bulleted, followed by supporting research findings.

- The ability and willingness of LGPs to collaborate and work with external resources, especially in the following ways, increased the potential for success within LGPs:

Two LGPs interviewed cited that their cities work in tandem on coordinating methodologies (e.g. data collection) and comparing development process successes and challenges (e.g. consultant management, public outreach requirements and strategies). At least four partnerships cited working with external resources, such as using local university resources, other IOU programs, and other 3P organizations.

The San Joaquin Valley LGP utilizes its implementer, San Joaquin Valley Clean Energy Organization (SJVCEO), to develop templates and coordinate plans for each city. SJVCEO can not only efficiently write plans for all cities in the partnership, but can make custom adjustments based on SJVCEO's expertise on each city.

Redwood Coast Energy Watch partnership contracts with the Redwood Coast Energy Authority to complete GHG inventories for six cities in the partnership as well as compile information to develop CAPs. RCEA hired three student interns from California State University Humboldt to complete GHG inventories. The cities in this Energy Watch partnership believe that RCEA has the expertise and the local understanding to complete these projects consistently and successfully.

Yolo County Energy Watch worked with University of California Davis' Extension Program to create a class of working professionals whose goal is to create a realistic CAP for the county.

In the San Diego region, partnerships are leveraging resources to complete CAPs. All partnerships have contributed funds to develop a new Climate Portal website, which will allow cities to view local initiatives, outputs, and technical resources.⁷⁷ The City of San Diego also coordinates with statewide municipalities that are part of Green Cities California (<http://www.greencitiescalifornia.org>).

PG&E's Green Communities program has become an integral part of Climate Action Planning for partnerships in that service territory as GC provides, through ICLEI, greenhouse gas inventories of a city's municipal facilities. The Green Communities program completed or initiated 59 community-wide GHG inventories and 121 GHG

⁷⁷ The portal is expected to launch soon, and will be available at: <http://sdclimatecollaborative.org/overview/>.

inventories at the municipal level. The Green Communities program has also aided in the development of 46 CAPs, 36 for community wide and municipal energy usage and 10 specific to municipal energy use. In addition to GHG and CAP support, the Green Communities program also offers support to LGPs to complete benchmarking. Ninety-nine LG staff within the nine county ABAG area received benchmarking training.

ICLEI, one of the lead SEEC coordinators, also provides templates for writing CAPs through its website. AMBAG Energy Watch is one of the partnerships in Northern California that has taken advantage of its services, creating plans for all the cities and counties in the region.

Ventura County Energy Leader Partnership has taken advantage of SCE's technical resource document that contains templates, public documents, and examples for completing all strategic plan menu items.

6.2.1.2 Challenges and Barriers

We identified one major barrier associated with CAPs and EAPs.

- Lack of sufficient resources to dedicate to CAPs/EAPs development has been exhibited in the following forms.

These have likely caused variations in EAP/CAP product quality and progress:

- Three partnership representatives interviewed stated that they did not have enough paid LG staff members;
- One partnership cited staff turnover in which initiative leaders have left and no follow-up leader has been identified or emerged;
- Three partnerships noted that without an implementation contractor, partnerships suffer from inconsistent skill levels that have required one city's knowledgeable staff member to support the less knowledgeable staff members of other cities in which they have no affiliation and are uncompensated;
- Four IOU PMs cited unengaged staff due to their having multiple responsibilities or "multiple hats";
- Differences in IOU resources, such as those displayed through PG&E's Green Communities program; and
- Seven partner contacts pointed out uncertainty in political climate and/or skepticism of global warming, which lowers motivation to develop CAP plans in particular.

One example of differences in IOU resources is PG&E's Green Communities program. This PG&E program provides a subset of LGs with resources to complete GHG inventories while other IOU partnerships do not have this service. One county experienced this difference when creating CAPs – it had to pay a consultant to complete inventories of municipal facilities that were in SCE's service territory and not PG&E's, lengthening the process altogether. Some LGPs that have had to rely on consultants exclusively have had difficulties obtaining confidential baseline data needed to make subsequent plan updates.

At least three partnerships in SCE and SoCalGas' service territory, one in SDG&E, and three in PG&E's service territory have claimed that there are not enough staff members to help complete plans.

Overall, interviewees perceived that data constraints inhibit the effective development of CAPs/EAPs for partnerships in SCE's service territory. These issues are detailed in Section 6.2.4- Data Issues below.

6.2.2 Reach Code Development

The degree of participation in reach code development varies greatly by city, county, and the IOU with which the LG is a partner. The majority of reach code work falls under Goal One of the Strategic Plan, and activities that fall under this category include:

- **Educating appropriate LG officials and staff** about Title 24 and opportunities to develop reach codes;
- **Developing a reach code** that is adoptable; and
- **Adopting the code** through approval by appropriate city council members as well as working to comply with newly adopted code.

Cities, counties, and regions choose to pursue the development and adoption of reach codes based on political support, technical feasibility, and staff resource availability. Most reach codes are developed to exceed a certain percentage of Title 24 requirements.

According to the rough draft of the Statewide Local Government Energy Efficiency Best Practices Coordinator's 2011 Annual Report, the following 40 cities and counties adopted local ordinances that exceed Title 24 minimum standards as of December 2011. Malibu is the only city in Table 27 that is not part of an LGP.

Table 27 - Cities and Counties with Reach Codes Adopted

IOU	Partnership	
PG&E	Belmont	Richmond
	Burlingame	San Anselmo
	Cotati	San Carlos
	Daly City	San Francisco
	Fremont	San Jose
	Hayward	San Mateo
	Healdsburg	San Rafael
	Los Altos	Santa Rosa
	Menlo Park	Sebastopol
	Morgan Hill	Sonoma
	Mountain View	Tiburon
	Napa	Union City
	Oakland	West Sacramento
	Pacifica	Windsor
	Palo Alto	Marin County
	Petaluma	Napa County
	Portola Valley	Santa Clara County
	Redwood City	Sonoma County
SCE/ SoCalGas	Goleta	
	Malibu*	
	Manhattan Beach	
	Santa Monica	
	Simi Valley	
SDG&E	Chula Vista	

*Malibu is not part of a Local Government Partnership (LGP).

According to the Statewide Local Government Energy Efficiency Best Practices Coordinator's 2011 Annual Report, "eight percent of cities and counties (42 total) representing 14.3 percent of California's total population goal have adopted reach codes".⁷⁸

⁷⁸ Second Annual Report from Statewide Local Government Energy Efficiency Best Practices Coordinator's 2011 Annual Report, <http://eecoordinator.info/wp-content/uploads/2012/01/Annual-Report-2011.pdf> March 2012.

6.2.2.1 Facilitating Factors

The following facilitating factors and best practices were observed of high-performing partnerships that adopted and are enforcing reach codes. Supporting research findings follow each bulleted factor or practice, below.

- LGs with active staff members who are also able to affect the permitting and inspections processes are able to pass and enforce reach codes effectively.

Four partners interviewed referred to active staff members whose dedication helped pass reach codes.

The city of Chula Vista hired a Sustainable Buildings Lead to do in-house training, oversee the permitting process, and educate the business community about reach codes. First, this person conducts trainings on advanced technologies so that reach codes are easier to hit. They also conduct secondary inspections after the standard inspections, to focus on elements related to the reach codes. Findings are shared with permitting staff, in addition to the builders, so that their knowledge increases and they can proactively give improved information to builders during the permitting process (they also direct builders to relevant SDG&E incentives). Over time, a continuous improvement loop has been developed, and the reach codes enforcement and education function is safe from staff turnover.

Several interviewees mentioned that recent budget constraints had reduced compliance staff. It is likely that reduced field inspections have resulted in lower compliance rates. Thus, anticipated reach code savings may not be realized due to failure to build-to-code.

- Templates and reward systems are helpful tools for LGs that do not necessarily have the depth of staff resources to pass and enforce reach codes.

Two partnerships interviewed noted using templates to develop reach codes. One partnership interviewed cited using reward systems to encourage builders to adopt reach codes.

CALGreen,⁷⁹ also known as the 2010 California Green Building Standards Code, is Part 11 of the California Building Standards Code in Title 24 of the California Code of Regulations. The code was designed to reduce the overall environmental impact of construction projects by requiring buildings to become more efficient in the use of materials and energy. CALGreen became effective January 1, 2011.

⁷⁹ http://www.documents.dgs.ca.gov/bsc/CALGreen/MasterCALGreenNon-ResGuide2010_2012Suppl-3rdEd_1-12.pdf

CALGreen, in regards to non-residential energy efficiency, consists of two voluntary tiers. Tier 1 requires a reduction in energy usage by 15 percent and Tier 2 requires a reduction in energy usage of 30 percent.

The city of San Diego has used CALGreen as its reach code, rather than attempting to develop its own reach codes.

Some cities in the South Bay Cities LGP, the City of San Diego LGP and Chula Vista LGP, and the Sonoma County Energy Watch partnership have adopted reward systems (e.g., reduced permitting fees, greater building floor area ratios) for those builders that exceed Title 24 requirements.

6.2.2.2 Challenges and Barriers

We identified barriers associated with reach code development.

- Investment in codes development can be perceived as “risky” in areas with high potential for political leadership changes, and this risk/enhanced caution is a barrier to reach codes.

The cities in one SCE partnership faced this situation in which reach codes were chosen as a Strategic Plan menu item and codes were being developed. However, in early 2012, the cities decided that codes developed now may not be adopted by the end of the year depending on who is elected.

One partnership indicated only one city (out of the three partner cities) had managed to implement a reach code since 2010. Of the other partner cities, one had started to develop a reach code, but was placed on hold following the 2010 fall elections when there was a shift in core leadership direction of the city.

- Given the lack of new construction, many partners would rather focus efforts on enforcing current code rather than developing new ones.

Two partnerships noted the lack of new construction as a reason to focus on code compliance. Also noted, smaller and rural cities may not attempt reach codes because enforcement of current codes is insufficient, and they would like to address this barrier first.

At least two partnerships in SCE and PG&E service territories have focused on standard code compliance as a result of the lack of new construction.

6.2.3 Benchmarking

LGP are encouraged to participate in benchmarking activities through tasks in Strategic Plan Goal 3. LGs participate in benchmarking activities in the following five ways:

1. Develop benchmarking policy to understand energy usage of municipal and commercial facilities;
2. Educate LG and community members regarding the benefits of benchmarking;
3. Conduct benchmarking of municipal and commercial facilities;
4. Suggest or prioritize the implementation of an energy efficient project; and
5. Set up municipal 'reach' policies, retrocommissioning programs, and revolving energy funds.

Different IOUs have different models for benchmarking. SDG&E, for example, requires all facilities (municipal and commercial) greater than 5,000 square feet to be benchmarked before implementing any retrofits. In comparison, the SCE Strategic Plan support activity is to "Develop energy benchmarking policies and procedures to enable ongoing benchmarking of all local government facilities." SCE does not actually pay for benchmarking itself. The CPUC's Decision 09-09-047 required that all Partnership buildings that participated in EE programs to be benchmarked, which SCE interpreted as "those that receive rebates". PG&E and SoCalGas do not mandate any benchmarking or restrict benchmarking to municipal facilities.

The main intent of benchmarking is to increase retrofit opportunities and help LGs prioritize retrofits and energy efficient projects. PG&E and SDG&E interviewees mentioned using benchmarking as a first step to inform their partnership's CAPs. Most SCE partners are focused on setting up benchmarking "utility manager" software to track energy usage in municipal facilities.

The Statewide Local Government Energy Efficiency Best Practices Coordinator's 2011 Annual Report has found that as of September 2011, the majority of LGPs chose to benchmark their facilities, with at least seven having successfully installed utility management software to track facilities' energy usage. Table 28 details other benchmarking activities that LGPs have planned and completed.

Table 28 - LGP Benchmarking Activity (September 2011)

Type of Benchmarking Activity	Planned	Completed
Benchmarking of facilities	22	10
Utility management software to track energy use	12	7
Revolving energy funds	10	4
Municipal 'reach' policies and programs	5	1
Retrocommissioning of municipal facilities	9	0

6.2.3.1 Facilitating Factors

Presented below as bullet points, we identified two areas as facilitating benchmarking activities for LGs (each is followed by supporting research findings).

- LGPs with more engaged stakeholders are more likely to see benchmarking lead to results.

For example, East Bay Energy Watch (EBEW) requires attendance by LG staff to attend benchmarking training sessions. The attendance of staff at training sessions helps them understand the benchmarking process and the value added so they can benchmark their own buildings going forward. It engages them in the process and also signals to the LGP implementers who is more serious about taking action, and where limited technical assistance resources might be directed first.

The Statewide Local Government Energy Efficiency Best Practices Coordinator's 2011 Annual Report finds that "in order to continue the South Bay cities' momentum of energy efficiency building retrofits that produce energy and cost savings, the South Bay Cities Council of Governments (SBCCOG) is partnering with Los Angeles County to provide EEMIS⁸⁰ to those cities choosing to participate. SBCCOG is also coordinating utility tracking services using EEMIS through a Memorandum of Understanding with LA County. To date 13 cities have signed release forms for data (pg. 9). Under this arrangement, LA County will expand its

⁸⁰ 'EEMIS' stands for Enterprise Energy Management Information System. An EEMIS is a database system that combines information about each building in a portfolio, and also tracks energy use for those buildings by importing monthly billing data from a utility. Examples of the type of information about a specific building includes items such as total conditioned square footage, what the building is used for, and specifics about energy consuming equipment such as the size and type of the air-conditioning systems being used. Having building characteristics and energy billing data in a database like an EEMIS allows management to complete various analysis such as trending usage over time, tracking energy use per square foot for a specific building, or comparing energy usage metrics for a set of building with similar uses, such as kWh per square foot for police station or libraries. This allows management to better plan and track energy strategies and policies across a portfolio of buildings.

EEMIS system to include building and energy use data for other cities and counties. These cities and counties will then be able to more effectively track their energy usage, implement more effective energy management strategies, and benchmark buildings within their territory, and also with other cities and counties within their region. For example, the kWh per square foot can be compared among libraries within Huntington Beach, and also compared with libraries in LA County, or even more regionally. LA County would retain control and ownership of the EEMIS system.

- The availability of training and educational resources increases understanding of the importance of benchmarking.

Six partnerships cited providing training or educational resources. For example, the San Joaquin Valley LGP created a guide called “Benchmarking Made Easy.”⁸¹ It explains what benchmarking is, how to use the Portfolio Manager system, and what kind of policies can be adopted. The San Joaquin Valley partnership recognized the need to have an engaged “point person” or benchmarking leader, but also realize the reality of staff turnover. The benchmarking guide is designed to ensure that if the point person is no longer available to lead the benchmarking effort, a new leader can be brought up to speed in an efficient manner without the need for extensive training.

6.2.3.2 Challenges and Barriers

Two major challenges exist in benchmarking facilities under the LGP program. They are presented below as bullet points, along with supporting evidence:

- Technological and data-related issues make benchmarking difficult to complete in a timely matter.

Three partnerships in SCE’s service territory, one partnership in PG&E’s service territory, and one partnership in SDG&E/SoCalGas’ service territory cited benchmarking difficulties in terms of collecting and managing data.

Many partnerships have had difficulty actually obtaining data from IOUs in order to populate data management systems (e.g. EEMIS and Portfolio Manager). Additionally, for partnerships that fall under more than one utility service territory (e.g., South Bay LGP), combining data that usually is provided in two different formats can be especially challenging.

⁸¹http://www.viewthesavings.com/sites/default/files/VIEW_3.1.1_Benchmarking_Made_Easy_12_14_2011%20%281%29.pdf

In regards to usability of available benchmarking software, many LG partners have found it extremely challenging to learn how to use benchmarking software, especially without proper training. Some LG partners reported that they were not educated enough on the technical capabilities of 'Utility Manager' systems.

As mentioned under the CAP/EAP discussion, timely data acquisition has posed a challenge for some partnerships, specifically for Partnerships in the development of benchmarking tools. A detailed discussion of data issues and observations can be found below.

6.2.4 Data Issues

The timely delivery of data from IOUs to LGPs is becoming a key aspect for the successful completion of Strategic Plan menu items, and the ability of partners to innovate as they become increasingly capable at delivering services. For example, Enterprise Energy Management Information Systems (EEMIS) provide large operations with the ability to view and manage energy usage and have existed for years, but several SCE Energy Leader partners were funded under an SCE Flight 5.6 solicitation to develop a regional EEMIS that allows local governments to gather and track high quality IOU usage data to more carefully manage their energy costs. This EEMIS/utility data partnership, originally developed in a partnership between Los Angeles County (LAC) and SCE, will yield significant efficiencies in how cities and counties manage and review utility data (much less staff time will be required), while improving the quality of data analysis for EE activities such as local benchmarking, GHG inventories, EM&V, and procurement decisions.

The expansion of the LAC EEMIS system is the first such collaboration between a utility, cities and counties in California and provides several examples of how complex data issues have become and the efforts undertaken to resolve them, including;

- EEMIS accommodates bill data and meter data which allows for a broad range of capabilities from annual consumption comparisons to (near) real-time analysis. EEMIS also accepts sub-metering and building automation system data which supports very comprehensive and deep building and equipment energy analyses. To accommodate EEMIS ability to handle detailed billing data, beginning in 2004, the County of Los Angeles and SCE developed a file transfer system (FTP) that was used to support the LAC EEMIS implementation. By 2010, as part of SCE's solicitation offering, there were an additional 50 Local Governments that had expressed interest in implementing a similar Utility Manager System. The FTP originally developed in 2004 did not have the capacity and structure to securely and effectively transfer data automatically to local governments on the scale required by a regional EEMIS. In 2010 SCE formed the Data Working Group and through a collaborative effort with LA County, the City

of Santa Barbara, and SCE's various internal stakeholders, developed a Managed File Transfer (MFT) system. Launched in late 2012, the MFT provides all data on all accounts needed by local governments participating in the LA County regional EEMIS in a manner that is compliant with regulatory and IOU security policy.

- To provide 3rd parties that operate regional EEMIS, such as LAC, with the account data for participating Local Government (LG) customers, SCE requires the Local Government's authorized agent to sign a Customer Information Service Request (CISR) form. For security purposes, SCE's policy states that customers who request data must submit a CISR that includes a comprehensive list of customer accounts (CAs) and all related service accounts (SAs). SCE followed this policy for the Enterprise Energy Management Information System (EEMIS) project and it worked well for LAC because it was a single customer and all CAs and linked SAs had been identified over time. However, as the regional EEMIS expanded during the 2010 - 2012 period, it was evident that not all of the participating cities and counties had included a full list of CAs and related SAs in their CISR forms. This meant that data for many CAs could not be transferred because the missing SAs constituted an incomplete CISR. At the beginning of 2013, SCE made a policy decision for all new data requests that would alleviate this problem. SCE's new policy would be to provide a comprehensive list of ALL accounts (CAs and SA's) in their database, for that customer, and that list would accompany the CISR. Additionally, for over 900 exception accounts, SCE notified the Local Government by email of the accounts that were missing from the original list, and indicated that unless the Local Government objected, in writing, SCE would include these in the data set. This solution was implemented in 2013. As a result, the data transfer from SCE to the requesting 3rd party are now comprehensive and complete.

While the expansion of the LAC EEMIS system into a regional platform presented many data challenges, it represented only one of many challenges for uses of data within an LGP framework. Examples of other challenges faced during the 2010 - 2012 program cycle include;

- Local Governments were not able to receive California Energy Commission (CEC) Sector Usage Data Reports. This caused difficulty in the development of Climate Action Plans (CAPs) because sector data usage information separated by customer classification (i.e.: residential, commercial, industrial, and agricultural) is key information for CAP development. To resolve this problem, SCE worked with internal and external stakeholders (Local Governments and ICLEI) to develop CEC Sector Usage Data Reports. This data will help Local Governments to establish a valuable baseline for the development of the municipality's greenhouse gas inventories. Reports were made available by the second quarter of 2012. As of the submittal of this evaluation, the CEC Sector Reports are

available free of charge and provide data by residential, commercial, industrial, and agricultural sector.

- The City of Irvine wanted to develop a tool to provide the ability to visualize and analyze energy intensity data spatially linked to tax assessor, census, and program participation data throughout Irvine. In September of 2009, CPUC Decision 09-09-047 allowed SCE to set aside and assist the City of Irvine in developing the City of Irvine GIS-Based Energy Data Pilot Project. The pilot had three initial objectives:
 - Design and build a prototype GIS tool that analyzes community utility usage data;
 - Evaluate geographic areas for target marking of energy efficiency programs and the effectiveness of outreach and incentive programs; and
 - Further Energy Efficiency programs in support of the California Energy Efficiency Long term Strategic Plan.

When the project began there were no predefined systems or data protocols to use for the development of this effort. By the second quarter of 2012, SCE had worked with Irvine and sought input from over 30 local governments to develop this tool. In addition, SCE engaged internal resources to collect and coordinate the various non-energy data inputs and layers. These inputs were then evaluated to determine an extensible approach for this tool. The tool is in the final stages of development and will provide a foundation for further development of similar data visualization and energy management efforts.

As demonstrated in the previous examples, the IOUs and partners are working to resolve data sharing issues, but the industry is experiencing some friction because the rapid expansion in the uses of data, systems that provide data, and the pace of the regulatory environment are not in sync. This friction becomes apparent when partners submit what they believe to be a reasonable request for data that are either declined or delayed to the point where projects go at risk. Conversely the IOUs are concerned with the diversity of requests coming in from various partners, and the need to develop systems and protocols that are compliant with rules designed to address issues of confidentiality and related customer protections. Below is a summary of observations gathered through interviews with staff at various IOUs and LGPs that summarize key issues surrounding the dynamics and complexity of data issues:

- Partner requests for data are not homogeneous and often require new and creative approaches to resolving data configuration, transfer and security issues. Some partners require large amounts of detailed data delivered frequently (monthly), others partners simply require aggregated data delivered less frequently (annually) and each request must be reviewed to assess whether or

not it can delivered in compliance with current utility and regulatory data directives. It appears to the evaluator that many data solutions take around two years to resolve. Note that in the examples above, many of the issues resolved in 2012 were first raised in 2009-2010.

- The current policies that govern data security and access are a mix of rules that can be subject to multiple interpretations. Some of the current rules used to assess partner data requests may have been developed before current data uses, and the benefits of this data, were understood;
- At the beginning of the 2010-2012 program cycle, it does not appear that there was a clear or coordinated management structure at ED or the IOUs tasked with solving the data delivery issue in a comprehensive way and within a reasonable time. The development of the SCE Data Working Group and the PG&E Community Energy Management (CEM) approach have demonstrated that management structures are being put in place to work with LGPs to address data issues, but these structures have taken time to develop.
- The perception of many LGPs is that discussion on data issues generally exists between only IOU and CPUC, with the appearance to partners that they are relegated to a secondary status with no date certain for resolution of problems. The implied solution is that data access issues should be addressed more openly and systematically across the IOU/CPUC/LG enterprise.
- Both LGs and IOUs agree that the process of assessing the risk and benefits of data access is going to get more complicated as;
 - More data is becoming available through industry trends and technology deployment such as smart grid;
 - More stakeholders are engaging in energy efficiency activities that would benefit from data access, such as LG efforts to provide energy solutions to specific constituents; and
 - More innovative uses for data become apparent, such as energy management software being developed that can use smart grid data for complex actions such as real time commissioning or automated DR activities.

As uses of data and the rules that govern access continue to evolve, stakeholders engaged in the LGP sector should proceed in developing the management capability to address data requests in an efficient and timely manner. Several examples of functioning data management structures that are collaborating with and benefitting LGPs include:

- The SCE Data Working Group formed in 2010 provides an example of an effective management structure that provides a resource that is dedicated to addressing a variety of data issues within the regulatory rules that define customer data security protocols.
- The PG&E Community Energy Management (CEM) approach to engaging LGs and community stakeholders provides a useful model for establishing communications with LG partners, and for identifying data issues early in the product develop cycle. Identifying data issues early can reduce the overall product development cycle time and minimizes the chance for delays due to misunderstandings. Several features of the CEM include:
 - Community Energy Managers are IOU employees who act as local energy experts, utilizing IOU energy expertise, data resources, and programs to provide localized support to LGs and partners. Community Energy Managers would be experts in community and government energy and climate action planning, including data needs;
 - Community Energy Managers could manage LG data requests and liaison with utility data managers to understand and fulfill requests; and
 - PG&E has utilized this approach to help drive a more localized approach to energy management, be more responsive to LG needs, and act as data request liaisons for community stakeholders. The approach has greatly enhanced PG&E's ability to respond to and fulfill data requests from LGs.
- Rulemaking 08-12-009 includes the potential to develop an 'Energy Data Center' that might serve as an important organizational function in managing data protocols and overseeing the development of a cohesive data policy that addresses the concerns of multiple stakeholders including regulators, utilities, and local government partners. Three possible roles for the energy data center as outlined in a September 2012 whitepaper include:⁸²
 1. Aggregate and anonymize customer-specific data such that it protects customers' privacy and make it available to the public in a timely manner;
 2. Provide independent research and analysis of current state, Commission, and utility programs using customer-specific data but publishing results of that analysis in an aggregated and anonymized form that protects customers' privacy; and
 3. Facilitate the transfer of customer-specific data to a governmental organization.

⁸² <http://www.cpuc.ca.gov/NR/rdonlyres/8B005D2C-9698-4F16-BB2B-D07E707DA676/0/EnergyDataCenterFinal.pdf>

An additional discussion on data issues is available in Appendix D.

6.3 LGP Structure, Management and LG Factors

Next we discuss LGP factors (e.g., characteristics and practices) that we observed to be correlated with LGP progress towards Strategic Plan goals. These findings cut across LGP program activities.

6.3.1 LGP Structure – Facilitating Factors, Challenges and Barriers

LGP have numerous implementer structures, as described in the previous section. Our research findings suggest that no one size fits all for the sample of LGPs included in our study – certain structures were associated with progress towards more Strategic Plan goals, but it may not be possible to use those structures in every context (e.g., there may not exist a council of governments covering the desired area, or a county may not be willing or able to take on the partnership lead role). Single-city LGPs (only in the SDG&E sample) have the easiest time progressing towards Strategic Plan goals as compared to LGPs spanning multiple cities (and counties) based on how we classified LGPs. If a single city within a region was making significant progress but the others were lagging, we classified them as “foundational” as compared to a region where all the cities and counties were individually making progress, which would be “advanced”.

- Using a COG that has existing energy efficiency infrastructure as implementer for groups of cities and counties where there is no one large, dominant city/county with energy efficiency experience is correlated with greater advancement based on our classification system among our study sample.

LGP spanning multiple cities (and counties) in our sample that have made the most progress towards Strategic Plan goals based on our classification system are typically implemented by a COG (or association of governments). COG-implemented LGPs have the broad reach and authority to galvanize the many levels of government to overcome barriers and achieve results due to their mission to serve their constituent LGs. Elected officials from each of the member LGs usually make up the council membership.

COGs are also motivated to engage all their member cities (and counties), whereas other regional or county structures may not evenly disseminate resources to individual cities. When COGs are motivated to achieve energy efficiency savings and/or have a broader climate change agenda, taking the lead role in a partnership usually maximizes LGP and related IOU resources most effectively.

COGs have the unique authority to comprehensively and evenly address a region. There were six COGs in our sample. We found that of the LGPs in our sample implemented by a COG those that had made the most progress had elected officials from cities (and counties, where relevant) engaged in the partnership, and partnership staff have direct lines of communication to city and county staff across all levels—elected officials, facility staff and financial management. We are unable to determine whether the COG implementation structure itself is indicative of making greater progress, which might be correlated with engaging elected officials, or if it's engaging elected officials that causes greater progress. COG authority reaches beyond energy and may encompass planning, transportation, water, and wastewater. COGs can effectively disseminate resources (knowledge, tools) to member cities and counties. COGs also know their member cities and counties well and can tailor efforts accordingly.

The AMBAG Energy Watch in PG&E's service territory has made substantial progress towards Strategic Plan goals, and has a COG structure. The LGP program funds one dedicated staff person, with PG&E Green Communities program funding two additional staff. It has been around for years, and there is an effective working relationship across the team—AMBAG, PG&E and 3P implementers that support the LGP. Each city and county in the region has an elected official who serves on the board. The LGP staff act as an extension to the COG, constantly working to raise visibility among LGs about Energy Watch services and accomplishments. The COG structure effectively engages all 18 cities and three counties in the region—at all levels within the LG (elected, senior management, facilities staff). All the elected officials want to see projects in their area and they push LGP staff to get resources. Given the geography of the region, there is no one dominant city or county. The LGP seeks to treat them equitably and provide services evenly. The LGP staff at the COG understand the unique needs and barriers of each LG, and achieve a high penetration among the sectors they target. The LGP staff report that municipal facilities staff are open to participating in the program because they trust AMBAG and already maintain effective working relationships.

An excellent example for a well-run COG that has made significant progress towards Strategic Plan goals for the South Bay Cities Energy Leader Partnership within SCE's service territory is the South Bay Cities COG (SBCCOG). This particular COG manages 15 diverse cities with a large group of volunteers that conduct outreach to the communities. SCE's 2010/12 program model funds are limited to cities and counties, which exclude potential projects within the water, waste water, park and recreation, and library districts. This partnership has managed to overcome these limitations by issuing separate contracts with these districts while collaborating with the IOUs. This partnership also engages in climate action planning and an innovative electric vehicle program.

A Board of Directors that is representative of 19 of the region's LGs runs San Diego

Association of Governments (SANDAG). The Board is comprised of mayors, council members, and county supervisors. Even before the creation of the SANDAG LGP, the COG was invested in creating energy roadmaps for cities that helped them work to further progress related to energy efficiency. This COG is able to take lessons learned from the cities and counties that do have their own LGPs, and assist smaller cities with the ultimate goal of spurring more independent action on the part of the cities. Because of the close ties to elected officials, the organization is able to find the appropriate people to engage at the LG level.

- There is one LGP in the sample that is implemented by a 3P implementer, and we observed that leveraging 3P energy efficiency expertise for new LGPs that lack energy efficiency infrastructure is an effective strategy.

PG&E's East Bay Energy Watch, an LGP that has made significant progress towards Strategic Plan goals, is an anomaly for a for-profit 3P implementer. No city or county in the region (Alameda and Contra Costa counties) takes the implementation role. Instead, leader cities Berkeley and Oakland are engaged in the partnership and disseminate best practices to other cities and counties. The implementer works closely with PG&E to outreach to newer cities, and has recently engaged the services of a local nonprofit that has ties to the city governments in Contra Costa County to help fill the gap that a 3P implementer has when engaging with LGs. The PG&E government representatives help to fill that gap by identifying appropriate government contacts and participating in meetings. East Bay has also identified at least one non-profit organization in Alameda County to facilitate outreach to those cities. Like a COG, this model is able to serve the entire region equally, since they are not beholden to any one city or county.

- Engaging a dominant city or county with prior energy efficiency experience in the partnership to tap their resources, motivation, and commitment and disseminating best practices to other cities and counties in the region, usually giving them the implementation role is correlated with greater advancement based on our classification system among our study sample.

We found that cities or counties with existing energy efficiency infrastructure are effective implementers among our sampled LGPs (n=6), where the city/county has a legacy of energy efficiency (and typically sustainability) activity with existing resources and motivation. These cities/counties are already doing related sustainability/efficiency work and the partnerships are a vehicle to provide additional resources and harness the existing efforts to meet IOU and CPUC goals. These LGs are motivated and place a higher priority on this type of work in order to maintain or build on their reputation as leaders around sustainability.

Sonoma County Energy Watch, an LGP that has made significant progress towards Strategic Plan goals in PG&E's service territory, is an effective example of a county-led LGP. The county is a leader in the region with respect to climate action planning and sustainability. The LGP program funds a dedicated staff person at the county who works exclusively on Energy Watch. The elected officials support long-term aggressive climate action planning, and consider the LGP program critical funding and linkage to additional resources to meet their aggressive climate goals. The county is the largest employer in Sonoma County and has access to many buildings, to which they take a long-term comprehensive approach using internal creative financing (revolving loan funds), IOU and external funding sources (CEC loans, on-bill financing, ESCO bank loans). The county often pilots programs that they try to disseminate to cities within the county. The 3P implementer on the LGP team works with cities, and the PG&E account representative provides crucial support to cities to get energy efficiency projects through. There is less traction in comprehensive energy efficiency and renewable projects among cities in the county, since they lack direct resources. However, there is no natural regional structure to which this LGP would lend itself.

- An overlapping LGP in an area where there exists a dominant LG, with an LGP (and associated dedicated resources) for the dominant partner resources and an overlapping LGP (and associated dedicated resources) for a regional entity that can address the rest of the LGs was a successful strategy for one county's LGP in our sample.

SANDAG, in San Diego's service territory, implements a regional LGP that also has a very successful single-city LGP (Chula Vista). SANDAG LGP concentrates its efforts on the rest of the region, providing critical support for cities that lack existing energy efficiency infrastructure. Chula Vista is a mid-sized city that has a history of energy efficiency and sustainability experience, with each city department having a dedicated energy efficiency component. There is a strong dedicated staff person who drives projects forward and supportive elected officials. SANDAG LGP and Chula Vista LGP coordinate and disseminate best practices to the other cities in the region.

The Port of San Diego LGP is a unique LGP in our sample, which could be viewed similarly as a single-city LGP. The Port of San Diego LGP focuses on the small businesses in its district and has made substantial progress towards Strategic Plan goals.

There are sometimes shortcomings associated with the leader city/county model that we observed in our sample, where there is not an overlapping regional partnership (such as with SANDAG LGP). While the city/county may do its best to

transfer knowledge and lessons learned to other cities in the partnership, if they lack sufficient resources, their efforts might significantly lag that of the leader. In these cases, the support from the lead partner and IOU is usually not enough to overcome the critical barrier of lack of LG resources. Progress among the lagging cities/counties is tentative.

Yolo County Energy Watch has progressed at the county level and two of the four cities are engaged in energy efficiency and sustainability. They are attempting to outreach to the other two cities, which lack dedicated staff and resources, to achieve further progress. San Bernardino LGP is a SoCalGas-only LGP that is mostly focused on the county itself (making progress on retrofitting municipal buildings), and has not made any progress engaging with the cities. There is no real drive at the county or among the cities to achieve communitywide energy savings or sustainability goals; and

The City of San Diego LGP has achieved significant progress in prior program cycles, but has struggled more recently with staff cutbacks. The other three SDG&E LGPs work together and help fill gaps, so that best practices are disseminated and resources are coordinated.

- There are gaps in progress among the LGPs sampled that lack a COG or dominant city/county to act as implementer; we observed that when the IOU provided extra support and engagement they were more successful. We suggest that in these cases expectations should be lowered so that each individual LG will meet long-term Strategic Plan goals, though much progress may be made over the long-term for the region.

Structures that we observed in our sample that have made targeted progress, but not as comprehensively and efficiently as the COGs in our sample, are implemented by energy-related organizations—JPAs or non-profits organized strictly around energy. Three LGPs in our sample fit this category. These partnerships are successful in focusing efforts on energy efficiency projects in the region, but can struggle to achieve broad, deep progress because they lack the broader authority of a COG to encompass non-energy sectors such as transportation and water. Depending on their authority and mandate, they may also have difficulty gaining traction in the municipal sector.

In northwestern California, the Redwood Coast Energy Authority (RCEA, a JPA) implements the Redwood Coast Energy Watch. An advantage of the structure is that PG&E can have one primary contact for the LGP, and the implementer devotes equal attention to the seven member cities. The non-profit is also located centrally and can serve the very remote areas within the LGP. RCEA is mostly funded by the LGP (PG&E), and also receives grants and city funding. The LGP has had success with

residential and commercial businesses across the region, although municipal projects have struggled somewhat.⁸³ They are also the regional clearinghouse for energy efficiency, climate change, green building, and renewable energy. Redwood Coast LGP has been in place since the 2006-2008 program cycle, and has had time to build infrastructure to serve the remote cities and County of Humboldt.

Ventura County Regional Energy Alliance (VCREA) is the regional implementer for the Ventura County Energy Leader partnership. This JPA was able to successfully develop CAPs/EAPs for over 10 cities in the region; the cities are resource constrained and the JPA's expertise with EAPs as well as familiarity with the cities' political landscape facilitated efficient completion of these plans.

San Joaquin Valley LGP has also made some progress towards Strategic Plan goals, but some of the smaller cities lack resources and motivation to address climate change and support the LGP.

Although the above exemplifies certain advantages to JPAs, this same construct can also be disadvantageous. For example, according to the Executive Director of VCREA, if the partnership were to "end" or dissolve, this JPA would no longer be funded, as the primary source of funding for this JPA come from the partnership, and would no longer be able to function. Additionally, JPAs do not have the reach to create comprehensive plans that COGs may have.

- Narrowly focused organizations as lead LGP implementers in our sample seemed to lack the reach and broad authority such as the ability to pass and enforce laws and adopt policies to address all types of activities envisioned by the Strategic Plan.

Structures that are often indicative of newer partnerships that lack a COG or leader large city/county with existing infrastructure to take on the implementation role are partnerships implemented by business organizations. There were three LGPs in our sample that fit this criterion. These partnerships are typically successful in getting commercial sector retrofits, but they struggle more with the broader charge of LGPs, to develop CAPs and lead by example through retrofitting municipal buildings. Santa Barbara Energy Watch and SLOEW are led by Chambers of Commerce or Economic Development Groups. PG&E has provided critical support to link the implementer with key contacts within the municipal sector, but little traction has been gained in the residential sector. PG&E is engaging with both counties in the region to try to elicit their support to get better municipal participation among cities and counties.

⁸³ Because the implementer is not a municipality itself, it has little "pull" in getting cities to complete their projects. Although RCEA was successful in submitting a joint ARRA application on behalf of multiple cities, the "relatively simple" projects have taken over 1.5 years to complete. In general, it has been hard to identify new municipal projects, since this has not been a priority for the cities (i.e. they wait for equipment to fail).

Sierra Nevada LGP, a new LGP implemented by Sierra Business Council, has made some progress towards Strategic Plan goals, leveraging prior progress made by two county LGPs from a prior program cycle and the expertise of 3P program implementers. The LGP has similar issues as Santa Barbara and SLOEW, being able to engage with all the cities and counties to address the broad array of activities that are envisioned by the Strategic Plan.

- The two SCE Energy Leader Model “Bundled city” partnerships in our sample reported a lack of sufficient resources to gain traction and show meaningful progress. Interviewees suggested and our opinion is that dedicating additional resources for a lead implementer (that already has energy efficiency expertise to leverage) for these partnerships could help ensure the LGs that have expertise and resources are able to effectively share them with and support the other cities.

The city of Huntington Beach (of Orange County Cities Energy Leader Partnership) currently has an Energy Manager that helps its partner cities that do not have the same level of resources or expertise to achieve Strategic Plan menu items such as benchmarking. Huntington Beach is an excellent example of a leader city in a regional partnership without a COG or regional implementer that has attempted to meet the entire partnership’s potential by using its own resources to assist its partner cities. This can also pose a potential risk, as the five cities within the partnership are dependent on one energy manager. If this energy manager were to exit the partnership or become unavailable, the sustainability of the partnership would be at risk.

6.3.2 LGP Management Practices

In addition to how LGPs are designed by the IOU and structured by geography and implementer type, there are also variations in how the LGP is managed day to day across the partners.

6.3.2.1 Facilitating Factors

There are several management characteristics and practices that we observed that are correlated with more advanced LGPs in our sample, all else constant. Below, we provide these facilitating factors as bullet points, followed by supporting research findings.

- The presence of dedicated, experienced implementation staff that drive projects forward was observed to be a beneficial management characteristic associated with greater progress, according to our classification system among LGPs in our sample.

We observed that most LGP program and related climate action planning activities that we assessed from the study sample required a dedicated, experienced project manager to move tasks forward, identify roadblocks, and offer solutions, with an eye to detail and results-orientation. We found among our sample of LGPs that those that had made the most progress towards Strategic Plan goals had at least one full-time employee dedicated to the partnership (including AMBAG LGP, Chula Vista LGP, SANDAG LGP, Sonoma County LGP, South Bay LGP and the Port of San Diego LGP). AMBAG LGP and Chula Vista LGP, the two sampled LGPs that had made the most progress towards Strategic Plan goals, each dedicate around two full-time employees. Our opinion based on our small research sample is that staff that are able to prioritize and are motivated to meeting the partnership's goals are likely to achieve greater results than those that have many other competing priorities.

Ability to dedicate staff is also indicative of other facilitating factors, so it may not be that having one or more full-time staff alone that drives success. Instead, it may be one feature of a successful partnership that usually includes a history of energy efficiency program implementation within an energy office or related department, with the support of elected officials. However, even for newer partnerships that lack the energy efficiency infrastructure or an energy department, our opinion is that being able to dedicate one or more at least half-time staff that possess effective project management skills and a results-orientation to the mission facilitates success.

Our opinion is that there is the need for a critical level of staffing and resources due to the complexities of implementing LGP programs. Also, we observed in our study sample that more advanced partnerships tend to leverage many funding and financing sources beyond LGPs, which requires significant time and skill. Likewise, in our opinion, newer partnerships need to be able to monitor other successful partnerships and follow their practices, such as by attending Best Practices meetings and peer forums and other related networking events (described in Section 3.8).

In this regard, the city of Chula Vista was perceived by one interviewee to be an "optimal size" of about 240,000 residents (the second largest in the region). At this size the city has enough funding and staffing to achieve various LGP initiatives, but government is also sufficiently small so that staff coordinating with LGP staff are relatively accessible and less likely to be overwhelmed by larger city responsibilities and inter-departmental protocols. Over time, LGP implementation becomes less difficult and more institutionalized.

- We observed that IOU account and government representatives engaging in PG&E's LGP partnerships and facilitating LGP and related IOU rebate projects was a beneficial management characteristic for achieving broad progress for PG&E LGPs in our sample.

We observed the potential for IOU government representatives to provide critical support to identifying appropriate contacts within governments and facilitate municipal energy efficiency projects among PG&E's sampled LGPs. For the commercial sector, PG&E account representatives helped understand the local customer base, identify opportunities, and move energy efficiency projects along. Working as a team, the PG&E LGP PM and the PG&E account representatives provided comprehensive support to partnerships. In particular, the representatives acted as project managers for projects outside the LGP service offerings, to link partners with core and 3P programs and facilitate participation. We found that among our PG&E sample, that these are services that the LG often values, for which the LGP does not receive direct energy savings credit. As pointed out elsewhere, direct energy savings goals serve to prioritize activities (and lack thereof may lower the priority level.) For PG&E, the representatives are incentivized to achieve savings and thus their goals are well aligned with partners to identify and complete energy savings projects. PG&E representatives may also link partners to PG&E for services outside energy efficiency, including renewables. For SCE, SDG&E and SoCalGas, we did not assess the extent to which IOU business customer representatives facilitated commercial retrofits.

PG&E's LGPs greatly benefit from the active engagement of account representatives (for unassigned small commercial customers and assigned larger commercial customers) and government representatives. These representatives participate in meetings with customers and help to link them to additional IOU and external resources. They are often incentivized to achieve participation in PG&E programs and they make an important contribution, helping to fill gaps (such as knowledge of LG contacts, facilitating participation in a calculated program for services that the LGP does not offer) and allow the partnership to address broader sustainability and climate change projects such as helping Sonoma County meet its aggressive 2010 CAP goal.

SDG&E's partners were very engaged with the utility and credited the engagement and accessibility of the utility staff as a key to success. In particular, the IOU facilitated data transfers, put partners in touch with rebate processing staff, and convened regional collaboration. Chula Vista LGP, an advanced partnership, cited the great deal of flexibility and their involvement in planning the next cycle of LGPs to their success. SDG&E has acted as a champion for Chula Vista LGP, linking their efforts to other cities in the county. There has been a lot more collaboration in the current program cycle that has benefitted the whole region.

One city within the South Santa Barbara County Partnership indicated that collaboration with SCE's codes and standards (C&S) group allowed them to complete one of their key Strategic Plan menu items. The C&S group was able to

provide the city with the technical expertise required to complete the cost effectiveness component of developing a reach code. This support was paramount in allowing the city to achieve this Strategic Plan goal.

- We observed that collaboration among partners enables broader, comprehensive treatment, which often occurs when goals are aligned among some of the sampled LGPs according to interviewees.

We noted among our sample that LGPs⁸⁴ that reported that they collaborated effectively across partners (IOU, LG and 3P implementation [if applicable] staff) tended to achieve greater results than those whose interests are not well aligned. We believe this is because where the LG feels that the IOU is offering services that they value, they are more cooperative and engaged and place greater emphasis on achieving LGP goals. We think and some interviewees offered that the key is aligning goals, with IOUs that offer greater flexibility having an easier time tailoring their services and resources to the LG's needs.

SDG&E's service territory is relatively small, so that IOU PMs can manage the "portfolio" of LGPs offered in San Diego County effectively, since there are fewer LGPs and many overlap and are coordinated. Importantly, SDG&E's LGP managers and partners convene regular quarterly meetings where the (leading) LGPs disseminate new ideas (e.g., dedicated energy efficiency rooms in public libraries), lessons learned (e.g., how not to do public outreach for CAP development and adoption) and best practices to the others.⁸⁵

For example, all LGPs within the SDG&E service territory contributed research funds into a regional mapping project. This project used a geographic information system (GIS) to investigate the vintage of homes, homes with the highest energy use, and which homes were most likely to afford retrofits. All are also currently contributing to a new web-based regional Climate Portal, which will include completed climate-related research and policy documents, data sources, and other information. Additionally, other LGPs in San Diego are adopting the Port of San Diego's successful Green Business Challenge.

PG&E also works closely with its partners to provide energy consumption data at various levels of resolution depending on the LG's needs based on many of our PG&E LGP staff and PG&E PM interviews. Many cities and counties among our

⁸⁴ Note that we do not report the specific sampled LGPs that mentioned problems with collaborating with the IOUs, since that information was solicited from partners with the promise that it would remain confidential and only be reported in aggregate.

⁸⁵ SDG&E's LGPs also compare and share consultant work scopes and fees to educate themselves on technical issues, scope similar work appropriately, and develop good contracts.

sample of LGPs told us that they are very interested in receiving data, and we observed in a couple of cases that this service is often an important first step to bring in new partners and establish a working relationship. We observed several cases where PG&E's government representatives helped identify the appropriate contacts at the cities and counties and helped move municipal retrofits forward, leveraging LGP and other IOU resources. PG&E account representatives served a similar function for commercial customers.

A recent example is within the East Bay Energy Watch, where PG&E and QuEST, the 3P implementer, convened meetings with cities (e.g., Fremont, Union City) that have not been historically active within the partnership and provided data to establish the relationship. The meetings and data exchange were followed by planning efforts to launch an outreach campaign in the local areas, with elected official support. One city in particular was interested in solar programs, and the PG&E account representative, who also attended the meeting, was able to facilitate providing information and eventually participation in PG&E renewable programs.

PG&E also offers flexibility to its partnerships, based on PG&E and LG interview responses, by supporting renewables activities by facilitating participation in PG&E renewable programs. This is usually done by account representatives, but LGP PMs may assist by putting LG staff in touch with the appropriate contacts and making them aware of resources based on their needs.

For the County of Sonoma, PG&E account representatives supported partner staff in obtaining funding from PG&E and the CEC for fuel cell installations for the county's zero net energy campus.

The three PG&E partnerships that had made the most progress towards Strategic Plan goals cite that the collaborative working relationship they have with PG&E and their 3P implementers is key to their success. In these cases, the LGs perceive a tangible benefit from the partnership: helping to achieve their CAP goals, getting resources into their communities (e.g., for low-income residents, hospitality sector), or supporting reach code development. The partnership funds staff within the LG to focus on climate action planning and energy efficiency, and PG&E provides technical assistance (engineers, audits, general technical assistance with projects) and resources (data, rebates, facilitating account representatives) to help them meet their goals. Earlier in the development stage, one partnership said it was key for both the LG and PG&E to establish trust—e.g., through keeping each other in the loop for projects. Once that trust was established, parties worked collaboratively to identify and overcome barriers to mutual success.

PG&E's Green Communities program was cited by several PG&E partnerships as a key resource for working on Strategic Plan elements. Especially for foundational LGPs, they receive education on climate and energy action planning, support in

setting goals and resources (data, funding, technical support) to implement projects. This is an example of the IOU being flexible in providing additional resources via a related Government partnership program and meeting LG needs. By effectively collaborating with its partners, PG&E learned their needs and designed a tailored program offering to address those needs.

Some of SCE's LGPs that had been in place prior to the introduction of the ELP model mentioned some issues with collaboration. Two partners mentioned that they felt the prior SCE approach was more collaborative. Given that the model is fairly new, we are not certain how much of these collaboration issues are going to remain once the partners adjust. We do not report any barriers related to collaboration with SCE at this time beyond the challenges and barriers already reported previously in this section.

6.3.2.2 Challenges and Barriers

There were two partners that mentioned potential barriers related to IOU management.

- PG&E management adds a layer of bureaucracy, according to one partner.

There was one PG&E partner that mentioned that an IOU management layer adds to the bureaucracy, but they felt that the unique resources that the IOU offers makes it worthwhile even when considering alternate administration arrangements. No other partners (across any IOUs' LGPs) mentioned this issue during the interviews.

- Exclusion of LG partners from PG&E program planning is a barrier to successful management, according to one partner.

One PG&E advanced partner mentioned that an area where PG&E could improve is that they are typically excluded from the planning stages of each program cycle, and instead are presented with budget and scopes. They prefer to provide input and participate in planning discussions in the spirit of collaboration and partnership.

Many partnerships mentioned the limitations of using LGP funds for energy efficiency as a barrier to doing more renewable projects to meet broader climate change goals.

- Barriers to tapping all the opportunities to offer IDSM to LGs exist among some of the LGPs in our sample, which might be impeding the realization of broader LGP potential for energy savings.

We observed that there exist opportunities to build from the relationships that are being developed through the LGP to achieve Strategic Plan goals beyond energy efficiency. Our opinion is that to truly offer comprehensive IDSM solutions to LGs, the current CPUC policies would need to be amended.

6.3.3 LG Partner Factors

We noted LG factors (characteristics or practices) that facilitate LGPs to make meaningful progress toward Strategic Plan goals.

6.3.3.1 Facilitating Factors

We observed that in our small study sample, most of these factors are correlated with one another. Within our sample, only the more advanced LGPs have most if not all of these characteristics (as described in Table 15 in the previous section), suggesting that there is no magic bullet design feature(s) for new partnerships to achieve broad, deep progress. Instead, we found that the following factors were correlated with a partner's ability to maximize LGP and related IOU resources among our study sample. We noted in our sample that partners lacking at least some of these factors usually indicates that the partnership will struggle or take significant time to get up and running to make productive use of LGP resources.

- LGs in our sample with a history of energy efficiency experience have achieved greater progress according to our classification system than those with less experience, which should be considered when evaluating LGP progress.

LGs that have an existing energy efficiency foundation obviously have an advantage over those with less experience. Not only do they leverage existing infrastructure, but experienced LGs usually have dedicated staff and departments that routinely deal with energy usage and energy efficiency. LGs that lack infrastructure usually deal with energy and related climate change issues in a piecemeal fashion, with facility managers trying to lead the charge in a partnership, though they often lack the authority and reach to generate substantial results.

LGPs in our sample that had progressed the most towards Strategic Plan goals have existing energy efficiency infrastructure to leverage—either COGs with staff dedicated to the partnership, or cities or counties with energy managers.

Some LGPs that span a county or region did not show as much progress as COGs because infrastructure existed but was not comprehensive: business organizations as implementers that do not address the range of areas that a COG can influence; and counties implementing a partnership with sufficient infrastructure, but lacking the motivation and structure to allow individual cities to leverage the infrastructure.

Our classification system provides a starting point for categorizing LGPs based on

their experience, which could facilitate more meaningful evaluation by applying different metrics to LGPs based on their experience and capabilities.

- Tailoring the partnership message to the community and elected officials to suit the political climate leads to greater success in both politically-liberal and conservative sampled LGPs, and could be considered by other LGPs in similar contexts.

We noted two distinct contexts where this practice was observed to lead to greater LGP success. The first is LGPs in areas where constituents are interested in addressing climate change, holding their elected officials accountable to achieve energy efficiency/climate change/sustainability results. The elected officials were more engaged in the partnership, seeing it as a way to gain or maintain visibility in the community as being a leader on addressing climate change. The second case is LGPs in areas where constituencies are not inclined to support climate change planning, but instead promoted the economic benefits associated with the partnerships.

This is a key factor, since LGPs are unique from other delivery mechanisms (3P, core) that have one single mission—to deliver an energy efficiency program. LGs have much broader missions that only tangentially relate to energy efficiency. Motivation to achieve energy efficiency and/or sustainability outcomes including LGP savings goals is key to progress so that LG staff, often across multiple departments and levels of authority/seniority, may prioritize energy efficiency program implementation. LG staff performance is not usually measured by energy efficiency program achievements; many staff involved in LGP implementation (especially those that only dedicate a small fraction of their time to it) can maintain their position within an LG and not worry much about making meaningful progress within an LGP program.

For Sonoma County Energy Watch, an LGP that has made significant progress towards Strategic Plan goals, interviewees said that the local constituency demands its politicians take action on climate change and that is a key motivation in the County dedicating staff and making the partnership and sustainability in general a high priority.

AMBAG Energy Watch has also made significant progress towards Strategic Plan goals, and its staff said that their area is mixed with some of the communities prioritizing sustainability and their elected officials are motivated for that reason; with other parts of the region more conservative politically and struggling with high unemployment. Elected officials in those areas are motivated to engage with the partnership to get jobs and marketing about their local businesses.

The East Bay LGP, similar to AMBAG Energy Watch, has a mix of LGs with two very politically liberal cities leading the others in terms of sustainability and progress towards addressing climate change. Many other cities in the region are more politically conservative and the implementer engages with the cities and solicits elected official support by focusing on economic activity they can bring to their cities.

The South Bay LGP has made substantial progress towards Strategic Plan goals, and they are in a politically liberal area of Southern California.

LGP in our sample that had made less progress than others towards Strategic Plan goals often cited the local political context as a barrier to doing broader climate change work. Those LGPs with a conservative political climate had the most success when they avoided mentioning “climate change” and “energy efficiency/conservation” and instead focused on promoting jobs and reducing government waste.

Sierra Nevada Energy Watch interviewees said that some of the “more conservative mountain communities” do not like “government uniformity” and “the locals do not believe in climate change” (in terms of following a template oriented to the Strategic Plan) so they need to spend more time educating the community.

The Desert Cities LGP interviewee said “as long as we don’t call it climate change, we’re good, don’t call it global warming, it’s a pretty conservative area” – they have made substantial progress towards Strategic Plan goals by focusing on the cost savings associated with energy efficiency.

Many of SDG&E’s LGPs are in areas that interviewees cited as “more conservative”, but “the community is interested in protecting and conserving its natural resources”, especially the coastal cities. Chula Vista LGP has also been successful in engaging with the local business organizations and keeping their activities transparent to the community. They view their LGP progress in terms of progressive city growth instead of addressing climate change, which is not a top priority for their constituency.

One LGP lacks any motivation at all for addressing the goals related to reach codes and climate action planning – because climate change is not a community or LG priority.

One LGP said that “we are in a politically conservative environment with Tea Party protestors” and that they were “challenged in an election year with their elected officials not willing to promote energy efficiency publicly”.

Orange County cities have had more success selling the partnership as a way to

reduce government waste in LG.

- Working effectively across LG departments facilitated LGP progress for some of the sampled LGPs.

Forging connections and working relationships across departments takes time, and we noted that partnerships in our sample that can leverage existing relationships and have a history of cooperation have an easier time than those that have to start from scratch.

Sonoma County LGP staff work across departments routinely, “taking a seat at the table to raise sustainability to a high priority” at every meeting. This approach is partly why the county has planned a zero net energy campus, with the LGP staff pushing departments to push beyond what they thought was a desirable target (e.g., LEED gold). Staff also coordinate with departments that deal with code enforcement and have used those connections to conduct innovative revisions to code to make renewable installations easier for residents.

Yolo County Energy Watch has made some notable progress towards Strategic Plan goals, and the county itself has a working group to specifically address climate change.

Chula Vista LGP staff work in a single department and work closely together, reportedly with “no silos”.

The City of San Diego has struggled recently with staff cutbacks, and staff work in different departments sometimes in “silos”. While the city continued to make progress in the residential sector with ARRA funding, non-residential activities have stalled.

The County of San Bernardino staff that works on the LGP is from the architecture and engineering department and does not coordinate with other departments. This LGP focuses mostly on municipal retrofits as a result.

Desert Cities Energy Leader Partnership, an LGP that has made significant progress towards Strategic Plan goals, interviewees said that some cities have sustainability managers or “green teams” and are engaged with the partnership. The LGP addresses other cities that lack such dedicated staff or good collaboration across departments by holding working group meetings including staff from planning, building, public works and environmental departments together. They said “if there’s a sustainability manager and a city manager” that is most effective.

The San Joaquin Valley Partnership, which has made some progress towards Strategic Plan goals, said that the largest cities in the partnership take a “holistic

citywide” approach to energy efficiency. The smaller cities were spread thin, with one staff person in charge “across multiple departments”.

The city of Huntington Beach, part of the Orange County bundled cities LGP, has a dedicated energy manager who feels that he can effectively work with other departments. Without such a dedicated position, it can be difficult to work across the many departments that need to be engaged for an effective partnership.

South Santa Barbara partnership staff said that they successfully worked across departments (administrative, finance, water/wastewater, engineering, parks and recreation and libraries) to achieve success with adopting reach codes.

- Self-reported and our observation of personal commitment of LGP staff to energy efficiency and related goals facilitated LGP progress in some of the sampled LGPs.

Anecdotally, we found that sampled partnerships that are implemented by staff that are personally dedicated to energy efficiency and/or sustainability are more successful because staff go to great lengths to move projects forward and overcome the many barriers associated with LGP programs. Conversely, partnerships where the implementation staff were not committed to at least energy efficiency (if not climate change) did not show as much progress. These findings are based on interview responses, but also interpreting responses and interviewer judgment.

- LGs in our sample that have been successful in utilizing multiple funding and financing options demonstrated an ability to overcome risk, be creative, address barriers, identify financing opportunities, dedicate staff time to write grants/applications, and devote staff to project management. Our opinion is that LGs that are able to leverage multiple funding and financing options are demonstrating their abilities to be effective. This type of activity could be a metric for the potential for LGPs to leverage resources, which might be a desirable outcome.

We observed several sampled LGPs where staff have shown capability and expertise in identifying and obtaining multiple funding and financing sources. In these cases they tended to do many more projects, often bundling measures with short- and long-lifetimes. We believe that successfully procuring a variety of funding sources requires a great deal of expertise, time, and commitment. We were told that sometimes there are internal (real or perceived) constraints to utilizing funding sources, requiring creativity, willingness to accept risk, and perseverance to work within the LG to suggest solutions and overcome barriers.

Most sampled LGPs used ARRA funds, while a few LGPs in our sample that had made the most progress towards Strategic Plan goals used additional sources in combination. Refer to Appendix B – B.3 for a summary of funding sources used by LGPs.

Two of three PG&E's LGPs that have achieved substantial progress towards Strategic Plan goals illustrate the advantages of using multiple funding sources.

Sonoma County is designing a zero-net energy campus with assistance from the PG&E partnership including rebates for fuel cells and proceeds from a revolving loan fund for energy efficiency. The county also used an ESCO to audit their buildings and low-interest local bank loans combined with partnership and other IOU rebates to do comprehensive municipal facility retrofits including old boilers and complex HVAC measures. Its implementer is piloting a scenario modeler that inputs potential projects and targets return on investment and funding sources that will help optimize comprehensive bundling of projects.

AMBAG Energy Watch has inventoried a large percentage of its LG buildings, addressing all energy efficiency opportunities including many old boilers that are in need of replacement. It uses a combination of partnership and IOU calculated rebates and CEC low-interest loans to fund this work. As ARRA funds subside, it is beginning to use IOU on-bill financing to fill any remaining funding gaps.

SDG&E's most successful partnership, Chula Vista LGP, used ARRA funding, a revolving loan fund, CEC loans, on-bill financing, and treasury bonds to fund energy efficiency projects.

The South Bay Partnership used Air Quality Management District and Energy Upgrade California funds for an electric vehicle program.

Challenges and Barriers

Besides the barrier related to conservative political contexts discussed above, there were no other LG partner factor-related challenges noted in the interviews.

6.4 Tracking and Oversight

Each IOU measures the success of LGP retrofit activities differently, and no utility tracks all the savings associated with LGP efforts related to retrofits, as described above. No IOU claims direct credit for renewable projects associated with LGP activities.

- **SDG&E and SoCalGas' LPGs** do not all track energy savings themselves, and retrofit savings only show up under their core programs;
- **SCE** only counts municipal retrofit savings, any residential or commercial

retrofits that occur as a result of marketing and outreach activities show up under core programs (including the DI program). Desert Cities Energy Leader Partnership is the exception to this rule, and its claimed savings include a mix of both municipal and non-municipal savings; and

- **PG&E** counts savings associated with municipal, commercial, and residential retrofits conducted by LGP partners, but not savings associated with referrals to 3P programs—and PG&E LGPs vary in terms of their coverage of measures and customers (e.g., some LGP partners do most of the retrofits in their area, while other LGPs do a very limited set of measures/customers and rely more on referrals).

These differences make it difficult to compare LGP savings across utilities (i.e., PG&E versus SCE) and for PG&E, across its LGPs. There are advantages and disadvantages associated with these approaches:

- **SDG&E/SoCalGas** – LGPs are less pressured to focus on direct energy savings (because there are no formal goals in the PIPs) and instead are encouraged to take a long-term, holistic view, focusing their efforts where they have advantages and can expect to see the most progress. However, PMs admit it is difficult to measure success. SDG&E holds regular meetings with all LGP partners, facilitating sharing of lessons learned and best practices, and helping to identify problem areas or lack of progress. SDG&E's service territory is one county, with a small number of LGPs—a few advanced LGPs that test strategies that are then passed down to the foundational LGPs. It is easier for SDG&E to monitor progress with such a contained geographic area and the structure of its LGPs.
- **SCE** – municipal savings is tracked by SCE LGPs, allowing effective monitoring of savings associated with the tiered incentive model. Many PMs feel that the approach helps to motivate partners to prioritize, develop, and implement EAPs. Many newer LGPs become motivated at the prospect of the funding opportunities afforded by the model. However, LGPs expend marketing and outreach budget for core programs, for which associated savings do not accrue to LGPs. If SCE's LGPs are compared on dollars per kWh saved basis with other core programs (or with PG&E's LGPs), they will look less cost effective because their marketing and outreach expenditures are detached from the savings they are intended to achieve. SCE LGPs do not spend any significant resources on renewable or non-energy (non-DR) projects.
- **PG&E** – all direct LGP partner efforts are tracked and claimed by LGPs, however referrals to overlapping 3P programs are not tracked or claimed. This limits the effectiveness of cross-referrals for most LGPs, since extensive M&O efforts for other programs will make the LGP appear less cost-effective. Many PG&E LGPs do expend efforts helping LGs plan renewable projects and PG&E account representatives facilitate rebate program participation. Very progressive PG&E

LGP also work to develop reach codes encompassing renewables. However, accomplishments associated with these efforts are not tracked or claimed, unless part of a broader non-resource activity associated with the Strategic Plan Menu update.

Below we offer metrics that might be useful for tracking LGP program success that were mostly suggested by partner interviewees, related to savings (resource) and non-resource goals. In general, LGP program monitoring and planning efforts could be aided by classifying LGPs by stage of advancement and structure. It is challenging to develop program strategies for and to evaluate the current set of LGPs across the state due to the major differences in their existing energy efficiency infrastructure and implementation type.

At the end of this section, we also offer some insights gained during analyzing the LGP and related program tracking data for this study, which might be useful to consider if developing additional metrics for future program cycles.

6.4.1 Resource Metrics

Resource goals are usually measured by total kWh, kW and therm reductions. Following are other success metrics that were proposed by partners during our LGP interviews to measure the effectiveness of LGPs.

Comprehensive energy efficiency measures delivered to community:

- Referrals to 3P and core programs/savings associated with those referrals (even if double-counting, report it as a shadow column);
- Communitywide savings across all IOU energy efficiency programs;
- Participation levels for all IOU programs for the whole community;
- Savings/participation in IOU programs among HTR communities such as small and medium businesses and moderate income, non-English speaking residents;
- Comprehensiveness of project bundles per site, such as percent of savings from measures other than T12 to T8 and basic CFLs;
- Number/percent of customers and customer segments that use IOU programs;
- Comprehensiveness of treatment for buildings/bundling of EE measures and renewables;
- Extent to which the LGP is serving whole cities/counties/regions;
- Number of referrals that the LGP gave to customers to participate in other 3P programs;
- (For regional LGPs) Number of cities with retrofit projects;
- Number of HTR businesses completing projects, or other measures of business diversity; and
- How many customers use a core program.

Continuous service to a customer/multiple touches, reflecting efforts, not just short-term outcomes, since some customers take longer to show savings results:

- Number of audits/buildings analyzed and reviewed;
- Number of projects identified (recommended via audit or less formally);
- Number of marketing and outreach visits to customers, cities/LGs;
- Number of cities within region/county that have initiated energy efficiency projects with LGP assistance;
- Number of cities within the region/county that have become engaged (e.g., appropriate contact has been identified and is participating in regular meetings);
- Number of LGs/percent of population covered by LGPs within an IOU service territory;
- Percent of customers contacted multiple times about efficiency education/programs (versus one contact); and
- How many different core programs are utilized.

Count renewable projects, broader efforts to reduce GHG emissions:

- Report on kWh mitigated through renewables (even if double-counting, report it as a shadow column); and
- GHG reductions for municipal buildings, community.

Self-Sustainability:

- If the program goes away, will the progress continue among partners;
- Amount of private funding leveraged with incentives;
- The extent to which the partner has extended its unique authority to maximum extent;
- The existing energy efficiency capacity within the LG, and likelihood that will continue without LGP funding and support; and
- The degree to which the LGP utilized additional funding and financing sources such as ARRA, revolving loan funds, CEC loans, IOU OBF.

6.4.2 Non-resource Metrics

The following metrics can help determine the success of efforts taken by LG partners in the non-resource activities investigated:

- Overarching Success Metrics

- Strategic Plan Menu tracking items have proven to be an effective/useful tool for partnerships in tracking success and should be continued;
- Number of trainings held with regards to codes, benchmarking, and/or climate action planning;
- Number of participants/attendees at trainings (mentioned above);
- Number of staff members been trained on energy management software;
- Do Energy Champions (LGP LG main representative) have a better understanding of energy efficiency/has their awareness increased?
- Is the public more aware of the energy efficiency and SCE's programs through the political network of the LGs? and
- Number of cities in partnerships that have advanced through the Energy Leader Model.
- CAP Success Metrics
 - Are city/region/city council members supportive of LG in implementing CAPs? and
 - The number of cities within partnership that have progressed towards implementation of CAP/EAPs and achieving goals.
- Benchmarking Success Metrics
 - Number/percent of buildings benchmarked and are then retrofitted; and
 - Number of buildings benchmarked with Energy Star and CEUS; after three years, number adopted into projects.

6.4.3 Program Tracking Data Issues

As stated previously, we analyzed LGP program savings, budget and expenditure data, which informed some of our findings and also helped us develop an understanding of the possibilities for developing an expansive set of metrics that could be used to track and oversee LGP program success going forward. We had access to a wide variety of data for our analysis from two sources:

- **The CPUC's EEGA** – which provides budget, and expenditure monthly data by program; and
- **Redacted Summary**-level IOU program data (LGP, core and 3P) from Itron – which provided energy savings goals and accomplishments by program. We provided Itron with an initial set of analysis variables and program classifications and they provided summary data.

We present the results of the LGP program savings data analysis in Appendix B (B.1).

Our team attempted to develop the following metrics, and in some cases encountered constraints, which we describe below:

- **Measure comprehensiveness** – fraction of program cycle savings (thus far) associated with basic lighting measures versus other measures;
 - Constraint: we started with a working definition for “lighting to code” used by one of the other Program Assessment teams that resulted in almost all lighting measures to show up in this category (likely because they all have incandescent lamp as a baseline – even LED measures); we subsequently created a simpler “T8/CFL” or “Other lighting” flag, but with more time and input from the IOUs we would have liked to iterate and break this category down into more levels to show distinctions across programs.
- **Customer segment** – penetration of customers, savings and number of individual projects across commercial customer segments and municipal buildings;⁸⁶
- **Customer size** – level of annual usage or type of commercial billing rate of customer in order to assess what types of businesses are being served by LGPs;
 - Constraint: there was not enough time to obtain data broken out by customer size; the first batch of summary-level data we obtained omitted this variable.
- **Program savings accomplishments** – savings (kWh, kW, therms) compared to goals; and
- **Program expenditures** – expenditures compared to budget.
 - Constraint: it would have been useful to break out budget expenditures by customer segment (e.g., muni versus commercial) and/or by type of expenditure (e.g., marketing and outreach versus administration) but the data are not reported at this level.

Early on during our research, we attempted to analyze communitywide savings for each LGP geographic area, including core, 3P, and LGP programs. We thought this could potentially be useful to compare across LGPs. We ran into issues and did not complete this analysis. We were considering developing the following metrics:

- **Total electric and gas consumption** – in the region served by each LGP to scale communitywide savings analysis and allow cross-comparisons;
 - Constraint: we were unable to obtain these data within the study timeframe.
- **Historical data** – historical data (e.g., prior program cycles) would allow analysis of change over time in areas served by LGPs and cumulative analysis;

⁸⁶ We used NAICS codes beginning with 92 to identify municipal customers for PG&E. For SCE, we first assumed that all LGP program savings were attributable to municipal customers, but we learned that there was one LGP (Desert Cities) that included savings from other customer segments. We excluded Desert Cities LGP from our analysis since we did not have NAICS code for SCE data.

- Constraint: we would like to have shown cumulative LGP and communitywide savings, going back as far as necessary to the start of each LGP – there are several issues with historical data, it is complex to link programs over program cycles (especially for communitywide savings) and the data are not readily available prior to 2010; and
- **Communitywide savings** – total savings associated with all IOU programs directed at each LGP area, to capture referrals to 3Ps (for PG&E and all IOUs) and core programs (for SDG&E and SoCalGas and SCE commercial/residential sectors) to facilitate consistent comparisons across IOUs.
 - Constraint: we combined what we thought were the relevant programs that the LGPs might refer customers to, which could benefit from review from the IOUs and refinement – it would also be useful to look at cumulative communitywide savings and to scale the savings (e.g., by per capita commercial customer usage).

6.5 Summary of Findings

Our findings suggest that LGPs that have made the most progress in meeting Strategic Plan goals (advanced) tend to have a combination of factors that allow them to overcome the many barriers to achieve progress across the spectrum of activities envisioned by the Strategic Plan. The most advanced LG partners in our sample have the motivation, authority, and foundation of energy efficiency capacity and the LGP program and related IOU resources (such as core program incentives, broader sustainability/renewable program funding and incentives, technical support, account and regional representative time and commitment) are used to support key implementation staff and provide critical funding for planning and implementation. Most often, the IOU resources are just one outside resource that the partner leverages—advanced LGP partners are adept at leveraging a variety of funding sources. LGP and IOU resources do not typically cause higher performing partnerships; instead an effective partnership uses LGP and related IOU resources for maximum impact. Traits that are common among the more advanced LGPs in our sample include:

- Supportive and motivated elected officials, who want to deliver on sustainability/climate action goals to a usually more liberal political constituency;
- Local or quasi-government implementers that have:
 - One or several motivated, competent staff that fulfill a project manager role, identifying LG projects/opportunities, identify and addressing barriers, and moving projects and initiatives forward;
 - Lead and support staff that can dedicate a good portion of their time to LGP activities, and are not completely consumed by other government duties;

- Continuity of staff that have developed a deep institutional understanding of energy efficiency and CAP issues over time, have an effective network, and understand the processes and nuances involved in program management and implementation;
- An adopted CAP or EAP, which can serve to drive progress in other areas (reach code development, benchmarking, retrofits), and is typically an indicator that the LG is motivated and has a foundation of energy efficiency and/or sustainability efforts, traits that are probably even more indicative of LGP performance than adopting a CAP;
- An ability to leverage additional resources within the LG to achieve greater progress;
- A history of energy-related activity and leadership, that provides the foundation for the LGP to build from; and
- Willingness to accept the risk associated with pursuing multiple financing options, with experience identifying and procuring a variety of funding sources (e.g., ARRA, CEC loans, IOU on-bill financing), typically including progressive city/county financing options such as revolving loan funds that allow energy efficiency savings to be kept out of the general fund and to be used for future energy efficiency/renewable projects.
- A leader in the region or a facilitating structure:
 - Local partner that is typically a leader in the region, who tends to innovate, lead, take on risk, develop creative strategies;
 - A large association or council of government implementer that is motivated, authorized and has internal resources combined with LGP support to provide tailored assistance to its LGs; and
 - A smaller association or council of government implementer that along with its LGs, convenes a group of sub leaders on specific components that together cover a broad range of expertise and influence.
- A supportive and collaborative IOU LGP structure, where the IOU provides resources that are valued and where the partner feels that the IOU will work to address their unique barriers.

LGP that have not made as much progress towards Strategic Plan goals (mostly ranked as foundational) may be successful in generating some targeted progress (e.g., developing an EAP, municipal retrofits, referrals to core programs). Existing infrastructure is typically leveraged (IOU core programs, experienced 3P implementers) and in some cases LG staff themselves become trained implementers.

The gap in progress between the sample of LGPs more consistently ranked as foundational versus advanced is making broad and substantial progress towards the long-term vision in the Strategic Plan. The major barriers we noted among the sample are a lack of LG resources due to the economy and the state's financial situation. Budget cuts and staff shortages make it extremely difficult for most cities and counties to dedicate personnel to drive energy efficiency and broader sustainability initiatives forward, unless the LG has been a leader in energy or sustainability for the long-term and already has existing infrastructure, or where the IOU through the LGP and other resources has been able to dedicate a critical mass of support (funding and expertise) to fill those gaps. LGP and related IOU resources are usually not substantial enough to overcome the many barriers facing LGs that lack historical energy efficiency experience (e.g., staffing and budget cutbacks, complexities of energy efficiency program implementation and regulatory reporting, cooperation of staff across multiple departments, many other competing priorities).

We noted that the sample of LGPs that were more often classified as foundational face a number of challenges that keep them from making more progress towards Strategic Plan goals:

- LGP program structural/model barriers:
 - Most cities within a county-implemented LGP, while well positioned to emulate pilot concepts tested by the county and with support from the LGP, lack sufficient resources to entice substantial progress across all but the most motivated and well-positioned cities;
 - For LGPs that are not implemented by a LG or association/council of governments, the implementers may lack the broad reach into the multiple channels of government necessary to affect climate action planning, reach code development and/or municipal building retrofits;
 - For LGPs implemented by business-oriented organizations, the implementers lack connections and authority to achieve meaningful progress in the municipal sector; and
 - For new LGPs that lack existing energy efficiency infrastructure, there may be long lead times on projects and initiatives, making it difficult to show progress within the typical energy efficiency program cycle period especially if they do not rely on 3P implementer expertise and infrastructure at least at the outset.
- Lack of facilitating geo-demographic characteristics:
 - In more political conservative regions of the state, a constituency (including contractors, businesses and residents) often does not want to devote local resources towards climate action planning (e.g., elected officials that do not want to use the words “climate change” when communicating to their constituency) or otherwise impede

economic recovery and business prosperity (e.g., development of reach codes that would inhibit new construction or remodels or create inconsistency across an area they serve); and

- Some LGPs operate in remote regions, lacking a leader LG to emulate, with greater difficulty tapping energy efficiency resources and expertise.
- LG barriers:
 - An unprecedented decimation of LG resources—staff and budget—that has reached “crisis” proportions for many LGs, and shows no signs of abating, that no matter how well IOUs design their programs, will be difficult for all but the leader LGs to overcome in the short run and build energy efficiency (EE) capacity; and
 - Some cities/counties have legal or institutional barriers to accessing funding and financing opportunities, and only those willing to accept financing risk and well-funded implementers are able to pursue creative solutions to these constraints among multiple levels of government staff.

There are also opportunities for LGPs mostly classified as foundational to achieve greater progress towards Strategic Plan goals:

- Encouraging more holistic/comprehensive programs:
 - There are regulatory and institutional barriers associated with the public goods funded-partnership program model, which is restricted to energy efficiency, to encourage broader climate action planning (i.e., beyond energy efficiency and DR) that could overcome a lack of partner motivation, resources, and pre-existing foundation of energy capacity.

We noted that these LGPs in our sample overcame barriers and achieved Strategic Plan goals, particularly with respect to energy efficiency, when:

- IOU support and facilitation;
 - Utility account (for business customers)/government (for municipal customers) representatives are particularly engaged in the partnership and motivated by goals to support energy efficiency retrofit projects, helping to identify appropriate contacts within the business community and at the LG;
 - The IOU and partner goals are aligned with respect to energy efficiency and climate change;
 - The IOU offers flexibility and/or additional resources (such as PG&E’s Green Communities Program) to LGPs so they have dedicated staff;

- The IOU motivates its partners to achieve energy savings, such as SCE's ELP model that explicitly encourages measurable savings in the municipal sector;
 - The IOU or a 3P contractor assumes administrative tasks for new inexperienced LG partner implementers, such as through providing contracting support; and
 - The partnership is adequately funded to fill key gaps within cities and counties.
- There is a leader LG (not necessarily in the role of implementer) in the region that can transfer effective strategies and lessons learned;
 - There is a dedicated implementer with sufficient resources to devote to the partnership whose interests are aligned with the partnership's goals;
 - LGs feel they are getting significant resources from the utility (e.g., incentives, data, tools, education) to tailor their activities to fit within the IOU partnership model and energy efficiency program cycle timeframe; and
 - The LG staff, at all appropriate levels, are sufficiently engaged in the partnership.

We noted a small number of LGPs, or LG(s) within a sampled LGP, in our sample that struggled even to generate municipal and commercial retrofits, and have made little to no progress in terms of Strategic Plan goals. New LGPs that lack existing energy efficiency infrastructure may not make much progress if they struggle to leverage internal, IOU, and external resources. Given the substantial barriers facing LGs, it may be that LGP/IOU resources should not be directed at LGPs that fail to advance after a program cycle since they are unable to devote even minimal resources to the endeavor. Resource are probably better directed at more advanced LGPs that are able to tap internal strengths. Or the IOU could consider restructuring the LGP or if possible directing additional resources to address the unique barriers. Common characteristics of low performing LGPs include:

- Cities that lack sufficient staff and motivation to achieve any meaningful progress; these cities should probably not implement partnerships and instead should be part of broader partnerships;
- A lack of commitment and motivation at the local level to address climate change, no vision or leadership or excessive economic barriers; and
- Lack of a motivated, results-oriented champion.

7 Conclusions and Recommendations

This study represents part of a larger effort to assess the performance of a large portion of the IOUs' nonresidential program portfolio to identify lessons learned and new best practices over a broad range of program attributes.

More specifically, the research objectives of this study include reviewing the operating landscape of the programs, characterizing LGP performance, identifying lessons learned (facilitating factors, limiting factors/challenges/barriers) and proposing potential best practices. While best practices have been developed for many program types (e.g., education and HVAC programs), a comprehensive set of best practices that pertain to the unique attributes of LGPs (e.g., city/IOU collaboration) does not yet exist. However, the California Statewide Best Practices Coordinator has made substantial progress developing best practices case studies and disseminating them to LGs. This research sought to find the levers—and combinations thereof—that best work to promote successful partnering and program delivery, which, in turn, helps meet the state's goals. Moreover, a primary purpose of our research was intended to identify a more comprehensive set of potential best practices and facilitating factors that are consistent with higher performing LGPs to inform future LGP design and selection.

Findings from this research are not robust enough to yield conclusive best practices. Instead we offer factors (characteristics or practices) we observed that facilitate higher performance among one or more of the sampled LGPs, termed “facilitating factors”, and suggestions for overcoming barriers either based on our judgment or suggested by one or more sampled LGP. Research efforts were complicated by the wide variation in context, activities, objectives, and approaches used by the LGPs. The LGP model does not lend itself easily to evaluation metrics of most kinds, including best practices. Paradoxically it is precisely the attributes that create complexity in measurement that also give LGPs' their unique and irreplaceable value. Overall, we observe the primary drivers of success are a combination of IOU contributions (management, services, support) and the varied and locally specific foci of the governments.

Table 29 provides a list of each partner's potential strengths and limitations. It bears noting that, while not considered a partner per se, the CPUC is an important piece of the LGP puzzle, with its own specific abilities to add value (e.g., authority to allocate resources and mandate change), as well as certain limiting factors (e.g., additional bureaucracy and limited staff resources).

Table 29 – LGP Partner Strengths and Limitations

	Local Government	IOU
Strengths	Access to resources (Financial) Community reach Ability to adopt plans, codes and regulations Broad authority over land use planning and development Ability to mandate change	Access to resources (Financial, Human and Informational/Intellectual) Energy efficiency expertise Training/Educational resources & facilities Program management & administrative expertise Energy use data
Limitations	Lack of resources (Human and Financial) Lack of energy efficiency expertise/infrastructure Shifting political landscape Multiple stakeholders with various agendas	Regulatory limitations Data confidentiality issues Administrative burdens & legal restrictions Multiple stakeholders/ overlapping programs

Given the number and variety of levers available, discovering the right mix to pull and the most important strengths of each partner to leverage are key considerations. Best practices should work to strike the balance of enabling the use of valuable attributes while decreasing the impact of limitations. To assess practices on a comparative level requires a reliable classification system, as well as an acknowledgement of the variety of motivators and that there are overlapping efforts (which may have differing motivators). This section presents study conclusions, recommendations, and suggestions that were informed by a consideration of such issues throughout our research. While we made significant inroads on addressing these evaluation issues, there remains work to be done to be able to comprehensively compare program performance across the state. We hope our findings, conclusions, recommendations, and suggestions can aid future research.

Study conclusions, recommendations, observations of facilitating factors, and suggestions for how to overcome barriers are organized by topic area. The topics start from the highest level, which is providing the motivation to ensure that each partner's (IOU and LG) goals for participating in the partnership are aligned with maximizing energy savings opportunities. Next, we discuss how the partnerships are designed to tap each partner's strengths through effective resource allocation

and attainment. Finally, we offer suggestions that relate to improving LGP program operations.

Facilitating factors were observed within a specific context(s) of one or more sampled LGP, and we are unable to assert whether those factors might facilitate success in different contexts. This precluded us from recommending that the IOUs broadly adopt the practices. Suggestions related to overcoming barriers are those offered by one or more LGP interviewee or stakeholder and/or based on our judgment. Collectively, we use the term “suggestions” to refer to observation of factors and suggestions for overcoming barriers.

Our intent is that the IOUs (for those directed at the IOU) consider our suggestions and explore those that might work in the various contexts present in each of their LGP portfolios; and that the CPUC consider those (directed at the CPUC) that might help them better guide and evaluate LGP program performance based on their needs and constraints.

Recommendations and suggestions that may apply to multiple areas are noted as such. Recommendations and suggestions within each of these sub-sections are provided in tabular format with the following columns:

- Number – Each recommendation or suggestion is numbered sequentially;
- Audience – Indicating to whom we are making the recommendation (e.g., CPUC, IOUs and LGPs);
- Topic Area – Indicating the type of recommendation or suggestion we are making (e.g., tracking and oversight or maximizing IOU resources);
- Recommendation or Suggestion – The recommendation or suggestion that in our opinion is worth studying further; and
- Context/Source – the context under which the facilitating factor was observed or the source of a suggestion for a practice that might improve LGP performance.

7.1 Motivation

This subsection presents conclusions, a recommendation, and suggestions related to increasing the motivation of IOUs and local governments to maximize energy savings and local governments’ progress towards Strategic Plan goals. First, we discuss how the IOU program models motivate LGPs. Next, we offer suggestions around program tracking and metrics that might lead to increased motivation to meet goals, and more effective oversight and evaluation. Then we discuss how to IDSM program participation might be expanded to meet Strategic Plan goals for local governments. Finally, we discuss the motivation of communities and local governments.

7.1.1 Program Designs

Each IOU offers a different LGP program model, each with its advantages and disadvantages as related to motivating LGPs to succeed.

SDG&E/SoCalGas' model is strictly non-resource, with no attributable direct savings claims. Local government partners appreciate the flexibility they are afforded and how they can focus on long-term goals and work within government planning cycles. The IOU program managers acknowledge that it can be difficult to measure LGP progress and motivate partners. However, for SDG&E there is a relatively small number of LGPs operating in one county, which makes tracking progress and ensuring effective use of program funds more manageable for the IOU.

PG&E claims direct energy savings associated with LGP activities in all sectors, helping to motivate partners and prioritize energy savings. They also provide additional funding and support through the Green Communities program, which helps some LGPs dedicate enough resources to non-resource activities to advance Strategic Plan progress.

SCE claims direct savings for the municipal sector, and its tiered ELP model rewards incremental progress of each local government towards achieving measurable savings. The IOU program managers note that the model encourages measurable progress as local government partners seek to move through the tiers. There is a prescribed set of criteria for each tier. It is transparent and easy to measure progress for individual local governments. Some partners would like more flexibility in the model, especially those that participated in prior program cycles before the ELP model was introduced.

SDG&E, SoCalGas, and SCE do not explicitly track indirect savings that result from LGPs conducting marketing and outreach that leads to an increase in IOU core program savings. We offer an observation below (a referral tracking system) that might address this issue.

There is no one right way to motivate and encourage LGPs to attain energy savings. There is a tradeoff between providing flexibility, and motivating and measuring progress. We do not offer any specific recommendations or suggestions related to the IOU models as a whole (such as suggesting one model should be offered over another) other than recommending that any changes that are made maintain the strengths of the existing models. However, we do offer suggestions in the next subsection that relate to improving the consistency of classifying and tracking LGPs to support better program oversight, planning, design, and evaluation.

The other recommendation and suggestions offered in this section relate to the themes of motivation, flexibility, and oversight, as they pertain to specific issues, which is a reflection that there is no magic bullet approach to LGP programs.

Instead, the inherent complexity of the state’s local governments is consistent with a varied approach to delivering energy savings and progress towards Strategic Plan goals.

#	Audience	Topic Area	Recommendation	Context/Source
1	CPUC	Program designs	Recognize that the diversity in IOU program models is somewhat a reflection and a response to the diversity of the state's local governments - no one size fits all. Any changes to IOU program designs going forward should try to maintain the existing strengths that each model offers.	Evaluator judgment

7.1.2 Program Tracking and Metrics

Currently, LGPs consistently measure accomplishments via direct energy savings claims (PG&E and SCE “government facilities” and PG&E’s “IOU core program coordination” program categories) and outcomes related to Strategic Plan Menu items that LGPs have selected (all IOUs’ “strategic plan support” activities) (e.g., a CAP is developed or a reach code is adopted). Both types of reporting serve to motivate LGPs to make measurable progress and facilitate IOU management and guidance and CPUC oversight. It appears that activities associated with meeting direct energy savings goals are usually prioritized by the LGPs. This is likely because kW and kWh savings have been traditionally, and remain, the “bottom line” metric of program accomplishments for the CPUC and IOUs, as evidenced by having associated goals included in regulatory decisions and being the metric that is most consistently tracked and reported (e.g., in the EEGA.)

The IOUs also report savings associated with LGP indirect energy savings activities (SDG&E/SoCalGas’ “government facilities,” and SDG&E/SoCalGas’ and SCE’s “IOU core program coordination” program categories), but those are claimed by the core programs and currently there is no way to track the level of indirect savings attributable to LGPs. SCE tracks some of the outputs associated with “IOU core program coordination” activities such as mayoral letters of support, however in general SCE, SDG&E, and SoCalGas do not systematically and comprehensively track outcomes, and impacts of indirect energy savings activities are not reported to the IOUs and the CPUC. This implicitly affects the degree to which these activities are prioritized by LGPs and the ability to which the IOUs can provide effective management and the CPUC effective oversight of them and of the programs, more generally.

Consistent with the best practice noted by the Energy Efficiency Best Practices Project of tying performance to verified results,⁸⁷ we believe that it may be useful to develop, track and report broader metrics of LGP success to motivate LGP progress and allow the IOUs and CPUC to provide more comprehensive and consistent oversight of resource (including direct LGP savings claims and indirect savings claimed by core programs related to “government facilities” and “IOU core program coordination” activities) and non-resource (“Strategic Plan support”) accomplishments. Additionally, it would aid the evaluation of the veracity of this supposition in the future.

#	Audience	Topic Area	Suggestion	Context/Source
2	CPUC & IOUs	Tracking and oversight	<p>Consider developing metrics for measuring broad LGP success consistently across the state such as:</p> <ul style="list-style-type: none"> • Number of cities within the region/county that have become engaged (e.g., appropriate contact has been identified and is participating in regular meetings). • The extent to which the partner has extended its unique authority in the partnership (see a related observation #11 that suggests a template could be filled out for each LGP that documents its strengths and weaknesses, which could include the reach of its authority). • The degree to which the LGP utilizes additional funding and financing sources such as ARRA, revolving loan funds, CEC loans, and/or IOU on-bill financing. • Number of cities within region/county that have initiated energy efficiency projects with LGP assistance. 	Evaluator judgment and suggestion by LGP interviewees

⁸⁷ For example, the best practice report for the large non-residential comprehensive incentives program (http://www.eebestpractices.com/pdf/BP_NR5.PDF), lists as a best practice “Tie staff performance to independently verified results.” Giving as a rationale: “Tying performance reviews and bonuses of program staff to verified savings as reported through an independent M&V or impact evaluation process is likely to increase project quality and the accuracy of initial savings estimates. Marketing staff, in particular, should have any financial incentives tied to savings that are independently verified.”

We also suggest that the IOUs also track referrals to core and third-party programs to measure outcomes and impacts, and motivate LGPs' indirect savings claims activities. This has been a recommendation in prior LGP program evaluations.

It was beyond the scope of this study to comprehensively assess the “degree of origination/referral” that should be implemented, as a wide range of outreach methods are currently employed (e.g., mailers to businesses versus presentations to targeted audiences with account executives present). At a minimum, commercial projects that result from very targeted efforts such as occurred through the Port of San Diego's Green Business Challenge⁸⁸ might be linked to the LGPs to reward their outreach and further demonstrate their impact.

#	Audience	Topic Area	Suggestion	Context/Source
3	IOUs	Tracking and oversight	Implement a tracking system such that projects that are originated through an LGP but implemented through core or third-party programs can be attributed to the originating LGP.	Evaluator judgment

In addition to the suggestion above related to broad metrics and tracking referrals, we also suggest that the IOUs consider developing additional metrics related to measure comprehensiveness and energy savings penetration by sector (e.g., municipal, residential, commercial). SCE already measures progress in the municipal sector relative to a consistent baseline, allowing consistent tracking across local governments.

#	Audience	Topic Area	Suggestion	Context/Source
4	IOUs	Tracking and oversight	Consider developing metrics to track measure comprehensiveness (e.g., percent of savings from measures other than basic lighting) and energy savings by sector (e.g., tracking cumulative commercial and municipal savings by LGP or savings relative to a baseline like SCE does in its ELP model).	Evaluator judgment

7.1.3 Expanding IDSM Participation

Limitations on how LGP program funds may be spent (e.g., they cannot be used for renewable projects) can restrict broader efforts to meet Climate Action Plan goals, but some LGPs overcome those barriers by tapping broader IOU and other

⁸⁸ The “Kilowatt Crackdown” and “Energy Showdown” programs offered in other states are similar successful examples of such targeted efforts.

resources. Climate Action Plans are roadmaps that outline steps and goals that a local government will use to achieve greenhouse gas emissions reductions. PG&E's Green Communities program is a good example of resources being provided to LGPs that can be used to support the planning and implementation of a Climate Action Plan. IOU account representatives can help link partners to additional IOU resources such as renewable programs, and state resources such as California Energy Commission loans and grants.

We noted that some local governments are enticed to engage with a partnership when they learn of other IOU resources they can obtain, such as solar rebates. By being willing to link local governments to additional resources, the IOU fulfills the vision of the partnership and increases IDSM activity. To get the most benefit requires the IOU taking time to learn the comprehensive needs of the local government, and the appropriate IOU representatives being engaged that understand all potential resources that are available. There is inconsistency among the IOUs in the interpretation of the extent to which LGP IOU program managers can dedicate time to linking local governments with resources outside energy efficiency and DR programs.

Below are three suggestions stemming from these findings.

#	Audience	Topic Area	Suggestions	Context/Source
5	IOUs	Remove regulatory barriers and expand the use of IOU IDSM resources	Continue to or start to provide broader IOU support for climate action planning and implementation to local governments via the channels they have established by the LGPs, such as by encouraging account representatives to link partners with IDSM programs.	PG&E's Green Communities Program coordination with PG&E's LGP programs
6	CPUC	Remove regulatory barriers and expand the use of IOU IDSM resources	Clarify the extent to which the IOUs are constrained from using LGP staff and resources to link local government partners to broader IDSM resources.	Evaluator judgment
7	CPUC & IOUs	Remove regulatory barriers and expand the use of IOU IDSM resources	Consider developing "shadow" metrics that address renewable projects and other projects completed by local governments with the assistance of the IOU using resources outside the LGP program to meet local climate action plans.	PG&E LGP interviewee suggestion

7.1.4 Motivating Communities and Local Government

As mentioned previously, there is great diversity across the state's local governments. There are factors in some areas that are a strength that helps support the LGP to meet its goals that in another area are a barrier. Political context is one such factor.

We noted that LGPs that tailored their messages to the local political climate had more success motivating the elected officials, business groups, and constituents to support the partnerships. In politically liberal areas, constituents tend to support efforts to address climate change and elect politicians who include addressing environmental and climate change issues in their platforms. LGPs provide resources to the local government to show to the constituencies that they are addressing their needs. Those resources may be used to develop and support the implementation of climate and/or energy action plans, where community members can participate in setting goals and tracking progress.

In politically conservative areas, politicians may be hesitant to promote LGPs in terms of addressing climate change, as some constituents do not want time and resources devoted to that cause. Business groups may also present resistance to LGP efforts such as adopting reach codes that they feel may negatively impact business development. LGPs in such contexts are more successful in tailoring the message of the partnership in terms of reducing government waste (e.g., reducing municipal energy bills) and creating local jobs (e.g., conducting retrofits in the community). Other strategies that were successful in these contexts were engaging vocal community and business groups as stakeholders and attempting to address their needs. We offer two related observations below. In Section 7.2.4, we offer a related observation for LGPs to tailor information about the benefits of LGPs according to the political context (e.g., GHG reductions or cost savings and job creation). These "talking points" could be developed by IOUs or LGs and potentially shared across LGPs.

#	Audience	Topic Area	Suggestions	Context/Source
8	LPGs	Motivating - local communities	Tailor the LGP message based on the local political climate - e.g., promote sustainability and climate change action in more liberal areas and cost savings and job creation in more conservative areas.	LPGs in politically conservative and liberal areas
9	LPGs	Motivating - local communities	Engage with community and business groups as potential stakeholders and attempt to tailor the LGP program approach to address their needs.	LPGs in politically conservative / pro-business areas

7.2 Resource Allocation

This subsection presents conclusions, a recommendation, and suggestions related to effectively tapping and allocating resources. Here we are referring to broad resources available to LGPs, such as information, tools, seminars, expertise, and financial and human resources. First, we discuss classifying LGPs and tailoring support based on their energy expertise. Next, we discuss IOU resources, local government resources, and finally, peer sharing across local governments.

7.2.1 Classifying and Tailoring Support to LGPs

We developed classifications of LGPs that aided our analysis. These groupings could serve as a starting point for more formal classifications to support future program design and implementation, development of best practices by the Statewide Local Government Best Practices Coordinator (who is tasked with developing a typology for LGPs), regulatory oversight, and program evaluation.

#	Audience	Topic Area	Recommendation	Context/Source
10	CPUC & IOUs	Classifying and tailoring support to LGPs	Consider building from the classifications used in this study to differentiate LGP programs by existing energy efficiency infrastructure, progress made towards Strategic Plan goals, ability to tap resources and structure (implementation type and geography) and use the classifications to aid in program planning and oversight.	Evaluator judgment

These classifications could support providing tailored resources to LGPs depending on their unique needs, advantages and barriers. Since there are so many LGPs across the state, trying to treat each one in the same manner is difficult, and classifying them by two or three key drivers of variation may be an effective improvement.

#	Audience	Topic Area	Suggestions	Context/Source
11	IOUs	Classifying and tailoring support to LGPs	Set realistic, short-term goals for new LGPs that lack energy efficiency infrastructure based on an understanding of their strengths, weaknesses and limitations (which could be based on a standard template that is filled out when new LGPs are developed and updated each program cycle).	Evaluator judgment
12	IOUs	Classifying and tailoring support to LGPs	Consider that LGPs that lack energy efficiency experience may benefit from prescribed approaches such as SCE's Energy Leader model, or close oversight such as direction on which Strategic Plan menu items they should select and what resources already exist (such as the Statewide LGP program resources – the Best Practices website, peer to peer forums, etc.) that they should leverage instead of each LGP starting from scratch.	LGs in the sample that lack EE expertise

We offer a suggestion related to special districts, where LGPs with more experience could be offered the option to serve these customers (possibly in conjunction with 3P programs) in Section 7.2.3.

7.2.2 IOU Resources

Through LGP programs and related services, the IOUs are uniquely situated to provide critical resources to local governments to achieve energy efficiency program goals. The IOUs provide training (e.g., on Title 24), technical support (e.g., on measure technology and such activities as developing CAPs), customer energy consumption and past program participation data, funding, and staff time (e.g., serving as project managers, doing technical analysis, developing contracts for partners). IOU account representatives provide key connections between the LGP and its municipal and commercial customers (via government reps and account reps, respectively), and also link customers to additional resources outside the LGP. We offer suggestions below related to maximizing the effectiveness of IOU resources.

#	Audience	Topic Area	Suggestions	Context/Source
13	IOUs	Maximizing IOU resources	Continue and increase involvement of IOU account representatives (government and commercial sector) in LGP programs to help achieve municipal and commercial retrofits, since they are able and often motivated by incentives to link partners with additional IOU resources such as non-residential or renewables rebate program rebates outside the LGP program.	PG&E's LGP model
14	LGs	Maximizing IOU resources	All levels of partnerships (e.g., Advanced and Foundational) should be encouraged to attend training on Title 24, in particular in regards to the opportunities to leverage the CALGreen structure and code enforcement/compliance enhancement.	Evaluator judgment
15	LGs	Maximizing IOU resources	Continue encouraging local governments to take advantage of IOU resources for CAP development such as PG&E's Green Communities support (e.g., GHG inventories and CAPs) and SCE's technical resource documents (templates, public documents and examples for completing Strategic Plan Menu items).	Evaluator judgment based on positive feedback from LGP interviewees

In Section 7.1.3, we offered suggestions related to leveraging the IOUs' IDSM resources, and in Section 7.3 we provide suggestions related to IOUs providing data to partners, lending IOU energy efficiency program implementation expertise, and contracting with third-party implementers on behalf of local governments.

7.2.3 Local Government Resources

An effectively engaged local government can leverage many additional resources both internally and externally—including financing, additional funding, marketing and outreach channels, branding, promotion, access to facilities staff, information and data, knowledge of community (business and residential), ability to create and enforce laws, broad authority over land use planning and development, and insight into the motivations of staff and elected officials—to achieve measurable goals.

The most advanced LGPs in our study sample typically have a history of energy efficiency infrastructure and use IOU resources along with many other internal and external resources; sampled LGPs that had made the most progress towards Strategic Plan goals use IOU resources for maximum impact. While LGPs in our sample that typically conduct a broad array of activities have made the most progress towards Strategic Plan goals, we did not find that that is because of synergies of doing multiple activities. Instead, we believe that LGPs that are doing broad work are *indicative of* an existing energy efficiency foundation, where barriers have been overcome, sufficient internal resources exist and external resources are harnessed. Such LGPs in our sample usually have made energy efficiency and sustainability a priority and have motivated staff and elected officials who are impelled to see results (typically because the constituency is asking for sustainability).

Local governments new to energy efficiency and sustainability typically have a long road to building the necessary foundation to achieving Strategic Plan goals, based on our review of the LGPs in our sample. This issue is currently exacerbated due to staff and resource shortages associated with the state's budget crisis. The IOUs can provide critical technical support and resources, but it may not be realistic to expect broad progress within all local governments in the near- or mid-term based on our sample in which the LGPs that had made the most progress had been in place two or more program cycles. Instead, expectations for success in one or two targeted areas in the first program cycle are more reasonable. LGPs that lack energy efficiency infrastructure could leverage 3P or regional energy efficiency implementation infrastructure, at least in the near-term, which is what we observed many new LGPs that lacked experience with measurable progress doing. Below we offer a suggestion related to the level at which energy efficiency infrastructure should be developed, and the extent to which it can be leveraged across a region.

#	Audience	Topic Area	Suggestion	Context/Source
16	CPUC	LGP structure	Consider whether every city should create its own energy efficiency program implementation infrastructure (including individual Energy Action Plans), given the state's budget crisis and its impact on local governments. A regional approach for areas that lack existing energy efficiency infrastructure may be more realistic, efficient and effective at least in the near and mid-term in order for local governments to realize Strategic Plan goals. Currently, the Strategic Plan indicates that all local governments individually should meet goals, but it may be more efficient and just as effective to develop energy efficiency infrastructure at a regional level, as long as it is leveraged effectively by all local governments so they can achieve the other Strategic Plan goals (e.g., retrofitting their municipal buildings, leveraging their community outreach channels, adopting reach codes and increasing code enforcement).	Multi-city LPGs

We observed two types of LGP implementation structures in our study sample that were correlated with the greatest degree of LGP progress towards Strategic Plan goals: council/association of governments⁸⁹ and single city/county that have a history of energy efficiency and/or sustainability, regardless of their size. We believe based on our knowledge and review of the study research that LGPs with alternative structures are usually not lower performing because of the structure (e.g., lack of a council of governments or city/county with energy efficiency implementation experience); instead, the structure is indicative of the constraints within the local government that limit LGP performance. Similarly, for individual cities or counties that have taken a leadership role on energy efficiency and/or sustainability, it is not the size or makeup of the local government that makes them successful implementers, but, instead, the prior motivation and experience that has created infrastructure that is leveraged by the LGP.

⁸⁹ Referred to more generically as "COG" in the remainder of the section, although this is intended to include both council of governments and association of governments as structure types.

The COG structure was correlated with greater progress towards Strategic Plan goals in our sample. Among our sample, a COG is the preferred implementation structure with the necessary authority and reach to provide comprehensive, efficient and equitable support to a region. The single “leader” city/county with a history of energy efficiency experience as implementer model is also correlated with progress towards Strategic Plan goals in our sample. But we noted resource gaps for the other cities/counties within the region under the leader city/county model in our sample, and their ability to produce substantial results may lag. Some partners also suggested, and we agree, that these structures also are at risk if the influential staff behind the leader city leaves. In essence, these structures do not have a “deep bench” of resources that is more likely to be available through a COG structure because of its larger span of influence and greater access to resources. An overlapping LGP model can be successful in overcoming this gap such as that being used in San Diego County by SDG&E: In this model a regional entity implements a partnership for the rest of the cities/counties and the leader city/county implements its own LGP. Close coordination between the two LGPs ensures that lessons learned are transferred and efforts are coordinated. The overlapping SANDAG and Chula Vista partnerships are good examples of this approach in SDG&E’s service territory.

Another LGP structure that was associated with LGPs in our sample that had made the most progress towards Strategic Plan goals is a Joint Powers of Authority (JPA) or non-profit organization dedicated to energy efficiency. These structures are regional and typically have success with most of the LGP program activities, but we noted in our small sample that they may struggle getting traction within the municipal sector (lacking the reach of a COG or a city/county since they usually do not have existing relationships, leverage, or motivation beyond the LGP). As stated above, LGPs in our sample that had made the most progress towards Strategic Plan goals use their authority and resources combined with LGP resources to achieve results.

A model that we noted was associated with less progress towards Strategic Plan goals is that of LGPs implemented by business organizations such as a chamber of commerce. Due to the focus on the needs of businesses inherent to these organizations, we found in our small sample that this type of model leads to gaps in addressing municipal and residential sectors. As noted in the above sections on IOU resources and motivation via program design, the IOU can address those gaps by leveraging other agencies, such as the IOU government representative’s contacts within the municipal sector or a third-party implementer’s knowledge of the residential sector. These cases usually require extra time and resources to build infrastructure to achieve broad success across all Strategic Plan goals. On the next page we offer suggestions related to effective LGP implementer structures.

#	Audience	Topic Area	Suggestions	Context/Source
17	IOUs	LGP structure	Structure LGPs with a Council/Association of Governments as implementer if one exists with energy efficiency experience.	A COG is in place that has existing EE infrastructure
18	IOUs	LGP structure	Structure LGPs with a leader city/county as implementer if one exists with energy efficiency experience.	City or county with existing EE infrastructure
19	IOUs	LGP structure	Consider creating an overlapping LGP with a regional entity as implementer to address the rest of the region. This regional structure would need to focus on deepening the pool of capable staff resources in order to mitigate the risk of staff turnover at the leader city/county.	A county with a city with EE expertise where the rest of the cities in the county lack EE expertise

Reduced municipal staffing and budget was the main barrier to achieving LGP goals mentioned by multiple interviewees, and has impacted municipal projects in diverse ways. Municipal facilities staffs across the state have been reduced significantly during the recession, and many staff can only perform equipment maintenance, versus planning and implementing upgrades. Rural cities, in particular, suffer from a lack of designated energy managers, and many cities cannot even complete municipal benchmarking, even if the LGPs provide training on this. Not surprisingly, LGPs and cities with dedicated energy managers have achieved greater progress.

In this section we present suggestions that could potentially be explored under any of the utility LGP models. Although SCE's LGPs do not claim savings for commercial projects and SDG&E/SoCalGas' LGPs do not claim any energy savings, we have retained suggestions pertaining to these sectors, since we believe they could help to increase savings overall (and as claimed by other programs), thereby helping meet state goals. Moreover, while in general outreach activities are typically classified as "non-resource", the specific outreach activities that are conducted in order to lead to retrofits are described here since they are closely related to resource outcomes.

Our interviews revealed several factors and practices that can help attain resource savings goals. In the remainder of this section we note how these facilitating factors can help to address some of the key barriers to retrofits that were documented in the Findings section of this report.

Key reasons for lagging municipal retrofits are insufficient facilities staff engagement—because local government activities are led by other organizational roles (e.g., community outreach, residential development functions)—or an absolute lack of facilities staff availability (due to budget cutbacks). Where these conditions are known, or are likely to occur, it is important that program planners adopt structures or strategies to ensure that municipal facilities are not largely ignored, and that cities/counties can use other municipal facilities’ staff expertise.

Conclusions offered in Section 7.1 are also relevant to increasing LG staff engagement by ensuring that they have the proper motivation to prioritize LGP activities. IOU program managers can also help increase the motivation and results-orientation of LGs to advanced LGP progress if they themselves are properly motivated with effective goals, oversight, and tracking. We make the following suggestions for LGPs where local cities do not have adequate staff resources to focus on municipal retrofits.

#	Audience	Topic Area	Suggestions	Context/Source
20	IOUs & LGPs	Consolidating resources across LGs where they are lacking	Where partner internal staff capacity is lacking or at risk of cutbacks, consolidate municipal facility assistance through aggregated government entities such as COGs (e.g., SANDAG), regional energy networks, and/or specialized contractors with municipal design, funding/grants and implementation expertise. This also creates a production leverage opportunity by providing a single “focal point” with which IOUs municipal sector staff can collaborate.	A COG and third-party contractor that have identified many municipal retrofit opportunities across multiple cities; many cities lacking staff capacity to pursue and implement grants, and manage new projects (versus maintaining operations)
21	IOUs & LGPs	Consolidating resources across LGs where they are lacking	Empower aggregated governments and/or contractors providing municipal facility assistance to actually implement projects approved by local governments.	Evaluator judgment
22	IOUs & LGPs	Consolidating resources across LGs where they	Encourage aggregated governments and/or contractors providing municipal facility assistance to conduct regional equipment procurements. Overall, this	A large city collaborating with multiple smaller cities to

#	Audience	Topic Area	Suggestions	Context/Source
		are lacking	strategy could be used in any regional context for which a city or agency (e.g., COG) is willing to lead a regional group initiative, and one or more partners will contribute funding. This strategy may be most advantageous for newer, emerging technologies, although procurement templates (and bulk purchases) could also work for established but under-utilized measures.	specificity and procure equipment for regional application

Cities and counties are under increasing fiscal pressure, and are likely to be for the foreseeable future. LGPs that are able to secure and utilize a variety of municipal funding sources (e.g., ARRA grants, CEC loans, OBF, revolving loan funds) have obvious advantages, however not all LGPs will have local staff capacity or expertise to tap into these resources.

#	Audience	Topic Area	Suggestion	Context/Source
23	IOUs & LGPs	Consolidating resources across LGs where they are lacking	Ensure that LGP cities and counties have access to specialized “municipal experts” with expertise in financial markets and strategies. This assistance could be from a higher-level implementer (e.g., COG, IOU-lead regional LGPs, regional energy network) or specialized consultant contractors.	Two COGs, a large city and mid-sized city with in-house municipal funding expertise, and multiple smaller cities less able to pursue and implement grants

Cities, working with their LGPs, are increasingly developing policies and accounting mechanisms that allow commercial businesses to finance improvements via their property taxes, and some of the programs (e.g., SCEIP) have already been recognized as best practice. Many smaller cities, however, may lack the resources to study, design, and implement these types of programs, which can be particularly valuable for commercial customers who are not able to use on-bill financing.

#	Audience	Topic Area	Suggestion	Context/Source
24	IOUs & LGPs	Consolidating resources across LGs where they are lacking	Ensure that LGP cities have access to specialized commercial projects expertise if internal staff capacity is lacking or at risk. This assistance could be from a higher-level implementer (e.g., COG, IOU-lead regional LGPs, regional energy network) or specialized consultant contractors.	A county, three large and mid-sized cities

Local governments usually have specialized knowledge of their communities along with access to marketing and outreach channels. In PG&E's service territory, there are advanced LGPs that would like to be able to comprehensively serve customers in their communities, but are precluded from doing so due to 3P programs that have first right of refusal. Anecdotally, there are some 3P programs that focus more on the larger customers offering greater energy savings opportunities, leaving a gap in treatment of small and medium customers. There may be an opportunity to tap additional local government resources to treat these, either on their own or in combination with 3P program implementers who may have more technical expertise for certain customer segments and/or measure types.

#	Audience	Topic Area	Suggestion	Context/Source
25	PG&E	Maximizing LG resources for LGs with energy efficiency capacity	Consider offering the more experienced LGPs the flexibility to treat customers and offer measures to small and medium customers that currently overlap with 3Ps; goals could be developed jointly across third parties and LGPs in areas with advanced LGPs.	PG&E LGP interviewee suggestion

As the Port of San Diego LGP exemplifies, targeting special districts (business/commercial or public services) through an LGP can present unique opportunities, as regular communication channels are usually firmly established and specialized districts have fewer competing priorities (e.g., residential efficiency projects). Often, the districts have close ties with their surrounding cities, or can be efficiently served with dedicated IOU LGP staff.

#	Audience	Topic Area	Suggestion	Context/Source
26	IOUs	Maximizing LG resources for special districts	Directly include public service districts in city/county/regional LGPs, unless legal restrictions disallow this. Otherwise, consider establishing separate LGPs for large public districts, where IOU staff can be leveraged effectively to potentially affect numerous projects. Inclusion of these markets might be an option offered to high performing LGPs that have a demonstrated capacity and ability to develop projects and deliver verified savings.	A public district that has successfully implemented targeted benchmarking and commercial retrofits contests; a PG&E COG and County; SCE interviewee's suggestion, based on previous experiences working with districts

We found in our study sample that LGPs that had made the most progress towards Strategic Plan goals usually have at least one if not two or three staff (at least 50 percent time, but usually full-time) dedicated to LGP program implementation, usually funded by the LGP (sometimes combined with related IOU program funding such as PG&E Green Communities). We noted that a small number of LGPs in our sample in which staff members across multiple local governments are putting in 10 percent time each did not gain traction because no one staff person places high priority on LGP activities. While our sample is too small to support a strong conclusion around specific staffing levels, partners that juggle LGP management with many other duties echoed our theory about the importance of prioritizing the LGP. Anecdotally, they told us that due to the complexities of participating in LGP programs and the challenges of working for local government in the current economic climate (with budget and staff cutbacks), being able to dedicate a significant portion of time to the LGP would help them make more progress faster. Turning to the partnership for a couple hours each week to attend a meeting and fill out a worksheet was not leading to meaningful progress. We offer suggestions below related to staffing as well as prioritizing code enforcement over reach code development for LGs that lack resources.

#	Audience	Topic Area	Suggestions	Context/Source
27	IOUs	Maximizing LG resources	Consider the ability of the local government to dedicate their own staff time and ensure that the IOU can provide sufficient funding if needed for LGPs such that at least one staff person can dedicate at least half their time to the effort.	LGPs that have at least one full-time employee engaged in the partnership
28	IOUs	Maximizing LG resources	Establish a "loading order" that places code compliance options before developing reach codes. Reach codes are better pursued by partners with the experience and depth of resources to dedicate to developing codes and enforcing code compliance. Partners with less expertise and infrastructure should not be excluded from pursuing reach codes, but should be made aware of code compliance options first.	Evaluator judgment
29	IOUs	Maximizing LG resources	For partnerships made up of multiple cities or counties, encourage development of broad staff capabilities related to climate action planning across the partnership such that the resource burden is distributed and the LGP is capable of continuing operation if there is turnover of key staff. IOUs can also provide added incentives to encourage staff participation.	Evaluator judgment

We offered suggestions in Section 7.1.3 and below in Section 7.2.4 related to leveraging the motivations of the community, including business groups, to support LGP program efforts.

7.2.4 Sharing of Resources Across Local Governments

The SEEC (described in Section 3.8) facilitates peer sharing of resources across local governments, which is critical to disseminate the lessons learned and resources developed by more advanced local governments to those that lack energy expertise and resources. We offer four specific suggestions related to sharing resources across LGPs. In the prior section, we offered suggestions related to sharing resources across local governments within a region to increase efficiency. The suggestions

below are intended to address sharing across all local governments, regardless of geographic proximity.

#	Audience	Topic Area	Suggestions	Context/Source
30	IOUs & LGPs	Sharing resources across LGPs	Developing and using templates to facilitate municipal projects implementation - to estimate energy savings, fill out applications (e.g., instructions for the application) and develop RFPs for projects implementation.	A COG, and IOU and a “lead city” in a multi-city LGP have all utilized various templates
31	IOUs	Sharing resources across LGPs	Continue encouraging local governments to learn from successful strategies of peer local governments for CAP development, such as sharing templates and technical resources including those provided by ICLEI.	Evaluator judgment and suggestion by LGP interviewees
32	IOUs	Sharing resources across LGPs	LGPs should be made aware of and provided templates for existing codes (i.e., CALGreen) to aid in the establishment of reach codes.	Evaluator judgment and suggestion by LGP interviewees
33	IOUs & LGPs	Sharing resources across LGPs	Consider tailoring information about the benefits and successes of participating in the LGP program to the local political climate - such as providing information on job creation and cost savings in addition to energy saved and avoided GHG. This could be informally shared across LGPs through peer networking, or the IOUs/SEEC partners could provide assistance.	Multiple LGPs noting that constituents more inclined to pursue energy savings than address climate change

7.3 Program Operations

This final subsection presents conclusions and suggestions for improving program operations. We identified a few areas of concentration, including audience targeting and outreach, program services and measures, and data sharing.

As mentioned in the previous section, targeting special districts (business/commercial or public services) through an LGP can present unique

opportunities. We offer suggestions related to improving program operations related to commercial districts.

#	Audience	Topic Area	Suggestions	Context/Source
34	IOUs	Benchmarking	Continue to offer training and education to LGPs on the importance and usefulness of benchmarking. Making training and education classes mandatory for partnerships to participate in Strategic Plan Menu goals may increase the successful delivery of these initiatives.	Evaluator judgment based on positive feedback from LGP interviewees
35	LGPs	Commercial districts	Target commercial retrofit campaigns to formal commercial districts (e.g., designated Business Improvement Districts), leveraging other city outreach efforts (e.g., “green streets” campaigns) and established communication channels.	A successful public district with commercial tenants and a mid-sized city with successful leveraging. Others cities planning to pursue this strategy
36	LGPs	Commercial districts	Consider utilizing contest formats for commercial districts (and perhaps public service districts) that reward businesses for participation and actual project completion, integrating peer networking, prizes and highly visible public relations.	A public district that has successfully implemented targeted benchmarking and commercial retrofits contests

We offer additional suggestions related to improving commercial and municipal retrofits on the next page.

#	Audience	Topic Area	Suggestions	Context/Source
37	PG&E	Commercial and municipal retrofits	Systematically implementing comprehensive (or “overlapping” as they are called by the implementer) audits, which include all measures offered by the LGP and other IOU programs, in a single comprehensive audit would benefit third parties by reducing their project search costs, and help PG&E to better understand lost savings opportunities when third parties do not pursue project referrals. Comprehensive audits would also help to attribute more savings to LGPs that aggressively look for comprehensive projects (a suggestion above).	Evaluator judgment (PG&E LGP piloting)
38	LGP	Commercial and municipal retrofits	Complete “basic” municipal facilities inventories prior to benchmarking and audits.	Mid-sized city that successfully obtained grants prior to rigorous assessments
39	LGP	Commercial and municipal retrofits	Implement personalized door-to-door commercial customer recruitment.	Multiple LGPs
40	LGP	Commercial and municipal retrofits	Include LGP mayors and other elected officials in customer outreach.	Multiple LGPs
41	LGP	Commercial and municipal retrofits	Require commercial energy assessments during the business licensing and re-licensing process (as the City of Chula Vista does via its FREBE program and which is recognized as best practice by the Local Government Commission.)	Mid-sized city
42	LGP	Commercial and municipal retrofits	Bundle measures for comprehensive projects. Systematically packaging more complex and less cost-effective measures with the most cost-effective measures allows for the development of comprehensive projects that are cost	Two COGs doing this

#	Audience	Topic Area	Suggestions	Context/Source
			effective, overall.	
43	LGP	Commercial and municipal retrofits	Include measure co-pays, to increase project comprehensiveness and reduce unreported measure failures. Offer additional assistance for regular code compliance/enforcement, particularly to smaller cities and rural areas.	Suggestion from LGPs

Several LGPs noted that they would need to promote new measures if CFLs and T-8 lighting are phased out of the statewide portfolio. We note that these issues are not unique to LGP programs, or to California energy efficiency programs. One LGP is working with its IOU to develop work papers for new deemed measures, such as LEDs, exterior lighting (induction), controls, comprehensive small business HVAC, refrigeration, bi-level controls in parking lots, wireless AC controls, energy management system, ceramic metal halide lighting (less expensive than LEDs), electronically commutated motors, and fan controls. Integrating these measures into LGPs may take a long time, however, due to the extensive CPUC review process. One LGP also reported that standard equipment “dumping” occurs (e.g., T12 lighting) in very rural communities, and that different LGPs may need to provide different measures. We offer related suggestions below.

#	Audience	Topic Area	Suggestions	Context/Source
44	CPUC	Phase out of highly cost-effective lighting measures	Consider the impact of phasing out cost-effective lighting measures on the cost-effectiveness of energy efficiency programs.	Suggestion from rural LGP
45	CPUC	Phase out of highly cost-effective lighting measures	Streamline the review of work papers to expedite the review process.	Suggestion from LGPs
46	IOUs	Phase out of highly cost-effective lighting measures	Prioritize efforts to better connect emerging technology programs with core/resource programs to better focus on technologies that can be readily deployed.	Suggestion from LGPs

We identified several issues related to sharing IOU data with local government partners. There are approximately 540 cities and counties across the state of California that will likely require increasing amounts of energy data for various needs such as ongoing GHG inventory work or targeted community level outreach. Several ways that LGPs might work collaboratively to help manage and improve the efficiency of data exchange issues include:

- Minimize the diversity of data requests being submitted to IOU partners by helping to develop common platforms across participating cities and counties; and
- Providing technical support to associated constituents such that each city or county does not need to dedicate scarce resources to managing energy data acquisition and analysis.

We provide suggestions related to data sharing below.

#	Audience	Topic Area	Suggestions	Context/Source
47	CPUC & IOUs & LGPs	Data sharing	Identify data issues (see Section 6.2.4) early and work in a collaborative forum to resolve data access issues quickly.	Evaluator judgment
48	CPUC & IOUs	Data sharing	Develop a set of data rules and protocols that are comprehensive, consistent, clear, fairly applied, and reflect current uses and benefits of data.	Evaluator judgment
49	CPUC & IOUs & LGPs	Data sharing	<p>Until an overarching set of rules and protocols are available, IOUs, CPUC, and program partners should develop the management capability to address data requests in an efficient and timely manner. Several aspects of this management capability include:</p> <ul style="list-style-type: none"> • Investigate the use of "Agile" software development teams to produce software and information products, including: <ul style="list-style-type: none"> ○ Small development team, work closely with data users to implement a rapid-prototyping and iteration model; and ○ Working to deliver data solutions within defined timeframes ○ Focusing on continuous improvement through regular 	Evaluator judgment and suggestion by LGP interviewees

#	Audience	Topic Area	Suggestions	Context/Source
			<p>adaptation to changing circumstances.</p> <p>Define a data governance authority at each IOU that can be a central point of contact on data issues. The data governance authority would be tasked with developing a process for managing data requests that are mutually agreeable to all parties. Provide a venue where LG partners, the IOUs, and the CPUC can convene to resolve data issues that cannot be resolved through early design collaboration, Active team development approach.</p>	
50	CPUC & IOUs	Data sharing	<p>Develop a suite of data reporting tools that can provide LG partners with an expanded set of data that can be used for non-contracted activity, such as targeted community outreach. This suite of reporting tools can fall into a pre-defined set of reports that address IOU data management requirements, while providing LGPs with best in class reports. (Appendix D provides an example of one such tool, the Tableau interactive data visualization and business intelligence tools provided through the Green Communities initiative.)</p>	Evaluator judgment and suggestion by LGP interviewees
51	CPUC & IOUs	Data sharing	<p>Review the potential role of new regional collaborations, such as Regional Energy Networks that support multiple cities and counties in coordinating and standardizing data requests (e.g., developing a standard template) between IOUs and cities/counties.</p>	Evaluator judgment