

**Application of Southern California Gas Company  
(U-904-G) for Approval of Natural Gas Energy  
Efficiency Programs and Budgets for Years  
2009 through 2011**

**Application No. 08-07-022  
Exhibit No.: \_\_\_\_\_**

**Chapter II**

**Supplemental Testimony**

**of**

**Athena Besa**

**Southern California Gas Company**

**Appendix B: Program Implementation Plans**


**Volume 3 of 4**

**Partnerships/Local Programs**

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

**July 2, 2009**



A  Sempra Energy utility®

**Partnerships/**

**Local Programs**

## 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

### 1) Program Name and Program ID number.

Program Name: Local Institutional Partnerships  
Program ID number: TBD

SoCalGas Master Program Implementation Plan, Statewide Institutional Partnerships, referencing the below programs:

ID#	Program	Sub-Program
	California Community Colleges Partnership (CCC)	Sub-Program IV*
	California Dept. of Corrections and Rehabilitation Partnership (CDCR)	Sub-Program I*
	State of California Partnership (State of CA)	Sub-Program II*
	UC/CSU Partnership (UC/CSU)	Sub-Program III*

\* Each Sub-Program PIP is referenced in this document by designated Roman numeral.

### 2) Projected Program Budget Table

Table 1<sup>1</sup>

Program #	Main Program Name/Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
	<b>Market Sector Programs</b>					
	<b>SCG Local Institutional Partnerships</b>					
	#L-InstP01 - CA Depart of Corrections Partnership	\$ 179,768	\$ 196,380	\$ 488,047	\$ -	\$ 864,194
	#L-InstP02 - CA Community College Partnership	\$ 296,321	\$ 312,056	\$ 880,715	\$ -	\$ 1,489,091
	#L-InstP03 - UC/CSU/IOU Partnership	\$ 265,278	\$ 207,385	\$ 582,487	\$ -	\$ 1,055,150
	#L-InstP04 - State of California /IOU Partnership	\$ 192,084	\$ 196,380	\$ 516,713	\$ -	\$ 905,176
	<b>TOTAL:</b>	<b>\$ 933,450</b>	<b>\$ 912,200</b>	<b>\$ 2,467,961</b>	<b>\$ -</b>	<b>\$ 4,313,611</b>

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

<sup>1</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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**3) Projected Program Gross Impacts Table**

**Table 2**

Program #	Main Program Name/Sub-Programs	2009-2011 Three-Year EE Program Gross kWh Savings	2009-2011 Three-Year EE Program Gross kW Savings	2009-2011 Three-Year EE Program Gross Therm Savings
	<b>Market Sector Programs</b>			
	<b>SCG Local Institutional Partnerships</b>			
	#L-InstP01 - CA Depart of Corrections Partnership	0	0	0
	#L-InstP02 - CA Community College Partnership	0	0	0
	#L-InstP03 - UC/CSU/IOU Partnership	0	0	0
	#L-InstP04 - State of California /IOU Partnership	0	0	0
	<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>0</b>

Note: Partnerships are considered non-resource programs and serve as a delivery mechanism for IOU programs.

These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

**4) Program Description**

*a) Describe Program*

Institutional Partnerships are designed to create dynamic and symbiotic working relationships between Investor-Owned Utilities (IOU), state or local governments and agencies or educational institutions. The objective is to reduce energy usage through facility and equipment improvements, share best practices, and provide education and training to key personnel. SoCalGas' (SCG) 2009-2011 statewide partnership portfolio will focus strongly on supporting the key California Energy Efficiency Strategic Plan (CEESP) goal of Demand Side Management (DSM) integration and coordination, which includes establishing integration procedures, piloting DSM integration programs, and improving regulatory coordination. The 2009-2011 Institutional Partnerships will also concentrate on innovative delivery channels and funding mechanisms to meet current economic conditions and achieve program integration and savings.

In the 2006-08 program cycle, SoCalGas successfully implemented three statewide institutional partnership programs; California Community Colleges (CCC), University of California and California State University (UC/CSU), California Department of Corrections and Rehabilitation (CDCR). Each statewide program was managed in conjunction with the other IOUs in the State of California. The 2009-2011 Institutional Partnerships will leverage off the past successes of the 2006-2008 Energy Efficiency portfolio and also strive to enhance offerings to meet the unique challenges of our institutional partners.

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SoCalGas has developed a strong history of working closely with a variety of institutional customers to improve energy efficiency. These partnerships enable customers to focus on; conservation, demand response, load shifting, and renewable energy within their facilities. In doing so, the partnerships assist institutional agencies comply with the state's CEESP and specific mandates enforced by the Governor. Additionally, the partnerships enable the institutional agencies to learn about and utilize innovative programs. They help the partners integrate efficiency into their overall plan and budget. By their very nature the partnerships facilitate collaboration between utilities, institutional agencies, and technical experts.

The cooperative nature of the partnerships, as well as the enhanced awareness they place on energy efficiency, has enabled many large projects at institutional facilities to be implemented that otherwise would have failed had they not been championed by partnership teams. In prior years, many partnerships achieved several million kWh of savings that might have otherwise been lost or installed with less-efficient equipment resulting in lower savings achieved. Institutional partnerships help to provide a streamlined and comprehensive approach to the customer, eliminating competition and confusion between IOU offerings.

Institutional Partnerships have evolved over the years to not only deliver energy savings but to include well established management teams. These management teams are comprised of IOU staff and representatives from institutional partners for each statewide partnership. The primary focus of the management teams is to present a consolidated approach to project management. The management team also assists the partner in identifying facilities that can be thoroughly audited; utilizing a comprehensive building approach to maximize the energy efficient potential. The management team reviews potential projects and develops working documents to illustrate payback and return on investments. This approach allows for projects to be prioritized and evaluated for potential implementation.

In addition, the partnerships have demonstrated that the three pillars of the Strategic Plan—Innovation, Integration, and Collaboration—are indeed the key to achieving the next generation of cost-effective, energy efficiency programs and the resulting reduction in greenhouse gas (GHG) emissions. Institutional partnerships capitalize on the vast opportunities for efficiency improvements and utilize the resources and expertise of IOU staff to ensure successful and cost-effective programs that meets all objectives of the California Public Utilities Commission (CPUC or Commission).

With the rising costs of energy and the current economic situation, partnerships will be vital in helping to offset project costs for customers and allowing continued advancement in the area of energy efficiency. Each Statewide program has developed strategies to allow for new opportunities as partnerships are forged and projects are implemented.

The four sub-programs proposed are listed and described below. Individual Program Implementation Plans (PIPs) for each are provided later in the document

### Program Elements for Institutional Partnerships

The adaptation and coordination of the 3 core elements (Institutional Facilities, Strategic Plan and Core Program Coordination) are represented below and have been agreed upon

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through discussions with IOUs and CPUC. Below is a list of core and sub-program elements that will be pursued by all partnerships. Elements that are unique to a single or a few partnerships will be described separately in sub-program PIPs.

<b>Core Program Elements</b>	<b>Sub-Program Elements</b>	<b>Type of Program Element</b>
1 – Government and Institutional Facilities	Energy Efficiency Retrofits	Resource
	Retro-Commissioning (RCx) & Monitoring Based Commissioning (MBCx)	Resource
	Demand Response New Construction	Demand Response Resource
	Program Administrative Management and Engineering Support	Non-Resource (technical assistance for project management, training, audits, etc.)
	On-Bill Financing	Non-Resource
2 – Strategic Plan Support	Code Compliance Support	Non-Resource
	Reach Code Support	Non-Resource
	Guiding Document(s) Support	Non-Resource
	Funding Sources	Non-Resource
	Peer-to-Peer Support	Non-Resource
3 – Core Program Coordination	Outreach & Education	Non-Resource
	New Construction and Demand Response	Resource – Demand Response
	Third Party Program Coordination	Non-Resource
	Emerging Technologies	Non-Resource
	Technical assistance for program management, training, audits, etc.	Non-Resource

Energy Efficiency Retrofits

This energy efficiency element could include: 1) lighting retrofit projects such as complete internal and external lighting retrofits (T5 technology, LED applications, newer 28 watt T8's, and in some cases replacing magnetic ballasts and T12 lamps), building-wide lighting controls, and boiler replacements, 2) Replacement of motors, variable frequency drives, energy management system upgrades, and HVAC upgrades/replacements including; chiller replacements and central plant upgrades. The partnerships will investigate opportunities to include energy efficiency measures in all major new construction and renovation projects, special repair projects, and standard scheduled maintenance operations.

To reduce peak demand and create energy savings in the existing facilities of the institutional partners, the partnerships will work with the facilities staff of the various customers to identify facilities and develop a pool of retrofit projects for implementation. Partnerships will also utilize benchmarking to identify retrofit candidates. The scope of the projects will be contingent on the availability of funds; however, the partnerships will work to ensure that projects are lined up in the event that additional funding is secured.

Each of the partnerships will have methodologies for identifying projects that work within their respective organizational structures. The identification strategy will involve the partnership teams preparing lists of potential projects matching the institutional customers with available budgets and existing modernization

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plans. Identification of potential sites includes utilities providing lists of service accounts with their annual consumption and peak demand values and consultants visiting probable sites to evaluate the efficiency upgrade potential of those sites.

In some cases and where applicable, institutional partners will use of the U.S. Department of Energy's Portfolio Manager to identify eligible candidates for energy efficiency projects. High-scoring buildings (above 75) typically meet the requirements of Executive Order S-20-04 in their optimization of energy use. Lower-scoring buildings are identified as candidates for potential energy efficiency programs. This process allows the IOUs and the institutional partners to make the best cost-effective choice in installing energy efficient measures.

### Retro-Commissioning and Monitoring-Based Commissioning

Each partnership will work to implement retro-commissioning (RCx) and/or monitoring-based commissioning (MCBx) projects. Some partnerships have already implemented such programs in some of their facilities, and they will continue to expand the number of facilities benefiting from these services. Others will work to implement them for the first time in a smaller number of facilities.

The RCx and MBCx projects will serve as opportunities to demonstrate a cost-effective approach to optimizing facility operations, saving both electric and gas energy, reducing operating costs while improving occupancy comfort, and improving environmental quality and reducing greenhouse gas emissions. The outcome of the projects will serve as an example to other internal departments within each customer organization, to other government agencies, and to private sector entities to encourage them to retro-commission their facilities.

Activities for this element may include but are not limited to the following:

- Selecting candidate buildings for RCx or MBCx based on results of benchmarking efforts or participation in the SoCalGas retro-commissioning program.
- Developing RCx/MBCx plans for each candidate building.
- Investigating opportunities through technical assessments of major building systems (lighting, HVAC, etc.).
- Conducting pre-functional tests of building systems.
- Identifying and correcting minor no-cost/low-cost deficiencies as well as capital improvement measures for future planning that may further improve system operation.
- Utilizing modeling/simulation software to model building operation and determine scenarios for optimum performance.
- Conducting functional performance tests to ensure proper operation of the optimized systems.

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- Developing training manuals and monitoring capabilities (if applicable) to ensure persistence of energy savings.
- Developing plans to comply with the governor's executive order and/or local government directives for future benchmarking and RCx activities.

### New Construction and Design Assistance

The partnerships will strive to achieve energy efficiency within all new buildings constructed by the partner institutions. Although the partner institutions have overarching directives that strive for laudable energy efficiency goals, these goals are not always implemented in practice. Budget and other constraints, as well as lack of concern, awareness, or knowledge, inhibit the realization of these goals in many new construction projects.

The ability of the partnership management teams to even be aware of all new construction projects varies significantly between the partnerships. The ability of the partnerships, or even the institutional representatives on the partnership teams, to actually control the implementation of energy efficiency in these new construction projects is even more limited. Therefore, education about energy efficiency and increasing both awareness of and concern about the subject among key decision-makers is a vital role of the partnerships, both for retrofits and new construction. The success of the partnerships in reaching all (or most) of the new construction projects is dependent upon their ability to bring various agencies, departments, and managers together under the energy efficiency umbrella.

For new construction projects, the partnerships' initial goal is to become aware of the various ongoing and planned projects within their institutions. This will be an easier task for the more centralized partners and more difficult for partners with distributed control.

Once the partnership teams are aware of new construction projects, they will work with the key decision makers to make sure they are on board with the importance of energy efficiency. The partnerships will also work closely with the utilities' Commercial New Construction Programs to provide assistance to the design teams for the new facilities. Because new construction energy efficiency is more effective when brought on board in the early design stages, the partnerships will strive to be pro-active in this manner, reaching out to newly planned projects as soon as they become known.

### Funding Sources

Federal grants, state financing, local bonds, IOU incentives, O&M budgets, and on-bill financing are potential funding sources. The partnership team and participating institutional partners may explore additional financing alternatives such as rebates, on-bill credit, CEC funding, and independent financing to maximize the state's investment in energy efficiency.



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Often the strengths of the customer organizations are leveraged in order to provide various in-kind contributions that benefit the entire program. These contributions include but are not limited to project management, facility personnel, marketing, site location venues and administrative time.

### On-Bill Financing

On-Bill Financing offering will provide zero to low interest financing for qualifying energy efficiency installations of lighting, refrigeration, and air conditioning measures for SCG's Market Segments, such as the Commercial and Industrial Market Segments and for government and institutional partnership programs.

All participating customers will be pre-qualified for a loan based on the customers' utility bill and payment history. The length of the loan may vary depending on the customer segment and measure life. Typically, a business loan will not exceed a 5 year term, while a government or institutional loan will usually not exceed a 7 year term. In addition, the length of the loan will also be capped at the length of measure life.

Loans will have a range from a minimum of \$5,000 to approximately \$250,000 for government and institutions. Maximum amount for government and institutions may vary by partnership and customer segments and will be subject to further research.

Many of the government and institutions are unable to incorporate energy efficiency designs or retrofits due to the lack of capital funds and complex procurement and funding procedures after the initial budget has been approved. The OBF element can be an effective tool that will increase participation and minimize lost opportunities.

### Demand Response

Demand response programs provide tariff-based benefits to customers implementing demand response activities. For demand response initiatives involving the purchase and installation of equipment by SCG's business customers, a plan will be developed to provide a financial incentive for energy savings resulting from the equipment supplied through the partnership program.

Partnerships will look for opportunities to integrate demand response and other DSM services into the program implementation plan. Resources will be leveraged to improve implementation efficiency and reduce transactional impacts on partnership staff. IOU energy efficiency and demand response program staff will collaborate with partners to conduct comprehensive audits and identify energy efficiency measures and demand response opportunities. The approach will reduce technical resources by combining EE/DR audits to avoid duplication and collaborate on incentive offerings which will all minimize customer interruptions.

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The partners will venture to identify facilities or an aggregation of facilities under a service account in order to establish opportunities for demand response participation.

Statewide Programs	Description	Sources of Funding & Assistance
California Dept. of Corrections and Rehabilitation Partnership	The CDCR/IOU partnership is a customized statewide energy efficiency partnership program that accomplishes immediate, long-term peak energy demand savings and establishes a permanent framework for sustainable, long-term comprehensive energy management programs at CDCR institutions served by California's four large IOU's.	Federal grants (specifically for new construction and modernization), state financing, IOU incentives and on-bill financing opportunities in accordance with CEESP objectives.
State of California Partnership	State of California/Investor-Owned Utilities (IOU) are collaborating to assist the state's 36 agencies to reduce the amount of energy they purchase by 20 percent by 2015, as required by the governor's Executive Order S-20-04 (i.e. Green Building Initiative (GBI)). Like all Executive Orders, the GBI is an unfunded mandate that requires State agencies to support the governor's environmental agenda.	Federal grants (potential), state financing, IOU incentives, comprehensive technical assistance and on-bill financing opportunities in accordance with CEESP objectives.
UC/CSU/IOU Partnership	The University of California, California State University (UC/CSU), Southern California Gas (SCG) and the IOUs are collaborating to continue the this Partnership to share energy efficiency best practices and implement energy efficiency projects for immediate and long-term energy savings and peak demand reduction.	State financing, local bonds, IOU incentives, comprehensive technical assistance and on-bill financing opportunities in accordance with CEESP objectives.
California Community Colleges Partnership	The CCC/IOU Energy Efficiency Partnership has been a successful collaboration between the California Community Colleges (CCC) and the four Investor-Owned Utilities (IOUs). The CCC is a two-year public institution of higher education that is composed of 110 colleges statewide and organized into 72 self-governing Districts.	Federal grants, state financing, local bonds, IOU incentives, comprehensive technical assistance and on-bill financing opportunities in accordance with CEESP objectives.

- b) List measures (technologies and corresponding incentive levels) to be provided in program and as used to develop the program's measure groupings described in Appendix A. May be included as an appendix to this PIP.*

The energy efficiency measures identified by all partnerships include both electric and gas measures.

Measure Categories	Technologies
Lighting	Includes indoor and outdoor fluorescent, HID, LED replacements, lighting controls, and other lighting projects.
Controls and other Equipment	Includes fans, motors, VFDs, air compressors, EMS systems and other equipment not covered under the lighting or HVAC categories.
Air Conditioning and	Air conditioning and refrigeration- Includes system and major

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Refrigeration	subsystem replacements such as central plants, chiller/boiler retrofits, whole building, and any other energy efficiency components in major infrastructure projects;
Other	New Construction, RCx, MBCx

- All program delivery mechanisms such as third parties and other innovative delivery techniques are provided at designated program incentive rates.
- Incentives will be paid on projects based on a cents per kWh saved. These rates are an average of \$ .24/kwh saved (for UC/CSU/CCC/CDCR, and State of CA) and will be detailed in the sub program for the specific partnership. Incentives are paid by the utility to the agency upon completion of the project. They are based upon the agreed-upon energy savings determined as part of the project evaluation, subject to changes made during the project’s implementation. All gas savings will be at \$1.00 per therm.

Incentive levels are referenced for each specific partnership in Sub-Program PIP I, II, III, IV, Section 6, iii.

*c) List non-incentive customer services*

The Institutional and Government Partnerships may include non-energy activities such as presentations at industry and association events, attendance at conferences, meetings, and community/outreach fairs. Distribution of marketing materials will be included at each event. Additional services include:

- Quality Assurance and Evaluation
- Training and education
- Design assistance
- Due diligence / project review
- Strategic Plan Support
- Core Program Coordination
- Funding Sources
- Program Administration and Management Support
- Support of State Assembly Bills, Senate Bills, and Executive Orders

**5) Program Rationale and Expected Outcome<sup>2</sup>**

SoCalGas and the other IOUs face the challenge of implementing cost effective energy efficiency programs that will result in immediate, long-term peak energy and demand savings in their service territories. The institutional partnerships consume vast quantities of energy and make up a significant portion of the both the electric and natural gas load in the State of California. These entities are large, complex organizations with a broad

<sup>2</sup> To be provided for each program and sub-program in PIP.

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set of goals, stakeholders, processes and constituencies. They are diverse from a geographic, climate, and operational needs standpoint. But with this size and diversity also comes a considerable opportunity to save energy use and cost on a scale that is meaningful to the IOUs and to California. Institutional partners also frequently struggle to fund and implement energy efficiency activities because of budgetary and resource issues. The Institutional Energy Efficiency Partnership Program is designed to meet these challenges.

Partnerships help provide a streamlined approach to institutional customers. Each utility dedicates a specific management team to support a portfolio approach, provide additional resources, and introduce innovative ideas to meeting the dynamics of institutional customers. Utility incentives and funding mechanisms help make energy efficient projects more cost effective and viable for institutional customers during the current economic times.

The expected outcomes for the 2009-2011 partnership programs include:

Partnerships will continue to:

- Lead and coordinate all energy efficiency, demand response, and solar initiatives by being the main point of contact for DSM offerings coordinating all projects, including Energy Efficiency (EE), Demand Response (DR), California Solar Initiative (CSI), Self Generation Incentive (SGIP) Programs as applicable to the partner.
- Leverage Partners' communications and outreach infrastructure to reach customers and/or internal departments more effectively,
- Provide co-marketing and technical support services dependent upon the customer's specific needs,
- Serve a key and growing role in creating and maintaining goodwill between the utilities and public sector customers. Institutional Partnerships build strong relationships statewide with the other IOUs and statewide customers, as well as with cities and counties.
- Continue to successfully develop new partnerships enhanced by the following improvements:
  - Direct a stronger focus on helping partners lead by example through addressing energy efficiency opportunities in their own facilities. Specifically, the partnerships will provide (1) technical assistance in identifying energy efficiency retrofit and retro-commissioning (RCx) projects, (2) financial assistance to help overcome barriers to implementation of these projects, and (3) combination EE/DR audits.
  - The partnership will seek opportunities to facilitate enhanced compliance with codes and standards. (AB 32, LEED, Exceeding Title 24 standards, etc.)
- Help to integrate the offering of demand-side management (DSM) programs and design strategies that will assist with the California Energy Efficiency Strategic Plan (CEESP).

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- Energy efficiency and demand response audits will be integrated and the partnership management team will actively coordinate all DSM services.
- Simplify and standardize state policies and codes guiding local building design and zoning codes.
- Building the capability to lead by example in energy-related technologies
- Maximize energy efficiency in new and existing construction and/or statewide policy
- Rapidly upgrade and expand energy efficiency training and information for energy managers and maintenance personnel.
- Align energy efficiency program opportunities closely with Green Rating opportunities, and increase program participation by ensuring that green rating systems reflect or parallel program offerings.

### Expected Outcomes

The partnerships will deliver energy savings and peak demand reduction in the facilities of the partner customers and other government agencies. These energy savings will be accomplished by evaluating the energy efficiency potential of existing buildings and then implementing retrofits and/or retro commissioning in some of those buildings. Additional savings will be achieved by working in the early stages of new construction projects to assure the most energy-efficient design acceptable to the customer (and to increase the desire to make highly energy-efficient designs “acceptable”).

Other program results will include:

- Showing that, with upper management support for energy efficiency, the customers can create opportunities to save energy, reduce operating costs, and improve occupancy comfort.
- Demonstrating that the partnership programs can be extremely cost-effective in the implementation of energy projects by supplementing the customers’ project funding with the incentives offered by the utilities.
- Evaluating the value of energy efficiency activities and the benefits associated with retro-commissioning.
- Exhibiting the potential for future public/private partnership efforts.
- Conducting a comprehensive survey of the potential for energy projects at customer facilities, identifying the best candidates for retro-commissioning or retrofitting, and constructing a long-term plan for the implementation of these projects. These energy project plans will be important to ensure that the customers continue to plan and implement energy efficiency projects beyond the term of the partnership so that the reduction in energy consumption occurs by the 2015 deadline.
- Developing opportunities for various government agencies to share best practices and lessons learned from partnership activities, especially in the areas of benchmarking, energy efficiency, retrofits, retro-commissioning, and emerging technology.
- Increasing awareness of energy efficiency among elected leaders, agency managers, operating staff, and the general public.

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- Publicizing the benefits of utility incentive programs within various government agencies.
- Providing specific information to the constituents of the institutional partners regarding the partners' achievements in energy efficiency as well as environmental improvements such as reducing greenhouse gases.
- Provide new and innovative ways to fund and implement energy efficient projects.

### **a) Quantitative Baseline and Market Transformation Information**

Market Transformation (MT) metrics proposed in Tables 3 and 4 are preliminary. The proposed metrics are meant to initiate a collaborative effort to elaborate meaningful metrics that will provide overall indicators of how markets as a whole are evolving. MT metrics should neither be used for short-term analyses nor for specific program analyses; rather, should focus on broad market segments.

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process and the successful end state have not yet converged. The CPUC defines the end state of MT as “Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market.”<sup>3</sup> The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies<sup>4</sup>.

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical and 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures<sup>5</sup>. Markets are social institutions<sup>6</sup>, and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains<sup>7</sup> as well as changes to codes and standards. Resource acquisition programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation progress<sup>8</sup>. According to York<sup>9</sup>, “Market transformation is not likely to be achieved without

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<sup>3</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>4</sup> California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

<sup>5</sup> Pelozo, J., and York, D. (1999). “Market Transformation: A Guide for Program Developers.” Energy Center of Wisconsin. Available at: <http://www.ecw.org/ecwresults/189-1.pdf>

<sup>6</sup> Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) “From technology transfer to market transformation”. Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at [http://www.ecee.org/conference\\_proceedings/ecee/2001/Panel\\_2/p2\\_7/Paper/](http://www.ecee.org/conference_proceedings/ecee/2001/Panel_2/p2_7/Paper/)

<sup>7</sup> Sebald, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at [www.calmac.org](http://www.calmac.org).

<sup>8</sup> Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings*.

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significant, permanent increases in energy prices. From an economic perspective, there are 3 ways to achieve market transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy.”

The question of what constitutes successful transformation is controversial because of a Catch-22: Market transformation is deemed successful when the changed market is self-sustaining, but that determination cannot be made until after program interventions are ended. Often, however, the need for immediate energy and demand savings or immediate carbon-emissions reductions will mean that program interventions may need to continue, which would interfere with the evaluation of whether MT is self-sustaining. Market transformation success has also been defined in terms of higher sales of efficient measures than would have otherwise occurred against a baseline absent of program interventions. The real world, however, provides no such control condition. Evaluators must estimate these baselines from quantitative factors such as past market sales that may be sparse and/or inaccurate - particularly for new products. Evaluations must also defer to expert judgments on what these baselines may have been as well as on the degree of successful market transformation<sup>10</sup>. Due to the subjective nature of these judgments, it is imperative that baselines as well as milestone MT targets be determined and agreed upon through collaborative discussion by all stakeholders, and these targets may need periodic revision as deemed necessary by changing context.

Market transformation draws heavily upon diffusion of innovation theory<sup>11</sup>, with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades<sup>12</sup>. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects<sup>13</sup>. The ability to make causal connections between these market transformation effects and any particular program’s activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are. First and foremost, they need to be designed specifically to address market transformation. “The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given to program designers.)<sup>14</sup>” The Strategic Plan recognizes that regulatory policies are not yet in

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<sup>9</sup> York, D., (1999). “A Discussion and Critique of Market Transformation”, Energy Center of Wisconsin. Available at <http://www.ecw.org/ecwresults/186-1.pdf>.

<sup>10</sup> Nadel, S., Thorne, J., Sachs, H., Prindle, B., and Elliot, R.N. (2003). “Market Transformation: Substantial Progress from a Decade of Work.” American Council for an Energy-Efficient Economy, Report Number A036. Available at: <http://www.aceee.org/pubs/a036full.pdf>

<sup>11</sup> Rogers (1995) Diffusion of Innovations, 5<sup>th</sup> Ed.

<sup>12</sup> Example in bottom chart of this graphic from NYTimes: <http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html>

<sup>13</sup> Sebold et al (2001) p. 6-5,

<sup>14</sup> Peters, J.S., Mast,B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume 1.*” Available at <http://calmac.org/publications/19981215CAD0001ME.PDF>.

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place to support the success of market transformation efforts<sup>15</sup>, but also reflects the CPUC's directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions<sup>16</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the utilities look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin's guide for MT program developers<sup>17</sup> suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

The metrics and baselines described below in Tables 3 and 4 are presented for the purposes of starting the much-needed discussion between all key participants. These are suggestions, intended to allow key participants to pilot-test processes for establishing baseline metrics, tracking market transformation progress, and for refining evaluation tools. Early trial of these evaluation metrics will reveal any gaps in data tracking so that we may refine our processes before full-scale market transformation evaluations take place.

The set of metrics we selected is intentionally a small set, for several reasons. First, as mentioned, the full set of metrics and baselines need to be selected by key participants. Second, we anticipate that market share data for many mid- and low-impact measures will be too sparse to show MT effects and not cost-effective to analyze. Third, we selected core measures and metrics that would both be indicative of overall portfolio efforts. These measures are also likely to be offered on a broad level by other utilities, providing a greater base of sales and customer data that could be analyzed for far-reaching MT effects.

Therefore, for the Institutional Partnerships, the utilities recommend development of a baseline, and tracking the number of cities, counties and government institutions that have plans for written energy efficiency provisions. Such a metric relates directly to the Strategic Plan (Goal 12.3.4) in terms of measuring progress towards 50% plans for sustainability.

With this discussion in mind, IOUs propose the following metrics for this sector:

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<sup>15</sup> CPUC (2008) Strategic Plan, p. 5.

<sup>16</sup> Nadel, Thorne, Saches, Prindle & Elliot (2003).

<sup>17</sup> Pelozo & York, (1999).



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**Table 3**

	<b>Baseline Metric</b>
	<b>Metric A</b>
Energy Efficiency Action Plans	Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.

**b) Market Transformation Information**

As stated above, market transformation draws heavily upon diffusion of innovation theory, with the state of a market characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects. Therefore it is problematic, if not impractical, to offer internal annual milestones towards market transformation sectors and specific program activities.

As a consequence, it is not appropriate to offer more than broad and general projections. Any targets provided in the following table are nothing more than best guesstimates, and are subject to the effects of many factors and market forces outside the control of program implementers.

**Table 4**

<b>Market Sector and Segment</b>	<b>Internal Market Transformation Planning Estimates</b>		
	<b>2009</b>	<b>2010</b>	<b>2011</b>
Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time

- 1) *Program Design to Overcome Barriers: Describe priority barriers that the program will overcome and how program is designed -- through marketing,*

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*delivery mechanisms, incentive levels, or other means -- to overcome these barriers.*

The existing partnerships have worked diligently to overcome barriers, though many still exist. The effort to resolve barriers is on-going, and significant progress has been made in each of the various partner customers. At the heart of the evolving success are the partnership teams made up of customer staff, utility staff, and consulting professionals. These teams enable the partnerships to overcome these barriers through a number of important and innovative mechanisms. The chart below outlines overarching barriers applicable to all partnerships. Specific barriers will be discussed in each sub-program PIPs below.

Primary Barriers	Strategies to Overcome Barriers
<p><u>Funding:</u> Project Funding Constraints. Energy efficiency is costly and budgets are limited. The decision-makers approving the details of a project often choose not to implement the high-costing more-efficient systems, equipment, or technologies.</p> <p>The Energy \$Mart Loan Program: This State program has taken a hit with the current economy and currently only carries one preferred lender.</p> <p>The IOUs On-Bill Financing: Not all utility OBF programs are ready for implementation.</p> <p>Internal Policy for Incentives: Incentive dollars are most often allocated to the general fund which makes for an inability to ensure incentives are allocated toward the participating department budget.</p>	<p><u>Incentives</u> help relieve budgetary constraints and assist the economic evaluations of the customers by making energy efficiency more cost-effective. In addition to their purely economic role, the incentives play an important part in promoting the importance and visibility of energy efficiency.</p> <p><u>The Energy \$Mart Loan program</u> has been created to finance energy projects through the Department of General Services. CEC loans may be able to fulfill the gap in funding.</p> <p><u>The IOUs On-Bill Financing Programs</u> are either being implemented or developed as a way of financing smaller retrofit and modernization upgrades</p> <p><u>Internal Policy for Incentives</u> Assist customer with identifying ways of authorizing funding departments to recapture dollars received from incentives to reinvest in future energy projects.</p>
<p><u>Knowledge Barrier.</u> Economic decisions are often short-sighted, with capital limitations taking precedence over long-term savings, even when accurate economic analysis would select the higher initial cost of higher-efficiency choices.</p>	<p><u>Education and training</u> brings energy efficiency awareness to decision-makers at all levels. Many of the partnerships have specific plans to incorporate education and training for a variety of people including elected officials, key department managers, facilities staff, personnel from other local governments (such as cities and school districts within the counties), and, in the case of the college partnerships, training within the general population.</p>
<p><u>Technology</u> itself is rapidly developing, and even the best-informed energy professionals have difficulty distinguishing between sales propaganda and truly valid technical advancements.</p>	<p><u>Integration</u> allows the partnership management team to be the single source of contact that enables the institutional customers to take advantage of all energy programs offered by the IOUs. This integration will break down many customer barriers to participation in multiple programs. Integration is innovatively being collaborated with internal utility departments in order to fulfill this strategy. Future strategic plans are being developed to include new construction, emerging technologies, education and training, demand response, California Solar Initiative (CSI), self-generation, on-bill financing, and other utility programs within the scope of partnership activities.</p>
<p><u>Staffing.</u> Staff time is at a premium, with most facility personnel. Attention to proper energy efficiency is time consuming and may get shelved as staff members work on more immediate problems.</p>	<p><u>Professional assistance</u> from utility staff and partnership consultants allows potential projects to be identified and evaluated. Many institutional and government customers do not have the time to methodically evaluate their buildings and identify the most salient energy efficiency projects. Furthermore, facility personnel often lack the technical expertise</p>

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Primary Barriers	Strategies to Overcome Barriers
	to evaluate those projects and determine the best energy efficiency improvements. The partnership team is able to prepare comprehensive lists of projects, evaluate their energy savings potential, and bring them to the team for review. The customer can then use this information to accelerate the timing of some projects, modify the scope of others, and rely on strategic energy planning, rather than simple maintenance schedules, for energy efficiency enhancements.
<u>Information Dissemination:</u> Some of the agencies lack the technical expertise to develop or manage projects.	The management team is currently developing an information tool for some agencies that will help reveal the savings potential of implementing energy efficiency measures in like size facilities. This is meant to appeal to the facilities managers or decision makers and allow the IOU to perform detailed energy audits that eventually lends itself to a project proposal.

We anticipate that each of the partnerships will continue to work through the various obstacles that inhibit the full implementation of energy efficiency within their customer institutions. This is a gradual and evolving process, and some of the partnerships have more significant barriers than others. Nonetheless, the partnership model is effective for all of them and leads to considerable energy savings and demand reduction, both in new construction and in existing buildings. For many of the institutional customers, budget requirements are becoming even tighter. The continuation of the partnerships will help assure that barriers do not become even more significant as budgets are reduced. Institutional Partnerships are designed to overcome barriers to participation and are designed to eliminate these barriers through:

### Customer Contributions

Often the strengths of the customer organizations are leveraged in order to provide various in-kind contributions that benefit the entire program. These contributions include but are not limited to project management, facility personnel, marketing, site location venues and administrative time.

The customer-partners provide major support to the partnerships and the energy-efficiency projects sponsored by the partnerships. The equipment and installation of the retrofit, new construction, and RCx/MBCx projects is paid for by the customers. The projects are managed by them or by a project manager paid for by customer funds.

Key personnel from the institutional partners also attend the routine partnership team meetings and provide additional work directing overall partnership activities and managing various energy efficiency projects. In some cases these are full-time positions paid for by the customer. Customer managers and various facilities and technical staff also provide assistance on an as-needed basis to the utility staff and/or partnership consultants for their various duties. This assistance includes such things as researching and locating building plans and providing access for and assisting with site surveys and monitoring activities.

### New Partnership Program Startups

As the awareness and success of the institutional partnerships grow, more government agencies may wish to form partnerships. We propose reserving an extra budget for these partnerships should they materialize during the course of the three-year program cycle.

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In order to create a new partnership, the government agency would develop an abstract similar to those used in the initial program planning for this program cycle. This would be submitted to the partnership program manager, either directly or through the customer's account executive. The program managers would then review the abstract and ascertain its viability and cost-effectiveness, as well as the availability of remaining funds. If the proposed partnership appears viable and there are sufficient funds remaining, the program manager will work with the potential partner to develop a program implementation plan.

Should additional partnerships not be created, the reserve funds could be used for additional projects within the existing partnerships based upon the utilities determination of need and optimal cost-effectiveness.

### Single Point of Contact

The partner customer would like a single point contact for energy programs that can help them make the most logical, effective energy decisions, and not have to sort out competing IOU offerings. The partnerships have taken a proactive approach to the integration of program communication. One strategy is to assemble a package of offerings that covers all the energy bases and is not just confined to the direct offerings from the partnership. These offering packages are presented one-on-one by the partnership team to various other personnel within the institution. The partnership teams are committed to using the most appropriate programs and will make sure that the right people for each IOU program are brought in at the right time for their implementation.

- 2) *Quantitative Program Targets: Provide estimated quantitative information on number of projects, companies, non-incentive customer services and/or incentives that program aims to deliver and/or complete in 2009-11 timeframe. Provide references where available.*

Program Name	Program Target by 2009	Program Target by 2010	Program Target by 2011
<b>Institutional and Government Facilities</b>			
EE/DR Audits	Ensure 100% of all audits are coordinated EE/DR efforts if applicable	Ensure 100% of all audits are coordinated EE/DR efforts if applicable	Ensure 100% of all audits are coordinated EE/DR efforts if applicable
Lighting and HVAC Retrofits	Identify potential for Retrofits	Identify potential for Retrofits	Identify potential for Retrofits
RCx and MBCx	Benchmark facilities to determine potential	Benchmark facilities to determine potential	Benchmark facilities to determine potential.
New Construction	Communicate Integration Strategy between internal departments and offerings and incentive structure.	Develop project agreement plan to ensure penetration of all existing and future potential projects.	Complete projects establish future pipeline.
<b>Strategic Plan Support</b>			
See Tables in Section 5e			
<b>Core Program Integration</b>			
Education and Outreach	TBD # of Partner Presentations	TBD # of Partner Presentations	TBD # of Partner Presentations

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<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
Financial Solutions Program: On-Bill Financing Element	Development documentation package and project agreement for partners.	Determine which partners will use OBF, establish a model for how OBF can be used with Institutional and Government customers.	Complete documentation of participation rates for partnerships and determine any lessons learned or roadblocks.
CSI	Establish communication plan for ensuring partners have been educated regarding solar potential	Develop project agreement plan and determine necessary stakeholders.	Complete documentation of participation potential and what is necessary for partners to participate

**Table 5:[e.g. Target #1: 20,000 refrigerators recycled by 2011; or Partnerships with 5 of the 10 top homebuilders by 2010]**

- 3) *Advancing Strategic Plan goals and objectives: Describe how program aggressively advances the goals, strategies and objectives of the California Long Term Energy Efficiency Strategic Plan. Reference and describe how program advances specific 2009-11 near term action steps toward Strategies outlined in plan.*

The California Long-Term Energy Efficiency Strategic Plan (Strategic Plan) sets forth a statewide roadmap to maximized achievement of cost-effective energy efficiency in California’s electricity and natural gas sectors between 2009 and 2020, and beyond. **Appendix R:** summarizes how the Institutional Objectives and Strategies during the 2009-2011 program cycle contribute to the fulfillment of the Strategic Plan near-term action and steps toward the plan’s longer term goals.

**See Appendix R for Institutional Alignment with California Long Term Energy Efficiency Strategic Plan.**

**6) Program Implementation**

- a. *Statewide IOU Coordination: Describe statewide IOU coordination efforts that will guide program implementation. Describe how the following will be coordinated and unified when available:*

*i) Program name*

Statewide Institutional Energy Efficiency Partnerships – (CDCR, State of CA, UC/CSU, CCC); Local Government Partnerships – University of San Diego, San Diego County Water Authority

*ii) Program delivery mechanisms*

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The partnerships will build upon the implementation strategies used in the 06-08 cycle. Mechanisms include:

- CORE / Target Market coordination
- Third Party Coordination
- Direct Install coordination with new and existing implementers
- Non-Residential Retrofit (NRR)
- Coordination with Non-residential New Construction (NRNC)

The implementation plan for this cycle will be refined to account for progress already made and will include:

- A more streamlined program management structure.
- Coordination with other energy efficiency programs and ongoing statewide and local government partnerships.
- Energy efficiency retrofits program element implementation (including project selection and implementation).
- Monitoring-based commissioning (MBCx) and MBCx Express implementation.
- Energy efficiency education and best practices development and training implementation.
- Integration with portfolio of products & services (e.g. California Solar Initiative, Savings By Design, new construction and demand response activities) into a partnership that enables easier customer access and streamlined IOU management of programs

### Third Party Program Coordination

Partnerships will ensure that third party programs are coordinated throughout partnership portfolios. Partnerships will present all delivery channels to customers to meet their unique needs. Due to funding constraints; third party program may be a more cost effective alternative to achieving energy savings. Management teams will coordinate internally to deliver third party programs as a combined front to the partner, eliminating multiple personnel and points of contact.

#### *iii) Incentive levels*

- See sub-program PIPs for specific incentive levels.

#### *iv) Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms.*

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- The Institutional Partnership structure builds on previously successful marketing and communication networks between the partner and its various agencies. This “buy-in” from the top opens up communications channels to the whole system. Combined with the existing management structure from the 2006-08 programs, this will facilitate marketing activities through pre-established channels for 2009-11. Due to support from the top of the organization, partnership programs will be very visible and provide opportunities to leverage existing conferences and meetings to raise awareness among internal departments for the program.

### Peer-to-Peer Support

Peer-to-peer support is considered a key part of the partnership strategy. Forums will be created for partners to share best practices and offer support for each other. Institutional partners utilize conferences and partnership workshops to present lessons learned and share success stories to expand outreach and encourage other segment customers to implement these various strategies for aligning with the CEESP.

See Sub-PIP tables Section 6, iv for Key Outreach Activities

- v) *IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable*

IOUs are continuously monitoring their respective local government partners to leverage off best practices and new/innovative programs. IOU's are also researching opportunities with the CEC to help provide alternative funding sources such as CEC loans for CDCR medical facilities. In regards to the ARB there is constant observation on air pollution policies to help partners meet the mandate of AB 32.

- vi) *Similar IOU and POU programs*

The four IOUs strive to have consistency in their respective program offering where practical to make the transactional experience for the state agencies seamless and transparent. Where the IOUs differ in their implementation strategies, the state agencies are educated and guided by the management team to ensure complete process follow through. If IOUs have interest in implementing EE programs, the partnership may provide technical assistance in designing these programs if requested.

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b) *Program delivery and coordination: Addressing all applicable items on the list below, describe how the program will be delivered or implemented in concert with them, including, if applicable, coordination with other Agency programs or actions. Describe timeline by which market segment/ sub-segment is expected to be “transformed”. Where they exist, highlight any shared or leveraged budget categories and amounts (admin, incentives, ME&O, and other applicable categories).*

*i) Emerging Technologies program:*

Emerging Technologies Element

Institutions provide venues for the piloting of new technologies and may test technologies that could potentially be implemented across the state. The Codes and Standards Program considers partnerships a high priority in the selection of test sites and also links with CEC’s PIER program.

The importance of energy efficiency within the state and the world is encouraging rapid development of new technologies and improved energy efficiency. However, it is virtually impossible for either key decision-makers or their technical staff to keep up with the rapidly evolving market. Even when they learn about the new technologies, it is very difficult to ascertain the true energy efficiency value of the new technologies and to distinguish scientific research from sales hyperbole.

The utilities, their research organizations, and their connection with the various state research organizations are vital links to the partners. New technology will be a useful component of the education and training element of the partnerships. The partnerships will be able to provide information to the managerial and technical personnel of the institutional customers to help them determine which technologies are worthy of consideration in energy efficiency.

Furthermore, some of the customers are very interested in serving as beta test sites for new technologies. Partnerships may well become key avenues by which new products or technologies can be installed, tested, and evaluated. The partnerships and their institutions will be able to work hand-in-hand with the utility and/or Energy Commission researchers in this arena.

Many of the Higher Education partnerships also include in house development and research of new emerging technologies leading to the ever increasing request for institutional partners to pilot new technologies.

*ii) Codes and Standards program*

Reach Code Support

The Reach Code Support sub-element will be implemented primarily through the Codes and Standards program PIPs. IP’s that choose to include Reach Code Support in their program will be encouraged to optimize compliance of existing codes before developing new reach codes. Some individual Partnerships may choose to include Reach Code activities to promote codes that exceed Title 24 requirements. Again, all reach code support activity will be coordinated with the Codes and Standards program to ensure government input and support for Codes and Standards development of model reach codes that align with Title 24 and achieve measurable energy savings. Partnerships that include Reach Code activities



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could perform activities that range from training staff regarding adoption and implementation of model reach codes to establishing expedited permitting processes, fee structures and other incentives for green buildings and other above-code developments. IP's may attend training and/or market the training to relevant trades, in coordination with utility and statewide marketing activities.

### Code Compliance Support

The Code Compliance sub-element will be implemented primarily through the Codes and Standards program, as described in the Codes and Standards PIP. Some individual Institutional Partners (IPs) will take action related to code compliance by engaging in a range of activities that will be coordinated with the Codes and Standards program.

IP's who participate in the Codes and Standards program may take advantage of the Title 24 and measure-specific training. They may also be able to participate in pilots designed to evaluate and improve the process used by governments to conduct code compliance.

Because optimization of existing compliance is the most effective approach to code compliance, IP's will be encouraged to start with this goal before tackling additional LEED certification requirements. IP Code Compliance activities may include referral to SCG's Codes and Standards program for training staff that are charged with code compliance. IP activity may also include referral to SCG's Codes and Standards program to access certification programs for inspectors and contractors. IP's may assist with marketing in coordination with SCG and statewide marketing activities, including advertising training opportunities to relevant trades, raising awareness of current codes among business and residential customers and encouraging compliance by accessing a suite of resources described in the Codes and Standards PIP.

Please refer to the Codes and Standards PIP for further information.

*iii) WE&T efforts*

Referenced above in Master PIP Section 4, 3a.

*iv) Program-specific marketing and outreach efforts (provide budget)*

### Outreach, Education and Training Element

The various partnerships will seek opportunities to increase awareness and understanding of energy efficiency as appropriate. In all cases this involves reaching upper management and/or elected officials to gain the support of decision makers for energy efficiency projects. It also involves reaching out to other departments within the customer organizations so that mid-level management of these departments will be responsive to and supportive of energy efficiency within the buildings in their jurisdictions. Likewise, it is important to train the day-to-day operating staff within the various facilities management organizations so that the

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designers, planners, and technicians are aware both of the importance of energy efficiency and the means by which it can be achieved. For institutional partnerships, education and training will be extended to elected officials, managers, and operations staff. Partnerships with educational institutions, it will involve educating faculty on energy efficiency so that they in turn may pass on the knowledge to their students.

The partnerships' education and training will also leverage existing utility training programs provided through the various training centers such as Southern California Gas' Energy Resource Center (ERC). In some cases, multiple partnerships may work together to provide education and training that is available to all of their constituents and thereby increase the availability and flexibility of the training programs. Specialized training sessions may be held at venues within the customer's facilities in order to minimize hardship on customer personnel and maximize attendance.

The education and training component also includes partnerships' outreach. Outreach is typically internal to the customer's organization, as the large and complex institutions that make up the partners have thousands of employees and many different departments. In many cases communication between the various departments of the organization is not well organized and information flow is slow or non-existent. The partnership will assist in the outreach to these ancillary departments in order to increase the awareness and understanding of energy efficiency. Partnerships will also reach out to similar but independent government agencies within their geographic regions; in particular, the county partnerships will reach out to cities, school districts, and other local agencies in order to bring them aboard. Partnerships will utilize existing infrastructures to accomplish outreach activities and others will rely more heavily on assistance from the utility partner and/or partnership consultants.

The education and training activities will include workshops for facility managers. They will receive training on best practices for implementation of energy efficiency retrofit projects, building operations, and new technologies that may be applicable to the effective completion of their daily tasks. Participants will have an opportunity to explore the utility programs currently available. In addition, the partnerships will provide opportunities for participants to share best practices with other facility managers.

Workshops will be coordinated and delivered in conjunction with other partnership efforts. In addition, the partnership team will coordinate with existing training centers such as SCG's Energy Resource Center, Southern California Edison's Customer Technology Application Center (CTAC) and Agricultural Technology Application Center (AgTAC), San Diego Gas & Electric's California Center for Sustainable Energy (CCSE), and PG&E's Pacific Energy Center to deliver various technical training courses to improve the skills and knowledge of facility staff.

The training of multiple groups and types of personnel within the institutional partners will help ensure partnership coordination of the project implementation process and coordination and cooperation of all key players from all departments within the organization.

The primary objectives of the education and training programs are to produce cost-effective energy savings. This will help the partners to comply with the requirement of Executive Order S-20-04 and their goals to reduce energy consumption. This will be achieved by:

- Increasing transfer of energy efficiency knowledge and implementation experience.

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- Increasing awareness and knowledge of the benefits of energy efficiency initiatives.
- Integrating efforts between partnership activities and utility programs offerings.
- Reducing the number of projects that are implemented without attention to energy efficiency.
- Increasing the number of institutional departments and/or local government agencies that use energy efficiency as a key decision-making parameter.
- Increasing communication between and building camaraderie among various key personnel in the facilities management groups of many departments, agencies, and organizations.

Sub-program specific activities are referenced in each sub-program PIP Section 6, iv.

*v) Rationale for selection of sub-contractors;*

### Subcontractor Activities

Subcontractors may be used to assist in program administration and management, and will provide professional and technical support for the implementation of each of the program elements. A program consultant will assist in day-to-day coordination and communication among the Institutional Partners as follows:

- Provide staffing to the Management Team and program specific subcommittees and implementation teams
- Coordinate, schedule, and document results and action items from program team meetings
- Prepare and conduct formal presentations and participate in conferences as required by the Management Team
- Develop and maintain a Project Tracking and Reporting database system.
- Assist the IOUs and Partners in CPUC reporting and regulatory communications.
- Assist in the development of workshop agendas and materials, identification of experts, facilitation of workshops and training sessions, and preparation of minutes for the Training and Education component
- Miscellaneous professional and technical assistance as requested by the IOUs

### Program Management Structure

Partnerships will continue to be administered by management teams consisting of representatives from IOUs and partnership management. A program administrator and management subcontractor for the CDCR, CCC, and UC/CSU partnerships will track project progress and keep the lines of communication and information consistent. The management structure of the partnership has allowed for a more streamlined approach and flexibility in overall program administration.

The management team will set overall program policy and ensure that the program stays on plan throughout its life cycle, and will meet roughly every three weeks. Subcommittees or “teams” made up of members of the management team and other

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representatives will perform the detailed work associated with the program elements, and make recommendations to the management team for action. This will potentially include a retrofit team, MBCx Express Team, and a training and education team. The team will be providing a more coordinated and integrated approach and will increase the penetration of energy efficiency and avoid lost opportunities.

Key Activities of Management Teams include:

Key Activity	Description
Identify key stakeholders to participate	The partnership management team identifies key stakeholders in each agency. They may be selected to participate in the project team.
Conduct solicitation for potential projects from participating agencies	The retrofit project team coordinates with the customer to generate a pool of projects to be evaluated.
Compile and evaluate projects based on project criteria and cost effectiveness requirements.	The retrofit project team performs due diligence on proposed projects to determine if each project meets the criteria and cost-effectiveness requirements. The project team provides a list of recommended projects.
Approve projects for funding	The partnership management team reviews project team recommendations for potential projects.
Identify funding sources	The partnership team and participating state agency explore financing alternatives such as rebates and incentives, on-bill financing, application of existing budget, and Energy \$Mart financing to maximize the state's investment in energy efficiency.
Coordinate project implementation with partners and contractors.	The project team provides oversight of project implementation and coordinates with customer and contractors to ensure successful and timely implementation.
Verify project installation and provide incentive payments.	The project team conducts 100% inspection. Upon verification, project team approves the completed projects for incentive payments.
Compile project results and complete final report.	The project team compiles all relevant project information including measure information; energy savings; program incentives paid; etc.
Coordinate with EM&V contractor where applicable.	If required, management team coordinates with the project teams and key stakeholders to support any requests from the CPUC approved EM&V contractors.

Partnerships can also hire energy efficiency retrofit subcontractors to install the energy efficiency measures for the retrofit component, and commissioning agents to assist in the performance of MBCx projects. Partnerships may also hire engineering subcontractors to assist with project development, as needed.

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### vi) *Non-energy activities of program*

If applicable specific non-energy activities will be listed in sub-program PIPs Section 6, vi.

### Guiding Document Support

Guiding document support will be provided by IOUs and will influence the partnerships through collaborative efforts that bring about the adoption of higher standards for energy efficiency. In addition, a tool will be developed for decision makers. This will enable customers to utilize this tool for guiding future decision making process and energy policy development that will align with the CLTEESP.

### Technical Assistance

The Partnership will focus on technical assistance and help the Partner to identify projects for potential implementation. The Partnership team will prepare comprehensive lists of projects, evaluate their energy savings potential, and bring them to the team for review. The Partners can then use this information to accelerate the timing of some projects, modify the scope of others, and rely on strategic energy planning, rather than simple maintenance schedules, for energy efficiency enhancements. Some technical assistance may include:

1. Training and Education
2. Energy Audits
3. Design assistance
4. Due diligence/Project Review

### vii) *Non-IOU Programs*

If applicable will be detailed in sub-program PIPs, Section 6, vii.

### viii) *CEC work on PIER*

Applicable PIER program coordination will be detailed in sub-program PIPs, Section 6 viii.

### ix) *CEC work on codes and standards*

If applicable will be detailed in sub-program PIPs, Section 6 ix.

### x) *Non-utility market initiatives*

If applicable will be detailed in sub-program PIPs Section 6, x.

c) *Best Practices: Describe why program approach constitutes “best practice” or reflects “lessons learned” in market strategies, program design and/or implementation techniques. Provide references where available.*

Institutional Partnerships have provided documentation that is valuable and provides lessons learned for a variety of institutional customers. Overarching best practices for institutional partnerships are noted below:

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<b>Type of Best Practice</b>	<b>Best Practice</b>	<b>Institutional Application(s)</b>
Goals & Objectives	Develop and use clearly articulated objectives that are internally consistent, actionable and measurable.	Share clearly defined and obtainable goals that are developed with partner input. Track goals through bi-weekly management team meetings to ensure they are achieved.
	Develop tools to track the portfolio's performance on a continuous basis and report progress.	The Program Workbook is a living document that will facilitate continuous tracking and reporting.
Planning	Design programs within the portfolio based on sound program plans; where appropriate, utilize clearly but concisely articulated program theories.	The plan & program structure are based on sound program plans & theories.
	Conduct baseline research	Baseline research was conducted of each Partnership and the individual participating cities & counties.
	Build feedback loops into program design and logic	The Program Workbook provides a mechanism for closely monitoring progress and making adjustments as may be needed to meet the Partnership goals and objectives.
	Maintain the flexibility to rebalance portfolio initiatives, as needed, to achieve the portfolio's goals and objectives.	
Staffing	Select highly qualified in-house staff &/or outside contractors to manage, design, implement and evaluate programs.	SCG Program Managers have been assigned to each Partnership to assure continuous open communication and implementation success. SCG's resources will be supplemented with pre-qualified technical support to meet the needs of its Partners.
	Clearly define portfolio implementation responsibilities and clarify roles to minimize confusion.	
Integration	Leverage relationships from complementary organizations such as utilities, trade allies, and industry specialists.	Structured to leverage all resources, assets and relationships of SCG, its Partners, and their participants, constituents, stakeholders, and other related individuals & organizations.
Reporting & Tracking	Clearly articulate the data requirements for measuring portfolio and program success.	Frequent meetings between/among SCG, its Partners and their members/constituents are designed to track and report Partnership progress and successes.
	Design tracking systems to support the requirements of all major users: program administrators, managers, contractors and evaluators.	

Specific best practices are referenced for each specific partnership in Sub-Program PIP I, II, III, IV, Section 6, b.

d) *Innovation: Describe any unique or innovative aspects of program not previously discussed. Why is this innovative?*

Innovative aspects of programs will be detailed in sub-program PIPs, Section 6, d, if applicable.

e) *Integrated/coordinated Demand Side Management: Describe in detail how program will achieve integrated or coordinated delivery of all DSM options (energy efficiency, demand response, and onsite generation) where applicable including integrated program design and delivery, shared budgets, program evaluation, and incentive mechanisms that*

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*promote greater integration of DSM resources. Provide a complete description for all the technologies, including integration supporting technologies that will be included in the program. If the program does not include all DSM options as noted above, briefly provide an explanation for a more limited subset of DSM technologies. Utilize Attachment 5A to highlight any shared or leveraged budget categories and amounts (admin, incentives, ME&O, and other applicable categories).*

SoCalGas supports the loading order in which our partners can achieve the highest level of integrated energy efficiency savings. Some of our partnerships have completed the Analysis (1) and Energy Conservation (2) efforts prior to becoming fully engaged into Partnership programs.

Once engaged into partnership programs, customers and partnerships focus on the Energy Efficiency aspect of integrated programs before moving onto Self Generation (5) or Demand Side Management (6). Moving partnerships into Self Generation or Demand Side Management at a premature time may act to mitigate energy savings and not realize energy savings.

Most partnerships remain focused on the Energy Efficiency aspect of integrated energy efficiency programs to maximize energy efficient efforts. The partnerships continue to focus on the ever demanding requests of Self Generation and Demand Side Management. Many institutional partners are under significant pressure from government mandates to implement Self Generation and Demand Side Management technologies. Partnerships have included Self Generation and Demand Side Management into implementation plans to meet these demands but also focus on the importance of appropriate energy efficiency management.

Integration of programs such as Self Generation and Demand Side Management require partnerships to develop innovative ways to share allocated budgets and developed goals. When plausible and cost-effective, partnerships will leverage off existing program delivery channels and budgets to provide Self Generation and Demand Side Management.

- f) Integration across resource types (energy, water, air quality, etc): If program aims to integrate across resources types, please provide rationale and general approach.*

If applicable this item will be detailed in the sub-program PIPs, Section 6, f.

- g) Pilots: Please describe any pilot projects that are part of this program*

If applicable this item will be detailed in the sub-program PIPs, Section 6 g.

- h) EM&V: Describe any process evaluation or other evaluation efforts that will be undertaken by the utility to determine if the program is meeting its goals and objectives. Include the evaluation timeframe and brief description of scope, as well as a summary of specific methodologies, if already developed. If not developed, indicate the process for developing them. Please include, as well, whether there are program-tracking databases that will be needed for evaluation purposes.*

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The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

7). *Diagram of Program: Please provide a one page diagram of the program including sub-programs. This should visually illustrate the program/sub-program linkages to areas such as:*

- a. *Statewide and individual IOU marketing and outreach*
- b. *WE&T programs*
- c. *Emerging Technologies and Codes and Standards*
- d. *Coordinated approaches across IOUs*
- e. *Integrated efforts across DSM programs*

**See Appendix**

8). *Program Logic Model: Provide a program logic model including sub-programs. May be included in an appendix to the PIP.*

**See Appendix**



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***I. Sub-Program Implementation Plan – CCC/IOU Partnership Program***

*1) Program Name*

California Community College/Investor Owned Utility (CCC/IOU) Partnership Program

*2) Projected Program Budget Table*

**Table 3<sup>18</sup>**

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

*3) Projected Program Gross Impacts Table*

**Table 4**

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>18</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

#### *4) Program Description*

##### *a) Describe Program*

The CCC/IOU Energy Efficiency Partnership has been a successful collaboration between the California Community Colleges (CCC) and the four Investor-Owned Utilities (IOUs). The CCC is a two-year public institution of higher education that is composed of 110 colleges statewide and organized into 72 self-governing Districts. It serves more than 2.6 million students coming from a wide range of cultural and economic backgrounds, and represents the largest system of higher education in the world. SoCalGas alongside the other IOUs (PG&E, SDG&E and SCE), will continue this collaboration, which started with the 2006-08 CCC/IOU Energy Efficiency Partnership, to share best practices and implement energy efficiency programs and projects for immediate and long-term energy savings and peak demand reduction.

This partnership provides a unique opportunity to deliver cost effective energy savings while leveraging the CCC's local and statewide new construction bond funding. The 2009-11 CCC/IOU Partnership will expand its efforts for the implementation of energy-efficient Retrofits, New Construction Design Assistance facilitated by the Savings By Design program, Demand Response, Retro-Commissioning (RCx), and Monitoring-Based Commissioning (MBCx) projects. The program will also focus its efforts on training and education, which will expand existing education programs by training faculty and staff in best practices on energy efficient technology implementation and energy management.

Projects will adopt a comprehensive approach by including retrofits and their DSM alternatives to include: demand-response, DG (renewable self-generation), solar hot water and water efficiency.

The 2009 - 11 CCC/IOU Partnership will expand its efforts in the delivery of energy efficiency and provide the following program elements:

- Energy-efficient retrofits of equipment and systems
- New construction design assistance. This will be a focus of the partnership due to the significant bond-funded construction of new and renovated facilities that are occurring at the CCC's at an unprecedented rate.
- Retro-commissioning/monitoring-based commissioning (RCx/MBCx) projects.
- Provide a "portal" to other IOU energy programs for a coordinated, integrated DSM program
- Training & education program, which will provide training to facility maintenance and operations staff in best practices on energy efficient technology implementation and energy management.
- Explore opportunities to partner with existing curriculum development efforts to train the next generation of the "green workforce", which has been identified as a critical component for California's future economy.

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*b) List Measures*

Measure Categories	Technologies
Lighting	Includes indoor and outdoor fluorescent, HID, LED replacements, lighting controls, and other lighting projects.
Controls and other Equipment	Includes fans, motors, VFDs, air compressors, EMS systems and other equipment not covered under the lighting or HVAC categories.
HVAC, Air Conditioning and Refrigeration	Includes system and major subsystem replacements
Other	New Construction, RCx, MBCx, IT Projects and others

Incentives

Incentives will be paid on projects based on a cents per kWh saved. These rates are an average of \$ .24/kwh saved. Incentives are paid by the utility to the agency upon completion of the project. They are based upon the agreed-upon energy savings determined as part of the project evaluation, subject to changes made during the project’s implementation. All gas savings will be at \$1.00 per therm.

Incentive rates for the New Partnership will be as follows:

- Lighting- \$0.24/kWh
- Controls and other Equipment- \$0.24/kWh
- HVAC, Air Conditioning and Refrigeration- \$0.24/kWh
- All gas savings will be at \$1.00/Therm
- Savings by Design/ Commercial New Construction Projects- \$0.10/ kWh above core SBD incentive rate

*c) List non-incentive customer services*

The California Community College/ Investor Owned Utility Partnership will include non-energy activities such as creating presentations for industry and association conferences, attending various conferences, meetings, and outreach events, and distributing marketing materials through said conferences as well as training sessions.

A training and education component for campus design staff, project managers, energy managers and others will also be provided in using best energy practices in the construction, retrofit, and monitoring based commissioning of campus buildings and central plant infrastructures.

Subcontractor Activities

Subcontractors will be used to assist in program administration and management, and will provide professional and technical support for the implementation of each of the program elements. A program consultant will assist in day-to-day coordination and communication among the partners (the colleges, System office, and four utilities) as follows:

- Provide staffing to the management team and program specific subcommittees and implementation teams
- Assist in program planning and design areas such as:

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- Program narrative preparation for filings
- Organization of financial budgets
- Preparation of program energy savings estimates and E3 cost-effectiveness calculators
- Providing assistance in the development of marketing and outreach plans
- Coordinate, schedule, and document results and action items from program team meetings
- Provide technical engineering assistance to develop projects and ensure that project documentation complies with CPUC energy efficiency policy and supports EM&V assessments.
- Prepare and conduct formal presentations and participate in conferences as required by the Management Team
- Develop and maintain a project tracking and reporting database system.
- Assist the IOUs and CCCs in CPUC reporting and regulatory communications
- Assist in the development of workshop agendas and materials, identification of experts, facilitation of workshops and training sessions, and preparation of minutes for the training and education component
- Miscellaneous professional and technical assistance as requested by the IOUs

The campuses will hire:

- Energy efficiency subcontractors to install the energy efficiency measures for the retrofit component
- Consultants and contractors to assist in the performance of MBCx projects
- Engineers and architects to assist with the New Construction Design Assistance element. Campuses may also hire engineering consultants to assist with project development as needed.

As seen in the 2006-08 partnership, the campus facilities management staff will play a major role in this program component while enlisting the assistance of subcontractors.

Non Incentive Services	Delivery Mechanism
Education and Training	Delivered through the creation of presentations for industry and association conferences, attending various conferences, meetings and outreach events, and distributing marketing materials through education programs. Training energy managers, facility maintenance staff and design staff, project manager and others in using best practices in the construction, retrofit, retro-commissioning and monitoring based commissioning of buildings and central plant infrastructure.
Emerging Technologies	Delivered through coordination with SoCalGas's Emerging Technologies group. The CCC/ IOU Partnership Program will work with the ETP group to develop potential pilots for emerging technologies development.
Funding Sources	Federal grants, state financing, local bonds, and IOU incentives. Further coordination and integration of SoCalGas's On-Bill Financing Program to assist in the funding of energy efficiency projects.
Subcontractor Activities	Subcontractors may be used to assist in program administration and state wide coordination among partners.
Program Administration and Management	Utility program managers will: Identify project tasks and establish schedule of deliverables and responsibilities to ensure the deliverance of successful program implementation, obtain inputs from the partners,

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	facilitate the decision-making on key program elements while coordinating partnership team communications, provide analytical assistance as needed, and submit accurate program information for reporting to the CPUC.
Quality Assurance and Evaluation	The New Energy Efficiency Partnerships team will establish and oversee quality assurance measures for the partnership program, including oversight and verification of subcontractor activities. These procedures and the associated reporting will be developed in more detail as a part of program implementation. In general, the partnership will continue the level of due diligence and quality assurance of the present IOU energy efficiency offerings, including a representative percentage of pre/post installation confirmation inspections for small hardware projects, and pre/post inspections on all large or specialized/hardware projects (installation of energy efficient equipment, facility retrofits, and building commissioning and new construction projects).
Codes and Standards	The other key element will be the refinement and further adoption of voluntary policies and requirements by the customers for energy efficiency and sustainability to create incrementally more efficient buildings in parallel with the adoption of more stringent, mandatory Codes and Standards by local and state jurisdictions.

5) *Program Rationale and Expected Outcome*

a) Quantitative Baseline and Market Transformation Information:

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section.

b) Market Transformation Information:

**Table 4**

	Market Transformation Planning Estimates		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section.

c) Program Design to Overcome Barriers:

SoCalGas and the other IOUs face the challenge of implementing cost effective energy efficiency programs that will result in immediate, long-term peak energy and demand savings in their service territories. The CCC system consumes vast quantities of energy and make up a

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significant portion of the both the electric and natural gas load in the State of California. However, due to the decentralized and self-governing structure of the CCCs, as well as the lack of funding and resources at these campuses, it has been an extremely challenging process to assist these districts in implementing energy efficient measures and practices.

The existing partnerships have worked diligently to overcome these barriers, though many still exist. The effort to resolve them is on-going, and significant progress has been made. At the heart of the evolving success are the partnership teams made up of customer staff, utility staff, and consulting professionals. These teams enable the partnerships to overcome these barriers through a number of important mechanisms:

Primary Barriers	Strategies to Overcome Barriers
<p><b>Funding Levels-</b> Project Funding Constraints. Energy efficiency is costly and budgets are limited. The actual decision-makers approving the details of a project often choose not to implement the higher-costing more-efficient systems, equipment, or technologies. Incentive dollars are most often allocated to the general fund which makes for an inability to ensure incentives are allocated toward the participating department budget.</p>	<p><u>Incentives</u> help relieve budgetary constraints and assist the economic evaluations of the customers by making energy efficiency more cost-effective. In addition to their purely economic role, the incentives play an important part in promoting the importance and visibility of energy efficiency. When a partnership can bring an incentive to the decision-making body and make a public announcement, it not only improves the economics, but it demonstrates the importance of the project and increases public awareness of both the utility's and the customer's commitment to energy efficiency and environmental quality.</p> <p><u>The Energy \$Mart Loan program</u> has been created to finance energy projects through the Department of General Services. <u>SoCalGas's On-Bill Financing Programs</u> is currently being implemented as a way of financing retrofit and modernization upgrades.</p>
<p><b>Short-sightedness-</b> Economic decisions are often short-sighted, with capital limitations taking precedence over long-term savings, even when accurate economic analysis would select the higher initial cost of higher-efficiency choices.</p>	<p><u>Education and training</u> brings energy efficiency awareness to decision-makers at all levels. Many of the partnerships have specific plans to incorporate education and training for a variety of people including elected officials, key department managers, facilities staff, personnel from other local governments (such as cities and school districts within the counties), and, in the case of the college partnerships, training within the general population. This component will enhance the awareness of energy efficiency, which in turn will subdue some of the barriers caused by lack of information or erroneous economic analysis.</p>
<p><b>Technology-</b> itself is rapidly developing, and even the best-informed energy professionals have difficulty distinguishing between sales propaganda and truly valid technical advancements.</p>	<p>Integration allows the partnership management team to be the single source of contact that enables the institutional customers to take advantage of all energy programs offered by the IOUs. This integration will break down many customer barriers to participation in multiple programs. This integration is innovatively being collaborated with internal utility departments in order to fulfill this strategy. Future strategic plans are being developed to include new construction, emerging technologies, education and training, demand response, California Solar Initiative (CSI), self-generation, on-bill financing, and other utility programs within the scope of partnership activities.</p>
<p><b>Staffing-</b> Staff time is at a premium, with most facilities personnel having too much to do in too</p>	<p><u>Professional assistance</u> from utility staff and partnership consultants allows potential projects to be identified and</p>

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Primary Barriers	Strategies to Overcome Barriers
little time. Attention to proper energy efficiency is time consuming and may get shelved as staff members work on more immediately urgent problems. Community College campuses tend to have inadequate staffing due to the current staff being overextended; additional technical assistance desired.	evaluated. Many institutional customers do not have the time to methodically evaluate their buildings and identify the most salient energy efficiency projects. Furthermore, facility personnel often lack the technical expertise to evaluate those projects and determine the best energy efficiency improvements. The partnership team is able to prepare a comprehensive lists of projects, evaluate their energy savings potential, and bring them to the team for review. The customer can then use this information to accelerate the timing of selected projects, modify the scope of others, and rely on strategic energy planning, rather than simple maintenance schedules for energy efficiency enhancements.
<b>Information Dissemination-</b> Some of the agencies lack the technical expertise to develop or manage projects. Therefore they lose out on opportunities to improve efficiency when staff is unaware of available technology and measures. Lack of funding and management support also causes the removal of such measures from a project.	The management team is currently developing an information tool for some agencies that will help reveal the savings potential of implementing projects with likely energy efficiency measures that may appear in agencies' typical facilities. This is meant to appeal to the facilities managers or decision makers and allow the IOU to perform detailed energy audits that eventually lends itself to a project proposal.
<b>Gap in ESCO Process and Small Projects-</b> The prior program cycle revealed to the management team that while the ESCO process and EnergySmart project financing mechanism works for the larger projects, smaller projects cannot pass the Life-Cycle Cost Analysis and the ESCOs do not find the projects attractive. 95% of the state's building inventory is under 25,000 sq. ft. which indicates the majority of the projects are smaller.	The management team is exploring alternative project delivery and financing models which may include a mechanism that creates seed money for starting up projects and integrating it with the On-Bill Financing program. This would be augmented by innovative pilot project delivery models such as the project co-funding approach, low to no cost measure offerings, and third party program bridging to pilot concepts that may fill gaps in the program.

We anticipate the partnership will continue to work through the various obstacles that inhibit the full implementation of energy efficiency within their institution. This is a gradual and evolving process. Nonetheless, the partnership model has shown to be extremely effective, and leads to considerable energy savings and demand reduction both in new construction and in existing buildings. For the California Community Colleges, budget requirements are becoming even tighter. The continuation of the partnerships will help assure that these barriers do not become even more significant as budgets are reduced.

*d) Quantitative Program Targets:*

Program Name	Program Target by 2009	Program Target by 2010	Program Target by 2011
New Construction	Communicate Integration and incentive structure. TBD x number of projects identified.	Develop project agreement plan to ensure penetration of all existing and future potential projects. TBD x number of projects implemented	Complete a number of projects establish pipeline. TBD x number of project incentives paid and completed.

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Program Name	Program Target by 2009	Program Target by 2010	Program Target by 2011
On-Bill Financing	Development of On-Bill Financing documentation package for partners. Develop project agreement plan and determine whether partners will participate. TBD x number of projects.	TBD x number of applications.	Complete documentation of participation rates for partnerships and determine any lessons learned or roadblocks. TBD x number of paid loans through OBF.
CSI	Establish communication plan for ensuring partners have been educated regarding solar potential	Develop project agreement plan and determine necessary stakeholders.	Complete documentation of participation potential and what is necessary for partners to participate
RCx and MBCx	TBD Benchmark X # of facilities to determine potential for RCx or MBCx.	TBD Complete project agreement packages for x # of facilities.	TBD Complete implementation and pay incentives on X # of RCx or MBCx projects.
Education and Outreach	TBD # of Partner Presentations	TBD # of Partner Presentations	TBD # of Partner Presentations
EE/DR Audits	Ensure 100% of all audits are coordinated EE/DR efforts if applicable	Ensure 100% of all audits are coordinated EE/DR efforts if applicable	Ensure 100% of all audits are coordinated EE/DR efforts if applicable

*e) Advancing Strategic Plan goals and objectives:*

Institutional partnerships are a natural fit with the goals, objectives, and strategies articulated in the California Energy Efficiency Strategic Plan. The partnerships have demonstrated that the three *Pillars* of the Strategic Plan -- Innovation, Integration, and Collaboration -- are indeed the key to achieving the next generation of cost-effective energy efficiency and the resulting reduction in greenhouse gas emissions.

The partnership management teams have and will continue to:

- Be very successful in developing a collaborative approach
- Overcome many of the barriers that diverse stakeholder groups encounter
- Successfully navigate these challenges, improve communications, firmly identify roles and responsibilities, and develop a continuity of both people and a management approach that works very well for their own partnerships.
- Firmly align goals: saving energy, improving the environment, and saving money for the institutional customers.
- Embrace Monitoring Based Commissioning (MBCx) and Retro-commissioning (RCx) at their facilities as a result of the 2006-2008
- Some of the partnerships have also worked with the PIER SPEED program, which has resulted in the installation of several pilot projects in 2007.
- Work with the PIER and IOU ET teams to leverage the pilot projects into larger scale emerging technology programs and projects in 2009-2011.



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- Work with the IOU Food Service Technology groups in an outreach effort to educate food service, maintenance, and facilities decision makers in the newer energy efficiency technologies emerging in this area. Innovation in the food service technology sector will be an important focus for the partnerships in 2009-2011.
- Lead the deployment of many information technology energy efficiency measures. Retrofit measures have included server virtualization, PC power management, ~~CRT to LCD monitor replacements~~ and high-efficiency UPS systems.
- Been innovative in setting policy for energy efficiency and sustainability.
- Ramp up voluntary policies and requirements that fit with the Strategic Plan initiative in the *Codes and Standards* area to adopt voluntary energy efficiency standards as a precursor to progressively more stringent mandatory building codes and standards.

### *6) Program Implementation*

#### *a) Statewide IOU Coordination:*

##### *i) Program Name*

California Community College/ Investor Owned Utility (CCC/ IOU) Partnership Program

##### *ii) Program Delivery Mechanisms*

The 2009-11 CCC/ IOU Energy Efficiency Partnership Program will utilize and build upon the implementation strategies employed in the partnership from the 2006-2008 program cycle. The implementation plan for this cycle will be refined to account for progress already made which will include:

### **Program Management Structure**

The management structure of the partnership will be further streamlined from the 2006-08 cycle to allow for more flexibility in overall program administration, outreach, project identification and development, and project implementation and verification. The program will continue to be administered by a management team, consisting of representatives from the UC Office of the President, the CSU Chancellor's Office, all four IOUs, and a program administration and management consultant who will track project progress and keep the lines of communication and information flowing. The management team will set overall program policy and ensure that the program stays on plan throughout its life cycle. One of the biggest changes from 2006-08 is to streamline implementation to combine the various responsibilities for project evaluation and implementation into a single team which will oversee retrofit, MBCx, new construction, and innovative projects. The team will be providing a more coordinated and *integrated approach* and will increase the penetration of energy efficiency to avoid lost opportunities.

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#### **Program Elements**

The following program elements will operate on a statewide, *integrated* basis, providing immediate energy savings and setting the foundation for a long-term program that focuses on its sustainability and best practices.

#### **Energy Efficiency Retrofits**

The partnership outreach and/or project team will identify and develop potential retrofit projects using the project portfolio described above as a starting point, with follow up campus audits and performance of savings calculations. In some cases, campuses will utilize ESCOs or other engineering firms under contract to develop projects. Project applications will be submitted, or when necessary, completed by the IOUs. If approved through the IOU due-diligence review process, the applications will be executed by the campus and the IOU, and project implementation will, at that time, commence. The projects will be implemented by the CCC campus staff or their engineering and construction contractors, and the IOUs will perform verification inspection prior to payment of incentives.

The energy efficiency retrofit projects that will be performed for the program will be electric and gas saving measures including: lighting retrofits, building wide lighting controls, boiler replacements, installation of water heaters, HVAC and chiller upgrades, VFDs, and central plant projects, amongst others.

#### **Retro-Commissioning (RCx) / Monitoring-Based Commissioning (MBCx)**

This element of the program is a unique approach to obtaining savings that combines the expertise of the state facility management staff, utility and subcontractor expertise. Through these resources, a systematic, comprehensive RCx/MBCx program will be implemented in existing buildings. It will provide a cost effective approach to achieving optimized operating facilities, save both electric and gas energy, reduce operating cost and improve occupancy comfort.

#### **New Construction and New Construction Design Assistance**

New Construction is a significant opportunity to achieve a breakthrough in energy savings at the Community Colleges. This program will be managed towards meeting the strategic energy plan goals of zero net energy for commercial buildings by 2030. The goal of the 2009-11 partnership is to fully integrate the new construction design assistance program under the partnership umbrella to capture those opportunities. In addition, the partnership will consider additional incentive dollars to implement those measures that show persistent energy savings and capture the lost opportunities by those projects that have been value-engineered out of the project scope due to budget and time constraints.

#### **Quality Assurance**

The CCC/IOU team will establish and oversee quality assurance measures for the partnership program, including oversight and verification of subcontractor activities. These procedures and the associated reporting will be developed in more detail as a part of a program implementation.

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In general, however, the partnership will continue the level of due diligence and quality assurance of the present IOU energy efficiency offerings. This will include a representative percentage of pre/post installation confirmation inspections for small hardware projects and pre/post inspections on all large or specialized projects hardware projects (installation of energy efficient equipment, facility retrofits, and building commissioning and new construction projects).

### *iii) Incentive Levels*

- Lighting projects- \$0.24/ kWh
- Motors/ VFDs/ Compressors/ Controls/ Others- \$0.24/ kWh
- HVAC projects with electric savings- \$0.24/ kWh
- Projects with gas savings- \$1.00/ Therm
- Savings by Design/ Commercial New Construction Projects- \$0.10/ kWh above core SBD incentive rate

### *iv) Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms.*

A change for the upcoming 2009-2011 program cycle is the refinement of the Outreach Team, which tried several models in 2006-2008, and has evolved into an effective team consisting of customer-focused IOU Account Executives, team leadership from the Community College Chancellor's Office, and key District staff. Because of the positive relationships that have been formed, the Outreach team has been able to reach the campus and District decision makers more effectively. The IOUs and consultant technical and engineering staff have also been able to quickly and accurately assess project opportunities, complete energy savings calculations, and process project applications with campuses.

The CCC/ IOU Partnership will also continue its activities with creating presentations for industry and association conferences, attending various conferences, meetings, and outreach events, and distributing marketing materials to contractors, architects, and Community College staff members statewide.

Key Activity	Description
Outreach	The partnership management team begins outreach efforts by contacting the heads of facilities management for each department, informing them of the availability of funds for approved measures and activities in state facilities. The team schedules meetings to discuss options, implementation criteria, benefits of program participation, and program offerings.
Customer Follow-Up	The partnership management team, in coordination with staff from the state and the IOUs, visit each targeted site to talk with facilities managers about the various options and proposed energy efficiency measures. After confirming an appropriate site for implementing measures and/or retro-commissioning, the management team meets the appropriate facilities managers to present the anticipated energy savings, other benefits, and considerations associated with the implementation.
Implementation and Training	The partnership management team share energy efficiency knowledge and implementation experience with other public agency entities through a

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Key Activity	Description
	series of meetings and workshops. These meetings and workshops are coordinated with other partnership programs.

v) *IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable*

IOUs are continuously monitoring their respective partners to leverage off best practices and new/innovative programs. IOU's are also researching opportunities with the CEC to help provide alternative funding sources such as CEC loans for CCC facilities. In regards to the ARB there is constant observation on air pollution policies to help CCC meet the mandate of AB 32.

vi) *Similar IOU and POU programs*

b) *Program delivery and coordination:*

- Foundation building, including preparing a needs assessment, evaluating cost-benefit analysis tools for investments in WE&T, creating a WE&T web portal, establishing ongoing dialogue with key players, and forming a WE&T task force.
- Focus specific strategies on community colleges and technical training.
- Transform HVAC—including its products, companies, employees and even its customers—to develop, install and maintain highly efficient and peak-friendly systems.

The partners will provide education and training for students and facility personnel through workshops and other training strategies in collaboration with other partnerships. It will be a venue for those individuals responsible for managing energy use on campuses to share information and experiences related to facility operations, to gain knowledge of industry best practices in energy efficiency management, and for successful energy efficiency project implementation, among other issues. The other strategy for the education and training element is the development of an energy efficiency vocational curriculum that will be offered to campus students to equip them with energy efficiency knowledge which they can apply in the industry. Lastly, this partnership will seek opportunities to improve project coordination and communication to strengthen the relationships amongst the Partners.

The primary vehicles for training and dissemination of information will be a series of training sessions and workshops (covering new construction, building operator training, retrofits, retro-commissioning, and monitoring based commissioning) to be held in Northern and Southern California. The partners will collaborate with the IOUs' technology centers to assist with course offerings and curriculum and content development and will utilize the existing material and best-practices documentation developed by other partnership programs during 2004-05 and 2006-08 program cycles.

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### Major Activities:

Key Activity	Description
Identify key stakeholders to participate	The management team will identify key stakeholders in each agency to participate in the project team.
Conduct solicitation for potential projects from participating agencies	The retrofit project team will coordinate with customer to generate a pool of projects for evaluation.
Compile and evaluate projects based on project criteria and cost effectiveness requirements.	The retrofit project team will perform due diligence on proposed projects to ensure that each project meets the criteria and cost-effectiveness requirements. Project team will provide a list of recommended projects to proceed with implementation.
Approve projects for funding	The management team will review project team recommendations for potential projects.
Coordinate project implementation with Partners and contractors.	The project team will have oversight of project implementation and will coordinate with customer and contractors to ensure successful and timely implementation of the project.
Verify project installation and provide incentive payments.	The project team will conduct 100% inspection. Upon verification, project team will approve the completed projects for incentive payments.
Compile project results and complete final report.	The project team will compile all relevant project information including measure information, energy savings, program incentives paid, etc.
Coordinate with EM&V contractor where applicable.	If required, there will be management team coordination with the project teams and key stakeholders to support any requests from the CPUC approved EM&V contractors.

### Non-Energy Activities

The CCC/IOU Partnership will include non-energy activities such as creating presentations for industry and association conferences, attending various conferences, meetings, and outreach events, and distributing marketing materials through education programs.

The partnership will also continue the progress made with the establishment of a statewide approach to training and building operations to facilitate long-term energy efficiency savings. The training and education component of the partnership involves training of campus design staff, project managers, energy managers and others in using best energy practices in the construction, retrofit, and monitoring based commissioning of campus buildings and central plant infrastructures.

### Subcontractor Activities

Subcontractors will be used to assist in program administration and management as well as in each of the three program elements. This approach was used successfully in the previous program cycle.

An administrative consultant will assist in day-to-day coordination and communication among the partners (the CCC and four IOUs) as follows:

- Provide staffing to the management and executive team and program specific implementation teams.

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- Assist in the three program elements, especially in the coordination and facilitation of partnership meetings providing timely and accurate meeting minutes. The consultant will provide communications between the partnership and the campuses, as well as providing analytical assistance to the IOUs, CCC as needed.
- Assist the CCC/IOU partners in providing timely and accurate program information for reporting to the CPUC.
- Assist in development of workshop agendas and materials, and facilitation of workshops and training sessions.

The campuses will hire energy efficiency retrofit subcontractors to install the energy efficiency measures for the retrofit component, and commissioning agents to assist in the performance of MBCx projects. Campuses may also hire engineering consultants to assist with project development, as needed.

*c) Best Practices:*

<b>Type of Best Practice</b>	<b>Best Practice</b>	<b>Institutional Application(s)</b>
Goals & Objectives	Develop and use clearly articulated objectives that are internally consistent, actionable and measurable.	Share clearly defined and obtainable goals that are developed with partner input. Track goals through bi-weekly management team meetings to ensure they are achieved.
	Develop tools to track the portfolio's performance on a continuous basis and report progress.	The Program Workbook is a living document that will facilitate continuous tracking and reporting.
Planning	Design programs within the portfolio based on sound program plans; where appropriate, utilize clearly but concisely articulated program theories.	The plan & program structure are based on sound program plans & theories.
	Build feedback loops into program design and logic Maintain the flexibility to rebalance portfolio initiatives, as needed, to achieve the portfolio's goals and objectives.	The Program Workbook provides a mechanism for closely monitoring progress and making adjustments as may be needed to meet the Partnership goals and objectives.
Staffing	Select highly qualified in-house staff &/or outside contractors to manage, design, implement and evaluate programs.	SoCalGas Program Managers have been assigned to each Partnership to assure continuous open communication and implementation success. SoCalGas's resources will be supplemented with pre-qualified technical support to meet the needs of its Partners.
	Clearly define portfolio implementation responsibilities and clarify roles to minimize confusion.	
Integration	Leverage relationships from complementary organizations such as utilities, trade allies, and industry specialists.	Structured to leverage all resources, assets and relationships of SoCalGas, its Partners, and their participants, constituents, stakeholders, and other related individuals & organizations.
Reporting & Tracking	Clearly articulate the data requirements for measuring portfolio and program success.	Frequent meetings between/among SoCalGas, its Partners and their members/ constituents is designed to track and report Partnership progress and successes.
	Design tracking systems to support the requirements of all major users:	

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Type of Best Practice	Best Practice	Institutional Application(s)
	program administrators, managers, contractors and evaluators.	

*d) Innovation:*

The CCC's made significant progress in adopting innovative projects during the 2006-2008 program cycle. Projects and technologies in the high technology (IT systems) areas such as Server Virtualization, PC Power Management, and high efficiency UPS systems were a focus. Pilot Projects were established with PIER for emerging technologies such as: Integrated Classroom Lighting Systems (ICLS), Bi-Level Stairway Lighting systems, and Kitchen Demand Controlled Exhaust Hood ventilation controls. Additionally in 2008, the Partnership began collaboration with IOU Food Service Technology groups to expand energy efficiency in campus cafeterias. The plan for the 2009-2011 Partnership is to leverage these innovative pilot projects to a fully focused and large scale offering for the California Community Colleges.

*e) Integrated/coordinated Demand Side Management.*

Demand response programs provide tariff-based benefits to customers implementing demand response activities. For demand response initiatives involving the purchase and installation of equipment by SoCalGas business customers, a plan will be developed to provide a financial incentive for energy savings resulting from the equipment supplied through the partnership program.

This partnership will look for opportunities to integrate demand response and other DSM services into the program implementation plan. Resources will be leveraged to improve implementation efficiency and reduce transactional impacts on partnership staff. IOU energy efficiency and demand response program staff will collaborate with partners to conduct comprehensive audits and identify energy efficiency measures and demand response opportunities. The approach will reduce technical resources by combining EE/DR audits to avoid duplication and collaborate on incentive offerings which will all minimize customer interruptions.

The partnership will also assist, where applicable, facility management staff that are interested in solar technology and will provide recommendations in facility operations through energy audits to improve its facilities with less costly EE/DR measures prior to implementing more costly solar technologies.

*f) Integration across resource types (energy, water, air quality, etc):  
N/A*

*g) Pilots:  
N/A*

*h) EM&V:*

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The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

7. Diagram of Program :

See Appendix

8. Program Logic Model:

See Appendix



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**II. Sub-Program Implementation Plan – CDCR/IOU Partnership Program**

1) *Program Name*

California Department of Corrections and Rehabilitation/Investor Owned Utility Statewide Energy Efficiency Partnership – Statewide Institutional Partnership

2) *Projected Program Budget Table*

**Table 5<sup>19</sup>**

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

3) *Projected Program Gross Impacts Table*

**Table 6**

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>19</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan**

These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

#### 4) *Program Description*

##### a) *Describe Program*

SoCalGas and the California Department of Corrections and Rehabilitation (CDCR) are collaborating to continue the Department of Corrections and Rehabilitation/Investor-Owned Utility (IOU) Partnership for the 2009-2011 cycle. The CDCR/IOU partnership is a customized statewide energy efficiency partnership program that accomplishes immediate, long-term peak energy demand savings and establishes a permanent framework for sustainable, long-term comprehensive energy management programs at CDCR institutions served by California's four large IOU's.

This program capitalizes on the vast opportunities for efficiency improvements and utilizes the resources and expertise of CDCR and IOU staff to ensure a successful and cost-effective program that meets all objectives of the California Public Utilities Commission (CPUC or Commission). The program also leverages the existing contractual relationship between CDCR and Energy Service Companies (ESCOs) to develop and implement energy projects at CDCR facilities statewide. CDCR is comprised of Adult Institutions, Parole Offices, Community Conservation Camps, and Juvenile Facilities which encompass an estimated 47,714,415 square feet of occupied space.

In the 2006-2008 program cycle SoCalGas and the other IOUs collaborated with CDCR facility staff to identify opportunities for energy efficiency projects by conducting audits at each location and compiled equipment information to create a pool of projects for implementation. CDCR worked diligently to remove barriers that had previously prevented energy efficiency projects from being implemented with state agencies. The IOU Management team executed an agency specific agreement with CDCR to capitalize on the agency's authority to complete on-site facility construction and renovation. Unlike other state agencies, CDCR has an Office of Facilities Management that handles all construction and operates independently from the Department of General Services (DGS). Based on past success the IOU Management team will facilitate another agency specific agreement with CDCR for the next program cycle.

CDCR initiated a Request for Proposal (RFP) to procure contractors, engineering subcontractors, and Energy Services Companies (ESCO's) to assist with project implementation at all statewide prison facilities. CDCR was also one of the first agencies to take advantage of the Energy Smart financing program available through the Department of Finance (DOF) and administrated by the Department of General Services (DGS) to finance their energy efficiency projects. Energy Smart financing has provided over 4.7 million dollars coupled with IOU incentives to fund energy efficiency projects at CDCR facilities. Energy Smart loans have been the main source of financial funding for CDCR energy efficiency projects and will continue to act as the primary source in the next program cycle.

Subsequently, the IOU Management Team initiated a RFP to procure an energy engineering and consulting firm devoted exclusively to the CDCR/IOU partnership

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program. The IOU Management Team has developed a cost-sharing model to help fund the Project Administrator dedicated to CDCR energy efficiency activities.

Future projects will continue to adopt a comprehensive approach by incorporating retrofits, new construction, and Demand Side Management (DSM) alternatives to include: demand-response, renewable self-generation, solar hot water and water efficiency. SCG, CDCR, and the other IOUs are confident that this partnership will be very successful through the next three-year cycle and are committed to expanding the program in the future.

*b) List Measures*

Measure Name	Rebate to end use customer or its assignee (\$/unit)
Customized - Indoor Lighting	\$ 0.24
Customized - Indoor Lighting Controls & EMS	\$ 0.24
Customized - Outdoor Lighting	\$ 0.24
Customized - Outdoor Lighting Controls	\$ 0.24
Customized - Motors	\$ 0.24
Customized - VFDs	\$ 0.24
Customized - HVAC EMS	\$ 0.24
Customized - Chillers	\$ 0.24
Customized - HVAC	\$ 0.24
RCx/MBCx	\$ 0.24
Overall Building Performance	\$ 0.10 above core
System Approach - Light Power Density	\$ 0.10 above core
System Approach - Chillers	\$ 0.10 above core
System Approach - Daylighting	\$ 0.10 above core
System Approach - HVAC Energy Reduction	\$ 0.10 above core

*Table x: Program Specific Measures*

*c) List non-incentive customer services*

The partnership shall provide the following non-incentive services:

1. Training and Education
2. Energy Audits
3. Technical Assistance
4. Design assistance
5. Due diligence/Project Review
6. Marketing/Outreach
7. Support of Assembly Bill 32, 900, Senate Bill 20-04

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5) *Program Rationale and Expected Outcome*

a) Quantitative Baseline and Market Transformation Information:

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section.

b) Market Transformation Information:

**Table 4**

	Market Transformation Planning Estimates		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section.

c) Program Design to Overcome Barriers:

The CDCR/IOU is a mature program that has a repeatable process for creating a project pipeline, seeking project approval, procuring project funding, implementing the project, monitoring the project, and inspecting. That does not mean the program does not have its challenges that affects implementation. These challenges/barriers are:

- Barrier: Project Funding Constraints – With the challenges the state is facing with their budgetary constraints, great opportunities for energy efficiency projects are not easily addressed.
  - Solutions:
    - The Energy \$Mart Loan program has been created to finance energy projects through the Department of General Services.
    - The IOUs On-Bill Financing Programs are either being implemented or developed as a way of financing smaller retrofit and modernization upgrades.
    - Increase the purview of CEC loans to include other State facilities.
    - IOU's to develop other innovative financing options.
- Barrier: Financial market situation: The current financial crisis has taken its toll on the Energy \$mart financing program. The Energy \$mart program has significantly reduced the amount of preferred lenders in the portfolio resulting in a time intensive competitive process for loan procurement.

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- Solution: Continue to develop and research alternative funding mechanisms for energy efficiency projects.
- Barrier: High cost for project overhead: CDCR is unique in that not only must the department account for traditional project costs it must also account for additional labor and facility access. ESCOs have limited timeframes and access to facilities. Additionally, guards must be assigned at each location for additional security.  
Solution: The partnership will continue to offer high incentive rates to adjust for additional costs and to make projects viable.

d) Quantitative Program Targets.

See Master PIP Section 2

e) Advancing Strategic Plan goals and objectives

See Master PIP Section

6) *Program Implementation*

a) Statewide IOU Coordination:

:

i) *Program Name*

California Department of Corrections and Rehabilitation/Investor Owned Utility  
Statewide Energy Efficiency Partnership

ii) *Program Delivery Mechanisms*

Delivery mechanisms, program elements, and subcontractor activities are detailed above in Master PIP Section 4, a and Section 6, a, ii.

CDCR does not utilize additional delivery mechanisms at this time. A detailed table of management activities for project delivery is provided below.

iii) *Incentive Levels*

- Lighting projects- \$0.24/ kWh
- Motors/ VFDs/ Compressors/ Controls/ Others- \$0.24/ kWh
- HVAC projects with electric savings- \$0.24/ kWh
- Projects with gas savings- \$1.00/ Therm
- Savings by Design/ Commercial New Construction Projects- \$0.10/ kWh above core SBD incentive rate

iv) *Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms.*

The CDCR/IOU partnership will rely on existing communication between the CDCR institutions and Operation and Maintenance (O&M) staff. This combined with the

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partnership management team structure will facilitate marketing activities through pre-established channels.

Key Activity	Description
Outreach	The partnership management team and program administrator will use preexisting communication channels to disseminate information throughout CDCR. Since the partnership is an agency specific agreement all interested parties are represented on the management team. Other pertinent parties are addressed my management team on an as needed basis.
Customer Follow-Up	CDCR partnership is an agency specific program. Follow-up is conducted at management team meetings held every 3 weeks.
Implementation and Training	The partnership management team and program administrator share energy efficiency knowledge and implementation experience with all pertinent parties through a series of meetings and workshops. These meetings and workshops are coordinated with other partnership programs as necessary.

- v) *IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable*

IOUs are continuously monitoring their respective local government partners to leverage off best practices and new/innovative programs. IOU’s are also researching opportunities with the CEC to help provide alternative funding sources such as CEC loans for CDCR medical facilities. In regards to the ARB there is constant observation on air pollution policies to help CDCR meet the mandate of AB 32.

- vi) *Similar IOU and POU programs*

The four IOUs strive to have consistency in their respective program offerings where practicable to make the transactional experience for the state agencies seamless and transparent. Where the IOUs differ in their implementation strategies, the state agencies are educated and guided by the management team to ensure complete process follow through. If POU’s have interest in implementing EE programs, the partnership shall provide technical assistance in designing these programs if requested.

- b) *Program delivery and coordination:*

The CDCR/IOU Partnership is in a unique position in which by collaboration, has certain delivery and coordination activities made possible by the agreements that are in place as required when entering into the partnership. Below are types of coordination activities already in place within the partnership:

- i. *Emerging Technologies Program*

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If opportunities allows, the IOUs bring forth emerging technologies to the partner either through PIER project opportunities or the management team's introduction of technology demonstration projects.

*ii. Codes and Standards Program*

Referenced above in the Master PIP

*iii. WE&T Efforts*

WE&T type of activities is an integral part of the MBCx strategy where facilities staff are trained to maintain building optimization adding value to their skill sets and further securing their need in the workforce

*iv. Program-specific marketing and outreach efforts*

The outreach efforts for the partnership involves the Energy Management Section of the Facilities Management Division working directly with the individual prison sites

*v. Non-energy activities of program*

Non energy activities include the technical assistance the partner may need but do not have the resource available in house. The program provides this kind of support as an added benefit to the partner in addition to the monetary incentives they may receive from the IOUs. CDCR however has adequate resources with ESCOs on board.

*vi. Non-IOU Programs*

*n/a*

*vii. CEC work on PIER*

*PIER technology projects are introduced into the programs at the project level when opportunities arise.*

*viii. CEC work on codes and standards*

*ix. Non-utility market initiatives:*

*c) Best Practices:*

Reference Master PIP

*d) Innovation:*

N/A

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e) Integrated/coordinated Demand Side Management:

f) Integration across resource types (energy, water, air quality, etc):

SoCalGas is exploring the option of including CDCR in a pilot water research program. Initial discoveries show that similarities exist between pilot facilities and CDCR's unique facilities.

g) Pilots:

h) EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

7) Diagram of Program :

8. Program Logic Model:



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**III. Sub-Program Implementation Plan – UC/CSU/IOU Partnership Program**

1) *Program Name*

University of California (UC)/California State University (CSU) / Investor-Owned Utility (IOU) Energy Efficiency Partnership

2) *Projected Program Budget Table*

**Table 7<sup>20</sup>**

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

3) *Projected Program Gross Impacts Table*

**Table 8**

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>20</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

#### 4) *Program Description*

##### a) *Describe Program*

The University of California, California State University (UC/CSU), SoCalGas and the three other Investor-Owned Utilities (IOUs) are collaborating to continue the Energy Efficiency Partnership Program to share energy efficiency best practices and to implement energy efficiency projects for immediate and long-term energy savings and peak demand reduction.

The UC/CSU/IOU Partnership is a natural fit with the goals, objectives and strategies articulated in the CLTEESP. The partnership was designed to achieve immediate energy and demand savings and establish a permanent framework for sustainable, comprehensive energy management programs. The partnership program is an existing statewide nonresidential program that will continue in the 2009-11 program cycle. It will continue to offer incentives for retrofit projects, monitoring-based commissioning, and training for campus energy managers.

SoCalGas and the other IOUs have implemented the partnership program with the goal of extending the reach and effectiveness of traditional utility programs by using the UC and CSU system communication and outreach channels. This will achieve broad penetration of energy efficiency services on campuses. SoCalGas will engage the UC and CSU systems to be strategic partners to help reach campus end-use customers through partnership activities and serve as channels for the IOUs' other energy efficiency and demand reduction programs.

The statewide partnership concept was pioneered during the 2004-05 program cycle by the four IOUs and the UC and CSU systems. The program was very successful in achieving the above goals. The UC/CSU/IOU Energy Efficiency Partnership will build on this success and emulate these strategies for the 2009-11 program cycle. Projects will adopt a comprehensive approach by including retrofits and DSM alternatives to include: demand-response, distributed generation (renewable self-generation), solar hot water and water efficiency.

##### b) *List Measures*

Measure Categories	Technologies
Lighting	Includes indoor and outdoor fluorescent, HID, LED replacements, lighting controls, and other lighting projects.
Controls and other Equipment	Includes fans, motors, VFDs, air compressors, EMS systems and other equipment not covered under the lighting or HVAC categories.
Air Conditioning and Refrigeration	Includes system and major subsystem replacements
Other	New Construction, RCx, MBCx, IT Projects and others

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### Incentives

Incentives will be paid on projects based on a cents per kWh saved. These rates are an average of \$.24/kwh saved. Incentives are paid by the utility to the agency upon completion of the project. They are based upon the agreed-upon energy savings determined as part of the project evaluation, subject to changes made during the project's implementation. All gas savings will be at \$1.00 per therm.

Incentive rates for the New Partnership will be as follows:

- Lighting projects- \$0.24/ kWh
- Motors/ VFDs/ Compressors/ Controls/ Others- \$0.24/ kWh
- HVAC projects with electric savings- \$0.24/ kWh
- Projects with gas savings- \$1.00/ Therm
- Savings by Design/ Commercial New Construction Projects- \$0.10/ kWh above core SBD incentive rate

### *c) List non-incentive customer services*

The partnership shall provide the following non-incentive services:

- a. Audit services
- b. Technical assistance
- c. Training and education
- d. Design assistance
- e. Due diligence project review
- f. Outreach activities

### *5) Program Rationale and Expected Outcome*

#### *a) Quantitative Baseline and Market Transformation Information:*

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section.

#### *b) Market Transformation Information:*

**Table 4**

Program/Element	Market Transformation Planning Estimates		
	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

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Refer to the overarching PIP section.

c) Program Design to Overcome Barriers:

d) Quantitative Program Targets  
See Master Section PIP

e) Advancing Strategic Plan goals and objectives:

The California Long-Term Energy Efficiency Strategic Plan (Strategic Plan) sets forth a statewide roadmap to maximized achievement of cost-effective energy efficiency in California's electricity and natural gas sectors between 2009 and 2020, and beyond. **See Appendix:** summarizes how the Institutional Objectives and Strategies during the 2009-2011 program cycle contribute to the fulfillment of the Strategic Plan near-term action and steps toward the plan's longer term goals.

### 6) *Program Implementation*

a) Statewide IOU Coordination:

i) *Program Name*

University of California (UC)/California State University (CSU) / Investor-Owned Utility (IOU) Energy Efficiency Partnership

ii) *Program Delivery Mechanisms*

#### Quality Assurance and Evaluation Activities

For reporting purposes, both the State and the IOUs require a stringent measurement and validation (M&V) process. For ESCO projects, the state requires measurement of energy savings that are accurate and objective to ensure that the ESCO is meeting the conditions of their performance contract. An ESCO includes in its proposal a guarantee to provide an energy analysis compiled by an M&V agent that the state and the IOU, where applicable, must approve prior to payment. M&V services are equally important to the IOUs because they must provide a verification of savings to the California Public Utilities Commission to substantiate their use of public good charge funds. The state and the IOUs require assistance from subcontractors to perform M&V tasks.

The partnership management team establishes and oversees quality assurance measures for the partnership programs including oversight and verification of subcontractor activities. These procedures and the associated reporting are developed in detail during the program implementation process. Project teams provide the level of due diligence and quality assurance that are consistent with current partnership and utility programs. Test samples include a representative percentage of pre- and post-installation confirmation assignments

iii) *Incentive Levels*

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- a. Lighting projects- \$0.24/kWh
- b. Motors/VFDs/Compressors/Others - \$0.24/kWh
- c. HVAC projects with electrical savings - \$0.24/kWh
- d. All gas savings - \$1.00/Therm
- e. New construction projects - \$0.10/ kWh above core SBD rates.

*iv) Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms.*

The UC/CSU/IOU Partnership is fortunate to have a built-in marketing and communication network between the UC Office of the President, the CSU Chancellors Office, and the campus energy managers. This “buy-in” from the top opens up communications channels to the whole system. Combined with the existing management structure from the 2006-08 programs, this will facilitate marketing activities through pre-established channels for 2009-11. Due to support from the top of the organization, partnership programs will be very visible and provide opportunities to leverage existing UC and CSU conferences and meetings to raise awareness among campuses for the program. In 2006-08 this was accomplished via the UC Sustainability Conference and the CSU Facilities Conference. As such, marketing efforts are minimal and cost effective.

Key Activity	Description
Outreach	The partnership management team begins outreach efforts by contacting each campuses head of facilities management informing them of the availability of funds for approved measures and activities in the partnership. The team schedules meetings to discuss options, implementation criteria, benefits of program participation, and program offerings.
Customer Follow-Up	The partnership management team, in coordination with staff from the state and the IOUs, visit each targeted site to talk with facilities managers about the various options and proposed energy efficiency measures. After confirming an appropriate site for implementing measures and/or retro-commissioning, the management team meets the appropriate facilities managers to present the anticipated energy savings, other benefits, and considerations associated with the implementation.
Implementation and Training	The partnership management team share energy efficiency knowledge and implementation experience with other public agency entities through a series of meetings and workshops. These meetings and workshops are coordinated with other partnership programs.

*v) IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable*

Reference Master PIP

*vi) Similar IOU and POU programs*

*b) Program delivery and coordination:*

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c) Best Practices:

Reference Master PIP

d) Innovation:

The UC/CSU campuses have made significant progress in adopting innovative projects during the 2006-08 program cycles. Projects and technologies in the high technology (IT systems) areas such as server virtualization, PC power management, and high efficiency UPS systems were a focus. Pilot projects were established with PIER for emerging technologies such as: Integrated Classroom Lighting Systems (ICLS), bi-level stairway lighting systems, and kitchen demand controlled exhaust hood ventilation controls. Additionally in 2008, the partnership began collaboration with IOU food service technology groups to expand energy efficiency in campus cafeterias. The plan for the 2009-11 partnership is to leverage these innovative pilot projects to a fully focused and large scale offering for the UC/CSU Universities.

e) Integrated/coordinated Demand Side Management.

f) Integration across resource types (energy, water, air quality, etc): .

g) Pilots:

h) EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

7) Diagram of Program :

See Appendix

8) Program Logic Model:

See Appendix

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***IV. Sub-Program Implementation Plan – State of California/IOU Partnership Program***

- 2) *Program Name*  
State of California/IOU Statewide Energy Efficiency Partnership Sub-Program
  
- 3) *Projected Program Budget Table*

**Table 9<sup>21</sup>**

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

- 4) *Projected Program Gross Impacts Table*

**Table 10**

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>21</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan**

These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

5) *Program Description*

a) *Describe Program*

SoCalGas and the State of California are collaborating to continue the State of California/Investor-Owned Utilities (IOU) Energy Efficiency Partnership program for the 2009-11 program cycle. This program's goals include sharing energy efficiency (EE) best practices and implementing projects to capture immediate and long-term energy savings and to produce mechanisms for peak demand reduction.

The program will assist the state's agencies to reduce the amount of energy they purchase from the grid by 20 percent by the year 2015, as required by the governor's Executive Order S-20-04 (i.e. Green Building Initiative (GBI)). Like all Executive Orders, the GBI is an unfunded mandate that requires State agencies to support the governor's environmental agenda.

Accompanying the GBI is the Green Building Action Plan (GBAP), which contains detailed instructions on how to achieve the mandated energy savings and reduction in demand. In addition to requiring all new construction and large renovations to meet Leadership in Energy and Environmental Design (LEED) silver certification requirements, the GBAP directs the state to benchmark, retro-commission, and retrofit its existing building stock.

The objective of the State of California/IOU Partnership program is to develop creative strategies to maximize the implementation of energy efficiency opportunities throughout the state. Through the partnership, the state can increase the value that agencies receive on their investments in energy efficiency measures. The overall goal is to uncover opportunities for retro-commissioning and retrofits by leveraging IOU incentive programs. In addition to financial benefits, the partnership provides a mechanism for the State to receive technical assistance from IOU staff and consultants. The partnership assists state agencies to comply with Executive Order S-20-04, the California Public Utilities Commission (CPUC) Decision 05-09-043, and the IOUs' CPUC-approved energy efficiency and demand response programs.

Program activities will operate on a statewide, integrated basis, focusing on the development and implementation of projects that will provide immediate energy savings and set the foundation for a long-term partnership that focuses on sustainability and best practices. This partnership will seek opportunities to coordinate and integrate projects with other demand side management (DSM) programs and will provide a comprehensive approach by including retrofits and DSM alternatives that include demand-response, distributed generation (renewable self-generation), solar hot water, and the energy efficiency related elements of water conservation.



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b) *List Measures.*

Measure Name	Rebate to end use customer or its assignee (\$/unit)
Customized - Indoor Lighting	\$ 0.15
Customized - Indoor Lighting Controls & EMS	\$ 0.15
Customized - Outdoor Lighting	\$ 0.15
Customized - Outdoor Lighting Controls	\$ 0.15
Customized - Motors	\$ 0.18
Customized - VFDs	\$ 0.18
Customized - HVAC EMS	\$ 0.18
Customized - Chillers	\$ 0.24
Customized - HVAC	\$ 0.24
RCx/MBCx	\$ 0.24
Overall Building Performance	\$ 0.10 above core
System Approach - Light Power Density	\$ 0.10 above core
System Approach - Chillers	\$ 0.10 above core
System Approach - Daylighting	\$ 0.10 above core
System Approach - HVAC Energy Reduction	\$ 0.10 above core

c) *List non-incentive customer services*

The partnership shall provide the following non-incentive services:

- g. Audit services
- h. Technical assistance
- i. Training and education
- j. Design assistance
- k. Due diligence project review
- l. Outreach activities

6) *Program Rationale and Expected Outcome*

a) Quantitative Baseline and Market Transformation Information:

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section.

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b) Market Transformation Information:

**Table 4**

Program/Element	Market Transformation Planning Estimates		
	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section.

c) Program Design to Overcome Barriers:

The State of California's departments and systems are large, complex organizations with diverse geographic, climatic, and operational needs that serve a broad range of stakeholders and constituencies. With this size and diversity comes an opportunity to save energy and energy costs on a scale that is significant to the IOUs and to California taxpayers. In the 2006-08 program cycle, the partnership allowed the State and IOUs to remove many barriers and achieve some milestones that include:

- **Barrier: Agreement of Objectives** – In order for the Partnership to have a clear vision that supports the goal, it is clear that a guiding agreement needs to be set in place to allow the team to initiate the effort.
  - **Solution:** A Memorandum of Understanding (MOU) with the State to implement the partnership program in support of the Green Building Initiative allowed the partnership to have the proper sponsorship that provides enablement for the Department of General Services (as the state’s primary procurement agency) and cooperation from each of the 36 agencies.
- **Barrier: Project Delivery Mechanism** – The State of California's departments and systems are large, complex organizations with diverse geographic, climatic, and operational needs that serve a broad range of stakeholders and constituencies. As the primary state procurement agency, the Department of General Services needed to have a project delivery mechanism in order to take advantage of the great energy savings opportunities for the state’s agency facilities.
  - **Solution:** A model contract between the state and an Energy Service Company (ESCO) was developed and approved.
  - **Solution:** A list of qualified ESCOs is being used during the selection process.
  - **Solution:** An ESCO Request for Proposals has been developed and the first round of projects is out for bid. A list of projects has been created for the project approval process.
- **Barrier: Project Funding Constraints** – With the challenges the state is facing with their budgetary constraints, great opportunities for energy efficiency projects are not easily addressed.
  - **Solution:** The Energy \$Mart Loan program has been created to finance energy projects through the Department of General Services.

## **2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan**

- Solution: The IOUs On-Bill Financing Programs are either being implemented or developed as a way of financing smaller retrofit and modernization upgrades.
- Solution: Increased IOU incentives offerings to motivate the state to complete EE projects.
- Increase purview of CEC loans to incorporate “other” State facilities.
- Performance contracting with ESCOs
- On-Bill Financing program
- Additional innovative financing options
- Barrier: Information Dissemination – Some of the agencies lack the technical expertise to develop or manage projects. Therefore the state loses out on opportunities to improve efficiency when staff is unaware of available technology and measures or a lack of funds, or lack of management support causes the removal of such measures from a project.
  - Solution: The management team is currently developing an information tool for agencies that helps reveal the savings potential of implementing projects with likely energy efficiency measures that may appear in agencies’ typical facilities. This is meant to appeal to the facilities managers or decision makers and allow the IOU to perform detailed energy audits that eventually lends itself to a project proposal.
- Barrier: Gap in ESCO Process and Small Projects – The prior program cycle revealed to the management team that while the ESCO process and Energy Smart project financing mechanism works for the larger projects, smaller projects cannot pass the Life-Cycle Cost Analysis and the ESCOs do not find the projects attractive. 95% of the state’s building inventory is under 25,000 sq. ft. which indicates the majority of the projects are smaller.
  - Solution: The management team is exploring alternative project delivery and financing models which may include a mechanism that creates seed money for starting up projects and integrating it with the On-Bill Financing program. This would be augmented by innovative pilot project delivery models such as the project co-funding approach, low to no cost measure offerings, and third party program bridging to pilot concepts that may fill gaps in the program.
- Barrier: Specific agencies who partake in EE projects are unable to delegate utility incentives to their internal budgets
  - Solution: Work with Department of Finance to authorize agencies to keep incentives.
- Barrier: Lack of consensus between executive buy-in and facility management.
  - Solution: Management team to push for coordinated meetings with executives and facility management.
- Barrier: The State of CA and unfunded mandates  
Solution:
  - State of CA to assign funding for specific energy efficiency projects.
  - Increase purview of state agencies under CEC loans.

d) Quantitative Program Targets: .

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See Master Section

e) *Advancing Strategic Plan goals and objectives:*

The California Long-Term Energy Efficiency Strategic Plan (Strategic Plan) sets forth a statewide roadmap to maximized achievement of cost-effective energy efficiency in California's electricity and natural gas sectors between 2009 and 2020, and beyond. **Appendix R:** summarizes how the Institutional Objectives and Strategies during the 2009-2011 program cycle contribute to the fulfillment of the Strategic Plan near-term action and steps toward the plan's longer term goals.

7) *Program Implementation*

a) Statewide IOU Coordination: :

i) *Program Name*

The State of California/IOU Energy Efficiency Partnership Program

ii) *Program Delivery Mechanisms*

Delivery mechanisms, program elements and subcontractor activities are detailed above in Master PIP Section 4, a.

The State of CA is unique in the fact that it utilizes benchmarking systems for project identification.

Benchmarking

The identification of potential projects begins with a benchmarking effort. The state uses the United States Department of Energy's benchmarking tool, Portfolio Manager, to determine the ENERGY STAR scores of all state-owned buildings.

Low-scoring facilities may be candidates for retro-commissioning or retrofit projects.

- Buildings that receive scores of 75 or higher meet the requirements of Executive Order S-20-04.
- Buildings that receive an ENERGY STAR<sup>®</sup> score between 45 and 75 receive consideration for retro-commissioning.
- Buildings that receive scores lower than 45 are candidates for retrofits or renovation. These buildings would not benefit from retro-commissioning since the low score indicates the existence of problems that lie outside the scope of retro-commissioning, such as major equipment replacement.

Once a retro-commissioning or a retrofit project maximizes a building's energy efficiency, it is benchmarked again during the measurement and verification (M&V) process. Benchmarking provides the information that the state needs to compile a yearly report on progress made toward achieving the 20 percent reduction in energy usage by 2015 (mandated by Executive Order S-20-04), and allows the IOUs to

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document the energy savings accrued by the partnership. The state conducts these activities with assistance from the IOUs. In fact, during the previous cycle, the partnership was instrumental in providing support to the State, the IOUs, and administrator for the Portfolio Manager program at the U.S. Department of Energy to allow the IOU energy usage data to seamlessly transfer to the DOE database for benchmarking. These modifications benefited not only the state, but other customers, as well as the federal program operators. This unanticipated benefit reflects the type of opportunities the partnership makes available to the state.

*iii) Incentive Levels*

- a. Lighting projects- \$0.15/kWh
- b. Motors/VFDs/Compressors/Others - \$0.18/kWh
- c. HVAC projects with electrical savings - \$0.24/kWh
- d. All gas savings - \$1.00/Therm
- e. New construction projects - \$0.10/ kWh above core SBD rates.

*iv) Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms.*

The retrofit and retro-commissioning program elements use similar marketing approaches. The partnership management team, in coordination with DGS and other state agency staff conduct marketing and outreach efforts. These efforts are accomplished using contacts with facility administrators and managers. Team members inform them of the availability of energy efficiency services available through the partnership and other utility programs. Key marketing activities include:

Key Activity	Description
Outreach	The partnership management team begins outreach efforts by contacting the heads of facilities management for each department, informing them of the availability of funds for approved measures and activities in state facilities. The team schedules meetings to discuss options, implementation criteria, benefits of program participation, and program offerings.
Customer Follow-Up	The partnership management team, in coordination with staff from the state and the IOUs, visit each targeted site to talk with facilities managers about the various options and proposed energy efficiency measures. After confirming an appropriate site for implementing measures and/or retro-commissioning, the management team meets the appropriate facilities managers to present the anticipated energy savings, other benefits, and considerations associated with the implementation.
Implementation and Training	The partnership management team share energy efficiency knowledge and implementation experience with other public agency entities through a series of meetings and workshops. These meetings and workshops are coordinated with other partnership programs.

*v) IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable*

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The partnership shall utilize the available CEC funding mechanism for the state hospital projects. There are currently two state hospital facilities in the pipeline to take advantage of this opportunity.

*vi) Similar IOU and POU programs*

The four IOUs strive to have consistency in their respective program offerings where practicable to make the transactional experience for the state agencies seamless and transparent. Where the IOUs differ in their implementation strategies, the state agencies are educated and guided by the management team to ensure complete process follow through. If POUs have interest in implementing EE programs, the partnership shall provide technical assistance in designing these programs if requested.

*b) Program delivery and coordination:*

The State of California/IOU Partnership is in a unique position in which by collaboration, has certain delivery and coordination activities made possible by the agreements that are in place as required when entering into the partnership. Below are types of coordination activities already in place within the partnership:

*i. Emerging Technologies Program*

If opportunities allows, the IOUs bring forth emerging technologies to the partner either through PIER project opportunities or the management team's introduction of technology demonstration projects.

*ii. Codes and Standards Program*

See Master PIP Section

*iii. WE&T Efforts*

WE&T type of activities is an integral part of the MBCx strategy where facilities staff are trained to maintain building optimization adding value to their skill sets and further securing their need in the workforce.

*iv. Program-specific marketing and outreach efforts (provide budget)*

The outreach efforts for the partnership involve working with individual state agencies that may have the resources or commitment to implement energy efficiency projects.

*v. Non-energy activities of program*

Non energy activities include the technical assistance the partner may need but do not have the resource available in house. The program provides this kind of

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support as an added benefit to the partner in addition to the monetary incentives they may receive from the IOUs.

*vi. Non-IOU Programs*

The partnership understands that some third-party programs serve the purpose of filling program gaps. The IOUs sees this as an added value to the program offering and makes the effort of augmenting the program's offering with these non-IOU programs.

*vii. CEC work on PIER*

PIER technology projects are introduced into the programs at the project level when opportunities arise.

*viii. CEC work on codes and standards*

N/A

*ix. Non-utility market initiatives*

N/A

*c) Best Practices*

See Master Section PIP

*d) Innovation:*

There are several innovative models currently being developed. They include:

- A co-funding model allows the project implementation activities to be shared between the agency and the IOU in order to facilitate implementation where barriers exist. In the state's stringent contracting requirements, one approach is to perform contracting and contract payments through the IOU's project implementation infrastructure. This system works around obstacles that agencies would normally encounter with the state's infrastructure while still complying with internal requirements.
- An On-Bill Financing pilot is currently in process with the California Department of Fairs and Exposition. The IOUs will complete this financing program's development with a take away from this pilot of the best practices as it affects On-Bill Financing.
- Shared Savings-Direct Install program. The State of California is facing significant funding and implementation barriers the IOU's are looking at the potential of a Direct Install/Shared Savings pilot for the 09-11 cycle.

*e) Integrated/coordinated Demand Side Management:*

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See Master Section PIP

f) Integration across resource types (energy, water, air quality, etc):

N/A

g) Pilots:

The State of California Partnership program is exploring different options for program delivery models that may fill gaps in program design. While the Retro-commissioning and ESCO process may work for larger projects, a solutions package for the small retrofit and modernization project is needed for the majority of the projects. The partnership program is currently underway with pilot projects that address the project development and financial barriers. These pilot projects are as follows:

- A co-funding model allows the project implementation activities to be shared between the agency and the IOU in order to facilitate implementation where barriers exist. In the state's stringent contracting requirements, one approach is to perform contracting and contract payments through the IOU's project implementation infrastructure. This system works around obstacles that agencies would normally encounter with the state's infrastructure while still complying with internal requirements.
- An On-Bill Financing pilot is currently in process with the California Department of Fairs and Exposition. The IOUs will complete this financing program's development with a take away from this pilot of the best practices as it affects On-Bill Financing.
- Shared Savings-Direct Install program. The State of California is facing significant funding and implementation barriers the IOU's are looking at the potential of a Direct Install/Shared Savings pilot for the 09-11 cycle.

h) EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

7) Diagram of Program :

See Appendix

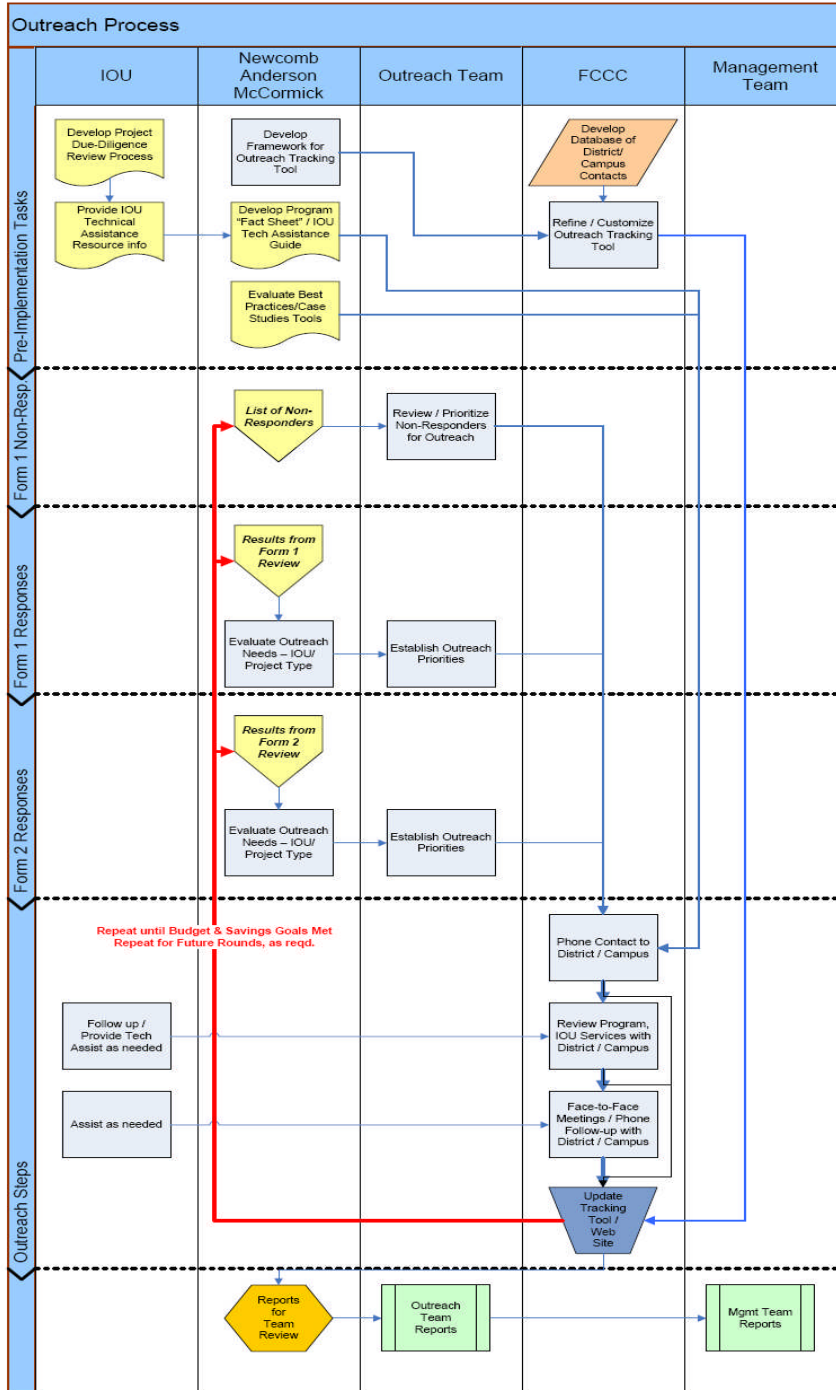
8) Program Logic Model



# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

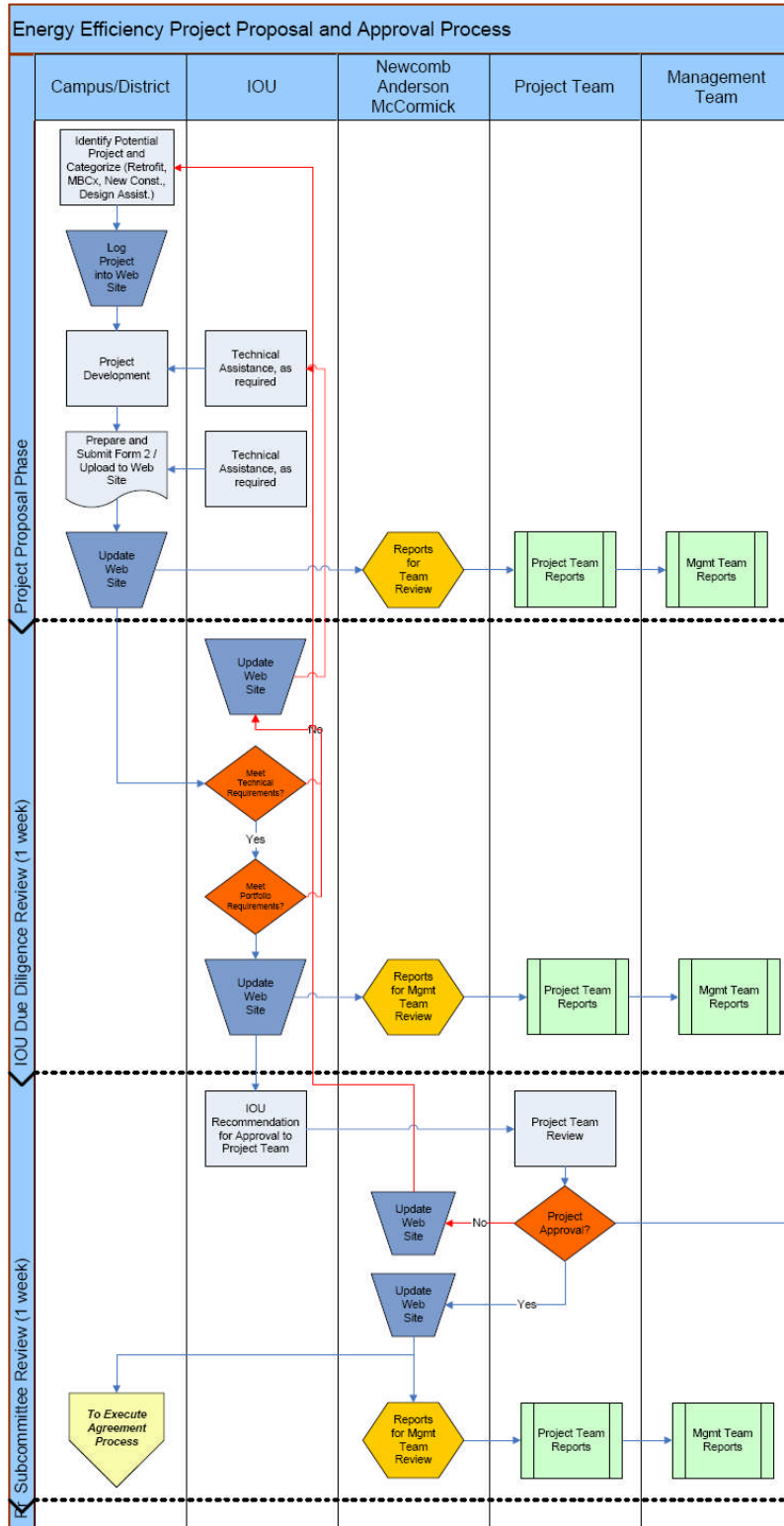
See Appendix *Appendix A: CCC Program Diagram*

*Table A1 – CCC Outreach Process*



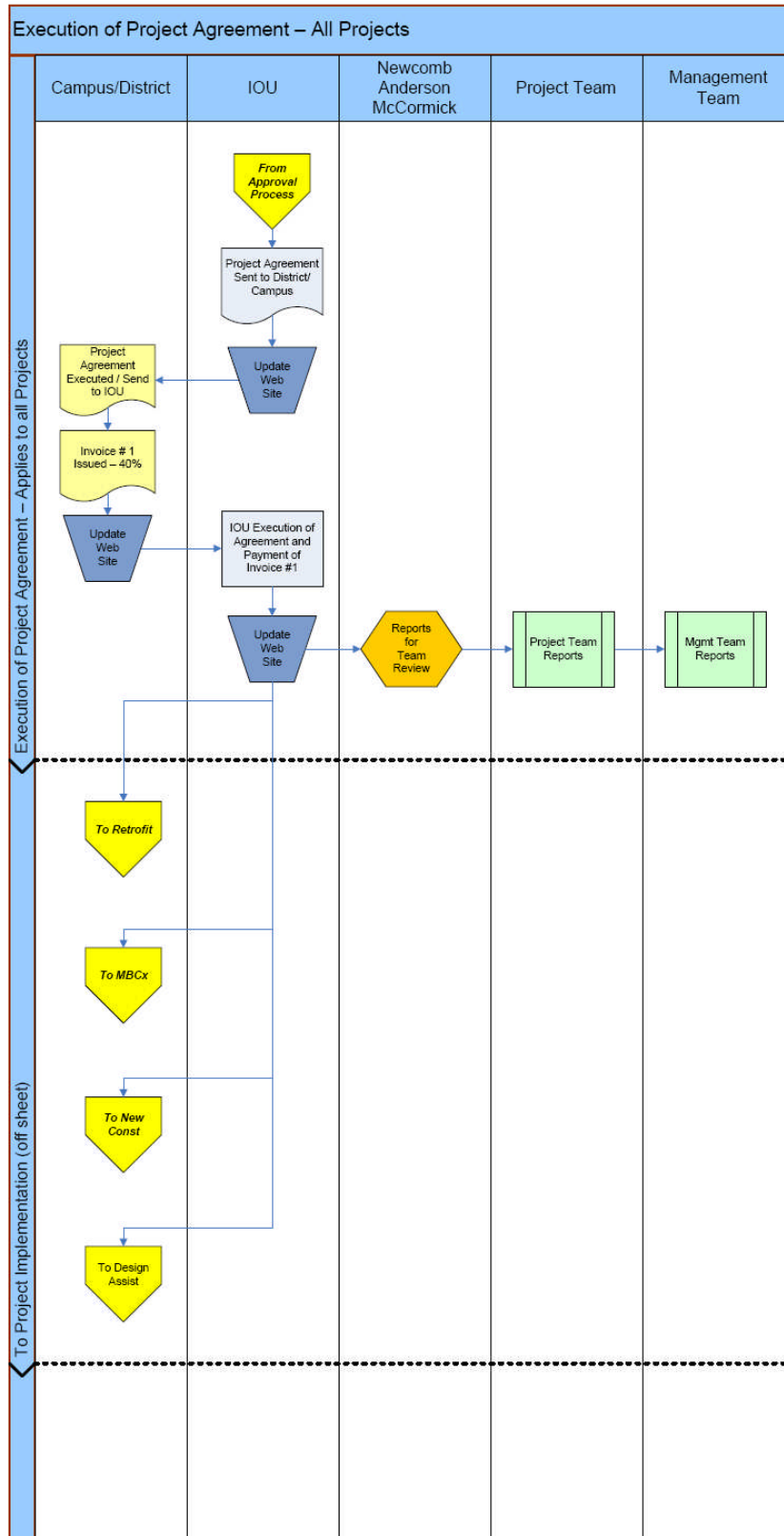
# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

Table A2 – CCC EE Project Proposal and Approval Process



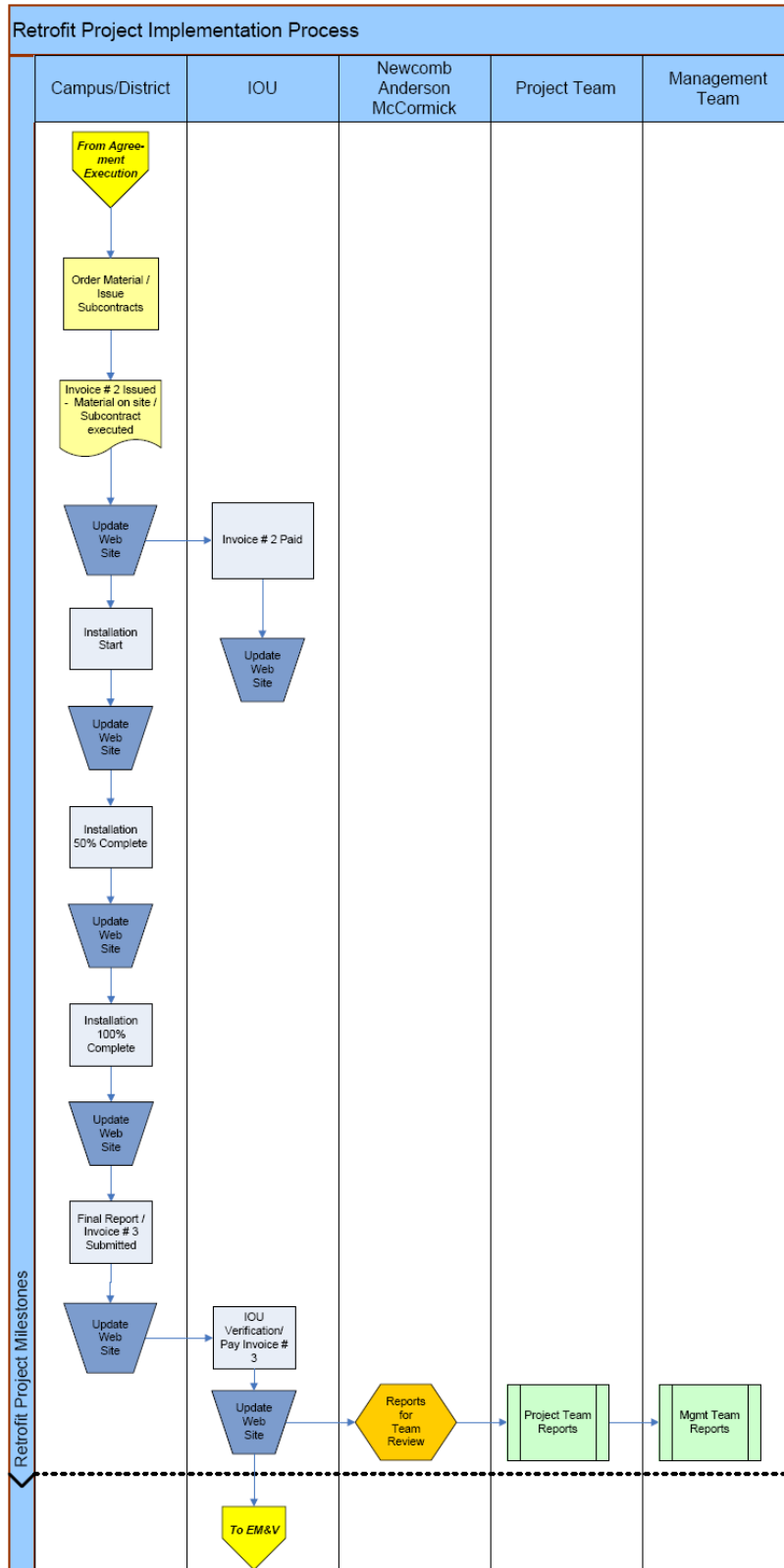
# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

Table A3 – CCC Execution of Project Agreement



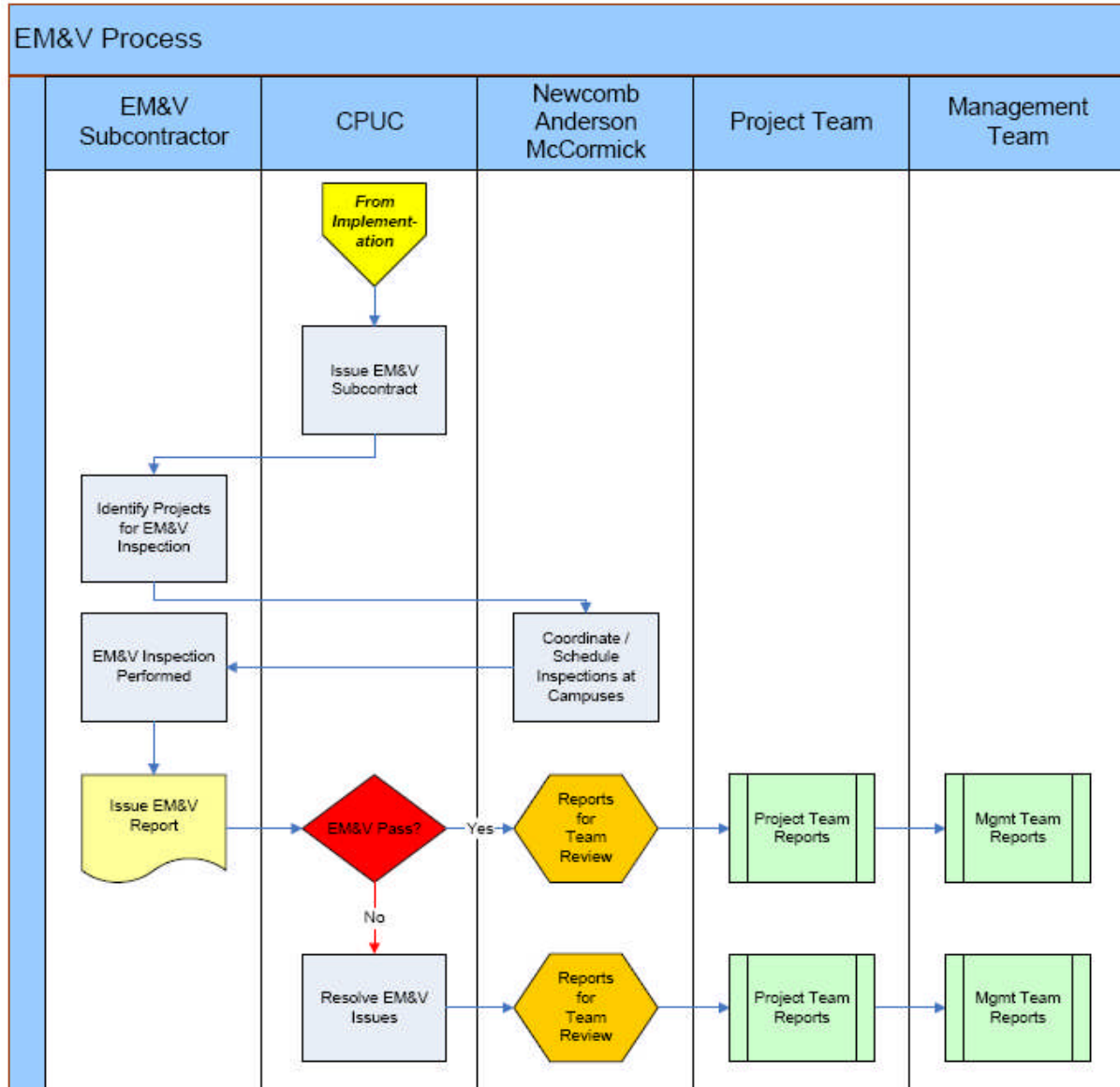
# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

Table A4 – Retrofit Program Implementation Process



## 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

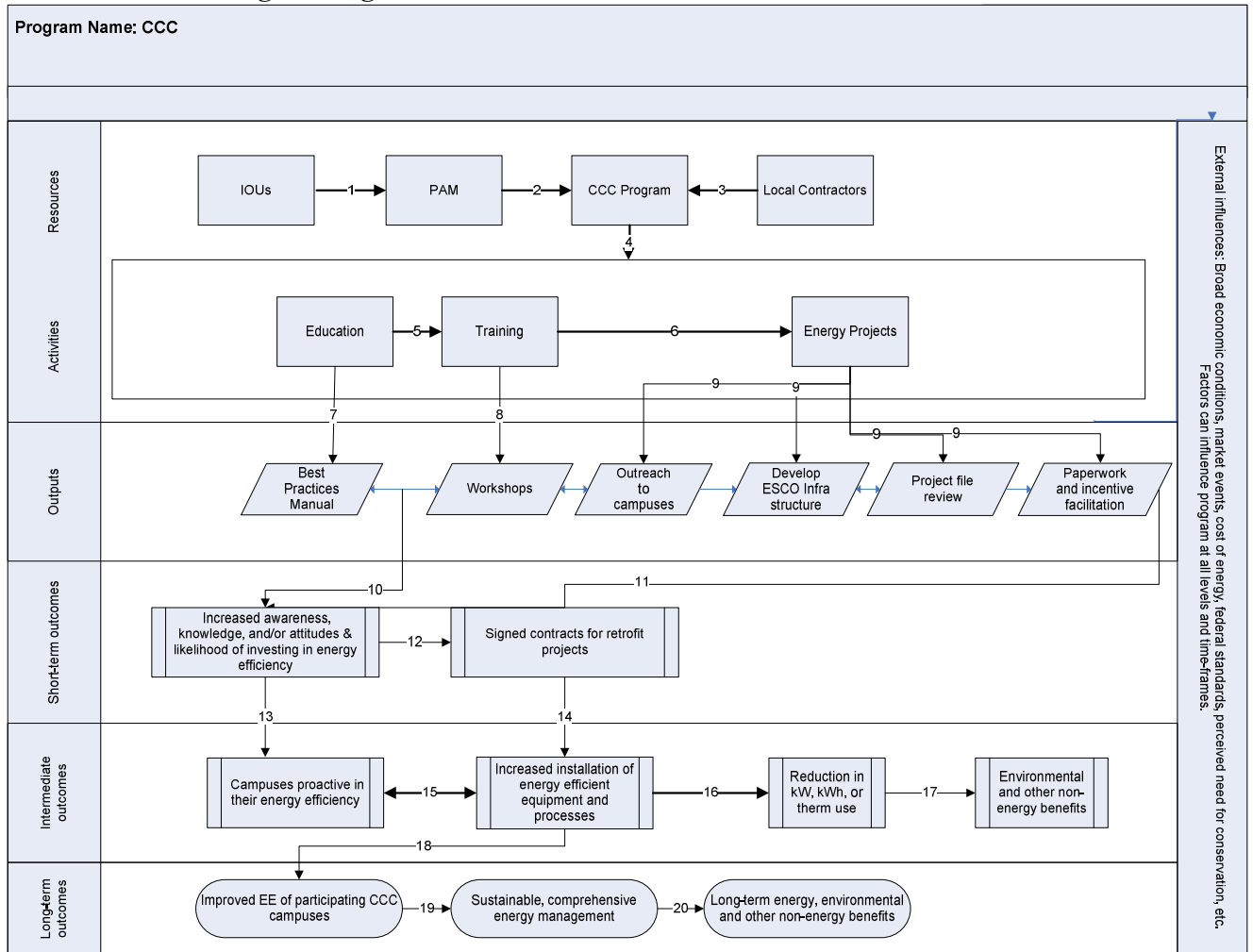
Table A5 – CCC EM&V Process



# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

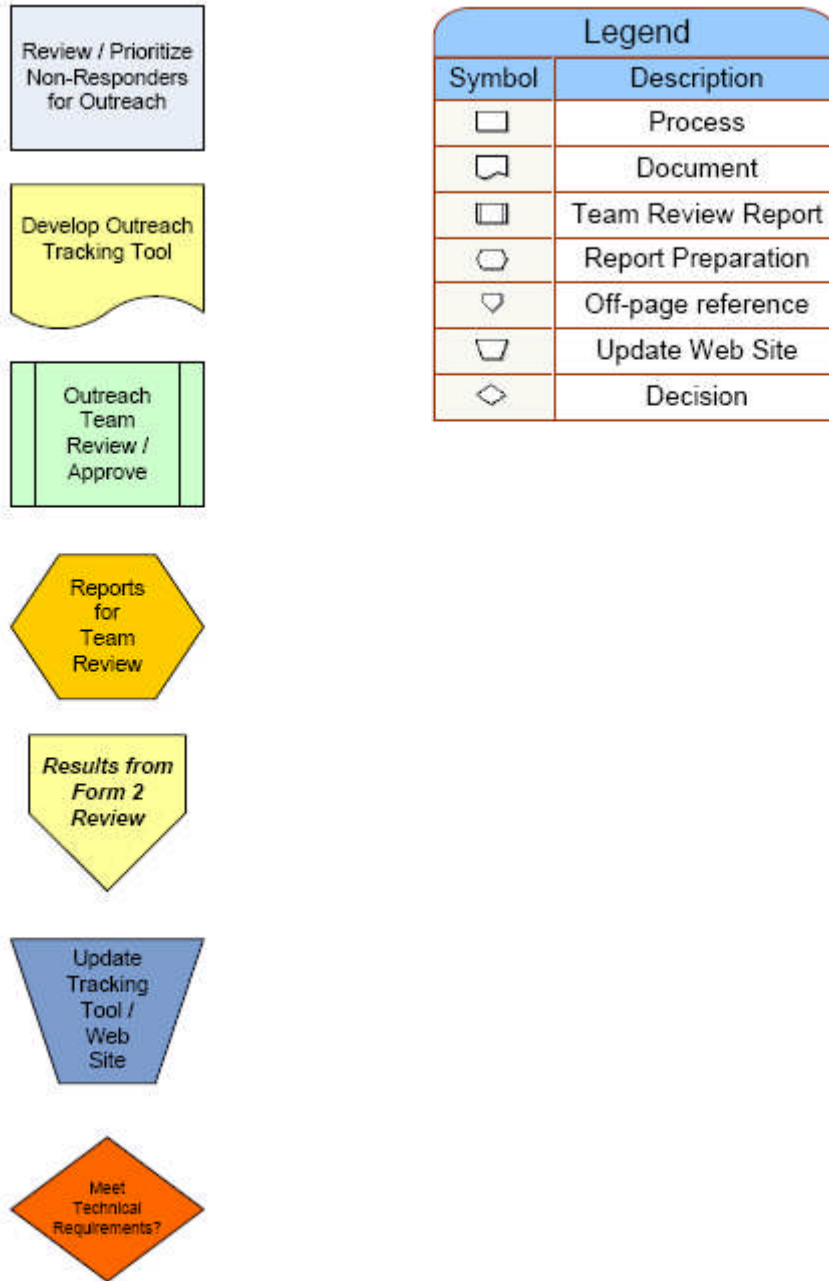
## Appendix B: CCC Program Logic Models

Table B1 – CCC Program Logic Model



## 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

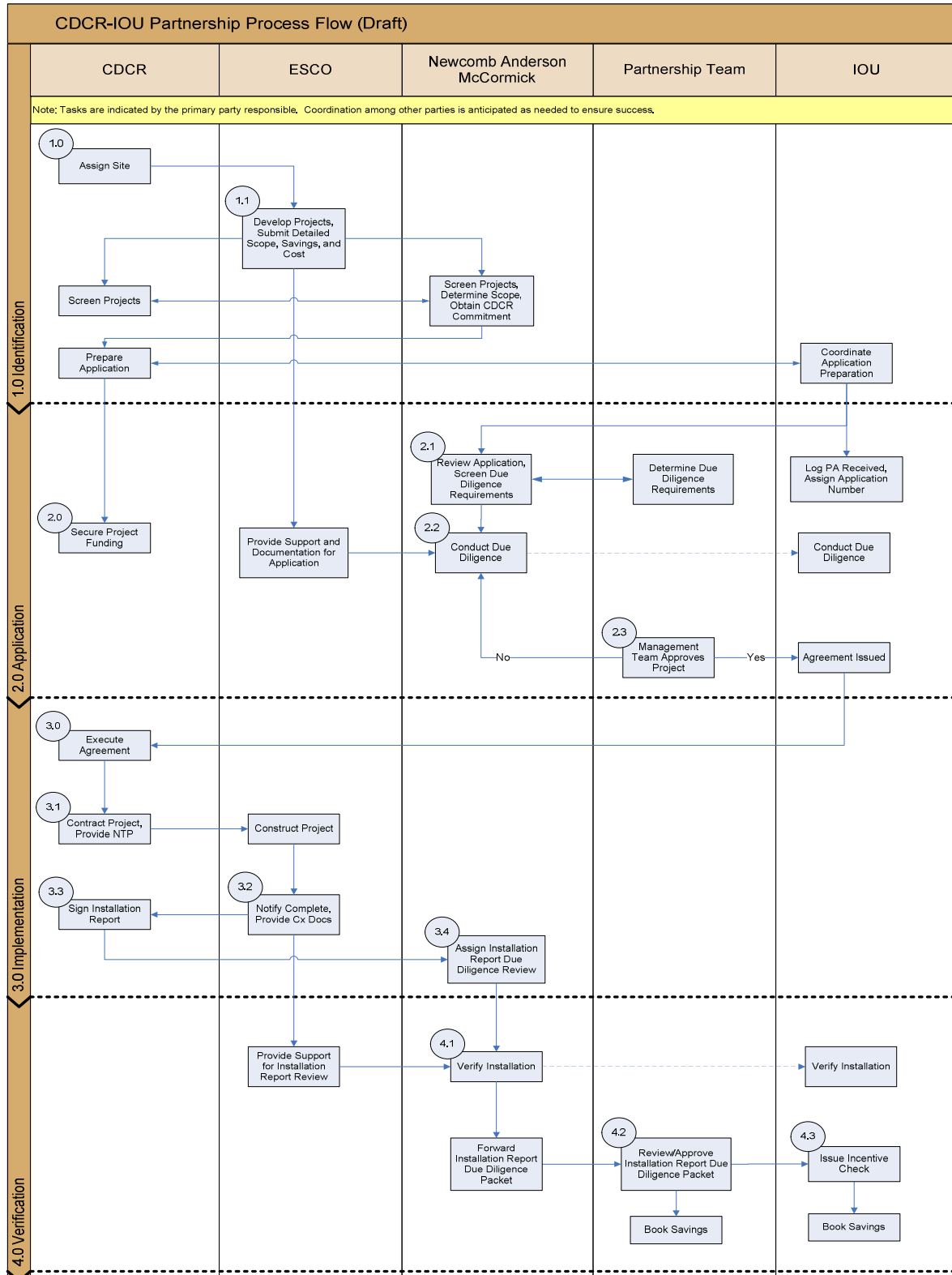
*Table B2 – CCC Logic Model*



# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

## Appendix C: CDCR Program Diagrams

Table C1 – CDCR Process Flow

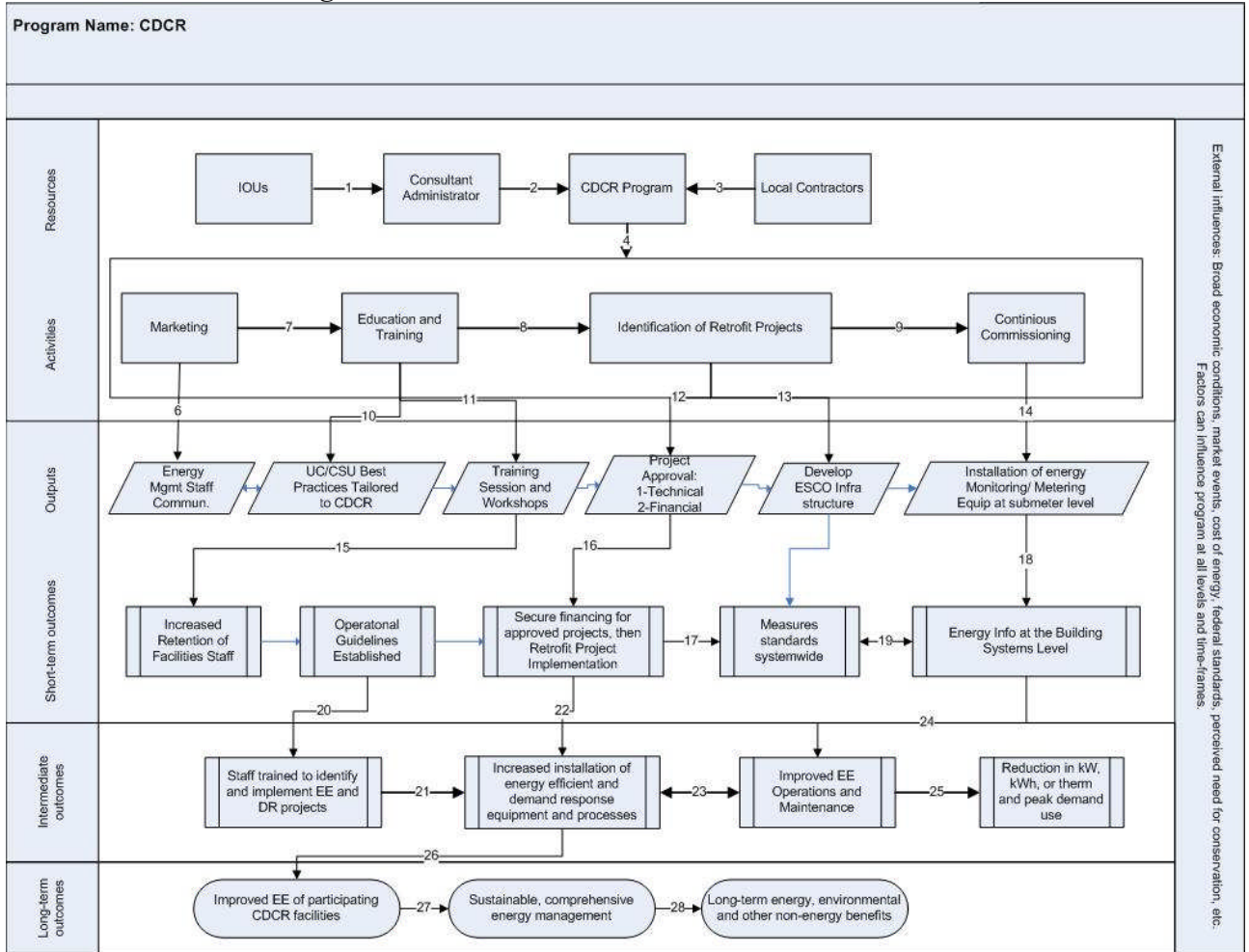




# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

## Appendix D: CDCR Program Logic Model

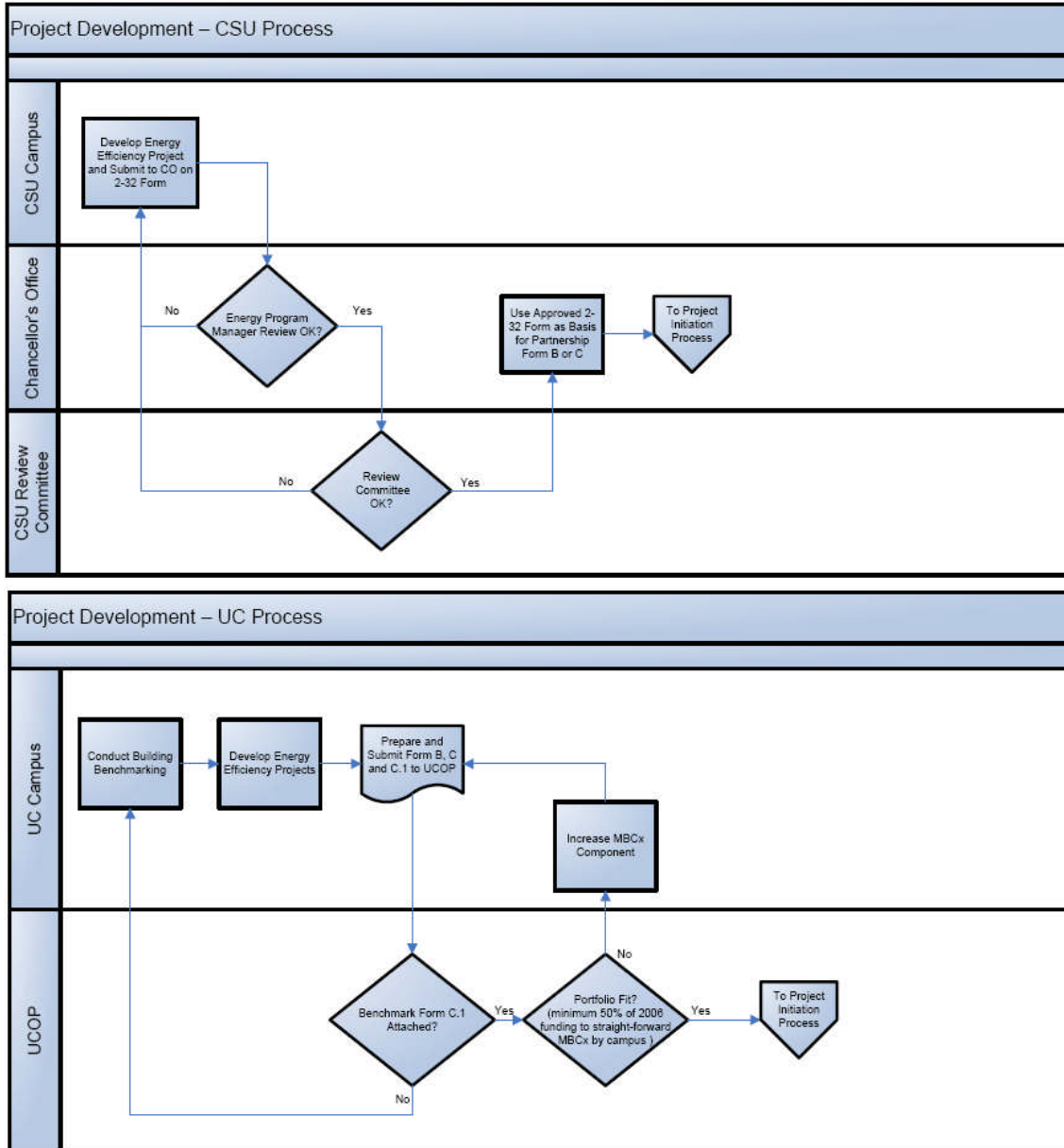
Table D1 – CDCR Logic Model



# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

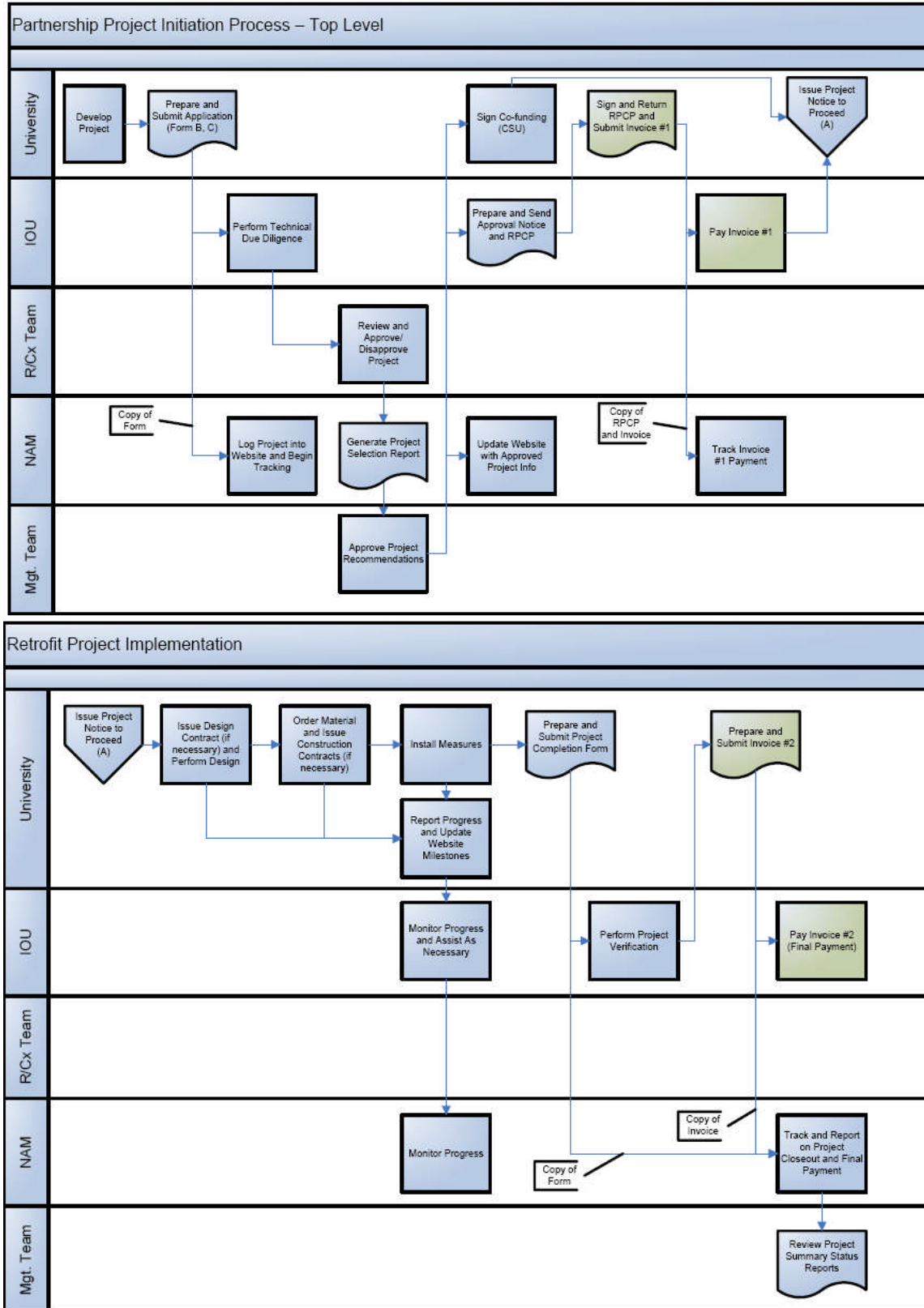
## Appendix E: UC/CSU Program Diagrams

Table E1 – UC/CSU Project Development UC/CSU



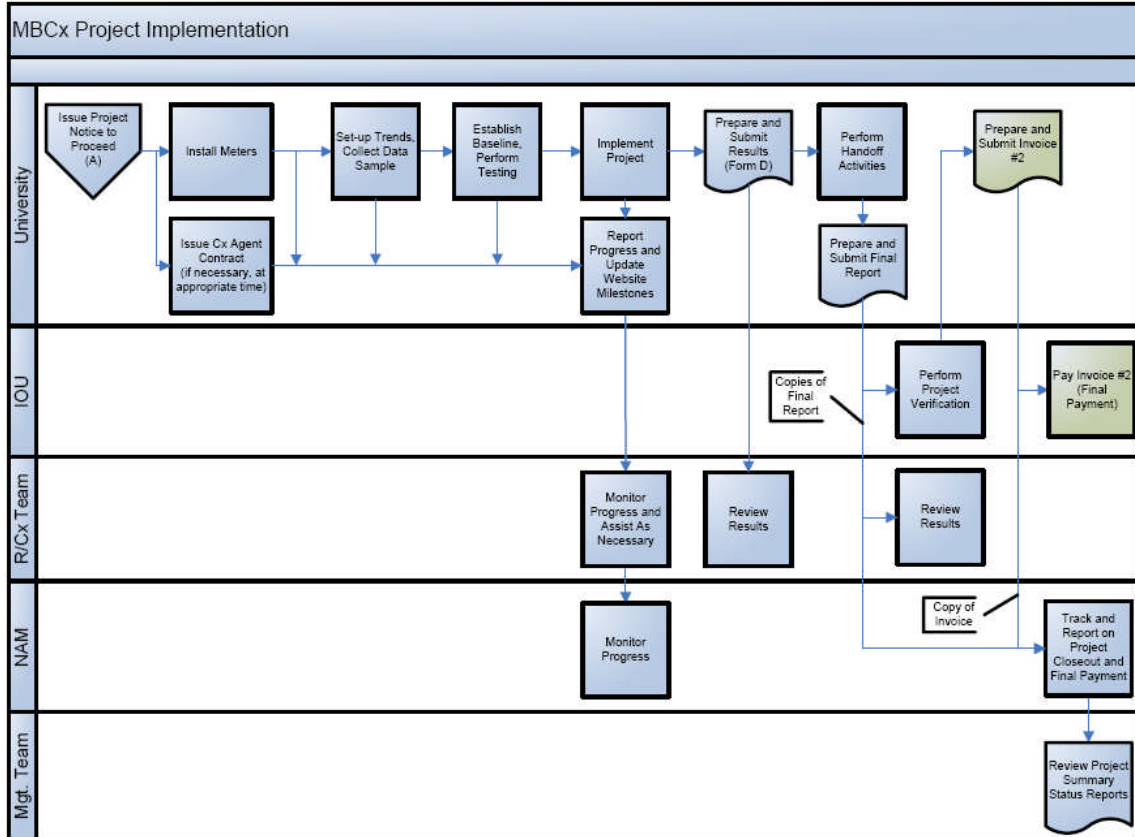
# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

*Table E2 – Partnership Project Initiation and Retrofit Project Implementation UC/CSU*



# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

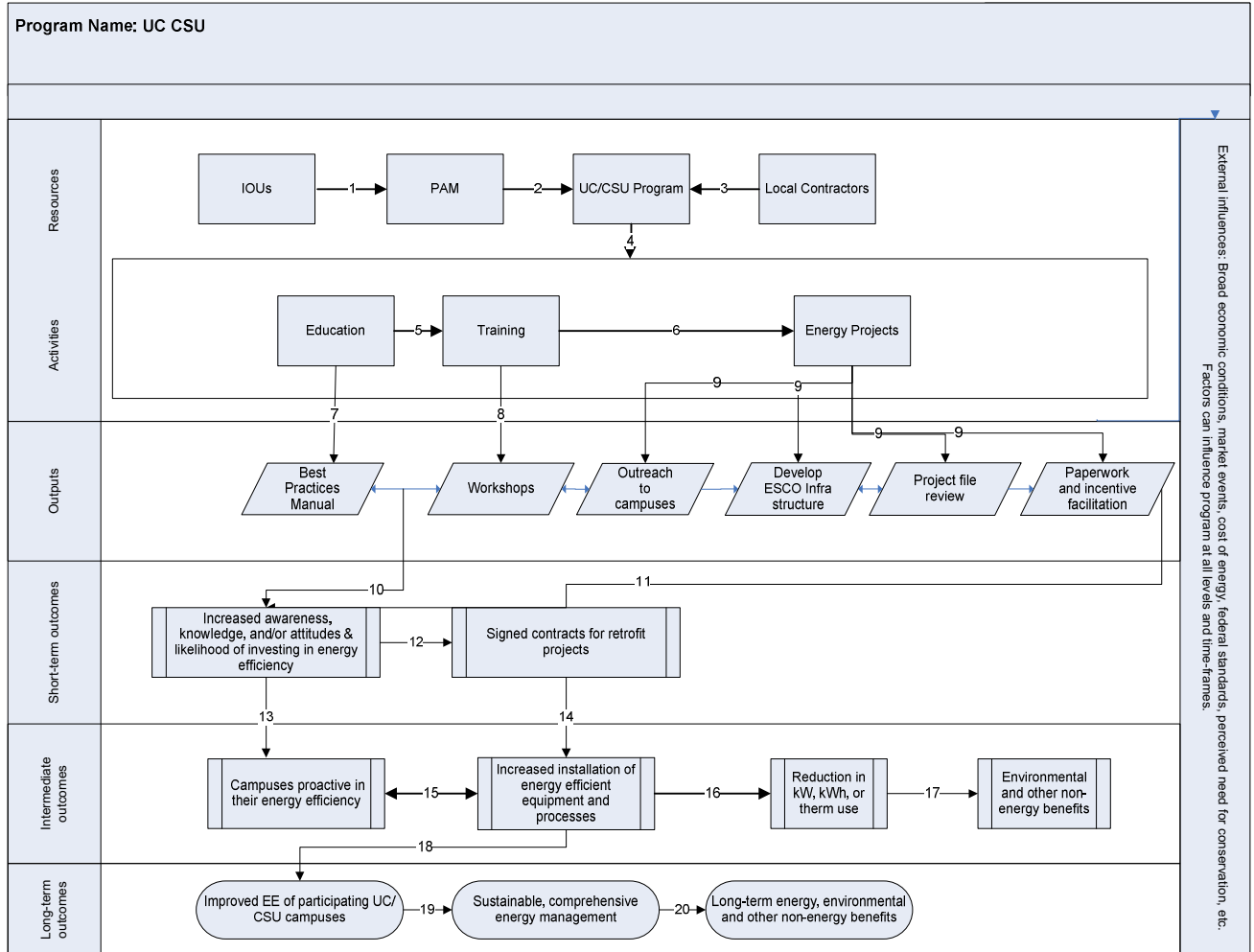
## Appendix E3 – MBCx Project Implementation UC/CSU



# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

## Appendix F: UC/CSU Program Logic Model

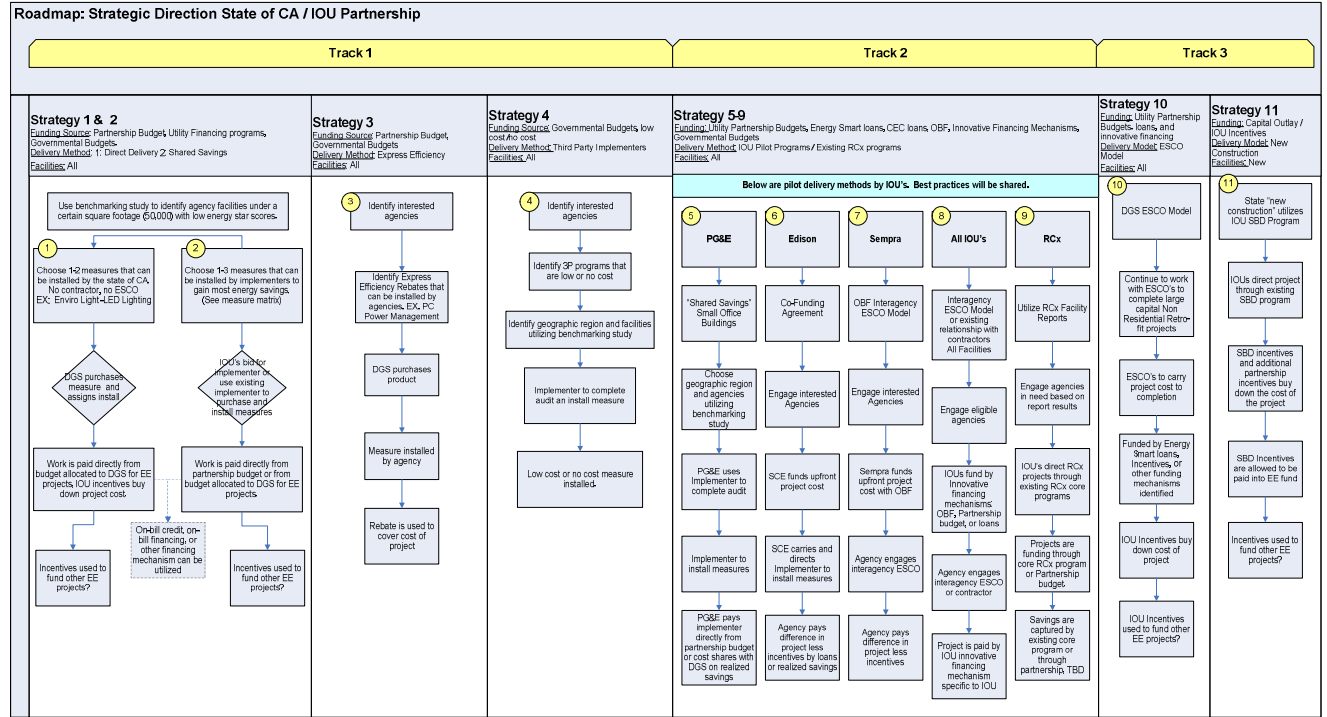
Table F1 – UC/CSU Program Logic Model



# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

## Appendix G: State of California Program Diagrams

**Table G1 – State of California Roadmap**



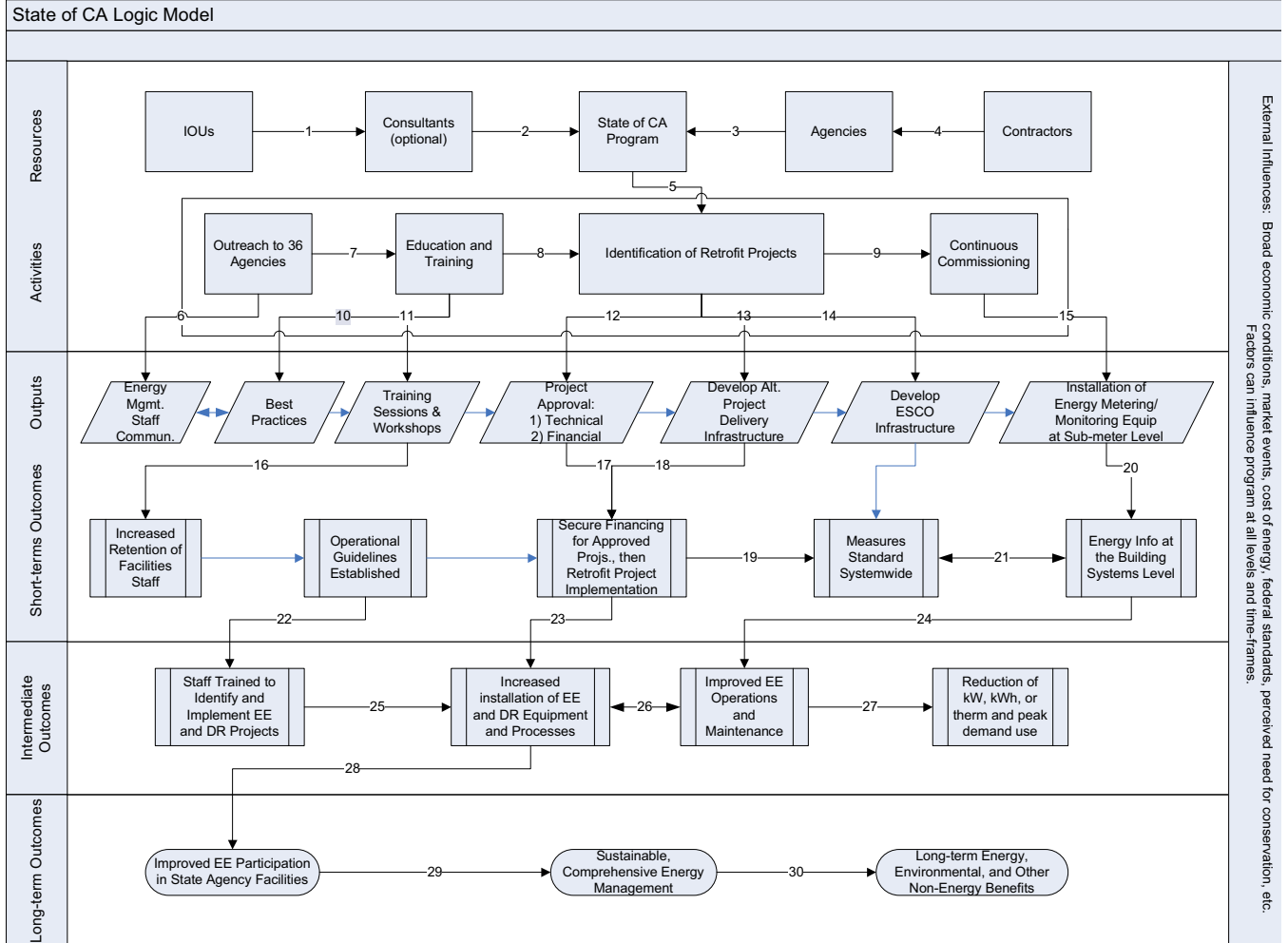
## 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

*Table G2 – State of California Measure Matrix*

State of CA Measure Matrix and Timeline			
0-3 Months		3-6 Months	
IOU's would contract directly with the Manufacturer for Installation - incentive would offset cost of product and installation		IOU's would contract directly with the Manufacturer for Installation - incentive would offset cost of product and installation	
Technology	Estimated Length of Installation	Technology	Estimated Installation Time
Vending Machine Controls	2-3 Months	Occupancy Sensors	4 Months
PC Network Software	1-3 Months	CFL replacement	4-5 Months
LED Exit Signs	3 Months	Steam Traps	5-6 Months
Storage Water Heaters	1-3 Months	Server Virtualization	4-5 Months
Examples of Agencies to Participate		Domestic Hot Water Boilers	5-6 Months
DHS		Fume Hood Occupancy Sensors	3-6 Months
DOM		Furnaces	3-6 Months
DDS		Building Envelope (Insulation, Window Treatmetns	3-6 Months
DMH		Food Service Equipment Replacement	3-6 Months
Fairs and Expos		Examples of Agencies to Participate	
Cal Trans		DMV	
BOE		CHP	
DGS		DMH	
State Compensation Ins. Fund		DDS	
		Cal Trans	
		DHS	
		Fairs and Expos	
		DGS	
		Courts	

# 2009-2011 Energy Efficiency Programs Local Institutional Partnerships Program Implementation Plan

## Appendix H: State of California Program Logic Model





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**Appendix K: Integration with the CLTEESP**

**TBD**

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

### **1) Program Name and Program ID number**

Program Name: Local Government Partnerships  
Program ID number: TBD

SoCalGas's Government Partnership program is complex and multi-dimensional to capture the varied ways that SoCalGas works with governments in its 2009-2011 portfolio. First, local governments are a distinct customer segment that operates with their own unique challenges and needs related to energy efficiency. Second, local governments also serve as a delivery channel for specific products and services when they serve as Local Government Partnerships. Finally, local governments have a unique role as leaders of their communities. Increasingly, local governments are interpreting their moral responsibility for community well-being to include reducing greenhouse gas (GHG) emissions, increasing renewable energy usage, protecting air quality, creating green jobs, and making the community more livable and sustainable.

The Government Partnership program is designed to reach local governments in all of their roles. Depending upon the activity, SoCalGas may play a different role with the local government, ranging from service provider to supporter to equal partner. Governments increasingly engage in strategic planning for GHG reduction not only in their facilities (represented in the municipal GHG inventory) but also in the community (analyzed in the community GHG emissions inventory). Opportunities increase for partnerships with utilities to meet mutual goals of energy reduction. These governments can not only coordinate and integrate demand-side management opportunities in each sector or market they influence, but also effectively leverage and promulgate low-income offerings.

SoCalGas will develop a marketing plan and marketing collateral based on customer segmentation work and research to support outreach efforts. This customer segmentation will help SoCalGas develop an understanding of customers' needs and respond accordingly with products and services that customer's want. The segmentation analysis looks at what the customer requires and how the customer is engaged with SoCalGas. SoCalGas will use many delivery channels and marketing and outreach approaches to effectively reach customers. This will include a team of SoCalGas experts and industry professionals, varying by market sub-segment, to deliver integrated offerings to the customer.

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### 2) Projected Program Budget Table

**Table 1<sup>1</sup>**

Program #	Main Program Name/Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
	<b>Market Sector Programs</b>					
	<b>SCG Local Government Partnerships</b>					
	#LGovP01 - LA County IOU Partnership	\$ 169,125	\$ 40,820	\$ 440,975	\$ -	\$ 650,920
	#LGovP02 - Kern County Energy Watch Partnership	\$ 109,033	\$ 65,093	\$ 138,570	\$ -	\$ 312,696
	#LGovP03 - Riverside County Partnership	\$ 173,830	\$ 28,370	\$ 238,978	\$ -	\$ 441,178
	#LGovP04 - San Bernardino County IOU Partnership	\$ 125,963	\$ 28,370	\$ 280,243	\$ -	\$ 434,576
	#LGovP05 - Santa Barbara County IOU Partnership	\$ 124,629	\$ 43,070	\$ 176,243	\$ -	\$ 343,941
	#LGovP06 - SBCCOG Partnership	\$ 119,282	\$ 44,250	\$ 298,366	\$ -	\$ 461,898
	#LGovP07 - San Luis Obispo County Partnership	\$ 131,165	\$ 42,020	\$ 148,662	\$ -	\$ 321,846
	#LGovP08 - Tulare Crnty-Visalia Energy Watch Prtnr	\$ 100,216	\$ 44,250	\$ 146,968	\$ -	\$ 291,434
	#LGovP09 - Orange County Cities Partnership	\$ 79,173	\$ 61,890	\$ 261,402	\$ -	\$ 402,465
	#LGovP10 - ILG IOU Partnership	\$ 98,717	\$ 154,350	\$ 190,023	\$ -	\$ 443,090
	#LGovP11 - Community Energy Partnership	\$ 112,313	\$ 27,030	\$ 237,177	\$ -	\$ 376,520
	#LGovP12 - Desert Cities Partnership	\$ 23,767	\$ 12,600	\$ 39,532	\$ -	\$ 75,899
	#LGovP13 - VCREA Sub-Program Partnership	\$ 140,765	\$ 129,020	\$ 234,456	\$ -	\$ 504,241
	#LGovP14 - Palm Desert IOU Pilot Partnership	\$ 838,864	\$ 726,437	\$ 1,034,682	\$ -	\$ 2,599,983
	<b>TOTAL:</b>	<b>\$ 2,346,843</b>	<b>\$ 1,447,569</b>	<b>\$ 3,866,276</b>	<b>\$ -</b>	<b>\$ 7,660,688</b>

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

<sup>1</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## 2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan

<b>Program Budget by Core Programs</b>						
Program #	Main Program Name	Government Facilities*	Strategic Plan	Core Programs	Program Budget**	Total (including Incentives)
	LA County IOU Partnership Sub-Program #1	\$855,000.00	\$ 212,682	\$ 431,809	\$ 644,491	\$ 1,499,491
	Kern County Energy Watch Sub-Program #2	\$125,000.00	\$ 96,811	\$ 196,556	\$ 293,368	\$ 418,368
	Riverside County Partnership Sub-Program #3	\$150,000.00	\$ 139,211	\$ 282,640	\$ 421,850	\$ 571,850
	San Bernardino County Sub-Program #4	\$150,000.00	\$ 136,772	\$ 277,689	\$ 414,462	\$ 564,461
	Santa Barbara County Partnership Sup-Program #5	\$70,000.00	\$ 107,163	\$ 217,573	\$ 324,736	\$ 394,736
	SBCCOG Sub-Program #6	\$37,500.00	\$ 148,041	\$ 300,569	\$ 448,610	\$ 486,110
	San Luis Obispo Sub-Program #7	\$50,000.00	\$ 99,727	\$ 202,476	\$ 302,203	\$ 352,203
	Tulare County-Visalia Regional Partnership Sub-Program #8	\$85,000.00	\$ 91,748	\$ 186,288	\$ 278,036	\$ 363,036
	Orange Cities Sub-Program #9	\$120,000.00	\$ 128,453	\$ 260,798	\$ 389,250	\$ 509,250
	ILG Sub-Program #10	\$0.00	\$ 142,687	\$ 289,698	\$ 432,385	\$ 432,385
	Community Energy Partnership Sup-Program #11	\$125,000.00	\$ 120,467	\$ 244,584	\$ 365,051	\$ 490,051
	Desert Cities Partnership Sub-Program #12	\$10,000.00	\$ 24,982	\$ 50,722	\$ 75,704	\$ 85,704
	VCREA Sub-Program #13	\$100,000.00	\$ 164,278	\$ 333,534	\$ 497,812	\$ 597,812
	Palm Desert Energy Partnership Demonstration Program	\$2,040,296	\$ 450,000	\$1,931,454	\$2,381,454	\$ 4,421,750
		<b>\$3,917,796.00</b>	<b>\$2,063,022</b>	<b>\$5,206,389</b>	<b>\$7,269,411</b>	<b>\$11,187,207</b>

\* These budgets are incentives forecasted for Government Facilities but are included in the Commercial programs incentives budgets. These budgets are noted in Table 7.1 as "Integration Budget Allocated to Other Programs (if Applicable)".  
These programs are considered Non-resource programs.  
\*\*The "Strategic Plan" and "Core Program" budgets total to the LGP budgets.

### 3) Projected Program Gross Impacts Table

Table 2

Program #	Main Program Name/Sub-Programs	2009-2011 Three-Year EE Program Gross kWh Savings	2009-2011 Three-Year EE Program Gross kW Savings	2009-2011 Three-Year EE Program Gross Therm Savings
	<b>Market Sector Programs</b>			
	<b>SCG Local Government Partnerships</b>			
	#LGovP01 - LA County IOU Partnership	0	0	0
	#LGovP02 - Kern County Energy Watch Partnership	0	0	0
	#LGovP03 - Riverside County Partnership	0	0	0
	#LGovP04 - San Bernardino County IOU Partnership	0	0	0
	#LGovP05 - Santa Barbara County IOU Partnership	0	0	0
	#LGovP06 - SBCCOG Partnership	0	0	0
	#LGovP07 - San Luis Obispo County Partnership	0	0	0
	#LGovP08 - Tulare Cnty-Visalia Energy Watch Prtnr	0	0	0
	#LGovP09 - Orange County Cities Partnership	0	0	0
	#LGovP10 - ILG IOU Partnership	0	0	0
	#LGovP11 - Community Energy Partnership	0	0	0
	#LGovP12 - Desert Cities Partnership	0	0	0
	#LGovP13 - VCREA Sub-Program Partnership	0	0	0
	#LGovP14 - Palm Desert IOU Pilot Partnership	0	0	0
	<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>0</b>

Note: Partnerships are considered non-resource programs and serve as a delivery mechanism for IOU programs.

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These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

**4) Program Element Description and Implementation Plan**

This LGP Master PIP describes each of the program elements listed below. The Master PIP discusses the major program elements of Government Facilities, California Long Term Energy Efficiency Strategic Plan (Strategic Plan) Support, and Core Program Coordination in an overarching context in sections 4 - 6. Following the Master PIP discussion are sub-PIPs (which also cover sections 4 – 6) for the additional unique program elements of Emerging Cities and for each of the individual Local Government Partnerships. The sub-PIPs also discuss the three major program elements (Government Facilities, Strategic Plan Support, and Core Program Coordination). The sub-PIPs for individual LGPs provide details regarding any targeted or distinct aspects of the three main elements as they relate to that particular LGP.

<b>Program Element</b>	
<b>A. Government Facilities</b>	
	A1 – Retrofit of County and Municipal Buildings
	A2 - Retro-commissioning
	A3 - Integrating Demand Response
	A4 - Technical Assistance
	A5 - On-Bill Financing
<b>B. Strategic Plan Support</b>	
	B1 - Code Compliance
	B2 - Reach Code Support
	B3 - Guiding Document Support
	B4 - Financing for the Community
	B5 - Peer to Peer Support
<b>C. Core Program Coordination</b>	
	C1- Outreach Education
	C2 - Third Party Program Coordination
	C3- Technical Assistance
<b>D. Individual Local Government Partnerships</b>	

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**Element A - Government Facilities**

***4 – Program Element Description and Implementation Plan – Element A - Government Facilities***

<b>A. Government Facilities</b>	
	A1 – Retrofit
	A2 - Retro-commissioning
	A3 - Integrating Demand Response
	A4 - Technical Assistance
	A5 - On-Bill Financing

**Overview**

The Government Facilities element will be implemented by most of the unique individual Local Government Partners (LGPs). This section (4A – 6A) describes the standard overview, rationale, outcomes, and barriers associated with the Government Facilities element by an LGP. If an individual LGP has a distinctive or targeted approach to Government Facilities, that LGP’s individual PIP will contain additional information. The individual LGPs will primarily target local government facilities/sites that are owned or leased by public agencies including city halls, administrative offices, recreation centers, fire stations, libraries.

Individual LGPs play an important role in assisting local governments (cities, counties and special districts) with retrofitting the facilities that they own and operate to achieve short and long term savings. While all local governments have access to SoCalGas programs and incentives to save energy, SoCalGas’s Government Partnership program will work closely with the LGPs to foster government facilities’ energy savings and to place these projects in the context of sustainability and climate change initiatives.

Approaching efficiency in government facilities in this way not only achieves short and long term savings, it also demonstrates a commitment to efficiency to the local government’s constituents and the community at large. This, in turn, enables government partnerships to become champions for energy efficiency programs and other utility programs to further reduce usage in their communities. Additionally, a comprehensive approach to government facilities will be an important step to addressing Assembly Bill 32 (AB32) and other statewide or local GHG reduction requirements.

The Emerging Cities program will be available to support smaller cities with facility audits and technical assistance that support and empower emerging cities to achieve efficiency in their own facilities.

This program element will include five sub-elements: Government Facilities Retrofits, Government Facilities Retro-commissioning, Integrated Demand Response, Technical Assistance, and On-Bill Financing.

**A1 - Retrofits:** Local Government Partnerships which choose to include a Government Facilities Retrofit element in their programs will achieve energy savings by providing technical,

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financial, managerial and administrative support to the government actor (usually a facilities manager) who initiates and implements energy-efficiency retrofit projects. Sometimes this entity is the same as the Partner, and other times it is a different entity. The degree of assistance provided will be tailored to each agency’s need, taking into account energy savings potential, cost effectiveness, level of commitment, available funds and in-house technical expertise. This program element will be leveraged by and integrated with other programs such as retro-commissioning, supporting demand response and self-generation as appropriate to achieve comprehensive impacts while minimizing lost opportunities.

Energy savings will be based on measures installed, e.g., retrofitted. Measures include, but are not limited to, the following:

<b>Measure End Use Types Planned</b>
Boiler Retrofits
HVAC
Water Heating
Natural Gas Water Pumps
Other

**A2 - Retro-commissioning (RCx):** Local Government Partnerships which choose to include a Government Facilities Retro-commissioning element in their programs will provide similar services as those described above for retrofits. RCx is a systematic process for identifying less-than-optimal performance in an existing building’s equipment, lighting, and control systems and making necessary adjustments. Whereas retrofitting involves replacing outdated equipment, RCx focuses on improving the efficiency of what is already in place. As mentioned in A1, by bundling RCx with retrofits and other comprehensive options, the customer will optimize their efficiency and get the best bang for the buck.

Measures include but are not limited to the following:

<b>Measure End Use Types Planned</b>
Boilers
HVAC controls and tune up
Water Heating
Other

**A3 – Integrating Demand Response:** LGPs will determine demand response (DR) potential in the course of comprehensively evaluating sites for energy efficiency retrofit and retro-commissioning opportunities. DR will be integrated with energy efficiency and referrals to DR programs will be made as appropriate. In addition to DR programs, partnerships will continue to identify self-generation opportunities. SoCalGas will work with the Partnerships to ensure that comprehensive packages are made available to the local governments within that Partnership, including, for example a menu of DR options. The LGP will promote offerings through an integrated marketing collateral and sales approach. With additional market segmentation and feedback from customers, the utilities will adjust approaches in order to offer the combination of programs to best meet the varied needs of customers. The goal is to integrate offerings through building auditing and assessment, marketing materials and the strategic sales approach.

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## **A4 - Technical Assistance:**

While SoCalGas makes technical assistance available to all governments, the LGPs will have targeted resources to provide technical assistance to the agencies within each LGP's geographic area. This assistance is an integral component of LGP administered energy efficiency programs and may take the form of engineering audits, equipment specifications, engineering and cost-effectiveness calculations, field inspections, and equipment testing and analysis, and is an integral component of LGP-administered energy efficiency programs. Partnerships will provide technical support for developing, packaging and completing energy-efficient retrofit projects. Additionally, SoCalGas will provide partnerships with training and access to benchmarking technology such as the USEPA/Energy Star Benchmarking tool to identify the government facilities with the highest potential. Partnerships will also provide resources for city staff training and certification in the following; Building Operator Certification, Certified Energy Management, LEED accreditation, Green Point rated and other applicable trainings. This training will serve to build knowledge of energy management and resource conservation within the LGP.

**A5 - On-Bill Financing:** On-bill financing (OBF) may be offered to GPs. In addition to OBF, LGPs may utilize other financing options such as CEC loans or municipal bonds as well as other state/federal grant programs. The Emerging Cities program will incorporate opportunities for On Bill Financing in the audit information provided to the emerging cities.

## **Target Audience**

### **A1 – Retrofit**

The target audience is Government Facilities, which can include municipal administration buildings as defined by NAICS 3 such as:

- City Libraries
- Fire Stations
- County Medical Hospitals
- County Correctional Facilities
- Police Stations
- Municipal Teen Centers
- Municipal Recreation Centers
- City/ County Museums
- Municipal Animal Shelters
- Public Works Department Facilities
- Municipal Water Agencies
- Municipal Transit Agencies

### **A2 – Retro-commissioning**

**Same as A1**

### **A3- Integrating Demand Response**

**Same as A1**



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#### **A4 – Technical Assistance**

Technical assistance associated with government facility retrofits will be targeted at the appropriate city staff including Department of Public Works, Energy Office, Department of Building Inspection, Department of the Environment, etc. While each partnership might vary slightly, the key target audience will be energy managers. The Emerging Cities program will establish additional peer-to-peer networks to facilitate sharing of best practices via the SANGAG partnership and other local government associations.

#### **A5 – On-Bill Financing**

Once a local government OBF program is created, any municipality associated with a Government Partnership would be a candidate for OBF and other financing assistance.

### **Implementation**

#### **A1 – Retrofit**

The LGPs will offer a comprehensive portfolio of energy efficiency programs that target municipal facilities. By partnering with local governments, Partnerships are well positioned to promote energy efficiency in their communities. Retrofit program offerings will include energy audits, lighting assessments and non-lighting system options, calculated and prescriptive rebates, and direct installation of a comprehensive portfolio of measures. To promote this program element, Partnerships will distribute throughout their networks marketing materials and information that is well coordinated with utility and statewide marketing plans. The Partnerships will also leverage their community relationships as well as community based organizations and associations. Partnerships may also directly market to municipal and special district staff and engage key stake holders within the local government and the community. Partnerships will work to achieve both immediate and comprehensive, long-term energy savings. Energy efficiency strategies and measures will be coordinated throughout municipal departments to streamline implementation. Partnerships will implement energy efficiency by providing comprehensive assessments, conservation measures and training and education to the local governments.

#### **A2 – Retro-commissioning (RCx)**

LGPs with a Government Facilities Retrofit element may choose to include a Government Facilities RCx program element. Such LGPs will perform field-based functional tests at the building system and/or building subsystem level to identify RCx opportunities that will deliver energy and demand savings. Each Partnership will tailor minimum criteria (as developed by SoCalGas) to identify RCx projects that will deliver the most savings. Each potential project will be assessed by technical feasibility and cost effectiveness. Preliminary investigation of a site's potential will include on-site equipment testing, monitoring, and/or verifying proper operation and calibration of a sample of the building systems and/or building sub-systems to be included in the proposed RCx projects.

#### **A3- Integrating Demand Response**

In evaluating opportunities in government facilities, Government Partnerships will also determine demand response potential. LGPs will make referrals to demand response programs

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as appropriate. In addition to demand response programs, partnerships will continue to identify self-generation. Refer to the Integration PIP for more detailed information.

### **A4 – Technical Assistance**

Assistance will be tailored to each agency's needs, scaled to the potential energy savings and level of commitment of the participating agency, and strategically applied to leverage the most savings from available resources. Technical assistance may also include education and training, support for peer networking to support best practices, team building and staff training.

### **A5 – On-Bill Financing**

Refer to the on-bill financing section included in Testimony Chapter 3

## ***5 - Program Element Rationale and Expected Outcome – Element A - Government Facilities***

### **a) Quantitative Baseline and Market Transformation Information**

Market Transformation (MT) metrics proposed in Tables 3 and 4 are preliminary. The proposed metrics are meant to initiate a collaborative effort to elaborate meaningful metrics that will provide overall indicators of how markets as a whole are evolving. MT metrics should neither be used for short-term analyses nor for specific program analyses; rather, should focus on broad market segments.

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process and the successful end state have not yet converged. The CPUC defines the end state of MT as “Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market.”<sup>2</sup> The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies<sup>3</sup>.

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical and 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures<sup>4</sup>. Markets are social institutions<sup>5</sup>, and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains<sup>6</sup> as well as changes to codes and standards. Resource acquisition

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<sup>2</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>3</sup> California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

<sup>4</sup> Pelozo, J., and York, D. (1999). “Market Transformation: A Guide for Program Developers.” Energy Center of Wisconsin. Available at: <http://www.ecw.org/ecwresults/189-1.pdf>

<sup>5</sup> Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) “From technology transfer to market transformation”. Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at [http://www.ecee.org/conference\\_proceedings/ecee/2001/Panel\\_2/p2\\_7/Paper/](http://www.ecee.org/conference_proceedings/ecee/2001/Panel_2/p2_7/Paper/)

<sup>6</sup> Sebald, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at [www.calmac.org](http://www.calmac.org).

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programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation progress<sup>7</sup>. According to York<sup>8</sup>, “Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are 3 ways to achieve market transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy.”

The question of what constitutes successful transformation is controversial because of a Catch-22: Market transformation is deemed successful when the changed market is self-sustaining, but that determination cannot be made until after program interventions are ended. Often, however, the need for immediate energy and demand savings or immediate carbon-emissions reductions will mean that program interventions may need to continue, which would interfere with the evaluation of whether MT is self-sustaining. Market transformation success has also been defined in terms of higher sales of efficient measures than would have otherwise occurred against a baseline absent of program interventions. The real world, however, provides no such control condition. Evaluators must estimate these baselines from quantitative factors such as past market sales that may be sparse and/or inaccurate - particularly for new products. Evaluations must also defer to expert judgments on what these baselines may have been as well as on the degree of successful market transformation<sup>9</sup>. Due to the subjective nature of these judgments, it is imperative that baselines as well as milestone MT targets be determined and agreed upon through collaborative discussion by all stakeholders, and these targets may need periodic revision as deemed necessary by changing context.

Market transformation draws heavily upon diffusion of innovation theory<sup>10</sup>, with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades<sup>11</sup>. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects<sup>12</sup>. The ability to make causal connections between these market transformation effects and any particular program’s activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are. First and

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<sup>7</sup> Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings*.

<sup>8</sup> York, D., (1999). “A Discussion and Critique of Market Transformation”, Energy Center of Wisconsin. Available at <http://www.ecw.org/ecwresults/186-1.pdf>.

<sup>9</sup> Nadel, S., Thorne, J., Sachs, H., Prindle, B., and Elliot, R.N. (2003). “Market Transformation: Substantial Progress from a Decade of Work.” American Council for an Energy-Efficient Economy, Report Number A036. Available at: <http://www.aceee.org/pubs/a036full.pdf>

<sup>10</sup> Rogers (1995) *Diffusion of Innovations*, 5<sup>th</sup> Ed.

<sup>11</sup> Example in bottom chart of this graphic from NYTimes:

<http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html>

<sup>12</sup> Sebold et al (2001) p. 6-5,

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foremost, they need to be designed specifically to address market transformation. “The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given to program designers.)<sup>13</sup>” The Strategic Plan recognizes that regulatory policies are not yet in place to support the success of market transformation efforts<sup>14</sup>, but also reflects the CPUC’s directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions<sup>15</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the utilities look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin’s guide for MT program developers<sup>16</sup> suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

The metrics and baselines described below in Tables 3 and 4 are presented for the purposes of starting the much-needed discussion between all key participants. These are suggestions, intended to allow key participants to pilot-test processes for establishing baseline metrics, tracking market transformation progress, and for refining evaluation tools. Early trial of these evaluation metrics will reveal any gaps in data tracking so that we may refine our processes before full-scale market transformation evaluations take place.

The set of metrics we selected is intentionally a small set, for several reasons. First, as mentioned, the full set of metrics and baselines need to be selected by key participants. Second, we anticipate that market share data for many mid- and low-impact measures will be too sparse to show MT effects and not cost-effective to analyze. Third, we selected core measures and metrics that would both be indicative of overall portfolio efforts. These measures are also likely to be offered on a broad level by other utilities, providing a greater base of sales and customer data that could be analyzed for far-reaching MT effects.

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<sup>13</sup> Peters, J.S., Mast,B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume 1.* Available at <http://calmac.org/publications/19981215CAD0001ME.PDF>.

<sup>14</sup> CPUC (2008) Strategic Plan, p. 5.

<sup>15</sup> Nadel, Thorne, Saches, Prindle & Elliot (2003).

<sup>16</sup> Pelosa & York, (1999).

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Therefore, for the Local Government Partnerships the following approach to quantitative baseline and market transformation information is presented as follows.

The utilities recommend development of a baseline, and tracking the number of cities, counties and government institutions that have plans for written energy efficiency provisions. Such a metric relates directly to the Strategic Plan (Goal 12.3.4) in terms of measuring progress towards 50% plans for sustainability.

In addition, we propose tracking community adoptions of new construction model reach codes, both residential and nonresidential. This metric aligns with the Strategic Plan (Goal 12.3.1). In addition to being a direct indicator of support by local government partnerships, community adoptions of model reach codes are of strategic interest to the CPUC. A proliferation of dissimilar reach codes would confuse the market relative to building codes and incentive programs. Model reach codes to be developed by Codes and Standards would allow energy efficiency efforts across partners to be aligned with a clear target for each climate zone. As discussed in the Local Government PIPs, the IOUs intend to work closely with partners in establishing baseline code compliance levels and pushing for model reach codes.

With this discussion in mind, IOUs propose the following metrics for this sector:

**Table 3**

	<b>Baseline Metric</b>	
	<b>Metric A</b>	<b>Metric B</b>
Energy Efficiency Action Plans	Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.	
Model Reach Codes		In coordination with Codes and Standards, develop a baseline inventory of cities and counties within the IOU territory with adopted model reach codes

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**b) Market Transformation Information**

As stated above, market transformation draws heavily upon diffusion of innovation theory, with the state of a market characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects. Therefore it is problematic, if not impractical, to offer internal annual milestones towards market transformation sectors and specific program activities.

As a consequence, it is not appropriate to offer more than broad and general projections. Any targets provided in the following table are nothing more than best guesstimates, and are subject to the effects of many factors and market forces outside the control of program implementers.

**Table 4**

	<b>Internal Market Transformation Planning Estimates</b>		
	<b>2009</b>	<b>2010</b>	<b>2011</b>
Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time
In coordination with Codes and Standards, develop a baseline inventory of cities and counties within the IOU territory with adopted model reach codes	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time

c) Program Design to Overcome Barriers:

Refer to individual partnership PIP section.

d) Quantitative Program Objectives:

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**Table 5**

Program/Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #1	TBD	TBD	TBD
Target #2	TBD	TBD	TBD
Target #3	TBD	TBD	TBD
Target #4	TBD	TBD	TBD

Refer to individual partnership PIP section.

**6 - Other Program Element Attributes- Element A - Government Facilities**

Other Program Element Attributes	Government Facilities
a) <b>Best Practices:</b> Describe why program element approach constitutes “best practice” or reflects “lessons learned” in market strategies, program design and/or implementation techniques, or past experience. Provide references where available.	The approach to Local Government Facilities constitutes a best practice because it incorporates the lessons learned from past program cycles. SoCalGas has seen that, as local governments become champions for energy efficiency in their communities, there is an increased focus on leading by reducing energy use in municipal facilities. In line with the Strategic Plan, the 2009-2011 program cycle will pave the path for a 20% reduction below 2003 levels by 2015 and 20% below levels by 2020.
b) <b>Innovation:</b> Describe any unique or innovative aspects of program element not previously discussed. Why is this innovative?	The Government Facilities program element incorporates innovative aspects of program design, as discussed above. These include benchmarking, community finance, and framing the facilities work within a climate action framework. Government Partnerships have used innovative solutions to address barriers. In using benchmarking technology and other technical assistance, Government Partnerships plan to prioritize the facilities that are best suited for retrofits. Additionally, each partnership will work to address potential barriers by sharing solutions and best practices. The Partnerships program will explore options for addressing financial barriers (e.g., support for California Energy Commission (CEC) loans and other funding opportunities) and support individual Partners that want to pilot new approaches, such as earmarking energy savings in a separate fund to

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Other Program Element Attributes	Government Facilities
	ensure that savings do not go back into the general fund.
<p>c) <u>Interagency Coordination</u>: Describe any interagency coordination with the ARB, CEC on PIER or Codes and Standards; non-utility market initiatives; energy efficiency market forces, opportunities and trends; and timeline by which market segment will be “transformed” or other aspects of the program.</p>	<p>The Government Partnerships program will foster coordination in relation to government facilities efficiency, encouraging LGPs to make use of coordination resources including:</p> <ul style="list-style-type: none"> <li>○ Participate in the CEC loan program for governments.</li> <li>○ CEC's Public Interest Energy Research (PIER) program</li> <li>○ "EPA Energy Star Low Carbon IT Campaign Ally" with their power management savings program.</li> <li>○ Work with the ARB as well as other agencies to co-market materials, co-brand programs, etc.</li> </ul>
<p>d) <u>Integrated/coordinated Demand Side Management</u>: Describe how program will achieve integrated or coordinated delivery of all DSM options, as well as LIEE and WET. (If this is an integral part of the program element and fully covered under #4 note that here.) Describe in detail how program will achieve integrated or coordinated delivery of <u>all</u> DSM options (energy efficiency, demand response, and onsite generation) where applicable including integrated program design and delivery, shared budgets, program evaluation, and incentive mechanisms that promote greater integration of DSM resources. Provide a complete description for all the technologies, including integration supporting technologies that will be included in the program. If the program does not include all DSM options as noted above, briefly provide an explanation for a more</p>	<p>Partnerships will achieve coordinated delivery of DSM options. Some LGPs will achieve integration of all elements, while others will only integrate a few. The integrated elements will include:</p> <ul style="list-style-type: none"> <li>● Integrated energy audits will be offered to government facilities that show savings potential and are willing to commit to the additional time and financial investments. Standard energy efficiency audits will be offered to most program participants.</li> <li>● Emerging Technologies and CEC-PIER collaboration is expected to include pilot projects and market acceleration assistance for market-ready products in the general categories of day lighting, lighting, HVAC, controls, and building envelope improvements.</li> <li>● Commissioning and retro-commissioning</li> </ul>



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<b>Other Program Element Attributes</b>	<b>Government Facilities</b>
<p>limited subset of DSM technologies. Utilize Attachment 5A to highlight any shared or leveraged budget categories and amounts (admin, incentives, ME&amp;O, and other applicable categories).</p>	<p>services will be continued to segment customers.</p> <ul style="list-style-type: none"> <li>• Demand response opportunities will be targeted in the larger facilities, particularly as part of monitoring-based retro-commissioning efforts where the controls to facilitate demand response efforts would be installed.</li> <li>• Coordination with LIEE to provide services to middle-income (“just above LIEE”) customers.</li> </ul>
<p>e) <u>Integration across resource types</u> (energy, water, air quality, etc): If program aims to integrate across resources types, provide rationale and general approach. (If this is an integral part of the program element and fully covered under #4 note that here.)</p>	<p>Government Partnerships will encourage conversations with other resource agencies including water, air quality and transportation authorities. The partnerships will enable individual LGPs to coordinate with other resource programs, such as water, waste, in achieving efficiencies in government facilities.</p>
<p>f) <u>Pilots</u>: Describe any pilot projects that are part of this program (If this was fully covered under #4, note that here.)</p>	<p>Some of the Pilots may address government facility efficiency. Smaller pilots may be implemented by individual LGPs as part of their partnership activity. The Government partnership team intends to do an assessment of government facilities and may pilot new approaches as a result of this assessment.</p>

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<b>Other Program Element Attributes</b>	<b>Government Facilities</b>
<p>g) <u>EM&amp;V</u>: Describe any process evaluation or other evaluation efforts that will be undertaken by the utility to determine if the program is meeting its goals and objectives. Include the evaluation timeframe and brief description of scope, as well as a summary of specific methodologies, if already developed. If not developed, indicate the process for developing them. Include reference to tracking databases that will be used for evaluation purposes.</p>	<p>A process evaluation will be conducted by a third party evaluator. The evaluation will assess communication and coordination effectiveness between partners as well as satisfaction with the service and increased awareness of energy efficiency opportunities. A combination of interviews and focus groups will likely be used to collect data. The evaluation is expected to build upon results found in the recently completed process evaluation for PY2006 to 2008.</p>

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**Element B - Strategic Plan Support**

***4 – Program Element Description and Implementation – Element B - Strategic Plan Support***

<b>B. Strategic Plan Support</b>	
	B1 - Code Compliance
	B2 - Reach Code Support
	B3 - Guiding Document Support
	B4 - Financing for the Community
	B5 - Peer to Peer Support

**Overview**

The Strategic Plan Support element will be implemented primarily through the unique program elements of the Emerging Cities coordinating with the SANDAG partnership and some components of the individual partners which are specifically designed to actualize the vision set forth in the long term strategic plan: California’s local governments will be leaders in using energy efficiency to reduce energy use and global warming emissions both in their own facilities and throughout their communities.

Individual LGPs will also play an important role in furthering the strategic plan. This section (4B – 6B) describes the standard overview, rationale, outcomes, and barriers associated with an individual LGPs implementation of the Strategic Plan support element. If an individual LGP has a different or targeted approach to Government Facilities, that LGP’s individual PIP will contain additional information.

It is important to note that individual Partners vary widely in terms of how appropriate and/or ready each Partner is to undertake activities related to supporting the strategic plan. The functions for strategic plan support are quite distinct (from codes to policy to finance). Given the diversity of entities serving as the individual LGP, some Partners can accommodate all of the distinct roles required for strategic plan support while others cannot.

The partners that directly represent a government entity will have different responsibilities and capabilities than those partners that represent a regional group, such as SANDAG. For example, governments are appropriate entities to enact policies including stretch codes, GHG targets, and general plan updates, but regional groups are better positioned to perform broader functions such as developing regional plans. In cases where the individual Partner does not function as a leader for some or all of the strategic plan initiatives (codes, climate plans, financing, and peer support), the Partner can often still play a supporting role.

Partners exhibit varying readiness to engage in strategic plan activity. Some partners have very limited staff and budgets and may be engaging in energy efficiency and sustainability issues for the first time. Other partners have been working on these issues for several years and are among the leading municipalities in the country in their sustainability efforts. Therefore, the approach

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to achieve strategic plan initiatives will need to be tailored to suit the individual needs and capabilities of each Partner.

Through the Emerging Cities program and SANDAG partnership, SoCalGas will provide an integrated suite of program offerings geared toward strategic plan support, including tools and technical assistance, to all cities in the service area. Emerging Cities, coordinating with SANDAG, will provide a roadmap developing a starting point for all cities in SoCalGas territory, including those with and without formal partnerships, that are interested in engaging in GHG reduction and energy efficient activities to reach objectives outlined in the Strategic Plan.

Local Government Partnerships will also implement, to varying degrees, aspects of the Strategic Plan Support element. The degree will depend on how far along the energy efficiency learning curve the partnership is.

The following section catalogs approaches and techniques that LGPs may choose to utilize to make constructive use of local government policies and services to promote community sustainability.

### **B1 - Code Compliance**

The Code Compliance sub-element will be implemented primarily through the Codes and Standards program, as described in the Codes and Standards PIP. Some individual LGPs will take action related to code compliance by engaging in a range of activities that will be coordinated with the Codes and Standards program. LGP Code Compliance activities may include training local government staff that is charged with code compliance in coordination with SoCalGas's Codes and Standards program or through training and education classes. LGP activity may also include developing and implementing certification programs for local inspectors and contractors. LGPs may assist with marketing in coordination with SoCalGas and statewide marketing activities, including advertising training opportunities to relevant trades, raising awareness of current codes among business and residential customers and encouraging compliance. Local Governments often have access to constituents through existing relationships and can use those routes to enhance or complement other energy efficiency marketing activities.

Please refer to the Codes and Standards PIP for further information.

### **B2 - Reach Code Support**

The Reach Code Support sub-element will be implemented primarily through the Codes and Standards program. Some individual Partnerships may choose to include Reach Code activities to promote local codes that exceed Title 24 requirements. Again, all reach code support activity will be coordinated with the Codes and Standards program. Partnerships that include Reach Code activities could perform activities that range from training local government staff regarding adoption and implementation of model reach codes to establishing expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments. Examples could include green building standards for new construction and retrofits/retro-commissioning or carbon offset reduction programs that exceed Title 24. SoCalGas will provide training through its Education and Training program. LGPs may attend training and/or market the training to relevant trades, in coordination with utility and statewide marketing activities.

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Please refer to the Codes and Standards PIP for further information.

### **B3- Guiding Document Support**

This program element will help government's complete GHG emissions inventories and climate action plans in accordance with the process developed by ICLEI and help develop guiding documents that effectively and methodically reduce community energy consumption and GHG emissions. Those partnerships that include this program element could perform activities that range from quantifying a municipality's baseline energy use, to developing a climate action plan to reduce energy use to developing policies to be incorporated into a general plan.

Those partners who have not yet developed their baseline energy use could include activities to inventory their municipal operations and community GHG emissions that would support strategic planning to increase use of SoCalGas energy efficiency, demand response, renewables, and other applicable programs. Advanced Partnerships and the individual Partners with a more regional focus could develop local policy documents that could include energy elements in general plans, energy efficiency recommendations for new developments, energy-efficient equipment purchasing guidelines, community climate action plans, and analyses for energy conservation codes and ordinances targeting the private sector.

Advanced Partnerships and the individual Partners with a more regional focus may assist municipalities within their jurisdictions with energy policies. For example, they may develop Community Energy Policy Packages for adopting and implementing a local energy initiative. This package may include draft policy language, a recommendation for legal authority (ordinance versus policy document versus administrative mandate); guidance and checklist for successful implementation (including assigning policy implementation to a sympathetic city department); staff report guidelines and discussion on implementations issues (e.g., how to frame objectives, scope, triggering mechanisms, requirements, and enforcement strategies). These services may also include technical assistance for agencies pursuing adoption of local policies, and may include estimating local savings impacts, providing supporting calculations or analysis of staff reports, etc.

### **B4 - Financing for the Community**

Some individual LGPs will implement some aspect of financing as part of their activity. A new program element will be offered to Partners to help governments explore financing opportunities such as low-interest loans through the California Energy Commission (CEC). The CEC's Energy Efficiency Financing Program provides financing for schools, hospitals and local governments through low-interest loans for feasibility studies and the installation of energy-saving measures. For those partners who include this program element, the Partnership could provide project financial analysis assistance to quantify energy efficiency project economics in terms understood by local government decision makers, and could assist facility engineering staff in presenting projects for approval. Assistance may include providing life cycle cost analysis and illustrating how energy efficiency investments can be structured to pay for themselves, while also freeing up resources through lower future facility operating costs.

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### **B5 – Peer to Peer Support**

Individual LGPs may participate in peer sharing forums and the quarterly partner networking events set up by SoCalGas. Individual LGPs may also set up their own networks for the governments within their area. LGPs provide an opportunity to raise awareness among local government staff and create connections across departments to lay the groundwork for the long-term change that is laid out in the strategic plan. Peer to peer exchange is one method for building local government energy efficiency knowledge and capability. LGP peer to peer exchange also may benefit utility and third party implementation staff where local government staff provides information about their local community needs and the inner workings of their local government.

Information sharing can occur within each Partnership (across Partnership members), across local government staff and across Partnerships. Peer to peer support will help local governments develop energy efficiency policy and program initiatives to promote energy efficiency within the local government community. Those Partners who choose to include this element in their program could utilize a combination of peer forums, local government-focused workshops, and a web based clearinghouse that will provide specific energy efficiency information and resources. Support networks would encompass those already working in energy efficiency or related areas such as environment, climate or sustainability and those whose primary function is not directly related to energy efficiency such as building inspectors, maintenance staff and city council members.

The expected outcomes are the exchange of information within, across and from Partnerships to broader local government staff. The range of expected impacts is consistent with elements of the strategic plan and includes:

- Increased knowledge and awareness of energy efficiency,
- Changes in local government behaviors related to energy efficiency,
- Increased ability to implement energy efficiency within local government, and
- Creation of linkages across local government staff and added resources that maximize the government's ability to develop goals and implement strategies around energy efficiency and carbon reduction.

### **Non-Incentive Services**

The functions and activities discussed in this section are all non-incentive services.

### **Target Audience**

The Partnership program will assist local governments, quasi-governments, nonprofits focused on the public sector, and their agents in achieving objectives of the Strategic Plan. Each Partner's actions in this arena will benefit their respective constituents, including but not limited to residents, inspectors, contractors, small businesses, and other local governments.

### **Implementation**

For each of the five Strategic Plan Support elements described, implementation will vary across the LGPs. For detailed information about implementation, please see the Individual LGP PIPs. In

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general, each Partnership contract will identify which strategic plan program elements will be included in the partnership program and the associated budget. The utility and partner responsibilities will be defined for each program element included in the partnership.

### ***5 - Program Element Rationale and Expected Outcome – Element B - Strategic Plan Support***

#### **a) Quantitative Baseline and Market Transformation Information**

Market Transformation (MT) metrics proposed in Tables 3 and 4 are preliminary. The proposed metrics are meant to initiate a collaborative effort to elaborate meaningful metrics that will provide overall indicators of how markets as a whole are evolving. MT metrics should neither be used for short-term analyses nor for specific program analyses; rather, should focus on broad market segments.

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process and the successful end state have not yet converged. The CPUC defines the end state of MT as “Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market.”<sup>17</sup> The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies<sup>18</sup>.

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical and 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures<sup>19</sup>. Markets are social institutions<sup>20</sup>, and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains<sup>21</sup> as well as changes to codes and standards. Resource acquisition programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation progress<sup>22</sup>. According to York<sup>23</sup>, “Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are 3

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<sup>17</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>18</sup> California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

<sup>19</sup> Pelozo, J., and York, D. (1999). “Market Transformation: A Guide for Program Developers.” Energy Center of Wisconsin. Available at: <http://www.ecw.org/ecwresults/189-1.pdf>

<sup>20</sup> Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) “From technology transfer to market transformation”. Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at [http://www.eceee.org/conference\\_proceedings/eceee/2001/Panel\\_2/p2\\_7/Paper/](http://www.eceee.org/conference_proceedings/eceee/2001/Panel_2/p2_7/Paper/)

<sup>21</sup> Sebold, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at [www.calmac.org](http://www.calmac.org).

<sup>22</sup> Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings*.

<sup>23</sup> York, D., (1999). “A Discussion and Critique of Market Transformation”, Energy Center of Wisconsin. Available at <http://www.ecw.org/ecwresults/186-1.pdf>.

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ways to achieve market transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy.”

The question of what constitutes successful transformation is controversial because of a Catch-22: Market transformation is deemed successful when the changed market is self-sustaining, but that determination cannot be made until after program interventions are ended. Often, however, the need for immediate energy and demand savings or immediate carbon-emissions reductions will mean that program interventions may need to continue, which would interfere with the evaluation of whether MT is self-sustaining. Market transformation success has also been defined in terms of higher sales of efficient measures than would have otherwise occurred against a baseline absent of program interventions. The real world, however, provides no such control condition. Evaluators must estimate these baselines from quantitative factors such as past market sales that may be sparse and/or inaccurate - particularly for new products. Evaluations must also defer to expert judgments on what these baselines may have been as well as on the degree of successful market transformation<sup>24</sup>. Due to the subjective nature of these judgments, it is imperative that baselines as well as milestone MT targets be determined and agreed upon through collaborative discussion by all stakeholders, and these targets may need periodic revision as deemed necessary by changing context.

Market transformation draws heavily upon diffusion of innovation theory<sup>25</sup>, with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades<sup>26</sup>. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects<sup>27</sup>. The ability to make causal connections between these market transformation effects and any particular program’s activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are. First and foremost, they need to be designed specifically to address market transformation. “The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given to program designers.)<sup>28</sup>” The Strategic Plan recognizes that regulatory policies are not yet in place to support the success of market transformation efforts<sup>29</sup>, but also reflects the CPUC’s

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<sup>24</sup> Nadel, S., Thorne, J., Sachs, H., Prindle, B., and Elliot, R.N. (2003). “Market Transformation: Substantial Progress from a Decade of Work.” American Council for an Energy-Efficient Economy, Report Number A036. Available at: <http://www.aceee.org/pubs/a036full.pdf>

<sup>25</sup> Rogers (1995) Diffusion of Innovations, 5<sup>th</sup> Ed.

<sup>26</sup> Example in bottom chart of this graphic from NYTimes:

<http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html>

<sup>27</sup> Sebold et al (2001) p. 6-5,

<sup>28</sup> Peters, J.S., Mast,B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume 1.* Available at <http://calmac.org/publications/19981215CAD0001ME.PDF>.

<sup>29</sup> CPUC (2008) Strategic Plan, p. 5.



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directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions<sup>30</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the utilities look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin's guide for MT program developers<sup>31</sup> suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

The metrics and baselines described below in Tables 3 and 4 are presented for the purposes of starting the much-needed discussion between all key participants. These are suggestions, intended to allow key participants to pilot-test processes for establishing baseline metrics, tracking market transformation progress, and for refining evaluation tools. Early trial of these evaluation metrics will reveal any gaps in data tracking so that we may refine our processes before full-scale market transformation evaluations take place.

The set of metrics we selected is intentionally a small set, for several reasons. First, as mentioned, the full set of metrics and baselines need to be selected by key participants. Second, we anticipate that market share data for many mid- and low-impact measures will be too sparse to show MT effects and not cost-effective to analyze. Third, we selected core measures and metrics that would both be indicative of overall portfolio efforts. These measures are also likely to be offered on a broad level by other utilities, providing a greater base of sales and customer data that could be analyzed for far-reaching MT effects. Therefore, for the Local Government Partnerships the following approach to quantitative baseline and market transformation information is presented as follows. The utilities recommend development of a baseline, and tracking the number of cities, counties and government institutions that have plans for written energy efficiency provisions. Such a metric relates directly to the Strategic Plan (Goal 12.3.4) in terms of measuring progress towards 50% plans for sustainability.

In addition, we propose tracking community adoptions of new construction model reach codes, both residential and nonresidential. This metric aligns with the Strategic Plan (Goal

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<sup>30</sup> Nadel, Thorne, Saches, Prindle & Elliot (2003).

<sup>31</sup> Peloza & York, (1999).

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12.3.1). In addition to being a direct indicator of support by local government partnerships, community adoptions of model reach codes are of strategic interest to the CPUC. A proliferation of dissimilar reach codes would confuse the market relative to building codes and incentive programs. Model reach codes to be developed by Codes and Standards would allow energy efficiency efforts across partners to be aligned with a clear target for each climate zone. As discussed in the Local Government PIPs, the IOUs intend to work closely with partners in establishing baseline code compliance levels and pushing for model reach codes.

With this discussion in mind, IOUs propose the following metrics for this sector:

**Table 3**

	Baseline Metric	
	Metric A	Metric B
Energy Efficiency Action Plans	Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.	
Model Reach Codes		In coordination with Codes and Standards, develop a baseline inventory of cities and counties within the IOU territory with adopted model reach codes

**b) Market Transformation Information**

As stated above, market transformation draws heavily upon diffusion of innovation theory, with the state of a market characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects. Therefore it is problematic, if not impractical, to offer internal annual milestones towards market transformation sectors and specific program activities.

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As a consequence, it is not appropriate to offer more than broad and general projections. Any targets provided in the following table are nothing more than best guesstimates, and are subject to the effects of many factors and market forces outside the control of program implementers.

**Table 4**

<b>Internal Market Transformation Planning Estimates</b>			
	<b>2009</b>	<b>2010</b>	<b>2011</b>
Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time
In coordination with Codes and Standards, develop a baseline inventory of cities and counties within the IOU territory with adopted model reach codes	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time

c) Program Design to Overcome Barriers:

Refer to individual partnership PIP section.

d) Quantitative Program Objectives:

**Table 5**

Program/Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #1	TBD	TBD	TBD
Target #2	TBD	TBD	TBD
Target #3	TBD	TBD	TBD
Target #4	TBD	TBD	TBD

Refer to individual partnership PIP section.

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### ***6 - Other Program Element Attributes – Element B - Strategic Plan Support***

#### **a) Best Practices**

SoCalGas's approach to Strategic Plan Support is innovative and reflects lessons learned because SoCalGas has observed that multiple actors provide governments with long-term GHG reduction and energy reduction strategies. SoCalGas has learned from previous programs that it is more important for governments to have access to tools and technical assistance to become informed energy actors rather than directly performing all functions themselves.

#### **b) Innovation**

The Strategic Plan Support element is inherently innovative since these elements have not been a part of previous Government Partnership program.

#### **c) Interagency Coordination**

The Strategic Plan Support element affords many opportunities for CEC, ARB and PIER coordination especially as communities look towards AB32 implementation and Title 24 compliance and development of climate action plans. Government Partnerships who include Strategic Plan Support elements in their program will look to align the goals of their respective communities around the goals of the Strategic Plan through education and outreach campaigns, peer-to-peer support and by providing technical assistance around compliance issues with these agencies.

#### **d) Integrated/coordinated Demand Side Management**

The Strategic Plan Support program element will achieve coordination of demand side management, low income efficiency, and workforce training. Peer to peer support will serve as a catalyst for integration by providing a platform for knowledge sharing. In this way, there is an opportunity to expose all peer to peer participants to all utility program offerings in an integrated fashion.

#### **e) Integration across resource types (energy, water, air quality, etc)**

This program element integrates other resources, especially regarding guiding documents, which necessarily should include resource types such as waste, land use, water. While government Partnerships are designed to focus on energy efficiency, SoCalGas can encourage partnerships to access other resources and can also emphasize when energy programs have incidental benefits to other resources. See individual PIPs for more specific information.

#### **f) Pilots**

Individual LGPs may choose to implement pilots related to this element. See individual PIPs for more specific information.

#### **g) EM&V**

A process evaluation will be conducted by a third party evaluator. The evaluation will assess communication and coordination effectiveness between partners as well as satisfaction with the service and increased awareness of energy efficiency opportunities. A combination of interviews and focus groups will likely be used to collect data. The evaluation is expected to build upon results found in the recently completed process evaluation for PY2006 to 2008.

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**Element C - Core Program Coordination**

***4 – Program Element Description and Implementation – Element C - Core Program Coordination***

<b>C. Core Program Coordination</b>	
	C1- Outreach Education
	C2 - Third Party Program Coordination
	C3 - Technical Assistance

**Overview**

The Core Program Coordination element will be implemented to some degree by all of the unique individual Local Government Partners (LGPs). This section (4C – 6C) describes the standard overview, rationale, outcomes, and barriers associated with the Core Program Coordination element by an LGP. If an individual LGP has a distinctive approach to Core Program Coordination, that LGPs individual PIP will contain additional information. Within Government Partnerships, the unique elements of Emerging Cities will also support the Core Program Coordination element.

Coordination with Core programs is important to the effectiveness of each individual LGP. A key to SoCalGas’s coordination effort is its market segment planning approach. All of SoCalGas’s programs will be coordinated starting in 2009 via a customer segment planning team, which will include SoCalGas staff from core, third party and government partnership as well as demand response, customer generation, and others. This means that LGPs will be coordinated with all other energy efficiency portfolio efforts to reach agricultural, commercial, industrial, residential and small business customers.

In addition, LGPs coordinate with each other, with SoCalGas, and with other implementers to support energy efficiency programs across the SoCalGas portfolio, and particularly with respect to outreach education for residential and small business customers, third party programs, and technical assistance. By utilizing the outreach channels of the local government, these programs target customers and fully canvas neighborhoods that may not be targeted by Core Programs.

In a continued effort to insure that customers and energy efficiency opportunities are not overlooked, LGPs will also have the opportunity to participate in a program to provide energy efficiency to moderate income customers slightly above the LIEE guideline or to customers who are unable to produce the necessary LIEE documentation.

Because of their close ties to the community, individual LGPs may identify opportunities to serve customer energy needs through integrated demand side management products including energy efficiency, demand response, low income programs, and codes and standards assistance as well as other utility programs including distributed generation. Such coordination provides customers with comprehensive solutions and minimizes overlap of effort and service. Where the LGP identifies a need that they do not currently service, they can refer participants to programs. The Partnership will provide the participant with contact information for the relevant programs and assistance as required. If program overlap is determined to exist, the Partnership will notify

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SoCalGas of the program(s) involved and discuss and coordinate efforts so as not to duplicate services and compete for customers.

In addition, LGPs can coordinate with and leverage other sources of funding to increase the impact of SoCalGas offerings and include programs provided by other agencies such as the CEC, ARB and other state and federal agencies.

In addition to outreach for energy efficiency opportunities, LGPs are an important delivery channel for integrated approaches and emerging technologies. As new approaches of integration and emerging technologies are available, the LGPs will serve as a channel for providing the appropriate outreach and education to the community.

### **C1 - Outreach and Education**

LGPs will provide education and outreach to inform their customers about comprehensive energy saving opportunities and best practices. All of the outreach will be coordinated with SoCalGas's marketing efforts and statewide marketing energy efficiency marketing initiatives.

As part of the coordination of Training and Education, the LGPs will leverage trainings at the San Diego Energy Resource Center and other sources.

### **C2 - Third Party Program Coordination**

LGPs will coordinate with Third Party direct install contractors and/or other core programs to implement retrofits of existing government buildings and municipal facilities. The contracts will be coordinated with the LGPs by establishing agreements between the contractors and the GPs that specify which customers and in which geographic areas each contractor is eligible to serve. Contractors will be selected to provide focus on targeted customers as well as specialization in strategic technologies such as HVAC tune-ups and replacement projects.

### **C3 – Technical Assistance**

Technical assistance is available to LGPs. Assistance many include but is not limited to audits, engineering calculations, reports and inspections.

### **Target Audience**

Community level data will be analyzed to determine the areas with the largest potential based on market potential studies and looking at previously served customers.

### **C1 - Outreach and Education**

The primary audience for outreach and education includes the following:

- Local Government Partners
- Government and agency employees
- Community based organizations
- Contractors
- SoCalGas customers
- Building engineers

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### **C2 - Third Party Program Coordination**

Individual LGPs will coordinate closely with the third parties providing the direct install implementation. In addition, each individual LGP will be trained in the programs offered by the third parties so that they may coordinate and/or refer customers to these programs. For example, third party coordination may be appropriate for more specialized technologies or specific target segments.

### **C3 – Technical Assistance**

The target audience for technical assistance includes local government partners, SoCalGas customers, and contractors.

## **Implementation**

### **C1 - Outreach and Education**

Objectives of the LGPs include leveraging marketing from existing core and statewide programs to provide a consistent and cost effective approach. Because LGPs best understand the needs of their community, the LGPs will tailor offerings to the community and implement programs through community outreach.

LGPs will also work with local governments, non-profits and SoCalGas to develop an education curriculum and schedule that will engage their communities. Partnerships will leverage the resources of the San Diego Energy Resource Center.

Some individual LGPs may develop training materials for adopting and implementing local energy initiatives or may utilize such materials developed under the Emerging Cities program. Partnerships will also develop workshop topics, schedule workshops in key locations, arrange for workshop presenters, coordinate workshop materials, market workshops to local governments, and facilitate workshops

### **C2 - Third Party Program Coordination**

LGPs using third party direct install programs will coordinate with third party direct install contractors to determine which areas of the community should be the focus of the direct install contractors marketing efforts. The direct install contracts will be coordinated with the LGPs by establishing agreements between the contractors and the LGPs that specify which customers and geographic areas each contractor is eligible to serve. This method provides a more orderly approach to using the limited number of contractors to reach the widest population in the state in a consistent manner. Each direct installation implementer will work with their assigned LGP to develop a marketing strategy for their assigned LGP territory. Each LGP with Direct Install element in their program will have a direct install budget that will augment the third party contract funds. Each project implemented and coordinated within a LGP community will be funded by the GP program and the associated savings will be allocated to the GP.

### **C3 – Technical Assistance**

Technical assistance is available to LGPs to provide audits, engineering calculations, reports and inspections. Additionally, partnerships will take a strategic market plan approach to address the customers with the largest potential or the biggest need. These efforts will be conducted with other third party and Core programs.



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## 5 - Program Element Rationale and Expected Outcome – Element C Core Program Coordination

### a) Quantitative Baseline and Market Transformation Information

Market Transformation (MT) metrics proposed in Tables 3 and 4 are preliminary. The proposed metrics are meant to initiate a collaborative effort to elaborate meaningful metrics that will provide overall indicators of how markets as a whole are evolving. MT metrics should neither be used for short-term analyses nor for specific program analyses; rather, should focus on broad market segments.

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process and the successful end state have not yet converged. The CPUC defines the end state of MT as “Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market.”<sup>32</sup> The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies<sup>33</sup>.

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical and 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures<sup>34</sup>. Markets are social institutions<sup>35</sup>, and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains<sup>36</sup> as well as changes to codes and standards. Resource acquisition programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation progress<sup>37</sup>. According to York<sup>38</sup>, “Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are 3 ways to achieve market transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy.”

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<sup>32</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>33</sup> California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

<sup>34</sup> Pelozo, J., and York, D. (1999). “Market Transformation: A Guide for Program Developers.” Energy Center of Wisconsin. Available at: <http://www.ecw.org/ecwresults/189-1.pdf>

<sup>35</sup> Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) “From technology transfer to market transformation”. Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at [http://www.eceee.org/conference\\_proceedings/eceee/2001/Panel\\_2/p2\\_7/Paper/](http://www.eceee.org/conference_proceedings/eceee/2001/Panel_2/p2_7/Paper/)

<sup>36</sup> Sebold, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at [www.calmac.org](http://www.calmac.org).

<sup>37</sup> Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings*.

<sup>38</sup> York, D., (1999). “A Discussion and Critique of Market Transformation”, Energy Center of Wisconsin. Available at <http://www.ecw.org/ecwresults/186-1.pdf>.

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The question of what constitutes successful transformation is controversial because of a Catch-22: Market transformation is deemed successful when the changed market is self-sustaining, but that determination cannot be made until after program interventions are ended. Often, however, the need for immediate energy and demand savings or immediate carbon-emissions reductions will mean that program interventions may need to continue, which would interfere with the evaluation of whether MT is self-sustaining. Market transformation success has also been defined in terms of higher sales of efficient measures than would have otherwise occurred against a baseline absent of program interventions. The real world, however, provides no such control condition. Evaluators must estimate these baselines from quantitative factors such as past market sales that may be sparse and/or inaccurate - particularly for new products. Evaluations must also defer to expert judgments on what these baselines may have been as well as on the degree of successful market transformation<sup>39</sup>. Due to the subjective nature of these judgments, it is imperative that baselines as well as milestone MT targets be determined and agreed upon through collaborative discussion by all stakeholders, and these targets may need periodic revision as deemed necessary by changing context.

Market transformation draws heavily upon diffusion of innovation theory<sup>40</sup>, with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades<sup>41</sup>. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects<sup>42</sup>. The ability to make causal connections between these market transformation effects and any particular program's activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are. First and foremost, they need to be designed specifically to address market transformation. "The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given to program designers.)<sup>43</sup>" The Strategic Plan recognizes that regulatory policies are not yet in place to support the success of market transformation efforts<sup>44</sup>, but also reflects the CPUC's directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

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<sup>39</sup> Nadel, S., Thorne, J., Sachs, H., Prindle, B., and Elliot, R.N. (2003). "Market Transformation: Substantial Progress from a Decade of Work." American Council for an Energy-Efficient Economy, Report Number A036. Available at: <http://www.aceee.org/pubs/a036full.pdf>

<sup>40</sup> Rogers (1995) Diffusion of Innovations, 5<sup>th</sup> Ed.

<sup>41</sup> Example in bottom chart of this graphic from NYTimes:

<http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html>

<sup>42</sup> Sebold et al (2001) p. 6-5,

<sup>43</sup> Peters, J.S., Mast,B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume 1.* Available at <http://calmac.org/publications/19981215CAD0001ME.PDF>.

<sup>44</sup> CPUC (2008) Strategic Plan, p. 5.

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Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions<sup>45</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the utilities look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin's guide for MT program developers<sup>46</sup> suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

The metrics and baselines described below in Tables 3 and 4 are presented for the purposes of starting the much-needed discussion between all key participants. These are suggestions, intended to allow key participants to pilot-test processes for establishing baseline metrics, tracking market transformation progress, and for refining evaluation tools. Early trial of these evaluation metrics will reveal any gaps in data tracking so that we may refine our processes before full-scale market transformation evaluations take place.

The set of metrics we selected is intentionally a small set, for several reasons. First, as mentioned, the full set of metrics and baselines need to be selected by key participants. Second, we anticipate that market share data for many mid- and low-impact measures will be too sparse to show MT effects and not cost-effective to analyze. Third, we selected core measures and metrics that would both be indicative of overall portfolio efforts. These measures are also likely to be offered on a broad level by other utilities, providing a greater base of sales and customer data that could be analyzed for far-reaching MT effects. Therefore, for the Local Government Partnerships the following approach to quantitative baseline and market transformation information is presented as follows. The utilities recommend development of a baseline, and tracking the number of cities, counties and government institutions that have plans for written energy efficiency provisions. Such a metric relates directly to the Strategic Plan (Goal 12.3.4) in terms of measuring progress towards 50% plans for sustainability.

In addition, we propose tracking community adoptions of new construction model reach codes, both residential and nonresidential. This metric aligns with the Strategic Plan (Goal 12.3.1). In addition to being a direct indicator of support by local government partnerships, community adoptions of model reach codes are of strategic interest to the CPUC. A proliferation of dissimilar reach codes would confuse the market relative to building codes

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<sup>45</sup> Nadel, Thorne, Saches, Prindle & Elliot (2003).

<sup>46</sup> Pelozo & York, (1999).

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and incentive programs. Model reach codes to be developed by Codes and Standards would allow energy efficiency efforts across partners to be aligned with a clear target for each climate zone. As discussed in the Local Government PIPs, the IOUs intend to work closely with partners in establishing baseline code compliance levels and pushing for model reach codes.

With this discussion in mind, IOUs propose the following metrics for this sector:

**Table 3**

	Baseline Metric	
	Metric A	Metric B
Energy Efficiency Action Plans	Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.	
Model Reach Codes		In coordination with Codes and Standards, develop a baseline inventory of cities and counties within the IOU territory with adopted model reach codes

**e) Market Transformation Information**

As stated above, market transformation draws heavily upon diffusion of innovation theory, with the state of a market characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects. Therefore it is problematic, if not impractical, to offer internal annual milestones towards market transformation sectors and specific program activities.

As a consequence, it is not appropriate to offer more than broad and general projections. Any targets provided in the following table are nothing more than best guesstimates, and are

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subject to the effects of many factors and market forces outside the control of program implementers.

**Table 4**

	<b>Internal Market Transformation Planning Estimates</b>		
	<b>2009</b>	<b>2010</b>	<b>2011</b>
Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time
In coordination with Codes and Standards, develop a baseline inventory of cities and counties within the IOU territory with adopted model reach codes	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time

a) Program Design to Overcome Barriers:

Refer to individual partnership PIP section.

b) Quantitative Program Objectives:

**Table 5**

Program/Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #1	TBD	TBD	TBD
Target #2	TBD	TBD	TBD
Target #3	TBD	TBD	TBD
Target #4	TBD	TBD	TBD

Refer to individual partnership PIP section.

**6 - Other Program Element Attributes – Element C Core Program Coordination**

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<b>Other Program Element Attributes</b>	<b>CORE Program Coordination</b>
<p>a) <u>Best Practices</u>: Describe why program element approach constitutes “best practice” or reflects “lessons learned” in market strategies, program design and/or implementation techniques, or past experience. Provide references where available.</p>	<p>This program element incorporates lessons learned from previous partnerships. Close coordination with Core and 3rd Party programs is integral for success. See EM&amp;V section for future documentation of best practices.</p>
<p>b) <u>Innovation</u>: Describe any unique or innovative aspects of program element not previously discussed. Why is this innovative?</p>	<p>This program element is unique because it takes coordination to a new level from the 2006-2008 cycle. Government Partnerships will work with Core programs, 3rd Party programs to develop a strategic market segment plan. This plan will identify largest opportunities for cost-effective energy savings, address barriers, share best practices and efficiently allocate resources. Partnerships will use education and outreach channels to inform their customers about energy savings opportunities and share best practices within partnerships.</p>
<p>c) <u>Interagency Coordination</u>: Describe any interagency coordination with the ARB, CEC on PIER or Codes and Standards; non-utility market initiatives; energy efficiency market forces, opportunities and trends; and timeline by which market segment will be “transformed” or other aspects of the program.</p>	<p>Core program integration will require strong coordination with outside agencies. As communities look to retrofit buildings and perform education and outreach, coordination with other governmental agencies will be a priority. A strategy will be to identify partnership opportunities with the various agencies and beginning to align our goals. On the community level, as local governments begin to think about AB32 implementation, GHG emission reduction opportunities will be indentified by modeling usage, past program participation and other trends.</p>

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<b>Other Program Element Attributes</b>	<b>CORE Program Coordination</b>
<p>d) <u>Integrated/coordinated Demand Side Management</u>: Describe how program will achieve integrated or coordinated delivery of all DSM options, as well as LIEE and WET. (If this is an integral part of the program element and fully covered under #4 note that here.) Describe in detail how program will achieve integrated or coordinated delivery of <u>all</u> DSM options (energy efficiency, demand response, and onsite generation) where applicable including integrated program design and delivery, shared budgets, program evaluation, and incentive mechanisms that promote greater integration of DSM resources. Provide a complete description for all the technologies, including integration supporting technologies that will be included in the program. If the program does not include all DSM options as noted above, briefly provide an explanation for a more limited subset of DSM technologies. Utilize Attachment 5A to highlight any shared or leveraged budget categories and amounts (admin, incentives, ME&amp;O, and other applicable categories).</p>	<p>In line with the Integration chapter of the Strategic Plan, partnerships will begin to adopt an integrated strategy for delivering demand response and self-generation programs. Partnerships will work to develop working groups to enable the most effective delivery method of the various programs. Workforce education and training initiatives will build capacity at the community level.</p>
<p>e) <u>Integration across resource types</u> (energy, water, air quality, etc): If program aims to integrate across resources types, provide rationale and general approach. (If this is an integral part of the program element and fully covered under #4 note that here.)</p>	<p>Several partnerships have worked with various water, air quality and transportation agencies to provide integrated offerings. By coordinating with LIEE programs and other agency programs, certain partnerships plan to work closely with other agencies and look for further opportunities.</p>
<p>f) <u>Pilots</u>: Describe any pilot projects that are part of this program (If this was fully covered under #4, note that here.)</p>	<p>Partnerships will look at their government facilities in a strategic and prioritized manner..</p>

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<b>Other Program Element Attributes</b>	<b>CORE Program Coordination</b>
<p>g) <u>EM&amp;V</u>: Describe any process evaluation or other evaluation efforts that will be undertaken by the utility to determine if the program is meeting its goals and objectives. Include the evaluation timeframe and brief description of scope, as well as a summary of specific methodologies, if already developed. If not developed, indicate the process for developing them. Include reference to tracking databases that will be used for evaluation purposes.</p>	<p>A process evaluation will be conducted by a third party evaluator. The evaluation will assess communication and coordination effectiveness between partners as well as satisfaction with the service and increased awareness of energy efficiency opportunities. A combination of interviews and focus groups will likely be used to collect data. The evaluation is expected to build upon results found in the recently completed process evaluation for PY2006 to 2008.</p>



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**Partnership Program Advancement of Strategic Plan Goals and Objectives**

The table below shows which partner is addressing each strategic planning goal. Please refer to individual local government sub PIP's for more detail of each individual partner's advancement of the strategic goal.

	Los Angeles County	Kern Energy Watch	Riverside County <small>Partnership</small>	San Bernardino <small>Partnership</small> Santa Barbara Partnership	SBCCOG Partnership	San Luis Obispo Partnership	Tulare County <small>Partnership</small> Orange Cities Partnership	ILG Partnership	Community Energy Partnership	Desert Cities <small>Partnership</small>	VCREA Partnership
Strategic Planning											
<b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.	Yes			Yes		Yes	Yes		No		Yes
<b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.	Yes			Yes		Yes	Yes		No		Yes
<b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.	No			No		No	No		No		No
<b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.	Yes			Yes		Yes	No		No		Yes
<b>1-5:</b> Develop broad education program and peer-to-peer support to local gov't's to adopt and implement model reach codes	Yes			Yes		Yes	Yes		No		Yes
<b>1-6:</b> Link emission reductions from "reach" codes and programs to ARB's AB 32 program	Yes			Yes		No	Yes		No		Yes

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	Los Angeles County	Kern Energy Watch	Riverside County <small>Partnership</small>	San Bernardino <small>Partnership</small>	Santa Barbara <small>Partnership</small>	SBCCOG Partnership	San Luis Obispo <small>Partnership</small>	Tulare County <small>Partnership</small>	Orange Cities <small>Partnership</small>	ILG Partnership	Community Energy <small>Partnership</small>	Desert Cities <small>Partnership</small>	VCREA Partnership
Strategic Planning													
1-7: Develop energy efficiency-related “carrots and sticks” using local zoning and development authority.	Yes				Yes		Yes		Yes		Yes		No
2-1: Statewide assessment of local government code enforcement and recommendation for change.	Yes				Yes		No		No		No		No
2-2: Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	Yes				Yes		Yes		No		No		Yes
2-3: Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	No				No		No		No		No		Yes
3-1: Adopt specific goals for efficiency of local government buildings.	Yes				Yes		Yes		Yes		Yes		Yes
3-2: Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Yes				Yes		Yes		No		Yes		Yes
3-3: Improve access to favorable financing terms that create positive cash flow from energy efficiency/DSM savings	Yes				Yes		Yes		Yes		Yes		Yes
3-4: Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	No				No		No		No		No		No

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	Los Angeles County	Kern Energy Watch	Riverside County <small>Partnership</small>	San Bernardino <small>Partnership</small>	Santa Barbara <small>Partnership</small>	SBCCOG Partnership	San Luis Obispo <small>Partnership</small>	Tulare County <small>Partnership</small>	Orange Cities <small>Partnership</small>	ILG Partnership	Community Energy <small>Partnership</small>	Desert Cities <small>Partnership</small>	VCREA Partnership
Strategic Planning													
3-5: Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	No				No		No		No		No		No
4-1: LGs commit to clean energy/climate change leadership.	Yes				Yes		Yes		Yes		Yes		Yes
4-2: Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.	Yes				Yes		Yes		Yes		Yes		Yes
4-3: Statewide liaison to assist local governments in energy efficiency, sustainability, and climate change.	Yes				Yes		Yes		No		No		Yes
4-4: Develop local projects that integrate EE/DSM/water/wastewater end use	Yes				Yes		Yes		Yes		Yes		Yes
4-5: Develop EE-related "carrots" and "sticks" using local zoning and development authority	Yes				Yes		Yes		No		Yes		Yes

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**Element D – Individual Local Government Partnerships**

The Individual Local Government Partnerships are listed below:

1. County of Los Angeles Partnership
2. Kern County Energy Watch Partnership
3. Riverside County Partnership
4. County of San Bernardino Partnership
5. Santa Barbara County Partnership
6. South Bay Partnership
7. San Luis Obispo County Energy Watch Partnership
8. San Joaquin Valley Partnership
9. Orange County Cities Partnership
10. ICLEI – Local Governments for Sustainability, U.S.A., Inc. (ICLEI), the Institute for Local Government (ILG) and the Local Government Commission (LGC )
11. Community Energy Partnership (CEP)
12. Desert Cities Partnership
13. Ventura Country Regional Energy Alliance
14. Palm Desert Energy Partnership Demonstration Program

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### 1) Program Name and Program ID number

Program Name: County of Los Angeles Partnership  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 3<sup>47</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 4

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>47</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

The 2009 - 11 SCE/SCG/County of Los Angeles Partnership is a continuation of the existing, successful 2004 - 05, and 2006 -08 programs with SCE and SCG. The 2009 - 11 Partnership will build on the lessons learned and will continue to focus on identifying energy efficiency activities in county facilities in support of the recently adopted county of Los Angeles Energy and Environmental Plan.

The Partnership program will support the energy efficiency components of the Energy and Environmental Plan initiatives by identifying projects and strategies to reach the 38 different county departments that the Internal Services Department (ISD) serves. In addition, there are departments and public agencies affiliated with the county (Public Housing, Sanitation Districts, School Districts County Metro Transit Authority, and Waterworks and Wastewater utilities) that have previously not participated in past Partnership programs. By tailoring outreach and implementing innovative ways to participate (emerging technologies, integration with state-wide pilots, e.g. water districts, and flexible funding) the Partnership will increase energy efficiency participation in these LA County departments.

#### a) List of program elements:

- 1 Retrofit (HVAC, lighting, Emerging Technology, others)
- 2 Retro-Commissioning and Monitoring-Based Commissioning
- 3 Energy Efficiency Education and Best Practices Development and Training
- 4 New Construction and Design Assistance (SBD)
- 5 Emerging Technologies
- 6 Integration with Demand Response and other DSM Services
- 7 Funding Sources: e.g. On-Bill Financing, Grants etc
- 8 Coordination with other IOU Program Offerings (core programs, solar, water renewable-portfolio, and others)
- 9 Policy Assistance: Energy Policy

#### b) Overview:

##### 1. Retrofit Program

The Retrofit projects in this program will be implemented by the County of Los Angeles through contracts with contractors and engineering consultants. The Partnership has identified potential projects from facility assessments and has a data set of projects that served as a basis for implementation. This data set provides valuable planning information to determine incentive levels, incentive payment structure, budget forecasts, and to establish the implementation strategies and schedules.

##### 2. Retro-Commissioning (RCx) / Monitoring-Based Commissioning (MBCx)

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This element of the program is a continuation of a unique approach to obtaining savings that combines the expertise of county staff, utility and subcontractor expertise, and the use of the County's Enterprise Energy Management Information System (EEMIS). Through these resources, a systematic, comprehensive RCx program will be implemented in existing facilities. It will provide a cost effective approach to achieving optimized operating facilities, save both electric and gas energy, reduce operating cost and improve occupant comfort.

### 3. Energy Efficiency Education and Best Practices Development and Training

The Partnership will facilitate education and training for facility and maintenance personnel. The education and training element will support the outreach and education initiatives as articulated in the County's Energy and Environmental Policy. There will be a venue for those individuals responsible for managing energy to share information and experiences related to facility operations, to gain knowledge of industry best practices in energy efficiency management, and successful project implementation, among other issues. The strategy for the education and training element is to leverage the resources of IOU technology centers and develop curriculum that will address the specific needs of the partner. Lastly, the Partnership will seek opportunities to improve project coordination and communication to strengthen the relationships among the Partnership team, LA County Departments and ISD.

### 4. New Construction and New Construction Design Assistance

As with retrofits, the county has a stated desire to implement more efficient and sustainable measures in new construction projects. In practice, however, budgetary constraints often prevent this. The Partnership's incentives, together with the visibility and upper-level management commitment the Partnership brings, increases the ability of the county's energy manager to see these desires actually met. The Partnership will work closely with design teams of future projects, both large and small, to implement energy efficiency, load management, and renewable energy to the maximum extent feasible.

### 5. Emerging Technologies

The Partnership may also pursue opportunities to facilitate the installation of emerging technologies. Where applicable the Partnership will provide incentives and technical aid for installing emerging technologies in County facilities to influence the technology being adopted into market.

### 6. Integration with Demand Response and other DSM services

Demand response programs provide tariff-based benefits to customers implementing demand response activities. For demand response initiatives involving the purchase and installation of equipment by SCE business customers, a plan to provide a financial incentive for the energy savings resulting from the equipment through the Partnership program will be developed.

The Partnership will look for opportunities to integrate demand response and other DSM services into the program implementation plan. Resources will be leveraged to improve implementation efficiency and reduce transactional impacts on Partnership staff. IOU energy efficiency and demand response (EE/DR) program staff will collaborate with

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

partners to conduct comprehensive audits and identify energy efficiency measures as well as demand response opportunities. The approach will reduce technical resources by combining EE/DR audits to avoid duplication, collaborate on incentive offerings and will minimize customer interruptions.

The partners seek to identify facilities or aggregation of facilities under a service account to establish opportunities for DR participation that will meet the program eligibility of a 30 kW minimum demand response opportunity per service account.

The Partnership will also assist, where applicable, facility management staff that are interested in solar technology and will provide recommendations in facility operations through energy audits to improve its facilities with less costly EE/DR measures prior to implementing more costly solar technologies.

### 7. Funding Source:

The utilities will work with the County of Los Angeles ISD staff to allocate appropriate Partnership incentives for qualified projects and collaborate with all applicable DSM programs to ensure agencies can include incentive information in the life cycle cost analysis to support the financing request, where applicable. The County is currently pursuing On-Bill Financing efforts, with their County Council, and if able to participate in this option, will work collaboratively with the Partnership to identify applicable projects. In addition, any grants or other State funding the County may be eligible for, for energy efficiency projects will be pursued, and the Partnership will assist with these alternate funding sources as much as possible.

### 8. Coordination with other IOU Programs:

The Partnership will be utilized as a “portal” to other IOU energy programs such as the California Solar Initiative, Self-Generation Incentive Program, and Demand Response, as well as related agricultural, water efficiency, green building programs, and others as appropriate. These other IOU departments/programs will be engaged in and active in the process of identifying opportunities and working with the Partnership team to ensure an integrated and smooth process.

### 9. Policy Assistance: Energy Policy:

The Partnership will support energy reduction and environmental initiatives described in the Los Angeles County Energy and Environmental Plan, adopted by the County in 2008. Support may include technical assistance, training, applicable incentives and emerging technology support. The Partnership intends to utilize the IOU core programs, as applicable, as well as coming up with unique and innovative ways to support the County’s Energy and Environmental Plan through outreach, pro-active communication and regular Partnership activities.

### c) Non-Incentive Services:



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Non-incentive services for the 2009-2011 LA County/SCG/SCE Partnership will include integrated audits not only for ISD operated buildings, but also for the 38 different county departments that Internal Services Department (ISD) serves, such as: Department of Public Works, Sheriff, Health Services, Public Housing, Sanitation Districts, School Districts under the Office of Education, the County Metro Transit Authority, and the county's Waterworks and Wastewater utilities. These audits will be identified through the Partnership and will include RCx, retro-fit, Demand Response opportunities, emerging technologies, solar or self generation programs as applicable.

In addition to the audits, other non-incentive services will include any training or education services provided by the IOUs to County staff, utilizing SCE's CTAC facility, and on-site training as appropriate.

d) Target audience:

The Partnership will primarily target LA County owned and or operated buildings. The target audience will be wide sweeping internally to the County because of the joint efforts of the Partnership to expand to other County departments under the leadership of Internal Services Department. Additionally the outreach and education will focus on building engineers, managers etc, to promote and maintain energy efficiency installations at all County facilities. County leadership (Department heads, County Council, Board of Supervisors, etc) will also be targeted through outreach efforts, to assist with County adoption of energy efficiency measures and promotion of the Partnership.

e) Implementation:

The implementation plan for this program cycle will include the continuation of activities implemented in the 2006 - 08 SCE/SCG/County of LA Partnership program. The Partnership will apply the lessons learned from the current Partnership as well as from other local and statewide Partnership programs.

SCE will retain the overall administration of the Partnership program. The Partnership will work together to establish funding guidelines for various projects, sharing technical expertise, and implementing projects. The Partnership also will coordinate the use of ISD's own resources and total program resources to identify and develop projects, manage individual projects, and track costs and savings.

A new approach will be employed to contract for construction and engineering work. In the current program cycle, the County was able to establish a process to procure contractors to implement projects. This responsibility will shift from the utilities to the county to facilitate the implementation process. However, project decisions will continue to be made by the management team on a Partnership level though discussions at our regularly scheduled Partnership meetings.

### **Program Management Structure**

The program will continue to be administered by a management team, consisting of representatives from the County of Los Angeles, SCE, and SCG, will track project progress and keep the lines of communication and information flowing. The management team will set overall program policy and ensure that the program stays on

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plan throughout its life cycle, and will meet roughly every two weeks. Subcommittees or “teams” made up of members of the management team and other representatives will perform the detailed work associated with the program elements, and make recommendations to the management team for action. This will potentially include retrofit, retro-commissioning, new construction, and training & education as well as coordinated activities with other demand-side management programs such as Demand Response (DR), California Solar Initiative (CSI), and emerging technologies (ET). The team will be providing a more coordinated and integrated approach and will increase the penetration of energy efficiency activities or savings and avoid lost opportunities.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

Program/Element	Market Transformation Planning Estimates		
	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

Funding from the County for projects has been, and may continue to be a barrier to participation. The Partnership plans on overcoming these barriers by continuing the foundation made in the 2006-08 program which includes regular status/Partnership meetings, meeting with contractors and vendors, and project managers working on construction and RCx projects in the County. The Partnership has been able to participate in County projects early in the planning stage, to ensure the most efficiency energy designs and equipment are implemented, and the construction costs are able to be offset by Partnership incentives. The Partnership may also provide flexibility in incentive structure and may reduce the actual measure incentive to cover additional engineering services and costs provided to the County through the Partnership (e.g. pay additional engineering costs to ensure project is implemented, but this may affect the total incentives available for the project due to cost-

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effectiveness considerations). Up-front, or advanced incentive payment structure may also be employed in this cycle, providing the County with a percentage of the actual project incentive dollars in advance of the actual installation of equipment, so that the County can use the incentive dollars to procure equipment, or hire contractors to do the installation of approved measures. County budget was calculated for the 2009-2011 cycle to align with the limited number of buildings identified for Retro-Commissioning within the County (many facilities were completed RCx in the 2006-2008 program), and based upon retro-fit forecasts provided by the County.

d) Quantitative Program Objectives:

**Table 5**

<b>LA COUTNY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
<b>EE/DR Audits</b>	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote EE opportunities first, in order to correctly assess and implement DR reduction potential.	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote EE opportunities first, in order to correctly assess and implement DR reduction potential.	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote EE opportunities first, in order to correctly assess and implement DR reduction potential.
<b>Lighting and HVAC Retrofits</b>	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 20% of all retrofit opportunities, and HVAC may account for 60% and the remaining 20% would be “other” (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 1,000,000 kWh and 80 kW.	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 20% of all retrofit opportunities, and HVAC may account for 60% and the remaining 20% would be “other” (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 1,000,000 kWh and 80 kW energy savings.	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 20% of all retrofit opportunities, and HVAC may account for 60% and the remaining 20% would be “other” (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 1,000,000 kWh and 80 kW energy savings.
<b>RCx and MBCx</b>	Identify County buildings for possible	Identify County buildings for possible	Identify County buildings for possible

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<b>LA COUTNY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
	RCx/MBCx opportunities, secure RCx/MBCx vendors and being Investigation process for implementation. RCx has typically accounted for 90% of all projects completed by the Partnership in the 2006-08 cycle. RCx/MBCx will account for energy savings of 1,300,000 kWh and 280 kW	RCx/MBCx opportunities, secure RCx/MBCx vendors and being Investigation process for implementation. RCx has typically accounted for 90% of all projects completed by the Partnership in the 2006-08 cycle. RCx/MBCx will account for energy savings of 1,300,000 kWh and 280 kW	RCx/MBCx opportunities, secure RCx/MBCx vendors and being Investigation process for implementation. RCx accounted for 90% of all projects completed by the Partnership in the 2006-08 cycle. RCx/MBCx will account for energy savings of 1,300,000 kWh and 280 kW
<b>New Construction</b>	Communicate Integration Strategy between internal departments and offerings and incentive structure. LA County has not typically had a lot of new construction projects, however the Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle (libraries, data center, etc). Energy savings from New Construction will account for 96,032 kWh and 20 kW	Communicate Integration Strategy between internal departments and offerings and incentive structure. LA County has not typically had a lot of new construction projects, however the Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle (libraries, data center, etc). Energy savings from New Construction will account for 96,032 kWh and 20 kW	Communicate Integration Strategy between internal departments and offerings and incentive structure. LA County has not typically had a lot of new construction projects, however the Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle (libraries, data center, etc). Energy savings from New Construction will account for 96,032 kWh and 20 kW
<b>kWh/kW Total</b>	<b>2,396,032 kWh</b>	<b>2,396,032 kWh</b>	<b>2,396,032 kWh</b>

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<b>LA COUTNY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
<b>Savings</b>	<b>380 kW</b>	<b>380 kW</b>	<b>380 kW</b>
<b>Core Program Integration</b>			
<b>Education and Outreach</b>	Utilize CTAC and other existing resources for training and education of County staff, specifically on RCx sustainability, EE and DR integration.	Utilize CTAC and other existing resources for training and education of County staff, specifically on RCx sustainability, EE and DR integration.	Utilize CTAC and other existing resources for training and education of County staff, specifically on RCx sustainability, EE and DR integration.
<b>Financial Solutions Program: On-Bill Financing Element</b>	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the Partnership. If agreement is reached, then Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the Partnership. If agreement is reached, then Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the Partnership. If agreement is reached, then Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.
<b>California Solar Initiative: CSI</b>	Implement communication plan for ensuring partners have been educated on solar potential of County buildings, and work with County on their proposed Solar Website which would allow constituents to estimate kWh reductions and	Work through the Partnership team to continue education, and look for opportunities for solar installation within the County. Possibly target new construction projects for solar technology. Continue any progress on County initiated Solar Website.	Complete documentation of participation potential and what is necessary for partners to participate, if any potential projects were identified.

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<b>LA COUTNY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
	costs/payback. (Outreach and Education Effort).		

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### **6) Other Program Element Attributes**

- a) Best Practices: The Partnership will continue lessons learned from previous Partnership cycles, most significantly in the Retro-Commissioning (RCx) arena. The LA County/SCG/SCE Partnership has been a strong leader in this area and has successfully implemented RCx projects in more than 30 buildings over the previous 2 Partnership cycles (2004-2008) saving the County millions of dollars in avoided energy costs, maintenance, and operations, as well as saving more than 17 Million kWh. Lessons learned about timeline, implementation, monitoring and reporting will be applied to the current cycle to capture efficiencies and streamline processes. Additionally, the communication process and teamwork approach best-practices will continue to be implemented and improved upon in the next cycle, so that all stakeholders share responsibilities, risk and reward.
- b) Innovation: For the 2009-2011 program, the partnership team will continue working collaboratively with County staff to deliver energy efficiency elements and demand-side management activities in support of the County's aggressive Policy goal of reducing energy consumption in County facilities by 20% by the year 2015. The Partnership will seek to identify and implement energy efficiency projects in "hard to reach" County-affiliated public agencies. By working with the County's water and wastewater utilities not only will energy saving projects be identified, the Partnership will support a potential CEC Pier energy grant to identify and implement water savings measures that produce energy savings in water pumping and treatment.

#### Environmental Stewardship

Under the County's Policy, the County has joined the CA Climate Action Registry and Cool Counties signifying the County's intent to establish its "environmental footprint" by quantifying Green House Gas (GHG) production responsibility, commit to reducing its GHG production in support of state and federal programs, and developing a climate action plan. The County's Policy identifies energy efficiency, renewable resources, and water efficiency as key areas in reducing GHG production.

Through the reduction of electric and gas consumption this program will greatly reduce the production of (GHG). SCE will calculate the reduction of CO2 reduction in tons by calculating the annual life-cycle energy savings, in accordance with California Assembly Bill 32 (AB 32) which caps global warming emissions to 2000 levels by 2010 (11% below business as usual), to 1990 levels by 2020 (25% below business as usual), and 80% below 1990 levels by 2050.

The County Policy also establishes a number of waste reduction, landfill diversion, recycling, alternative transportation/green fleet, green purchasing and other environmental programs for both County employees and constituents that are part of the Environmental Stewardship category under the Policy.

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### Public Education and Outreach

The County holds regular County Energy & Environmental Fairs for employees and constituents as part of its Public Education and Outreach category under the Policy. The utilities have participated in the past two, quarterly Fairs.

The County is a founding member and current chair of the Local Government Sustainable Energy Coalition. The Local Government Sustainable Energy Coalition is an association of California public entities formed to share information and resources to strengthen and leverage their communities' commitments to a sustainable energy future – a future that provides for essential energy resources, restrains energy demand, increases energy efficiency and renewable energy production, and improves energy security and reliability, while enhancing environmental values and community well-being. The County will work through its utility partnership to grow the Coalition in an effort to increase energy and sustainability knowledge throughout the southern California region's local governments and public agencies.

### Sustainable Building Design

Under its Policy, the County requires U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) certification at the Silver level for new County buildings greater than 50,000 square feet. LEED certification is a designation offered by the USGBC to recognize projects that optimize energy and water use efficiency, enhance the sustainability of the project site, improve indoor environmental quality, and maximize the use and reuse of sustainable and local resources.

The partnership team will identify and support the appropriate energy efficiency elements of the LEED certification process. SCE's Savings By Design programs will be leveraged for technical resources and incentives to support the sustainable design initiative. The team will identify opportunities to support the energy efficiency element of the County's effort on the Green Building component of the Sustainable Design initiative. These energy savings will be accomplished by evaluating the energy efficiency potential of existing buildings and then implementing retrofits and/or retro commissioning in some of those buildings. Additional savings will be achieved by working in the early stages of new construction projects to assure the most energy-efficient design acceptable to the County (and to increase the desire to make highly energy-efficient designs "acceptable").

The County is also currently investigating the feasibility of adoption of LEED certification for existing buildings. Similarly, utility incentive programs and the partnership will be leveraged to enhance the energy efficiency aspects of any LEED EB program adopted by the County.



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Additionally, the County Policy includes a program to investigate the requirement of LEED certification (or other certification standard) for privately developed buildings in County unincorporated area. The goal is to develop and implement a County ordinance requiring certification for new residential and commercial construction. The Partnership may help support this program through public education and outreach on green building benefits, advertising of existing incentives, technical resources, and pilot program incentives. A draft ordinance is before the County's Regional Planning Commission and additional public hearings and presentations to the Board of Supervisors are still being scheduled. It will be the Partnership's goal to help this ordinance pass and provide early (pilot program) incentives to assist in its implementation.

- c) Interagency Coordination: Coordination with the ARB, CEC and PIER or Codes and Standards; and others as opportunities arise.
- d) Integrated/coordinated Demand Side Management: The Partnership will continue integration to other IOU energy programs such as the demand response, solar initiative, and self-generation programs, as well as related agricultural, water efficiency, and green building programs. Demand response programs provide tariff-based benefits to customers implementing demand response activities. For demand response initiatives involving the purchase and installation of equipment by SCE business customers, a plan will be developed to provide a financial incentive for energy savings resulting from the equipment supplied through the Partnership program. The Partnership will look for opportunities to integrate demand response and other DSM services into the program implementation plan. Resources will be leveraged to improve implementation efficiency. IOU energy efficiency and demand response program staff will collaborate with partners to conduct comprehensive audits and identify energy efficiency measures and demand response opportunities. The approach will reduce technical resources by combining EE/DR audits to avoid duplication and collaborate on incentive offerings which will all minimize customer interruptions.
- e) Integration across resource types This is an integral part of the program element and fully covered under #4.
- f) Pilots: Currently, there have not been any pilot projects incorporated into the Partnership, however, any future opportunities for innovative or market-transforming pilots will be considered, and agreed upon by all parties in the Partnership. Pilot initiatives could include resource and/or non-resource activities as prescribed by the CPUC.
- g) EM&V: The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after

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program implementation has begun, since plans need to be based on identified program design and implementation issues.

**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6<sup>48</sup> California Long-Term Energy Efficiency Strategic Plan Implementation:**

<b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.	Partnership will work with LA County policy makers to adopt and implement building or new construction goals that exceed Title 24 requirements by a percentage determined by the County (e.g. all new construction in the County will be more than X% above T24)
<b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.	Not expected to be influenced by Partnership activities; however the Partnership is supportive of the County's role in any permitting or expedited approval policy for green building.
<b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.	Not expected to be influenced by Partnership activities, however the Partnership is supportive of the County's role in any permitting or expedited approval policy for green building.
<b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.	Not expected to be influenced in the LA County/SCG/SCE Partnership.
<b>1-5:</b> Develop broad education program and peer-to-peer support to local gov'ts to adopt and implement model reach codes	Develop information campaign on mechanics and benefits of model programs targeting local gov't decision-makers and community leaders and Board of Supervisors.
<b>1-6:</b> Link emission reductions from "reach" codes and programs to ARB's AB 32 program	CARB adopts regulation providing local gov't emission reduction credit for "reach" standards <ul style="list-style-type: none"> <li>• State Attorney General and Office of Planning &amp; Research provide guidance on using CEQA authority to target energy and GHG savings in LG development authority</li> </ul>
<b>2-2:</b> Dramatically improve compliance with and enforcement of Title 24 building	Develop strategies Test Pilot program for compliance in 2010

<sup>48</sup> This table includes a subset of CEESP local government chapter strategies that pertain especially to local government actors. Statewide coordination-related strategies should be discussed in the Strategic Plan portion of the Testimony. This table should be addressed in the master PIP by IOU territory but need not be repeated in local partner PIPs.

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code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	
<b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	Update and or incorporate energy components in licensing requirements.
<b>3-1:</b> Adopt specific goals for efficiency of local government buildings, including:	Implement local policies for LEED new construction and existing buildings.
<b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Benchmark existing buildings against ratings such as Energy Star and its Portfolio Manger  Continue commissioning programs on selected high-use buildings
<b>3-4:</b> Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	Explore and document model policies and mechanisms by June 2010  Implementation plan in place by Dec 2010 for mechanisms to fund.
<b>3-5:</b> Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	Coordinate this approach with Research & Technology activities; • Develop and begin first projects by 12/2010.
<b>4-1:</b> LGs commit to clean energy/climate change leadership.	Assist initial set of local governments in commitments; develop and communicate appropriate messages.
<b>4-2:</b> Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.	Develop model General Plan (Energy Plan already adopted by the County of LA) amendments. • Leaders among local governments adopt policies in General Plan elements. • Publicize to other local governments.
<b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use	Identify opportunities and challenges for more energy/environmentally integrated development and infrastructure • Develop and implement pilot projects, such as the California Sustainable Communities Initiative.

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<b>4-5:</b> Develop EE-related “carrots” and “sticks” using local zoning and development authority	Not expected to be influenced in the LA County/SCG/SCE Partnership.
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### 1) Program Name and Program ID number

Program Name: Kern County Energy Watch Partnership  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 5<sup>49</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 6

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>49</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

#### a) List of program elements:

The core program elements are similar to those identified in the Master Program Implementation Plan (PIP): Element A - Government Facilities, Element B - Strategic Plan Activities, and Element C - Core Program coordination.

#### **Core Program Element - Government Facilities**

The Partnership will deliver energy savings during the next three-year program cycle. Every local government that participates in the Partnership will achieve specified energy savings and greenhouse gas reductions from the facilities and infrastructure that it manages through technology retrofits, operational improvements and policy changes. Participating local governments will take advantage of Partnership incentives for municipal facilities and, wherever possible, of eligible rebate, incentive and technical assistance programs offered by their serving utilities.

##### A.1) Retrofit of county and municipal facilities

The County of Kern has the opportunity to expand on the Kern County Energy Watch Municipal Program by trying to maximize the feasibility and energy efficiency upgrade of the county's municipal facilities. The plan is to retrofit county facilities through the Partnership program's technical assistance, capital improvement projects, and where appropriate direct delivery installation components. Potential opportunities include but are not limited to: lighting, air conditioning, and gas measures. Direct delivery includes but is not limited to: CFLs, hardwire fixtures, lighting controls, T8's, occupancy sensors, LED exit signs, vending machine controllers, and aerators.

##### A.2) Retro-Commissioning (of buildings or clusters of buildings):

The Partnership will focus on identifying HVAC retrofit opportunities through the retro-commissioning of municipal buildings. This will provide a systematic whole-system approach to energy efficiency. Many chronic building problems and energy waste can be resolved by making low-cost or no-cost adjustments identified by the Retro-commissioning process.

##### A.3) Integrating Demand Response into the audits:

The Partnership's plans include identifying and performing successful comprehensive energy efficiency projects with member cities and enrolling service accounts from each city in demand response programs in alignment with the Master Partnership Implementation Plan.

##### A.4) Technical assistance for project management, training, audits, etc.:

Each Partnership has a specific budget for each of these elements. Standard programs available include energy efficiency training, energy audits, and technical assistance in alignment with the Master Partnership Implementation Plan.

##### A.5) On-bill financing:

The County and each city in the partnership have indicated an interest in using On-bill Financing.

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

### **Core Program Element - Strategic Plan Support**

#### **B.1) Code Compliance Support:**

The Partnership will explore the creation of an energy code compliance improvement program and various strategies across the partnering cities to improve compliance with building energy standards and appliance regulations. The Partnership will conduct focused energy code training targeted to the Kern County region including workshops for municipal planning and building staff, building professionals, and contractors.

#### **B.2) Reach Code Support:**

The Partnership will seek to establish meaningful reach codes as part of its effort to add value to energy efficiency in alignment with the strategies described in the Master Partnership Implementation Plan.

#### **B.3) Guiding Document(s) Support:**

In addition to establishing documentation in alignment with the strategies described in the Master Partnership Implementation Plan, the Kern County Partnership objectives will include development of Energy Action Plans and Climate Action Plans to document baseline energy use and emissions. These baselines will be used to set and achieve emission reductions and energy savings. Individual county and city plans will be used to develop a regional energy savings plan.

#### **B.4) Financing for the community:**

The Kern County Partnership will develop an education and outreach program for the Partnership communities in alignment with the strategies described in the Master Partnership Implementation Plan.

#### **B.5) Peer to Peer Support:**

The Kern County Partnership will actively participate and support in the peer to peer program in forums for the partnering county and cities and through the strategies described in the Master Partnership Implementation Plan.

### **Core Program Element - Core Program Coordination**

#### **C.1) Outreach & Education:**

The Partnership has an established comprehensive Marketing Education & Outreach (ME&O) Plan that will be expanded to incorporate: educational workshops to assist cities in moving forward with energy savings projects, policies, codes, and ordinances; general awareness events and exhibits to publicize the Partnership and its goals throughout the communities (including environmental fairs and expos); marketing energy efficiency program through a variety of media channels including mailers, press releases, and quarterly e-newsletters; and providing a minimum of 16 special workshops throughout the county and five cities.

#### **C.2) Residential and Small Business Direct Install:**

The Partnership will continue its support of the core program by driving participation through its county economic development agency, chambers of commerce, bill mailing inserts, and public television access. The Partnership will also fund and execute focused small business, multi-family, and single family residential direct install activities.

#### **C.3) Third-party program coordination:**

The Partnership will actively support third part programs through the strategies described in the Master Partnership Implementation Plan.

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### C.4) Retrofits for just-above LIEE-qualified customers:

The Kern County Partnership will support this program in alignment with the strategies described in the Master Partnership Implementation Plan.

- Technical assistance for program management, training, audits, etc.: The Partnership will allocate a portion of its direct implementation budget for this activity. In addition, the Partnership anticipates bringing technical and financial assistance from the following programs to its communities: SCE & PG&E Energy Center offerings, Energy Star® Qualified Refrigerator Rebates, Refrigerator and Freezer Recycling, Electric Water Heater Rebates, and Energy Star® Qualified Lighting; Express Efficiency; Multi-family Energy Efficiency Rebate Program; Non-Residential Audits; Retro-Commissioning; Savings by Design; Standard Performance Contracts; Variable Speed Pool Pump Rebate Program.

### b) Overview:

The Kern County Energy Watch Partnership (the Partnership) is a continuation of the Partnership between the City of Bakersfield, Kern County, Southern California Edison (SCE), Southern California Gas, and Pacific Gas & Electric (PG&E) which will be expanded to include the cities of Delano, McFarland, Tehachapi, and California City, and the implementing partner: The Kern County Council of Governments (KCOG).

The Partnership builds upon the success of the Kern County Energy Watch Partnership. The 2009-11 partnership improves SCE's current local government partnering strategy by establishing a disciplined, concentrated approach to create consistency in program offerings and improve clarity and ease of participation in community partnerships. The Partnership will develop new partners from the additional four incorporated cities and extend the program's reach into the unincorporated communities within Kern County. The Partnership's comprehensive portfolio of activities is designed to seek innovative approaches to energy efficiency by implementing best practices for municipalities and by establishing a wave of energy efficiency activities through focused educational and outreach events. This will also increase effective delivery of technical and financial energy services to residents and businesses.

### c) Non-incentive services:

In addition to the strategies described in the Master Partnership Implementation Plan and the ELP model, the Kern County Partnership will include a Portfolio of partnership ME&O activities to increase community enrollment in energy programs, and other SCE services, resources and assets brought to support the ME&O Plan (e.g., mobile education unit; account manager support; training at the Agricultural Technology Application Center (AGTAC); speakers bureau; limited giveaways such as opportunity drawings and free CFLs; marketing, design & printing of brochures and other collateral materials; media/press/publicity support, etc.).

### d) Target audience, etc.:

The target audience includes:

- City and county staff, management and policymakers (elected officials);
- Residential and business customers;
- Students of Kern County Community Colleges; and,



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- Residents and business customers of the unincorporated communities

e) Implementation:

In addition to the strategies and coordination described in the Master Partnership Implementation Plan:

- The Partnership has developed a comprehensive portfolio of ME&O activities and is proceeding to schedule near-term activities and events. These include advertising in regional and local newspapers, cable TV and newspaper interviews about energy efficiency opportunities, and workshops as well as community exhibits most with an attendance of 1,500-3,000 people.
- The Partnership program strategies include an integrated approach to energy consumption and reduction, increasing awareness of energy efficiency, demand response, Low-Income Energy Efficiency, California Alternative Rates for Energy Program, Self-Generation Incentive Program, and California Solar Initiative Program.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

Table 3

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

Table 4

	Market Transformation Planning Estimates		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

The Cities and unincorporated communities that form the Kern County Partnership will have barriers consistent with and will employ those strategies to overcome them as described in the Master Partnership Implementation Plan to overcome them.

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d) Quantitative Program Objectives:

**Table 5**

<b>Program/Element</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
Target #1 Government Facilities (Therms)	35000	45000	45000
Target #2 Community Direct Install (kWh reduction)	-	-	-
Target #3 Education and training- Number of workshops	8	12	16
Target # 4 Education and training – Peer to Peer Forums for reach code actions	4	8	12
Target #5 Strategic Planning Activities- Number of Ordinances, policies, etc. *	5	7	9
Target #6 Community Outreach- Number of events (including sweeps)	12	24	36

**6) Other Program Element Attributes**

a) Best Practices:

As well as those strategies described in the Master Partnership Implementation Plan, the Kern County Partnership will embody the following best practices:

- Leverage the strong member municipal relationships developed by the Partnership in the 2006-08 cycle to further develop and capture energy efficiency opportunities in facilities within the county and cities.
- Expand the existing Kern County Partnership education programs to identify, develop and capture energy efficiency opportunities within the region’s communities.

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b) Innovation:

The Partnership will collaborate with its county and city participants, including school districts and special districts, to develop strategies to implement integrated and comprehensive projects that will encompass energy efficiency, demand response, and renewable elements.

The Partnership will also hold 16 training work shops and 36 exhibits over the course of the 36 months of the 2009-11 cycle at community events to demonstrate: energy efficiency activities and practices, energy code training to target the needs of the Kern County, promote whole-building performance to get better space conditioning, coordinate emerging “green” or sustainability standards, and promote programs that promote sustainability including California New Homes Program; Home Energy Efficiency Program, Appliance Recycling Program, Benchmarking and Performance Tracking, and On-Line Buyer’s Guide and Business and Consumer Electronics Program.

c) Interagency Coordination:

The Kern County Partnership, through its local government and consulting network, will encourage coordination with agencies and initiatives as noted within the Master Partnership Implementation Plan as well as with the participating IOUs: SCE, SCG, and PG&E.

d) Integrated/coordinated Demand Side Management:

The Kern County Partnership program plans include identifying and enrolling service accounts from each participating county and city in demand response programs in alignment with the Master Implementation Plan.

e) Integration across resource types (energy, water, air quality, etc):

The Partnership promotes comprehensive sustainability, including water conservation, solid waste management, and alternative mobility.

f) Pilots:

No pilots are planned through this Partnership.

g) EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

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**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

Table 6

<p><b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24’s requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.</p>	<p>The Partnership will evaluate adopting them on a voluntary but rewarded basis, including excess Title 24 performance in the fee-waiver program or adopting the new California “Green Building Code” on a voluntary basis through 2010, making it mandatory in 2011, if a sustained funding source is provided to support the activities.</p>
<p><b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.</p>	<p>Each local agency, through the Partnership will evaluate and adopt expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments as appropriate.</p>
<p><b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.</p>	<p>The Partnership will evaluate and adopt as appropriate, a point of sale energy disclosure, provided a sustained funding source is provided to support the activities and dependant upon availability of standardized energy star benchmarked data (per recent legislation) on each meter at the point of sale.</p>
<p><b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.</p>	<p>The local agencies of the Partnership will contemplate pursuing the adoption of an AB 811 financing mechanism for its jurisdiction in alignment with the strategies described in the Master Partnership Implementation Plan.</p>
<p><b>1-5:</b> Develop broad education program and peer-to-peer support to local governments to adopt and implement model reach codes.</p>	<p>Within the Partnership and through other Partnerships, the local agencies of the Partnership, and the KCOG, will participate in 12 comprehensive peer to peer educational &amp; outreach forums on a quarterly basis that emphasize specific actions to take to help achieve the local agencies’ reach code goals.</p>

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<p><b>1-6:</b> Link emission reductions from “reach” codes and programs to CARB’s AB 32 program.</p>	<p>Each local agency of the Partnership will evaluate and adopt, through the Partnership, the nexus of energy DSM programs and the larger AB 32 / SB 375 compliance requirements will be integrated as appropriate, provided a sustained funding source is provided to support the activities.</p>
<p><b>2-2:</b> Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).</p>	<p>The Partnership will support each agency in developing and implementing Training &amp; Education programs to achieve additional T-24 compliance, provided a sustained funding source is provided to support the activities.</p>
<p><b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).</p>	<p>Each local agency of the Partnership will evaluate and adopt as appropriate, policies regarding energy components of the professional licensing of local inspectors and contractors hired.</p>
<p><b>3-1:</b> Adopt specific goals for efficiency of local government buildings.</p>	<p>The Partnership goal is to achieve the ELP model silver target level in the aggregated local agency municipal facilities resulting in at least a 5% savings over the 2003 energy use baseline during the 2009-2011 Partnership.</p>
<p><b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.</p>	<p>Each local agency of the Partnership will evaluate and adopt as appropriate, commissioning, performance measurement, and verification as a core part of their energy action plan.</p>
<p><b>3-4:</b> Explore creation of line item in local governments’ budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.</p>	<p>Each local agency of the Partnership will evaluate and adopt as appropriate, creation of a line item in their budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.</p>
<p><b>3-5:</b> Develop innovation Incubator that competitively selects initiatives for inclusion in local government pilot projects.</p>	<p>n/a</p>

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<p><b>4-1:</b> Local governments commit to clean energy/climate change leadership.</p>	<p>Each local agency of the Partnership will evaluate and adopt as appropriate, a Strategic Energy Plan that includes long and short term energy &amp; sustainability objectives in line with the adopted California Long Term Energy Efficiency Strategic Plan.</p>
<p><b>4-2:</b> Use local governments’ general plan energy and other elements to promote energy efficiency, sustainability and climate change.</p>	<p>Each local agency of the Partnership will evaluate and adopt as appropriate, development of aggressive sustainability goals into their General Plan Updates that include emphasizing sustainability through green building design &amp; technologies, reduction of GHG emissions, increased use of renewable energy, and conservation of existing sources of energy.</p>
<p><b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use</p>	<p>The Partnership will influence wastewater, storm water and potable water capital projects, with SCE, SCG, and PG&amp;E to ensure that they are as energy efficient as possible.</p>
<p><b>4-5:</b> Develop EE-related “carrots” and “sticks” using local zoning and development authority</p>	<p>Each local agency of the Partnership will evaluate, develop, and adopt as required, zoning and development authority changes to comply with AB 32 / SB 375.</p>

## 2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan

### 1) Program Name and Program ID number

Program Name: Riverside County Partnership  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 7<sup>50</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 8

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>50</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

Southern California Edison (SCE) and the County of Riverside continue to implement the Riverside County/SCE/SCG Energy Efficiency Partnership Program for the 2009 - 11 program years. Southern California Gas Company (SCG) is committed to participating in the program. This new partner brings additional resources to expand the county's efforts to enhance electric and gas energy efficiency projects through state-of-the-art new construction and retrofits of existing buildings. This partnership interlocks with the goals, objectives, and strategies articulated in the CEESP.

This is a collaborative effort between utility program managers, county facility managers and other internal organizations. The partnership's goal is to build an infrastructure that delivers cost-effective energy efficiency projects and provides a comprehensive outreach and education element with the goal of raising partner and customer awareness about the benefits of energy efficiency. The partnership's commitment to success during the 2006-08 program cycle was demonstrated by the implementation of major projects that exceeded title 24 standards.

Projects will adopt a comprehensive approach by including retrofits and there DSM alternatives to include: demand-response, distributed generation (renewable self-generation), solar hot water and water efficiency as applicable.

#### a) List of program elements

- 1 Retro-fit (HVAC, lighting, Emerging Technology, boilers, water heaters, others)
- 2 Retro-Commissioning and Monitoring-Based Commissioning
- 3 Energy Efficiency Education and Best Practices Development and Training
- 4 New Construction and Design Assistance (SBD)
- 5 Emerging Technologies
- 6 Integration with Demand Response and other DSM Services
- 7 Funding Sources: e.g. On-Bill Financing, Grants etc
- 8 Coordination with other IOU Program Offerings (core programs, solar, water and others)
- 9 Policy Assistance: Energy Policy

#### b) Overview:

##### 1). Retrofit Program

The Retrofit projects in this program will be implemented by the County of Riverside through contracts with contractors and engineering consultants. The partnership has identified potential projects from facility assessments and has a data set of projects that served as a basis for implementation. This data set provides valuable planning information to determine incentive levels, incentive



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payment structure, budget forecasts, and to establish the implementation strategies and schedules.

### 2). Retro-Commissioning (RCx) / Monitoring-Based Commissioning (MBCx)

This element of the program is a continuation of a unique approach to obtaining savings that combines the expertise of county staff, utilities and subcontractors. Through these resources, a systematic, comprehensive RCx program will be implemented in existing facilities. It will provide a cost-effective approach to achieving optimized operating facilities, saving both electric and gas energy, reducing operating cost and improving occupant comfort.

### 3). Energy Efficiency Education and Best Practices Development and Training

The partnership will facilitate education and training for facility and maintenance personnel. The education and training element will support the outreach and education initiatives as articulated in the County's Energy and Environmental Policy. There will be a venue for those individuals responsible for managing energy to share information and experiences related to facility operations, to gain knowledge of industry best practices in energy efficiency management, and successful project implementation, among other issues. The strategy for the education and training element is to leverage the resources of IOU technology centers and develop curriculum that will address the specific needs of the partner. Lastly, this partnership will seek opportunities to improve project coordination and communication to strengthen the relationships amongst the partners.

### 4). New Construction and New Construction Design Assistance

As with retrofits, the county has a stated desire to implement more efficient and sustainable measures in new construction projects. In practice, however, budgetary constraints often prevent this. The partnership's incentives, together with the visibility and upper-level management commitment the partnership brings, increases the ability of the county's energy manager to see these desires actually met. The partnership will work closely with design teams of future projects, both large and small, to implement energy efficiency, load management, and renewable energy to the maximum extent feasible.

### 5). Emerging Technologies

The partnerships may also pursue opportunities to facilitate the installation of emerging technologies. The partnerships may assist in these ongoing operations by providing applicable incentives and technical aid for installing emerging technologies to facilitate the technology to be adopted in market.

### 6). Integration with Demand Response and other DSM services

Demand response programs provide tariff-based benefits to customers implementing demand response activities. For demand response initiatives involving the purchase and installation of equipment by SCE business customers, a plan to provide a financial incentive for the energy savings resulting from the equipment through the partnership program will be developed.

The partnership will look for opportunities to integrate demand response and other DSM services into the program implementation plan. Resources will be leveraged to improve

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

implementation efficiency and reduce transactional impacts on partnership staff. IOU energy efficiency and demand response (EE/DR) program staff will collaborate with partners to conduct comprehensive audits and identify energy efficiency measures as well as demand response opportunities. The approach will reduce technical resources by combining EE/DR audits to avoid duplication, collaborate on incentive offerings and will minimize customer interruptions.

The partners will endeavor to identify facilities or aggregation of facilities under a service account to establish the opportunities for DR participation that will meet the program eligibility of a 30 kW minimum demand response opportunity per service account.

The partnership will also assist, where applicable, facility management staff that are interested in solar technology and will provide recommendations in facility operations through energy audits to improve its facilities with less costly EE/DR measures prior to implementing more costly solar technologies.

### 7). Funding Source

The utilities will work with the County of Riverside internal program staff to allocate appropriate partnership incentives for qualified projects and collaborate with all applicable DSM programs to ensure that agencies can include incentive information in the life cycle cost analysis to support the financing request, where applicable. If County approves the adoption of On Bill Financing, Partnership will look for opportunities for funding through this additional source.

### 8). Coordination with other IOU Programs

The partnership will be utilized as a “portal” to other IOU energy programs such as the California Solar Initiative, Self-Generation Incentive Program, and Demand Response, as well as related agricultural, water efficiency, green building programs, and others as appropriate. These other IOU departments/programs will be engaged in and active in the process of identifying opportunities and working with the Partnership team to ensure an integrated and smooth process.

### 9). Policy Assistance: Energy Policy

Support the County in drafting a formal Energy Policy/Plan for County facilities. Plan may include adopted procedures for implementation, maintenance, purchasing, Codes & Standards, information about AB811, and AB32 and others. County has not yet indicated they were moving to formalize this process/plan, however, the Partnership will encourage them to do so and will provide technical and administrative support to build a sound energy plan.

### c) Non-Incentive Services:

Non-incentive services for the 2009-2011 Riverside County /SCG/SCE Partnership will include integrated audits not only for County operated buildings, but also for the different county departments that Energy Management serves, or may have influence on. Examples include: Department of Public Works, Sheriff, Health Services, Public Housing, Sanitation Districts, and School Districts under the Office of Education. These

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

audits will be identified through the partnership and will include RCx, retro-fit, Demand Response opportunities, emerging technologies, solar or self generation and others.

In addition to the audits, other non-incentive services will include any training or education services provided by the IOUs to County staff, utilizing SCE CTAC facility, and on-site training as appropriate.

County is currently investigating On-Bill Financing, being offered by the IOUs, and if able to participate in this option, will work collaboratively with the Partnership to identify applicable projects. In addition, any grants or other State Funding the County may be eligible for, for energy efficiency projects will be pursued, and the Partnership will assist with these alternate funding sources as much as possible.

d) Target audience:

The Partnership will primarily target Riverside County owned and or operated buildings. The target audience will be wide sweeping internally to the County because of the joint efforts of the Partnership to expand to other County departments under the leadership of Energy Management. Additionally the outreach will focus on building engineers, managers etc, to promote and maintain energy efficiency installations at all County facilities. County leadership (Department heads, County Council, Board of Supervisors, etc) will also be targeted through outreach efforts, to assist with County adoption of energy efficiency measures and promotion of the Partnership.

e) Implementation:

The implementation plan for this program cycle will include the continuation of activities implemented in the 2006 - 08 SCE /County of Riverside Partnership program. The partnership will apply the lessons learned from the current partnership as well as from other local and statewide partnership programs.

SCE will retain the overall administration of the partnership program. The partnership will work together to establish funding guidelines for various projects, sharing technical expertise, and implementing projects. The partnership also will coordinate the use of the County's own resources and total program resources to identify and develop projects, manage individual projects, and track costs and savings, however project decisions will continue to be made by the management team on a partnership level.

### **Program Management Structure**

The program will continue to be administered by a management team, consisting of representatives from the County of Riverside, SCE, and SCG, will track project progress and keep the lines of communication and information flowing. The management team will set overall program policy and ensure that the program stays on plan throughout its life cycle, and will meet roughly every two weeks. Subcommittees or "teams" made up of members of the management team and other representative will perform the detailed work associated with the program elements, and make recommendations to the management team for action. This will potentially include retrofit, retro-commissioning, new construction, and training & education as well as coordinated activities with other demand-side management programs such as demand response (DR), California solar

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initiative (CSI), and emerging technologies (ET). The team will be providing a more coordinated and integrated approach and will increase the penetration of energy efficiency and avoid lost opportunities.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

Program/Element	Market Transformation Planning Estimates		
	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

One of the main barriers to participation is getting a proven executable process in place for identification, purchasing and implementation of projects within the County. In addition, funding has been, and may continue to be a barrier to participation. The Partnership plans on overcoming these barriers by continuing the foundation made in the 2006-08 program which includes regular status/Partnership meetings, meeting with contractors and vendors, and recently, the buy in and participation from County project managers working on construction and design projects in the County. The Partnership has been able to participate in County construction projects early in the planning stage, to ensure the most efficiency energy designs and equipment are implemented, and the construction costs are able to be offset by Partnership incentives, which will be used to fund additional County projects.

The Partnership may also provide flexibility in incentive structure and may reduce the actual measure incentive to cover additional engineering services and costs provided to the County through the Partnership (e.g. pay additional engineering costs to ensure project is implemented, but this may affect the total incentives available for the project due to cost-effectiveness considerations). Up-front, or advanced incentive payment

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structure may also be employed in this cycle, providing the County with a percentage of the actual project incentive dollars in advance of the actual installation of equipment, so that the County can use the incentive dollars to procure equipment, or hire contractors to do the installation of approved measures.

d) Quantitative Program Objectives:

**Table 5**

<b>RIVERSIDE COUNTY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
<b>EE/DR Audits</b>	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote EE opportunities first, in order to correctly assess and implement DR reduction potential.	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote EE opportunities first, in order to correctly assess and implement DR reduction potential.	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote EE opportunities first, in order to correctly assess and implement DR reduction potential.
<b>Lighting, Boiler, Water Heater and HVAC Retrofits</b>	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 20% of all retrofit opportunities, and HVAC may account for 60% and the remaining 20% would be "other" (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 680,859 kWh and 20 kW. 25% of therm savings will come from space heating boiler, and domestic hot water retrofits.	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 20% of all retrofit opportunities, and HVAC may account for 60% and the remaining 20% would be "other" (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 680,859 kWh and 20 kW. 25% of therm savings will come from space heating boiler, and domestic hot water retrofits.	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 20% of all retrofit opportunities, and HVAC may account for 60% and the remaining 20% would be "other" (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 680,859 kWh and 20 kW. 25% of therm savings will come from space heating boiler, and domestic hot water retrofits.
<b>RCx and MBCx</b>	Identify County buildings for possible RCx/MBCx opportunities, secure RCx/MBCx vendors	Identify County buildings for possible RCx/MBCx opportunities, secure RCx/MBCx vendors	Identify County buildings for possible RCx/MBCx opportunities, secure RCx/MBCx vendors

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<b>RIVERSIDE COUNTY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
	and being Investigation process for implementation. RCx has not yet been implemented in County buildings, however, as opportunities are identified, the Partnership will pursue this energy savings approach. RCx/MBCx will account for energy savings of 200,000 kWh and 5 kW	and being Investigation process for implementation. RCx has not yet been implemented in County buildings, however, as opportunities are identified, the Partnership will pursue this energy savings approach. RCx/MBCx will account for energy savings of 200,000 kWh and 5 kW	and being Investigation process for implementation. RCx has not yet been implemented in County buildings, however, as opportunities are identified, the Partnership will pursue this energy savings approach. RCx/MBCx will account for energy savings of 200,000 kWh and 5 kW
<b>New Construction</b>	Communicate Integration Strategy between internal departments, offerings and incentive structure. Riverside County has many New Construction projects identified for potential completion within the 2009-2011 Partnership cycle. New Construction will account for the majority of projects for this Partnership. The Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle (libraries, Sheriff's Stations, etc). Energy savings from New Construction will	Communicate Integration Strategy between internal departments, offerings and incentive structure. Riverside County has many New Construction projects identified for potential completion within the 2009-2011 Partnership cycle. New Construction will account for the majority of projects for this Partnership. The Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle (libraries, Sheriff's Stations, etc). Energy savings from New Construction will	Communicate Integration Strategy between internal departments, offerings and incentive structure. Riverside County has many New Construction projects identified for potential completion within the 2009-2011 Partnership cycle. New Construction will account for the majority of projects for this Partnership. The Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle (libraries, Sheriff's Stations, etc). Energy savings from New Construction will

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<b>RIVERSIDE COUTNY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
	account for 1,800,000 kWh and 450 kW	account for 1,800,000 kWh and 450 kW	account for 1,800,000 kWh and 450 kW
<b>Total Therm Savings</b>	<b>30,000 therms</b>	<b>40,000 therms</b>	<b>50,000 therms</b>
<b>kWh/kW Total Savings</b>	<b>2,680,859 kWh 475 kW</b>	<b>2,680,859 kWh 475 kW</b>	<b>2,680,859 kWh 475 kW</b>
<b>Core Program Integration</b>			
<b>Education and Outreach</b>	Utilize CTAC and other existing resources for training and education of County staff, specifically on EE and DR integration and benefits of RCx.	Utilize CTAC and other existing resources for training and education of County staff, specifically on EE and DR integration and benefits of RCx.	Utilize CTAC and other existing resources for training and education of County staff, specifically on EE and DR integration and benefits of RCx.
<b>Financial Solutions Program: On-Bill Financing Element</b>	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the Partnership. If agreement is reached, then Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the Partnership. If agreement is reached, then Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the Partnership. If agreement is reached, then Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.
<b>California Solar Initiative: CSI</b>	Implement communication plan for ensuring partners have been educated on solar potential of County buildings. Possibly target new	Implement communication plan for ensuring partners have been educated on solar potential of County buildings. Possibly target new	Implement communication plan for ensuring partners have been educated on solar potential of County buildings. Possibly target new

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<b>RIVERSIDE COUNTY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
	construction projects for solar technology	construction projects for solar technology.	construction projects for solar technology

**6) Other Program Element Attributes**

- a) Best Practices: The Partnership will continue lessons learned from previous partnership cycles. Lessons learned about timeline, implementation, monitoring and reporting will be applied to the current cycle to capture efficiencies and streamline processes. Additionally, the communication process and teamwork approach best-practices will continue to be implemented and improved upon in the next cycle, so that all stakeholders share responsibilities, risk and reward.
- b) Innovation: Referenced in Master PIP 6d.
- c) Interagency Coordination: Referenced in Master PIP 6e.
- d) Integrated/coordinated Demand Side Management: The partnership will continue integration to other IOU energy programs such as the demand response, solar initiative, and self-generation programs, as well as related agricultural, water efficiency, and green building programs. Demand response programs provide tariff-based benefits to customers implementing demand response activities. For demand response initiatives involving the purchase and installation of equipment by SCE business customers, a plan will be developed to provide a financial incentive for energy savings resulting from the equipment supplied through the partnership program. The partnership will look for opportunities to integrate demand response and other DSM services into the program implementation plan. Resources will be leveraged to improve implementation efficiency. IOU energy efficiency and demand response program staff will collaborate with partners to conduct comprehensive audits and identify energy efficiency measures and demand response opportunities. The approach will reduce technical resources by combining EE/DR audits to avoid duplication and collaborate on incentive offerings which will all minimize customer interruptions.
- e) Integration across resource types (energy, water, air quality, etc): Fully covered under Section 4.
- f) Pilots: Currently, there have not been any pilot projects incorporated into the Partnership, however, any future opportunities for innovative or market-transforming pilots will be considered, and agreed upon by all parties in the Partnership. Pilot initiatives could include resource and/or non-resource activities as prescribed by the CPUC



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- g) EM&V: The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

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**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6<sup>51</sup> California Long-Term Energy Efficiency Strategic Plan Implementation:**

<b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.	Partnership will work with Riverside County policy makers to adopt and implement building or new construction goals that exceed Title 24 requirements by a percentage determined by the County (e.g. all new construction in the County will be more than X% above T24)
<b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.	Not expected to be influenced by Partnership activities, however the Partnership is supportive of the County's role in any permitting or expedited approval policy for green building.
<b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.	Not expected to be influenced by Partnership activities, however the Partnership is supportive of the County's role in any permitting or expedited approval policy for green building.
<b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.	Not expected to be influenced in the Riverside County/SCG/SCE Partnership.
<b>1-5:</b> Develop broad education program and peer-to-peer support to local gov'ts to adopt and implement model reach codes	Develop information campaign on mechanics and benefits of model programs targeting local gov't decision-makers and community leaders and Board of Supervisors.
<b>1-6:</b> Link emission reductions from "reach" codes and programs to ARB's AB 32 program	CARB adopts regulation providing local gov't emission reduction credit for "reach" standards <ul style="list-style-type: none"> <li>• State Attorney General and Office of Planning &amp; Research provide guidance on using CEQA authority to target energy and GHG savings in LG development authority</li> </ul>
<b>2-2:</b> Dramatically improve compliance	Develop strategies

<sup>51</sup> This table includes a subset of CEESP local government chapter strategies that pertain especially to local government actors. Statewide coordination-related strategies should be discussed in the Strategic Plan portion of the Testimony. This table should be addressed in the master PIP by IOU territory but need not be repeated in local partner PIPs.

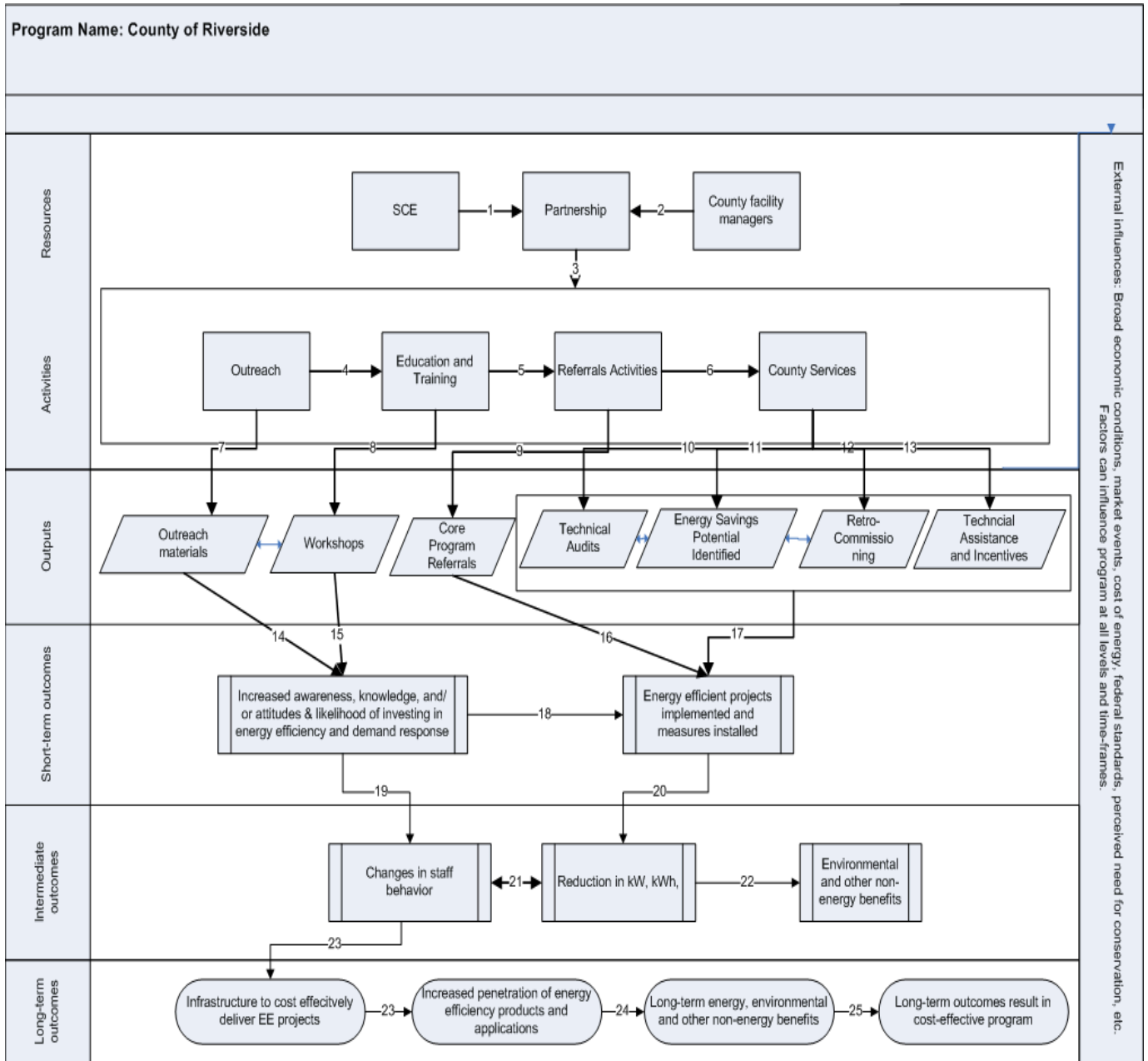
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with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	Test Pilot program for compliance in 2010
<b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	Update and or incorporate energy components in licensing requirements.
<b>3-1:</b> Adopt specific goals for efficiency of local government buildings, including:	Implement local policies for LEED new construction and existing buildings.
<b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Benchmark existing buildings against ratings such as Energy Star and its Portfolio Manger  Continue commissioning programs on selected high-use buildings
<b>3-4:</b> Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	Explore and document model policies and mechanisms by June 2010  Implementation plan in place by Dec 2010 for mechanisms to fund.
<b>3-5:</b> Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	Coordinate this approach with Research & Technology activities; • Develop and begin first projects by 12/2010.
<b>4-1:</b> LGs commit to clean energy/climate change leadership.	Assist initial set of local governments in commitments; develop and communicate appropriate messages.
<b>4-2:</b> Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.	Help County develop Energy Plan, and implement elements of the plan in County buildings. • Leaders among local governments adopt policies in General Plan elements. • Publicize to other local governments
<b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use	Identify opportunities and challenges for more energy/environmentally integrated development and infrastructure • Develop and implement pilot projects, such as the California Sustainable Communities

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	Initiative.
<b>4-5:</b> Develop EE-related “carrots” and “sticks” using local zoning and development authority	Not expected to be influenced in the Riverside County/SCG/SCE Partnership.

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## 2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan

### 1) Program Name and Program ID number

Program Name: County of San Bernardino Partnership  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 9<sup>52</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 10

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>52</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

Southern California Edison (SCE), Southern California Gas (SCG) and the County of San Bernardino (County) will form a 2009 - 11 energy efficiency Partnership that will build upon and expand the County's efforts to enhance energy efficiency through state-of-the-art new construction and retrofits of existing buildings.

Institutional and government Partnerships are a natural fit with the goals, objectives, and strategies articulated in the California Long Term Energy Efficiency Strategic Plan (CLTEESP). The Partnership program will focus on delivering an integrated support model for the County of San Bernardino to take advantage of the entire portfolio of energy programs and services, as well as other resources. Included in these efforts will be coordination with Demand Response (DR), California Solar Initiative (CSI), new construction, and more.

This Partnership will assist the County in achieving its green policy initiatives to formulate an integrated approach to energy efficiency. This will be a collaborative effort with the aim to build an infrastructure that would efficiently deliver cost effective energy efficiency projects thus reducing the "carbon footprint" created by County facilities. It would also provide a comprehensive outreach and education element with the goal of raising awareness about the benefits of energy efficiency. County facilities will be targeted for the retrofit, retro-commissioning (RCx) and new construction elements.

#### a) List of program elements:

- 10 Retro-fit (HVAC, lighting, Emerging Technology, boiler, water heaters, others)
- 11 Retro-Commissioning and Monitoring-Based Commissioning
- 12 Energy Efficiency Education and Best Practices Development and Training
- 13 New Construction and Design Assistance (SBD:Saving By design)
- 14 Emerging Technologies
- 15 Integration with Demand Response and other DSM Services
- 16 Funding Sources: e.g. On-Bill Financing, Grants, etc.
- 17 Coordination with other IOU Program Offerings (core programs, solar, water and others)
- 18 Policy Assistance: Energy Policy

#### b) Overview:

The following elements will be addressed in the 2009-11 SCE/SCG/County of San Bernardino Partnership.

#### Retrofit Program

The energy efficiency measures identified in the project list include energy efficiency retrofits: such as lighting retrofits (T5 technology, LED applications, newer 28 watt T-8's), building wide lighting controls, HVAC and chiller upgrades/replacements,

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boilers, domestic water heaters, and central plant projects. The Partnership will work with facility staff to identify appropriate facilities to develop a list of projects for implementation. The Retrofit projects in this program will be implemented by the County of San Bernardino through contracts with contractors and engineering consultants.

### Retro-Commissioning (RCx) / Monitoring-Based Commissioning (MBCx)

This element of the program is a unique approach to obtaining savings that combines the expertise of County staff, utility and subcontractor staff. Through these resources, a systematic, comprehensive RCx program will be developed to implement within existing facilities. The program will provide a cost effective approach by reviewing existing methods of operating the buildings and developing a plan to optimize the operation for maximum savings on both electric and gas energy. This will reduce operating cost and improve occupant comfort.

### Energy Efficiency Education and Best Practices Development and Training

The Partnership will facilitate education and training for facility and maintenance personnel. The education and training element will support the outreach and education initiatives as articulated in the County's Energy and Environmental Policies. By focusing on the establishment of training sessions to benefit the County's personnel, the California Long Term Energy Efficiency Strategic Plan will be served. There will be a venue for those individuals responsible for managing energy to share information and experiences related to facility operations, to gain knowledge of industry best practices in energy efficiency management, and successfully implement projects, among other issues. The strategy for the education and training element is to leverage the resources of IOU technology centers and develop curriculum that will address the specific needs of the Partner. Lastly, this Partnership will seek opportunities to improve project coordination and communication to strengthen the relationships among the Partners.

### New Construction and New Construction Design Assistance

As with retrofits, the County has stated a desire to implement energy efficiency. In practice, however, budgetary constraints often prevent this. The Partnership's incentives, together with the visibility and upper-level management commitment the Partnership brings, increases the ability of the County's energy manager to see these desires realized. The Partnership will work closely with design teams of future projects, both large and small, to implement energy efficiency, load management, and renewable energy to the maximum extent feasible. The County is continuing to grow in population, and there are many new projects planned.

### Emerging Technologies

The Partnerships may also pursue opportunities such as server virtualization and PC power networking to facilitate the installation of emerging technologies. The Partnerships may assist in these ongoing operations by providing applicable incentives and technical aid for installing emerging technologies to county facility.

### Integration with Demand Response and other DSM services

The Demand Response Program can include a plan to provide a financial incentive for the energy savings resulting from the purchase and installation of equipment that will



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successfully shift demand from on-peak hours to non-peak hours. Partnership can utilize Demand Response Program as follows:

The Partnership will look for opportunities to integrate demand response and other DSM services into the program implementation plan. Resources will be leveraged to improve implementation efficiency and reduce transactional impacts on Partnership staff. IOU energy efficiency and demand response (EE/DR) program staff will collaborate with Partners to conduct comprehensive audits and identify energy efficiency measures as well as demand response opportunities. The approach will reduce technical resources by combining EE/DR audits to avoid duplication, collaborate on incentive offerings and will minimize customer interruptions.

The Partners will endeavor to identify facilities or aggregation of facilities under a service account to establish the opportunities for DR participation that will meet the program eligibility of a 30 kW minimum demand response opportunity per service account.

The Partnership will also assist, where applicable, facility management staff that are interested in solar technology and will provide recommendations in facility operations through energy audits to improve its facilities with less costly EE/DR measures prior to implementing more costly solar technologies.

### Funding Source

The utilities will work with the County of San Bernardino internal program staff to allocate appropriate Partnership incentives for qualified projects and collaborate with all applicable DSM programs to ensure that agencies can include incentive information in the life cycle cost analysis to support the financing request, where applicable. The Partnership can assist the County with feasibility study and develop a method for prioritizing their projects. Partnership can also provide On Bill Financing which will offer zero-interest financing for qualifying energy efficiency projects. If County approves the adoption of On Bill Financing, the Partnership will utilize this additional source to fund more projects which will lead to additional energy saving for the County.

### Coordination with other IOU Programs

The Partnership will be utilized as a “portal” to other IOU energy programs such as the California Solar Initiative, Self-Generation Incentive Program, and Demand Response, as well as related agricultural, water efficiency, green building programs, and others as appropriate. These other IOU departments/programs will be both engaged and active in the process of identifying opportunities and working with the Partnership team to ensure an integrated and smooth process.

### Policy Assistance: Energy Policy

Support the County in drafting a formal Energy Policy/Plan for County facilities. Plan may include adopted procedures for implementation, maintenance, purchasing, Codes & Standards, information about AB811, and AB32 and others. County has not yet indicated they were moving to formalize this process/plan, however, the Partnership will encourage them to do so and will provide technical and administrative support to build a sound energy plan.

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c) Non-incentive services:

The Partnership will focus on technical assistance and help the County in identifying projects for potential implementation. The Partnership team will prepare comprehensive lists of projects, evaluate their energy savings potential, and bring them to the team for review. The departments can then use this information to accelerate the timing of some projects, modify the scope of others, and rely on strategic energy planning, rather than simple maintenance schedules, for energy efficiency enhancements.

d) Target audience:

The Partnership will primarily target County owned and/or operated buildings. The target audience will be wide sweeping internally to the County because of the joint efforts of the Partnership to expand to other County departments under the leadership of Facilities Management Department. Additionally the outreach will focus on building engineers, managers etc., to promote and maintain energy efficiency installations at all County facilities. County leadership (Department heads, County Council, Board of Supervisors, etc) will also be targeted through outreach efforts, to assist with County adoption of energy efficiency measures and promotion of the Partnership. The Partnership will assist the County leaders in identifying potential energy efficiency projects and providing information such as estimated energy saving and feasibility study to help the County in making their decisions.

e) Implementation:

The 2009-11 San Bernardino County /SCE/SCG Partnership will utilize and build upon the implementation strategies employed in other Partnerships from the current and previous program cycle.

The program will be administered by a management team, consisting of representatives from the County of San Bernardino, SCE, and SCG who will track project progress and keep the lines of communication and information flowing. The management team will set overall program policy and ensure that the program will meet regularly and stay on plan throughout its life cycle. Subcommittees or “action teams” made up of members of the management team and other representatives will perform the detailed work associated with the program elements, and make recommendations to the management team for action. This will potentially include a retrofit team, retro-commissioning team, and training & education as well as coordinated activities with other demand-side management programs such as demand response (DR), California solar initiative (CSI), and emerging technologies (ET).. The team will be providing a more coordinated and integrated approach and will increase the penetration of energy efficiency and avoid lost opportunities.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

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Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

Program/Element	Market Transformation Planning Estimates		
	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

Some of the barriers that the County faces are time and technical assistance. Many local government customers do not have the time to methodically evaluate their buildings and identify the most salient energy efficiency projects. Facility personnel may lack time, resources or the technical expertise to evaluate those projects and determine the best energy efficiency improvements. In addition, the State of California has enacted legislation to aggressively improve the energy efficiency of new buildings and reduce greenhouse gas emissions.

The Partnership will address these concerns by considering the framework and implementation methodology of the existing institutional and local government Partnerships and implementing their inherent strategies. The Partnership team will then tailor its management structure and implementation plans that will best address the needs and uniqueness of the County of San Bernardino. This program will draw upon the lessons learned such as the benefits of retro-commissioning, effectiveness of energy efficiency, and implementing energy efficiency in new buildings. This will improve the program’s design and implementation processes to ensure a sustainable, long-term, comprehensive energy management program for the County.

d) Quantitative Program Objectives:

**Table 5**

<b>SAN BERNARDINO COUTNY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
<b>EE/DR Audits</b>	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote	Ensure 100% of all audits are coordinated EE/DR efforts if applicable. Promote

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<b>SAN BERNARDINO COUNTY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
	EE opportunities first, in order to correctly assess and implement DR reduction potential.	EE opportunities first, in order to correctly assess and implement DR reduction potential.	EE opportunities first, in order to correctly assess and implement DR reduction potential.
<b>Lighting, Boiler, Water Heater and HVAC Retrofits</b>	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 50% of all retrofit opportunities, and HVAC may account for 40% and the remaining 10% would be “other” (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 1,522,112 kWh and 212 kW. 25% of therm savings will come from space heating boiler, and domestic hot water retrofits.	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 50% of all retrofit opportunities, and HVAC may account for 40% and the remaining 10% would be “other” (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 1,422,112 kWh and 192 kW. 25% of therm savings will come from space heating boiler, and domestic hot water retrofits.	Utilize Partnership activities and completed audits to identify and implement retrofit measures. Lighting retrofits may account for 20% of all retrofit opportunities, and HVAC may account for 60% and the remaining 20% would be “other” (e.g. vending misers, software controls, etc). Retrofits will account for energy savings of 1,322,112 kWh and 172 kW. 25% of therm savings will come from space heating boiler, and domestic hot water retrofits.
<b>RCx and MBCx</b>	Identify County buildings for possible RCx/MBCx opportunities, secure RCx/MBCx vendors and begin Investigation process for implementation. RCx has not yet been implemented in County buildings; however, as opportunities are identified, the Partnership will pursue this energy savings approach.	Identify County buildings for possible RCx/MBCx opportunities, secure RCx/MBCx vendors and begin Investigation process for implementation. RCx has not yet been implemented in County buildings; however, as opportunities are identified, the Partnership will pursue this energy savings approach.	Identify County buildings for possible RCx/MBCx opportunities, secure RCx/MBCx vendors and begin Investigation process for implementation. RCx has not yet been implemented in County buildings; however, as opportunities are identified, the Partnership will pursue this energy savings approach.

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<b>SAN BERNARDINO COUNTY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
<b>New Construction</b>	Communicate Integration Strategy between internal departments, offerings and incentive structure. Identify potential projects to complete within the 2009-2011 Partnership cycle. The Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle. Energy savings from New Construction will account for 300,000 kWh and 80 kW	Communicate Integration Strategy between internal departments, offerings and incentive structure. Identify potential projects to complete within the 2009-2011 Partnership cycle. The Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle. Energy savings from New Construction will account for 400,000 kWh and 100 kW	Communicate Integration Strategy between internal departments, offerings and incentive structure. Identify potential projects to complete within the 2009-2011 Partnership cycle. The Partnership has earmarked budget and expected kWh/kW savings for remodeling projects and some new buildings anticipated within the cycle. Energy savings from New Construction will account for 500,000 kWh and 120 kW
<b>Total Therm Savings</b>	<b>30,000 therms</b>	<b>40,000 therms</b>	<b>50,000 therms</b>
<b>kWh/kW Total Savings</b>	<b>1,822,112 kWh 292 kW</b>	<b>1,822,112 kWh 292 kW</b>	<b>1,822,112 kWh 292 kW</b>
<b>Core Program Integration</b>			
<b>Education and Outreach</b>	Utilize CTAC and other existing resources for training and education of County staff, specifically on EE and DR integration and benefits of RCx.	Utilize CTAC and other existing resources for training and education of County staff, specifically on EE and DR integration and benefits of RCx.	Utilize CTAC and other existing resources for training and education of County staff, specifically on EE and DR integration and benefits of RCx.
<b>Financial Solutions Program: On-Bill Financing Element</b>	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the	Continue work with IOU and County council to broker an acceptable Agreement to take advantage of On-Bill Financing, if at all possible. If County is not able to participate, this will not be an element of the

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<b>SAN BERNARDINO COUNTY PARTNERSHIP: County Facilities</b>			
<b>Program Name</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
	Partnership. If agreement is reached, then the Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.	Partnership. If agreement is reached, then the Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.	Partnership. If agreement is reached, then the Partnership will identify qualified projects and implement energy efficiency measures offset by OBF.
<b>California Solar Initiative: CSI</b>	Implement communication plan for ensuring partners have been educated on solar potential of County buildings. Possibly target new construction projects for solar technology	Implement communication plan for ensuring partners have been educated on solar potential of County buildings. Possibly target new construction projects for solar technology.	Implement communication plan for ensuring partners have been educated on solar potential of County buildings. Possibly target new construction projects for solar technology

**6) Other Program Element Attributes**

a) Best Practices:

The Partnership will focus on lessons learned from other Partnerships to gain knowledge of industry best practices in energy efficiency management and successful project implementation. The Partnership will seek opportunities to improve project coordination and communication by increasing awareness and acceptance of energy efficiency practices which will strengthen the relationships among the Partners.

b) Innovation:

Referenced in Master PIP 6d.

c) Interagency Coordination:

Referenced in Master PIP 6e.

d) Integrated/coordinated Demand Side Management:

The Partnership will continue integration to other IOU energy programs such as the demand response, the California Solar Initiative, and self-generation programs, as well as related agricultural, water efficiency, and green building programs. Demand response

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programs provide tariff-based benefits to customers implementing demand response activities. For demand response initiatives involving the purchase and installation of equipment by SCE business customers, a plan will be developed to provide a financial incentive for energy savings resulting from the equipment supplied through the Partnership program. The Partnership will look for opportunities to integrate demand response and other DSM services into the program implementation plan. IOU energy efficiency and demand response program staff will collaborate with Partners to conduct audits and identify energy efficiency measures and demand response opportunities. The approach will reduce technical resources by combining EE/DR audits to avoid duplication and collaborate on incentive offerings which will all minimize customer interruptions.

e) Integration across resource types:

The Partnership will continue to look for collaborative ways to integrate state-wide pilots or CPUC approved programs for air-quality water, etc., into the County projects as appropriate.

f) Pilots:

Currently, there have not been any pilot projects incorporated into the Partnership, however, any future opportunities for innovative or market-transforming pilots will be considered, and agreed upon by all parties in the Partnership. Pilot initiatives could include resource and/or non-resource activities as prescribed by the CPUC.

g) EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6<sup>53</sup>**

<p><b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24’s requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.</p>	<p>Partnership will work with the County policy makers to adopt and implement building or new construction goals that exceed Title 24 requirements.</p>
<p><b>1-2:</b> Establish expedited permitting and</p>	<p>Not expected to be influenced by</p>

<sup>53</sup> This table includes a subset of CLTEESP local government chapter strategies that pertain especially to local government actors. Statewide coordination-related strategies should be discussed in the Strategic Plan portion of the Testimony. This table should be addressed in the master PIP by IOU territory but need not be repeated in local Partner PIPs.

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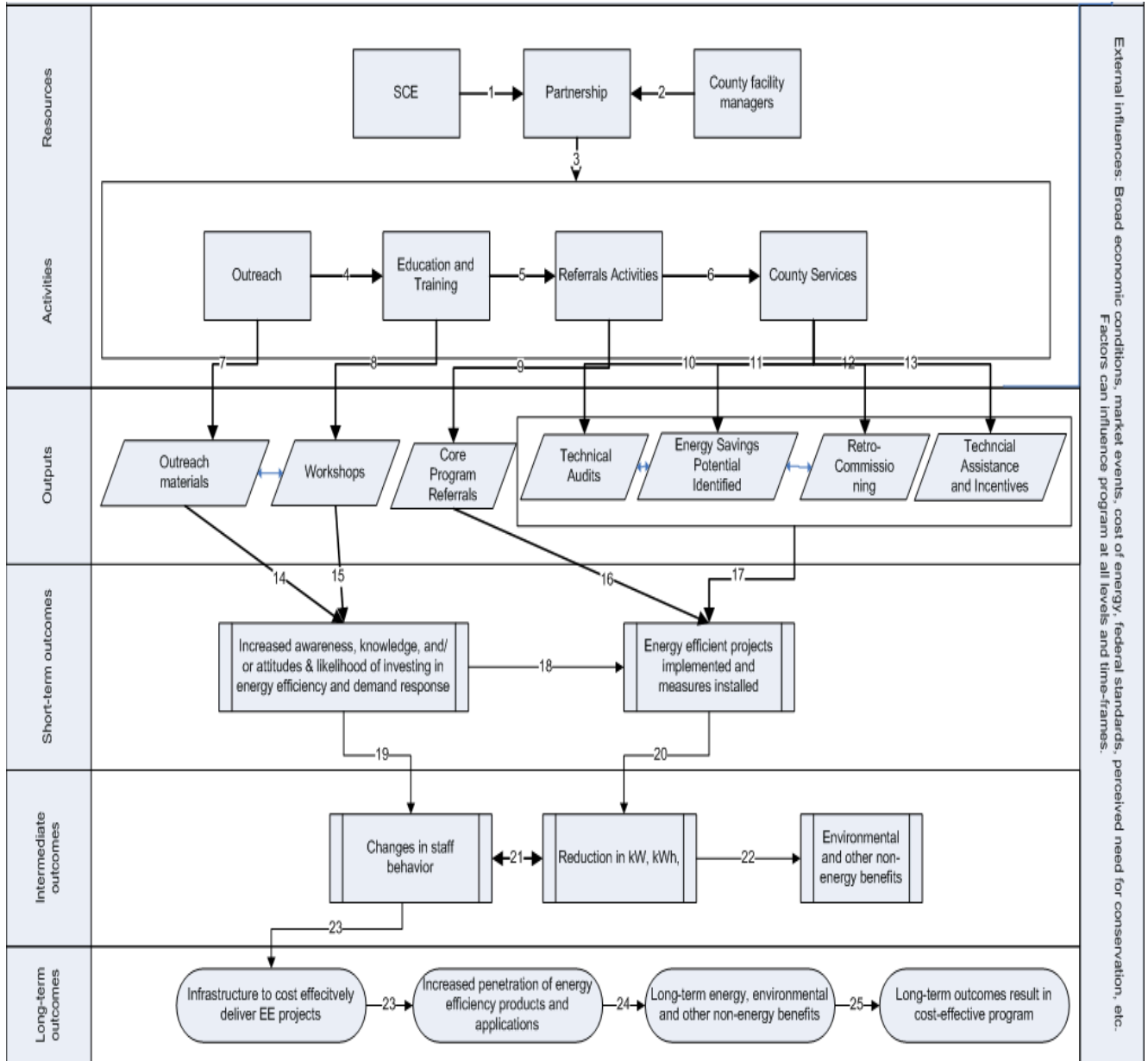
entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.	Partnership activities; however the Partnership is supportive of the County's role in any permitting or expedited approval policy for green building.
<b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.	Not expected to be influenced by Partnership activities; however the Partnership is supportive of the County's role in any permitting or expedited approval policy for green building.
<b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.	Not expected to be influenced in the San Bernardino County/SCG/SCE Partnership.
<b>1-5:</b> Develop broad education program and peer-to-peer support to local government's to adopt and implement model reach codes	Develop information campaign on mechanics and benefits of model programs targeting local government decision-makers and community leaders and Board of Supervisors.
<b>1-6:</b> Link emission reductions from "reach" codes and programs to ARB's AB 32 program	CARB adopts regulation providing local government emission reduction credit for "reach" standards. • State Attorney General and Office of Planning & Research provide guidance on using CEQA authority to target energy and GHG savings in LG development authority.
<b>2-2:</b> Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	Work with County to develop strategies to promote Title 24 as a standard requirement.
<b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	Not expected to be influenced in the San Bernardino County/SCG/SCE Partnership..
<b>3-1:</b> Adopt specific goals for efficiency of local government buildings, including:	Implement local policies for LEED new construction and existing buildings.
<b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Benchmark existing buildings against ratings such as Energy Star and its Portfolio Manager.  Continue commissioning programs on selected high-use buildings.



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<p><b>3-4:</b> Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.</p>	<p>Work with County to create a method that permits this task.</p>
<p><b>3-5:</b> Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.</p>	<p>Coordinate this approach with Research &amp; Technology Activities.</p>
<p><b>4-1:</b> LGs commit to clean energy/climate change leadership.</p>	<p>Assist initial set of local governments in commitments; develop and communicate appropriate messages.</p>
<p><b>4-2:</b> Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.</p>	<p>Assist County in developing model General Plan.</p>
<p><b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use</p>	<p>Identify opportunities and challenges for more energy/environmentally integrated development and infrastructure.</p> <ul style="list-style-type: none"> <li>• Develop and implement pilot projects, such as the California Sustainable Communities Initiative.</li> </ul>
<p><b>4-5:</b> Develop EE-related “carrots” and “sticks” using local zoning and development authority</p>	<p>Not expected to be influenced in the San Bernardino County/SCG/SCE Partnership.</p>

# 2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan



## 2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan

### 1) Program Name and Program ID number

Program Name: Santa Barbara County Partnership  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 11<sup>54</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 12

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>54</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

#### a) List of program elements:

The core program elements are similar to those identified in the Master Program Implementation Plan: Government Facilities, Strategic Plan Activities and Core Program Coordination.

#### b) Overview

The Santa Barbara County Energy Efficiency Partnership is a joint project of Southern California Edison, Southern California Gas Company, the County of Santa Barbara and the Cities of Santa Barbara, Goleta and Carpinteria,. SCEEP leverages partner resources to reduce energy use, increase energy efficiency awareness and reduce greenhouse gas emissions, in Santa Barbara County and partnering Cities.

#### **Core Program Element A - Government Facilities**

Participating local governments will take advantage of Partnership incentives for municipal facilities and, wherever possible, of eligible rebate, incentive and technical assistance programs offered by their serving utilities.

##### **4.A.1. Retrofit of County and Municipal facilities**

The Partnership will provide opportunity for a comprehensive retrofit of municipal facilities. Incentives will be administered through Southern California Edison (SCE) and Southern California Gas (SCG) Local Government Partnership Portfolio. Upgrades will include mechanical systems, lighting and other measures. Training will be conducted for County and City personnel to instruct them on the use and benefit from new systems installed for long-term energy efficiency.

The County of Santa Barbara has about 700 facilities; the City of Santa Barbara has 500 facilities. The City of Carpintera and City of Goleta have significantly less City-owned facilities; but just as much enthusiasm. A preliminary list of municipal retrofits has been identified and the City of Santa Barbara alone has identified approximately 100 facilities for retrofitting. Retrofits to municipal facilities will consist primarily of lighting (34%) and HVAC change outs and controls (34%). The balance (32%) of energy saving retrofits will be spread among various measures including pumps, motors, space heating boilers, domestic water heaters, and controls. Opportunities will be identified through comprehensive Energy Efficiency Demand Response (EEDR) audits which will be conducted as part of the program.

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Enhanced incentives offered to encourage higher levels of commitment to energy savings are an integral part of this program. Whole facility approaches will be accorded top priority. A minimum threshold of “Partner Level” of participation is expected for participants. Santa Barbara City currently require all new construction projects to be LEED certified and exceed Title 24 Standards by at least 10%..

While many projects have been identified as having the potential to participate however, further review is required to forecast the energy savings impact. Two of the four Partners with prospective projects meet or exceed their minimum participation threshold. The Partners still in the investigative stage do have minimum thresholds that need to be met.

### **4.A.2 RetroCommissioning (of buildings or clusters of buildings)**

The Partnership will offer RetroCommissioning (RCx) as part of their portfolio. Ideal projects will be at least 100,000 sq.ft. and not have had a major retrofit within the past five years. Smaller projects will be considered and opportunity evaluated on a case-by-case basis. One project, Santa Barbara City Hall, has been identified as a potential candidate. All projects will be cost effective with a total Resource Cost (TRC) greater than 1.5 and have a maximum payback of 10 years.

### **4.A.3 Integrating Demand Response into the audits**

Essential program service element includes combining comprehensive energy audits, and energy efficiency with demand response. Projects receiving integrated EEDR audits and who incorporate energy efficiency recommendations will participate at least at a Valued Partner level of demand response. Participants will be encouraged to apply for additional incentives that are available.

### **4.A.4 Technical assistance for project management, training, audits, etc.**

The Partnership will assist County and City government officials in understanding, managing, and reducing their energy use and costs, and position the partners as leaders in the region in energy management practice. Assistance will be offered to planners, designers, inspectors, plan checkers, employees and building occupants. This plan will include design assistance, plan review, Title 24 training, the audit process, technology review and building awareness. This assistance will be delivered by government or industry representatives, IOU Technical Staff and consultants.

### **4.A.5 On-bill financing**

The Partnership will participate in both the SCE and SCG on-bill financing for municipal facilities that install energy-efficient equipment or implement energy-efficient strategies. Financing and installation of equipment will be considered for partial or full extended repayment in the amount up to that offered through the applicable core program and will be

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included as a component line item of the monthly utility bill for repayment to the IOU.

In addition, local governments will consider participating in the CEC's low interest municipal energy loan program.

### **Core Program Element B - Strategic Plan Support**

The SCEEP will use the following strategies in support of the California Long Term Energy Efficiency Strategic Plan (CLTEESP).

#### **4.B.1 Code compliance support**

The partnership will work with SCE, SCG and other organizations, to assist County and City building and planning officials gain a better understanding of new and existing energy codes. This will be facilitated primarily through training and development of local plan checkers and building inspectors.

We will also conduct energy code compliance training and offer Title 24 training to design professionals, building professionals planners and inspectors, tailored to exceed the minimum Standards.

#### **4.B.2. Reach code support**

Partners will consider establishing and enforcing reach codes that require exceeding Title 24 standards by at least 20%. Alternatively, new facilities may be required to be LEED certified.

The City of Santa Barbara currently supports exceeding Title 24 Standards by at least 20% and will continue to work with the community contractors and architects to evaluate further revisions to the building code to exceed the newly revised Title 24 by up to 20%. Technical assistance will be needed to complete the evaluation. Designers and builders will be offered local outreach and training to assist them in reaching these requirements. Requiring a Built Green certification or another accepted green building standard will be considered as part of the building code review. The Partnership will also encourage implementation of a Green Purchasing Policy promoting sales of Energy Star rated equipment.

#### **4.B.3. Guiding document(s) support**

The Partnership will support Local Government integration of energy efficiency comprehensively into their policies, plans and goals. Supporting documents include: local building codes and standards, sample documentation, building energy ordinances and resolutions, training and technical manuals. These and other materials that support sustainability initiatives will be made available to the community.

#### **4.B.5 Financing for the community**

SCEEP will coordinate with Southern California Edison (SCE) and Southern California Gas (SCG) to initiate and offer on-bill financing for

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facilities choosing to install high efficiency equipment or strategies. Financing and installation of equipment will be considered for partial or full extended repayment in the amount up to that offered through the applicable core program and included as a component line item of the monthly utility bill.

**4.B.5 Peer-to-peer support**

The Partnership will establish an Energy Forum to facilitate peer-to-peer support consisting of an effective means whereby the Partners can share experiences and success stories with one another. This will facilitate the replication of successful County and City-sponsored programs and the establishment of Partnership Best Practices.

**Core Program Element C – Core program Coordination**

**4.C.1 Marketing Outreach & Education**

The Partnership will provide marketing and community outreach, education and training and community sweeps and other initiatives designed to connect the community with opportunities to take action to save energy, money and the environment. In addition, the program will act as a portal for all energy offerings, delivering information on demand response, self-generation and low income programs, California Alternative Rate for Energy (CARE) and the California Solar Initiative (CSI).via its website at:[www.sceeps.org](http://www.sceeps.org)

**4.C.2. Residential and small business Direct Install**

The Partnership will continue to offer and encourage participation in the Direct Install retrofit program targeting small businesses, multi-family residential and mobile homes. Lighting retrofits for outdoor lighting, indoor lighting retrofits, cold cathode retrofits, refrigeration and HVAC efficiency measures for businesses will be promoted.

**4.C.3. Third-party program coordination**

Third party vendors are being solicited to assist with delivering specific elements of the program. One is that third party vendors will play a significant role in the implementation of the Direct Install program.

**4.B.4. Retrofits for just-above LIEE-qualified customers**

Not expected to be part of this Partnership's offering.

**4.B.5. Technical assistance for program management, training, audits, etc.**

The Partnership will provide comprehensive technical training, planning assistance and marketing materials. Strategies will include: press releases, targeted mailings, newsletters, marketing collateral, television and radio ads targeting business managers and community leaders. Title-24 compliance seminars will be offered to plan checkers, building officials,

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inspectors, designers and builders. Self-audit tools and other web-based information will be offered to the community.

Santa Barbara County will leverage its local infrastructure to “spread the word” about energy efficiency and extend the reach of Statewide and local energy codes. Specific applications include countywide outreach and education seminars and special local events to disseminate a single integrated energy efficiency message to all residents and businesses in the County.

One of the distinguishing characteristics of the Partnership is its intent to develop and maintain a coordinated “Municipal Forum” to provide on-going integration of communications and sharing of ideas. The Forum is intended to leverage the County- and City-run television channels, a central web site, email programs, and webinars to facilitate communications.

c) Non-incentive services

In addition to offering incentives SCEEP will provide numerous non-incentive services including Peer-to-Peer Leadership, Energy Efficiency Trainings, Marketing, Education and Outreach, Information, Education and Funneling or core and third-party programs and Energy Champion Recognition

d) Target Audience

See Master PIP. CEP will also target special districts in partnering cities, for example water districts, and school districts.

e) Implementation

**Cost Effectiveness**

Program cost efficiency will be captured throughout our Partner Cities by maximizing replicable program elements, leveraging resources and staff support from each partner as defined in our participation model, and implementing initiatives that create demonstrated permanent and persistent energy savings.

As an evolving Partnership, the CEP has built a solid infrastructure, established partner trust, and gained invaluable knowledge and experience, all of which will result in a seamless and cost-efficient 2009-2011 implementation. This includes tried and tested implementation strategies, extensive resource databases and tracking mechanisms, approved marketing and outreach materials, planning templates, contractor and engineering relationships as well as other resources that can be carried over. Implementation processes are discussed in the Master PIP in the respective core program elements.



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**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

	Market Transformation Planning Estimates		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

The principal barrier to energy efficiency is the state of the state and local economy. Overcoming the increased first-cost barrier will be a major hurdle. In difficult economic times, when companies are looking at their bottom line and local governments are making cuts to popular programs, it is a challenge to convince decision makers that investing in energy efficiency is the best course of action. They do realize that energy inefficiency costs money that directly impacts their bottom line but swallowing the additional costs incurred to be energy wise involves making very difficult choices that could be avoided.

Seminars identifying ways to fund energy efficiency, Utility on-bill financing, CEC funding, utility incentives, State and Federal tax breaks and the Green Procurement Policy will all help reduce first-cost and support overcoming this barrier.

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d) Quantitative Program Objectives:

**Table 5**

<b>Target</b>	<b>Program Element</b>	<b>Program Target by 2009</b>	<b>Program Target by 2010</b>	<b>Program Target by 2011</b>
1	Kw, kWh	1,500,000/294	2,625,000/515	3,375,000/662
2	Number of Workshops	4	4	4
3	Number of Ordinances, Codes, etc.			
4	# of ME&O Events conducted that target Residential customers	4	4	4

**6) Other Program Element Attributes**

a) Best Practices:

Local governments are a rich area of untapped energy efficiency potential. While the governmental entities themselves are often supportive of energy efficiency, there are many barriers that thwart their efforts to “lead by example”. The Partnership is specifically structured to help local governments be successful, and then to leverage their energy and demand savings success to encourage their residents and businesses to do the same.

b) Innovation:

The City of Santa Barbara plans to certify all existing municipal buildings under LEED for Existing Buildings Operation and Maintenance as they are retrofitted. All new mechanical systems will be retrofitted with direct digital control (DDC) systems with load rolling and demand limiting capability that can be used to monitor performance and transmit a signal implement DR

In Marketing and Outreach , the Partnerships is utilizing funds to target sectors of the community sometimes “forgotten” in promoting energy efficiency measures, Through selective targeting of non-profits, such as the Boys and Girls Clubs and faith-based organizations for retrofit opportunities, the Partnership is reaching non-traditional audiences with an energy efficiency message. In addition, materials are produced in English and Spanish, which also promote a more inclusive energy efficiency message.

The partnership is cross-partnered with other entities in Santa Barbara County to spread the word about energy efficiency and sustainability by partnering with local environmental organizations, architects and contractor groups such as Architecture 2030, Building Green Business and other “green” groups. The focus is to integrate energy efficiency and green sustainability issues into one overall message and to cross-reference these in our marketing, outreach and education initiatives.

c) Interagency Coordination

SCEEP plans to coordinate its program with the ARB, local water agencies, schools, non-profit organizations, and local special districts and joint powers authorities operating within the County or broader south coast region.

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d) Integrated/Coordinated Demand Side Management

This Partnership will focus attention on the utility core programs and encourage the community to participate in more than one utility program and other non-utility programs. The partnership will identify energy efficiency improvements and demand response opportunities through a customer solutions approach to comprehensive audits.

e) Integration across resource types (energy, water, air quality, etc.)

One of SCEEP’s strategies is to coordinate energy and water efficiency messages to leverage both.

f) Pilots

None have been identified at this time.

g) EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6**

<b>California Energy Efficiency Strategic Plan (CEESP) Strategy</b>	<b>SCEEP’s Approach to Achieving CEESP Goal</b>
1-1: Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24’s requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.	SCEEP will investigate development of a Forum consisting of interested Partners for the purpose of establishing common energy goals. The group would address strategies affecting codes, standards and incentives; review best practices for exceeding Title 24; and provide consultants to assist cities with their own planning and implementation.
1-2: Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.	SCEEP members either are, or will consider offering expedited processing for facilities that exceed Title 24 or propose certification through LEED or Built Green initiatives. Benefits may include expedited permitting, and/or reduced fee structures.
1-3: Develop, adopt and implement model point-of-sale and other point-of-transactions relying on building ratings.	
1-4: Create assessment districts or other mechanisms so property owners can fund EE through bonds and pay off on property taxes; develop other EE financing tools.	SCEEP participants have expressed interest in participating in SCE’s on-bill financing program and in applying for low interest CEC loans for energy efficiency projects.
1-5: Develop broad education program and peer-to-peer support to local governments to adopt and implement model reach codes.	Technical training will be provided to the local government professionals, contractors, and facility maintenance professionals to improve knowledge and awareness of energy efficiency in building renovation and new construction. The Partnership agencies will share strategies that affect building codes, standards and incentives, review best practices for exceeding current Title 24 standards, and provide advice to assist cities with their own planning and implementation.

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<b>California Energy Efficiency Strategic Plan (CEESP) Strategy</b>	<b>SCEEP's Approach to Achieving CEESP Goal</b>
1-6: Link emission reductions from "reach" codes and programs to ARB's AB32 program.	SCEEP members will collect data on energy-efficient projects to evaluate the effect of potential reach codes and the link to ARB's AB32 program. Consistent with AB 32 goals, the energy savings will be translated to a reduction in greenhouse gas emissions in the community.
2-2: Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	
2-3: Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	
3-1: Adopt specific goals for efficiency of local new and existing government buildings	The City of Santa Barbara will continue with their policy that requires new construction and renovations of municipal facilities to exceed Title 24 by 20%. Other members will consider requiring municipal retrofit projects to participate at least at the Valued Partner level.
3-2: Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	SCEEP will explore requiring commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings in an effort to promote exceeding current energy standards.
3-3: Improve access to financing to support LG EE/DSM, such as lowering interest rate of Energy Commission's loan fund, and utility on-bill financing.	The Partners are very interested in participating in, and promoting utility on-bill financing and low interest energy efficiency loans.
3-4: Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	
3-5: Develop innovation incubator that competitively selects initiatives for inclusion in LG pilot projects.	
4-1: LGs commit to clean energy/climate change leadership.	Partner agencies will consider incorporating energy efficiency and renewable energy as a priority in the update of building codes and General Plans. The agencies will showcase energy and climate change initiatives and results as projects are completed.
4-2: Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.	SCEEP envisions facilitating a peer-to-peer effort that allows each governmental entity to leverage the knowledge and experience of the others and take a more integrated approach to overall energy savings and greenhouse gas reduction through its Municipal Forum. The City of Santa Barbara will complete its General Plan update with land use and zoning policies that encourage or provide incentives for energy efficient buildings. Examples include development priority for "green" economic development, incentives for voluntary energy efficiency retrofits, and a housing density bonus for reduced footprint projects.
4-4: Develop local projects that integrate EE/DSM/water/wastewater end use.	Santa Barbara County is served by 17 water purveyors. SCEEP will work with the Santa Barbara County Water Agency to coordinate with these purveyors for more energy efficient groundwater pumping, water treatment, waste water treatment and local conveyance. SCEEP will enlist assistance from the county's Department of General Services to work with the Water Agency.
4-5: Develop EE-related "carrots" and "sticks" using local zoning and development authority.	The City of Santa Barbara will complete its General Plan update with land use and zoning policies that encourage or provide incentives for energy efficient buildings. Examples include development priority for "green" economic development, incentives for voluntary energy efficiency retrofits, and a housing density bonus for reduced footprint projects

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### 1) Program Name and Program ID number

Program Name: South Bay Partnership  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 13<sup>55</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 14

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>55</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

#### a) List of program elements:

The core program elements are similar to those identified in the Master Program Implementation Plan: Government Facilities, Strategic Plan Activities, and Core Program coordination.

#### b) Overview:

The South Bay Energy Efficiency Partnership (the Partnership) consists of the City of Carson, the City of El Segundo, the City of Gardena, the City of Hawthorne, the City of Hermosa Beach, the City of Inglewood, the City of Lawndale, the City of Lomita, the City of Manhattan Beach, the City of Palo Verdes Estates, the City of Rancho Palos Verdes, the City of Redondo Beach, the City of Rolling Hills, the City of Rolling Hills Estates, the City of Torrance, South Bay Cities Council of Governments, Southern California Edison, and the Southern California Gas Company. The Partnership is implemented by the South Bay Cities Council of Governments through the South Bay Environmental Services Center.

Through the participation of Southern California Gas, the West Basin Water District, and the LA County Sanitation District in the Partnership, a comprehensive and integrated approach to energy efficiency, natural gas efficiency, water efficiency as well as wastewater, storm water and potable water capital projects will be identified and developed ensuring that the municipalities are as energy efficient as possible.

This 2009-2011 South Bay Partnership builds upon the already successful South Bay Energy Savings Center partnership. The South Bay's comprehensive portfolio of activities is designed to promote energy efficiency activities while focusing on a larger conservation program which includes water conservation, solid waste and alternative mobility strategies. Through focused outreach and educational activities, the programs message that "saving energy is good for the environment and saves money too" will be emphasized through the importance of energy efficiency measures and best practices. The program will also provide the tools necessary to take advantage of rebates and financial incentives for all public agencies, their residents and businesses.

#### **Core Program Element A - Government Facilities**

This area will deliver energy savings during the next three-year program cycle. Every local government that participates in the Partnership will achieve specified energy savings and greenhouse gas reductions from the facilities and infrastructure that it manages through technology retrofits, operational improvements and policy changes. Participating local governments will take advantage of Partnership incentives for municipal facilities and, wherever possible, of eligible rebate, incentive and technical assistance programs offered by their serving utilities.

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

### **A.1) Retrofit of county and municipal facilities**

The 15 cities within the South Bay Cities Council of Governments maintain over 500 municipal buildings. The Partnership has begun the process of reassessing previous reviews performed on city facilities and has begun conducting additional assessments for school facilities and special districts. The assessments are intended to be completed within the first quarter of 2009 and will be used to complete comprehensive energy efficiency retrofits in municipal facilities. Potential opportunities include but are not limited to: lighting, air conditioning and computer network savings.

### **A.2) Retro-Commissioning (of buildings or clusters of buildings)**

The Partnership focuses on identifying HVAC retrofit opportunities through the retro-commissioning of municipal buildings. This provides a systematic whole-system approach to energy efficiency and many chronic building problems and energy waste can be resolved by making low-cost or no-cost adjustments identified by the Retro-commissioning process.

### **A.3) Integrating Demand Response into the audits**

The Partnership's plans include identifying and performing successful comprehensive energy efficiency projects with member cities and enrolling service accounts from each city in demand response programs in alignment with Master Partnership Implementation.

### **A.4) Technical assistance for project management, training, audits, etc.**

Each Partnership has a specific budget for each of these elements. Standard programs available include energy efficiency training, energy audits, and technical assistance in alignment with Master Partnership Implementation Plan.

### **A.5) On-bill financing**

Each city in the partnership has indicated a keen interest in using On-bill Financing.

## **Core Program Element B: Strategic Plan Support**

### **B.1) Code Compliance Support**

The South Bay Partnership will explore the creation of an energy code compliance improvement program and various strategies across the partnering cities to improve compliance with building energy standards and appliance regulations. The Partnership will conduct focused energy code training targeted to the South Bay region including workshops for municipal planning and building staff, building professionals, and contractors.

### **B.2) Reach Code Support**

The South Bay Partnership will seek to establish meaningful reach codes as part of its effort to add value to energy efficiency in alignment with the strategies as expressed in the Master Partnership Implementation Plan.

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**B.3) Guiding Document(s) Support**

As well as establishing documentation in alignment with the strategies as expressed in the Master Partnership Implementation Plan, the South Bay Partnership objectives will include development of Energy Action Plans and Climate Action Plans to document baseline energy use and emissions. These baselines will be used to set and achieve emission reductions and energy savings. Individual city plans will be used to develop a regional energy savings plan.

**B.4) Financing for the community**

The South Bay Partnership will develop an education and outreach program for the Partnership communities in alignment with the strategies as expressed in the Master Partnership Implementation Plan.

**B.5) Peer to Peer Support**

The South Bay Partnership will actively participate and support in the peer to peer program in forums for the partnering cities and through the strategies as expressed in the Master Partnership Implementation Plan.

**Core Program Element C: Core Program Coordination**

**C.1) Outreach & Education**

The Partnership has an established comprehensive Marketing Education & Outreach (ME&O) Plan that will be expanded to incorporate: educational workshops to assist cities in moving forward with energy savings projects, policies, codes, and ordinances; general awareness events and exhibits to publicize the Partnership and its goals throughout the communities (including environmental fairs and expos); marketing energy efficiency programs through a variety of media channels including mailers, press releases, and quarterly e-newsletters; and provide a minimum of 16 special workshops throughout the 15 cities.

**C.2) Residential and Small Business Direct Install**

The Partnership will establish training and outreach efforts to support and coordinate with the SCE core programs for South Bay commercial and small businesses customers as well as leverage existing member cities chambers of commerce, bill mailing inserts, and municipal channel 3 television access to distribute information and drive greater participation.

**C.3) Third-party program coordination**

The Partnership will actively support third part programs through the strategies as expressed in the Master Partnership Implementation Plan.

**C.4) Retrofits for just-above LIEE-qualified customers**

The South Bay Partnership will support this program in alignment with the strategies as expressed in the Master Partnership Implementation Plan.

**C.5) Technical assistance for program management, training, audits, etc.**



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The Partnership anticipates bringing technical and financial assistance from the following additional programs to its communities: SCE & SCG Energy Center offerings, Energy Star® Qualified Refrigerator Rebates, Refrigerator and Freezer Recycling, Electric Water Heater Rebates, and Energy Star® Qualified Lighting; Express Efficiency; Multi-family Energy Efficiency Rebate Program; Non-Residential Audits; Retro-Commissioning; Savings by Design; Standard Performance Contracts; Variable Speed Pool Pump Rebate Program.

c) Non-Incentive Services:

In addition to the strategies as expressed in the Master Partnership Implementation Plan and the ELP model, the South Bay Partnership will include a Portfolio of partnership ME&O activities to increase community enrollment in energy programs, and other SCE services, resources and assets brought to support the ME&O Plan (e.g., mobile education unit; account manager support; training at the Customer Technology Application Center (CTAC); speakers bureau; limited giveaways such as opportunity drawings and free CFLs; marketing, design & printing of brochures and other collateral materials; media/press/publicity support, etc.).

d) Non-Incentive Services:

City and county staff, management and policymakers (elected officials).  
Residential and business customers in the South Bay region.

e) Implementation

In addition to the strategies and coordination as expressed in the Master Partnership Implementation Plan:

The Partnership has developed a comprehensive portfolio of ME&O activities and is proceeding to schedule near-term activities and events. These include advertising in regional and local newspapers, cable TV and newspaper interviews about energy efficiency opportunities, and work shops as well as community exhibits most with an attendance of 1,500-3,000 people.

The Partnership programs strategies include an integrated approach to energy consumption and reduction, increasing awareness of energy efficiency, demand response, Low-Income Energy Efficiency, California Alternative Rates for Energy Program, Self-Generation Incentive Program, and California’s Solar Initiative.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	<b>Baseline Metric</b>		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

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b) Market Transformation Information

**Table 4**

	<b>Market Transformation Planning Estimates</b>		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

The Cities that form the South Bay Partnership will have barriers consistent with and will employ those strategies as expressed in the Master Partnership Implementation Plan to overcome them.

d) Quantitative Program Objectives

**Table 4.3**

Program/Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #1 Government Facilities (kWh reduction)	1,500,000	4,950,000	7,500,000
Target #2 Education and training- Number of workshops	8	12	16
Target # 3 Education and training – Peer to Peer Forums for reach code actions	4	8	12
Target #4 Strategic Planning Activities- Number of Ordinances, policies, etc. *	5	7	9
Target #5 Community Outreach- Number of events (including sweeps)	12	24	36

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**6) Other Program Element Attributes**

**a. Best Practices**

As well as those strategies as expressed in the Master Partnership Implementation Plan, the South Bay Partnership will embody the following best practices:

Leverage the strong member municipal relationships developed by the Partnership in the 06-08 cycle to further develop and capture energy efficiency opportunities within the county and cities facilities.

Expand the existing South Bay Partnership education programs to identify, develop and capture energy efficiency opportunities within the region's communities.

**b. Innovation**

The Partnership will collaborate with its municipal participants, including school districts and special districts, to develop strategies to implement integrated and comprehensive projects that will encompass energy efficiency, demand response, and renewable elements.

The Partnership will also hold 16 training work shops and 36 exhibits over the course of the 36 months of the 09-11 cycle at community events to demonstrate: energy efficiency activities and practices, energy code training to target the needs of the South Bay region, promote whole-building performance to get better space conditioning, coordinate emerging "green" or sustainability standards, and promote programs that promote sustainability including California New Homes Program; Home Energy Efficiency Program, Appliance Recycling Program, Benchmarking and Performance Tracking, and On-Line Buyer's Guide and Business and Consumer Electronics Program.

**c. Interagency Coordination**

The South Bay Partnership through its local government and consulting network will encourage coordination with Agencies and Initiatives as noted within the Master Partnership Implementation Plan as well as with the participating IOUs, SCE and SCG, and the South Bay region water agencies and sanitation district.

**d. Integrated/coordinated Demand Side Management:**

The South Bay Partnership program plans include identifying and enrolling municipal service accounts from each city in demand response programs in alignment with the Master Implementation Plan.

**e. Integration across resource types (energy, water, air quality, etc)**

The Partnership promotes comprehensive sustainability, including water conservation, solid waste management, and alternative mobility.

**f. Pilots**

The Partnership promotes comprehensive sustainability, including water conservation, solid waste management, and alternative mobility.

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**g. EM&V**

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues

**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 5**

<p><b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.</p>	<p>The SBESC will evaluate adopting them on a voluntary but rewarded basis, including excess Title 24 performance in the fee-waiver program or adopting the new California "Green Building Code" on a voluntary basis through 2010, making it mandatory in 2011, if a sustained funding source is provided to support the activities.</p>
<p><b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.</p>	<p>Each local agency of the SBESC, through the Partnership will evaluate and adopt expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments as appropriate.</p>
<p><b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.</p>	<p>The SBESC will evaluate and adopt as appropriate, a point of sale energy disclosure dependant upon availability of standardized energy star benchmarked data (per recent legislation) on each meter at the point of sale.</p>
<p><b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.</p>	<p>The local agencies of the Partnership will contemplate pursuing the adoption of an AB 811 financing mechanism for its jurisdiction in alignment with the strategies as expressed in the Master Partnership Implementation Plan.</p>
<p><b>1-5:</b> Develop broad education program and peer-to-peer support to local governments to adopt and implement model reach codes</p>	<p>Within the Partnership and through other Partnerships, the local agencies of the Partnership, and the SBESC, will participate in 12 comprehensive peer to peer educational &amp; outreach forums on a quarterly basis that emphasize specific actions to take to help achieve the local agencies' reach code goals.</p>
<p><b>1-6:</b> Link emission reductions from "reach"</p>	<p>Each local agency of the SBESC will</p>

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codes and programs to ARB's AB 32 program	evaluate and adopt, through the Partnership, the nexus of energy DSM programs and the larger AB 32/SB 375 compliance requirements will be integrated as appropriate, provided a sustained funding source is provided to support the activities.
<b>2-2:</b> Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	The Partnership will support each agency in developing and implementing Training & Education programs to achieve additional T-24 compliance, provided a sustained funding source is provided to support the activities.
<b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	Each local agency of the SBESC will evaluate and adopt as appropriate, policies regarding energy components of the professional licensing of local inspectors and contractors hired.
<b>3-1:</b> Adopt specific goals for efficiency of local government buildings	The Partnership goal is to achieve the ELP model silver target level in the aggregated local agency municipal facilities resulting in at least a 5% savings over the 2003 energy use baseline during the 2009-2011 Partnership.
<b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Each local agency of the SBESC will evaluate and adopt as appropriate, commissioning, performance measurement, and verification as a core part of their energy action plan.
<b>3-4:</b> Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	Each local agency of the SBESC will evaluate and adopt as appropriate, creation of a line item in their budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.
<b>3-5:</b> Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	n/a
<b>4-1:</b> LGs commit to clean energy/climate change leadership.	Each local agency of the SBESC will evaluate and adopt as appropriate, a Strategic Energy Plan that includes long and short term energy & sustainability objectives in line with the adopted California Long Term Energy Efficiency Strategic Plan.
<b>4-2:</b> Use local governments' general plan	Each local agency of the SBESC will

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<p>energy and other elements to promote energy efficiency, sustainability and climate change.</p>	<p>evaluate and adopt as appropriate, development of aggressive sustainability goals into their General Plan Updates that include emphasizing sustainability through green building design &amp; technologies, reduction of GHG emissions, increased use of renewable energy, and conservation of existing sources of energy.</p>
<p><b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use</p>	<p>Through the addition of SCG, the West Basin Water District, and the Los Angeles County Sanitation District to the Partnership, water efficiency projects, including low flow aerators and shower heads will be added. Additionally, as funding allows wastewater, stormwater and potable water capital projects will be contemplated with SCE will ensure that they are as energy efficient as possible.</p>
<p><b>4-5:</b> Develop EE-related “carrots” and “sticks” using local zoning and development authority</p>	<p>Each local agency of the SBESC will evaluate, develop, and adopt as required, zoning and development authority changes to comply with AB32/SB375.</p>

## 2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan

### 1) Program Name and Program ID number

Program Name: San Luis Obispo County Energy Watch Partnership  
 Program ID Number: TBD

### 2) Projected Program Budget Table

Table 15<sup>56</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 16

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>56</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

**4) Program Element Description and Implementation Plan**

a) List of program elements:

The following elements are fully described in the LGP Master PIP. The table below indicates those elements applicable to the LGP:

Available to Local Gov't via GC or IP	Implemented by LGP as described in Master PIP?	Targeted Implementation by LGP?	Program Element
			A. Government Facilities
		X	A1 – Retrofit of County and Municipal Buildings
	X		A2 - Retro-Commissioning
	X		A3 - Integrating Demand Response
		X	A4 - Technical Assistance
	X		A5 - On-Bill Financing
			B. Strategic Plan Support
X		X	B1 - Code Compliance
X	X		B2 - Reach Code Support
X		X	B3 - Guiding Document Support
X	X		B4 - Financing for the Community
X		X	B5 – Peer to Peer Support
			C. Core Program Coordination
	X		C1- Outreach Education
		X	C2 - Residential and Small Business Direct Install
		X	C3 – Third Party Program Coordination
	X		C4 – Retrofits for Just Above LIEE
	X		C5 - Technical Assistance



# **2009-2011 Energy Efficiency Programs**

## **Local Government Partnerships**

### **Program Implementation Plan**

#### 4A – Program Element Description and Implementation - Government Facilities

##### Overview

San Luis Obispo County Energy Watch (SLOCEW) is a joint partnership between the County of San Luis Obispo and Pacific Gas and Electric Company, and SCG. The Partnership will manage the administration, marketing, integration and implementation components of this Partnership program. Through the SLOCEW Partnership, emphasis will be placed on the outreach to the Cities and Special Districts within San Luis Obispo County to assist them in improving the energy efficiency of their facilities and integrating energy efficiency throughout the local communities.

A1 – Retrofits: In addition to the retrofit of government facilities for the County of San Luis Obispo and the City of San Luis Obispo, emphasis will be placed on the outreach to and involvement of the smaller cities within the County. These efforts will be coordinated with the California Energy Commission (CEC) in order to use their audit and financial services to facilitate retrofit projects being completed in what may prove to be a difficult financial environment for many municipalities. With the coordinated effort of the San Luis Obispo County Energy Watch, IOUs and the CEC, it is anticipated that the retrofit projects completed will be more comprehensive, achieve greater short-term and long-term energy savings and assist the municipalities in saving energy dollars that can be used to support other essential services.

A2 – Retro-Commissioning: Although the Partnership focus will be on assisting the local governments with retrofit projects, opportunities to include retro-commissioning will also be presented in order to achieve greater comprehensive savings.

##### Non-Incentive Services

A3 – Integrating Demand Response: In the course of assisting the local governments with a comprehensive evaluation of their facilities, demand response opportunities will be addressed and evaluated for cost effective implementation.

A4 – Technical Assistance: The Partnership will work with the utilities and CEC to assist in providing a comprehensive energy evaluation of all County and City owned facilities. Technical assistance will also be provided to assist the local governments in moving projects forward to completion.

A5 – On-Bill Financing: When On-Bill-Financing becomes available, the Partnership will work with the local governments to utilize this program, where feasible, to advance and complete projects.

##### Target Audience

The target audience for this partnership is the government facilities owned by the County of San Luis Obispo and all of the incorporated cities located within the County. These facilities include but are not limited to:

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- Administration Buildings
- Correctional Facilities
- Police Stations
- Fire Stations
- Libraries
- Hospitals
- Recreation and Park Facilities
- Streetlights and Traffic Signals
- Waste Water Treatment Plants
- Arts and Entertainment Facilities

**Implementation**

Through working with County and City Managers, a comprehensive audit will be performed for all government owned facilities. Once the viable measures have been identified, financing and incentive options will be discussed. Assistance will be provided in developing a package to be presented to the elected officials for approval. Additional assistance will be provided by the partnership along each step through project completion.

**5A – Program Element Rationale and Expected Outcome – Government Facilities**

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	<b>Baseline Metric</b>		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

	<b>Market Transformation Planning Estimates</b>		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

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c) Program Design to Overcome Barriers:

Table 1

Overcoming Barriers to Retrofitting Government Facilities	Barrier	Solution
1	Lack of information about programs available to assist local governments with improving the energy efficiency of their facilities.	Meet with City Managers and other City Administrators to provide them with basic information about program and assistance availability.
2	Lack of information/data on municipal facility usage and energy savings opportunities.	Through the use of utility and CEC resources, provide Cities with a comprehensive audit for all of their facilities to identify viable retrofit projects. Work with community leaders to obtain a commitment to pursue viable retrofit projects and identify financing/assistance sources.
3	Lack of aligned goals from community leaders and lack of financial and human resources to pursue retrofit projects.	Work with community leaders to obtain a commitment to pursue viable retrofit projects and identify financing/assistance sources. Obtain a resolution from individual Cities to demonstrate a commitment to energy efficiency and pave the path for retrofits.

d) Quantitative Program Objectives:

Table 2

Government Facilities Program Objectives	Program Target by 2009	Program Target by 2010	Program Target by 2011
Percentage of City Managers provided with basic program and partnership information	100%		
Percentage of City Managers met with individually and City commitment obtained	5 – 20%	20 – 50 %	50 – 75%
Percentage of committed Cities	5 – 20 %	20 – 50%	50 – 75%

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Government Facilities Program Objectives	Program Target by 2009	Program Target by 2010	Program Target by 2011
with completed comprehensive audits and results presented to City Managers			
Percentage of committed Cities with completed retrofit projects	0%	20 – 50%	50 – 75%

6A - Other Program Element Attributes- Government Facilities

- a) Best Practices: As individual Cities begin completing retrofit projects, they become champions for energy efficiency in their own communities and an example and resource for other communities. Partnership successes will also be shared with the Santa Barbara and Kern County partnerships through quarterly joint partnership meetings.
- b) Innovation: Funding retrofit projects may be the single most difficult obstacle facing cities. These financial challenges will be addressed by the Partnership creating a working relationship with the CEC to use their financing program and other energy efficiency grants and opportunities that may become available. The Partnership will also research other financing and funding opportunities and share the information within the Partnership and with other partnerships.
- c) Interagency Coordination: The Partnership will assist the County and Cities to ensure that all County/City Departments are aware of the partnership opportunities. The partnership will also work with the CEC to assist with project financing and energy audits and to utilize their expertise and technical assistance to overcome funding and project obstacles.
- d) Integrated/coordinated Demand Side Management: All retrofit projects will be assessed for opportunities to reduce peak demand. Where feasible and where financing opportunities exist, solar and other alternative energy projects will be considered for project inclusion.
- e) Integration across resource types (energy, water, air quality, etc): Regular meetings will be established with various applicable agencies to discuss how they might be able to assist in achieving energy efficiency within their own agencies and communities, and how the Partnership might be able to assist these agencies in distributing their information to applicable business and residential constituents.
- f) Pilots: Specific pilot projects have not been identified for the Partnership, however, with the Partnership’s relationship with entities such as Cal Poly San Luis Obispo, Diablo Canyon Nuclear Power Plant and Morro Bay Power Plant, every opportunity will be

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explored to assist with the energy efficiency education of the communities and opportunities to incorporate new technologies in retrofit projects. In addition, where feasible, specific pilot opportunities will be explored to establish demonstration projects for new and emerging technologies to showcase their potential and opportunities.

- g) EM&V: The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

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## **4B – Program Element Description and Implementation – Strategic Plan Support**

### **Overview**

The San Luis Obispo County Energy Watch program will assist the County and Cities in the enforcement of existing energy building codes and the development of reach codes that may reduce peak energy demand and greenhouse gases. The Partnership will utilize the Green Communities and other utility programs and training that may be available to assist in this effort. It is the objective of the Partnership to have individual city and countywide energy and greenhouse gas reduction plans in place by the end of this program cycle.

### **Non-Incentive Services**

**B1 – Code Compliance:** The Partnership’s objective is to work with the County and various City Building/Planning Departments to determine where the enforcement of existing energy codes may be lacking. Once areas of non-enforcement have been identified, a plan will be developed to encourage enforcement including providing information on the cost of non-enforcement in terms of energy savings and dollars lost due to non-compliance resulting from non-enforcement.

**B2 – Reach Code Support:** Once it has been determined that existing energy codes are being enforced then reach codes will be evaluated for their applicability in assisting the County and City’s in meeting their energy and greenhouse gas reduction objectives.

**B3 – Guiding Document Support:** The Partnership will coordinate a meeting with the County and Cities to begin discussions about developing both individual City- and County-wide energy and greenhouse gas reduction plans. From this initial meeting, the Partnership will work to bring utility and other resources together to assist in the development of these plans. The Partnership’s objective is to have individual City and County energy and greenhouse gas reduction plans in place by the end of 2011.

**B4 – Financing for the Community:** As opportunities become available through utility or other programs, the Partnership will research these opportunities and make recommendations to and provide assistance to the local governments.

**B5 – Peer to Peer Support:** For all its aspects, the Partnership will work to share information and gain new ideas from the Santa Barbara, Kern County and other local government partnerships. This will take place through quarterly meetings with the Santa Barbara and Kern County Partnerships and attendance via phone at their monthly meetings. Information will also be shared and gathered through the meetings with other City/County agencies especially the quarterly meetings that the County Planning Department conducts with the City Planning Departments. Through this effort, best practices can be gleaned and shared to overcome obstacles and optimize achievements.

### **Target Audience**

The Partnership will provide assistance to the Planning/Building/Permitting Departments in San Luis Obispo County and the incorporated Cities within the County.

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Implementation

The Partnership will assist the target audience with benchmarking their existing compliance of energy codes and assist, where needed, with training and developing a plan for code enforcement.

5B – Program Element Rationale and Expected Outcome – Strategic Plan Support

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

	Market Transformation Planning Estimates		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

**Table 1**

Overcoming Barriers to Strategic Plan Support	Barrier	Solution
1	Understanding the degree to which the non-enforcement of energy codes is an issue.	Meet with building inspectors and other City/County officials to determine if non-enforcement is an issue or if there is a specific area or reason for non-enforcement. Once this has been completed, establish a cost ratio between enforcement/non-enforcement and compliance/non-compliance. This information will then be shared with the City/County officials and the

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Overcoming Barriers to Strategic Plan Support	Barrier	Solution
		Partnership will work with the Cities/County to address the potential of enforcement/compliance.
2	Lack of funding for training and technical assistance.	Develop a list of utility, local and other resources that can be used to assist Cities/County with training, to provide technical assistance and to act as an ongoing resource.
3	Existing codes are complicated and may be inconsistent or inconsistently enforced based on locality.	Through Planning Department meetings and discussion of code enforcement issues, peer to peer support will be developed and will facilitate the information exchange necessary to bring consistency across municipalities.

d) Quantitative Program Objectives:

Table 2

Program/Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
Percentage of local governments with established energy code enforcement standards	0 – 10%	10 – 50%	50 – 100%
Decrease in energy code non-compliance rates	10 – 20%	15 – 20%	20 -50%
Cities with approved energy and GHG reduction plans	0 – 10%	10 – 30%	50 – 100%

6B - Other Program Element Attributes- Strategic Plan Support

- a) Best Practices: As individual Cities begin improving code enforcement, they become a resource for other communities. Compliance successes will be shared with other Cities in their quarterly County Planning Department meetings and will also be shared with the Santa Barbara and Kern County partnerships through quarterly joint partnership meetings.
- b) Innovation: Resources may be an issue for the County and individual Cities. Utilization of utility and local resources may assist in the education and compliance with energy codes. Organizations such as architect associations and the Home Builders Council may be valuable resources in improving compliance and assisting the local municipality's



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enforcement. The Partnership will work with the County Planning Department to add code enforcement as a regular agenda item as part of their quarterly meeting with the City Planning Departments. The Partnership will also seek to provide some type of code enforcement and/or compliance training or information at each of these meetings.

- c) Interagency Coordination: The Partnership will assist the County and Cities with the coordination of meetings, training and the research of local and other resources such as utility programs and other information that may be available to assist County/City Departments with enforcement. The Partnership will also assist with organizing meetings with other organizations such as builder and architect associations that may be able to assist with compliance.
- d) Integrated/Coordinated Demand Side Management: Through the enforcement of existing codes, it is anticipated that not only will energy consumption and GHG output be reduced, but that peak demand may also be influenced. Once the enforcement of existing codes and their potential savings has been addressed then reach codes can begin to be established emphasizing demand response measures and other demand response activities.
- e) Integration across resource types (energy, water, air quality, etc): Regular meetings will be established to meet with various applicable agencies such as Water Departments and Air Pollution Control Districts on how they might be able to assist in achieving energy efficiency. Code enforcement will also be discussed to determine if there are best practices for code compliance and enforcement that can be shared and used.
- f) Pilots: Education regarding the relationship of energy use to air quality and green house gas emissions will be emphasized. A pilot project will be developed to showcase how energy efficiency can be used to address these issues. GHG reduction information can be provided to the County and each City on an annual basis showcasing the impact of the Partnership's energy efficiency activities.
- g) EM&V: The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

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### 4C – Program Element Description and Implementation – Core Program Coordination

#### Overview

San Luis Obispo County Energy Watch intends to take an integrated approach to distributing information about resources available to utility customers. Integrated information will include programs such as low-income, demand response and third party programs in addition to other local programs that may be applicable such as water conservation, waste management, recycling and others. The Partnership will also provide education, training and workshops on a variety of energy efficiency and energy related subjects to individual business segments and communitywide.

**C1 – Outreach and Education:** The Partnership will assist the local governments in providing energy education and outreach within the communities. These activities will be coordinated with the utilities.

**C2 – Residential and Small Business Direct Install:** The Partnership will offer direct installation activities and will coordinate these activities with utility and other programs. The direct install activities will be discussed in monthly partnership meetings and will be directed to areas designated by the partnership with input from the local governments. The focus of the small business direct installation efforts will be to those businesses primarily operating in low to low-middle income areas and who employ local residents. The residential direct installation efforts will also be focused in these areas through the LIEE contractor. Employees of the businesses operating in these areas will be targeted for program inclusion.

**C3 – Third Party Program Coordination:** The Partnership will coordinate with Third Party contractors and programs so that there is a coordinated effort with direct installation activities to provide the best opportunities and most applicable energy savings solutions to the customer.

**C4 – Retrofits for Just-Above LIEE:** The Partnership plans on utilizing this program as its only residential program. The LIEE contractor will be invited to participate in the monthly partnership meeting so that their efforts can be coordinated with the other programs and so that they can receive input from the local governments.

**C5 – Technical Assistance:** Technical assistance will be made available to the local governments through the Partnership. Assistance may include audits, reports and inspections.

#### Target Audience

Programs will be targeted to residential and business customers as appropriate. The residential program will be utilized in the lower income areas of the communities to address the needs of those who may not qualify for the LIEE program but may not be able to afford making energy efficient improvements on their own. The Third Party programs will be utilized for those customers who would be better served by an expanded list of measures than those offered through direct installation.

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Implementation

The Partnership will assemble a list of all energy efficiency programs available within the communities. The programs will be categorized by individual market sectors and this information will be made available to customers through business, trade and other community organizations and through the Partnership website.

5C – Program Element Rationale and Expected Outcome – Core Program Coordination

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	<b>Baseline Metric</b>		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

	<b>Market Transformation Planning Estimates</b>		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

**Table 1**

Overcoming Barriers to Core Program Coordination	Barrier	Solution
1	Constrained customer participation due to poor economic conditions.	Through trade, business and other organizations, provide information on the variety of energy efficiency programs and program elements that can assist especially in the area of financing energy efficiency projects..

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Overcoming Barriers to Core Program Coordination	Barrier	Solution
2	Customers not knowing where to begin in becoming more energy efficient.	Through utility, Partnership and/or other programs, assist the customer with obtaining an assessment of the greatest energy savings potential.
3	Program overlap or customer not knowing program applicability.	Provide customers with a list of available utility, Partnership and other programs. This list will include information about the area and/or business segment where the program is applicable, a description about the program and program contact information.

d) Quantitative Program Objectives:

Table 2

Core Program Coordination	Program Target by 2009	Program Target by 2010	Program Target by 2011
Increased percentage of program participation over 2006-08 levels	0 – 10%	5 – 20%	10 – 30%
Number of referrals made to third party and other non-Partnership programs	0 – 20	10 – 25	25 - 50
Number of events where program information was provided	0 – 5	5 – 20	10 - 30

6C - Other Program Element Attributes- Core Program Coordination

- a) Best Practices: Through communications with local organizations, other local government partnerships, utility personnel, local government agencies and others, establish a list of programs that are applicable to individual customer segments. This information will then be shared with the customer through trade, business and other local organizations. As businesses participate in the programs, use the same organizations that distributed the program information to share information about the businesses including type of projects, project costs, energy savings, how the project was financed, etc.
- b) Innovation: Financial resources may be an obstacle to projects moving forward. As a result, the Partnership will establish a check list of conservation practices (low or no cost

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recommendations) for each customer segment. Assistance will be provided to the customer in the implementation of these recommendations through a partnership with the Community College and/or other workforce resources. Once the customer has implemented the low cost/no cost measures then the Partnership will assist the customer in researching financial options so that other more costly and aggressive measures can be implemented.

- c) Interagency Coordination: The Partnership will assist customers with obtaining information about programs and services that may be available through local, state or federal agencies that can assist residential and business customers with their energy efficiency efforts.
- d) Integrated/Coordinated Demand Side Management: Peak demand reduction programs will be promoted where applicable. These types of programs will be highlighted on the program list that will be distributed through direct install and third party contractors, through local government departments such as water, recycling, waste management, air quality, etc.
- e) Integration across resource types (energy, water, air quality, etc): Partnership, third party, other utility and other energy efficiency program information will be distributed through the assistance of other agencies such as water, air quality and waste management. In turn, information about applicable local agency programs will be distributed through Partnership activities.
- f) Pilots: The Partnership will work with third party program contractors to showcase third party program benefits. This may include business or business segment tours of facilities that have participated in a third party program.
- g) EM&V: The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

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### 1) Program Name and Program ID number

Program Name: San Joaquin Valley Partnership  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 17<sup>57</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 18

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>57</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

#### a) List of program elements:

The core program elements are similar to those identified in the Master Program Implementation Plan: Government Facilities, Strategic Plan Activities, and Core Program coordination.

#### b) Overview

The SJVELP Program is a Local Government Partnership proposed to be comprised of the County of Tulare and the cities of Exeter, Farmerville, Lindsey, Portersville, Tulare, Visalia, Woodlake, Southern California Edison (SCE), Southern California Gas, and potentially Pacific Gas & Electric (PG&E) and the implementing partner: The San Joaquin Valley Clean Energy Organization (SJVCEO).

The Partnership's comprehensive portfolio of activities is designed to seek innovative approaches to energy efficiency in California's central valley environment; to increase adoption of energy efficiency measures and best practices within their municipality and community by continuing a "culture" of energy efficiency through focused educational and outreach events; and to increase the effective delivery of technical and financial energy services to residents and businesses. ME&O activities will consist of staff training, SCE's Mobile Education Unit at home shows, fairs and farmers market nights, technical training at the local collages, marketing and co-branding with SCE core programs, and evaluate implementing an AB 811 financing mechanism for citizens of Tulare County.

#### **Core Program Element A - Government Facilities**

This area will deliver energy savings during the next three-year program cycle. Every local government that participates in the Partnership will achieve specified energy savings and greenhouse gas reductions from the facilities and infrastructure that it manages through technology retrofits, operational improvements and policy changes. Participating local governments will take advantage of Partnership incentives for municipal facilities and, wherever possible, of eligible rebate, incentive and technical assistance programs offered by their serving utilities.

##### **A.1) Retrofit of county and municipal facilities**

Through Partnership support, the County and participating Cities will conduct audits of their facilities. Potential opportunities identified from current assessments include but are not limited to: lighting, air conditioning, controls, thermal energy storage, and solar generation.

##### **A.2) Retro-Commissioning (of buildings or clusters of buildings)**

The Partnership focuses on identifying HVAC retrofit opportunities through the retro-commissioning of municipal buildings. This provides a systematic whole-

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system approach to energy efficiency and many chronic building problems and energy waste can be resolved by making low-cost or no-cost adjustments identified by the Retro-commissioning process.

- A.3) Integrating Demand Response into the audits**  
The Partnership's plans include identifying and performing successful comprehensive energy efficiency projects with member cities and enrolling service accounts from the county and each city in demand response programs in alignment with Master Partnership Implementation Plan.
- A.4) Technical assistance for project management, training, audits, etc.**  
Each Partnership has a specific budget for each of these elements. Standard programs available include energy efficiency training, energy audits, and technical assistance in alignment with Master Partnership Implementation Plan.
- A.5) On-bill financing**  
The County and each city in the partnership have indicated a keen interest in using On-bill Financing.

### **Core Program Element B: Strategic Plan Support**

- B.1) Code Compliance Support**  
The San Joaquin Valley Partnership will explore the creation of an energy code compliance improvement program and various strategies across the partnering cities to improve compliance with building energy standards and appliance regulations. The Partnership will conduct focused energy code training targeted to the Tulare County region including workshops for municipal planning and building staff, building professionals, and contractors.
- B.2) Reach Code Support**  
The San Joaquin Valley Partnership will seek to establish meaningful reach codes as part of its effort to add value to energy efficiency in alignment with the strategies as expressed in the Master Partnership Implementation Plan.
- B.3) Guiding Document(s) Support**  
As well as establishing documentation in alignment with the strategies as expressed in the Master Partnership Implementation Plan, the San Joaquin Valley Partnership objectives will include development of Energy Action Plans and Climate Action Plans to document baseline energy use and emissions. These baselines will be used to set and achieve emission reductions and energy savings. Individual county and city plans will be used to develop a regional energy savings plan.
- B.4) Financing for the community**  
The San Joaquin Valley Partnership will develop an education and outreach program for the Partnership communities in alignment with the strategies as expressed in the Master Partnership Implementation Plan.



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**B.5) Peer to Peer Support**

The San Joaquin Valley Partnership will actively participate and support in the peer to peer program in forums for the partnering cities and through the strategies as expressed in the Master Partnership Implementation Plan.

**Core Program Element C: Core Program Coordination**

**C.1) Outreach & Education**

The Partnership will establish a comprehensive Marketing Education & Outreach (ME&O) Plan that will incorporate: educational workshops to assist the county and cities in moving forward with energy savings projects, policies, codes, and ordinances; general awareness events and exhibits to publicize the Partnership and its goals throughout the communities (including environmental fairs and expos); marketing energy efficiency programs through a variety of media channels including mailers, press releases, and quarterly e-newsletters; and provide a minimum of 12 special workshops strategically located throughout Tulare County and in the SCE AGTAC energy center.

**C.2) Residential and Small Business Direct Install**

<sup>58</sup>The Partnership will continue its support of the core program (the core program launched sweeps in Tulare County in the 06-08 cycle) by driving participation through leveraging its county and cities' chambers of commerce, bill mailing inserts, and public television access. The Partnership will also fund and execute focused multi-family and single family residential direct install activities.

**C.3) Third-party program coordination**

The Partnership will actively support third part programs through the strategies as expressed in the Master Partnership Implementation Plan.

**C.4) Retrofits for just-above LIEE-qualified customers**

The San Joaquin Valley Partnership will support this program in alignment with the strategies as expressed in the Master Partnership Implementation Plan.

**C.5) Technical assistance for program management, training, audits, etc.**

The Partnership will use allocate a portion of its direct implementation budget for this activity. In addition, the Partnership anticipates bringing technical and financial assistance from the following additional programs to its communities: SCE, SCG, & PG&E Energy Center offerings, Energy Star® Qualified Refrigerator Rebates, Refrigerator and Freezer Recycling, Electric Water Heater Rebates, and Energy Star® Qualified Lighting; Express Efficiency; Multi-family Energy Efficiency Rebate Program; Non-Residential Audits; Retro-Commissioning; Savings by Design; Standard Performance Contracts; Variable Speed Pool Pump Rebate Program.

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<sup>58</sup> This component may not be offered by SCG.

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c) Non-Incentive Services:

In addition to the strategies as expressed in the Master Partnership Implementation Plan and the ELP model, the San Joaquin Valley Partnership will include a Portfolio of partnership ME&O activities to increase community enrollment in energy programs, and other SCE, SCG, and PG&E services, resources and assets brought to support the ME&O Plan (e.g., mobile education unit; account manager support; training at the Agricultural Technology Application Center (AGTAC); speakers bureau; limited giveaways such as opportunity drawings and free CFLs; marketing, design & printing of brochures and other collateral materials; media/press/publicity support, etc.).

d) Target audience

- City and county staff, management and policymakers (elected officials).
- Residential and business customers.
- Students of the Tulare County Community Colleges
- Residents and business customers of unincorporated communities.

e) Implementation

In addition to the strategies and coordination as expressed in the Master Partnership Implementation Plan:

- The Partnership will develop a comprehensive portfolio of ME&O activities and is proceeding to schedule near-term activities and events. These include advertising in regional and local newspapers, cable TV and newspaper interviews about energy efficiency opportunities, and work shops as well as community exhibits most with an attendance of 1,500-3,000 people.
- The Partnership programs strategies include an integrated approach to energy consumption and reduction, increasing awareness of energy efficiency, demand response, Low-Income Energy Efficiency, California Alternative Rates for Energy Program, Self-Generation Incentive Program, and California’s Solar Initiative.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

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**Table 4**

Program/Element	Market Transformation Planning Estimates		
	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

The county and cities that form the San Joaquin Valley Partnership will have barriers consistent with and will employ those strategies as expressed in the Master Partnership Implementation Plan to overcome them.

d) Quantitative Program Objectives

**Table 5**

Program/Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #1 Government Facilities (kWh reduction)	540,000	1,782,000	2,700,000
Target #2 Community Direct Install (kWh reduction)	360,000	1,188,000	1,800,000
Target #3 Education and training- Number of workshops	8	12	16
Target # 4 Education and training – Peer to Peer Forums for reach code actions	4	6	8
Target #5 Strategic Planning Activities- Number of Ordinances, policies, etc. *	5	7	9
Target #6 Community Outreach- Number of events (including	12	24	36

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sweeps)		
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**6) Other Program Element Attributes**

**a. Best Practices**

As well as those strategies as expressed in the Master Partnership Implementation Plan, the San Joaquin Valley Partnership will embody the following best practices:

- Develop Partnership specific education programs to identify, develop and capture energy efficiency opportunities within the region communities.

**b. Innovation**

The Partnership will collaborate with its municipal participants, including school districts and special districts, to develop strategies to implement integrated and comprehensive projects that will encompass energy efficiency, demand response, and renewable elements.

The Partnership will also hold 12 training work shops and 36 exhibits over the course of the 36 months of the 09-11 cycle at community events to demonstrate: energy efficiency activities and practices, energy code training to target the needs of partnering county and cities, promote whole-building performance to get better space conditioning, coordinate emerging “green” or sustainability standards, and promote programs that promote sustainability including California New Homes Program; Home Energy Efficiency Program, Appliance Recycling Program, Benchmarking and Performance Tracking, and On-Line Buyer’s Guide and Business and Consumer Electronics Program.

**c. Interagency Coordination**

The San Joaquin Valley Partnership through its local government and consulting network will encourage coordination with Agencies and Initiatives as noted within the Master Partnership Implementation Plan as well as with the participating IOUs, SCE, SCG, and PG&E.

**d. Integrated/coordinated Demand Side Management:**

The San Joaquin Valley Partnership program plans include identifying and enrolling service accounts from the county and each city in demand response programs in alignment with the Master Implementation Plan.

**e. Integration across resource types (energy, water, air quality, etc)**

The Partnership promotes comprehensive sustainability, including water conservation, solid waste management, and alternative mobility.

**f. Pilots**

No pilots are planned through this Partnership.

**g. EM&V**

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the

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context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6**

<p><b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24’s requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.</p>	<p>The Partnership will evaluate adopting them on a voluntary but rewarded basis, including excess Title 24 performance in the fee-waiver program or adopting the new California “Green Building Code” on a voluntary basis through 2010, making it mandatory in 2011, if a sustained funding source is provided to support the activities.</p>
<p><b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.</p>	<p>Each local agency of the Partnership, through the Partnership will evaluate and adopt expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments as feasible.</p>
<p><b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.</p>	<p>The Partnership will evaluate and adopt as appropriate, a point of sale energy disclosure, provided a sustained funding source is provided to support the activities and dependant upon availability of standardized energy star benchmarked data (per recent legislation) on each meter at the point of sale.</p>
<p><b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.</p>	<p>The local agencies of the Partnership will explore pursuing the adoption of an AB 811 financing mechanism for its jurisdiction in alignment with the strategies as expressed in the Master Partnership Implementation Plan.</p>
<p><b>1-5:</b> Develop broad education program and peer-to-peer support to local governments to adopt and implement model reach codes</p>	<p>Within the Partnership and through other Partnerships, the local agencies of the Partnership, and the SJVCEO, will participate in 8 comprehensive peer to peer educational &amp; outreach forums on a quarterly basis that emphasize specific actions to take to help achieve the local agencies’ reach code goals.</p>
<p><b>1-6:</b> Link emission reductions from “reach” codes and programs to ARB’s AB 32</p>	<p>Each local agency of the Partnership will evaluate and adopt, through the</p>

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program	Partnership, the nexus of energy DSM programs and the larger AB 32/SB 375 compliance requirements will be integrated as appropriate, provided a sustained funding source is provided to support the activities.
<b>2-2:</b> Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	The Partnership will support each agency in developing and implementing Training & Education programs to achieve additional T-24 compliance, provided a sustained funding source is provided to support the activities.
<b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	Each local agency of the Partnership will evaluate and adopt as appropriate, policies regarding energy components of the professional licensing of local inspectors and contractors hired.
<b>3-1:</b> Adopt specific goals for efficiency of local government buildings	The Partnership goal is to achieve the ELP model silver target level in the aggregated local agency municipal facilities resulting in at least a 5% savings over the 2003 energy use baseline during the 2009-2011 Partnership.
<b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Each local agency of the Partnership will evaluate and adopt as appropriate, commissioning, performance measurement, and verification as a core part of their energy action plan.
<b>3-4:</b> Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	Each local agency of the Partnership will evaluate and adopt as appropriate, creation of a line item in their budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.
<b>3-5:</b> Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	n/a
<b>4-1:</b> LGs commit to clean energy/climate change leadership.	Each local agency of the Partnership will evaluate and adopt as appropriate, a Strategic Energy Plan that includes long and short term energy & sustainability objectives in line with the adopted California Long Term Energy Efficiency Strategic Plan.
<b>4-2:</b> Use local governments' general plan energy and other elements to promote	Each local agency of the Partnership will evaluate and adopt as appropriate,

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energy efficiency, sustainability and climate change.	development of aggressive sustainability goals into their General Plan Updates that include emphasizing sustainability through green building design & technologies, reduction of GHG emissions, increased use of renewable energy, and conservation of existing sources of energy.
<b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use	The Partnership will influence wastewater, storm water and potable water capital projects, with SCE, SCG, and PG&E to ensure that they are as energy efficient as possible.
<b>4-5:</b> Develop EE-related “carrots” and “sticks” using local zoning and development authority	Each local agency of the Partnership will evaluate, develop, and adopt as required, zoning and development authority changes to comply with AB32/SB375.

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### 1) Program Name and Program ID number

Program Name: Orange County Cities Partnership  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 19<sup>59</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 20

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>59</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.



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These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

- a) List of program elements:  
Program elements are described below.
  
- b) Overview:

#### **Core Program Element A - Government Facilities**

##### **A.1. Retrofit of county and municipal facilities**

The four cities in the Orange County Partnership are developing detailed lists of facilities that will be retrofitted during the three-year program. Many of these facilities and their respective energy savings have been identified and quantified. Other buildings have been audited by the CEC, and the Partnership is awaiting the CEC's reports.

Municipal facilities energy efficiency is a big component of Huntington Beach's local government partnership. It will consist of numerous projects in 2 phases. Phase 1 consists of Monitoring Based Commissioning of the 2 largest municipal facilities in the City and IT energy saving retrofits such as server virtualization, network energy management software and HVAC retrofits of server rooms. Phase 2 energy projects will consist of lighting system redesign & retrofits, HVAC retrofits, Pumping retrofits, boiler retrofits, domestic hot water, and building envelope improvements.

##### **A.2. Retro-commissioning (of buildings and clusters of buildings)**

The cities are including this means of achieving significant energy savings in their plans. See A.1 above.

##### **A.3. Integrating Demand Response into the audits**

SCG will help promote participation in demand response programs. Each city plans to increase its participation in demand response accordingly. Integrated EE/DR audits will be conducted in eligible facilities.

##### **A.4. Technical Assistance for project management, training, audits, etc. -**

Each partnership has a specific budget for each of these activities.

##### **A.5) .On-Bill Financing**

Each city in the partnership has indicated a keen interest in using On-bill financing (OBF). The extent of participation in OBF will be limited only by the according to OBF guidelines approved by the CPUC.

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#### Core Program Element B - Strategic Plan Support

##### **B.1 Code Compliance Support**

The Partnership will support the individual cities as they examine ways to increase compliance with existing codes. Each partner is aware that this is an area where increased enforcement can result in substantial energy savings and greenhouse gas emissions. The partnership will provide training, technical assistance and additional support from SCE's, and SCG's Codes and Standards program to help build capacity in local government to address code compliance issues.

##### **B.2). Reach Code**

The cities in this Partnership are also interested in establishing meaningful reach codes as part of its effort secure long term energy savings and greenhouse gas emissions in support of the CLTEESP. The Partners will consider what other cities have done and will benefit from process, templates and other best practices. See Table 6 for more details.

##### **B.3). Guiding Document(s) Support**

At least one of the cities offers information at the city's building permit office on best practices and energy efficiency opportunities through the utility's programs. Significant enhancements to this practice are planned for the 2009 – 2011 program cycle. The Partnership intends to make available training, documents and templates to help cities develop their climate and energy action plans, especially as it relates to utility energy elements .

##### **B.5) Financing for the community**

The Partners are aware of the opportunities for financing provided by AB 811 and will be examining its possibilities. The Partnership will provide AB811 presentation and technical assistance through the Peer-to-peer support network.

##### **B.5) Peer to Peer Support**

IOUs intend to develop an effective means by which each city participating in partnerships, past and present, can readily share information with others. Conference calls including all Partnerships as well as conferences will be conducted on a routine basis.

#### Core Program Element C - Core Program Coordination

##### **C.1) . Outreach and Education**

The partnership has a portion of its budget specifically allocated to outreach and education to demonstrate local government leadership and to provide the community with opportunities to provide energy actions and reduce the community's environmental footprint. ME&O activities will consist of staff training, Huntington Beach Green Corp citizen & Environmental Board training, SCE's Mobile Education Unit at the Annual Green Expo, Stipends for HB Green Corp home and business energy & green audits & onsite retrofits, Support for Huntington Beach's annual environmental awards, publishing of Huntington Beach's case studies and strategic sustainability and energy plans and potentially implementing an AB 811 financing mechanism for citizens of Huntington Beach.

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**C.2) Residential and Small Business Direct Install**

There are no activities planned for direct install in homes and business at this time. However, outreach will be done in the communication to create awareness of energy services and programs as mentioned in C.1.

**C.3.) Third-party program coordination**

The Partnership will execute community events appropriate for a third party contractor to execute, such as light exchange events.

**C.4) Retrofits for just-above LIEE qualified customers**

Only coordination activities contemplated.

**C.5 Technical Assistance for program management, training, audits, etc.**

a specific portion of the partnership budget is allocated specifically for this activity. See Table 6 for more details.

c) Non-Incentive Services:

- Train Huntington Beach Green Corps of citizen volunteers to provide energy efficiency audits for residential, small commercial and low-income citizens of Huntington Beach, provide stipends to offset background checks and expenses.
- Study & consider voluntary “reach” green codes, similar to the HB Goes Green Residential Scorecard that is currently in a pilot project mode.
- Support for the annual Environmental Award
- Publishing case studies and sustainability and energy/climate plans with support from available programs and funding sources.
- Strategic plan support. The city of Costa Mesa would like to extend its existing green building permit waiver program.

d) Target audience

- All Municipal Facilities: City Halls, Civic Center, Police Departments, Libraries, Social Services, Community Centers, Sports Fields, Medical Facilities, Parks, and water infrastructure.
- Additionally, citizens and businesses and city staff are the target audience for partner cities.

e) Implementation

The program will be cost-effectively implemented with customized incentives for the retro-commissioning and retrofitting of partner cities’ municipal facilities based on SCG enhanced incentives for LGPs.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

Table 3

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

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Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

Program/Element	Market Transformation Planning Estimates		
	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers

In this Partnership, the barriers and strategies to overcome them are the traditional resource barriers of expertise and funding as outlined in the Master PIP.

d) Quantitative Program Objectives:

**Table 5**

Target	Program Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
1	kWh	2,500,000	3,500,000	
2	Number of Workshops	TBD	TBD	TBD
3	Number of Ordinances, Codes, etc.	TBD	TBD	TBD
4	# of ME&O Events conducted that target Residential customers	TBD	TBD	TBD

**6) Other Program Element Attributes**

a) Best Practices

Same as outlined in the Master PIP.

b) Innovation

Demonstrate environmental stewardship and community leadership in support of the CLTEESP by developing a municipal sustainability dashboard to simplify sustainability reporting including energy efficiency and renewable energy.

c) Interagency Coordination

Huntington Beach is a PIER program partner and is planning on installing Bi-level area lights and Enforma diagnostic software. Huntington Beach has a materials recovery

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facility in its jurisdiction, and will be partnering to develop a RESCO grant proposal for the CEC utilizing indigenous renewable energy resources in Huntington Beach. The partnership will provide technical assistance and other support through the Codes and Standards program and its relationship with PIER as well as facilitate support from other programs and organizations through its network of consultants, engaged for this purpose.

d) Integrated/coordinated Demand Side Management:

Orange County cities will pursue necessary & cost-effective DSM as identified in the SCE's Energy Leader Master PIP and have identified at least 5 accounts that are eligible for participation in Demand Response programs. The partnerships will facilitate the provision of technical support for renewable energy-related activities being planned by the City of Huntington Beach and other cities wishing to pursue similar opportunities. Huntington Beach will apply for a RESCO grant from the CEC and Federal government to utilize indigenous renewable energies. .

e) Integration across resource types (energy, water, air quality, etc)

Part of the Phase 2 energy projects identified earlier will include smart irrigation controllers for the irrigation accounts that use significant amounts of water. .

f) Pilots

PIER program Bi-level LED area lighting and Enforma diagnostic software in the City of Huntington Beach is currently

- New city buildings, Chamber of Commerce and Police Building, will be LEED Certified in Costa Mesa.

g) EM&V

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues

**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6**

<p><b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.</p>	<p>. . Costa Mesa will adopt the new</p>
<p><b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green</p>	<p>Costa Mesa will consider expedited permitting based upon reduced valuation in 2009.</p>

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buildings and other above-code developments.	
<b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.	
<b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.	Huntington Beach will investigate the adoption of an AB 811 financing mechanism for its jurisdiction
<b>1-5:</b> Develop broad education program and peer-to-peer support to local gov't's to adopt and implement model reach codes	.
<b>1-6:</b> Link emission reductions from "reach" codes and programs to ARB's AB 32 program	
<b>2-2:</b> Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	
<b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	Huntington Beach already has two energy service companies pre-qualified and they are energy literate and conscious firms. Additionally, Costa Mesa has a service agreement with a certified energy company that is also energy literate
<b>3-1:</b> Adopt specific goals for efficiency of local government buildings, including:	Huntington Beach will be publishing an environmentally preferred purchasing policy and publishing energy/climate plans as part of the 2009-2011 Partnership with SCE. Additionally, Costa Mesa is also interested in publishing an energy action plan in partnership.
<b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Phase 1 energy projects are retro-commissioning the two largest municipal facilities with significant near term energy savings. The City of Costa Mesa has a high interest in retro-commissioning all its current municipal facilities to maximize both energy savings and performance.
<b>3-4:</b> Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	Huntington Beach has devoted a portion of its annual capital improvement plan to energy efficiency and the savings accrue to the general fund. However, part of the energy/climate action plan will track the fiscal impacts (savings) created by the plan.
<b>3-5:</b> Develop innovation Incubator that	

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competitively selects initiatives for inclusion in LG pilot projects.	
<b>4-1:</b> LGs commit to clean energy/climate change leadership.	Both the City of Costa Mesa and Huntington Beach have located appropriate sites for large scale solar installations and both cities are exploring current funding mechanisms. Huntington Beach is also applying for grants to study ocean & urban wind power and will meet 2020 AB 32 goals before 2015. HB has signed the US Mayors Climate Protection Agreement. <a href="http://www.usmayors.org/climateprotection/">http://www.usmayors.org/climateprotection/</a>
<b>4-2:</b> Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.	Huntington Beach has deferred investment in general plan updates to include energy/climate concerns
<b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use	Phase 2 energy projects will include water efficiency projects, including aerators and ET irrigation controllers. Additionally, as wastewater, stormwater and potable water capital projects are pursued this partnership with SCE, and SCG will ensure that they are as energy efficient as possible.
<b>4-5:</b> Develop EE-related "carrots" and "sticks" using local zoning and development authority	Huntington Beach is studying zoning and development authority changes to comply with AB32/SB375. Specifically we are updating the Beach/Edinger Corridor plans and the Downtown Specific plan to create accessible and walkable neighborhoods that enhance Huntington Beach.

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### 1) Program Name and Program ID number

Program Name: ICLEI – Local Governments for Sustainability, U.S.A., Inc. (ICLEI), the Institute for Local Government (ILG) and the Local Government Commission (LGC )

Program ID Number: TBD

### 2) Projected Program Budget Table

**Table 21**<sup>60</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

**Table 22**

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>60</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.



## 2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 4) Program Element Description and Implementation Plan

a) List of program elements:

The program elements are described below.

b) Overview:

SCG is offering assistance to help local governments reduce their carbon footprint through increased energy efficiency. This offering will primarily be delivered through the non-profit organizations, ICLEI – Local Governments for Sustainability, U.S.A., Inc. (ICLEI), the Institute for Local Government (ILG) and the Local Government Commission (LGC). This collaborative effort is structured to leverage the unique resources, assets, relationships, communications channels, programs, training, models and tools brought by each non-profit organization to support the CEESP. This is a statewide local government strategic element support effort among the four investor-owned utilities.

ICLEI will help local government (LG) participants in SCG’s service territory understand the linkages between energy efficiency and greenhouse gas (GHG) reduction/AB32 compliance. ICLEI will deliver in-person and online trainings to facilitate LG understanding of requirements under AB32, learn about principles and methodologies for conducting GHG inventories and setting GHG reduction targets, as well as developing and implementing climate action plans (CAPs). ICLEI will also provide access to templates and tools that detail the components of GHG inventories and CAPs and provide training on mitigation strategies for reducing GHG emissions in both local government operations and community-scale activities and facilities.

The LGC will conduct conferences, workshops and webinars, building upon ICLEI’s deliverables linking energy actions with GHG reduction to provide information about energy efficiency, demand response and renewable energy (EE/DR/RE), AB32 implementation, CEESP and other timely and important energy and climate policies, rules, regulations and legislation. These venues will increase opportunities for LGs to network and share information and experiences about best practices and lessons learned.

To encourage LGs to implement the best practices recommended by ICLEI and the LGC, the ILG will conduct a statewide local government recognition program for LGs that achieve their energy and climate goals. Within SCG’s service area, Silver, Gold and Platinum awards levels will be linked to the incentive and achievement levels established.

#### Element A- Government Facilities:

Master PIP sub elements partnership addresses

A-1	Retro-fit of County and Municipal Buildings	No
A-2	Retro-commissioning	No
A-3	Integrating Demand Response	No
A-4	Technical Assistance	Yes
A-5	On-Bill Financing or CEC Loans	Yes

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This partnership will support element A in the following ways:

- By providing another channel for disseminating information about the key characteristics of successful Government Facilities energy programs, including information about high potential EE/DR/RE technologies, measures and approaches.
- By providing information about on-bill financing, CEC’s California Energy Efficiency Financing Program (CEEFP) low interest loans, strategies for establishing self-replenishing revolving funds for energy projects, and other types of relevant information about financing municipal facilities retrofits.
- By quantifying the GHG reductions that will be achieved through their Government Facilities energy retrofit plans so that this information can be effectively communicated to department heads, elected officials, lenders and community leaders whose support is needed to approve these plans.

### Element B- Strategic Plan Support:

Master PIP sub elements partnership addresses

B-1	Code Compliance	No
B-2	Reach Code Support	No
B-3	Guiding Document Support	No
B-4	Financing for the Community	No
B-5	Peer to Peer Support	Yes

The 3 non-profit organizations will combine their respective membership bases and infrastructure to bring broad peer networks for sharing information, models and tools. They will also coordinate their respective resource libraries and databases and compile comprehensive resources related to best practices, tools and techniques that will be accessible by all local governments statewide.

ICLEI will focus on providing local governments tools and resources needed to develop their GHG inventories and climate action plans. ICLEI will offer trainings for LGPs that explain the methodology for computing the GHG impacts of their Government Facilities energy projects. ICLEI will also provide information about its GHG Inventory and Climate Action Planning Tools, and how these could be used to more effectively communicate the energy and GHG benefits of their Government Facilities energy portfolio to decision-makers that need to approve the capital expenditures. In addition, ICLEI will train participants on how to develop Climate Action Plans (CAPs) that include GHG reduction strategies that reflect best environmental responsibility policies, plans, programs and practices.

The LGC will supplement the GHG-specific information provided by ICLEI with additional information about California’s energy and climate policies and programs, and conduct conferences, webinars and other types of education and outreach venues for peer networking and sharing of best practices among LGs that are implementing similar types of Government Facilities projects. Information about financing strategies and options will be included. The ILG will then recognize the achievements of LG participants as they progress along the achievement scale. ILG will leverage its extensive network with California local governments as

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the non-profit research affiliate of the League of California Cities and the California State Association of Counties to reach all city and county officials with its California Climate Action Network (CCAN) program. Through CCAN, ILG will create and manage an awards and recognition program for local governments that achieve specified levels of energy efficiency and GHG reductions.

**Element C- Core Program Coordination:**

Master PIP sub elements partnership addresses

C-1	Outreach and Education	Yes
C-2	Third Party Program Coordination	No
C-3	Technical Assistance	Yes

The partnership supports core program coordination by providing another channel for disseminating information about community energy programs and opportunities, and for coordinating those outreach and education activities. Through the Core Program Coordination element, LGPs coordinate with SCG to support EE programs across the SCG portfolio with respect to outreach, education, third party programs, and technical assistance. LGPs will also have the opportunity to help bring EE to moderate income customers slightly above the LIEE guideline or to customers who are unable to produce the necessary LIEE documentation. The program element will support Element C by helping LGs integrate climate action/GHG reduction messages into the LGP/LGs’ community education and outreach efforts.

c) Non-Incentive Services:

This is a non-resource government partnership program. All of the services delivered are non-incentive.

d) Target audience:

California cities and counties, LG staff and management, including facilities managers, budget and finance staff, department heads, elected officials, lenders, and community leaders whose support is needed to approve LG facilities retrofits and the LG Controller, Treasurer, financial advisors and others who assist the City in developing its financial plans.

State agencies & policymakers that are depending on local governments to help achieve California’s aggressive energy and climate action goals.

A wide variety of stakeholders that are needed to support local government efforts to “lead by example” in energy efficiency, demand response, renewable energy, climate action.

e) Implementation:

The focus is to provide education, outreach and general strategic planning assistance to participants ultimately driving local governments to greater utilization of utility energy efficiency programs as an integral component toward meeting their GHG implementation goals. Services include but are not limited to:

- Providing information through webinars, training, and peer support network groups about GHG inventories, the recently adopted Local Government Operations Protocol (LGOP), GHG reduction targets, climate action plans and potential GHG mitigation and adaptation strategies [ICLEI]

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- Providing local governments access to tools and templates to compute their GHG emissions and that of their communities, and evaluate the GHG reduction impacts of various proposed policies, plans, codes & ordinances [ICLEI]
- Conducting conferences, workshops, webinars, peer support network groups, and other types of venues for knowledge sharing, peer support, training and education about best policies, practices, etc. [LGC]
- Develop and manage an awards and recognition program that recognizes local governments that achieve targeted levels of energy efficiency, with special recognition of local governments that adopt reach policies, goals and codes. [ILG]

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

**Table 3**

	<b>Baseline Metric</b>		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

	<b>Market Transformation Planning Estimates</b>		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

Lack of resources - both funds and knowledgeable staff with sufficient time - remain the two most significant barriers to achieving government energy efficiency and GHG reduction. This program brings in 3 non-profits that have information, tools and peer networks that can help LGs collaborate on how to overcome these barriers.

LGs are committed to help California achieve its aggressive energy and climate goals. Presently, however, many California's LGs are not clear about the immediate direction they are to take in addressing the multitude of policy priorities options – what they are, how they fit together, which needs to be done first, what is voluntary vs. mandatory, etc.

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To overcome the staffing and knowledge gap that prevents many LGs from moving forward easily, the partnership will provide targeted information and training that helps clarify the maze of new and emerging policies, rules, regulation and legislation and LGs’ role in implementing these so that LGs can take decisive action, thereby supporting the goals of the CEESP.

Primary Barriers	Strategies to Overcome Barriers
<p>Many local governments do not have sufficient staff resources to stay abreast of all the current issues (e.g., new policies, rules &amp; regulations; AB32 &amp; Title 24 compliance; most current and “best” policies, practices, programs, etc. for EE/DR/RE, climate action/GHG reductions, water efficiency, etc.).</p> <p>Many local governments also do not have staff that are knowledgeable in energy, climate &amp; other sustainability issues and options.</p> <p>Many local governments are confused about the different types of carbon policies, programs, goals (especially mandatory vs. voluntary), and protocols.</p>	<p>Establish Baseline Understanding. The 3 non-profit organizations will collaborate in compiling a comprehensive repository of information for local governments about best-in-class energy, climate &amp; other sustainability policies, programs, codes, ordinances, standards, practices, etc. This database will build upon the existing resources of each of organizations and integrate new information from many other sources, including local government partners and other programs &amp; stakeholders. These resources will help shortcut the amount of time needed by LGs to get their arms quickly around these types of issues and events, and also to understand what is deemed the body of “best practices”, so that they can understand what needs to be done.</p> <p>Provide Regular Updates. California leads the nation in energy, climate and other environmental sustainability goals and initiatives. Each is progressing along its own track and few are fully integrated or coordinated with other initiatives. As a result, it is very difficult for any one person or organization to stay abreast of all of these issues. The need to understand this information is burdensome to LGs who have barely enough staff and funds to cover their current mission-critical responsibilities. The partnership will deliver a comprehensive portfolio of education and training through conferences, workshops, webinars, etc. that help LGs stay current on evolving policies, rules, regulation &amp; legislation so that they can free up staff time to address other essential priorities.</p> <p>Provide Access to Continuous Peer Support. As California’s LGs struggle to keep up with all of these activities, they find it very helpful to network, learn, grow and share data, information and experiences with other LGs that are facing the same challenges. The partnership will facilitate access to a wide variety of peer-to-peer</p>

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Primary Barriers	Strategies to Overcome Barriers
	networks so that LGs can participate in the topics that are of greatest interest, need and priority to them and identify other LGs that can share in the development and implementation of policies, programs, strategies, etc.

d) Quantitative Program Objectives:

**Table 5**

Program	Program Target by 2009	Program Target by 2010	Program Target by 2011
Workshop/Conferences			
Statewide Conference	N/A	1	1
Regional LG Networking Meeting	N/A	3	3
Energy/GHG Topics Regional Workshops	N/A	3	3
Recognition Program			
Launch	N/A	X	
Recognition Events		Min. 1/yr	Min. 1/yr
Tools			
CAP Guidebook	N/A	X	Ongoing
Energy Programs database	N/A	X	Ongoing
Best Practices database	N/A	X	Ongoing
GHG reduction decision support tool	N/A	N/A	X
Direct LG Training			
Small group topical meetings/Webinars (e.g., GHG emissions inventories-LGOP, target setting, CAP development and implementation, Staffing, Financing, Recognition program, EE, CEESP)	N/A	6	6
Coordination with regional entities (COGs, non-profit LG orgs, related agencies)	Ongoing	Ongoing	Ongoing
Outreach			
Email communications, Newsletters, Web sites, presentations, leveraging opportunities, etc	Ongoing	Ongoing	Ongoing

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**6) Other Program Element Attributes**

a) Best Practices:

Type of Best Practice	Best Practice	ELPP Application(s)
Planning	Build feedback loops into <del>program design and logic.</del> Maintain the flexibility to rebalance portfolio initiatives, as needed, to achieve the portfolio's goals and objectives.	The portfolio of activities to be developed and managed by the 3 nonprofit organizations will be reviewed a minimum of quarterly throughout the program period.
Staffing	Clearly define portfolio implementation responsibilities and clarify roles to minimize confusion.	The roles of the 3 nonprofit organizations have been clearly defined.
Integration	Leverage relationships from complementary organizations such as utilities, trade allies, and industry specialists.	The partnership is structured to leverage all resources, assets and relationships of the three non-profit partners, as well as SCG, local governments, and other organizations that also have information about local government best policies, practices, tools, techniques, etc. for reducing energy and GHGs.
Reporting & Tracking	Clearly articulate the data requirements for measuring portfolio and program success.	Monthly coordination meetings coupled with quarterly portfolio reviews and adjustments.
	Design tracking systems to support the requirements of all major users: program administrators, managers, contractors and evaluators.	

b) Innovation:

These 3 nonprofit organizations all work now with LGs. Through the partnership they will combine and leverage their joint resources, assets, relationships, communications channels to increase the robustness of the information, tools and services that they can bring to California's local governments. It makes sense that they should bring their respective members into a common forum for sharing information, tools and techniques with all California local governments. This close collaboration is expected to improve both effectiveness and cost-effectiveness of their education and outreach activities.

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c) Interagency Coordination:

The full scope of this program is the broader umbrella of “sustainability” initiatives, and thus includes a wide variety of environmental sustainability strategies and initiatives by other state and local agencies. Coordination will be required with all of these agencies to assure that California local governments understand their roles in implementing these goals. The types of agencies with which coordination will be needed include but are not limited to: California Air Resources Board (CARB); California Climate Action Registry (CCAR); California Department of Conservation’s “Emerald Cities” and “Innovative Recycling” Programs; California Integrated Waste Management Board (CIWMB); California Strategic Growth Council; California Department of Housing & Community Development (HCD); California Energy Commission (CEC); California Department of Water Resources (DWR); Governor’s Office of Planning & Research (OPR); State Water Resources Control Board (SWRCB); U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE); U.S. Environmental Protection Agency’s ENERGY STAR & WaterSense Programs.

d) Integrated/coordinated Demand Side Management:

This Partnership is designed primarily to provide strategic planning support for local governments and will include EE, DR and RE.

e) Integration across resource types:

Consistent with the CEESP, this program will include energy (EE, DR & RE) in combination with GHG reduction. Although not a direct goal of the partnership, the process of computing GHG inventories as well as developing and implementing CAPs will also benefit other sustainability initiatives such as water efficiency, waste management, transportation management, smart planning and growth.

f) Pilots:

No pilots are planned through this program, although it is possible that explorations of reach policies, goals, codes, ordinances, etc. could be developed into pilot programs.

g) EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.



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**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

Table 6

CEESP Strategies for Local Government Sector	Program Activities that Support CEESP Strategies
1-1: Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.	Provide venues for delivering training by SCG.
1-2: Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.	Compile information from multiple organizations and disseminate through workshops, webinars & on-line resources Encourage including in Energy and Climate Action Plans Provide training, tools and templates for estimating and reducing emissions impacts from various policies, codes, standards & ordinances
1-3: Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.	
1-4: Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.	
1-5: Develop broad education program and peer-to-peer support to local gov't's to adopt and implement model reach codes	
1-6: Link emission reductions from "reach" codes and programs to ARB's AB 32 program	
2-2: Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	Provide venues for delivering training by SCG
2-3: Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	Recommend that local governments adopt & implement
3-1: Adopt specific goals for efficiency of local government buildings:	Help establish goals for municipal EE and compute the GHG benefits of EE projects & plans Help elected officials draft resolutions & adopt EE goals Link energy efficiency progress to Recognition program Encourage local governments to include these goals in their Climate Action Plans
3-2: Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Encourage local governments to adopt

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CEESP Strategies for Local Government Sector	Program Activities that Support CEESP Strategies
3-4: Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	Provide information about successful “revolving fund” strategies deployed by other LGs & how they overcame implementation barriers
3-5: Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	Provide information about participation opportunities
4-1: LGs commit to clean energy/climate change leadership.	Compile information from multiple organizations and disseminate through workshops, webinars & on-line resources Encourage including in Climate Action Plans
4-2: Use local governments’ general plan energy and other elements to promote energy efficiency, sustainability and climate change.	
4-4: Develop local projects that integrate EE/DSM/water/wastewater end use	Provide coordination with water & wastewater agencies, CEC, others
4-5: Develop EE-related “carrots” and “sticks” using local zoning and development authority	Develop curriculum & educational materials Conduct training

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### 1) Program Name and Program ID number

Program Name: Community Energy Partnership (CEP)  
Program ID Number: TBD

### 2) Projected Program Budget Table

Table 22<sup>61</sup>

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### 3) Projected Program Gross Impacts Table

Table 23

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>61</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

#### a) List of program elements:

The core program elements are similar to those identified in the Master Program Implementation Plan: Government Facilities, Strategic Plan Activities and Core Program Coordination.

#### b) Overview

The CEP's 2009-2011 program builds upon the CEP's successful, award-winning model originated in 1992 by enhancing the leadership role of cities in energy management. Over the past 16 years, the CEP has evolved from the Irvine Energy Efficiency Initiative to a ten cities program that defines a true partnership between local governments and utilities focused on achieving energy savings and behavioral change in residential, non-residential and the municipal sectors.

This approach pursued will allow the CEP to be flexible in the customization of solutions to overcome challenges and exploit opportunities faced by local governments. In doing so, local governments will be able to develop individualized action plans for achieving both local and statewide goals and targets. Through this framework, the CEP program supports local governments who are willing to commit and sustain the appropriate level of participation and resources to effectively initiate programs that address the main issue areas for local government action that are identified in the CLTEESP.

The Community Energy Partnership consists of nine cities lead by The Energy Coalition based in Irvine. The cities currently include: Brea Corona, Hermosa Beach, Irvine, Moreno Valley, San Bernardino, Santa Clara and Santa Monica.

### **Core Program Element A - Government Facilities**

This area likely has the greatest potential to deliver energy savings during the next three-year program cycle. Every local government that participates in the CEP program will achieve specified energy savings and greenhouse gas reductions from the facilities and infrastructure that it manages through technology retrofits, operational improvements and policy changes. Participating local governments will take advantage of Partnership incentives for municipal facilities and, wherever possible, of eligible rebate, incentive and technical assistance programs offered by their serving utilities.

#### **A.1) Retrofit of county and municipal facilities**

CEP will provide opportunities for our Partner Cities to "lead by doing" by identifying opportunities for local governments to participate in comprehensive retrofits of municipal facilities and leveraging incentives that are offered through Southern California Edison (SCE) and Southern California Gas Company's (SCG) core programs. Enhanced incentives for increased levels of commitment to achieve energy savings are an integral

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part of this program. Whole facility approaches will be accorded top priority.

CEP will support city planning efforts throughout this process by:

- Identifying energy efficiency municipal facility retrofit projects. A preliminary list of municipal retrofits has already been identified. Based on early estimates, CEP anticipates completing up to 30 buildings or approximately 600,000 square feet. Retrofits to municipal facilities will consist primarily of lighting (60%) and HVAC (20%) change outs. The balance of 20% of energy saving retrofits will be spread among various measures that will be identified through audits to be conducted through technical assistance provided by SCE and SCG.
- Targeting special districts for additional energy efficiency facility retrofit projects. Special districts may include water districts, school districts, county facilities, libraries, community centers and senior centers.
- Providing workforce education and training to city personnel to provide for long-term energy efficiency maintenance and upgrades
- Enrolling municipal facilities into existing utility programs
- Coordinating advanced engineering audits to identify further opportunities for savings
- Enrolling qualifying municipal facilities in our Partner Cities in ENERGY STAR's Benchmarking Portfolio Manager program

### **A.2) RetroCommissioning (of buildings or clusters of buildings)**

CEP will identify the potential for energy-savings opportunities through the Retro-Commissioning (RCx) of municipal facilities within CEP's Partner Cities. While further study is needed, CEP anticipates completing RCx in up to 15 buildings. CEP will encourage any facility receiving enhanced technical assistance to also pursue RCx and apply for utility incentives in order to optimize building performance and reduce energy costs.

CEP will also assist in providing training and education to city employees on the benefits of RCx during any major retrofits of existing governmental buildings.

### **A.3) Integrating Demand Response into the audits**

The CEP will provide integrated audits that are a combination of energy efficiency and demand response (DR) where applicable. SCE's tiered incentive program requires cities to implement DR in order to move up to a higher incentive level. CEP will encourage Partner Cities who are receiving energy efficiency audits for municipal facilities and implementing energy efficiency recommendations to participate in at least the basic level of demand response. This integration of DR and EE will

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encourage Partner Cities to exploit synergies and maximize potential energy savings.

### **A.4) Technical Assistance for project management, training, audits, etc.**

CEP will assist city government officials and staff in understanding, managing, and reducing their energy use and costs, and position Partner Cities as regional leaders in energy management practice. Assistance will be offered to designers, building inspectors, building engineers, employees and building occupants, and will include design assistance, plan review, Title 24 training, the audit process, technology review and building awareness. This assistance will be delivered by government or industry representatives, IOU Technical Staff, consultants or another qualified source.

CEP program understands the need to build local energy efficiency expertise. A key role of CEP program in the new cycle will be the development of local government energy efficiency expertise. Faced with resource constraints, local governments lack adequate resources to proactively act or respond to energy efficiency opportunities in their buildings or in community buildings. To that end, CEP program will work with local governments to identify any resource constraints, and partner with utilities to find viable and cost effective solutions to ensure that the required level of expertise is achieved in the following ways:

- Develop in-house capabilities (energy manager position) devoted to achieving all cost-effective energy efficiency for local government facilities and stimulating similar actions in the community
- Continue to build the capacity/expertise of a designated Team Leader to be able to address and respond to energy efficiency opportunities within the city
- Educate employees through city staff workshops/information sessions.

### **A.5) On-bill financing**

Through the utilities' on-bill financing, the CEP will encourage Partner Cities to take advantage of this opportunity for municipal facilities that install energy-efficient equipment or strategies. Financing and installation of equipment will be considered for partial or full extended repayment in the amount up to that offered through the applicable core program and will be included as a component line item of the monthly utility bill for repayment to the IOU.

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## **Core Program Element B - Strategic Plan Support**

The CEP program in 2009-11 will seek to fully integrate the available menu of demand-side resources by heavily relying on marketing, education and outreach to cities and their communities on the energy services at their disposal. In addition, through workforce training, the CEP will seek to promote sustainability of energy services to ultimately realize the energy efficiency transformation goals of the state.

More specifically, the CEP will use the following strategies in support of the California Long Term Energy Efficiency Strategic Plan (CLTEESP):

### **B.1) Code compliance support**

The CLTEESP concludes that significant attention must be focused on enforcing and strengthening local on-the-ground compliance with energy codes and standards. CEP program will support local government code compliance efforts as a key element to obtaining full savings from California's building and appliance energy code standards. Consistent and effective compliance, enforcement, and verification by local governments are essential parts of the overall effort. An emphasis will be placed on multi-jurisdictional efforts which can be promoted through CEP partner cities in order to take advantage of economies of scale that can be realized, particularly for outreach and training efforts. CEP will work with SCE, SCG and other organizations to assist city building officials to gain a better understanding of new and existing energy codes.

### **B.2) Reach code support**

The relevant codes and standards that will be addressed by CEP program are primarily those related to residential and commercial buildings, both new and existing. The CLTEESP calls for the coordination of local government building codes and development policies, requirements to be mandated by local governments when a significant renovation occurs or when a property is sold, and the development of model local government programs that exceed minimum State code requirements.

Through the CEP program, local governments will commit to begin engaging in a good faith effort to develop "reach" codes and standards. They will also commit to coordinating with neighboring jurisdictions, professional and industry associations and others in the development and implementation of the reach codes.

### **B-3) Guiding document(s) support**

The CLTEESP calls for local governments to lead their communities with innovative programs for energy efficiency, sustainability, and climate change. CEP will serve as a catalyst to help facilitate local government energy leadership and adoption of an Action Plan that will move their community forward. Participating local governments will leverage their

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existing programs, interactions, and relationships in support of community-focused energy efficiency, demand response and greenhouse gas reduction programs with particular focus on socio-economically diverse populations. These activities will entail close collaboration with the serving utilities in educating and informing citizens about opportunities for participation in utility sponsored programs.

### **B-4) Financing for the community**

A key barrier for local governments as well as private property owners in undertaking energy efficiency and greenhouse gas reduction projects is the difficulty in obtaining up-front financing to cover the project costs. The CLTEESP recognizes the need for new and innovative financing solutions to accelerate investments in energy efficiency and clean energy technologies for both residential and commercial properties. The CEP program will work closely with its participants to foster a larger local government role in the development and implementation of innovative financing tools. This will be achieved by embracing approaches with local governments such as:

- AB 811
- Assessment district loans
- Third party financing (PPAs).

The CEP will also coordinate with Southern California Edison (SCE) and Southern California Gas (SCG) to initiate and offer on-bill financing for both municipal and community facilities choosing to install high efficiency equipment or strategies. Financing and installation of equipment will be considered for partial or full extended repayment in the amount up to that offered through the applicable core program and included as a component line item of the monthly utility bill.

In addition, CEP will support partner cities in the exploration of tax-exempt equipment lease financing, clean renewable energy bonds (“CREBs”), and other innovative financing approaches. The CEP will also serve as a clearinghouse to disseminate information to our Partner Cities on federal energy efficiency community block development grants which will likely be allocated to municipalities on a per capita basis. Many of these financing options require lead time for the local government decision making and public input processes to occur. Best efforts will be made to measure and track resulting energy savings and greenhouse gas reductions over the next three years but it is likely that the bulk of the positive impact will occur over a longer period of time.

### **B.5) Peer-to-peer support**

Through its peer-to-peer strategy, the CEP supports the goals of the CLTEESP by providing a support network through which Team Leaders from Partner Cities can have access to information, exchange information, and attend training workshops, all in an effort to increase in-house EE



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knowledge base levels to enable them to better serve their residents and businesses. Peer-to-peer support has been the cornerstone of the CEP program's ability to effectively stimulate the sharing of ideas and best practices among partner cities. This effort will be continued as follows in 2009-11:

Energy Champions within each Partner City serve as spokespersons and role models to encourage participation in CEP and showcase results. Energy Champions, who may be identified at the City Council level or other position of significance within the City. Many CEP cities have already identified Energy Champions,...

Team Leaders manage the programmatic aspects of planning and implementing CEP's initiatives within their city. CEP Partner Cities have already identified and in most cases have already developed an institutional knowledge of CEP through their Team Leaders who have built a long term working relationship with CEP, in most cases for as much as two funding cycles. All CEP Team Leaders help to accomplish CEP goals by providing insight on city-specific needs and access to city resources.

### Partner-to-Partner Dialogue

CEP Team Leaders have the unique advantage of providing one another with peer-to-peer leadership that would not normally exist without CEP. Through CEP, Partner Cities are able to leverage the experience and expertise of fellow peer cities to increase awareness and participation levels and positively influence their own local government. Through regular Team Leaders Meetings, Team Leaders are able to engage in peer-to-peer dialogue, support each other with local policy and code advancement, and share best practices and technical knowledge.

### Partnership-to-Partnership Dialogue

The CEP will also connect to new Partnerships, and local governments participating in other cutting-edge IOU Partnership programs across the state as well as statewide programs such as ICLEI and ILG. The CEP will leverage opportunities for sharing and advancing city leadership through mentorship and sharing of best practices and models with Hermosa Beach who has joined the regional South Bay Partnership, Palm Desert of the new Palm Desert Partnership, and Cathedral City of the new Desert Cities Partnership.

## **Core Program Element C - Core Program Coordination**

CEP has been developed in response to the need to integrate statewide energy and greenhouse goals into effective local action. CEP objective is to develop effective partnerships between local governments and utilities that support the development of long-term, sustainable energy and greenhouse gas reduction programs in

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support of the California Energy Action Plan and California Global Warming Solutions Act (AB 32). CEP supports the key areas of the CLTEESP that helps local governments define individualized energy reduction goals and Action Plans through very practical, flexible and straightforward steps.

### **C.1) Outreach & Education**

In order to reach a broad spectrum of residents and businesses within a given community, CEP will continue its award-winning work within each city to create a customized, city-specific plan that uses the best practices and a socio-ecological approach that combines efforts at the individual, organizational and community levels. CEP will utilize existing resources offered by the city or utility for an efficient and effective campaign. Energy efficiency will be framed within the context of climate change and the city's goals to reduce greenhouse gas emissions as outlined in AB 32.

CEP will provide marketing and outreach, education and training and community sweeps to connect the community with opportunities to take action to save energy, money and the environment and increase the viability of small businesses. In addition, the program will act as a clearinghouse for all energy offerings, delivering information on demand response, self-generation and low income programs, California Alternative Rate for Energy (CARE) and the California Solar Initiative (CSI).

### **C-2) Residential and small business Direct Install**

No activity planned in 2009-2011 program cycle besides the promotion of existing utility core programs.

### **C-3) Third-party program coordination**

CEP will coordinate with third party programs and associations in order to realize the benefits of being part of a broad professional network, such as resource sharing and establishment of best practices. CEP intends to involve interested special districts (i.e. water, fire and school districts) and to coordinate with local building and trade professionals and organizations and other green business and sustainability organizations to develop an integrated, comprehensive message. See Master PIP regarding activities that provide access to energy offerings.

### **C-4) Retrofits for just-above LIEE-qualified customers**

CEP will promote retrofits as an integrated approach to energy consumption and reduction, increasing awareness of energy efficiency and demand response for qualified Low-Income Energy Efficiency (LIEE) customers. Coordinating with the Multi-family Energy Efficiency Program will provide energy efficiency retrofits for just-above low income customers. This implementation of demand side management (DSM) strategies will also be coordinated with the LIEE Program and will support progress towards local and statewide sustainability goals.

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**C.5) Technical assistance/Workforce Education & Training for program management, training, audits, etc.**

CEP will assist our Partner City staff, residents and businesses in understanding, managing, and reducing their energy use and costs, and position Partner Cities as regional leaders in energy management practice by providing comprehensive technical, planning, marketing and implementation assistance.

CEP will use utility resources to support Partner Cities' capacity for smart energy management. This includes encouraging and enlisting city staff to leverage utility resources.

c) Non-Incentive Services:

The CEP will provide numerous non-incentive services which include:

- Municipal Energy Action support
- Peer-to-Peer Leadership
- Energy Efficiency Trainings
- Marketing, Education and Outreach
- Information, Education and Funneling or core and third-party programs
- Energy Champion Recognition

d) Target Audience

See Master PIP. CEP will also target special districts in partnering cities, for example water districts, and school districts.

e) Implementation

**Cost Effectiveness**

Program cost efficiency will be captured throughout our Partner Cities by maximizing replicable program elements, leveraging resources and staff support from each partner as defined in our participation model, and implementing initiatives that create demonstrated permanent and persistent energy savings.

As an evolving Partnership, the CEP has built a solid infrastructure, established partner trust, and gained invaluable knowledge and experience, all of which will result in a seamless and cost-efficient 2009-2011 implementation. This includes tried and tested implementation strategies, extensive resource databases and tracking mechanisms, approved marketing and outreach materials, planning templates, contractor and engineering relationships as well as other resources that can be carried over.

Implementation processes are discussed in the Master PIP in the respective core program elements.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

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**Table 3**

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

b) Market Transformation Information

**Table 4**

	Market Transformation Planning Estimates		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

Economy. The principal barrier we anticipate which could result in reduced participation is the state of the economy both at the state and local level. With commercial and residential development at an all time low and with major companies and builders facing massive layoffs, it is going to become increasingly difficult to convince decision makers that investing in energy efficiency is the prudent thing for them to do. While they understand that saving energy translates directly to their bottom line, additional costs incurred can mean laying-off additional personnel to fund the project.

The CEP will utilize strategies to include cost/benefit analysis for all suggested or identified projects to show long-term benefits and pay-back. The CEP will encourage Partner Cities to find viable and cost effective solutions such as taking advantage of on-bill financing, and identifying other sources of funding such as CEC funding and federal funding. The CEP will also encourage Partner Cities to leverage the enhanced utility incentive structure being offered to local governments participating in SCE's partnerships program.

Lack of Access to Financing/Resources. The CEP will work with local governments to access on-bill financing, explain the benefits of AB 811 and encourage other community financing options to ease the adoption of energy efficiency in communities. The CEP will also continue to provide Partner Cities with the benefit of project management support from utility and industry experts as well as The Energy Coalition, and funnel Partner Cities to resources offered at no cost by the utilities' core programs, such as energy audits, technical assistance and workforce education training programs.

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End User Attitudes Towards Energy Efficiency. Over the course of the past funding cycle, the CEP observed a gradual acceptance of new energy efficient technology and utility programs. However, complete market transformation has not yet been achieved in our Partner Cities. As a trusted entity, the CEP will continue to build upon our history of effective marketing and outreach strategies and established relationships with local governments and key community stakeholders to achieve behavioral modifications that will ultimately lead to a positive change in end user attitudes.

Cost of Obtaining and Processing Information. Local governments are often overwhelmed on a day-to-day basis with obtaining and processing disparate information from different channels on an individual basis. The CEP has identified and continues to address this barrier through our existing peer-to-peer support network of Team Leaders from each Partner City. Through this vehicle, the CEP is able to provide a forum for CEP Team Leaders to facilitate the sharing of best practices and information processing strategies.

### d) Quantitative Program Objectives:

**Table 5**

Target	Program Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
1	Kw, kWh			
2	Number of Workshops	10	20	30
3	Number of Ordinances, Codes, etc.	?		
4	# of ME&O Events conducted that target Residential customers	25	50	75

## 6) Other Program Element Attributes

### a. Best Practices

Primary Barriers/Program Challenges	Program Best Practices
Insufficient technical & financial resources	<b>One-stop Shopping</b> - Provides comprehensive bundle of technical, economic, marketing and implementation assistance
First cost of EE investments	<b>Financing</b> - On-bill financing, other low interest energy loans, possible establishment of self-replenishing energy efficiency/savings funds, AB 811
Incomplete implementation (due to adoption of aggressive policies & goals without a sound implementation & financing plan)	<b>Course Corrections</b> - Mechanism for constant tracking, monitoring and review of program results vs. challenges, allowing sufficient time for course corrections
Insufficient motivation	<b>Comprehensive Benefits</b> – Combines measure incentives with funding support for ME&O activities that are very important to local governments. Also, ascending to the leadership role is a natural and appropriate role for governmental entities.
Lost opportunities	<b>Comprehensive Strategies</b> – Comprehensive whole portfolio, building & facility approaches minimize lost EE and DR opportunities by municipal facilities, while the companion ME&O strategy leverages the participating local governments' efforts to encourage residents & business to also become energy efficient.

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### **b. Innovation**

The CEP's unique combination of Partner Cities strengthens the ability to test strategies and share best practices across every corner of SCE and SCG's service territory. They were selected for their leadership potential, and geographic distinction. This range of diversity allows for program versatility and the opportunity to explore implementation across multiple factors, including:

- Population size
- Climate zones, from coastal to desert cities (6, 8-10, 15)
- Socio-economic backgrounds
- Languages and cultures
- Age of infrastructure
- Level of local government energy efficiency experience and knowledge

In past funding cycles, the CEP has been able to successfully develop regional marketing strategies that addressed these differences while also branding the Partner Cities as a group. In 2009-11, the CEP intends to leverage this existing foundation and enthusiasm of our Partner Cities by positioning them as regional leaders. Many of our Partner Cities are entering their third Partnership term with SCE and SCG, and will serve as mentors for neighboring cities in order to create additional energy savings and future local government leaders.

### **c. Interagency Coordination**

The CEP has a history of successful collaboration with other agencies in order to achieve its energy efficiency goals through creative cross-marketing. For example, the CEP has partnered with local water agencies such as City of San Bernardino Water Department to market our program through a bill insert to their entire customer base. For the past four years, the CEP has actively participated on the organizing committee of the City of Corona's Department of Water and Power annual Splash Festival, an event through which the CEP demonstrated the direct correlation between water conservation and energy savings to city residents. In addition, for the past two funding cycles, the CEP has established relationships with nearly 100 schools to date throughout our Partner Cities through our implementation of the 25-year-old PEAK program, a 4<sup>th</sup>-6<sup>th</sup> grade science curriculum designed to empower youth to become smart energy managers in their homes, schools and communities.

The CEP plans on continuing this collaborative effort and expanding our coordination both with local agencies such as the Santa Clarita Water District and Metropolitan Water District, as well as statewide agencies, such as ARB and CEC. The CEP also plans on continuing to enhance our marketing efforts by leveraging the materials produced by Flex Your Power, Department of Energy and ENERGY STAR.

### **d. Integrated/Coordinated Demand Side Management**

The integration of demand side resources is critical to realizing the State's long-term energy goals and objectives. The CEP strives to minimize lost opportunities that accrue from the disparate delivery of energy services. As a core implementation strategy, the CEP adopts an integrated approach that leverages the synergies and economies of scale

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that exist from the complementary implementation of both energy efficiency and demand response resources, along with promoting awareness and increasing knowledge of LIEE, renewables, and self-generation. In doing so, the CEP supports the IOU strategic approach in the delivery of energy services to its end-users as well as the CLTEESP.

The CEP program in 2009-11 will seek to fully integrate the entire menu of demand-side resources through our marketing, education and outreach services to cities and their communities on the energy services at their disposal. Our goal is to work with cities to directly engage high EE potential local residents and businesses to inform them about EE opportunities, their costs and benefits, and SCE's technical assistance, incentives and funding assistance that can help them take actions.

The CEP has built a solid foundation within the partner cities for the integration of energy efficiency and demand response services. The CEP's goal is to increase customer participation by utilizing an integrated energy efficiency and demand response approach to increasing energy savings, awareness, and customer participation in the utility portfolio of programs. This is achieved by leveraging the existing and successful outreach and service delivery methods currently employed by the CEP and the use of a coordinated marketing approach

### **e. Integration across resource types (energy, water, air quality, etc.)**

A key focus of the CEP will be assisting our local government partners in identifying and exploiting cost-effective opportunities for integration with other resource areas including water, solid waste and air quality around climate action/AB32. The CEP will develop joint marketing and promotion initiatives with water and sewer districts, solid waste management agencies, regional air quality districts, and other relevant resource management entities. These initiatives will include but will not be limited to coordinated customer financial incentives for program participation, one-stop shopping for program information and applications, joint measurement and evaluation methodologies for calculation of greenhouse gas reductions, and development of a collaborative public information campaign that will link all of the desired customer actions within each of the various resource areas into one unified marketing message. This approach will increase the cumulative cost-effectiveness and customer participation of the previously fragmented programs. The socio-economic and geographical diversity of the CEP cities will also prove invaluable in testing and perfecting the most effective peer-to-peer collaborative approaches. Support for these activities will be coordinated with the SCE consultants, SCE core programs and experts selected to support the Partners. Funding for activities not eligible for partnership funding will be secured by partnering cities from applicable sources.

### **f. Pilots**

Two pilot program opportunities will be pursued in conjunction with the CEP implementation plan.

Green Schools Initiative

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The first pilot project will be a Green Schools Initiative in collaboration with the Irvine Unified School District. The Green Schools Initiative will consist of three components:

- 1) Reduction in the carbon footprint of the District through a combination of energy efficiency retrofits, comprehensive greenhouse gas reduction policies and installation of solar electric and solar thermal rooftop systems. Funding for non-PGC funded activities will be secured from other sources.
- 2) Development of an enhanced environmental curriculum to strengthen classroom instruction in the areas of environmental sustainability with a particular emphasis on energy efficiency and greenhouse gas reductions. Once again, CEP will coordinate with other programs, partners and resources to secure funding for activities not eligible for partnership program funds.
- 3) Expansion of the role of the School District and its students as catalysts for change in the community through outreach and creation of robust partnerships with the City of Irvine, community organizations and other stakeholders. The overall goals of this pilot IUSD green schools program will be a 15% reduction in District energy, installation of up to 1MW of rooftop solar electric systems, and installation of significant solar thermal rooftop systems.

### Irvine GHG Emissions Tracking Tool

The second pilot project will be the dissemination and transference of a comprehensive greenhouse gas emissions tracking and measurement tool being developed by the City of Irvine that incorporates a geographic Information system (GIS) interface. This tool will allow cities within the CEP as well as cities throughout the State to carefully assess current and future energy consumption patterns, as well as assist with future utility system planning for energy service demands from new developments and opportunities for energy use reduction programs and policies. This City of Irvine GIS Energy and Greenhouse Gas Emissions Protocol will be a cost-effective and easily adaptable tool for all California cities. This will be pursued in concert with any program or offerings to provide this type of support to Partners, for example, ICLEI. Other funding sources will be identified for activities not eligible for partnership program funds.

### **g. EM&V**

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.



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**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6**

<b>California Energy Efficiency Strategic Plan (CEESP) Strategy</b>	<b>CEP's Approach to Achieving CEESP Goal</b>
1-1: Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.	<p>CEP will investigate development of a Municipal Forum (Forum) consisting of partner representatives for the purpose of establishing common goals for the region. The Forum will address strategies for affecting codes, standards and incentives; review best practices for exceeding current Title 24 standards; and provide expert consultation to assist cities with their own planning and implementation.</p> <p>The CEP will leverage the beyond Title 24 reach codes that have already been developed and adopted in the City of Santa Monica by actively promoting and achieving adoption of similar reach codes by at least half of the other CEP cities.</p>
1-2: Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.	<p>Some of the CEP partner cities have already implemented expedited permitting and other incentives for green building projects. The CEP will expand these approaches for joint adoption by other CEP partners.</p> <p>Also, please see discussion under 1-1 above.</p>
1-3: Develop, adopt and implement model point-of-sale and other point-of-transactions relying on building ratings.	<p>The CEP will provide technical support and coordinate the joint development and adoption of model multi-jurisdiction point of sale and point of permit requirements related to increased energy efficiency in CEP partner cities.</p>
1-4: Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.	<p>Using the lessons learned from participation in the implementation of Palm Desert's AB 811 program, the CEP will assist in the adoption of AB 811 programs in at least half of the CEP partner cities along with adoption of other appropriate innovative EE financing approaches.</p>
1-5: Develop broad education program and peer-to-peer support to local governments to adopt and implement model reach codes.	<p>See response to item 1-1 above. The CEP will enlist the leadership cities within the partnership as mentors for development and adoption of reach codes in the other CEP cities.</p> <p>Also, please see discussion under 1-1 above.</p>
1-6: Link emission reductions from "reach" codes and programs to ARB's AB32 program.	<p>CEP will conduct training of City managers, policymakers, business owners, community leaders and others to explain their respective roles in implementing AB 32 and the important role of energy efficiency in achieving these aggressive greenhouse gas reduction targets.</p> <p>Each CEP partner city that has not already done so will develop and adopt an Energy and Climate Action Plan that will link policy and program actions being taken within their community to specific AB 32 goals and targets.</p>
2-2: Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	<p>Through leveraging of expertise and resources within the CEP partnership (outreach, training, technical assistance, etc.) multi-jurisdictional efforts will be implemented to increase the rate of Title 24 compliance .</p> <p>Also, please see discussion under 1-1 above.</p>
2-3: Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	<p>Also, please see discussion under 1-1 above.</p>
3-1: Adopt specific goals for efficiency of local new and existing government buildings	<p>CEP partner cities will commit up to a 10% reduction in energy use within qualifying municipal buildings as well as work to adopt a LEED requirement for new government buildings.</p>
3-2: Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	<p>The CEP will assist in a joint analysis and development of joint recommendations by the partner cities into the feasibility of commissioning requirements for new buildings and retro-commissioning requirements for existing buildings, as applicable.</p>
3-3: Improve access to financing to support LG EE/DSM, such as lowering interest rate of Energy Commission's loan fund, and utility on-bill financing.	<p>As discussed under 4.b) above, partners in CEP are very interested in on-bill financing and low interest energy efficiency loans.</p>

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<b>California Energy Efficiency Strategic Plan (CEESP) Strategy</b>	<b>CEP's Approach to Achieving CEESP Goal</b>
3-4: Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	The CEP will assist in a joint analysis and development of joint recommendations by the partner cities into the feasibility of modified budgeting approaches to allow EE cost savings to be returned to the department and/or projects that generate the savings.
3-5: Develop innovation incubator that competitively selects initiatives for inclusion in LG pilot projects.	The CEP has emphasized creativity by our Partners to develop innovative local governments pilots, such as the Palm Desert Demonstration Project, Green Schools Initiative, Benchmarking, etc.
4-1: LGs commit to clean energy/climate change leadership.	Each CEP partner that has not already done so will develop and adopt an Energy and Climate Change Action Plan. Each CEP partner city will commit to supporting a community-focused effort related to energy efficiency, demand response and greenhouse gas reduction programs with particular emphasis on socio-economically diverse populations.
4-2: Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.	<p>CEP envisions facilitating a peer-to-peer effort that allows each governmental entity to leverage the knowledge and experience of the others and take a more integrated approach to overall energy savings and greenhouse gas reduction through its Municipal Forum (see discussion under 1-1 above).</p> <p>The CEP will draw upon the experiences from the partner cities to identify generic modifications to General Plan elements that promote community sustainability. Recent General Plan re-drafting experiences in Santa Monica and Irvine will be very useful in this effort.</p>
4-4: Develop local projects that integrate EE/DSM/water/wastewater end use.	The CEP will assist in the identification and preliminary concept development of integrated resource projects within the partner cities.
4-5: Develop EE-related "carrots" and "sticks" using local zoning and development authority.	The CEP will help compile and disseminate examples of energy efficiency related requirements and incentives within local zoning and land-use planning codes/policies for joint consideration by the partner cities. One code innovation example that will be shared is a local solar access ordinance that has been developed by the City of Santa Monica. Model sustainable land-use policies that are being developed in some of the other partner cities to create sustainable development incentives will also be examined for potential broader applicability to the partners.

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**1) Program Name and Program ID number**

Program Name: Desert Cities Partnership  
Program ID Number: TBD

**2) Projected Program Budget Table**

**Table 24<sup>62</sup>**

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

**3) Projected Program Gross Impacts Table**

**Table 25**

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>62</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Local Government Partnerships Program Implementation Plan**

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

#### a) List of program elements:

The core program elements are similar to those identified in the Master Program Implementation Plan: Government Facilities, Strategic Plan Activities and Core Program Coordination.

#### b) Overview

The Desert Cities Partnership Program is a new local government partnership in SCE's, and SCG's partnership portfolio. The Desert Cities Energy Partnership includes the Coachella Valley Association of Governments (CVAG), Southern California Edison (SCE), and Southern California Gas Company (SCG) with cooperation from Imperial Irrigation District, a local public utility. CVAG is a local government agency, including 10 cities, Riverside County, and three tribal governments (collectively referred to as Jurisdictions) as its members. CVAG will partner with Southern California Edison (SCE), and SCG for this partnership. CVAG will coordinate education and outreach efforts, a valley-wide marketing program, as well as related administrative and reporting activities. Through its existing communication network, CVAG will provide outreach to the member jurisdictions and the larger Coachella Valley community about energy efficiency. SCE, and SCG will provide energy information, technical assistance, and assist the jurisdictions with implementation of municipal facilities retrofits and energy efficiency upgrades. The IOUs will provide resources and support, as available, for training, events, and marketing programs.

The partnership will provide comprehensive evaluation and retrofit of municipal facilities, marketing and outreach, education and training, and community activities to connect the community with opportunities to take action to save energy, money and the environment. CVAG will coordinate partnership activities with its member jurisdictions through the Energy and Environmental Resources Committee, and their Energy and Water Conservation Subcommittee. The Subcommittee meets monthly and will provide a forum for coordination of partnership activities. The Subcommittee can assist with potential projects, outreach opportunities, and possible events and training. The Subcommittee is coordinating a CVAG Energy Symposium and Energy Fair in April 2009.

A unique element of the DCELP is the opportunity to bring together other community partners in a successful regional partnership that will maximize opportunities to meet common goals. One of our utility partners, the Imperial Irrigation District (IID) serves three of our member cities -- Coachella, Indio and La Quinta -- as well as parts of Riverside County. IID has indicated their interest in cooperating with CVAG, SCE and The Gas Company to promote this regional partnership. They have already offered to provide an IID energy professional as a resource to the three cities to work on joint program promotion, evaluation of city facilities for energy efficiency, and coordination of project implementation. They have indicated the potential for cooperative efforts to accomplish economies of scale and efficient utilization of resources. They have expressed a willingness to participate with SCE and SCG to maximize the resources

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necessary to meet our energy use reduction goal. Imperial Irrigation District is an active partner in the CVAG Energy and Water Conservation Subcommittee.

In addition, CVAG has three tribal governments as member agencies – the Agua Caliente Band of Cahuilla Indians, Cabazon Band of Mission Indians, and the Torres Martinez Desert Cahuilla Indians. The tribal governments are involved with energy management plans and may have an interest in cooperating with regional efforts to promote energy efficiency. The Agua Caliente Band of Cahuilla Indians is represented on the CVAG Energy and Water Conservation Subcommittee.

CVAG's Energy and Water Conservation Subcommittee also includes representatives from local water districts, including Desert Water Agency, the Coachella Valley Water District, and Mission Springs Water District. Recognizing the critical link between water conservation and energy efficiency, CVAG is working with the water districts to integrate these efforts. Given that the management and delivery of water resources to our communities accounts for 20% of electrical demand, our energy efficiency efforts will necessarily involve coordination with water conservation programs already underway and to be developed by the water districts. Including the local water districts in this effort will further enhance the partnership.

Two cities in the Coachella Valley, Cathedral City and Palm Desert, have existing partnerships through SCE's, and SCG's community energy partnership facilitated by the energy coalition. DCEP will build on the leadership efforts of Cathedral City and Palm Desert. Coordination with their existing partnerships provides opportunities to advance a regional energy initiative, as well as information sharing and lessons learned that are beneficial for other Coachella Valley cities and their efforts to build their own energy efficiency programs.

One of the CVAG member cities is Palm Springs. Palm Springs has a strong vision for a sustainable environment and submitted a strong abstract and Program Implementation Plan (PIP) for the 2009 - 11 program cycle. Due to their geographical proximity and economies of scale, Palm Springs and the other CVAG cities have been brought into the Desert Cities Partnership (DCELP). The City of Palm Springs desires to be an environmental advocate and a leader in environmental compliance and protection. The city will strive to become a model for environmental excellence and a prevailing force in environmental protection. To accomplish these goals, the Palm Springs shall endeavor to establish policies that will incorporate environmental responsibility into its daily management of urban residential, commercial, and industrial growth, education, energy and water use, air quality, transportation, waste reduction, recycling, economic development, and open space and natural habitats.

A number of Coachella Valley cities have also adopted the U.S. Mayor's Climate Protection Agreement, including Palm Springs, Rancho Mirage, Palm Desert, and La Quinta. Portions of this agreement call for making energy conservation a priority through the retrofitting of City facilities with energy efficient lighting, the purchase of ENERGY STAR® equipment and appliances for City use, and increase pump efficiency in water and wastewater systems.

Additionally, most of the cities have approved the Coachella Valley Association of Government's (CVAG) model resolution on energy conservation and resource sustainability.

### **Core Program Element A - Government Facilities**

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## **A.1 Retrofit of county and municipal facilities**

The partnership will focus on working with jurisdictions to encourage them to lead by example to become models of energy efficiency in their municipal facilities. CVAG and SCE, and SCG will meet with each participating city to identify their municipal facilities and to establish when upgrades may have been made to those facilities. This will include an initial evaluation or audit of all municipal facilities. The CVAG member jurisdictions within IOU territory that have expressed interest include Desert Hot Springs, Cathedral City, Indian Wells, Palm Springs, Rancho Mirage and the Agua Caliente Band of Cahuilla Indians.

## **A.2 Retro-Commissioning (of buildings or clusters of buildings)**

Each city will have the opportunity to evaluate potential retro-commissioning and financing options to accomplish these projects.

## **A.3 Integrating Demand Response into the audits**

SCG will support Demand Response options offered through SCE's Energy Leader model. Each partner city planning to progress from one "level" in the Energy Leader model to another, it must include a plan to increase its participation in demand response accordingly.

## **A.4 Technical assistance for project management, training, audits, etc.**

Through the partnership, each participating city will receive technical assistance in identifying and prioritizing the portfolio of municipal energy efficiency projects that will meet its energy efficiency goals and commitments to sustainability practices.

## **A.5 On-bill financing**

Each city in the partnership has indicated a keen interest in using On-bill financing. The extent of participation in OBF will be limited only by the funding level provided to the partnerships.

## **Core Program Element B - Strategic Plan Support**

### **B.1 Code Compliance Support**

The Partnership is examining ways to increase compliance with existing codes. Each city is aware that this is an area where increased enforcement can result in substantial energy savings. However, increased enforcement has real costs associated with it and the Partners will consider how to implement improvements without increasing costs. There is no provision in the Partnership program to fund this, and it is an area where costs could rapidly grow out of control. Significant consideration will be required before a meaningful, cost responsible approach can be fully developed and implemented. See Table 6 for more details.

### **B.2 Reach Code Support**

The Partnership is also interested in establishing meaningful reach codes as part of its effort to add value to energy efficiency. The establishment and implementation of such new code requirements poses similar cost considerations to item 1 above, Code Compliance Support. The Partners will consider what other cities have done. See Table 6 for more details.

### **B.3 Guiding Document(s) Support**

CVAG and our Energy and Water Conservation Subcommittee will be developing information about best practices for energy efficiency, sustainability and related topics during 2009. This information will be available to participating jurisdictions, hopefully through a website related to the partnership. The IOUs intend to make available documents and best practices to help cities develop their energy efficiency practices.

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### **B.4 Financing for the community**

The partnership will also provide information about financing options, including on-bill financing, revolving energy efficiency funds, low interest loans, energy service company (ESCO) contracts, and other potential programs and financing instruments that can assist with the upfront costs of energy efficiency retrofits. CVAG is also working through its Energy and Water Conservation Subcommittee on potential opportunities for an AB 811 funding program that would provide a source of funds for energy efficiency upgrades for municipal, business, and residential customers.

### **B.5 Peer to Peer Support**

The Partnership intends to develop an effective means by which each city participating in partnerships, past and present, can readily share information with others. Conference calls including all Partnerships as well as conferences will be conducted on a routine basis.

## **Core Program Element C - Core Program Coordination**

### **C.1 Outreach & Education**

The partnership has a portion of its budget specifically allocated to outreach and education.  
See Master PIP

### **C.2 Residential and Small Business Direct Install**

Not a part of this partnership activity.

### **C.3 Third-party program coordination**

The Partnership will execute community events appropriate for a third party contractor to execute, such as light exchange events.

### **C.4 Retrofits for just-above LIEE-qualified customers**

See Master PIP

### **C.5 Technical assistance for program management, training, audits, etc.**

See Master PIP and Table 6.

## **5) Program Element Rationale and Expected Outcome**

### a) Quantitative Baseline and Market Transformation Information

Table 3

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

### b) Market Transformation Information

Table 4

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	<b>Market Transformation Planning Estimates</b>		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

Master PIP

d) Quantitative Program Objectives:

**Table 5**

Target	Program Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
1	Government Buildings kWh	1,000,000	1,250,000	1,500,000
2	Number of Workshops	3	3	2
3	Community kWh	1,000,000	1,500,000	1,250,000
4	# of ME&O Events	3	4	2

**6) Other Program Element Attributes**

a) Best Practices

Offer best practices information via website and other outreach, including 2009 Energy Summit.

b) Innovation

Develop municipal sustainability dashboard to simplify sustainability reporting including energy efficiency and renewable energy.

c) Interagency Coordination

Through our Energy and Water Conservation Subcommittee, we will be coordinating partnership programs with other stakeholders, including water districts, building industry, other utilities, environmental community, and members of the public.

d) Integrated/coordinated Demand Side Management:

e) Integration across resource types (energy, water, air quality, etc)

Air quality and water are key elements of our environmental sustainability programs. The partnership will facilitate integration of these efforts.

f) Pilots – Establish localized pool pump program pilot for climate zone 15.

g) EM&V – The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed



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until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6**

<p><b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24’s requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.</p>	<p>A number of the Coachella Valley cities have adopted the California Green Builder program on a voluntary basis. We plan to provide training and information to cities about Title 24 and ways to encourage more stringent energy codes on a voluntary basis, including incentives.</p>
<p><b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.</p>	<p>We will offer training and educational workshops for city planning and building department staff regarding opportunities for expedited permitting and other incentives, green building codes and energy efficient design.</p>
<p><b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.</p>	<p>We will evaluate the potential for this program in coordination with SCE, and SCG.</p>
<p><b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.</p>	<p>We are exploring potential funding sources for jurisdictions to implement AB 811 programs for energy efficiency.</p>
<p><b>1-5:</b> Develop broad education program and peer-to-peer support to local gov’ts to adopt and implement model reach codes</p>	<p>We will work with SCE, and SCG and other partners to enhance education and peer-to-peer support for local governments.</p>
<p><b>1-6:</b> Link emission reductions from “reach” codes and programs to ARB’s AB 32 program</p>	<p>We are coordinating energy efficiency programs with GHG reduction and climate action initiatives. We plan to present an AB 32 workshop for local governments in the Coachella Valley. CVAG is working with the local air quality management district to evaluate AB 32 implementation options.</p>
<p><b>2-2:</b> Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).</p>	<p>We will develop training &amp; education programs and evaluate potential for stipends for incremental staff time to assist with achieving additional T-24 compliance. This would likely require a sustained funding source to support the activities.</p>
<p><b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of</p>	

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their professional licensing (as such energy components are adopted).	
<b>3-1:</b> Adopt specific goals for efficiency of local government buildings, including:	Various opportunities for improved efficiency, including environmentally preferred purchasing policies, and incentives will be shared with the cities.
<b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	Energy efficiency upgrades and retro-commissioning of municipal facilities is a major goal of the 2009-2011 partnership.
<b>3-4:</b> Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	Explore this opportunity with cities to determine whether it could be effective.
<b>3-5:</b> Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	The Coachella Valley has significant potential for renewable energy development and energy efficiency incubators, including universities with sustainability goals.
<b>4-1:</b> LGs commit to clean energy/climate change leadership.	A goal of the Desert Cities partnership will be to integrate energy efficiency efforts with climate action leadership. Other CVAG partners in the Coachella Valley are exploring economic development opportunities for clean energy.
<b>4-2:</b> Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.	Local cities are interested in education and training opportunities to explore ways to promote energy efficiency, sustainability and greenhouse gas reduction through general plans and community planning.
<b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use	CVAG's Energy and Water Conservation Subcommittee is coordinating efforts to reduce water use, enhance water-related energy efficiency, and other water and energy saving programs. Local water districts are participants in the Subcommittee and will be included in partnership outreach.
<b>4-5:</b> Develop EE-related "carrots" and "sticks" using local zoning and development authority	The partnership will focus on incentives, education, model programs, and leadership by example.

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**1) Program Name and Program ID number**

Program Name: Ventura Country Regional Energy Alliance  
Program ID Number: TBD

**2) Projected Program Budget Table**

**Table 26<sup>63</sup>**

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

**3) Projected Program Gross Impacts Table**

**Table 27**

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>63</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

### **4) Program Element Description and Implementation Plan**

#### a) List of program elements:

The core program elements are similar to those identified in the Master Program Implementation plan: Government facilities, Strategic Plan Activities and Core Program Coordination.

#### b) Overview

The Ventura County Regional Energy Alliance (VCREA) consists of nine Cities and one County. The Cities of Camarillo, Fillmore, Moorpark, Ojai, Port Hueneme, Santa Paula, Thousand Oaks, and Ventura along with Ventura County are members of the Alliance. The Alliance implements its program of comprehensive energy savings organized through a single energy office for public agencies and non-profit service providers.

VCREA Board of Directors is composed of elected officials from various public agencies and provides the policy and leadership for the program. The Board 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. VCREA is not a mandated public agency, but rather an outcome of collaboration among regional leaders concerned specifically with energy issues.

VCREA provides a local government face that remains consistent to promote greater coordination and integration of efforts that leverage energy efficiency to self generation, demand reduction, green building, recycling, cogeneration, conversion energy and other new approaches to building a network of reliable resources and sustainable implementation practices.

The Board has placed emphasis on project retrofit implementation, leveraging ratepayer and taxpayer funds to maximize return on investment. As the local partner and based on past experiences, VCREA developed an innovative regional process and program methodology which generated significant energy savings and demand reduction, in prior cycles and will continue in the 2009-2011 IOU funding cycle.

### **Core Program Element A - Government Facilities**

#### **A.1 Retrofit of county and municipal facilities**

The Alliance members will assist municipal facilities in each community in finding and implementing measures that save energy. Comprehensive Energy Efficiency (EE), and where applicable, Demand Response (DR) audits will be conducted to identify the potential for installing energy-efficient measures. These measures include lighting, and sensors, HVAC systems, variable frequency drives (VFD) and motors, boiler and small measures such as vending misers, exit signs, and hot water system technology that reduce demand on 24/7 energy consumption. Energy savings are expected to be 75% lighting, 15% VFD and 10% HVAC measures.

#### **A.2 RetroCommissioning (of buildings or clusters of buildings)**

Each member of the Partnership is currently evaluating its existing building stock to determine which facilities could be targets for RetroCommissioning (RCx). To date, no

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projects have been selected, however, a number of facilities are expected to be candidates. More detailed analysis is needed to determine the potential impact from this measure.

### **A.3 Integrating Demand Response into the audits**

The Partnership members will evaluate each project and determine if detailed EE audit could yield energy savings and further determine if DR could potentially benefit the customer. The Partners will support energy planning, and policy integration among building officials, contractors, architects, managers and public officials to advance energy efficiency and support demand reduction., and advance sustainable energy improvements where most cost effective.

### **A.4 Technical assistance for project management training, audits, etc.**

The Partners will offer training, technical seminars and briefings to building inspectors, plan checkers and building officials for Title 24 code compliance. Sessions will be conducted in a manner similar to that provided at IOU centers (i.e., CTAC and ERC) but located in the region. Additional workshops will be offered to elected officials with guidelines on how to meet and exceed minimum building standards. Technical support is readily available for project identification, bid document development, contractor recruitment, project management, enhanced incentives, financing options and savings verification.

### **A.5 On-bill financing**

VCREA members will promote SCE and SCG on-bill financing for facilities that install energy-efficient equipment. .

## **Core Program Element B - Strategic Plan Support**

### **B.1 Code compliance support**

More individual project support will be provided to organizations that promote the understanding of energy efficiency as an essential “first step” in building design, and facility operations. By further example, practical briefings and seminars will be presented to facilitate code compliance and understanding energy efficiency as having the ability to provide reasonable “return on investments”.

### **B.2 Reach code support**

Emphasis will be placed on supporting higher code compliance and building the local green workforce through the expansion of locally available high quality trainings. More individual project support will be provided to organizations that promote the understanding of energy efficiency as an essential “first step” in building design, and facility operations.

Further practical briefings and seminars will be presented to facilitate understanding of energy efficiency Reach Codes as the ability of energy efficiency to yield lower operating costs.

### **B.3 Guiding document(s) support**

Sample documents will be available. Supporting documents will include State and local building codes, Standards documentation, Title 24 Compliance Forms, sample building ordinances, resolutions that address energy efficiency, training and technical manuals, energy use calculations and other sustainability materials. All of the above will be

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available to building professionals and municipal personnel along with guidance toward use of Best Practices. Partners will coordinate with consultants secured by SCE to provide support in the preparation of guiding documents and templates, especially as it relates to utility energy elements.

### **B.4 Financing the community**

In addition to conducting facility audits the Alliance will support the planning necessary for agencies to fund and implement the energy measures identified. Financing energy efficiency in an extraordinary economic period that coincides with the 2009-2011 funding cycle through enhanced public sector incentives, rebates, loans, and tax credits; developing innovative approaches with non-profits to ensure EE and DR projects are funded and given the value and recognition associated with charitable/donor funded projects.

### **B.5 Peer-to-peer support**

The Alliance seeks to keep member Partners “in the loop” and share knowledge and Best Practices amongst themselves and with other Partnerships, through expanded marketing efforts, greater use of email and web-based information. Much of this information is already available from the IOUs and other support groups. The Partnership website ([www.vcenergy.org](http://www.vcenergy.org)) is regularly updated and managed to connect local training efforts to those of the utilities. By facilitating peer discussions, professional networks, broadening local and regional communication the message of energy efficiency and sustainability will be supported.

## **Core Program Element C - Core Program Coordination**

### **C.1 Outreach and education**

The Alliance will provide energy efficiency information by maintaining a clearinghouse for relevant policy, commission proceedings and practices that support energy efficiency. They will provide technical support to identify candidate buildings and facilities eligible for retrofits, support product application, enhanced incentives levels and energy measurement and savings verification services.

The members will support community educational efforts in such activities as earth day events, career days, home tours and demonstrations with the intent to show energy efficiency as the cornerstone and “first step” to improving the built community and showing the way to the higher standards for new construction and new purchases. They will operate the Ventura County Energy Resource Center providing technical support, trainings and information services in support of California Long Term Energy Efficiency Strategic Plan (CLTEESP) and IOU energy savings goals. See Master PIP for other outreach efforts described in the Energy Leader Program Model

### **C.2 Residential and small business Direct Install**

VCREA does not have any plans to conduct Direct Install initiatives for this Partnership.

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**C.3 Third-party program coordination**

VCREA will work with local third party contractors who provide services that are not directed to the public sector; but, rather are focused on individual customers or groups of customers, including low income customers. See Master PIP.

**C.4 Retrofits for just above LIFE-qualified customers**

VCREA will work with low-income and non-profit housing developers to integrate energy efficiency for just above LIFE-qualified customers. SCE’s The Multi-Family Energy Efficiency Program will be leveraged as appropriate.

**C.5 Technical assistance for program management, training, audits etc.**

In addition to the Partnership offering to local governments, The Partnership will facilitate training, technical seminars and briefings to building inspectors, plan checkers and elected officials for Title 24 code compliance and other energy and sustainability offerings. . VCERA will provide practical support and consultants throughout the region. They will also provide self-audit tools, assistance for residential customers, technical, planning, and implementation assistance. Marketing materials supporting energy efficiency will be made available in strategic locations such as city halls and libraries.

c) Non-incentive Services

See Master PIP

d) Target Audience

See Master PIP. VCREA will also target special districts and non profit organizations.

e) Implementation

The Ventura Partnership will support the implementation of the Energy Leader Model as identified in the Master PIP for each of the core program elements.

**5) Program Element Rationale and Expected Outcome**

a) Quantitative Baseline and Market Transformation Information

Table 3

	Baseline Metric		
	Metric A	Metric B	Metric C
Program/Element			

Refer to the overarching PIP section

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b) Market Transformation Information

**Table 4**

	<b>Market Transformation Planning Estimates</b>		
Program/Element	2009	2010	2011
Metric A			
Metric B			
Metric C			
Etc.			

Refer to the overarching PIP section

c) Program Design to Overcome Barriers:

Public agencies are the implementers of numerous public sector mandates. While energy efficiency is important, it is not a mandate; therefore, the ability of this partnership to advance energy efficiency by reducing barriers to participation is both cost effective to the public and a wise investment of ratepayers funds precisely directed to retrofits of public buildings, processing plants, health facilities and clinics all in support of public good, safety and welfare. The ratepayers are the taxpayers who benefit from installations of new efficiencies that are in part funded with ratepayer funds for technical support and incentives that result in verifiable energy savings. Public sector partners are capable partners with the IOUs to implement demand reduction in times of emergency and peak demands. Local governments need longer lead time for planning and implementation of any project, need designated incentives and must abide by contract and labor rules that are not typical to the balance of the commercial sector customers. The Partnership provides the vehicle to achieve savings that would otherwise be limited or lost.

Recognition that retrofitting the huge inventory of existing public buildings is key to achieving energy independence and building a local green economy that can generate jobs and support the CTEESP. Public sector buildings and facilities are essential to health and safety, security, education, and civil society. Retrofit projects include specific replicable measures that spread among hundreds of installations/applications in facilities that operate everyday (24/7) and provide a backbone to private sector, commercial and business applications that may further power the shared political and physical environment.

d) Quantitative Program Objectives:

**Table 28**

Program Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #1 Technical Trainings/Briefings	kWh	kwh	kWh
Target #2 Public Agency Retrofit Projects	14	28	28



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Program Element	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #3 Community Event Participation/Info/Edu	Monthly	Monthly	Monthly
Target #4 Public Policy Outreach Codes, ordinances, etc.	Monthly	Monthly	Monthly

**6) Other Program Element Attributes**

**a) Best practices:**

VCREA will promote Best Practices by building economies of scale through the Regional Energy Office, bundling retrofits to public sector and non-profits, offering enhanced incentives and reduced paperwork managed through the Partnership and jump-starting the “green economy” by coupling ratepayer and taxpayer funds to achieve measurable savings.

**b) Innovation: Describe any unique or innovative aspects of program element not previously discussed.**

**LED Exit Sign Initiative** was created as an innovative marketing and outreach approach to result in real savings. LED exit signs are directed to facility operators for installation at their own (“sweat equity”) expense. VCREA proposes to expand this program to both public and non-profit commercial customers within Ventura County, by marketing this program through organizations such as the local Chambers of Commerce, as well as other professional and service groups that request energy efficiency briefings. The LED exit sign is a “calling card” measure that will yield direct savings when tied to the Partnership’s marketing/information activities.

**Public Swimming Pool Initiative** is proposed with the goal of improving the efficiency of the many large public swimming pools within Ventura County and encourages efficient use of natural gas. These pools are operated by cities, school districts, park and recreation districts, and non-profit organizations that all share the same utility partners. The program will emphasize the installation of pool covers and high-efficiency replacement heating boilers and controls to optimize the operation of the boiler. Participants will be directed into the appropriate Express Efficiency rebate as well as be considered as candidates for on-bill financing, CEC loan program and other forms of finance.

**c) Interagency Coordination:**

The Partners will collaborate with local governments, cities, county agencies, school districts, water districts, housing authorities, etc.) to advance energy efficiency, retrofit projects that lead to energy and demand reduction, carbon reduction and green house gas reductions, and support growing trends to couple efficiencies and economies to maximize sustainability. VCREA will focus interagency coordination at the local/regional level, working with the Ventura County Air Pollution Control District (ARB). VCREA has begun regular communication with CEC to participate in possible PIER and other opportunities as they arise and will coordinate with SCE’s Codes and Standards Program.

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**d) Integrated/coordinated Demand Side Management:**

VCREA will work with local third party contractors who provide services that are not directed to the public sector; but, rather are focused on individual customers or groups of low income customers. See Master PIP.

**e) Integration across resource types (energy, water, air quality, etc):**

VCREA is working with low-income and non-profit housing developers to integrate energy efficiency in new design. VCREA also works regularly with the largest industry in the county, which includes the farm/agriculture industry; work is jointly undertaken with public sector offices such as planning departments and water agencies to link mandates with energy efficiency rebates (i.e. carrot/stick approach).

**f) Pilots:**

**Mobile Water/Energy Lab Initiative** – The community is very interested in conserving all or its resources. VCREA is working together with the utilities and municipal water agencies to fund and implement a mobile water/energy lab. The goal of this pilot program is to develop an awareness of the strategies and technologies which can result in gas, electric and water savings. This lab will be a showcase for conservation and can be featured at schools, fairs, conventions, seminars and trade shows to name a few. Funding will be secured from other sources for activities not eligible for partnership funding.

**Hot Water Efficiency Initiative** is a new and significant marketing, outreach and training program that will be directed toward homeowners, property managers, contractors and design professionals. The goal of this pilot program is to develop an awareness of the strategies and technologies which can result in significant reductions in water heating and builds on evolving efforts to connect energy and water efficiency as part of sustainable practices. Ongoing training sessions will focus on the benefits and challenges of the various strategies, and will include product samples, displays - including the Mobile Water/Energy Lab, installation advice and a variety of handouts, including utility brochures and locally developed relevant materials. Hands on demonstrations will be coordinated with participating suppliers, installers and contractors.

**g) EM&V:**

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

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**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

**Table 6**

<b>1-1:</b> Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.	Ventura County Government exploring AB 811 opportunities; may extend to cities; success will be dependent upon statewide economy and related public agency budgets and funding crisis.
<b>1-2:</b> Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.	Ventura County and various cities in region already provide "head of the line" service to "green projects"; success for further expedited services will be dependent upon statewide economy and related public agency budgets, including those agencies that rely on full cost recovery and funding crisis.
<b>1-3:</b> Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.	VCREA will coordinate with Ventura County Building & Safety Department to develop new mobile information program using fines recovered from POS litigation. VCREA will cooperate with IOU's to support the roll-out of POS programs in the region.
<b>1-4:</b> Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.	Local Partner (VCREA) working with County of Ventura and several cities in the research of AB 811 and other appropriate district/bonds or other mechanisms; success limited by current economic conditions, bonding options and related public agency budget and funding crisis.
<b>1-5:</b> Develop broad education program and peer-to-peer support to local gov't's to adopt and implement model reach codes	VCREA tracks IOU training opportunities, as well as CEC, PIER, and other agencies; VCREA will host and/or participate along with Partner cities in events in SoCal Region to advance Commission adopted State EE Plan.
<b>1-6:</b> Link emission reductions from "reach" codes and programs to ARB's AB 32 program	Local Partner (VCREA) will build on existing link and collaboration with Ventura County Air Pollution Control District (VCAPCD) to determine where energy efficiency can support reduction in emissions. VCREA will report emission reductions with each public agency and non-profit organization's retrofit project .
<b>2-2:</b> Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	Partnership will host regular training events for building inspectors; VCREA expected to participate with Ventura County Building Department in joint presentations to further leverage opportunities.
<b>2-3:</b> Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	Partnership links with local professional network of public agency inspectors and code enforcement offices to inform and invite participation in Partnership and IOU organized training programs.
<b>3-1:</b> Adopt specific goals for efficiency of local government buildings, including:	Local Partner (VCREA) will meet with Ventura County, nine cities, various school districts and public water districts in the formation and staffing of internal committees to set goals and develop collaborative plans to achieve 5% or greater energy efficiency.
<b>3-2:</b> Require commissioning for new buildings, and re-commissioning and retro-commissioning of	Local Partner (VCREA) will lend technical support to individual local cities and the county in the

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existing buildings.	development of cost effective new requirements.
<b>3-3:</b> Improve access to financing to support LG EE/DSM, such as lowering interest rate of Energy Commission’s loan fund, and utility on-bill financing.	Local Partner (VCREA) has been successful in supporting local governments' quest for CEC loans and OBF; VCREA will continue in this effort.
<b>3-4:</b> Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	VCREA will continue efforts to encourage actual budget tracking/identification of energy efficiency savings as appropriate to various budgeting processes.
<b>3-5:</b> Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	
<b>4-1:</b> LGs commit to clean energy/climate change leadership.	VCREA is unique regional leader as the sole “energy efficiency to renewable energy” public agency. Additional public agencies are expected to participate and lend leadership.
<b>4-2:</b> Use local governments’ general plan energy and other elements to promote energy efficiency, sustainability and climate change.	VCREA staff/consultants work with the county, various cities and communities, and a number of school and local government committees to advance general plans and leverage other public planning documents that support energy efficiency.
<b>4-4:</b> Develop local projects that integrate EE/DSM/water/wastewater end use	VCREA staff/consultants works with the county, various cities and communities, and a number of school and local government committees to advance sustainability plans and leverage other public planning documents that support energy efficiency and reduce energy demand.
<b>4-5:</b> Develop EE-related “carrots” and “sticks” using local zoning and development authority	VCREA lacks direct authority over any public agencies, but will provide the technical support to local governments that consider using “carrot/stick” approaches.

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**1) Program Name and Program ID number**

Program Name: Palm Desert Energy Partnership Demonstration Program  
Program ID number: TBD

**2) Projected Program Budget Table**

**Table 29<sup>64</sup>**

Program #	Main Program Name / Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
<b>Market Sector Programs</b>						
	Core Program #1					
	Sub-Program #1					
	Sub-Program #2					
	Etc.					
	<b>TOTAL:</b>					

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

**3) Projected Program Gross Impacts Table**

**Table 30**

Program #	Program Name / Sub-Programs	2009 - 2011	2009 - 2011	2009 - 2011
		Three-Year EE Program Gross kWh Savings	Three-Year EE Program Gross kW Savings	Three-Year EE Program Gross Therm Savings
<b>Market Sector Programs</b>				
	Core Program #1			
	Sub-Program #1			
	Sub-Program #2			
	Etc.			
	<b>TOTAL:</b>			

<sup>64</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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Refer to overarching PIP section.

### 4) Program Element Description and Implementation Plan

#### a) List of program elements

The following elements are fully described in the LGP Master PIP. The following table indicates all elements applicable to the LGP.

Applicable to LGP?	Unique Implementation by LGP?	Program Element
X		<b>A. Government Facilities</b>
X		A1 – Retrofit of County and Municipal Buildings
		A2 - Retro-Commissioning
		A3 - Integrating Demand Response
		A4 - Technical Assistance
X		A5 - On-Bill Financing
X		<b>B. Strategic Plan Support</b>
X		B1 - Code Compliance
X	X	B2 - Reach Code Support
X		B3 - Guiding Document Support
X	X	B4 - Financing for the Community
X		B5 - Peer to Peer Support
X		<b>C. Core Program Coordination</b>
	X	C1- Outreach Education
	X	C2 - Residential and Small Business Direct Install
X		C3 - Third Party Program Coordination
		C4 – Retrofits for Just Above LIEE
		C5 - Technical Assistance
X	X	<b>D. Unique Program Elements</b>

#### b) Overview

The Palm Desert Energy Partnership Demonstration Program (the “Project”) presents a model for the community energy partnerships that brings the City of Palm Desert (the “City”) and its energy utilities, Southern California Gas (SoCalGas) and Southern California Edison (SCE), together in a partnership in which each of the partners brings its experience, expertise and resources to bear on the task of saving energy. The facilitating partner for this demonstration project is The Energy Coalition, which also advises the partners on partnership principles. This partnership between the City, its energy utilities and the facilitating partner provides the foundation for a long-term energy partnership commitment and a five-year, comprehensive demand-side management campaign.

California benefits from this powerful partnership model because the city’s residents and businesses are empowered to become reliable providers of cost-effective, environmentally-advantaged, demand-side management energy resources that help meet the states growing energy needs. In return, the city’s citizens and businesses reap the economic benefits of their participation in a comprehensive program that helps them save energy and money.

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The 2009-2011 Palm Desert Energy Partnership Demonstration Program is designed to encourage residential and business customers to purchase energy efficient equipment and focus on activities based on a segmented market in conjunction with SCG's EE portfolio of programs. The program will expand the opportunity to obtain energy savings through a variety of sources and maximize existing savings potential for both residential and commercial customers. The program embraces initiatives established by the CPUC, known as the "Big Bold Energy Efficiency Strategies:"

As new energy efficient measures are identified, measure costs change or marketing opportunities/ failures are identified, the Program will make adjustments to the measures list or rebate amounts. To stay abreast of new, yet proven technologies, and to better meet the needs of all customers, the program will continue to solicit information from industry experts, vendors and customers to provide input as to new innovative measures that might be added, or how the program could be improved.

This three year component (2009-2011) is envisioned as the final three years of a five year, sustained campaign. Over the course of the five years, SCG and its project partners set an objective to reduce overall energy usage and peak load in the city by thirty percent of year 2005 baseline usage. Outcomes can be classified as energy savings, demand reduction, and the piloting of practices that can be replicated in other communities.

For replicable approaches, the partnership will have available through 2011 its experiences and recommendations regarding each of the following and their impact on results:

- City energy efficiency code
- Targeting incentives to the community usage profile
- Integrating IOU marketing of energy efficiency with the resources available at the community level
- Teaming relationship in energy efficiency partnerships
- One-stop shop implementation of energy efficiency offerings
- Effectiveness of a new approach to achieving results through behavioral messaging campaign

### **A Core Program Element- Government Facilities**

The Partnership will leverage new technologies to showcase at City owned facilities where applicable. All new Palm Desert government buildings shall be LEED certified.

#### **A1 – Retrofit of county and municipal facilities**

Almost all Palm Desert facilities have been retrofitted to code and above through the installation of dual glazing and solar shade screens, insulation on all buildings to R19 levels in walls and R38 in ceilings. Reflective coatings and urethane foam has been installed on applicable flat roof areas and they have installed an 80 kW PV solar system on their civic center. Over the last 3 years, Energy Audits have been performed on all cities owned buildings. The Partnership is in the process of reviewing and updating previous audits for additional opportunities. Potential savings opportunities include

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installation of the new generation LED lights (where applicable) on buildings and streetlights throughout the city. The city is currently in the process of replacing all HVAC units with Energy Star rated SEER 14 HVAC systems. The city is also considering an additional 125kW PV solar system to serve the civic center park and office complex. The city has recently built 2 LEED Silver Certified buildings and is currently applying for LEED EB Certification on the existing civic center complex. The city also has a large stock of low income housing which may yield substantial savings. Energy audits and upgrades are currently underway at those facilities. Qualified licensed contractors selected as part of the public bidding process have performed and will perform all EE improvements for the city.

### **A2 – Retro-commissioning (of buildings or clusters of buildings)**

See Master PIP

### **A3 – Integrating Demand Response into the audits**

See Master PIP

### **A4 – Technical assistance for project management, training, audits, etc.**

See Master PIP

### **A5 – On-Bill Financing –**

Through IOU on-bill financing, the Partnership will encourage the city to take advantage of this opportunity for municipal facilities that install energy-efficient equipment or strategies.

## **B. Core Program Element-Strategic Plan Support**

The Partnership program will continue to fully integrate the available menu of demand-side resources by heavily relying on marketing, education and outreach to all residential and commercial customers in Palm Desert.

More specifically, the Partnership will use the following strategies in support of the California Long Term Energy Efficiency Strategic Plan (CLTEESP):

**B1 – Code Compliance Support-**The city currently has building codes exceeding Title 24 for new construction. Palm Desert has successfully demonstrated its ability to serve as a model city Partnership through its early adoption of an aggressive Building Energy Ordinance # 1124. Established in 2006, the Ordinance requires new construction 10%-15% above Title 24 standards. The city's experience from development to implementation of this model can be shared with other local governments to support their adoption of increased energy code standards. With the adoption of 2008 Title 24 code standards, this Ordinance will sunset in August 2009, but the city will continue to explore other opportunities to continue leadership in this area.

**B2 – Reach Code Support-** Code enforcement for Title 24 compliance has always been a priority with the City of Palm Desert's Building and Safety Department. Palm Desert maintains a high level of compliance within its boundaries with codes and permitting and inspection requirements. Its experience with overseeing its more stringent energy



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requirements has made it a leader within the State on enforcement. All Palm Desert Building Inspectors, Plan Examiners and consultants are ICC and CEC Certified and undergo continuing education on application and enforcement of the new 2008 California Energy Efficiency Standards.

As stated above the city implemented an ordinance which went into effect in January of 2007 and will remain in effect through the 2009–11 program cycle. As a result of the new Title 24 standards going in to effect in 2009, the City and Partnership are evaluating the creation of new more stringent codes for possible implementation which may include a “time of sale” ordinance requiring energy efficiency retrofits for both commercial and residential facilities.

**B3 – Guiding Document(s) Support-** The CLTEESP calls for local governments to lead their communities with innovative programs for energy efficiency, sustainability, and climate change. No local government has done more than Palm Desert to promote energy efficiency, renewable energy, sustainability and climate change through its Partnership with Southern California Edison, Southern California Gas Company and The Energy Coalition and the marketing of Set to Save program and Energy Independence Loan program.

The Partnership created a comprehensive strategic plan for energy efficiency, greenhouse gas reduction and will continue to share the information with surrounding communities and cities.

**B4 – Financing for the community-** A key barrier for residential and commercial property owners in undertaking energy efficiency and greenhouse gas reduction projects is the difficulty in obtaining up-front financing to cover the project costs. The CLTEESP recognizes the need for new and innovative financing solutions to accelerate investments in energy efficiency and clean energy technologies for both residential and commercial properties. Palm Desert intends to continue its robust AB811 financing plan and lead other communities in this effort.

The City of Palm Desert sponsored AB811. This legislation makes financing of energy efficiency projects much easier and attractive. This novel financing mechanism is expected to significantly increase participation in energy efficiency projects throughout the city. It will also be replicable statewide, something any community can elect to implement for its residents and businesses. Since inception of the Energy Loan Program, the City has awarded \$5.7 million in energy loans for high efficiency HVAC equipment, Solar Panels, Fuel Cells, Pool Pumps and Heaters and Tankless Water Heaters. IOU On - Bill Financing will also be promoted and utilized when applicable.

**B5 – Peer to Peer Support-** The City recently has taken on additional peer-to-peer educational and outreach opportunities to support local government interest in creating energy financing options for residents by actively sharing their knowledge and experience with the development and implementation of the PD Energy Independence Loan Program (AB 811). As a result of the City of Palm Desert’s leadership in promoting AB811 in 2008, and the subsequent implementation of its loan program for customers, the Partnership is a national leader in helping customers finance large energy efficiency and renewable investments. The Partnership is now taking a leadership role in

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Congress with an effort to update the Internal Revenue Code to allow for tax free bonds to be used by cities and counties to fund loan programs.

**C Core Program Element-Core Program Coordination-** The Partnership actively explores and attempts to leverage the existing synergies between EE, DR, and Renewables to achieve its aggressive goals. Whether through integrated commercial audits or the City's Energy Loan Program, the Partnership makes participation in energy management assessable to its constituents through a variety of offerings. The Partnership will coordinate to a greater degree with the California Solar Initiative. The Partnership has encouraged a large number of solar arrays and fuel cell installations in the city.

**C1 Outreach & Education-**In order to reach the broad spectrum of customers in Palm Desert, outreach and education are a vital component to the Partnership and will continue to play a key role through the 2009-2011 programs. The Partnership will continue to provide unique, in person customer education through in home and business surveys.

Closely coordinated local education, training, marketing and outreach (including neighborhood "sweeps" and events) in which the utilities and the City work together to educate consumers and co-promote programs. In 2007/2008 the Partnership successfully participated in numerous outreach events and hosted several meetings with stakeholders, including Homeowners Associations (HOA's), Contractors, City employees, and business leaders. The Partnerships third party contractor will also participate in community events representing the partnership in the community with the attempt to create a community groundswell.

The goal of marketing and outreach efforts is to very effectively communicate the Partnership's energy efficiency and renewable energy programs to the community in order to achieve strong participation by residences and businesses.

Marketing and outreach efforts will need to continue to be highly proactive in order for this partnership to continue to achieve the savings of the final years of the partnership. In fact, the goals for the upcoming 3 years are greater than the initial 2 years so marketing becomes more critical. With this partnership being a demonstration program it is charged with not only demonstrating new programs, equipment and technology but also new product delivery strategies and new marketing and outreach strategies. As new programs and delivery strategies are developed they must be communicated to the community effectively in order to achieve participation. Examples include the new "One Stop Shop" pool pump program which introduced a new purchase, payment and installation methodology which is showing strong results not just because of improved process but also because we have been able to effectively communicate the new program. The new loan program which has emerged due the passage of AB 811 is also achieving good results due to its benefits and our outreach. Other new programs have been introduced and new ones will be introduced in the future, all requiring marketing support.

Restrictions on the partnership's ability to market its programs will most certainly reduce the participation levels of the community. It is important to keep in mind also that during a severe economic downturn as we are now experiencing achieving the goals becomes

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much more difficult. Effective marketing and outreach communication to the community becomes even more critical. Since we are attempting to motivate the community to make large investments in energy efficiency and renewables we are required to engage in effective and continual communication.

### **C2 Residential and Small Business Direct Install**

The Project will implement residential in-home energy surveys through a contractor to encourage customer participation. The residential surveys provide customers with detailed set of recommendations tailored to the customer's energy use profile. Customers will answer specific energy use questions and instantly receive this analysis of their energy profile and a set of recommendations. The surveys are in conjunction with SCE utilizing a direct install campaign in tandem. Direct install measures consist of low-flow showerheads, low flow faucet aerators, and CFL's. Other cost effective direct install measures will be evaluating on an ongoing basis. SCG's On-Line Surveys will also be available in English, Spanish, Chinese, and Vietnamese.

For small and medium non-residential customers facility surveys may be conducted, or information may be provided through Account Executives, Third Party Contractors, Interns, Commercial/Industrial Service Technicians, email, direct mail, telephone, or other means through the Education, Training and Outreach program. Detailed information will be recorded in a tracking system, including equipment inventories and project recommendations. Recommendations will be followed up periodically to determine implementation status and whether additional assistance will be required to cause a project to be implemented. In addition to providing surveys, cost effective direct install measures will be installed in tandem. Direct install measures are comprised of low-flow shower heads, low-flow faucet aerators, early replacement of low-flow spray nozzles for hotel/motel, restaurant, golf course, and some commercial facilities. Other cost effective direct install measures will be evaluating on an ongoing basis.

**C3 Third-party program Coordination-** The Partnership coordinates through IOU Program Managers coordination and ramped up promotion of third party programs in Palm Desert.

**C4 Retrofits for just above LIEE qualified customers-**The Partnership will promote retrofits as an integrated approach to energy consumption and reduction, increasing awareness of energy efficiency and demand response for qualified Low-Income Energy Efficiency (LIEE) customers. Coordinating with the Multi-family Energy Efficiency Programs will provide energy efficiency retrofits for just-above low income customers. This implementation of demand side management (DSM) strategies will also be coordinated with the LIEE Program and will support progress towards local and statewide sustainability goals.

**C5 Technical assistance for program management, training audits, etc.** The Partnership will assist residents and businesses in understanding, managing, and reducing their energy use and costs, by providing comprehensive technical, planning, marketing and implementation assistance. This includes encouraging and enlisting city staff to leverage utility resources. Technical assistance and support to contractors, and customers

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will continue to be promoted through the Office of Energy Management (OEM). Both SCE and SoCalGas have been working out of the OEM since 2007.

### **D. Core Program Element-Unique to the Palm Desert Partnership**

**D1- Effective Behavioral Messaging-** Behavioral scientists have indicated that energy savings of 6 to 20% are possible through the application of effective messaging. The Partnership intends to launch a new pilot program designed to accomplish this in early 2009 and carry it through 2009-2011 program cycle if successful. The messaging will be tailored to the specific customer's usage history. This project will not only influence attitudes and behaviors toward energy efficiency, it will measure the results of this influence, and lay the groundwork for the establishment of disciplines for making behavioral savings verifiable.

**D2-New Delivery Channels: (“One-Stop Shop” Pilot Approach)-**There are 7,800 residential pools in Palm Desert. With this high concentration of pools and energy savings potential, the Partnership intends to continue an approach where the customer calls a toll-free number for installation. Upon making the call, a contractor will be assigned to install a new variable speed pool pump to replace the customer's existing, working model. The contractor will collect, at the time of installation, payment for the difference between what the Partnership can pay in incentives and a previously agreed upon fixed cost. After installation and verification, the contractor will receive payment for installation. The Partnership launched this effective pilot in late 2007. The Partnership will seek other technologies that can be implemented in this matter, i.e. pool heaters, liquid pool cover, HVAC, etc.

**D3- Hardware Incentives** — Incentives for the purchase of ENERGY STAR® qualified natural gas furnaces, and water heaters paid as a point-of-sale discount instant discount or rebate. Incentives will be offered for multifamily, single-family customers. Incentives will also be provided for early replacement of inefficient pool heaters and furnaces with units that exceed current standards by a least 10%. Higher incentive levels will be considered for homeowners and property managers that institute a comprehensive suite of measures including furnace upgrades, building shell improvements, water heating system efficiency improvements. Higher incentives offered through special seasonal “sales” and aggressive promotion of services. Enhanced outreach efforts will be employed to target high usage customers who could provide the most cost effective natural gas savings from early replacement efforts. To simplify the process, Point of Sale opportunities, and combined utility applications, and the “One-Stop-Shop” program will be utilized, while evaluating other segment opportunities.

**D3-Comprehensive Commercial Retrofit** — There is ample opportunity to reduce energy consumption in the commercial sector. A portfolio of program strategies will be deployed to systematically and comprehensively address energy savings in each customer segment in the City. Enhanced incentive levels will be considered for customers that implement both space conditioning and water heating (including pool/spa heating) system improvements at the same site. To simplify the process, combined utility rebate applications will be utilized.

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The Partnership expects to launch other innovative approaches to achieving significant participation in energy efficiency which can both be replicated by other communities and carried over to the 2009-2011 program cycle.

**D4-“Emerging Technologies”** - SCG will promote the purchase and installation of solar water heating systems and new, high-efficient natural gas air conditioning systems. Solar water heating systems for commercial and residential pool heating in addition to a liquid pool cover will be the initial targets of these demonstration project efforts.

**D5-HVAC Strategies**-Early Replacement of HVAC equipment including furnaces delivered through a comprehensive HVAC focused program. The Partnership will focus on promotion of quality HVAC installation/maintenance as well as equipment efficiencies. The Partnership will promote the whole-building approach by offering higher incentives for homeowners and property managers which institute a comprehensive suite of measures including furnace upgrades, building shell improvements, water heating system efficiency improvements. Higher incentives offered through special seasonal “sales” and aggressive promotion of services. Enhances outreach efforts will be employed to target high usage customers who could provide the most cost effective natural gas savings from early replacement efforts.

### c) Non-incentive services

Technical assistance will be provided to non-residential and multifamily customers in the form of energy surveys and site specific technical analysis. In addition, the Partnership will implement the AB811 financing program. The Partnership will develop an “Energy Champion Recognition” program which will publicly recognize individuals, residents, and businesses for their contribution to the program. Additionally the Partnership will continue to participate in community events, energy rallies for Homeowners Associations, and participating in a school curriculum promoting efficiency and demand reduction. The Partnership will also publish and share with other cities the Partnership’s Energy/Strategic Plan.

### d) Target audience

The Partnerships emphasis is focused on all residential and commercial customers with in Palm Desert. The Partnership intends to enhance the resources of SCG’s Account Executives with concentrated outreach to commercial customers in Palm Desert. A majority of the commercial customers in Palm Desert are considered “hard to reach” and the Partnership endeavors to create replicable methodologies to successfully reach this market. The overarching principle of the Project is to provide comprehensive approaches to all customer groups through targeted strategies with a focus on early replacement of inefficient equipment. Marketing, outreach and delivery strategies are intended to leverage the strengths of each of the partners. Due to the number of Home Owners Associations in Palm Desert, Restaurant food establishments, and customers with pools,

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the Partnership will continue to place emphasis on targeting programs to them through various delivery channels.

### e) Implementation

The partnership approach has proven an appealing model because it bundles services that have been disparate and sporadically utilized by customers. Partnership participants are exposed to “the bigger picture” of local, state, and global energy resources, and they are presented with a variety of energy savings opportunities through electric, natural gas, and water utility programs and sustainable practices. Results are not delivered in isolation.

Critical to this project, and a key driver to making customers take actions to reduce energy use and peak demand, is an outreach and information campaign that continually promotes the efficiency ethic and contains a follow-up mechanism with residents and businesses who have expressed interest in efficiency. The Project’s Energy Efficient Upgrade Program offering will continue to be promoted through a joint SCG/SCE/City of Palm Desert communication strategy that may include announcements in local media, newsletter articles, outreach efforts, and direct mail campaigns etc. The effort will result in an increased community presence, while establishing a strong grass roots outreach movement to motivate participation.

A cadre of energy use specialists will be available to complete comprehensive in-home and business energy surveys, either as part of energy efficiency “events” targeted especially to, Homeowner Associations, mobile home parks, food service establishments or from customer requests. These surveyors will identify appropriate measures for the home and business, and discuss incentive and financing options while educating customer on energy efficiency. Since project inception, the partnership has built up its capacity to deliver in-home surveys throughout the community. The project team has trained the city’s energy technicians to perform in-home and business energy surveys. In 2008 SCG awarded a contract to Energy Controls & Concepts to perform up to 3,000 in-home surveys, and 400 non-residential surveys in conjunction with SCE.

The collected survey information will be input into a database that can be mined for additional communication opportunities, including special “sale” offerings, retailer promotions, and reminders to take advantage of energy efficiency opportunities. The City schedules calls to all residents who have had an in-home survey after 30 days and again 120 days to check on the performance of the contractor and to determine if any actions have been taken by the resident as a result of the survey. In 2009, the Partnership plans to launch a new quality control program with all customers which participate in the Energy Efficiency Upgrade Program.

Installation contractors will serve as another primary marketing tool. Using program materials provided by the Project (including a package that outlines the energy savings of various devices, environmental impacts, bill reductions, testimonials, available financing, and utility incentives), these contractors will have the ability to apply incentives at time of sale, making the transaction as streamlined as possible for the consumer. They will also participate in energy events and presentations made to condominium association meetings, at clubhouse events, etc.

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It was realized through the partnership efforts to date that outreach is an important aspect to this project. There will be great emphasis on expanding “grass roots” outreach events throughout the community. Included in outreach activities is assistance to City staff, residences, builders and developers in promoting standards that ensure that all new construction and retrofit projects incorporate the most energy efficient designs and measures as possible. The partnership will evaluate energy savings opportunities for all cities owned and operated facilities through out the City of Palm Desert through energy surveys and introduction of emerging technology if feasible.

The City’ residents and business will continue to enjoy complete access to all of the programs in SCG’s 2009-2011 energy efficiency portfolio. Activities associated with this Project will leverage these existing programs to pursue additional energy efficiency opportunities.

### **5) Program Element Rationale and Expected Outcome**

The City of Palm Desert is primarily a residential, commercial and resort community. Residential gas usage in the City is very slightly below the SCG’s system average. While the average single family home in Palm Desert is larger than the system average, many residents are seasonal users of their Palm Desert homes. This factor, when combined with the large number of condominiums and mobile homes, has kept the average gas consumption in Palm Desert less than the system average.

The City of Palm Desert accounts for 0.2% of system gas consumption and less than 0.6% of the customer base. There are 30,400 residential dwellings in the City of Palm Desert and nearly all represent at least some level of opportunity for retrofits. Of those, the largest potential may exist in the single family and condominium sectors, since they constitute well over one half of the market.

Thirty-nine percent of all single family customers have gas meter set dates prior to 1984 and 67% of condominiums were built before 1984, when building efficiency standards were far less rigorous. These units were built with single-pane windows, low efficiency gas furnaces and water heaters, low SEER air conditioning, little or no energy efficient lighting, and may contain other appliances manufactured before higher energy efficiency models were available. Empirical data suggests that the potential for air conditioner replacement in this market may be less than some estimates, because many of these 20+ year old units may have been already replaced or substantially repaired, due to their heavy use during the long hot summer months experienced in the City of Palm Desert, but natural gas fired space heating furnaces are much less likely to have been replaced. Increased ceiling and wall insulation could be of real value to residents living in these older condominiums and single family homes given the potential of these measures to reduce both AC and furnace usage.

There are over 80 Home Owners Associations in Palm Desert with a total of 900 pool and spas. There will be an emphasis to promote early replacement of existing natural gas pool/spa heaters at these facilities. Additionally there are over 7,000 residential pools in

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the City of Palm Desert which provides the Partnership with opportunity to reduce energy usage substantially among this market.

The Project will achieve its goals by targeting efforts to specific residential and business sectors including; Homeowners Associations, Hospitality/Services, Institutional, Retail & Offices Segments, and through other market segmentation opportunities in alignment with SCG's EE portfolio offerings.

The City of Palm Desert is already an acknowledged leader in wise energy policy and civic commitment. This commitment is demonstrated in the City's funding participation for this partnership program. In March 2005, the City Council created a new department entitled the Office of Energy Management. This department is staffed by 3 full time city employees and has 2 additional work station provisions for employees assigned to this partnership program. Both SCE and SCG have been working out of the Office of Energy Management since 2007

The Project offers a unified approach where all DSM program offerings work together seamlessly to help customers take actions. The Partnership will rely on a combination of short- and long-term program solutions over a 5-year period in order to achieve the City of Palm Desert's stated energy goals, of 30% reduction, for its community. The City's residents and businesses will continue to enjoy complete access to all of the programs in SoCalGas' 2009-2011 energy efficiency portfolio. Activities associated with this project will leverage these existing programs to pursue additional energy efficiency opportunities to help reach the Project's natural gas goal. The overarching principle of the Project is to provide comprehensive approaches to all customer groups through targeted strategies with a focus on early replacement of inefficient equipment. Marketing, outreach and delivery strategies are intended to leverage the strengths of each of the partners.

### **Program Strategy: Promotion and Outreach**

- A multi-faceted approach impacting all residents and businesses.
- Energy surveys for all customers (Commercial and Residential), covering both gas and electric measures, with an emphasis on in-home surveys.
- Continuous, targeted communication and education.
- Neighborhood sweeps to sell, finance and install measures.
- Demonstration projects showcasing efficiency opportunities within the program.
- School curriculum promoting efficiency and demand reduction.

### **Program Strategy: Comprehensive HVAC**

- Robust program to encourage early replacement in all markets.
- Incentives and financing to replace energy hogs.
- Trained, certified contractor/dealer network.
- Includes proper heating system installation and air duct repair.
- Early replacement furnace incentives delivered through a Comprehensive HVAC Program. Higher incentive levels considered for homeowners and property owners that institute a comprehensive suite of measures.



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### **Program Strategy: Residential Consumers**

- In-home surveys and sweeps provide detailed customer information and encouragement for implementation of energy efficiency measures.
- Home Energy Reports educating customers own energy consumption compared to neighbors while providing energy savings recommendations.
- Sales events, community events, and point-of-sale incentives increase participation and make things easy.
- Low-cost/no-cost equipment installations.
- Addresses all areas: behavior change, appliances, water heating, space heating & cooling, lighting, and pool heating.
- Rebates considered for property owners or managers that institute a comprehensive suite of measures.
- Promotion of “Emerging Technologies” including solar water heating systems for residential pool heating.
- Addresses all segments: single family, multifamily, condominiums, and mobile homes.

### **Program Strategy: Nonresidential Consumers**

- Incented equipment replacements for small/medium businesses
- Low-cost/no-cost equipment replacements for businesses.
- Detailed energy audits, technical assistance and incentives.
- Segment focused (e.g., golf courses, restaurants, motels/hotels) and technology (e.g., efficient pool heaters, high efficiency domestic hot water heaters) focused.
- An Enhanced Direct Install element where leads for participation in other energy efficiency programs are generated real time.
- Where applicable, customers will be informed of On-Bill Financing opportunities.
- Where applicable promotion of “Emerging Technologies” including solar water heating systems and new, high efficient natural gas air conditioning systems.

### **Program Strategy: Residential and Nonresidential New Construction**

- New ordinance mandating high efficiency construction.
- Technical and design assistance for developers to meet higher requirements.  
A residential New Construction program unique to Palm Desert where builders are eligible for incentives on a prescriptive basis.

#### **a) Quantitative Baseline and Market Transformation Information**

Market Transformation (MT) metrics proposed in Tables 3 and 4 are preliminary. The proposed metrics are meant to initiate a collaborative effort to elaborate meaningful metrics that will provide overall indicators of how markets as a whole are evolving. MT metrics should neither be used for short-term analyses nor for specific program analyses; rather, should focus on broad market segments.

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process and the successful end state have not yet converged. The CPUC defines the end state of MT as

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“Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market.”<sup>65</sup> The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies<sup>66</sup>.

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical and 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures<sup>67</sup>. Markets are social institutions<sup>68</sup>, and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains<sup>69</sup> as well as changes to codes and standards. Resource acquisition programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation progress<sup>70</sup>. According to York<sup>71</sup>, “Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are 3 ways to achieve market transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy.”

The question of what constitutes successful transformation is controversial because of a Catch-22: Market transformation is deemed successful when the changed market is self-sustaining, but that determination cannot be made until after program interventions are ended. Often, however, the need for immediate energy and demand savings or immediate carbon-emissions reductions will mean that program interventions may need to continue, which would interfere with the evaluation of whether MT is self-sustaining. Market transformation success has also been defined in terms of higher sales of efficient measures than would have otherwise occurred against a baseline absent of program interventions. The real world, however, provides no such control condition. Evaluators must estimate these baselines from quantitative factors such as past market sales that may be sparse and/or inaccurate - particularly for new products. Evaluations must also defer to expert judgments on what these baselines may have been as well as on the degree of successful market

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<sup>65</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>66</sup> California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

<sup>67</sup> Pelozo, J., and York, D. (1999). “Market Transformation: A Guide for Program Developers.” Energy Center of Wisconsin. Available at: <http://www.ecw.org/ecwresults/189-1.pdf>

<sup>68</sup> Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) “From technology transfer to market transformation”. Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at [http://www.eceee.org/conference\\_proceedings/eceee/2001/Panel\\_2/p2\\_7/Paper/](http://www.eceee.org/conference_proceedings/eceee/2001/Panel_2/p2_7/Paper/)

<sup>69</sup> Sebold, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at [www.calmac.org](http://www.calmac.org).

<sup>70</sup> Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings*.

<sup>71</sup> York, D., (1999). “A Discussion and Critique of Market Transformation”, Energy Center of Wisconsin. Available at <http://www.ecw.org/ecwresults/186-1.pdf>.

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transformation<sup>72</sup>. Due to the subjective nature of these judgments, it is imperative that baselines as well as milestone MT targets be determined and agreed upon through collaborative discussion by all stakeholders, and these targets may need periodic revision as deemed necessary by changing context.

Market transformation draws heavily upon diffusion of innovation theory<sup>73</sup>, with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades<sup>74</sup>. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects<sup>75</sup>. The ability to make causal connections between these market transformation effects and any particular program's activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are. First and foremost, they need to be designed specifically to address market transformation. "The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given to program designers.)<sup>76</sup>" The Strategic Plan recognizes that regulatory policies are not yet in place to support the success of market transformation efforts<sup>77</sup>, but also reflects the CPUC's directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions<sup>78</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the utilities look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin's guide for MT program developers<sup>79</sup> suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective

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<sup>72</sup> Nadel, S., Thorne, J., Sachs, H., Prindle, B., and Elliot, R.N. (2003). "Market Transformation: Substantial Progress from a Decade of Work." American Council for an Energy-Efficient Economy, Report Number A036. Available at: <http://www.aceee.org/pubs/a036full.pdf>

<sup>73</sup> Rogers (1995) *Diffusion of Innovations*, 5<sup>th</sup> Ed.

<sup>74</sup> Example in bottom chart of this graphic from NYTimes:

<http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html>

<sup>75</sup> Sebold et al (2001) p. 6-5,

<sup>76</sup> Peters, J.S., Mast, B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume I.* Available at <http://calmac.org/publications/19981215CAD0001ME.PDF>.

<sup>77</sup> CPUC (2008) Strategic Plan, p. 5.

<sup>78</sup> Nadel, Thorne, Sachs, Prindle & Elliot (2003).

<sup>79</sup> Pelozo & York, (1999).

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expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

The metrics and baselines described below in Tables 3 and 4 are presented for the purposes of starting the much-needed discussion between all key participants. These are suggestions, intended to allow key participants to pilot-test processes for establishing baseline metrics, tracking market transformation progress, and for refining evaluation tools. Early trial of these evaluation metrics will reveal any gaps in data tracking so that we may refine our processes before full-scale market transformation evaluations take place.

The set of metrics we selected is intentionally a small set, for several reasons. First, as mentioned, the full set of metrics and baselines need to be selected by key participants. Second, we anticipate that market share data for many mid- and low-impact measures will be too sparse to show MT effects and not cost-effective to analyze. Third, we selected core measures and metrics that would both be indicative of overall portfolio efforts. These measures are also likely to be offered on a broad level by other utilities, providing a greater base of sales and customer data that could be analyzed for far-reaching MT effects. Therefore, for the Local Government Partnerships the following approach to quantitative baseline and market transformation information is presented as follows. The utilities recommend development of a baseline, and tracking the number of cities, counties and government institutions that have plans for written energy efficiency provisions. Such a metric relates directly to the Strategic Plan (Goal 12.3.4) in terms of measuring progress towards 50% plans for sustainability.

In addition, we propose tracking community adoptions of new construction model reach codes, both residential and nonresidential. This metric aligns with the Strategic Plan (Goal 12.3.1). In addition to being a direct indicator of support by local government partnerships, community adoptions of model reach codes are of strategic interest to the CPUC. A proliferation of dissimilar reach codes would confuse the market relative to building codes and incentive programs. Model reach codes to be developed by Codes and Standards would allow energy efficiency efforts across partners to be aligned with a clear target for each climate zone. As discussed in the Local Government PIPs, the IOUs intend to work closely with partners in establishing baseline code compliance levels and pushing for model reach codes.

With this discussion in mind, IOUs propose the following metrics for this sector:

**Table 3**

	<b>Baseline Metric</b>	
	<b>Metric A</b>	<b>Metric B</b>
Energy Efficiency Action Plans	Baseline inventory of cities, counties and	

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	government institutions within the IOU territory that have adopted such energy planning documents as Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.	
Model Reach Codes		In coordination with Codes and Standards, develop a baseline inventory of cities and counties within the IOU territory with adopted model reach codes

**f) Market Transformation Information**

As stated above, market transformation draws heavily upon diffusion of innovation theory, with the state of a market characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects. Therefore it is problematic, if not impractical, to offer internal annual milestones towards market transformation sectors and specific program activities.

As a consequence, it is not appropriate to offer more than broad and general projections. Any targets provided in the following table are nothing more than best guesstimates, and are subject to the effects of many factors and market forces outside the control of program implementers.

**Table 4**

	<b>Internal Market Transformation Planning Estimates</b>		
	<b>2009</b>	<b>2010</b>	<b>2011</b>
Baseline inventory of cities, counties and government institutions within the IOU territory that have adopted such energy planning documents as	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time

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Energy Action Plans, Climate Action Plans and Sustainability Plans, and General Plans with energy or climate elements.			
In coordination with Codes and Standards, develop a baseline inventory of cities and counties within the IOU territory with adopted model reach codes	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time

a) Program Design to Overcome Barriers:

The City of Palm Desert has an unprecedented conservation goal and would not be able to achieve it without the Partnership. The Partnership is designed to empower the community to save money and energy by reducing energy consumption and peak demand by 30% by 2011. In order to reduce the barriers to customer participation it has been recognized through the first two years of the Partnership that creative financing options for large equipment purchases is required. Additionally creating a simpler sign-up experience is imperative to achieve the aggressive conservation goals. The creation and emphasis in 2009-2011 in the “One-Stop-Shopping” concept will be a crucial program in aiding to achievement of the goals. Energy conservation is heavily promoted by both the Partnership and the utilities. As a result, the Partnership has recognized the importance of behavior change and the need to quantify the outcome of conservation. It is the intent of the Partnership through the launch of this ground breaking behavior change campaign to be able to successfully quantify the savings. The Partnership provides the vehicle to achieve savings that would otherwise be limited or lost.

b) Quantitative Program Objectives:

**Table 5**

Program	Program Target by 2009	Program Target by 2010	Program Target by 2011
Behavior Messaging Campaign	1% natural gas energy savings achieved	1.5% natural gas energy savings achieved	2.5% natural gas energy savings achieved
Total Energy usage reduction (from incentive/rebates)	860,725 therms	869,185 therms	962,591 therms
Residential Energy Surveys	8,000 energy surveys	8,000 energy surveys	8,000 energy surveys

**6) Other Program Element Attributes**

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### a) Best Practices

The Partnership continually approves upon its lessons learned as well as shares them with other cities who may value or act on the information. The Palm Desert Partnership reaches out to cities within the Coachella Valley and more broadly across the State to explain its unique programs, standards, and financing options to other cities and counties. City leadership, Partnership management, and the participating utilities are all engaged in continual interaction with other cities and counties to educate them on the successes of the PD Partnership.

### b) Innovation

The Partnership is an innovative, unique partnership which continually evaluates and implements energy savings opportunities, new technology and delivery channels, ensuring they are replicable to other cities and communities. An example of innovation includes the passing and implementation of AB811.

### c) Interagency Coordination

See Master PIP

### d) Integrated/coordinated Demand Side Management

The Partnership continually focuses on integration of the utilities demand side management programs where applicable. In 2008 the partnership created its first combined commercial food service rebate application and will be expanding this concept to the residential programs in 2009. Energy Surveys and the Direct Install programs have also been integrated therefore the customer is presented with an energy solution and education rather than on an isolated case from each utility. The 2009-2011 programs will expand integration of other programs including expansion of the “One-Stop-Shop”.

### e) Integration across resource types (energy, water, air quality, etc)

See Master PIP

### f) Pilots

Although the Partnership itself is a demonstration (pilot) program, it continually evaluates piloting new technologies, and delivery channels. The launch of a behavioral campaign and the “One-Stop-Shopping” strategies are examples of two piloted efforts of this Partnership. The Partnership is also underway in evaluating liquid pool cover technology which they plan to pilot in 2009.

### g) EM&V

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The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.



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**7) Partnership Program Advancement of Strategic Plan Goals and Objectives**

This partnership supports the Strategic Plan in the following manner:

- By actively utilizing utility financing options in promoting energy efficiency activities, the partnership is improving the ability to meet commercial sector goals (Commercial Sector, Strategy 3).
- The partnership actively promotes quality installation of HVAC measures and proper maintenance in efforts to reduce peak demands (Heating, Ventilation and Air Conditioning, Strategy 2).
- Will offer training on energy efficiency to homeowners, building managers, contractors and others (Workforce Education and Training, Strategy 4).
- Through use of effective behavioral messaging, the partnership will launch a pilot program designed to influence customer attitudes and behaviors toward energy efficiency (Marketing, Education and Outreach, Strategy 3).
- Additional strategic plan detailed in table 6.

Table 6

<p>1-1: Develop, adopt and implement model building energy codes (and/or other green codes) more stringent than Title 24's requirements, on both a mandatory and voluntary basis; adopt one or two additional tiers of increasing stringency.</p>	<p>Palm Desert has successfully demonstrated its ability to serve as a model City Partnership through its early adoption of an aggressive building energy ordinance # 1124 established in 2006 which requires new construction 10%-15% above Title 24. The City's experience from development to implementation of this model can be shared with other local governments to support their adoption of increased energy code standards. With the adoption of the 2008 Title 24 code standards in April of 2009, this Ordinance will sunset, but the City will continue to explore other opportunities to continue leadership in this area. Additionally, the Partnership is evaluating new and more stringent codes for possible implementation. These include a possible "time of sale" requirement that exceeds Title 24.</p>
<p>1-2: Establish expedited permitting and entitlement approval processes, fee structures and other incentives for green buildings and other above-code developments.</p>	<p>Palm Desert building permit fees have been waived for HVAC, PV solar and fuel cell permits.</p>
<p>1-3: Develop, adopt and implement model point-of-sale and other point-of transactions relying on building ratings.</p>	<p>Palm Desert is investigating a time of sale ordinance requiring energy efficiency retrofits.</p>
<p>1-4: Create assessment districts or other mechanisms so property owners can fund EE through city bonds and pay off on property taxes; develop other EE financing tools.</p>	<p>As a result of the City of Palm Desert's leadership in promoting AB811 in 2008, and the subsequent implementation of its loan program for customers, the Partnership is a national leader in helping customers finance large energy efficiency and renewable</p>

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	investments. The Partnership is now taking a leadership role in Congress with an effort to update the Internal Revenue Code to allow for tax free bonds to be used by cities and counties to fund loan programs. (Mentioned in section 4)
1-5: Develop broad education program and peer-to-peer support to local govt's to adopt and implement model reach codes	The Palm Desert Partnership is reaching out to cities within the Coachella Valley and more broadly across the State to explain its unique programs, standards, and financing options to other cities and counties. City leadership, Partnership management, and the participating utilities are all engaged in continual interaction with other cities and counties to educate them on the successes of the PD Partnership. The City recently has taken on additional peer-to-peer educational and outreach opportunities to support local govt. interest in creating energy financing options for residents by actively sharing their knowledge and experience with the development and implementation of the PD Energy Independence Loan Program (AB 811).
1-6: Link emission reductions from "reach" codes and programs to ARB's AB 32 program	The Palm Desert Partnership is converting its energy savings into carbon reductions continually. Thus far with the savings that have been achieved in the first two years of the Partnership it is estimated that based on the overall natural gas therm savings to date it is approximately 13,390,135 pounds of CO2 or 6,695 tons of carbon emission reductions have been achieved.
2-2: Dramatically improve compliance with and enforcement of Title 24 building code, and of HVAC permitting and inspection requirements (including focus on peak load reductions in inland areas).	Palm Desert maintains a high level of compliance within its boundaries with codes and permitting and inspection requirements. Its experience with overseeing its more stringent energy requirements has made it a leader within the State on enforcement. All Palm Desert Building Inspectors, Plan Examiners and consultants are ICC trained and certified.
2-3: Local inspectors and contractors hired by local governments shall meet the requirements of the energy component of their professional licensing (as such energy components are adopted).	The Palm Desert Partnership is actively engaged in meeting with its key contractors on an ongoing basis to ensure knowledge of its new and innovative programs. The key contractors include building, pool, HVAC and solar contractors.
3-1: Adopt specific goals for efficiency of	All new Palm Desert government buildings

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local government buildings, including:	shall be LEED certified.
3-2: Require commissioning for new buildings, and re-commissioning and retro-commissioning of existing buildings.	
3-4: Explore creation of line item in LG budgets or other options that allow EE cost savings to be returned to the department and/or projects that provided the savings to fund additional efficiency.	The Palm Desert Office of Energy Management (OEM) is currently developing a specific proposal with its utility partners to create a new funding source for the OEM utilizing 'renewable energy credits' which are being created through the programs of the Partnership.
3-5: Develop innovation Incubator that competitively selects initiatives for inclusion in LG pilot projects.	
4-1: LGs commit to clean energy/climate change leadership.	The Palm Desert Partnership has committed to leadership promoting energy efficiency, renewable energy through its aggressive marketing of Set to Save and Energy Independence. The City has also taken an aggressive position in developing a full sustainability strategy which is now being compiled.
4-2: Use local governments' general plan energy and other elements to promote energy efficiency, sustainability and climate change.	No local government has done more than Palm Desert to promote energy efficiency, renewable energy, sustainability and climate change through its Partnership with SoCal Edison, SoCalGas, & The Energy Coalition and the marketing of Set to Save and Energy Independence. A Strategic Plan for this project which focused on energy efficiency was also developed.
4-4: Develop local projects that integrate EE/DSM/water/wastewater end use	The Partnership actively explores and attempts to leverage the existing synergies between EE, DR, and Renewables to achieve its aggressive goals. Whether through integrated commercial audits or the City's Energy Loan Program, the Partnership makes participation in energy management assessable to its constituents through a variety of offerings.
4-5: Develop EE-related "carrots" and "sticks" using local zoning and development authority	

## 2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan

1) Program Name and Program ID number

Program Name: Comprehensive Home Performance Program (CHPP)  
Program ID number: TBD

2) Projected Program Budget Table

**Table 1<sup>1</sup>**

Program #	Main Program Name/Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
	Market Sector Programs					
	SCG Local Comprehensive Home Performance					
	#Local02 - Local Whole Home Performance	\$ 515,957	\$ 406,220	\$ 10,966,832	\$ -	\$ 11,889,010
	<b>TOTAL:</b>	<b>\$ 515,957</b>	<b>\$ 406,220</b>	<b>\$ 10,966,832</b>	<b>\$ -</b>	<b>\$ 11,889,010</b>

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

3) Projected Program Gross Impacts Table

**Table 2**

Program #	Main Program Name/Sub-Programs	2009-2011 Three-Year EE Program Gross kWh Savings	2009-2011 Three-Year EE Program Gross kW Savings	2009-2011 Three-Year EE Program Gross Therm Savings
	Market Sector Programs			
	SCG Local Comprehensive Home Performance			
	#Local02 - Local Whole Home Performance	650,562	469	947,167
	<b>TOTAL:</b>	<b>650,562</b>	<b>469</b>	<b>947,167</b>

These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

4) Program Description

<sup>1</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

## **2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan**

### a) Describe Program

SCG's Whole House Performance Pilot Program will be implemented as a joint utility program with SCE's Comprehensive Home Performance Program. The program will be a new to SCG's 2009-11 residential energy efficiency portfolio, based on the SCE's successful 2006-08 IDEEA Comprehensive Home Performance Delivery Program. In accordance with the California Energy Efficiency Strategic Plan (CEESP), this program advances comprehensive energy efficiency measures, including: whole house solutions, visual monitoring and displays, performance standards, local government opportunities, and DSM integration. The Whole House Performance Program (WHP) delivers comprehensive improvement packages tailored to the needs of each existing home and its owner. The WHP solicits, screens, and trains qualified residential repair and renovation and HVAC contractors to deliver program services such as performing whole-house diagnostics by proposing a comprehensive improvement package, and then completing the recommended improvements. The program also includes marketing activities to help educate customers on program services and provide additional customer leads to trained contractors. Furthermore, the program will provide consistent standards and professional identity in association with the national Home Performance with ENERGY STAR® program.

Incentive will be available to offset the homeowners cost for home performance improvements. The WHP offers rebates for various measures installed through WHP specific rebates and rebates offered by the Home Energy Efficient Survey (HEES), Home Energy Efficiency Rebates (HEER), and other residential EE programs. Contractors will receive an incentive for completing formal home diagnostics, post retrofit quality assurance testing, and reporting data on all jobs. Furthermore, the program will provide consistent standards and professional branding identified in association with the national Home Performance with ENERGY STAR® program (HPwES).

WHP provides a full range of services for participating contractors including orientation, training in both technical and business/marketing/sales topics, field mentoring and support, specialty teambuilding, website materials, email newsletters, an online peer group Q&A forum, and a broad range of alliance-building, education and marketing services.

SCG will work collaboratively with the California Building Performance Contractors Association (CBPCA) to implement this program in 2009-11 program cycle.

**Program Integration:** WHP leverages measure specific rebates offer from other residential programs such as HEES and HEER, then bundles them into a whole house performance improvement package for delivery. The program provides technical and marketing training to contractors, and mentoring support. It offers incentives to the residents and the contractors. CHPP is an perfect demonstration of ED's request for Comprehensive Home Improve Program.

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**Support for LIEE and Non-LIEE Qualifying Low Income Family:** The WHP will coordinate activities with LIEE to make sure all qualifying LIEE participants are specifically targeted by the program. The WHP will work with local/municipalities to support AB811, so the Non-LIEE qualifying Low Income Families needs can be best served.

b. ) List measures

- Thermal load reduction via air sealing, insulation, ventilation, windows, etc.
- Right-sizing and proper installation of HVAC systems, including ducts, to reduce connected HVAC loads per Title 24 and ACCA guidelines.
- Baseload reduction opportunities such as water heating and appliances.
- Where applicable - solar water heating, photovoltaic (PV) installations, and self generation.
- **Gas Measures to be considered:\***
  - Faucet Aerators
  - Low-Flow Showerheads
  - Thermostatic Low Flow Restrictive Valve
  - Water Heater Pipe Wrap
  - Filter Tone

*\*Incentives for some of these measures are still under discussion. They will be finalized at a later date.*

c) List non-incentive customer services

The Program offers technical training, field mentoring, and business/marketing seminars. The technical training and field mentoring are used to improve basic contractor skills and introduce the basic concept of energy efficient home repair and renovation practices. The business/marketing seminar will be offered to help contractors on the most effective way of selling home performance to customers.

## **2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan**

### 5) Program Rationale and Expected Outcome

The WHP local program is designed to offer a one-stop approach for whole house energy efficient improvements. This program leverages all existing residential programs that offer measure specific application, plus WHP specific building/housing envelope related measure. The program design is to induce maximum energy efficiency actions within the same household. To ensure quality of service, the program offers contractor technical, business/marketing, and mentoring services, all packaged under a recognized national brand name of Home Performance with ENERGY STAR® program.

The current SCE CHPP program design does not specifically support CLTSEE Plan as indicated in the Energy Division's comments. For example, SCE does not at this time require the WHP participants to achieve either 30% or 70% purchased energy reduction from their 2008 levels. The program is designed to work in conjunction with participants' ability to pay. If the participant is unable to afford to implement part of the recommendations, then the implementation plan is modified to focus only the affordable measures. Even with this design today, the program team has already learned that the current incentive level is insufficient to induce many necessary EE actions. To accomplish these deep energy reduction goals, the program would need to go beyond the participant's ability to afford. This issue cannot be resolved in the scope of this PIP. The SCG and SCE program team would like to enlist ED's assistance to work on these issues.

#### a) Quantitative Baseline and Market Transformation Information

Market transformation (MT) metrics proposed in Tables 3 and 4 are preliminary. The proposed metrics are meant to initiate a collaborative effort to elaborate meaningful metrics that will provide overall indicators of how markets as a whole are evolving. MT metrics should neither be used for short-term analyses nor for specific program analyses. Rather, should focus on broad market segments.

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process and the successful end state have not yet converged. The CPUC defines the end state of MT as "Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market."<sup>2</sup> The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies<sup>3</sup>.

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<sup>2</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>3</sup> California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

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Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical and 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures<sup>4</sup>. Markets are social institutions<sup>5</sup>, and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains<sup>6</sup> as well as changes to codes and standards. Resource acquisition programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation progress<sup>7</sup>. According to York<sup>8</sup>, “Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are 3 ways to achieve market transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy.”

The question of what constitutes successful transformation is controversial because of a Catch-22: Market transformation is deemed successful when the changed market is self-sustaining, but that determination cannot be made until after program interventions are ended. Often, however, the need for immediate energy and demand savings or immediate carbon-emissions reductions will mean that program interventions may need to continue, which would interfere with the evaluation of whether MT is self-sustaining. Market transformation success has also been defined in terms of higher sales of efficient measures than would have otherwise occurred against a baseline absent of program interventions. The real world, however, provides no such control condition. Evaluators must estimate these baselines from quantitative factors such as past market sales that may be sparse and/or inaccurate - particularly for new products. Evaluations must also defer to expert judgments on what these baselines may have been as well as on the degree of successful market transformation<sup>9</sup>. Due to the subjective nature of these judgments, it is imperative that baselines as well as milestone MT targets be determined and agreed upon through collaborative discussion by all stakeholders, and these targets may need periodic revision as deemed necessary by changing context.

Market transformation draws heavily upon diffusion of innovation theory<sup>10</sup>, with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped

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<sup>4</sup> Peloza, J., and York, D. (1999). “Market Transformation: A Guide for Program Developers.” Energy Center of Wisconsin. Available at: <http://www.ecw.org/ecwresults/189-1.pdf>

<sup>5</sup> Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) “From technology transfer to market transformation”. Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at [http://www.ecee.org/conference\\_proceedings/ecee/2001/Panel\\_2/p2\\_7/Paper/](http://www.ecee.org/conference_proceedings/ecee/2001/Panel_2/p2_7/Paper/)

<sup>6</sup> Sebold, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at [www.calmac.org](http://www.calmac.org).

<sup>7</sup> Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings*.

<sup>8</sup> York, D., (1999). “A Discussion and Critique of Market Transformation”, Energy Center of Wisconsin. Available at <http://www.ecw.org/ecwresults/186-1.pdf>.

<sup>9</sup> Nadel, S., Thorne, J., Sachs, H., Prindle, B., and Elliot, R.N. (2003). “Market Transformation: Substantial Progress from a Decade of Work.” American Council for an Energy-Efficient Economy, Report Number A036. Available at: <http://www.aceee.org/pubs/a036full.pdf>

<sup>10</sup> Rogers (1995) *Diffusion of Innovations*, 5<sup>th</sup> Ed.



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diffusion curve. In practice, however, the diffusion curve of products may span decades<sup>11</sup>. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects<sup>12</sup>. The ability to make causal connections between these market transformation effects and any particular program's activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are. First and foremost, they need to be designed specifically to address market transformation. "The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given to program designers.)"<sup>13</sup> The Strategic Plan recognizes that regulatory policies are not yet in place to support the success of market transformation efforts<sup>14</sup>, but also reflects the CPUC's directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions<sup>15</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the utilities look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin's guide for MT program developers<sup>16</sup> suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

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<sup>11</sup> Example in bottom chart of this graphic from NYTimes:  
<http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html>

<sup>12</sup> Sebold et al (2001) p. 6-5,

<sup>13</sup> Peters, J.S., Mast,B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume 1.* Available at <http://calmac.org/publications/19981215CAD0001ME.PDF>.

<sup>14</sup> CPUC (2008) Strategic Plan, p. 5.

<sup>15</sup> Nadel, Thorne, Saches, Prindle & Elliot (2003).

<sup>16</sup> Pelosa & York, (1999).

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The metrics and baselines described below in Tables 3 and 4 are presented for the purposes of starting the much-needed discussion between all key participants. These are suggestions, intended to allow key participants to pilot-test processes for establishing baseline metrics, tracking market transformation progress, and for refining evaluation tools. Early trial of these evaluation metrics will reveal any gaps in data tracking so that we may refine our processes before full-scale market transformation evaluations take place.

The set of metrics we selected is intentionally a small set, for several reasons. First, as mentioned, the full set of metrics and baselines need to be selected by key participants. Second, we anticipate that market share data for many mid- and low-impact measures will be too sparse to show MT effects and not cost-effective to analyze. Third, we selected core measures and metrics that would both be indicative of overall portfolio efforts. These measures are also likely to be offered on a broad level by other utilities, providing a greater base of sales and customer data that could be analyzed for far-reaching MT effects.

The IOUs are proposing a metric that is believed to reliably detect market transformation for energy efficiency solutions in the residential sector. While all metrics fall short of a perfect measure, the ideal metric would have a baseline that is already established that includes a reasonable and easy method of duplication and comparison. Market transformation cannot be measured on a year to year basis but will take several years and measurements to reliably discern trends. With this in mind, the IOUs propose the following metric:

Over the past several years a good baseline of market saturation has been established in the California Lighting and Appliance Saturation Study (CLASS). The original study was completed in 2000 and then updated in 2005. The overarching goal for these studies is to provide efficiency levels of appliances in order to understand future energy savings potential and past accomplishments in the residential sector. The IOUs propose that the values in these studies and the data made available in the on-line "California Residential Efficiency Saturation Tool" be used as the basis for the metric for EE in the residential sector. Specifically it is proposed that a new California Lighting and Appliance Saturation study be conducted in 2010 to estimate again the efficiency levels for key measures. A comparison could then be made to the previous baseline studies of 2000 and 2005 and a determination made if a trend is taking place that indicates that more energy efficient solutions are being installed in residential households.

As market transformation is more than just market share of measures, the suggested metrics also include attitudinal and behavioral metrics.

Attitudinal change is an important part of any market transformation effort. This change may be tracked with a battery of questions that probes customer attitudes, knowledge and awareness (AKA) of energy efficiency. In order to gauge an attitudinal based metric for this sector a battery of questions probing AKA among customers would have to be created and used to scale AKA. Examples of AKA would include knowledge of energy efficiency lighting and other specific measures. Evaluators could also draw from customer surveys used in past program evaluation studies to determine whether any response patterns would be a useful indicator of market transformation, moving forward. The dimensions of any scale need to be selected by the MT collaborative. The baseline response pattern to the AKA scale would need to be established early

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during the program cycle. Customers could be surveyed on an annual basis and changes in their AKA tracked along the scale. Responses of customers for a particular sub-program could be pulled out for separate analysis, as needed.

In addition, behavioral change is an important part of any market transformation effort. This change may be tracked with a battery of questions that probes customer past behavior and intentions about energy efficiency. In order to gauge a behavioral based metric for this sector a battery of questions about energy efficient behaviors could be used to create a scale of Energy Behavior. Evaluators could also draw questions about specific behaviors from customer surveys used in past program evaluation studies to determine whether any response patterns would be a useful indicator of market transformation, moving forward. The dimensions of any scale need to be selected by the MT collaborative. The behaviors that could be probed include maintenance behaviors to keep EE measures operating correctly, and behaviors that maximize energy efficiency of existing equipment. Customers could be surveyed early in the program cycle and their responses on the scale could serve as the baseline for subsequent behavioral change. Customers could be probed annually and their Energy Behavior change measured along the scale. Responses of customers for a particular sub-program could be pulled out for separate analysis, as needed.

Therefore, for the Residential sector, the approach to quantitative baseline and market transformation information is as follows:

**Table 3**

Metric A	Metric B	Metric C
Energy efficiency saturation of the following appliances as measured by the CLASS on-site survey.	Ratio of survey participants that seek/consider EE when making purchase decisions.	Behaviors of Residential sector as gauged based on a scale developed to measure (EE/green) behaviors.

Appliance	2000	2005	Change	% Change
Freezer UEC	728.00	626.50	101.50	13.9%
Heating AFUE	77.91	79.32	1.41	1.8%
Refrigerator UEC	931.55	721.18	210.37	22.6%
Dishwasher EF	0.48	0.50	0.01	2.5%
Washing Machine EF	1.32	1.77	0.45	34.5%
Water Heating EF	0.58	0.59	0.01	1.4%
Cooling SEER	9.50	10.31	0.81	8.5%
CFLs per Home*	0.32	3.51	3.19	996.9%

\*In the 2005 CLASS report, Page 51 Table 30 shows that CFLs per home jumped from 0.32 lamps/home in 2000 to 3.51 lamps/home in 2005

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### b) Market Transformation Information

As stated above, market transformation draws heavily upon diffusion of innovation theory, with the state of a market characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects. Therefore it is problematic, if not impractical, to offer internal annual milestones towards market transformation sectors and specific program activities.

As a consequence, it is not appropriate to offer more than broad and general projections. Any targets provided in the following table are nothing more than best guesstimates, and are subject to the effects of many factors and market forces outside the control of program implementers.

**Table 4**

<b>Residential Sector Internal Market Transformation Planning Estimates</b>			
	<b>2009</b>	<b>2010</b>	<b>2011</b>
Metric A	NA	Upward moving efficiency over time measured by CLASS	NA
Metric B	Upward moving average over time	Upward moving average over time	Upward moving average over time
Metric C	Upward moving average over time	Upward moving average over time	Upward moving average over time

### c) Program Design to Overcome Barriers

From the previous Program cycle, SCE's WHP received a diminutive amount of complete Home Performance reports from participating contractors with the incentive in place. The Program recognizes that the incentive amount may not be enough and it is essential to increase the incentive amount for each submission of completed reports from participating contractors. Program manager and CBPCA will also brainstorm a way of increasing the accountability/knowledge of participating contractors for turning in complete reports to overcome these barriers.

### d) Quantitative Program Targets

The Program aims to retrofit 300 homes in 2009, 495 homes in 2010, and 705 homes in 2011. By 2011, the Program also aims to complete a minimum of 7 Home Performance training sessions, 6 orientation seminars, and 6 business/marketing seminars.

**Table 5**

Program Name	Program Target by 2009	Program Target by 2010	Program Target by 2011

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Enrolled and Completed Homes Retrofit Projects	300	495	705
Completed Home Performance Technical Training Classes	2	3	2
: Completed Business/Marketing Seminars	2	2	2

e) Advancing Strategic Plan goals and objectives:

This program responds to the need for much larger energy savings in existing homes than is possible with conventional checklist audits or single measure improvement (prescriptive) programs. The WHP program design meets many of the program elements specified by the Energy Division and it is consist with the requirements of CLTEESP.

It addresses the key “whole house” strategy of the CLTEESP by influencing homeowner “decision triggers” to improving home energy efficiency and understand advantages to expand participation to reach savings goals. This program is also a vehicle to increase penetration of cost effective, high efficiency appliances and shell upgrades.

## **2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan**

### 6) Program Implementation

#### a. Statewide IOU Coordination

Comprehensive Home Performance Program is a third party program in SCG's territory. This Program will be implemented jointly with SCE. This collaboration will provide an opportunity for a cost effective program while increasing the comprehensiveness of the Program. SCG has been in active discussion with the other California IOU's and active California municipalities (SMUD and Anaheim Public Utilities) in planning Home Performance programs. As program develops, statewide coordination and consistency will be considered as applicable.

#### b. Program delivery and coordination

CBPCA will implement the program in collaboration with SCE and SCG's program manager and residential team. Implementation will include coordination with Energy Star, California Energy Commission (CEC)/PIER for needed R&D, and a variety of other allies. The WHP will be implemented in alignment with all applicable research, best practices, and policy movements. The following activities are part of the program implementation design:

##### Contractor solicitation and screening

The Program uses contractor lists provided by allied organizations such as the Institute for Heating and Air Conditioning Industries (IHACI), Air Conditioning Contractors of America (ACCA), National Association of the Remodeling Industry (NARI), Build It Green (BIG), Insulation Contractors of America (ICA), and solar groups. It will have a presence at key local conferences such as the Journal of Light Construction's (JLC) Remodelers Exhibition to advertise the Program directly to interested contractors. The WHP includes personal screening interviews to assure active interest and dissemination of the scope and intent of the training.

##### Technical training and field mentoring

Training and mentoring activities will include the following:

- Training to improve basic contractor skills and introduce the basic concepts of energy-efficient home repair and renovation practices.
- Training in building science, home assessment, and proper remediation including an intensive day of in-home hands-on diagnostic practice.
- Advanced training with an additional day in an actual home, and access to Building Performance Institute (BPI) technical certification.
- Small-group field mentoring in technical and proposal development activities.

## **2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan**

### Contractor business support

Many contractors are not successful with comprehensive home performance due to business rather than technical challenges. Business barriers range from staff training and motivation to team-building, work process scheduling and management, quality control, marketing, job estimation, and sales. At least two annual seminars in these business matters will be offered as well as a broad range of supporting materials such as data collection and homeowner report templates and regular monitoring of contractor activity. Contractors will be offered business planning guidance as needed, including help in grouping complementary trades and interests into fully job-capable teams.

### Incentives

WHP will offer financial incentives to both contractors and customers. Contractors will receive a financial incentive for home diagnostics, post retrofit quality assurance testing, and reporting of data. Customers will receive financial incentive for installing Home Performance measures performed by an eligible WHP contractor. As pointed in the program barriers section above, we are aware the current incentive levels are not sufficient to bring the desired program results. We are currently working with the implementers to come up with alternative ways to address this key issue

### Data collection, quality assurance and reporting

Energy simulation models will be combined with utility billing data for calibration for each project. To assure contractor reporting the payment of customer incentives will be tied to the contractor's delivery of full job data, utility bills and homeowner report. As required by ENERGY STAR, the Program's implementers will randomly select 5 percent of each contractor's reported retrofits for onsite job verification and review 100 percent of the job data inputs from contractors. Verifications will include homeowner interviews, intensive visual checklist inspections, and selective retesting of key items. A subset of these energy savings estimates may later be validated against the first year's after-retrofit utility bills plus climate data and homeowner interviews as needed to identify changes in other factors affecting energy use.

### Marketing/ implementation methods employed

Contractors will be instructed in cost-effective marketing methods. Media attention will be gained through free home retrofit contests. SCG may assist in media outreach and provide customer billing data to help identify and approach priority candidates. Realtors will be engaged as lead generators to identify clients of interest. Other groups will be engaged as appropriate. The program will coordinate, as applicable, with SCG's marketing activities and may include website links, bill inserts, press releases, referrals, and information in marketing collateral.

### Activities to be performed by subcontractors

A subcontractor will be involved in specifying, staffing, scheduling, and general oversight of CBPCA activities. A selected group of trainers and contractors will assist the subcontracted lead trainer with technical training and mentoring activities. Job verifications are assigned to qualified experts such as HERS raters. Other subcontractors

## **2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan**

will provide marketing assistance, promotional materials, energy simulation software support, etc.

### AB811

The Program will look for opportunities, through AB811, to work with local governments in installing energy efficiency improvements to residential properties and making those improvements more affordable.

i.                   Emerging Technologies program

This comprehensive retrofit program is an ideal early-adopter vehicle for new technologies such as the hot/dry air conditioner, energy use monitors for users, new approaches to hydronic heating, ecological insulation options, cool roof technologies, and even advanced solar hot water and PV installations.

ii.                   Codes and Standards program

The 2008 Title 24 code revision is the most relevant to this program's work. New requirements as well as adequate enforcement and compliance with older 2005 provisions (notably HVAC quality installation) will be required, monitored, and reported in this Program. WHP will be coordinated with the Codes & Standards program to ensure that the impacts of any code changes are incorporated into program design and implementation.

iii.                  WE&T efforts

The CLTEESP is supported through coordination with the WE&T Strategic Plan, whereby the third party implementer's unique approach towards development of qualified home retrofit technicians will lead to significant progress in the reduction of residential energy consumption over the next decade.

iv.                  Program-specific marketing and outreach efforts

Marketing campaign will be structured to continuously solicit contractors and market to customers throughout the life of the Program. Marketing efforts will be conducted using the following approach:

- i. **Marketing to Contractors:** The Program will market to contractors, through local chapters of various trade associations, plus targeted commercial contact databases.
- ii. **Marketing to the Customers:** The Program marketing strategy involves empowering the trained contractors to be the primary public educator and



## **2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan**

marketer. Those consumer marketing and education efforts help contractors develop and manage the customer leads that provide the necessary path to specific home performance jobs. This program will also target customers who have participated in utility audit programs to further increase the opportunity for a more comprehensive approach in meeting the customers EE needs. The Program will participate in select public events such as home shows and work with local media to publicize the Program's benefits. WHP will also market via direct mailing, brochures, and bill inserts to create interests of the Program.

Budget for these activities are included in the overall budget for this program.

SCE's marketing budget is \$175,438 and SCG's marketing budget is \$175,438 for this Program. The combined marketing budget for both IOU is \$350,876. It is approximately 10% of the third party implementer's total budget.

v. Non-energy activities of program

A truly comprehensive home retrofit includes some elements that are chosen by the homeowner primarily for reasons other than energy bill savings such as indoor air quality, noise abatement or structural deterioration problems. When building envelope enhancements are made, the homeowner typically receives along with these improvements health benefits, home integrity assurance from moisture problems, HVAC equipment longevity, and potential home value increase. At the program level, implementers review projects to identify and encourage all project components that contribute to energy savings as well as other benefits. At an individual project level, contractors seek to identify homeowner's desires, solve a full range of Home Performance deficiencies, and clearly explain how these deficiencies contribute to energy waste.

vi. Non-IOU Programs

The Program will be open to suggestion from Non-IOU Programs in order to achieve the Program's objectives.

vii. CEC work on PIER

Public Interest Energy Research (PIER) funded the development of Home Performance contracting protocols during 2003-2006. That program provided field testing and contractor feedback for the PIER project. In addition, PIER may fund further research into related topics including homeowner motivation, valuation of societal benefits, and

## **2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan**

comparative demonstration and analysis of methods for energy savings forecasting and verifications.

viii. CEC work on codes and standards

The 2008 Title 24 code revision is the most relevant to this program's work. WHP will be coordinated with the Codes & Standards program to ensure that the impacts of any code changes are incorporated into program design and implementation.

ix. Non-utility market initiatives

WHP coordinates and fulfills Home Performance with Energy Star requirements, and its contractors are allowed to display the Energy Star logo in their home performance marketing. CBPCA is actively allied with Build it Green and the U.S. Green Building Council, and provides energy related training and support to "green remodelers" in those organizations. The Lung Association's "Health House" program is another ally in promotion of whole house solutions. CBPCA is also involved in the Berkeley Solar Plan's efforts to incorporate substantial energy efficiency improvements and options such as whole house retrofits into solar installations.

c. Best Practices:

The Program offers a 9 day intensive Home Performance training for contractors who are interested in adding a Home Performance aspect to their contracting business. Contractors attend classroom training as well as learning hands on how to use many of the advance tools to asses a home's condition. Mentoring sessions are also conducted in order for the contractors to absorb more knowledge from professionals that have experience in the subject matter.

Contractors will be offered to attend a business/marketing seminar to successfully add the Home Performance aspect to their business and provide a business planning guide as needed.

Lessons Learned: Through experience both in SCG's WHP and similar Home Performance with Energy Star efforts elsewhere, a variety of lessons have been drawn that permit some key design refinements.

- Incentives are necessary to overcome the broad lack of market awareness of comprehensive energy retrofit opportunities and benefits.
- Contractors need incentives to create early demand and help the business model transition to Home Performance contracting.
- Incentives need to be tied to job pre/post-testing data to overcome contractor resistance to "paperwork" and the complexity of comprehensive testing.

## **2009-2011 Energy Efficiency Programs Comprehensive Home Performance Program Implementation Plan**

d. Innovation

This Program is innovative because it takes a “whole-house” approach instead of “prescriptive” approach. It offers the highest possible electric & gas savings per home due to its comprehensiveness. The improvement package is tailored to the needs of each existing home and its owner which minimizes lost opportunities.

e. Integrated/coordinated Demand Side Management

With collaboration of the third party implementer, this program will create additional energy savings and integration through inter-program referral and data sharing, and bundling of DSM solutions across energy efficiency, demand response, California Solar Initiative, Smart Meter, and other IDSM efforts.

f. Integration across resource types (energy, water, air quality, etc)

This Program will be able to integrate across resource types from energy to air quality. Customer who completes a Home Performance retrofit will not only improve their indoor air quality but also the outdoor air quality by reducing the carbon footprint of their home from making it more energy efficient.

g. Pilots

This pilot program is new to the SCG portfolio for the 2009-2011 program cycle. We are currently running a pilot study program on approximately 35 to 80 homes in different climate zones with certain criteria on existing homes. The program team will be shaking down the program to scale-up and to smooth out implementation issues outlined earlier.

h. EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

7) **Diagram of Program**

SDG&E is working with the other IOU's to complete this diagram.

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8) Program Logic Model

SDG&E is working with the other IOU's to complete this diagram.

## 2009 – 2011 Energy Efficiency Programs Local Non-Residential Incentive Program Implementation Plan

- 1) Program Name: Local Non-Residential Incentive Partnership  
Program ID number: LGP2O
- 2) Projected Program Budget Table

**Table 1<sup>1</sup>**

Program #	Main Program Name/Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
	Market Sector Programs					
	SCG Local Non-Residential Incentive Partnership					
	#Local05 - Local Non-Residential BID	\$ 316,042	\$ 3,150	\$ 8,755,923	\$ -	\$ 9,075,115
	<b>TOTAL:</b>	<b>\$ 316,042</b>	<b>\$ 3,150</b>	<b>\$ 8,755,923</b>	<b>\$ -</b>	<b>\$ 9,075,115</b>

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

- 3) Projected Program Gross Impacts Table<sup>2</sup> – by calendar year

**Table 2**

Program #	Main Program Name/Sub-Programs	2009-2011 Three-Year EE Program Gross kWh Savings	2009-2011 Three-Year EE Program Gross kW Savings	2009-2011 Three-Year EE Program Gross Therm Savings
	Market Sector Programs			
	SCG Local Non-Residential Incentive Partnership			
	#Local05 - Local Non-Residential BID	0	0	1,309,959
	<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>1,309,959</b>

These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

- 4) Program Description

<sup>1</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here  
Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

<sup>2</sup> For all-electric IOUs, the therm column should include interactive effects.

## **2009 – 2011 Energy Efficiency Programs Local Non-Residential Incentive Program Implementation Plan**

### a. Describe program

The mission of the LRNP is to provide integrated energy, resource and emissions conservation solutions to California Industry and to encourage and enable a higher degree of energy-efficiency market penetration by increasing the amount of comprehensive high efficiency measures being installed.

The SoCalGas Local Non-Residential Incentive Partnership (LNRP) provides incentives for energy-efficient retrofits or replacements of existing equipment at SoCalGas customer sites. Participants may be either customers or energy-efficiency service providers (EESP's) acting as project sponsors for activities at customer sites. To qualify, a project must save a minimum of 1,000,000 therms per year. Associated energy, resource such as water, sewerage and emissions, and GHG savings will be considered when evaluating a project for funding. A project may consist of a single project at a single site, or may be aggregated from multiple projects belonging to a single customer, and may include a variety of measures.

LNRP is designed to serve the largest non-residential customers within the SoCalGas service territory. Non-residential customers in this group are comprised of the following industry sub-segments: Government/Utilities, Manufacturing/Processing Industries and Institutional. Each sub-segment has distinct energy use patterns, differences in equipment and facility design, and various management structures and decision-making processes. Because each industry sub-segment is unique, LNRP will use a customized, customer-focused approach. Participating customers, taking into account their individual energy and resource conservation opportunities as well as internal hurdle rates, will propose or "bid" to SoCalGas the incentive level needed to enable large EE and Resource savings projects. This ensures that LNRP will be adaptable to the unique needs of each market segment.

The program is designed to be flexible and cost effective: The project sponsor proposes a project and desired incentives. Incentives may cover up to 100% of the incremental project costs less any additional funding received from other sources. Measurement and verification (M&V) is required for all projects. As a performance-based incentive program, the approved M&V report will ultimately determine the energy savings for each project. The total sum of incentives paid for a project may not exceed the amount "bid" by the customer and agreed to by SoCalGas.

New to this program cycle, LNRP will offer adders that will incent customers to act expeditiously on EE projects. *A 1% incentive bonus will be offered to customers that expedite measure installation and complete their EE project within 120 days of acceptance of the customer's bid.* In addition, customers who participate in the LNRP program may be eligible to receive additional funding to join The Climate Registry if they are not a member.

### b. List measures

The targeted measure types include combustion and combustion control systems, steam systems, Process Control systems, Central Plant facilities, Adiabatic Pre-Reformers, hydrogen recovery systems, Progressive Crude Distillation systems, upgrades to Distillation Columns, heat exchanger improvements and heat recovery systems, or any very large scale process that consumes resources (natural gas, water, power) and has emissions (waste water, NOx, GHG) on orders of magnitude.

## **2009 – 2011 Energy Efficiency Programs Local Non-Residential Incentive Program Implementation Plan**

### c. List non-incentive customer services

The LNRP provides targeted assistance on large integrated energy efficiency and resource conservation projects in association with both the private sector and Government Agencies such as the CEC and DOE. The Program will offer technical assistance services that include integrated, in-depth energy and resource conservation assessments, technical reports on assessments, provide project engineering review and assist with formulating M&V protocols in order to alleviate pressure on customer staff and conquer the technical, personnel and financial barriers currently blocking many projects from being identified and implemented.

### 5) Program Rationale and Expected Outcome

#### a) **Quantitative Baseline and Market Transformation Information**

Market Transformation (MT) metrics proposed in Tables 3 and 4 are preliminary. The proposed metrics are meant to initiate a collaborative effort to elaborate meaningful metrics that will provide overall indicators of how markets as a whole are evolving. MT metrics should neither be used for short-term analyses nor for specific program analyses; rather, should focus on broad market segments.

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process and the successful end state have not yet converged. The CPUC defines the end state of MT as “Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market.”<sup>3</sup> The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies<sup>4</sup>.

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical and 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures<sup>5</sup>. Markets are social institutions<sup>6</sup>, and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains<sup>7</sup> as well as changes to codes and standards. Resource acquisition programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation

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<sup>3</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>4</sup> California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

<sup>5</sup> Pelozo, J., and York, D. (1999). “Market Transformation: A Guide for Program Developers.” Energy Center of Wisconsin. Available at: <http://www.ecw.org/ecwresults/189-1.pdf>

<sup>6</sup> Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) “From technology transfer to market transformation”. Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at [http://www.eceee.org/conference\\_proceedings/eceee/2001/Panel\\_2/p2\\_7/Paper/](http://www.eceee.org/conference_proceedings/eceee/2001/Panel_2/p2_7/Paper/)

<sup>7</sup> Sebold, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at [www.calmac.org](http://www.calmac.org).

## 2009 – 2011 Energy Efficiency Programs Local Non-Residential Incentive Program Implementation Plan

progress<sup>8</sup>. According to York<sup>9</sup>, “Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are 3 ways to achieve market transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy.”

The question of what constitutes successful transformation is controversial because of a Catch-22: Market transformation is deemed successful when the changed market is self-sustaining, but that determination cannot be made until after program interventions are ended. Often, however, the need for immediate energy and demand savings or immediate carbon-emissions reductions will mean that program interventions may need to continue, which would interfere with the evaluation of whether MT is self-sustaining. Market transformation success has also been defined in terms of higher sales of efficient measures than would have otherwise occurred against a baseline absent of program interventions. The real world, however, provides no such control condition. Evaluators must estimate these baselines from quantitative factors such as past market sales that may be sparse and/or inaccurate - particularly for new products. Evaluations must also defer to expert judgments on what these baselines may have been as well as on the degree of successful market transformation<sup>10</sup>. Due to the subjective nature of these judgments, it is imperative that baselines as well as milestone MT targets be determined and agreed upon through collaborative discussion by all stakeholders, and these targets may need periodic revision as deemed necessary by changing context.

Market transformation draws heavily upon diffusion of innovation theory<sup>11</sup>, with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades<sup>12</sup>. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects<sup>13</sup>. The ability to make causal connections between these market transformation effects and any particular program’s activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are. First and foremost, they need to be designed specifically to address market transformation. “The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given

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<sup>8</sup> Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings*.

<sup>9</sup> York, D., (1999). “A Discussion and Critique of Market Transformation”, Energy Center of Wisconsin. Available at <http://www.ecw.org/ecwresults/186-1.pdf>.

<sup>10</sup> Nadel, S., Thorne, J., Sachs, H., Prindle, B., and Elliot, R.N. (2003). “Market Transformation: Substantial Progress from a Decade of Work.” American Council for an Energy-Efficient Economy, Report Number A036. Available at: <http://www.aceee.org/pubs/a036full.pdf>

<sup>11</sup> Rogers (1995) Diffusion of Innovations, 5<sup>th</sup> Ed.

<sup>12</sup> Example in bottom chart of this graphic from the New York Times: <http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html>

<sup>13</sup> Sebold et al (2001) p. 6-5,



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to program designers.)<sup>14</sup>” The Strategic Plan recognizes that regulatory policies are not yet in place to support the success of market transformation efforts<sup>15</sup>, but also reflects the CPUC’s directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions<sup>16</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the utilities look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin’s guide for MT program developers<sup>17</sup> suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

The metrics and baselines described below in Tables 3 and 4 are presented for the purposes of starting the much-needed discussion between all key participants. These are suggestions, intended to allow key participants to pilot-test processes for establishing baseline metrics, tracking market transformation progress, and for refining evaluation tools. Early trial of these evaluation metrics will reveal any gaps in data tracking so that we may refine our processes before full-scale market transformation evaluations take place.

The set of metrics we selected is intentionally a small set, for several reasons. First, as mentioned, the full set of metrics and baselines need to be selected by key participants. Second, we anticipate that market share data for many mid- and low-impact measures will be too sparse to show MT effects and not cost-effective to analyze. Third, we selected core measures and metrics that would both be indicative of overall portfolio efforts. These measures are also likely to be offered on a broad level by other utilities, providing a greater base of sales and customer data that could be analyzed for far-reaching MT effects.

Therefore, for the Commercial sector, the following approach to quantitative baseline and market transformation information is presented as follows.

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<sup>14</sup> Peters, J.S., Mast, B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume I.* Available at <http://calmac.org/publications/19981215CAD0001ME.PDF>.

<sup>15</sup> CPUC (2008) Strategic Plan, p. 5.

<sup>16</sup> Nadel, Thorne, Saches, Prindle & Elliot (2003).

<sup>17</sup> Pelozo & York, (1999).

## **2009 – 2011 Energy Efficiency Programs Local Non-Residential Incentive Program Implementation Plan**

The IOUs are proposing metrics believed to reliably market transformation for Energy Efficient equipment in key energy end-use areas. While all metrics fall short of a perfect measure, the ideal metric would have a baseline that is already established that includes a reasonable and easy method of duplication and comparison. Market transformation cannot be measured on a year to year basis but will take several years and measurements to reliably discern trends.

The overarching purpose for this metrics is to gauge the saturation levels of energy efficient lighting and high efficiency boilers in order to understand past accomplishments and future energy savings potential in the commercial sector. Specifically it is proposed that new lighting and boiler saturation studies be conducted. The objective of these studies would be to estimate the efficiency levels of equipment in the field. A comparison could then be made to comparable baseline studies and a determination made if a trend is taking place that indicates that more energy efficient solutions are being installed in commercial applications. As market transformation is more than just market share of measures, the suggested metrics also include an attitudinal metric.

Attitudinal change is an important part of any market transformation effort. This change may be tracked with a battery of questions that probes customer attitudes, knowledge and awareness (AKA) of energy efficiency. In order to gauge an attitudinal based metric for this sector a battery of questions probing AKA among customers would have to be created and used to scale AKA. Examples of AKA would include knowledge of energy efficiency lighting and other specific measures. Evaluators could also draw from customer surveys used in past program evaluation studies to determine whether any response patterns would be a useful indicator of market transformation, moving forward. The dimensions of any scale would need to be selected by the MT collaborative. The baseline response pattern to the AKA scale would need to be established early during the program cycle. Customers could be surveyed on an annual basis and changes in their AKA tracked along the scale. Responses of customers for a particular sub-program could be pulled out for separate analysis, as needed. In addition, the suggested metrics also include a behavioral metric.

In addition, behavioral change is an important part of any market transformation effort. This change may be tracked with a battery of questions that probes customer past behavior and intentions about energy efficiency. In order to gauge an behavioral based metric for this sector a battery of questions about energy efficient behaviors could be used to create a scale of Energy Behavior. Evaluators could also draw questions about specific behaviors from customer surveys used in past program evaluation studies to determine whether any response patterns would be a useful indicator of market transformation, moving forward. The dimensions of any scale would need to be selected by the MT collaborative. The behaviors that could be probed include maintenance behaviors to keep EE measures operating correctly, and behaviors that maximize energy efficiency of existing equipment. Customers could be surveyed early in the program cycle and their responses on the scale could serve as the baseline for subsequent behavioral change. Customers could be probed annually and their Energy Behavior change measured along the scale. Responses of customers for a particular sub-program could be pulled out for separate analysis, as needed.

With this discussion in mind, IOUs propose the following metrics for this sector:

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**Table 3**

	<b>Baseline Metric</b>			
	<b>Metric A</b>	<b>Metric B</b>	<b>Metric C</b>	<b>Metric D</b>
Measure-based metric	Ratio of high efficiency lighting installed over a base lighting case			
Measure-based metric		Ratio of high efficiency boilers over a base case		
Attitudinal-based metric			Ratio of survey participants that have built EE practices into their business models when considering capital improvements	
Behavioral-Adoption based metric				Behaviors of sector are gauged based on a scale developed to measure energy efficient behaviors in businesses

**b) Market Transformation Information**

As stated above, market transformation draws heavily upon diffusion of innovation theory, with the state of a market characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects. Therefore it is problematic, if not impractical, to offer internal annual milestones towards market transformation sectors and specific program activities.

As a consequence, it is not appropriate to offer more than broad and general projections. Any targets provided in the following table are nothing more than best guesstimates, and are subject to the effects of many factors and market forces outside the control of program implementers.

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**Table 4**

	<b>Internal Market Transformation Planning Estimates</b>		
	<b>2009</b>	<b>2010</b>	<b>2011</b>
Ratio of high efficiency lighting installed over a base lighting case	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time
Ratio of high efficiency boilers over a base case	Improvement over baseline, over time	Improvement over baseline, over time	Improvement over baseline, over time
Ratio of survey participants that have built EE practices into their business models when considering capital improvements	Establish baseline	Improvement over baseline, over time	Improvement over baseline, over time
Behaviors of sector are gauged based on a scale developed to measure energy efficient behaviors in businesses	Establish baseline	Improvement over baseline, over time	Improvement over baseline, over time

a. Program Design to Overcome Barriers:

In general, the LNRP is an energy efficiency retrofit program designed to address barriers due to: (1) budgetary planning horizons for large projects (e.g., long range capital expenditure planning versus calendar year planning) that differ from CPUC program funding cycles, (2) longer planning horizons that do not coincide with program funding period, (3) new and innovative technologies, and (4) statewide limitations on the maximum incentive payments to individual customers or project sponsors.

LNRP overcomes these barriers by providing financial incentives for SoCalGas customers and/or project sponsors who submit unique and innovative large, nonresidential energy-savings projects and/or programs, and propose an incentive amount (within program guidelines) necessary to implement the project. Incentives may cover up to 100% of the project’s measure costs, up to certain limits (\$/therm saved) that vary by measure type.

The desired results of LNRP are in step with the Industrial Goal 1 of the LTSP as stated in section 4, page 46, which is to “Support California industry’s adoption of energy efficiency by integrating energy efficiency savings with achievement of GHG goals and other resource conservation goals.”, LTSP Commercial sector goal of “developing a multipronged approach to advance the practice of integrated design”, and the LTSP Agricultural goal of developing a roadmap agricultural through which “regulations, financing mechanisms and incentive programs affecting the management of energy, air and water resources, solid waste and climate change will be coordinated to mutual advantage.”

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b. Quantitative Program Targets

**Table 5**

Program Name	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #1 Participants	2	2	2
Target #2 Therms		5M	5M
Target #3			
Target #4			

[e.g. Target #1: 20,000 refrigerators recycled by 2011; or Partnerships with 5 of the 10 top homebuilders by 2010]

c. Advancing Strategic Plan goals and objectives:

The unifying objective of the California Long Term Energy Efficiency Strategic Plan (LTSP) is to support California Industry’s adoption of energy efficiency by integrating energy efficiency savings with achievement of GHG goals and other resource management objectives. (Section 4, page 45). The LNRP will support this effort by addressing barriers specifically mentioned in the LTSP. Specifically, LNRP will:

- Leverage industry-relevant technical assistance and qualified personnel resources available to customers through the Statewide Audit program, to provide facility/process energy assessments to alleviate difficulty in accessing industry relevant technical assistance
- Provide “carrots” in the form of financial incentives to help energy efficiency project paybacks meet internal hurdle rates.
- Allow customers to submit competitive bids for energy projects which will enable SoCalGas to move energy efficiency projects forward but will also allow SoCalGas to choose project bids that provide the greatest benefit to ratepayers
- Will allow SoCalGas to overcome funding limits on large projects and allow SoCalGas to provide integrated assessments in association with other agencies and to bring other sources of funding to the table to help move projects to implementation.

The LNRP will also provide education and informational resources through marketing and program outreach efforts. These program elements will work in concert to transform the market towards sustained, long-term energy savings.

The LNRP will be applied broadly across very large commercial, industrial and agricultural sectors. The program will reduce capital costs of large scale, comprehensive energy efficiency projects and systems improvements, and will engage all relevant parties (IOU’s, water agencies, air boards, etc...) in the process. The high monetary value of the incentives offered coupled with the comprehensive nature of the EE projects directly assists all very large non-residential customers with implementing EE projects across the board. This strategy of the LNRP is in alignment with the vision of the LTSP which is to have “the goals, the designs and funding of such programs for energy, air, and water improvements will be fully coordinated.”

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The LNRP leverages WE&T efforts for large commercial, industrial & agriculture customers described in the WE&T PIP by informing customers of relevant training opportunities.

### 6) Program Implementation

#### a. Statewide IOU Coordination:

The SoCalGas Local Non-Residential Program (LNRP) is a local program. Program evaluation results will be shared with statewide IOU teams for potential inclusion in future program designs.

- i. Program name: The SoCalGas Local Non-Residential Program (LNRP)
- ii. Program delivery mechanisms: SoCalGas account executives, engineers, and consultants.
- iii. Incentive levels: Negotiated up to 100% of the incremental project costs, less additional funding received from other sources
- iv. Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms. The target market for the LNRP is SoCalGas' largest non-residential customers. Outreach will be provided by account executives and relevant education and training events and presented to customers in a variety of formats including but not limited to: program kick-off meetings, seminars, e-mail, direct contact by SoCalGas' Account Executives and other representatives. SoCalGas will also engage ESCOs and trade associations, to generate interest and participation in the program. Additional marketing activities may include, program materials, website development, participation in events, press releases and general media attention.  
Implementation efforts will include any necessary updates to the development and design of program literature, application forms, promotional items, direct mailers, bill inserts, and other appropriate program literature, as needed to effectively implement the Program.
- v. IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable: SoCalGas will coordinate with appropriate IOUs, POUs, and government agencies based on site and project specific factors. The program is designed to be inclusive and will utilize all relevant resources to move resource efficiency projects forward.
- vi. Similar IOU and POU programs: This is an innovative, comprehensive resource efficiency program and there are no similar programs at this time. The LNRP engages all parties that have an interest and can contribute resources to move the project forward.

The SoCalGas Local Non-Residential Incentive Partnership (LNRP) will continue coordination with other local and statewide agencies, program sponsors and other 3rd party programs to promote energy-efficiency, eliminate overlaps, and provide outreach to customers and project sponsors.

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b. Program delivery and coordination:

- i. Emerging Technologies program:  
Refer to ET PIP
- ii. Codes and Standards program:  
The program relies on the Codes and Standards program to maintain an updated and relevant list of measures that will support savings. As Codes and Standards impact measures, the program will act to align itself with appropriate offerings. Programs will include new offerings that will allow flexibility in adapting to changes in codes and standards, market trends, and technologies. Planned enhancements to Title 24 will be reflected in incentive levels and eligible measures and services. As the market moves toward “low energy” or “zero net energy” buildings, specific changes to each element of the bundling will be made to ensure the latest cost effective technologies/services (e.g. superboiler) made available as these technologies transition from 1) R&D to 2) Emerging technologies to 3) Incubation to 4) Mainstream.
- iii. WE&T efforts:  
WE&T is a portfolio of education and training programs that showcase energy efficient equipment found on the list of measures offered in the program. The education and training takes place through energy centers, technology test centers, and education and training program offerings. In addition to providing the education and training, the classes also address how customers engage the energy efficiency program offerings relative to the class. An Energy Efficiency representative will be present at all relative classes to provide detailed information on the application process to the relevant Energy Efficiency program.
- iv. Program-specific marketing and outreach efforts (provide budget)  
Outreach will be provided by account executives and relevant education and training events and presented to customers in a variety of formats including but not limited to: program kick-off meetings, seminars, e-mail, direct contact by SoCalGas’ Account Executives and other representatives. SoCalGas will also engage ESCOs and trade associations, to generate interest and participation in the program. Additional marketing activities may include, program materials, website development, participation in events, press releases and general media attention.
- v. Non-energy activities of program  
The LNRP is a total resource conservation program and all activities are designed to support integrated, comprehensive projects. SoCalGas may work with water agencies to coordinate resources for energy saving projects that also save water. Similarly, SoCalGas may coordinate with ARB and Air Quality Management Districts on energy savings projects that significantly reduce emissions.
- vi. Non-IOU Programs

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The Program will continue to engage with Air Quality Management Districts, CEC, CARB, DOE, water agencies, and other government agencies responsible for regulating the various aspects and operations of customer facilities participating in the programs

vii. CEC work on PIER

The Program will interact with the Emerging Technologies Program to leverage new technologies to increase the list of measures available for energy efficiency projects. The portfolio staff actively works to incorporate promising emerging technologies and PIER projects. The program will work with PIER on researching new technologies for evaluation and testing for application in mainstream projects.

viii. CEC work on codes and standards

See Section 6) a. ii

ix. Non-utility market initiatives

The program will support, educate customers, and/or enforce such initiatives as AB32, renewables, ANSI certification, facility benchmarking, Continuous Energy Improvement, California Green Building Initiative, and other initiatives as directed. SoCalGas will remain engaged in these efforts and work to influence the development of increasingly higher standards.



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### c. Best Practices:

The LNRP program approach constitutes “best practice” by:

- Providing cost-effective energy efficiency.
  - LNRP reimburses up to 100% of the energy efficiency project cost.
  - LNRP also enables SoCalGas to negotiate with very large customers to get energy efficiency projects implemented.
- Producing significant energy savings.
  - The incentive options offered by LNRP will enable SoCalGas to help implement EE projects due to the program’s flexibility in customizing appropriate energy efficiency solutions and funding for a diverse range of customers.
- Focused cost-effective resource program.
  - The LNRP can select “bids” that provide the greatest energy and resource savings benefits and negotiate on “bids” that are less beneficial to ratepayers
- Avoiding lost opportunities by helping customers realize “total benefits” that a large energy efficiency project will bring.
- Producing both short and long term energy savings.
- Produces co-branding opportunities supporting the reduction of greenhouse gases.
  - LNRP is co-branded with SoCalGas’ “Cool Planet Project”, a program that rewards LNRP participants with an annual membership to The Climate Registry
  - LNRP will enable SoCalGas to work in association with water agencies, air boards, waste water treatment agencies and electric utilities to move projects forward.
- Providing an application process that is both easy and friendly.
  - Once an LNRP project has been approved, customers/Project Sponsors meet with Utility EE Staff to agree to a plan for their project and set up reasonable milestones to gauge the progress of a project. The SoCalGas Program Manager will work closely with the Project Sponsor to facilitate the review and payment process.

### d. Innovation:

The LNRP is very innovative in its approach to initiating EE, resource conservation and GHG reduction projects. The LNRP provides very large customers a “single point of contact” for very large projects, it is comprehensive in its approach to all conservation opportunities for very large projects in that it brings all relevant parties to the table on a project, it is innovative in that it allows very large customers to state what funding level will make a very large project actually happen, and its approach of bringing multiple sources of project funds to the table gets more resources involved in making the project happen but potentially reduces funding required from each source.

Another innovative approach is how the project measurement & verification (M&V) is handled. Customers/Project Sponsors have the option of having SoCalGas’ Industrial End User Engineers and their third-party Engineering experts assist with the project M&V at no cost or the Project Sponsor can perform the project EM&V themselves.

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The “Accelerated Installation Bonus”: Participants who install measures within 120 days will be eligible to receive an additional 1% to their incentive payment.

Finally, LNRP is innovative in that it directly supports regional efforts to control and reduce greenhouse gas emissions. LNRP is co-branded with SoCalGas’ “Cool Planet Project.” The Cool Planet Project is a program that possibly rewards LNRP participants with an annual membership to The Climate Registry.

e. Integrated/coordinated Demand Side Management:

An identified challenge to integrating energy efficiency and resource conservation programs is that, in the past, each program and agency focused only on their piece of the agenda. For many large projects, the single focus and single incentive payment of the EE agency or conservation agency wasn’t enough to make a project viable. By focusing on the larger, more integrated picture, this will very likely make EE, resource conservation and GHG reduction projects more “viable” for customers and agencies. To overcome these differences, the LNRP will be offered in an integrated and coordinated marketing effort, showcased in consolidated applications, collateral, web sites, and events, where applicable. By being a part of a bundling of program elements and offerings, customers will have the opportunity to engage parties that are relevant to their projects and apply for project incentives from multiple sources.

f. Integration across resource types

LNRP supports regional efforts to control and reduce greenhouse gas emissions, water consumption, waste water discharge and air quality emissions. SoCalGas will coordinate with power, water, wastewater, and air quality agencies to provide customers support for their integrated project. Participants are eligible to take part in SoCalGas’ Cool Planet Project. The Cool Planet Project is a program that may reward LNRP participants with an annual membership to The Climate Registry. The LNRP also works with water agencies to document water conservation actions by customers and, through industrial plant assessments, specified measures that both conserve energy and reduce emissions. These benefits are in addition to the incentive payments offered by LNRP.

g. Pilots: N/A

h. EM&V:

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

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7) Diagram of Program :

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8) Program Logic Model:

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- 1) Program Name and Program ID number.  
 Program Name: On-Bill Financing (OBF)  
 Program ID: N/A

Note, OBF is not an actual program, but rather a funding mechanism for other programs. Thus many sections of the PIP template are not applicable to OBF.

- 2) Projected Program Budget

**Table 1<sup>1</sup>**

Program #	Main Program Name/Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
	Market Sector Programs					
	SCG Local On-Bill Financing (OBF)					
	#Local01 - OBF	\$ 524,892	\$ 673,522	\$ 1,646,996	\$ -	\$ 2,845,410
	<b>TOTAL:</b>	<b>\$ 524,892</b>	<b>\$ 673,522</b>	<b>\$ 1,646,996</b>	<b>\$ -</b>	<b>\$ 2,845,410</b>

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

- 3) Projected Program Gross Impacts Table

**Table 2**

Program #	Main Program Name/Sub-Programs	2009-2011 Three-Year EE Program Gross kWh Savings	2009-2011 Three-Year EE Program Gross kW Savings	2009-2011 Three-Year EE Program Gross Therm Savings
	Market Sector Programs			
	SCG Local Sustainable Communities Case Studies Program			
	#Local03 - Local Sustainable Communities (RMV)	0	0	0
	<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>0</b>

Note: This program is a mechanism for facilitating energy savings and energy savings are claimed via core programs.

<sup>1</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.

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These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

### 4) Program Description<sup>2</sup>

The On-Bill Financing Option is designed primarily to facilitate the purchase and installation of comprehensive, qualified energy efficiency measures by customers who might not otherwise be able to act given capital constraints and/or administrative and time burdens. It is designed to build on the success of the 2006-2008 program cycle offering. SoCalGas proposes to establish a \$3.5 million sustainable loan pool from non-PGC ratepayer funds to fund loans during 2009, 2010 and 2011.

Approved customers are eligible to receive a full rebate or incentive from the participating energy efficiency programs and to finance the balance of qualified energy efficiency measures. Loan is not transferable. Partial or non-payment of loan could result in shut-off of utility service and turned over for collection.<sup>3</sup>

#### **Option Features**

- Interest-free, unsecured loans
- Non-Institutional customers<sup>4</sup>: Loans offered per meter from \$5,000-\$100,000 with a maximum five year loan term
- Institutional customers<sup>5</sup>: Loans offered per meter from \$5,000- \$250,000, with a maximum loan term of ten years or useful life of measure(s) (whichever is shorter)
- Monthly payment on a term loan is billed on the participating customer's utility bill.
- No penalty for early repayment

#### **Eligible Customers:**

- Non-residential customers (including institutional customers) and owners of multifamily units who do not reside on the premises.
- Must have continuous utility service with SoCalGas for at least the 24 immediately preceding months in the same business and with a minimum of 12 months of energy usage history at the current meter.
- Must be in good credit standing as determined by the Utility

#### **Project Eligibility**

- Measures and/or equipment must be installed at the meter of the account holder of record in which the loan is being made.<sup>6</sup>

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<sup>2</sup> For history and additional information, see Prepared Direct Testimony of Athena Besa and Mark Gaines 7.28.08

<sup>3</sup> Per Rule No. 40 On-Bill Financing Program

<sup>4</sup> Non-Taxpayer-funded non-residential customers and owners of multifamily units who do not reside on the premises

<sup>5</sup> Tax-payer funded government institutions such as counties, cities, etc.

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- Project must meet terms and conditions of one or more energy efficiency programs offered through the Utility
- Project must meet “simple payback” criterion
  - Projected energy savings are used to calculate payback period
- Loan term is tied to the payback period
  - Maximum project payback for tax payer funded Institutions is 10 years or useful equipment life (whichever is shorter); for all other projects is 5 years.

**5) Program Rational and Expected Outcome**

In accordance with the California Energy Efficiency Strategic Plan, the On-Bill Financing Option will increase comprehensive participation in energy efficiency programs across sectors and local government partnerships, while addressing untapped energy efficiency potential. OBF will focus on quality audits and installations to address all feasible end-uses. Furthermore, Institutional entities that may have limited participation traditionally in energy efficiency programs due to capital constraints and long budget cycles will be targeted for energy efficiency measures and financing. Proponents advocating for the inclusion of the On-Bill Financing Option in overall utility portfolios argue that the availability of this type of opportunity allows more customers to participate in energy efficiency programs.

On-Bill Financing will leverage existing energy efficiency programs.

Desired results of the OBF Option are:

- Promote high efficiency measure installations and increase participation in energy efficiency programs
- Provide incremental energy savings from increased customer participation and ability to install a more comprehensive package of measures
- Provide convenient, accessible financing for customers to utilize with energy efficiency programs and ease of repayment through the utility bill

a) Quantitative Baseline and Market Transformation Information:

**Table 3:**

	Baseline Metric		
	<u>Metric A</u>	<u>Metric B</u>	<u>Metric C</u>
Overall Program			
Sub-Program #1			
Sub-Program #2			
Sub-Program #3			

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<sup>6</sup> Projects may be combined if the meters have identical customer of record, are on the same premise (per SoCalGas Rule 1), meet all credit criteria and the total for combined projects meets loan minimum, maximum and payback criteria.

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Market Transformation has not been a major focus of the California energy efficiency programs since the energy crisis. Consequently, relatively little attention has been given in recent years to identifying and gathering data on indicators of change towards market transformation. For some programs or sub-programs that promote a single end use or measure, there may be some data available for this purpose, probably from industry sources, that we have not yet identified. For many of the programs, however, this kind of long-term, consistent, and expensive data collection has not been done in California.

The utility program planners have worked closely with their respective EM&V staffs and with each other to identify available information and propose potential metrics. Each utility and each program has some data available, but attempts to distill the limited available information into a common set of agreed-upon metrics have proved far more difficult to accomplish. Offering metrics in which there is not strong confidence would not be productive. Therefore, the utilities respectfully exclude "draft" metrics at this time and instead suggest a means of developing meaningful indicators.

The utilities will develop meaningful baseline and market transformation concepts and metrics for programs that do not currently have them, and then propose to design and administer studies to gather and track consistent, reliable and valid baseline and market effects data. We would propose to use the program logic models and The California Evaluation Framework (2004) as guides, and to begin this work after approval of the Application using funding provided for Evaluation, Measurement & Verification.

We expect that the baseline studies (1) adequately describe the operation of markets that are targeted by a program, (2) confirm our tentative identification of measurable parameters that would indicate changes towards greater efficiency in the market(s) and that are likely to be affected by the program, and (3) gather the current values of those parameters, to serve as baselines against which future market movement can be tracked.

b) Market Transformation Information

**Table 4:**

<b>Internal Market Transformation Planning Estimates</b>			
Market Sector and Segment	2009	2010	2011
Metric A			
Metric B			
Metric C			

As explained immediately above, the utilities propose to provide these draft metrics when available.

c) Program Design to Overcome Barriers:

d) Quantitative Program Targets:

**Table 5:**



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Program Name	Program Target by 2009	Program Target by 2010	Program Target by 2011
Target #1			
Target #2			

- e) Advancing Strategic Plan Goals and Objectives:
- 6) Program Implementation
  - a. Statewide IOU Coordination:

OBF will be administered as a local funding mechanism.

- b. Program delivery and coordination:

Loans will be offered in program years 2009, 2010 and 2011, or until loan funds are spent and/or committed. Marketing efforts for OBF will be integrated with utility and third party energy efficiency offerings.

SoCalGas has made a number of modifications to existing systems and procedures to facilitate implementation of OBF. These modifications are transparent to the customer, involving enhancements to the customer information database, billing system and bill format. Additionally, changes to tariffs and rules have been filed with the Commission and internal procedures and processes updated.

Marketing messages and materials will be integrated in the individual energy efficiency programs as well as in utility information and outreach programs. OBF materials such as application forms, loan agreements and disclosure notices will be updated to reflect program cycle guidelines.

Utility will review applications submitted by customers, contractors and account executives for compliance with credit check criteria and project payback. Utility will notify parties of approved applications and provide loan documents for customer signature; customers failing to meet the credit check or payback criteria will be referred to the appropriate energy efficiency program(s). Upon notification that installation is complete and receipt of appropriate paperwork, utility will verify installation and release funds.

Upon release of funds, utility will enter loan payment into the billing system. Utility will begin monitoring remittance activity, tracking accounts moving into collections and analyzing any loans going into default.

Customers interested in installing energy efficiency improvements at their facilities may become aware of the utility’s energy efficiency programs in a number of ways: through direct marketing, through their contractor or from a utility account executive. The customer, working with their account executive or contractor, will decide upon the

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comprehensive package of energy efficiency measures to be installed. Upon notification of approval to participate in the OBF option, the customer will schedule installation by the contractor. After installation is complete, utility will inspect installed measures, release the funds for the project's authorized costs and customer's loan repayment will begin appearing on the monthly utility bill during the next billing cycle.

- i. Emerging Technologies program – On-Bill Financing is applicable to Emerging Technologies.
  - ii. Codes and Standards program – On-Bill Financing is not applicable to the Codes & Standards program.
  - iii. WE&T efforts - On-Bill Financing is not applicable to WE&T efforts.
  - iv. Program-specific marketing and outreach efforts (provide budget) – Using knowledge gained from the Phase I On-Bill Financing Program pilot, SoCalGas will enhance its marketing efforts to ensure broad participation in the program. Such marketing plans will build on previous successes and help to ensure integration of the On-Bill Financing Program with other SoCalGas programs.
  - v. Non-energy activities of program – This is not applicable to the On-Bill Financing Program.
  - vi. Non-IOU Programs -
  - vii. CEC work on PIER – This is not applicable to the On-Bill Financing Program. However, SoCalGas will work with customers to help take advantage of the CEC's Energy Efficiency Financing Program.
  - viii. CEC work on codes and standards - This is not applicable to the On-Bill Financing Program.
  - ix. Non-utility market initiatives – SoCalGas will partner with local financial institutions to support loans to customers for energy efficiency projects. In addition, SoCalGas is one of the major sponsors of "The Energy Loan", a Fannie Mae special product developed to provide homeowners with an unsecured finance option for specified energy efficient home improvements.
- c. Best Practices: SoCalGas's On-Bill Financing Program will strive to ensure incorporation of best practices. A formal EM&V "process evaluation" of SoCalGas's OBF program was conducted early in the implementation of the program and the program has incorporated a number of the study's recommendations to help improve its practices.
- d. Innovation: The On-Bill Financing Program has sought to provide customers a diversity of options for financing their energy efficiency investments and these options continue to increase as SoCalGas explores new and different ways to provide financial assistance.
- e. Integrated/coordinated Demand Side Management: The OBF Option will be offered in conjunction with energy efficiency programs including, but not limited to the Express Efficiency Rebate Program, Business Energy Efficiency Program, Savings By Design Program, Emerging Technologies Program, Multifamily Energy Efficiency Rebate Program, Utility Third Party Programs, and SoCalGas Partnership Programs.

**2009–2011 Energy Efficiency Programs**  
**On-Bill Financing**  
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In addition, SoCalGas plans to explore ways to assist customers in developing “Green Energy Systems”. Green Energy Systems could be large energy projects (e.g. gas chiller system, boiler, co-generation) that customers cannot pursue due to financial limitations. Such systems lend themselves to incorporation of Integrated Demand-Side Management features including demand response or solar. Utility-owned or financed projects would be required to maximize the use of cost effective equipment. The customer would then pay, in concept, a surcharge that is lower than the incremental energy savings they are experiencing and would thus have a positive cash flow but for reasons such as scarce capital or perceived risk, elect not to make the investment in the highest efficiency option.

- f. Integration across resource types (energy, water, air quality, etc): This is not applicable to the On-Bill Financing Program.
  - g. Pilots: During 2006-8, SoCalGas conducted Phase I of its On-Bill Financing pilot and proposes to continue into Phase II during 2009-11.
  - h. EM&V:  
The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.
- 7) Diagram of Program – This is not applicable to the OBF.
  - 8) Program Logic Model – This is not applicable to the OBF.

# 2009-2011 Energy Efficiency Programs Strategic Development and Integration Program Implementation Plan

## 1. Program Name and Program ID number

Program Name: Strategic Development and Integration Program  
 Program ID number: TBD

## 2. Projected Program Budget Table

**Table 1**

Program #	Main Program Name/Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
	Market Sector Programs					
	SCG Local Strategic Develop & Integration					
	#Local04 - Local Strategic Develop & Integ	\$ 853,187	\$ -	\$ -	\$ -	\$ 853,187
	<b>TOTAL:</b>	<b>\$ 853,187</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 853,187</b>

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

## 3. Projected Program Impacts

This is a non-resource program and, therefore, has no projected program impacts.

## 4. Brief Program Description

In order to create market transformation in California, SCG is committed to the vision and goals outlined in the California Energy Efficiency Strategic Plan. This plan includes customer segmentation and targeted program development and the integration of EE/DSM and emerging high efficiency technologies coupled with innovative and comprehensive program design and theory,. A focused team of qualified resources has been identified to support these activities and drive the direction of the programs through innovation and the inclusion of best practices. This team will be dedicated to this activity and will act as a coordinating entity by collaborating with regulatory, program, technology and other staff.

The team will be specifically responsible for overseeing activities associated with achieving strategic plan goals and ensuring that the strategic plan itself is updated so that it provides relevant guidance and direction on a continuous basis. The team will be responsible for:

- Cooperatively developing milestones toward achieving strategic objectives and evaluating the progress of programs toward these milestones as well as meeting sector goals.

## **2009-2011 Energy Efficiency Programs Strategic Development and Integration Program Implementation Plan**

- Facilitating the evolution of program design to ensure support of the long term strategic vision and direction.
- Researching, identifying and supporting incorporation of best practices in both current and future programs.
- Providing guidance and acting as an ongoing information source for pilot programs, integration activities and program innovations associated with emerging technologies, best practices, and market awareness.
- Representing SCG in Strategic Planning activities. This includes the representation of SCG at all California Strategic Planning meetings. SCG subject matter experts will provide input as the plan evolves in order to keep it current and valuable. The team will share lessons learned and successful strategies with the other IOUs.
- Incorporating stakeholder input in the long-term planning process, collaborating with other utilities and the CPUC to conduct public workshops such as an annual California Energy Efficiency Summit.
- Acting as a liaison between external parties and internal staff to ensure that there is a complete and ongoing feedback loop with lessons learned and recommendations being fully shared and leveraged.
- Ensuring that, as specific objectives emerge and the plan evolves, lessons learned are available for incorporation into existing programs as well as for future planning.
- Collaborating with the Emerging Technologies group to ensure that cutting edge technologies are quickly adopted and incorporated into the programs thru 2011 and beyond.
- Working in partnership with, and providing information and guidance to, program sector management to ensure that interim milestones and approaches are directed toward the long-term vision.

Having a team dedicated to facilitating strategic activities and supporting the integration of activities, technologies and other innovations will allow SCG to continue providing a high level of customer service, capturing savings under current program design while avoiding lost opportunities associated with unproven and more inventive approaches.

### **5. Program Rationale and Expected Outcome**

Energy efficiency programs play a critical role in promoting and developing markets for energy efficient products. Rebate offerings and promotions influence both retailers and end users alike, with incentives stimulating demand and product availability. While media coverage has increased the population's receptivity toward energy efficiency, new technologies with quality concerns are still slow to be adopted, and utility sponsored programs are required to provide impetus for use. Through utility sponsored programs and specific pilot opportunities, emerging technologies are more readily accepted by a larger group of early adopters and move more rapidly into the mainstream.

## **2009-2011 Energy Efficiency Programs Strategic Development and Integration Program Implementation Plan**

Targeting specific market segments with integrated and comprehensive solutions provides the ability to penetrate individual market environments much more deeply. Today's industries and buying habits are changing rapidly due to industry changes, regulations and outside influences. Programs and distribution channels need to be well thought out, customer centric, flexible, comprehensive, and able to adapt quickly in order to meet the needs and gain momentum to transform the market itself.

Achieving the strategic goals outlined in the plan will require SCG to be responsive, proactive and creative in all aspects of program design, delivery channels and distribution approaches. New concepts and emerging technologies need to be incorporated in order to maintain relevance and to capture savings that might be otherwise lost.

### **Challenges:**

- Retailers are reluctant to stock high efficiency products that are not competitively priced.
- Consumers have limited knowledge of the breadth of products available.
- Newer technologies that have not been mass-produced have not yet proven themselves commercially, being too expensive for current market and not readily available in the market place.
- Slow adoption of ground-breaking or novel technologies that users consider unproven.
- Many potentially promising ideas are not fully developed due to lack of monies or proof of concept.
- Developing and leveraging expertise which requires a significant investment in time and effort that is difficult to maintain while balancing current operational needs.
- 

### **Opportunities:**

- Increased customer acceptance of "Green messaging".
- Statewide cooperation on strategic initiatives
- Sustained utility support of manufacturers and retailers to introduce new technologies at a more competitive price.
- Increasing market focus to promote comprehensive and integrated solutions.
- Targeted solutions and tracking of market segments to provide new insights into promising approaches.
- Implementation of concrete solutions providing continuous improvement toward achieving long-term goals.
- Leverage ideas, best practices and other lessons learned statewide.
- Identification of regional, state and national best practices for relevance to and implementation by SCG

SCG has assigned a dedicated team as a single point of contact to work collaboratively with internal and external participants and stakeholders, to provide focus, and to minimize

## **2009-2011 Energy Efficiency Programs Strategic Development and Integration Program Implementation Plan**

delays, as a result of the inevitable conflict between operational and strategic needs. The initiatives identified in the current Strategic Plan are designed to address the challenges of the current marketplace and capitalize on current and as yet to be identified opportunities. The implementation of responsible parties and a living process will enable SCG to bring high impact ideas and solution to the consumer as quickly as possible to achieve efficient and effective long-term results.

### **6. Program Implementation**

The team will be dedicated to program and process improvements relative to achieving long-term goals and activities associated with the Strategic Plan and direction. A primary initiative will be to support and refine a market segment based approach to energy management. Working with an integrated team, customer needs will be addressed by offering tailored, comprehensive packages inclusive of Energy Efficiency, Demand Response and Renewables to specific market segments. These activities and their results will actively be tracked to provide lessons learned across the organization and elsewhere to refine approaches and to provide input for future pilots and other inventive approaches to enable California to reach their goals. The team will evaluate each segment/sector's progress and track specific actions including implementation of identified best practices.

A significant amount of research, coordination and oversight will be necessary on an ongoing basis. The team will be responsible for facilitating potential pilot programs, overseeing their activities and identifying those with potential to address savings beyond 2011. These actions will require an understanding of emerging technologies and their values to the market, manufacturing approaches and the development of distribution channels.

Implementation and achievement of the Strategic Plan goals will be overseen by this dedicated team to provide direction, coordination and continuous improvement, implementing new ideas and best practices. An ongoing basis the plan will be updated to ensure that the strategies and approaches evolve as the markets transform.

## 2009-2011 Energy Efficiency Programs Sustainable Communities Program Implementation Plan

1) Program Name and Program ID number

Program Name: Sustainable Communities Case Studies Program  
Program ID number: TBD

2) 2) Projected Program Budget Table

**Table 1<sup>1</sup>**

Program #	Main Program Name/Sub-Programs	Total Administrative Cost (Actual)	Total Marketing & Outreach (Actual)	TOTAL Direct Implementation	Integration Budget Allocated to Other Programs (if Applicable)	Total Budget By Program (Actual)
	Market Sector Programs					
	SCG Local Sustainable Communities Case Studies Program					
	#Local03 - Local Sustainable Communities (RMV)	\$ 261,450.00	\$ 31,500.00	\$ 535,500.00	\$ -	\$ 828,450.00
	<b>TOTAL:</b>	<b>\$ 261,450.00</b>	<b>\$ 31,500.00</b>	<b>\$ 535,500.00</b>	<b>\$ -</b>	<b>\$ 828,450.00</b>

These budget numbers are presented in Appendix C: Energy Division Tables, Graphs Pie Charts: Table 7.1 - 2009 - 2011 IOU Strategic Planning Program Budget

3) Projected Program Gross Impacts Table

**Table 2**

Program #	Main Program Name/Sub-Programs	2009-2011 Three-Year EE Program Gross kWh Savings	2009-2011 Three-Year EE Program Gross kW Savings	2009-2011 Three-Year EE Program Gross Therm Savings
	Market Sector Programs			
	SCG Local Sustainable Communities Case Studies Program			
	#Local03 - Local Sustainable Communities (RMV)	0	0	0
	<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>0</b>

Note: This is a non-resource program.

<sup>1</sup> Definition of Table 1 Column Headings: Total Budget is the sum of all other columns presented here

Total Administrative Cost includes all Managerial and Clerical Labor, Human Resource Support and Development, Travel and Conference Fees, and General and Administrative Overhead (labor and materials).

Total Direct Implementation – includes all financial incentives used to promote participation in a program and the cost of all direct labor, installation and service labor, hardware and materials, and rebate processing and inspection used to promote participation in a program.

Total Marketing & Outreach includes all media buy costs and labor associated with marketing production.

Integrated Budget Allocated to Other Programs includes budget utilized to coordinate with other EE, DR, or DG programs.

Total Budget is the sum of all other columns presented here

Definition of Sub-Program: A “sub-program” of a program has a specific title; targets; budget; uses a unique delivery or marketing approach not used across the entire program; and for resource programs, has specific estimated savings and demand impacts.



## **2009-2011 Energy Efficiency Programs Sustainable Communities Program Implementation Plan**

These savings values are presented in Appendix C: Energy Division Tables, Graphs & Pie Charts: Table 7.2 - IOU 2009 - 2011 Program Savings Estimates

### 4) Program Description

SoCalGas' Sustainable Communities (SC) program provides the framework for the design and building of communities that support the environment through energy- and resource-efficiency. SC helps to enhance quality of life by protecting and preserving natural resources and improving economic development. Incentives and other assistance are available to developers, building owners, and design teams that construct highly energy-efficient buildings with sustainable design, and long-term energy-efficiency.

This highly innovative program will be SoCalGas' flagship program providing the path for all other programs in meeting California's long-term energy efficiency goals, including zero net energy homes by 2020. This program will enable market transformation resulting in measurable energy efficiency, integrated demand response, distributed generation, renewables and natural resource savings while optimizing long term ecological, social and economic health of California. It accomplishes this by comprehensively integrating the "vertical" development (buildings and their components) with the "horizontal" development (land and utility and transportation infrastructure) over the full planning horizon. This holistic approach to program design and implementation is coupled with a new management model and evolutionary improvements in energy, water and air quality savings over the project life.

Another key feature of SC's flagship approach is its longer-term focus and crosscutting implementation to avoid trapping the key market players in the usual "organizational silos". SC achieves this through the unique partnership between SOCALGAS and the Master Developer by developing early market interventions deployed by 3<sup>rd</sup> party implementers upstream of the usual core programs. This innovation produces more productive and resilient market change with greater cost-effectiveness.

#### **Sustainable Design and Construction Training**

A training program and training materials will be developed for participating builders and contractors. The training, for both residential and non-residential building, will cover all relevant issues including sustainable design and construction impacting energy efficiency, solar, water, waste, utility infrastructure (smart grid and AMI), and transportation.

A metric of this service will be determined in tracking the impact early intervention and training have on increasing energy-efficient design of residential structures. Developing training goals and objectives, curriculum and tracking of buildings energy performance will be used to measure success of the training. The minimum specifications will be covered in the training developed to help encourage and monitor innovative design and exceeding building performance targets set by the developer and utilities. The utility will support training developed and provided by developers' consultants for builder subcontractors.

## **2009-2011 Energy Efficiency Programs Sustainable Communities Program Implementation Plan**

The incorporation of a Learning Center within the development is proposed to help educate and build awareness of energy efficiency, renewable generation and sustainable measures that have been incorporated into the development. The Learning Center will create a powerful teaching tool due to its interactive software and real time graphics. This tool could demonstrate the community's energy savings compared to non-efficient developments, showcase the development's green features and show environmental impacts and equivalent comparisons. In addition, kiosks will contain renewable energy education and incorporate actual data related to utility owned on-site generation. The center would be strategically located within the community near a school, library or public center. This location could also be used for utility hosted energy workshops highlighting energy efficiency and green building design.

### **Sustainable Design Assistance**

Design assistance will be provided to participating engineers, architects, planners, and builders. The program will encourage innovative and less traditional approaches to meeting and exceeding sustainability goals. Design assistance will occur much earlier in the development process than traditional utility offerings to embrace this flagship program's crosscutting nature and to better leverage its holistic ambitions and goals.

### **Residential Modeling Procedure and Protocol Development**

Because builders will be required to submit documentation illustrating how their designs will meet the sustainability requirements, this program will develop the modeling procedures and other requirements for this documentation. Sustainability targets would be set at 35% below Title 24<sup>2</sup> for all residential building and would also include participation in the New Solar Homes Partnership program to foster development of renewable energy on each residential building. Similar energy performance targets would be established for commercial projects with corresponding participation in the CSI program.

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<sup>2</sup> Title 24 2005.

# 2009-2011 Energy Efficiency Programs Sustainable Communities Program Implementation Plan

Figure 1: Sustainable Communities Crosscutting Approach

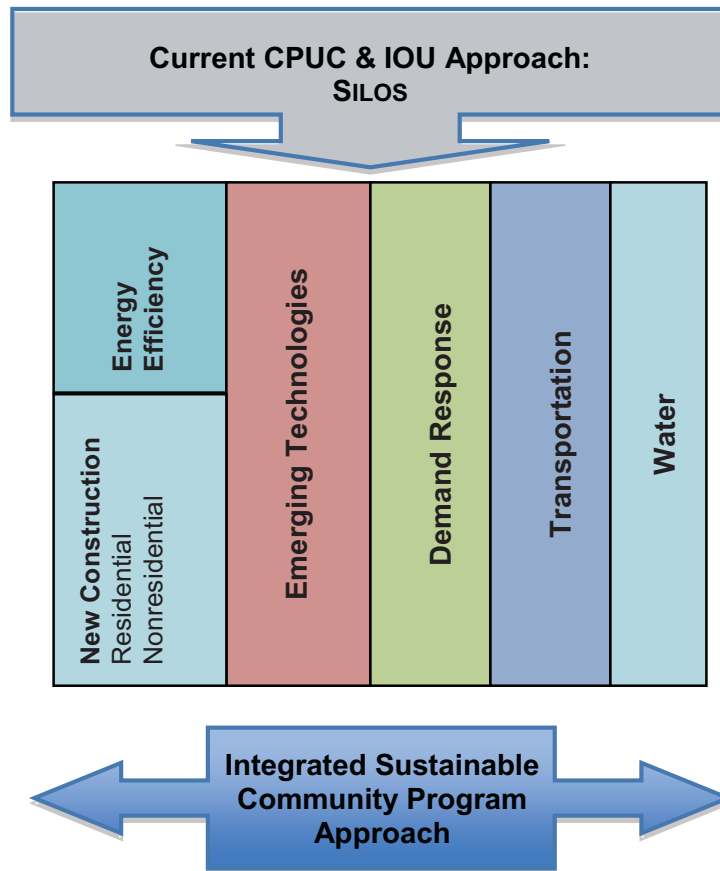
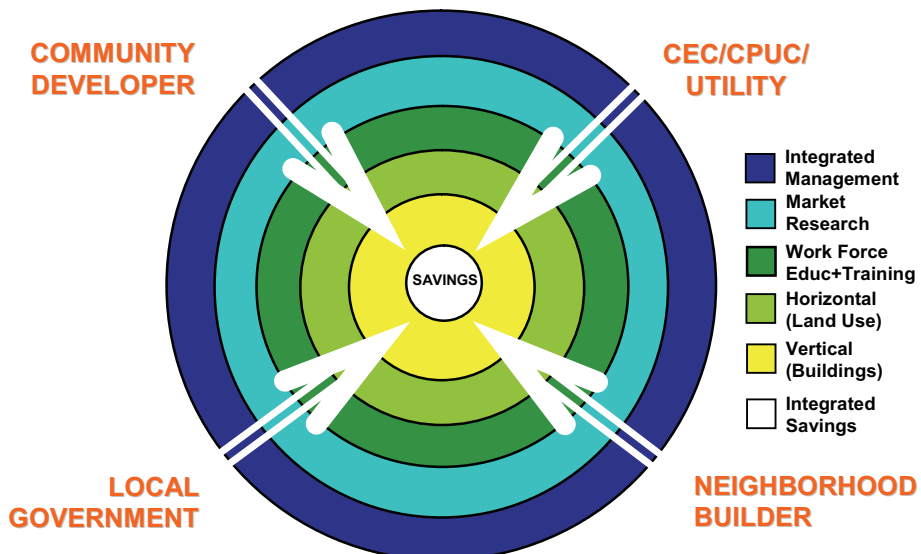


Figure 2: Sustainable Communities Integrated Savings Approach

## The New Paradigm . . .

. . . an integrated management approach



## 2009-2011 Energy Efficiency Programs Sustainable Communities Program Implementation Plan

### 5) Program Rationale and Expected Outcome

#### a) Quantitative Baseline and Market Transformation Information

Market transformation (MT) metrics proposed in Tables 3 and 4 are preliminary. The proposed metrics are meant to initiate a collaborative effort to elaborate meaningful metrics that will provide overall indicators of how markets as a whole are evolving. MT metrics should neither be used for short-term analyses nor for specific program analyses. Rather, should focus on broad market segments.

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process and the successful end state have not yet converged. The CPUC defines the end state of MT as “Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market.”<sup>3</sup> The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies<sup>4</sup>.

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical and 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures<sup>5</sup>. Markets are social institutions<sup>6</sup>, and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains<sup>7</sup> as well as changes to codes and standards. Resource acquisition programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation progress<sup>8</sup>. According to York<sup>9</sup>, “Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are 3 ways to achieve market

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<sup>3</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>4</sup> California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at <http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf>

<sup>5</sup> Pelozo, J., and York, D. (1999). “Market Transformation: A Guide for Program Developers.” Energy Center of Wisconsin. Available at: <http://www.ecw.org/ecwresults/189-1.pdf>

<sup>6</sup> Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) “From technology transfer to market transformation”. Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at [http://www.eceee.org/conference\\_proceedings/eceee/2001/Panel\\_2/p2\\_7/Paper/](http://www.eceee.org/conference_proceedings/eceee/2001/Panel_2/p2_7/Paper/)

<sup>7</sup> Sebold, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at [www.calmac.org](http://www.calmac.org).

<sup>8</sup> Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings*.

<sup>9</sup> York, D., (1999). “A Discussion and Critique of Market Transformation”, Energy Center of Wisconsin. Available at <http://www.ecw.org/ecwresults/186-1.pdf>.

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transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy.”

The question of what constitutes successful transformation is controversial because of a Catch-22: Market transformation is deemed successful when the changed market is self-sustaining, but that determination cannot be made until after program interventions are ended. Often, however, the need for immediate energy and demand savings or immediate carbon-emissions reductions will mean that program interventions may need to continue, which would interfere with the evaluation of whether MT is self-sustaining. Market transformation success has also been defined in terms of higher sales of efficient measures than would have otherwise occurred against a baseline absent of program interventions. The real world, however, provides no such control condition. Evaluators must estimate these baselines from quantitative factors such as past market sales that may be sparse and/or inaccurate - particularly for new products. Evaluations must also defer to expert judgments on what these baselines may have been as well as on the degree of successful market transformation<sup>10</sup>. Due to the subjective nature of these judgments, it is imperative that baselines as well as milestone MT targets be determined and agreed upon through collaborative discussion by all stakeholders, and these targets may need periodic revision as deemed necessary by changing context.

Market transformation draws heavily upon diffusion of innovation theory<sup>11</sup>, with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades<sup>12</sup>. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects<sup>13</sup>. The ability to make causal connections between these market transformation effects and any particular program’s activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are. First and foremost, they need to be designed specifically to address market transformation. “The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given to program designers.)<sup>14</sup>” The Strategic Plan

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<sup>10</sup> Nadel, S., Thorne, J., Sachs, H., Prindle, B., and Elliot, R.N. (2003). “Market Transformation: Substantial Progress from a Decade of Work.” American Council for an Energy-Efficient Economy, Report Number A036. Available at: <http://www.aceee.org/pubs/a036full.pdf>

<sup>11</sup> Rogers (1995) Diffusion of Innovations, 5<sup>th</sup> Ed.

<sup>12</sup> Example in bottom chart of this graphic from NYTimes:  
<http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html>

<sup>13</sup> Sebold et al (2001) p. 6-5,

<sup>14</sup> Peters, J.S., Mast, B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume 1.* Available at <http://calmac.org/publications/19981215CAD0001ME.PDF>.

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recognizes that regulatory policies are not yet in place to support the success of market transformation efforts<sup>15</sup>, but also reflects the CPUC's directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions<sup>16</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the utilities look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin's guide for MT program developers<sup>17</sup> suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

The metrics and baselines described below in Tables 3 and 4 are presented for the purposes of starting the much-needed discussion between all key participants. These are suggestions, intended to allow key participants to pilot-test processes for establishing baseline metrics, tracking market transformation progress, and for refining evaluation tools. Early trial of these evaluation metrics will reveal any gaps in data tracking so that we may refine our processes before full-scale market transformation evaluations take place.

The set of metrics we selected is intentionally a small set, for several reasons. First, as mentioned, the full set of metrics and baselines need to be selected by key participants. Second, we anticipate that market share data for many mid- and low-impact measures will be too sparse to show MT effects and not cost-effective to analyze. Third, we selected core measures and metrics that would both be indicative of overall portfolio efforts. These measures are also likely to be offered on a broad level by other utilities, providing a greater base of sales and customer data that could be analyzed for far-reaching MT effects.

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<sup>15</sup> CPUC (2008) Strategic Plan, p. 5.

<sup>16</sup> Nadel, Thorne, Saches, Prindle & Elliot (2003).

<sup>17</sup> Pelosa & York, (1999).

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The IOUs are proposing a metric that is believed to reliably indicate a trend toward market transformation for Energy Efficient in Residential New Construction (RNC). While all metrics fall short of a perfect measure, the ideal metric would have a baseline that is already established that includes a reasonable and easy method of duplication and comparison. Market transformation cannot be measured on a year to year basis but will take several years and measurements to reliably discern trends. With this in mind, the IOUs propose the following metrics:

- Participants in the Statewide Residential New Construction program with projects exceeding Title 24 (2005) standard by specific percentages, as determined from IOU program records.
- Average compliance margin of the Residential New Construction sector, as determined through a sample study of as-built residences.

The overarching purpose for these metrics is to understand how this market is transforming. Future studies could estimate compliance margins relative to code and highlight key changes in measure adoptions driving changes in compliance margins. Drivers of this MT include efforts from Codes and Standards, Marketing, Education, and Outreach, Workforce Education and Training, and the direct RNC program

Therefore, for the Residential New Construction sector, the approach to quantitative baseline and market transformation information is as follows:

**Table 3**

Metric A	Metric B
Percent of participants with projects exceeding Title 24 (2005) standard by specific percentages.	Average compliance margin of the Residential New Construction sector.

b) Market Transformation Information

As stated above, market transformation draws heavily upon diffusion of innovation theory, with the state of a market characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects. Therefore it is problematic, if not impractical, to offer internal annual milestones towards market transformation sectors and specific program activities.

As a consequence, it is not appropriate to offer more than broad and general projections. Any targets provided in the following table are nothing more than best guesstimates, and are subject to the effects of many factors and market forces outside the control of program implementers.

**Table 4**

	<b>Residential New Construction Sector Internal Market Transformation Planning Estimates</b>
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	2009	2010	2011
Metric A	Upward moving trend toward 2011 target.	Upward moving trend toward 2011 target.	Up to 50% of projects 30-35% better than 2005 Title 24; Up to 10% of projects 55% better than 2005 Title 24. (Consistent with Residential Strategy 1-1 in Long Term Strategic Plan)
Metric B	Upward trend in non-participants as-built compliance margins.	Upward trend in non-participants as-built compliance margins.	Upward trend in non-participants as-built compliance margins.

b) Program Design to Overcome Barriers

- Program cycles are too short for stakeholders with long-term planning and development horizons. 3-year program cycles ignore market conditions and long project lead-times.

Master-planned communities typically have twenty year planning horizons which is much longer than typical IOU program timelines. For example, RMV’s Ranch Plan went through a decade of science-based planning, and processing; development of the first planning area (PA1) will commence once the market recovers, hopefully by 2010 ([www.TheRanchPlan.com](http://www.TheRanchPlan.com)). Another example is Otay Ranch, a large master planned community in Chula Vista went through a ten-year planning process, opened in 1999, and ten years later still is no where near completion despite being San Diego County’s top selling planned community. (<http://otayranch.com/about/aboutIndex.shtml>). This program resolves this by proposing a sufficient timeline that allows for full program integration into the development plan.

- IOUs and non-governmental organizations lack the coordinated efforts that are needed to accomplish the goals. Disincentives exist at the CPUC, CEC, and IOUs that delay and inhibit effective and persistent market transformation:
  - Incentives availability is unpredictable for long-term stakeholders, and they are unable to utilize or secure them for projects.
  - Current organizational ‘silos’ at IOUs and CPUC associated with various rulings make it impractical to do an integrated and comprehensive sustainable communities program. This creates missed opportunities for EE and DR savings up and down the energy supply and demand chains.
  - Utility customers are seeking integrated solutions addressing their entire energy infrastructure needs from smart appliances, smart meters, smart grid functionality including vehicle-to-grid capability, to promoting grid-enabled renewables. Existing program structures prevent appropriate creation and delivery of an integrated market solution.



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c) Quantitative Program Targets

**Table 5**

Sustainable Communities Case Studies Program	Program Target by 2009	Program Target by 2010	Program Target by 2011
Savings By Design	All Commercial Projects at 10% better than Title 24	All Commercial Projects at 15% better than Title 24	All Commercial Projects at 20% better than Title 24
California Advanced Home Program	All Residential Projects at 35% better than Title 24	All Residential Projects at 35% better than Title 24	All Residential Projects at 35% better than Title 24
Zero Net Energy Home	15% of new residential to be zero net	20% of new residential to be zero net	25% of new residential to be zero net

d) Advancing Strategic Plan goals and objectives

SOCALGAS Sustainable Communities (SC) program supports the Statewide Strategic Plan, and promoting a sustainable future for Southern California. By addressing environment concerns and energy and resource efficiency, the program seeks to support the residential 2020 goals of zero net energy in new construction. Coupled with the focus on sustainable design and green building practices, the program is uniquely positioned to influence the design and construction of sustainable communities in its broadest definition. Consistent with The California Long Term Energy Efficient Strategic Plan, Residential New Construction will reach “zero net energy” (ZNE) performance for all new single and multi family homes by 2020, and commercial new construction will increasingly embrace zero net energy performance (including clean, on site distributed generation), reaching 100% penetration of new starts in 2030. Near term, by 2011, 50% of new homes will surpass 2005 Title 24 energy efficiency standards by 35%; 10% will surpass 2005 Title 24 standards by 55%..

6) Program Implementation

a. Statewide IOU Coordination

The lessons learned with the Sustainable Communities program will become a greater resource in helping plan the energy efficiency programs across IOU’s to move new construction markets towards their zero net energy targets established in the Statewide Strategic Plan. By developing innovative training programs for builders, their trades and jurisdictions, those could be successfully integrated into the WE&T programs of the IOU’s. In working with the developers on very aggressive energy efficiency targets, both residential and commercial new construction projects will be

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held up as models providing the roadmap in incorporating very high EE levels in various projects across IOU territories.

b. Program delivery and coordination

i. Emerging Technologies program

Coordination of Sustainable Communities Case Study Program with the Codes and Standards and Emerging Technologies activities will be realized through the Program Management Team meeting regularly to discuss program integration and implementation issues. The ZNEH and SBD Sub Programs are expected to interact extensively with the ET Program to ensure new and emerging technologies are showcased and / or piloted through ZNEH case study projects.

ii. Codes and Standards program

Close coordination with the statewide Codes and Standards team is essential for tracking and implementing changes initiated by the Title 24 standards. The Sustainable Communities Case Study goals are closely tied to Title 24 standards, and it is imperative to implement changes to the program on an as-needed basis. New Construction, Codes and Standards and Emerging Technologies activities will be coordinated through the Program Management Team as well as the Community Developer's.

iii. WE&T efforts

The workforce education and training needs for The Sustainable Communities Case Study are unique. The WE&T curriculum needs to be crafted around actual market conditions and knowledge gaps at the local government level along with builders and trade associations. SDGE will work with RMV's development team to help inform the CAHP and SBD program staff will coordinate with the WE&T program management team to ensure its training and education needs are met.

iv. Non-IOU Programs

The Program will remain engaged with CEC, DOE, MWD and other government agencies responsible for various aspects of New Construction in California.

v. CEC work on PIER

The ZNEH Sub Program will interact extensively with the ET Program to ensure new technologies are absorbed quickly into the case study projects.

vi. CEC work on codes and standards

See Section 6.b.ii.

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### vii. Non-utility market initiatives

California utilities have established relationships with a number of other groups in the building industry. The New Construction Program will continue to seek out and coordinate synergies with, but not limited to, the following groups:

### c. Best Practices

#### **Research**

To ensure that the *Sustainable Communities* program produces the greatest benefit, investigating and learning from other sustainable development efforts is extremely important. This includes investigating market, technology, and behavioral intelligence from existing master-planned communities and discovering any gaps in education, training, design assistance which improved program development can fill. Sharing lessons-learned helps overcome significant market barriers, eliminate lost opportunities, and achieves long-term returns.

#### **Collaboration**

By working directly with the Community Developer, integration across community energy end-uses such as buildings, transportation, water, and generation can be achieved. This allows 100% participation by the community and encourages the developer to be innovative and aggressive in setting energy efficiency and renewable energy goals.

In addition, working through the Community Developer will enable the IOU to influence multiple types of consultants (architects, landscape architects, urban designers, transportation engineers, mechanical and electrical engineers), trades (mechanical, electrical, plumbing, roofing, and renewable installers) and supply chain partners such as manufacturers as well as local governments.

#### **Integration**

Taking a holistic, integrated approach to the upfront horizontal infrastructure planning opens the way to realize system-wide savings resulting in not only peak demand reduction but down-stream savings as well.

### d. Innovation

Sustainable Communities will be SoCalGas' flagship program providing the path for all other programs to meet California's long-term energy-efficiency goals, including net-zero energy homes by 2020.

SC enables enhanced market transformation resulting in measurable energy efficiency, integrated demand response, distributed generation, renewables and natural resource savings while optimizing long-term ecological, social and economic health of California. It accomplishes this by comprehensively integrating the 'vertical' development (buildings and their components) with the 'horizontal' development (land and utility and transportation infrastructure) over the full planning

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horizon. This holistic approach to program design and implementation is coupled with a new management model and evolutionary improvements in energy, water and air quality savings over the project life.

Master-planned communities typically have twenty-year planning horizons which is why weaving the vertical program elements with horizontal elements are so critical to its success. This program is unique in its breath and the level of integration to achieve long-term savings for: electricity, natural gas, water, wastewater, carbon emissions, and greenhouse gases.

Sustainable Communities recognizes that master-planned community developments provide a 'proving ground' for interrelated pilot program offerings. This program will help SOCALGAS and the CPUC to better understand barriers and opportunities with different stakeholders as part of a pilot/program rather than from numerous disjointed efforts. In addition to establishing SOCALGAS as a leader in promoting sustainable development, SC provides the CPUC the opportunity to establish their leadership and overall policy guidance in support of these innovative programs.

The process for developing sustainable, livable land-use practices and building design is creative, technical and, participatory. The basic principles of sustainable development merge similar objectives to protect and restore the natural environment while providing nurturing, high-quality communities for people to work and live in.

The common fundamental characteristic throughout the program is its focus on performance approaches rather than prescriptive approaches to fully integrate building systems with infrastructure enabling SOCALGAS into California's Smart Grid. The Smart Grid concept overlaps various functions such as smart meters, smart appliances, demand response, self generation, highly efficient PV systems and transportation.

### e. Integrated/coordinated Demand Side Management

Fundamental to SC's innovative design is it fully embraces an IDSM methodology by closely 'knitting' EE, DR, DG and renewables across development components. Its very nature speaks to integration to form synergistic impacts that are typically unattainable through EE business as usual.

At a minimum, all marketing materials will be developed to support energy-efficient design process in helping cross promote demand response to educate customers on the availability of IOU DR programs/Smart Meters etc. Additional work will take place during the three-year program cycle to evaluate closer linkages between EE and DR via Program Managers and success with this concept with various case study projects. Additionally, this feedback mechanism establishes a means to facilitate technology approaches that enable SC to crosscut organizational silos in achieving its strategic vision.

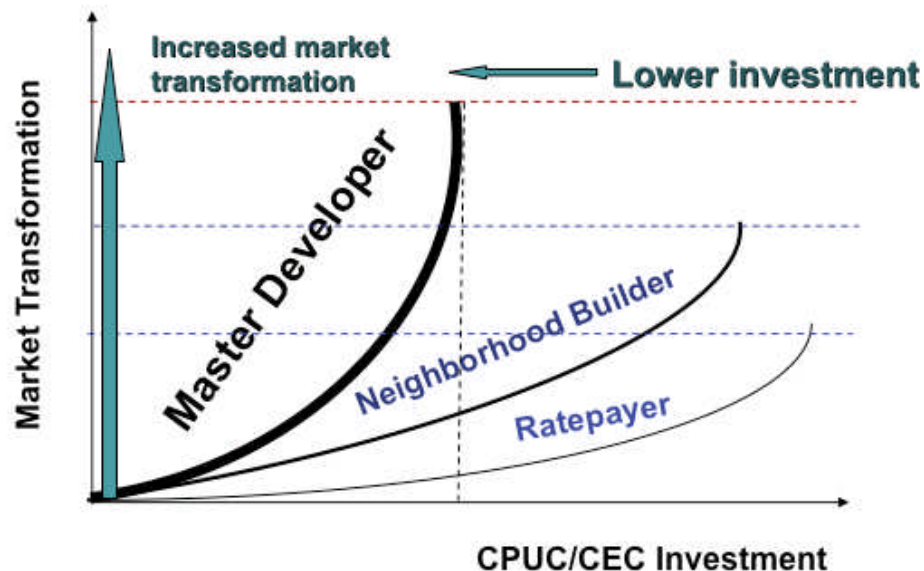
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### f. Integration across resource types (energy, water, air quality, etc)

SC is a comprehensive program with a cross-cutting focus on energy-design, green building practices, and increased utilization of renewable resources. Infrastructure, transportation planning, energy, water, materials, and waste are all addressed in the program rather than as separate elements. This provides the opportunity for exponential energy- and resource-savings throughout the community – giving SOCALGAS and developers the ability to shift to cleaner forms of energy to power our communities. The key difference is that SC approaches the market with the Master Developer as its focus. Rather than address market barriers at the tail end of the market cycle, SC deals with barriers earlier in the development process thereby enhancing and improving its leverage to create substantially greater impacts as displayed in the table below.

### ***Integrated Community-Based Solutions***

***... yield exponential benefits for multiple stakeholders ...***



The main elements addressed by the participating projects will be structured around three key concepts – Environment, Resources, and Energy – with a detailed focus to the following principles:

- Sustainable site design
- Energy efficiency
- Advanced renewables integration
- Pollution reduction
- Water efficiency
- Indoor air quality
- Resource preservation

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- Smart Grid
- Integrating local Governments
- Transportation.
- Smart Land-Use Options (ex: mixed housing, walk-ability / bike-ability)

These energy- and land-use practices, sensitive to both the human community and natural environment, will be achieved through the *Sustainable Communities Case Studies* program and will allow the utility to initiate a collaborative partnership with the design community, developers, builders and related industries.

g. Pilots

### **Rancho Mission Viejo**

To support the *Case Study* program concept and to integrate it into the *Sustainable Communities* program, SOCALGAS proposes a separate *Sustainable Communities Case Studies* program that focuses on the Ranch Plan being developed by the Rancho Mission Viejo Company (“RMV”).

This South Orange County project comprises 23,000 acres with 75% preserved as open space. There will be six villages developed over a twenty-year timeframe consisting of 14,000 units with 5,200,000 square feet of commercial construction including schools and a hospital.

The project is being developed with sustainability as its guiding principle and addresses:

- Interdependence of humanity and nature
- Intergenerational stewardship
- Optimized value
- Design with natural systems
- Conservation of natural resources
- High-performance design technologies
- Resource-efficient healthy materials
- Elimination of waste
- Multi-modal transportation
- Innovation, education, and ongoing evolution

The project will also address quantitative environmental metrics of:

- Energy use
- Air pollution
- Greenhouse gases
- Water use
- Storm water and runoff

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The tools developed, results achieved and lessons learned from the RMV pilot have direct application Statewide and will be shared to further advance sustainable development elsewhere in California. This provides a much-needed proving ground serving to enrich sustainable community development at a cost-effective level unattainable through traditional approaches.

### **Project Opportunities**

Utilizing the Ranch Plan as a case study will provide both short- and long-term opportunities for energy savings and other benefits in a cost-effective environment. It will also provide a comprehensive mix of energy-efficient market potential for multiple residential, commercial, and retail sectors. It will provide a model to successfully implement the programmatic initiatives found in the Strategic Plan.

Working through the community developer will enable the IOU to influence multiple types of consultants (architects, landscape architects, urban designers, transportation engineers, and mechanical and electrical engineers), trades (mechanical, electrical, plumbing, roofing, and renewable installers), and supply chain partners such as manufacturers as well as local governments.

Planning Area 1 (PA1), the first phase of this 4-phase development, has been targeted by this case study to initiate an analysis of the increased focus on sustainable building design that can be achieved through early intervention in the design process.

### **Project Funding**

The Sustainable Communities Model developed by CTG Energetics, Inc. and the RMV Sustainability Team, is the core controlling element in the analysis of the Ranch Plan. Funding for the development and maintenance of the Sustainable Communities Model is needed to support the case study and evaluate the energy and environmental impacts, and sustainable design decision making for both PA1 and the broader Ranch Plan. This Sustainable Communities Model is the core controlling element in the analysis of the Ranch Plan. The Sustainable Communities Model® (SCM) quantifies total environmental impacts (including energy use, water use, greenhouse gas emissions, air pollution emissions, stormwater, transportation impacts, solid waste, and other factors) allowing communities to optimize planning and design decisions that result in the greatest environmental benefit for the least cost. The SCM takes a quantitative, systems-based approach towards sustainability. This enables a project's design team to "connect" each specialty's detailed analyses together to explore and optimize environmental impacts that cross disciplinary boundaries. The landscape architect can explore the impacts that various planting palettes has on building energy use (shading, microclimate modification, evaporative cooling), water consumption, carbon sequestration and embodied environmental impacts such as the amount of embodied energy/carbon in water. The SCM is scalable over a wide range of community sizes, and can be applied to "communities" ranging from municipalities, to large master planned developments/re-developments, to academic and corporate campuses, down to individual buildings.

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Funding for the development and maintenance of the Sustainable Communities Model is needed to support the case study and evaluate the energy and environmental impacts, and sustainable design decision making for both PA1 and the broader Ranch Plan. The funds are anticipated to support five key areas of the Sustainable Communities Model:

1. Conversion of the current SCM version 1 to version 2 for PA1
2. Implementation of the entire Ranch Plan in SCM version 2 to facilitate investigation beyond PA1
3. Support of on-going plan design changes (densities, unit types, etc)
4. Development and refinement of peer review and referencing methodologies to support the environmental benefit calculations
5. Development of new calculations and modules needed to support specific decision points at the Ranch (e.g. large scale photovoltaic, cogeneration, district heating and cooling, etc.)

Additional funding will be required to cover:

- An on-site HERS-certified inspector during the build-out of PA1. This inspector will perform the required tests and inspections and will ensure consistency and quality in the Planning Area 1 homes.
- Full-time, on-site technical support for 3<sup>rd</sup> party inspections and tests of building to ensure quality, program compliance, energy savings, and measurement and verification.
- Sales training

The Green Energy Systems (GES) program (see Statewide New Construction PIP, Savings By Design for an example) will explore the potential for utility ownership of major energy efficiency equipment to facilitate the installation of the highest efficiency HVAC systems in commercial buildings. The program recognizes that building owner financing is constrained and without utility ownership, the system design will not maximize energy savings. The objective of GES is to capture energy efficiency opportunities that would otherwise be lost for the 20 to 30 year life of the HVAC equipment. This pilot will build on the success of the Sustainable Communities program that incorporates utility ownership of clean energy generation systems on customer facilities.

Under GES, SCP will seek to identify projects with the following characteristics:

- The project is of sufficient size to warrant the effort (>\$2,000,000 investment)
- The building is intended to be owner occupied or owner managed
- The HVAC system is a central plant configuration

If an appropriate project is identified, with an owner willing to enter into a contractual agreement with the utility to own and operate the building's HVAC central plant, then the utility will file an advice letter for approval of incremental capital and maintenance costs and will demonstrate that the project meets the following criteria:



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- The project is cost effective as a stand-alone energy-efficiency project and delivers incremental energy savings beyond what the building owner would otherwise have installed
- The capital requirement is between \$2,000,000 and \$20,000,000

If approved, the utility will sub-contract out the design, construction, and operation of the facility but will serve as project manager to ensure it's constructed and operated at the design efficiency levels.

**Energy-Efficiency Funding**

Because The Ranch Plan is served by both utilities of Sempra Energy, SDG&E and the SoCalGas will jointly share energy efficiency funding for the project:

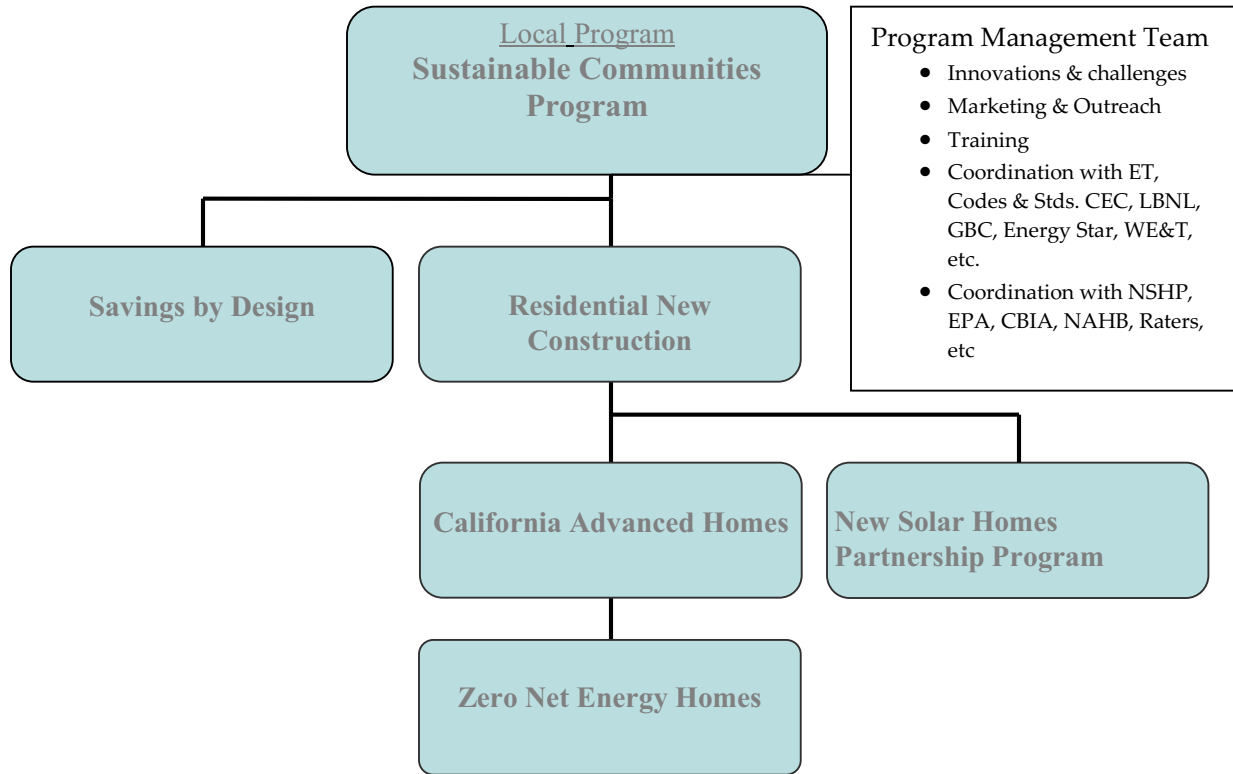
- Funding for the energy efficiency component of the Ranch Plan PA1 will be through the residential and commercial new construction programs incentives for building performance.
- Photovoltaic installation funding for new residential construction will be through the New Solar Homes Partnership Program.
- Photovoltaic installation funding for new commercial construction will be through the California Solar Initiative.
- Additional funding may originate from the utilities' emerging technology, demand response, and self-generation programs.
- Other funding sources will support water, clean-air transportation and infrastructure elements of the Sustainable Communities Program to incorporate the key horizontal components with the vertical components to achieve a fully realized sustainable development.
- RMV is also actively pursuing other additional funding sources, such as foundation grants to support the fully integrated Ranch Plan.

h. EM&V

The utilities are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2009-2011 after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader utility and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

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7) Diagram of Program



Savings By Design: Neighborhood Retail, Business Park, and Offices, Fire/Police Stations, Churches and Civic.

California Advanced Homes: Single family detached, single family attached, multi-family apartments and Assisted Living Community.

New Solar Homes Partnership Program: Single family detached, single family attached, multi-family apartments.

Zero Net Energy Homes: Single family detached, single family attached, multi-family apartments.

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**Figure 2: Sustainable Communities Program Linkages**

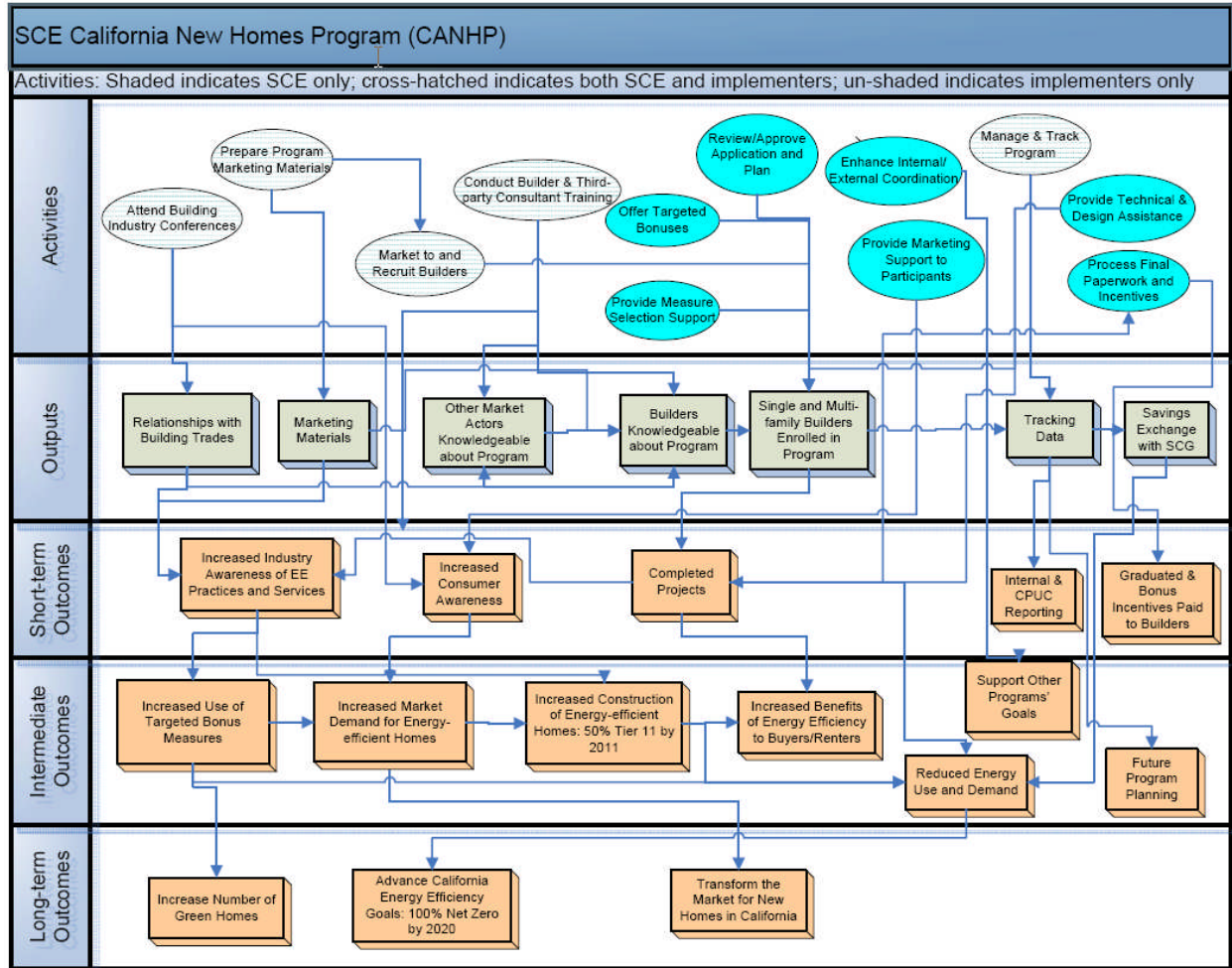


<b>Master Developer</b>	
<b>OPPORTUNITIES</b>	<b>CHALLENGES</b>
<b>Integrated community-based approach</b>	Funding format and prescriptive incentives not conducive
<b>Reduce energy consumption and increase renewables</b>	Added costs viewed as too high vs. return
<b>Influence multiple stakeholders</b>	Current incentive programming focused only on homeowner and builder
<b>Implement research and pilot programs</b>	Master Developer not included in existing incentive structure
<b>Stimulate market transformation</b>	Funding cycles too short for Master Developer timeframes

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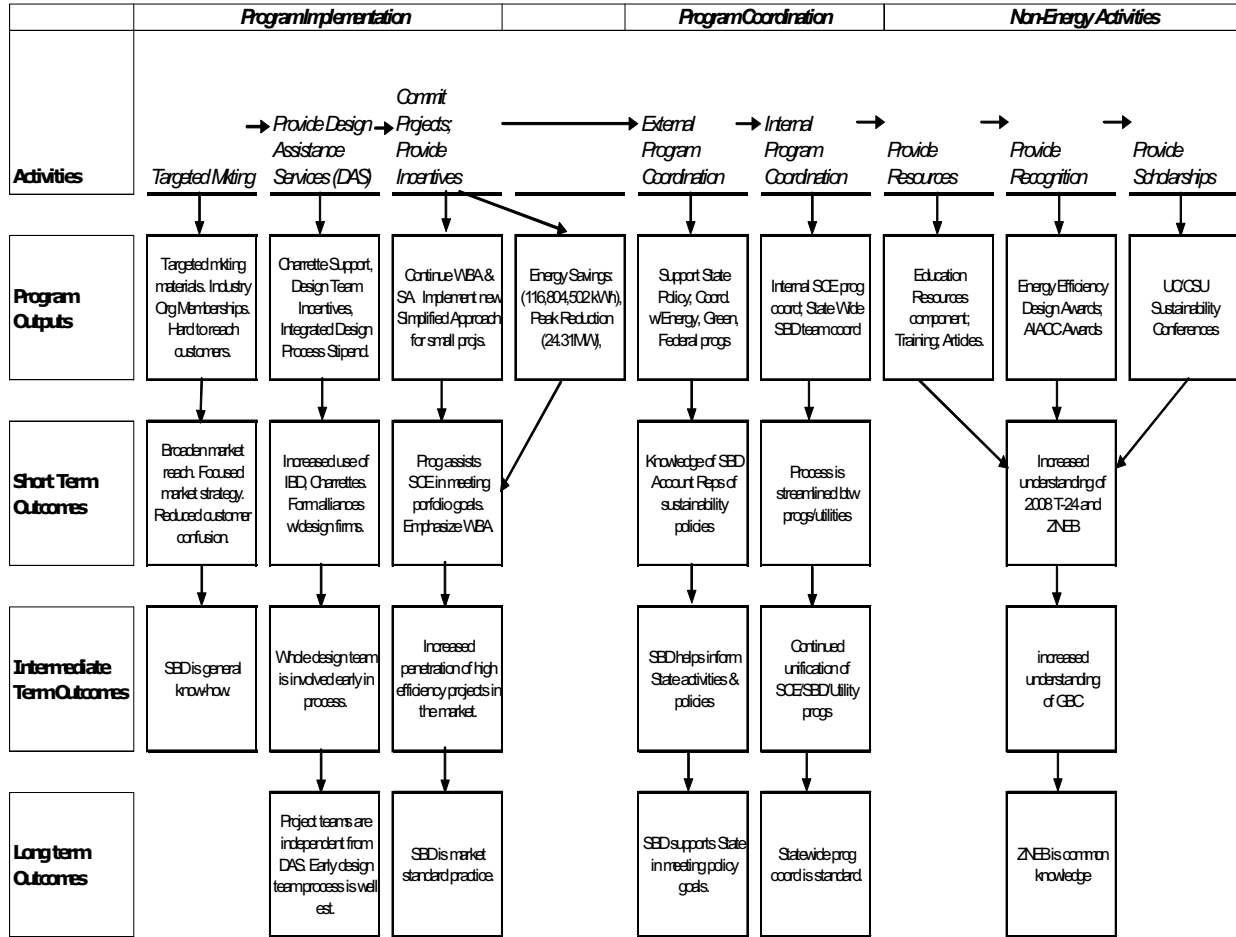
## 8) Program Logic Model

### CAHP Logic Model



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Savings by Design DRAFT 2009-2011 Logic Model



KEY:

Compl	completed	IED	integrated building design
Mktg	Marketing	VBA	Whole Building Approach
bdg	building	SA	Systems Analysis (Approach)
comm	community	ZNEB	Zero Net Energy Building
coord	coordination	GBC	Greenbuilding Code
conf	conference		