

**PACIFIC GAS AND ELECTRIC COMPANY**  
**2013-2014 ENERGY EFFICIENCY PORTFOLIO**  
**PROGRAM IMPLEMENTATION PLAN**  
**STATEWIDE PROGRAM**  
**INDUSTRIAL PROGRAM**  
**PGE2102**

**APRIL 23, 2013**

**(REVISED)**

## TABLE OF CONTENTS

1)	Statewide Industrial Program, PGE2102, statewide core .....	1
2)	Total Authorized Program Budget (including 2010-2012 Carryover Funding) .....	1
3)	Projected Program Gross Impacts Table.....	1
4)	Program Description .....	1
a)	Describe Program.....	1
b)	List of Measures.....	4
c)	List of Non-Incentive Customer Services.....	4
5)	Program Rationale and Expected Outcome .....	5
a)	Quantitative Baseline and Market Transformation Information.....	5
b)	Market Transformation Indicators .....	11
c)	Program Design to Overcome Barriers.....	11
d)	Quantitative Program Targets .....	14
e)	Advancing Strategic Plan Goals and Objectives .....	14
6.0)	Program Implementation – Overview.....	15
a)	Statewide IOU Coordination.....	15
b)	Program delivery and coordination.....	18
c)	Best Practices .....	21
d)	Innovation .....	22
e)	Integrated/coordinated Demand Side Management.....	24
f)	Integration across resource types .....	26
g)	Pilots .....	27
h)	EM&V.....	27
7)	Diagram of Program .....	28
8)	Program Logic Model.....	29
6.1)	Industrial Energy Advisor Program, core subprogram .....	30
a)	Program Description .....	30
b)	List measures .....	35
c)	List non-incentive customer services.....	35
5)	Program Rationale and Expected Outcome .....	35
a)	Quantitative Baseline and Market Transformation Information.....	35
b)	Market Transformation Information .....	35
c)	Program Design to Overcome Barriers.....	35
d)	Quantitative Program Targets .....	36
e)	Advancing Strategic Plan goals and objectives .....	36
6)	Program Implementation .....	38
a)	Statewide IOU coordination .....	38
b)	Program delivery and coordination.....	40
c)	Best Practices .....	42
d)	Innovation .....	42
e)	Integrated/Coordinated Demand Side Management.....	43
f)	Integration Across Resource Types .....	43
g)	Pilots .....	44
h)	EM&V.....	44
7)	Diagram of Program .....	45

8)	Program Logic Model .....	46
6.2)	Industrial Calculated Incentives, core sub-program .....	47
4)	Program Description .....	47
	a) Describe program.....	47
	b) List of Measures.....	48
	c) List non-incentive customer services.....	50
5)	Program Rationale and Expected Outcome .....	51
	a) Quantitative Baseline and Market Transformation Information.....	51
	b) Market Transformation Information .....	51
	c) Program Design to Overcome Barriers.....	51
	d) Quantitative Program Targets .....	53
	e) Advancing Strategic Plan goals and objectives .....	53
6)	Program Implementation .....	54
	a) Statewide IOU coordination .....	54
	b) Program delivery and coordination.....	58
	c) Best Practices .....	61
	d) Innovation .....	61
	e) Integrated/coordinated Demand Side Management.....	63
	f) Integration across resource types .....	63
	g) Pilots .....	64
	h) EM&V.....	64
7)	Diagram of Program .....	65
8)	Program Logic Model .....	66
6.3)	Industrial Deemed Incentives, core sub-program .....	67
	a) Statewide IOU Coordination.....	69
	b) Quantitative Baseline and Market Transformation Information.....	70
	c) Market Transformation Information .....	70
	d) Program Design to Overcome Barriers.....	70
	e) Quantitative Program Targets .....	70
	d) Advancing Strategic Plan goals and objectives .....	71
6)	Program Implementation .....	71
	a) Statewide IOU coordination .....	71
	b) Program delivery and coordination.....	74
	c) Best Practices .....	76
	d) Innovation .....	77
	e) Integrated/coordinated Demand Side Management.....	77
	f) Integration across resource types .....	78
	g) Pilots .....	78
	h) EM&V.....	78
7)	Diagram of Program .....	79
8)	Program Logic Model .....	80
6.4)	Industrial Continuous Energy Improvement (CEI), core-subprogram .....	81
	a) Describe program.....	81
	b) List measures .....	84
	c) List non-incentive customer services.....	84
5)	Program Rationale and Expected Outcome .....	84

a)	Quantitative Baseline and Market Transformation Information.....	84
b)	Market Transformation Information.....	85
c)	Program Design to Overcome Barriers.....	85
d)	Quantitative Program Targets.....	85
e)	Advancing Strategic Plan goals and objectives.....	85
6)	Program Implementation.....	86
a)	Statewide IOU coordination.....	86
b)	Program delivery and coordination.....	88
c)	Best Practices.....	89
d)	Innovation.....	89
e)	Integrated/coordinated Demand Side Management.....	90
f)	Integration across resource types.....	92
g)	Pilots.....	92
h)	EM&V.....	92
7)	Diagram of Program.....	94
8)	Program Logic Model.....	95
	Appendix 1 – Strategic Plan Crosswalk.....	96
	Appendix 2 – Industrial Technology Roadmap.....	98

- 1) Statewide Industrial Program, PGE2102, statewide core
- 2) Total Authorized Program Budget (including 2010-2012 Carryover Funding)

**Table 1**  
**Projected Program Budget**

EEGA	New Sub Program	Total Administrative Cost	Total Marketing & Outreach	Total Direct Implementation (Customer Services)	Direct Implementation (Incentives & Rebates)	Total 2013-2014 Compliance Budget	2010-2012 Carryover Funding
PGE21021	Industrial Calculated Incentives	\$1,468,712	\$2,170,720	\$10,477,177	\$11,282,092	\$25,398,702	\$8,867,908
PGE21022	Industrial Deemed Incentives	\$145,553	\$210,811	\$748,964	\$914,627	\$2,019,954	-
PGE21023	Industrial Continuous Energy Improvement	\$56,178	-	\$966,619	-	\$1,022,797	-
PGE21024	Industrial Energy Advisor	\$46,505	\$65,693	\$2,695,882	\$3,255,000	\$6,063,079	-

- 3) Projected Program Gross Impacts Table

**Table 2**  
**Projected Program Gross Impacts**

		2013-2014	2013-2014	2013-2014
PGE2102	Statewide Industrial Program	Two Year EE Program Gross KWH Savings	Two Year EE Program Gross KW Savings	Two Year EE Program Gross Therm Savings
PGE21021	Industrial Calculated Incentives	71,279,214	9,600	12,733,111
PGE21022	Industrial Deemed Incentives	7,740,011	1,666	421,095
PGE21023	Industrial Continuous Energy Improvement	-	-	-
PGE21024	Industrial Energy Advisor	1,004,736	608	235,036
	Total	80,023,961	11,874	13,389,242

\*Savings include forecasted 2010-2012 pipeline commitments.

- 4) Program Description
  - a) Describe Program

California's industrial sector is a major consumer of energy resources, as shown in the table below, taken from the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan). These numbers clearly indicate a significant opportunity for energy efficiency—yet challenges to implementing energy efficiency are many.

Contribution of the Industrial Sector	(% of total in CA)
Electricity use	16
Natural gas use	33
Energy use	22
End-se CO <sub>2</sub>	20

To begin, this sector shows high diversity across customer type, company and facility size, and operation. Customer types include printing plants, plastic injection molding facilities, component fabrication plants, lumber and paper mills, cement plants and quarries, metals processing plants, petroleum refineries, chemical industries, assembly plants, and water and wastewater treatment plants, to name a few. While these customers often share an emphasis on process technologies and systems, implementation strategies vary based on end-use requirements, and one-size-fits-all solutions rarely fit the bill.

Further, industries operating in California are typically subjected to multiple policies and regulations regarding environmental impacts (waste water, air quality, greenhouse gas (GHG) reduction, energy efficiency, and waste management) and use of water and other resources. Compliance can create competing objectives, which in turn impede the implementation of energy efficiency.

To address these and other challenges, the Statewide Industrial Program offers California’s industrial segment a statewide-consistent suite of products and services designed to meet customer needs, overcome market barriers to optimized energy management, enhance adoption of integrated demand-side management (IDSMS) practices, and advance the industry toward achieving the goals of the Strategic Plan. The program overcomes barriers through strategies that provide an integrated solution to the customer; create heightened awareness through education and outreach; and foster continuous energy improvement (CEI). The program also promotes use of commonly accepted standards to document a facility’s attainment of high resource management levels—and access to branding and certification to garner market recognition for this achievement. In addition, it supports training to create a highly skilled energy efficiency workforce that is accessible to industry.

The four statewide Industrial sub-programs described below—Energy Advisor, Calculated Incentives, Deemed Incentives, and Continuous Energy Improvement—comprise the core product and service offerings for the Industrial market. Each of the four investor-owned utilities in the state also offer local program elements that complement and enhance these core offerings in their region. As described below, as well as in complete detail in the sub-program descriptions (see 6.1 through 6.4), these offerings together are designed to not only overcome the traditional market barriers to energy efficiency, but also use efficiency to advance demand response (DR) and distributed generation (DG) opportunities (including Solar and renewables) uniquely suited to the industrial segment.

1. Industrial Energy Advisor Program: Brings together under one program all audit services offered to support the customer's (1) education; (2) participation in energy efficiency, demand response and self-generation energy reducing opportunities and benefits; and (3) awareness of greenhouse gas and water conservation activities. These services include Benchmarking, Online Energy Audit Tool, Continuous Energy Improvement (CEI) (see CEI sub-program PIP), Nonresidential Audits, Pump Efficiency Services, and retro-commissioning (RCx).
2. Industrial Calculated Incentives Program: Provides standardized incentives—as well as comprehensive technical and design assistance—for customized and integrated energy efficiency/DR initiatives in new construction, retrofit, and RCx projects. This sub-program overcomes information, technical, and financial barriers. Further, because it presents a calculation method that can consider system and resource interactions, will become the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the Strategic Plan. Details on this offering are provided in PIP section 6.2.
3. Industrial Deemed Incentives Program: Provides utility representatives, equipment vendors, and customers an easy-to-use mechanism to cost-effectively subsidize and encourage adoption of mass market efficiency measures through fixed incentive amounts per unit/measure for installed energy-saving projects. While deemed rebates lend themselves well to penetrating the small and medium customer market, they are also a cost effective and efficient way to process large customer projects targeted through large customer strategies. Details on the Deemed sub-program are provided in PIP section 6.3.
4. Industrial Continuous Energy Improvement Program: Features a consultative service which targets long-term and strategic energy planning. CEI is designed to reintroduce the importance of energy management by transforming the market and to help reduce energy intensity through a comprehensive energy management approach. CEI will address technical and management opportunities for commercial customers while creating sustainable practices through a high-level energy commitment from executive and board-level management. CEI applies the principles of well-known business continuous improvement programs, such as Six Sigma and International Standards Organization (ISO) standards, to facility and plant energy management. These principles are: (1) Commitment; (2) Assessment; (3) Planning; (4) Implementation; (5) Evaluation; and (6) Modification. At each stage of customer engagement, a variety of complementary IOU and non-IOU products and services can be customized to fit different customer profiles and optimize the cost-effectiveness of the delivered energy management solution.

The IOUs and CPUC have worked collaboratively to define a set of Program Performance Metrics (PPM) to measure progress made by the programs and sub-programs towards their short term goals and Market Transformation. Statewide

coordination and planning will facilitate inter IOU sharing of successes, lessons learned, and best practices in the pursuit of those targets and metrics.

Statewide coordination and planning between IOU program planning staff, IOU functional departments, government agencies, and other key partners and stakeholders will also be critical to the advancement of the Strategic Plan. In addition, leveraging national and state initiatives, tools, and resources to manage energy, use and protection of natural resources and environmental impacts will be key to optimizing the potential for California's industrial segment. As described in Section 6, the Statewide Industrial Energy Efficiency Program includes the staged integration and coordination with existing initiatives and regulations today, and later will drive or support advancements in integrated resource planning, energy management certification, industry benchmarking, workforce education and training, and sharing of industry best practices towards a goal of optimized energy utilization.

Industries are uniquely suited to integrated energy strategies, and an integrated approach should be an effective way to help customers meet overall economic and green goals. In alignment with California's preferred loading order, however, the IOUs will continue to aggressively market and support energy efficiency first as the most cost-effective energy resource through education and training, as well as when pursuing strategic energy planning with customers.

b) List of Measures

The key end-use technology categories addressed through the Statewide Industrial Energy Efficiency Program are pumping, motors, heat recovery systems, process steam, loads, and heating, air compressors, hot water systems, insulation, plug load controls and lighting.

c) List of Non-Incentive Customer Services

Non-incentive customer services offered through the Statewide Industrial Energy Efficiency Program will include the following:

- Energy Advisor
  - Basic audits
  - Integrated audits
  - Retro-commissioning audits
  - Benchmarking
  - Pump tests and pumping systems technical support
  - Water leak detection services
  
- Continuous Energy Improvement (CEI)
  - Energy management assessments
  - Energy planning consulting
  - Energy use baselines establishment

- Facility/customer benchmarking
- CEI education and training
- Customer recognition
- Plant certification
- Education and Training
  - System-assessment DOE training
    - Basic, Intermediate and Specialist Training (in support of ANSI Certification) in industrial pumps, motors, compressed air, and steam
  - Other system-specific training
    - Steam system and process heating seminar
    - Air systems
  - Industry-specific integrated energy management workshops and seminars developed by the IOUs
    - Control systems
    - Energy management systems
  - Workforce Training and Education (WE&T)
    - Training to build team of highly skilled personnel to perform plant certification and assessment.

5) Program Rationale and Expected Outcome

a) Quantitative Baseline and Market Transformation Information

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>1</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>2</sup>.

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical dimensions 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>3</sup>. Markets are social

---

<sup>1</sup> California Public Utilities Commission Decision, D.98-04-063, Appendix A.

<sup>2</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>3</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>

institutions<sup>4</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>5</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>6</sup>. According to York<sup>7</sup>, “Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are three 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>8</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>9</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

---

<sup>4</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>5</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>6</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>7</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>8</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>9</sup> Rogers (1995) *Diffusion of Innovations*, 5<sup>th</sup> Ed.

decades<sup>10</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>11</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>12</sup>" The Strategic Plan recognizes that regulatory policies are not yet in place to support the success of market transformation efforts<sup>13</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>14</sup>. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the IOUs 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>15</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

---

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

<sup>11</sup> Sebold et al (2001) p. 6-5,

<sup>12</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>13</sup> CPUC (2008) Strategic Plan, p. 5.

<sup>14</sup> Nadel, Thorne, Saches, Prindle & Elliot (2003).

<sup>15</sup> Pelozo & York, (1999).

information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

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.

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 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.

Program Performance Metrics (PPMs)

The IOUs have evaluated 2010-2012 PPMs in Resolution E-4385 for applicability to the 2013-2014 program cycle and propose to work collaboratively with Energy Division to develop revised program targets and PPMs as appropriate for the 2013-2014 program cycle. The IOUs' will propose revisions in an advice letter, per additional guidance from Energy Division.

**Table 3.1 Short-Term PPMs**

On December 2, 2010, the Commission issued Resolution E-4385, approving short-term Program Performance Metrics (PPMs) for Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and San Diego Gas and Electric Company for 2010-2012 statewide energy efficiency programs and subprograms. The Commission gave each PPM a metric type which indicated the reporting frequency: Metric type 2a indicates that the IOUs should report on the metric on an annual basis (unless indicated otherwise). Metric type 2b indicates the IOUs should report on the metric at the end of the program cycle.

SW PROGRAM / Sub-program	SHORT-TERM PROGRAM PERFORMANCE METRIC (PPM)	Metric Type
<b>COMMERCIAL / INDUSTRIAL / AGRICULTURAL COMBINED</b>		
	*1. Number and percent (relative to all eligible customers) of commercial, industrial and agricultural customers participating in sub-programs (NRA, Deemed, Calculated, and CEI) by NAICS code, by size (+/- 200 kW per yr or +/- 50K therms per yr), and by Hard to Reach (HTR)**  ** "HTR" is as defined in the EE Policy Manual	2a
<b>Continuous Energy Improvement (CEI)</b>	*1. Number and percent of commercial, industrial, and agricultural CEI participants that meet short-term (2013-2014) milestones as identified by their long term energy plans.	2a
	*2. Lessons learned, best practices, and plan to ramp up the CEI program are developed. (Y/N)	2b
	*3. Number and percent of commercial, industrial and agricultural customers that created an energy plan via CEI will be tracked by program.	2a
	*1. Number and percent of commercial, industrial, and agricultural customers receiving non-residential audits by NAICS and SIC code.	2b

<p><b>Non-Residential Audit Program (Energy Advisor)</b></p>	<p>*2. For commercial, industrial, and agricultural customers who received audits, the number and percent of adopted audit-recommended technologies, processes and practices, (Report disaggregated data by type of audit - Basic, Integrated, and Retro-commissioning audit).** (1)</p> <p>**Data sources for reporting will come from (a) program tracking databases and (b) process evaluation to refine estimates.</p> <p>(1) – An audit completed in one portfolio may have measures implemented over several years and portfolios.</p>	<p>2b</p>
<p><b>Deemed Incentives</b></p>	<p>*1. Number and percent of new, improved, or ETP measures** installed in the commercial, industrial and agricultural programs.</p> <p>** “ETP measure” defined as ET measures first introduced into the EE portfolio since January 1, 2006</p>	<p>2a</p>
<p><b>Calculated Incentives</b></p>	<p>*1. Number and percent of new, improved, or ETP measures installed in completed calculated projects.</p>	<p>2a</p>
	<p>*2. Number, percent, and ex-ante savings from commercial, industrial and agricultural sector of projects with ETP measures** included. (Report disaggregated savings by measure and number of installations by measure.)</p> <p>** “ETP measure” defined as ET measures first introduced into the EE portfolio since January 1, 2006</p>	<p>2b</p>
<p><b>INDUSTRIAL</b></p>		
<p><b>Industrial Deemed</b></p>	<p>1. The number and percent of first time** participants in energy efficiency programs. (Report disaggregate data by sub-program)</p> <p>**“First time” means customer has not participated in energy efficiency programs since December 31, 2005.</p>	<p>2a</p>

**Table 3.2 Long Term PPMs**

PG&E includes long term PPMs<sup>16</sup> per Energy Division guidance received in December 2012. As stated in the Joint Utilities’ comments to the Commission in R. 09-11-014 dated November 21, 2011, and discussed between IOUs and ED on January 9, 2013, IOUs plan to finalize long term PPMs in further discussions with involved stakeholders and propose updates to Energy Division at a later date.

<sup>16</sup> From the Energy Division’s file “Revised MTIs\_10 27 11-formal-release-ED-May-2012.xlsx”

MTI Index#	RE-CATEGORIZED Metric (LTPPM - or SPI) [E-4385 Appendix B original text except for noted edits]	Unresolved Issues
CIA-1	<u>MT Indicator 1:</u> Number and percent of Calculated Incentive participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program.	
CIA-3	<u>MT Indicator 3:</u> Number and percent of CEI Participants who achieve all scheduled milestones, as identified in their long-term energy plans.	
CIA-4b	<u>MT Indicator 4b:</u> Number and percent of CEI Participants that include greenhouse gas reduction measurement, monitoring and reduction strategies in their long-term energy plans.	
CIA-5	<u>MT Indicator 5:</u> Number and percentage of eligible customers participating in the CEI Program	
CIA-6	<u>MT Indicator 1:</u> Percent of NRA participants that implement non-incented measures recommended in the audit.	
CIA-16	<u>MT Indicator 2:</u> Percentage of commercial participants, tracked by NRA, Calculated and Deemed subprogram, who go on to implement a long-term energy plan.	Need to define "long term energy plan"; start with CEI program definitions.
Ind-1	<u>MT Indicator 1:</u> The percentage of participants in the Industrial programs who go on to implement an energy plan under the Continuous Energy Improvement subprogram	

b) Market Transformation Indicators

Per Resolution E-4385, a subset of market transformation indicators (MTIs) for statewide energy efficiency programs and subprograms were presented at a public workshop on November 7, 2011, to allow for public comments and discussion before being finalized. Per guidance from Energy Division received in December 2012, the approved Market Transformation Indicators for 2013-2014 were filed in a Joint IOU matrix with PG&E's January 14, 2013 compliance filing advice letter.

c) Program Design to Overcome Barriers

The multitudes of primarily institutional and behavioral—rather than technical—barriers that prevent the industrial sector from achieving its full technical or economic potential in energy efficiency include the following:

- Limits on capital expenditure due to industry reluctance to invest in projects with greater than two year payback
- Lack of awareness of energy efficiency opportunities
- Difficulty in accessing industry-specific technical assistance
- Inadequate availability of plant and management personnel to foster energy efficiency
- Prioritization of production over energy management
- Aversion to the risk of investing in new technologies and processes with unknown impacts to industrial output or quality
- Limited capital and labor resources for assessing and implementing energy efficiency projects

Further, the industrial sector faces an array of barriers common to all nonresidential customers:

- A high percentage of building developers, owners, managers, and contractors build or retrofit to current standards (Title 24). Likewise, architects and engineering (A&E) firms tend to specify known and familiar equipment and designs.
- Because viable high efficiency emerging technologies are unknown to facility owners and system designers, these technologies are slow to penetrate the market, causing lost energy efficiency opportunities.
- Insufficient access to information creates barriers with:
  - operating best practices;
  - energy efficiency opportunities,
  - impacts of an energy efficiency project on emissions, resource consumption, or waste discharge streams;
  - difficulty in obtaining technical assistance; and
  - inadequate availability of qualified industry specialists can all impede adoption of energy efficiency.

The Statewide Industrial Energy Efficiency Program includes numerous features designed to overcome these barriers:

- **Integrated Demand Side Management Approach:** The Statewide Industrial Program offers California's industrial segment a statewide suite of products and services to overcome market barriers to optimize energy management and meet the goals of the Strategic Plan. It overcomes multiple barriers identified above through the implementation of strategies that provide an integrated solution to the customer, offer education and outreach to create awareness and promote continuous energy efficiency improvement. The program also enables a facility to

attain resource management levels that exceed industry standards and gain them market and worldwide recognition.

- **CEI Program Offering:** CEI offerings help customers to implement energy efficiency measures that have been identified through energy efficiency audits or in-depth facility/process assessments. Such assessment may be jointly provided by the IOUs and the U.S. Department of Energy (DOE) or ANSI. It focuses on improving production and optimizing energy efficiency and provides integrated resource management solutions including GHG reduction. This approach overcomes such barriers as lack of awareness of energy efficiency opportunities and provides highly skilled workforce of energy efficiency, process optimization, and resource management.
- **Marketing and Outreach:** To increase awareness of the program, a statewide centralized clearinghouse will be developed to give customers access to information on operating best practices in energy efficiency, industry relevant technical assistance, baselines, case studies, tools and computer based training. This clearinghouse addresses the issue of availability of information and qualified industry specialists to fully assess a building, system or process and help customers understand how energy efficiency can impact their emissions, resource consumption or waste discharge streams. It helps alleviate the problem often run into by non-residential customers of getting incorrect or out-of-date information from some local networks. It will also enable design engineers to specify energy efficient measures to exceed industry accepted baseline standards when constructing new or retrofitting existing buildings or systems, instead of specifying only what they know or what they are familiar with.
- **The Statewide Program information and services** will primarily be delivered through account representatives; utility call centers hotlines, local government partnerships, third parties, and utility internet sites. Information will also be made available through industry events, such as the Plant Engineering Expo, through industry organizations, such as the California Manufacturing Association, and the Building Owners and Managers Association (BOMA); and through advertising in industry and trade publications. Other avenues to reach out to customers and identify energy efficiency opportunities include non-resource programs that provide Education and Outreach, Workforce Education and Training, or through IOU Emerging Technologies Programs.
- **Education and Training:** Highly skilled Energy Management Professionals may conduct technical training and seminars to educate the public as well as develop a highly trained energy efficiency workforce that is accessible to industry.
- **Emerging Technologies:** In collaboration with ET and the CEC, ET may conduct studies, pilots, and demonstrations to prove the viability of promising emerging technologies and lower the risk of investment which in turn will speed up market penetration.
- **Financial Assistance:** Rebates and incentives properly priced and based on energy savings quantified through technical assessments or basic audits, can help

customers overcome internal financial hurdle rates. Skilled energy efficiency personnel may also assist customers and provide additional information about other opportunities for project assistance, such as State or Federal funds available for energy efficiency projects, tax incentives or other local sources of project funding.

- The Statewide Finance PIP includes plans to explore and develop additional finance tools to facilitate the adoption of integrated projects.

d) Quantitative Program Targets

Table 5 - Program targets are provided at the sub-program level.

e) Advancing Strategic Plan Goals and Objectives

The Statewide Industrial Energy Efficiency Program supports all three goals in the Strategic Plan for the Industrial Sector.

Goal 1: Support California industry's adoption of energy efficiency by integrating energy efficiency savings with achievement of GHG goals and other resource goals.

To address this goal, the strategy adopted is to develop an interagency framework that could combine energy efficiency incentives to achieve measured performance improvements in resource management, including water, air quality, GHG emissions, and energy efficiency. This first goal focuses on developing a minimum regulatory energy efficiency requirement for individual company or industrial sub-sectors as a whole. One example could be to integrate AB32 requirements to allow industries to use energy efficiency to meet or exceed regulatory requirements for GHG emission reductions. An IOU – CARB AB32 team will be formed to study the feasibility of implementing negotiated agreements between agencies. Along the same lines, the IOUs are also undertaking an initiative with the food processing industry, under the Agriculture program.

Goal 2: Build market value and demand for continuous improvement in industrial efficiency through branding and certification.

This second goal focuses on companies that want to exceed a minimum regulatory requirement by actively managing their energy use over time. To this end, this program offers CEI options that include participation in a recognized national effort to certify industrial facilities for energy efficiency. Industrial customers will then be able to reach their GHG emission reductions targets via a supported, structured program based on best practices and develop world-wide recognition for their efforts through third-party certification based on proven best practices. The IOUs will be partnering with DOE Industrial Technologies Program or EPA Technologies program, for example, to gain access to highly skilled professionals in energy management systems.

Goal 3: Provide centralized technical and public policy guidance for California industrial energy and resource efficiency.

The primary interest with this goal is to provide a clearinghouse of technical knowledge and information so that industry personnel can access information on emerging technology and industry specific research. The clearinghouse will leverage extensive knowledge on energy efficiency developed by other organizations like DOE and EPA. In alignment with the Strategic Plan, the statewide team will be developing this clearinghouse on the EDR website which is an existing statewide resource.

#### 6.0) Program Implementation – Overview

##### a) Statewide IOU Coordination

- i. Program name: Statewide Industrial Energy Efficiency Program
- ii. Program delivery mechanisms

The Statewide Industrial Energy Efficiency Program will be coordinated on a statewide level to ensure the program is continuously updated and enhanced throughout the two year transition period and beyond. In addition, each of the four sub-programs in the Industrial Energy Efficiency Program will be coordinated on a statewide level to unify the implementation of program aspects such as program name, program delivery mechanisms, incentive levels, marketing and outreach plans, and IOU program interactions. A detailed description of each of these program aspects and how they will be coordinated statewide is provided in sub-program descriptions. The two coordination systems, one for the core program and one for the sub-program level, will interact with and support one another. The broad, high-level coordination effort for the core program will be described below, focusing on how the IOUs will work together to effect the continuous improvement of the Statewide Industrial Program.

The Statewide IOU Coordination process for the Statewide Industrial Program will be as follows:

- Designate an IOU Program “Lead” – The coordination process will begin with each IOU designating a Statewide Industrial Program “lead”. The IOU lead will represent one Industrial sub-program, investigating new innovations, special accomplishments, and challenges experienced by sub-program managers in all IOUs. Where such innovations or challenges show potential for impacting the Statewide Industrial Program across multiple sub-programs or the statewide program as a whole, the IOU lead will present such information to a quarterly Steering Committee meeting.
- Hold Periodic Steering Committee Meetings – The Industrial Steering Committee will comprise all designated IOU leads (including at least one lead for each of the four sub-programs), and possibly other contributing stakeholders identified by the

IOUs. At the periodically Steering Committee meeting, individual innovations, challenges, and accomplishments experienced in one IOU or by one sub-program will be transmitted to all IOUs. The Steering Committee will evaluate these individual IOU and sub-program experiences, hear ideas for course corrections and overcoming challenges, replicate successful innovations for consistency statewide, resolve differences in implementation to stay unified, and measure the Industrial program's progress against statewide metrics and goals.

- Adopt Program Enhancements - Once the Steering Committee agrees that a particular implementation policy or innovation has merit on a statewide level, each IOU lead will distribute the information to their sub-program managers for adoption and integration. Therefore, the IOU lead will act as a conduit, feeding sub-program information up to the statewide Steering Committee and distributing measures for adoption back to the sub-program managers. This feedback loop will assure consistency and unity in programmatic improvements across the IOUs. In some cases, it may be necessary to invite the sub-program managers to the Steering Committee meeting to get their feedback and ensure they receive the same message.
- Evaluate Program Enhancements Against Statewide Targets – To complete the adaptive management loop, the Steering Committee will track the program's accomplishment of statewide targets and goals to ensure that adopted program enhancements are generating their intended results. The Steering Committee will determine whether further course corrections are needed, and if so, rely on the above coordination process to generate the improvements necessary to stay on track.

The high-level focus of this statewide coordination effort will enable the capture of new innovations and opportunities for program improvement, correct program weaknesses that reveal themselves during implementation, and ensure achievement of statewide targets across IOU service territories. Therefore, statewide focus on program unity and continuous program improvement over the course of the two year implementation cycle will be enabled. The details of actual implementation of these coordination activities are to be determined by the IOU's industrial program managers.

iii. Incentive levels

Details on the incentive levels are discussed with each of the four sub-programs.

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

The IOUs will continue to develop an in-depth segmentation of the industrial market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers based on their needs and preferences. Such delivery channels will

likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs. More specific marketing information is provided in each of the industrial sub-program plans.

To reach out to the diverse customer segments, IOUs will continue to foster strategic partnerships with industry and community groups, as well as trade professional associations, to engage in a multi-faceted approach to marketing energy efficiency practices and programs to targeted users. Specific efforts will include:

- Participation in trade association meetings to market the industrial program;
- Close partnerships with key industry associations, and participation in their annual conferences, with an effort to develop conference speaking engagements;
- Targeted integrated education and training to specific market sectors to support peer-to-peer interactions and industry advancement;
- Ads and articles, with program information and case studies, in trade magazines;
- Targeted customer efforts through IOU account representatives, program engineers, third parties, and government partnerships;
- Phone and web-based customer support and outreach;
- Development of coordinated industrial resources into a centralized “one stop shopping” clearinghouse; and
- Development of marketing collateral that drives customers to account representatives and websites for additional support.

The IOUs will raise awareness of energy efficiency programs available using a number of strategies, including:

- IOU representatives will make a regular and consistent customer calling effort to key customers within this sector; and
- IOU representatives, Energy Efficiency program management representatives, and field engineers will be available to provide additional expertise.

To help ensure that IOUs are marketing the right products to the right customer at the right time through the right channels, the IOUs need to be able to segment customers based upon their individual characteristics and energy needs. The IOU’s efforts to collect this customer data will guide the development and implementation of its IDSM marketing and outreach activities.

This customer segmentation will help the IOUs develop an understanding of customers’ needs and respond accordingly with products and services that customers want. The segmentation analysis looks at what the customer requires and how the customer is engaged with each IOU. This foundational segmentation will evolve with incremental

insight into customer mindsets, behaviors, responses and motivations to achieve the most effective level of energy use. Based upon this evolving segmentation, the IOUs will be able to identify what integrated product offerings are specific to individual customer needs, and offer those products through the most relevant channels.

Based on the segmentation analysis, the IOUs will be able to focus on providing consistent marketing and overall messaging focused on the customer's:

- Business/personal goals;
  - Unique needs; and
  - Green/global climate change goals
- v. IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable

The Statewide Industrial Energy Efficiency Program will leverage the programs offered by CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information and marketing collateral with commercial customers, as appropriate. Conventionally, each government agency and IOU has operated natural resource and energy programs independently, missing opportunities to serve customers who must manage more than one resource type. The sub-program descriptions provide more specific information on linkages with other government programs.

- vi. Similar IOU and POU programs

Some initiatives, such as the California Advanced Lighting Controls Training Program, are joint efforts with the other California IOUs and publicly owned utilities (POUs), as well as other domestic and international utilities. In addition to these joint efforts, local third-party programs that address niche opportunities within the commercial market will be implemented in each of the IOUs service territory. These various efforts will be coordinated to ensure a consistent approach in terms of program message, delivery and measure incentives.

- b) Program delivery and coordination

- i. Emerging Technologies program

The long-term energy efficiency vision of California can only be attained through the long-term and continuous development, verification, and acceptance of new technologies into the market. The achievement of long-term goals requires new technology as well as information, training, and market development to maximize the EE benefits of cutting-edge technologies. In recognition of the importance of emerging technologies, the program is poised to adopt the efficiency potential of new technologies through its programs.

Similar to years past, commercial, industrial and agricultural lighting performance will be reported primarily under the Commercial, Industrial, and Agricultural EE programs. The Industrial Calculated and Deemed Incentives programs will include non-residential lighting products, including but not limited to, LEDs, linear fluorescents, fixtures, ballasts, and lighting controls.

ii. Codes and Standards program

The program relies on the Codes and Standards program to help 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. It is important to manage the measure life cycle to take full advantage of providing incentives before moving them into code. The program will coordinate with the Codes and Standards Planning & Coordination subprogram. 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 20 and 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 ensure that the latest cost-effective technologies/services (e.g., LEDs) are 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 efforts support the education and training of a robust network of industry trade allies, vendors, engineers, design teams and others who can support the market transformation strategies of the Strategic Plan. In the Industrial Programs, WE&T efforts will focus in the near term on supporting national ANSI Energy Management Certification development efforts, as outlined in the Strategic Plan. Programs will closely coordinate with key stakeholders to ensure that California is poised to adopt this national standard and be a leader in this effort. Specifically, prerequisite trainings will be offered in DOE systems trainings to lay the groundwork for certification level trainings. These education and training offerings will take place through utilities energy centers and technology centers.

iv. Program-specific marketing and outreach efforts (budget provided in Table 1)

In addition to the general efforts listed above in 6.a.iv., specific marketing and outreach efforts for sub-programs are found in the sub-program documents.

Integrated and program-specific marketing efforts will complement and work in coordination with statewide ME&O to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU-specific programs providing reinforcement at a local level.

v. Non-energy activities of program

Integrated comprehensive energy audits (described in the Industrial Energy Advisor sub-program) that look across the various energy efficiency program offerings, as well as that look across the various EE program offerings, as well as complementary options available through other entities (e.g., water agencies) will be used to identify the opportunities to be recommended to the specific industrial customer.

The Statewide Industrial Energy Efficiency Program will offer information to customers about the non-energy benefits associated with recommended measures, such as improved safety, productivity, indoor air quality, comfort, and appearance.

vi. Non-IOU Programs

A variety of programs will be coordinated and leveraged to support program objectives. These include:

- Connecting customers with the CA Climate Action Registry
- AB32 support through CO2 tracking in program resources
- Regulatory program coordination, including EPA air quality standards, water quality standards, and new refrigerant regulations
- Non-utility financing resources, including from water utilities, industry and private banking, state and federal incentives, funds, grants, and loan products to support energy and other resource management objectives
- Water/Energy efforts within California
- ANSI standard (see CEI section)
- ISO international energy management standards (see CEI section)

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, as appropriate and feasible.

vii. CEC work on PIER

Not applicable

viii. CEC work on codes and standards

As indicated in Section 6.b.ii, planned enhancements to Title 20 and in eligible measures and services.

ix. Non-utility market initiatives

The program will support, educate, and/or enforce such initiatives as AB32, renewables, ANSI certification, facility benchmarking, Continuous Energy

Improvement, California Green Building Initiative, and other initiatives as directed. The IOUs will remain engaged in these efforts and work to influence the development of increasingly higher standards.

The Program will leverage the following efforts:

- California Green Building Initiative
- LEED
- Zero-net energy
- DOE
- AB1103
- AB758

c) Best Practices

The Statewide Industrial Energy Efficiency Program reflects the best of each IOU program's successful components of statewide Industrial program offerings, and introduces new elements from other utilities and national efforts as well. Best practices include:

- **Continuous Energy Improvement:** This approach proposes to transform the market and reduce energy intensity through addressing technical and management opportunities.
- **Technical Assistance:** Recognizing the need for personalized assistance for customers, the IOUs will offer a full-service approach starting from audits/pump tests to design and technical assistance, presentation of recommendations, resources to develop a long term plan, and potential of project management assistance, with financial incentives.
- **Vendor Partnerships:** This strategy will be coupled with vendor support and educational workshops and classes to provide the full breadth of support customers may need to influence their decision to implement energy efficient equipment and practices.
- **Statewide Coordination:** In order to take advantage of the statewide implementation of the program, the IOU program representatives will meet on a quarterly basis to improve program operations by sharing successes and areas of operational concerns.
- **Leveraging Industry-Specific Resources:** We will make full use of resources available, such as industry trade and professional associations.

As general best practices, lessons learned from previous EM&V studies will be leveraged to improve program design and results.

d) Innovation

One innovation is that the program focuses on energy efficiency savings through not just hardware installation but also documented permanent changes in operations. . Further, it covers all energy resources including energy efficiency, demand response, energy storage, combined heat and power, distributed generation, renewables, and emerging technologies.

The products and services are bundled in an integrated fashion to serve the customer's need and are geared towards a value creation solution that helps customer to realize that they can run their operations efficiently and also meet their business and regulatory objectives. This approach brings to market a more customer-centric energy solution that takes into account their short- and long-term energy usage management and planning and helps overcome some of the barriers to making energy efficiency a priority. It also helps industrial customers identify, develop and document energy efficiency improvements and their economic benefits.

With the introduction of the new CEI product and services, customers now play a more active role in managing their energy usage and GHG reduction. Bundling the program offerings (calculated, deemed, audits, and CEI) makes it easier for customer to participate in a one-stop shop program. Integrated offerings approach will also garner significant gains in energy efficiency and make the goals envisioned in California's long-term energy efficiency strategic plan a reality.

In addition, this approach will also enable industry to integrate AB32 requirements such that industrial facilities can use energy efficiency to meet and exceed regulatory requirements for GHG emissions and can also aid in water conservation, waste disposal and air quality improvement. It also moves us towards a more holistic approach in managing all energy resources utilization which includes energy efficiency, demand response, energy storage, combined heat and power, distributed generation, renewables and emerging technologies.

Another innovation used in our program design is the creation of the infrastructure for a statewide centralized technical resource to enable customers to seek energy efficiency information and best practices to manage their energy resource. It provides a resource otherwise unavailable due to business resource limitations. A web based technical resource is envisioned that includes tools to help customers calculate their energy savings. Also, web based training may be offered in energy efficiency and energy management. It would also link the customer to industry sites that may offer industry specific information e.g., the latest trends in industry for energy efficiency.

This resource center will be developed on the existing EDR (Energy Design Resource) website and will be readily available to customers. It is another avenue to increase awareness of energy efficiency opportunities by customers, industry consultants and suppliers that was identified as a barrier to the adoption of energy efficiency.

Some of the outcomes from this innovative program approach are listed below:

- IOUs establish a stronger presence with trade associations and community groups, enabling a deeper understanding of customer needs and how energy efficiency can be a part of their solution to their primary concerns. This will enable a deeper and more effective penetration of energy efficiency solutions to a broader base of customers.
- Integrated Energy Efficiency Assessments are offered to provide targeted Industrial, food processing, and water customers with a holistic approach to maximizing energy efficiency, maximizing investment efficiency and maximizing GHG reductions.
- IOU assistance makes customers aware of renewable energy opportunities, with emphasis on system available for California Solar Initiative, Renewable Generation, Department of Energy and other incentives, grants and rebates.
- Web-based services, including energy efficiency information, training, and modeling tools, are available to help customers with retrofit or new construction projects, via a new enhanced “Energy Design Resources” website.
- Training is designed to strategically target internal personnel, vendors and trade associations, and customers in a focused alignment, which will create a synergistic effort that will overcome many informational and transactional barriers.
- Seminars are offered to train customers on how to identify energy efficiency opportunities at their facility/in their process. Class room software tool training is available on modeling and quantifying savings opportunities. IOUs may also provide a PDA energy efficiency tool or tools from the statewide IOU tool lending library that customers can use at their sites.
- Energy measuring and benchmarking assistance/services are offered to customers so they can see how their facility/process measures up to “best in class” systems utilizing tools such as the U.S. EPA’s ENERGY STAR Benchmarking tool.
- Information on “green” energy opportunities is provided when doing basic audits or in-depth assessments. Education and training on green and renewable energy opportunities will be available on the EDR website.
- Assistance is offered to help customers quantify the carbon emissions savings that EE opportunities identified during audits and assessments offer.
- A web link is developed between customers and the California Climate Registry to document a plant’s carbon footprint.
- Trained personnel help identify, assess and make available to customers an integrated assessment tool and train customers on the use of the tool to empower customers to identify the best EE opportunities at their facilities.
- An application process improved for statewide consistency, makes it easier for customers to participate in the program.

e) Integrated/coordinated Demand Side Management

Integrating the portfolio of IOU offerings to include energy efficiency, demand response and distributed generation—as well as other resources, such as air and water as they connect to energy—supports future cost-effectiveness of the portfolio and the CA Loading order, but also the needs and wants of our customers, who are interested in any energy solution that solves their problems and meets their business needs. It also advances significantly the goals of the Strategic Plan. On a broader scale IDSM also includes the integration of Third-Party programs and Local Government Partnerships (LGP) delivery channel with the statewide industrial program.

Customers prefer a single IOU point of contact that understands multiple options. They benefit from a single, coordinated planning process that helps them prioritize integrated investment decisions based on their unique needs. To that end, the statewide IOUs have made tremendous progress in advancing integrated solutions. These include:

**Marketing:** In marketing integration, the IOUs are placing major emphasis on getting the right message to the right customer at the right time. Advanced customer segmentation is being used to develop detailed integrated marketing and outreach plans which outline multiple tactics, delivery channels and key messages to target to specific customers based on their specific needs. The account representatives, who serve as the key customer point of contact, will be trained to ensure consistent delivery of portfolio offerings.

**Education and training:** Workshops organized around a customer segment provide an ideal situation to integrate customer energy solutions. Building on past successes of providing integrated workshops to customers, the IOUs will offer workshops that provide opportunities cross-sell solutions and share key information from other IOU departments. As appropriate, Workforce Education and Training will also cover integrated energy and system solutions, which will be increasingly important as Critical Peak Pricing matures.

**Integrated Audits:** These will combine funds and resources of energy efficiency and demand response programs. They will provide integrated recommendations to customers that emphasize energy management in proper sequence, as supports the CA Loading Order, which calls for permanent reductions through energy efficiency before implementing demand response. Incentives from both programs can help reduce payback cost and support advanced energy management decisions. Demand response opportunities will be targeted in the larger facilities, particularly as part of monitoring-based retro-commissioning efforts, where controls to facilitate demand response efforts would be installed.

Integrated audits combine funds and resources of energy efficiency and demand response programs to provide integrated recommendations to customers that emphasize energy management in proper sequence, in support of the California Loading Order. Incentives from both programs can help reduce payback cost and support advanced energy management decisions. Demand response opportunities will be targeted in the larger facilities, especially as part of monitoring-based retro-commissioning efforts where the

controls to facilitate demand response efforts would be installed. Additionally, any energy efficiency audits required for participation in distributed generation programs will be expanded to include DR opportunities when appropriate and thus address the three facets of DSM integration.

As required, IOU distributed generation programs require that customers receive an energy audit before being eligible to receive solar audits.

Emerging Technologies and CEC – Program collaboration with Emerging Technologies and CEC is expected to include initiatives and market acceleration assistance for market-ready products in the general categories of day lighting, lighting, HVAC, controls, and building envelope improvements.

Over the last few years, traditional DSM programs have shown us that successful customer participation in one program often leads to repeat participation in the same program or other similarly related types of programs. Nonetheless, cross-marketing DSM programs with these customers remains a challenge due to program-specific silos. To eliminate these silos, the Program will leverage lessons learned from past program experience and offer comprehensive, coordinated marketing and program delivery.

A primary issue when integrating energy efficiency and demand response programs is that these two efforts are at odds with each other, as both programs reduce the potential for each other's financial incentives to the customer. For example, energy efficiency may reduce the overall baseline that serves as the basis for the demand response program's incentives. Also, benefits from long-term energy savings derived from technological measures often outweigh the temporary demand reduction benefits derived from behavioral actions. To overcome this barrier and maximize the potential of both programs, additional incentives will be paid for energy efficiency measures that enable demand response

A secondary issue when integrating energy efficiency and demand response programs is that communication messages for both types of DSM programs are often not coordinated, since energy efficiency is typically technology based and demand response is often focused on behavior. Also, demand response efforts often happen prior to the summer "event season" and wane throughout the remainder of the year. To overcome these differences, the program will offer Integrated and coordinated year-round marketing through consolidated applications, collateral, web sites, and events, where applicable. Through bundling program elements and offering one program application, customers will have the opportunity to enroll in demand response, as well as energy efficiency, programs.

In summary, the Program seeks to overcome the many issues raised by integration of energy efficiency and demand response by focusing on several tactics:

- Promotion and incentivizing of demand response enabling energy efficiency measures to ensure that energy efficiency is completed first to maximize potentials.
- Integrated and coordinated year-round marketing (e.g. Applications, collateral, web sites, and events)
- Linking of program eligibility requirements (e.g., Customer size)
- Provision of unified technical assistance through enhanced EE/DR Audits through the TA Program to allow for cross-harvesting opportunities
- Integrated presence on IOU websites
- Regular coordination meetings between energy efficiency and demand response program management

During the current cycle, funding for energy efficiency and demand response must remain non-commingled; therefore payments will be split between the two programs as appropriate.

The IOUs will coordinate program efforts with the local program integration teams and the Statewide Integration Task Force to identify successful approaches and offerings, potential pilot programs and metrics.

f) Integration across resource types

California's Industrial sector faces a multitude of environmental and regulatory challenges that threaten their survival and competitiveness. New regulations aimed at improving air quality, water quality and reducing toxic environmental pollutants are proving to be expensive and disruptive to business as usual, and in many cases will have the impact of increasing energy use in compliance.

Proposes to leverage these challenges, the Industrial Program will coordinate with the regulating agencies and the programs they are operating to support mutually advantageous program designs, customer incentives, marketing opportunities, and implementation opportunities. IOUs will continue to offer targeted trainings to customers who share common regulatory challenges in an effort to educate customers on impending regulatory requirements for their business operation, and the most efficient solution options to consider for compliance. Future workshops may look at wastewater treatment options, steam system upgrades, and energy efficiency to meet AB32 industrial targets.

IOUs will pursue opportunities to partner with water agencies to offer joint energy and water conservation incentives to support projects that would reduce both resources. Partnering with other utilities will help reduce administrative cost and has a greater impact on societal benefits.

Where applicable, the Program will integrate topics such as GHG reduction and water conservation into targeted customer workshops, and marketing and communications,

building on a strong track record from the past program cycle. Marketing and communications material will include savings opportunities and messaging.

g) Pilots

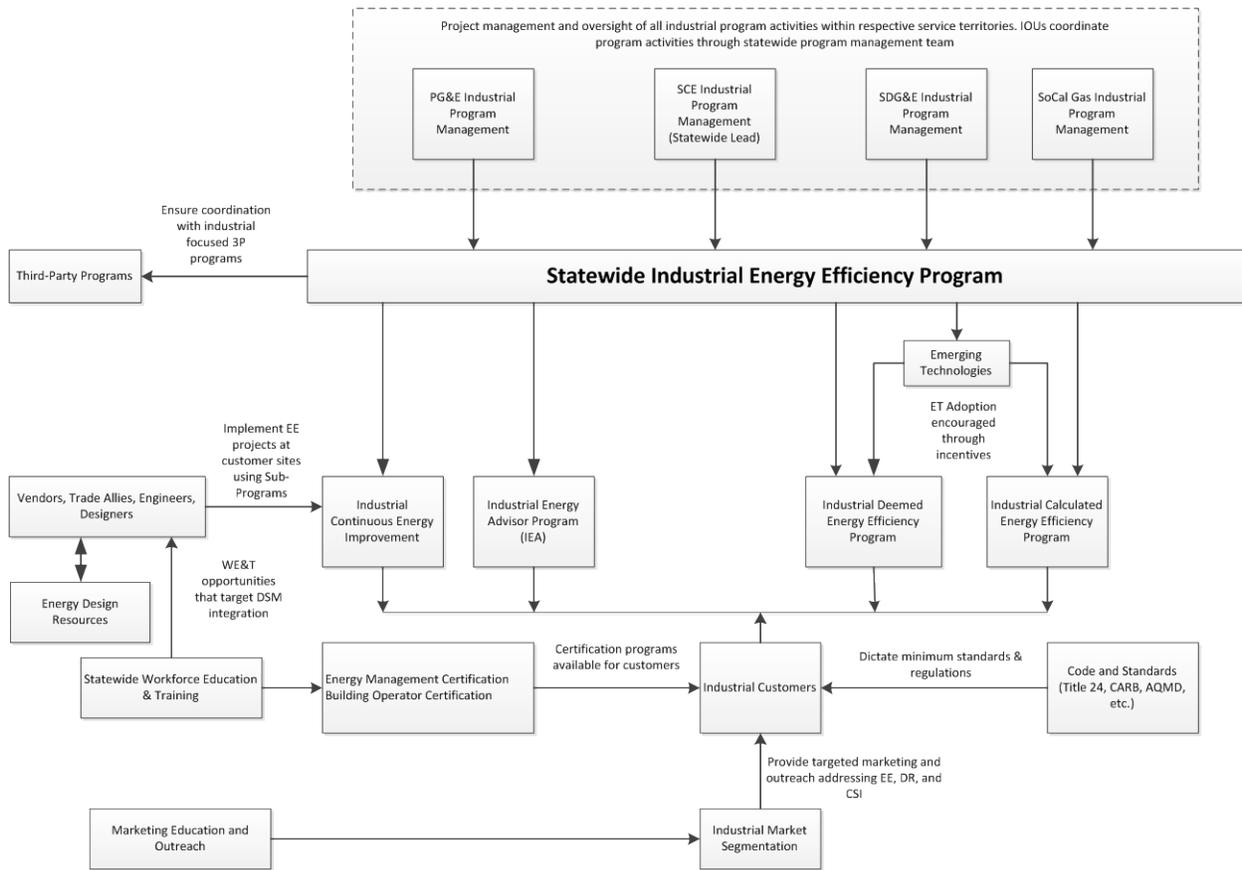
The Statewide Industrial Program will coordinate on a statewide level to ensure the program is continuously updated and enhanced throughout the two-year implementation cycle. Pilots may be developed at that time in response to customer's needs or to further advance the goals of the Strategic Plan.

The IOUs intend to implement methods to gather and retain more detailed performance and usage data on a pilot basis. This will determine the more effective methods and achieve savings. Exploring incentives for sub-metering is an option, as is expanding the tool library in lieu of incentives.

h) EM&V

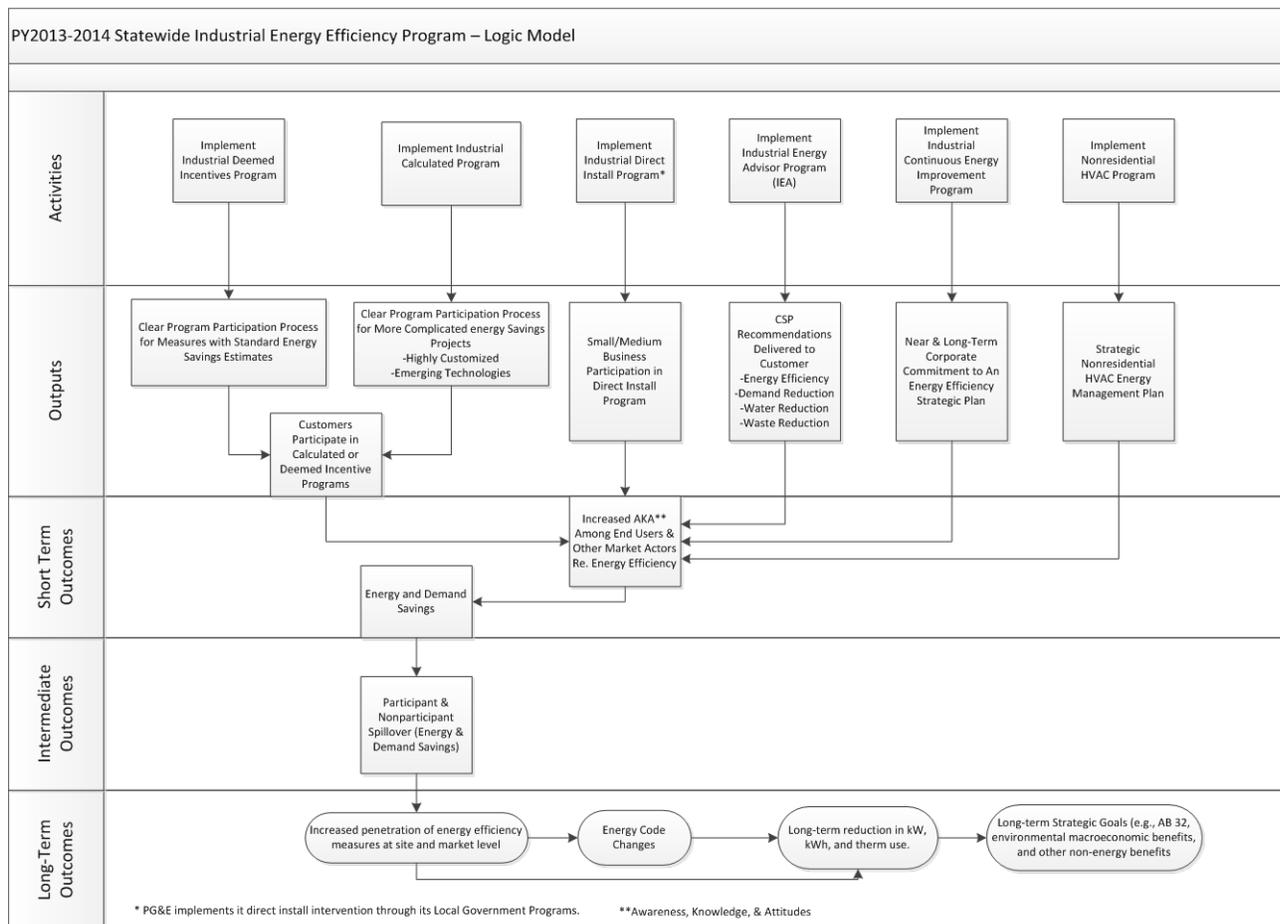
The IOUs are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan after the program implementation plans are filed. This plan will include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts will be developed collaboratively by the IOUs and Energy Division. Development of these plans will occur after the final program design is approved by the CPUC and, in many cases, after program implementation has begun, since the plans need to be based on identified program design and implementation issues.

7) Diagram of Program



8) Program Logic Model

Note: On December 2, 2010, the Commission issued Resolution E-4385, approving Program Performance Metrics (PPMs) for Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and San Diego Gas and Electric Company for 2010-2012 statement energy efficiency programs and subprograms. In addition, this Resolution approved updated logic models for the statewide programs. Below is the approved logic model for the Statewide Industrial Energy Efficiency Program.



6.1) Industrial Energy Advisor Program, core subprogram

a) Program Description

The Statewide Investor Owned Utilities (IOUs) have created the Industrial Energy Advisor Program to bring together under one program all services offered to support customer education and participation in energy efficiency, demand response and self-generation energy reducing opportunities and benefits, along with awareness of greenhouse gas and water conservation activities.

The Industrial Energy Advisor Program was created to provide a streamlined and coordinated assignment of right-sized customer solutions. The key is to start the process with an initial analysis of a customer's needs, determination from the analysis which audit will service the customer with the highest cost/benefit, and identify additional program support and key indicators that will motivate the customer to implement energy saving recommendations.

The IOUs anticipate the restructuring of the Energy Advisor Program will affect the way audits are provided. The Energy Advisor Program will enhance the IOUs' ability to match customer need(s) with the right audit service. This will result in an increased cost-effective delivery of these audit services with an increased expectation for customer adoption/installation of provided customer specific recommendations.

In its offerings, Energy Advisor Program will place an emphasis in deep energy saving measures and emerging technologies, where appropriate. When the technologies and customer opportunities are correctly aligned, customers will become more open to the benefits these technologies offer to their business and will therefore increase their acceptance and adoption.

Together the Energy Advisor Program offerings will work to support the achievement of Strategic Plan objectives across all nonresidential segments.

The IOUs believe this approach is the best way to influence market transformation, serve customers' needs, and increase adoption of DSM solutions.

The Industrial Energy Advisor Program package consists of five distinct offerings:

- Benchmarking is the first step for a customer to begin to understand the energy use of their building. Benchmarking is an initiative designed to educate and motivate customers to measure and track the energy use of their facilities, to educate customers of the benefits of benchmarking their facilities and to show them how they can track the impact of energy savings after implementing energy saving measures. To support the customer's efforts, the IOUs will offer technical support, hands-on workshops that will provide customers with information about how to benchmark, how benchmarking can be used as an energy management tool and what to do next after benchmarking.

The IOUs will develop or continue Benchmarking initiatives that support the customers' ability to comply with AB1103 benchmarking requirements (upon its implementation), utilizing ENERGY STAR Portfolio Manager and IOU supported Automated Benchmarking Services.

The IOUs will also continue to offer customers technical support ranging from email and phone hotlines, hands-on workshops and web-based benchmarking educational and instructional materials.

They will continue their support to identifying, evaluation and make information about other benchmarking tools available.

The primary focus for benchmarking activities will continue to be centered on commercial buildings (in alignment with the target building type of AB 1103).

- Industrial Continuous Energy Improvement (CEI) is a consultative service aimed at helping industrial customers (IOUs will target CEI services in line with market segment potential in their service territories and resource availability) engage in long-term, strategic energy planning. Corporate energy management is not currently part of normal business operations for the majority of IOU customers. With current economic pressures forcing customers to reduce costs and focus more on their core business, it is likely to be further marginalized. CEI proposes to reintroduce the importance of energy management by transforming the market (and reducing energy intensity) through a comprehensive approach that addresses both technical and management opportunities and creates sustainable practices which address energy savings, reduction of greenhouse gas emissions and water conservation, through high-level energy commitments from executive and board-level management.

CEI offers customers the pinnacle of audit offerings, guiding executive management to levels of energy management self-actualization that make energy and environmental issues a consideration in all management/business operational decisions and in long term energy planning. For additional information about CEI, please consult the Industrial CEI Program Implementation Plan.

- Non Residential Audits (NRA) The Transition Period will provide Integrated Comprehensive Energy Audits (ICEA) that focus on customer energy savings, cost/benefits, and the targeted delivery of financial and technical assistance. Audit information must communicate complex information in a simple and understandable way to enable customers to identify energy efficiency, demand response and distributed generation opportunities. Audits use "ex ante" Deemed and Calculated methodologies for energy savings analysis information.

As stated above, NRA offers ICEA. In Appendix A, each IOU defines the sub-categories of ICEA that they provide.

In this program cycle, emphasis will be given to meeting requirements of the California Long Term Energy Efficiency Strategic Plan (Strategic Plan), streamlining the audit process, increasing its efficiency, lessening complexity, and increasing the effectiveness of influencing customer implementation actions through actions such as integration of the demand response technical audit component directly into NRAs offerings. In addition, the IOUs will investigate ways to implement meaningful financial measurements, such as return on investment and/or simple payback metrics, and to be effective, the financial tool selected should ensure cost assumptions are appropriate to the customer to provide meaningful information. Also, NRA may assume the audit and budget responsibilities for Demand Response's technical audit services, as applicable. It is intended that these audits will be a critical component of the integrated comprehensive audit service offering.

- Pump Efficiency Services is designed to help industrial customers make informed decisions about improving inefficient pumping systems and operations through recommendations derived from pump test audit or direct observations of processes.

The Pump Efficiency Services program element, implemented by a team of trained in house or third party contractors, aims to overcome key informational, technical, and financial barriers to pump optimization by offering pump tests, retrofit incentives, and targeted education, training and technical support for customers and pump companies. Each IOUs database of pump test results will be used in the near-term to target pumps in need of retrofit as a means to capture savings. However, pump performance data aggregation at the statewide level will contribute to the development of metrics and targets for pump improvements. This will support a statewide pumping focus across segments, in agriculture, commercial and industrial, supporting their strategies and objectives.

The IOUs will continue to offer pump testing services at no or low cost and pumping system efficiency workshops through their energy education centers or other event opportunities during the Transition Period.

- Retro-commissioning:

The IOUs will continue to enhance their core Retro-commissioning (RCx) programs. RCx is a systematic process for optimizing an existing building or system's performance by identifying operational deficiencies and making necessary adjustments.

The RCx element is designed to optimize existing building or system performance by identifying operational deficiencies and making necessary adjustments to correct the deficiency. RCx is offered to industrial customers, based on the market segment potential and resources of the respective IOU. The range of projects may involve measures which reset, repair or replace existing system controls and components. Simple payback for these measures is usually short in duration and must meet customer expectations. Through the RCx assessment report, comprehensive projects

are identified and referred to other sub-programs for completion (i.e., Calculated and Deemed sub-programs). Energy savings from projects identified through RCx will be claimed in the Industrial Calculated Incentives Program.

Enhanced RCx program elements will explore and may include but not be limited to:

- Innovative approaches to measure identification, automated baseline capabilities, and savings quantification;
- Continuous commissioning and monitoring-based commissioning;
- Strategies to drive savings persistence;
- Appropriate alignment with retrofit activities; and
- Overall program incentives, targeting, and delivery.

The RCx program is a key offering in the Industrial Calculated Sub-Program and a more detailed description of the program is provided.

The Transition Period will be used to develop and test the Energy Advisor Program design strategy. The strategy focuses on simplifying the way audits are provided to customers. Through various assessment functions, the IOUs will work with the customer to identify the best, most cost-effective solution and the one with the greatest potential to motivate the customer to implement energy saving solutions (i.e. primarily EE, DR, and SG).

It is anticipated that the Energy Advisor Program will allow the expansion of services across diverse class of customers, potentially across all segments and will interconnect the customer with the wide and diverse range of programs offered. From a customer perspective, the impact on customer time and resources will be reduced. The audit analyses will include DSM, greenhouse gas reduction information and will provide water conservation recommendation all in a single report. The resulting report will identify comprehensive solutions that will simplify the customer decision-making process.

The primary program objectives for 2013-14 are:

- Support the Strategic Plan by offering integrated audits across a wide selection that address the full spectrum of energy solutions, including energy efficiency, demand response, and distributed generation (California Solar Initiative and distributed generation) focusing on industrial facilities as defined by each IOU's market potential and resource availability.
- Provide a focus on the "MUSH" (municipalities, universities, colleges, schools, and hospitals) market to test ideas for deep energy retrofit efforts
- Continue to deliver high value audit reports to the customer. Audit reports will be designed in such a way that they will provide the customer with information

which motivates them to implement energy efficiency, demand response and consider renewable generation options.

- Enhance efforts to identify and provide financial analyses focused on deeper energy savings and technologies. Identify ways different financial metrics, such as return on investment and/or simple payback, can be provided where the values presented have meaning to the customer.
- Explore and evaluate the potential of enhanced customer incentive options that are contingent on a customer's receiving an audit prior to applying to incentive programs.
- Incorporate new and/or emerging technologies appropriate for the customer's facility.
- Develop and implement enhancements to current Benchmarking workshops (targeting industrial buildings) and continue providing Benchmarking and AB1103 technical support through established and new delivery channels.
- Encourage statewide consistency by offering similar energy audits with the ultimate goal of offering customers the best energy management practices and technologies.
- Enhance the Energy Advisor offerings by including activities such as, but not limited to:
  - Highlighting emerging technologies and deep energy savings opportunities and providing education on long-term energy planning/project management strategies (in coordination with CEI program).
  - Continuing existing water saving services, leak detection services, and strategies which will be offered to customers in all customer segments, as determined by the IOUs to provide customer benefits and cost-effective administration. The services will be offered through the use of audit teams, in house and/or contracted, and may be required as a service in the delivery of all integrated comprehensive audits.
- The Energy Advisor Program will play a key role in exploring options for identifying deep energy savings, promoting emerging technologies and providing proper support to customers who take advantage of more than three measures from Industrial Deemed Incentive subprogram.
- The Energy Advisor Program will develop processes to assist energy audit teams and customers identify facilities and services that will provide the greatest return on benefits from the audit. The IOUs may explore leveraging tools to complete energy audits, usage analysis, assessments and/or building performance benchmarking as the first step in determining a customer's need.
- The Energy Advisor Program may also enhance tracking and audit component capabilities to support customer needs analysis, reduce program application barriers, maximize recommendation follow up and streamlined audit report generation.

b) List measures

The Energy Advisor Program primarily offers non-resource, auditing services. It does not offer incentives, but ultimately influences the customer's implementation of energy efficiency, demand response, and self-generation opportunities in combination with incentive from the core incentive programs (refer to the Industrial Deemed and Calculated sub-programs for specific information). However, each IOU reserves the ability to offer incentives specific to Energy Advisor Program's individual service offerings.

c) List non-incentive customer services

The Industrial Energy Advisor Program is designed to deliver a coordinated and customer specific service. The Energy Advisor Program features a statewide integrated demand side management customer specific solution that promotes energy efficiency, demand response, distributed generation and emerging technologies as appropriate to the customer's need(s).

Such activities include, but are not limited to: energy management assessments, energy planning, marketing and outreach, baselining and benchmarking, project implementation support, technical support, energy savings calculations, process evaluations and report generation, and web-based energy resources.

5) Program Rationale and Expected Outcome

a) Quantitative Baseline and Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 3 – Refer to the overarching program for quantitative baseline metrics

b) Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics and goals are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

c) Program Design to Overcome Barriers

The Energy Advisor Program offers services which change corporate/management cultures that prevent successful implementation of comprehensive energy policies. These offerings help overcome customers' lack of awareness of DSM opportunities by

providing a customer focused, comprehensive package of energy solutions designed specifically to motivate the customer to implement recommendations. Information such as cost/benefit analysis (i.e. ROI, or simple payback) and identification of appropriate IOU incentive and/or finance programs, can significantly enhance the financial benefit of the energy saving recommendation. The Energy Advisor Program also provides customers with tools to measure the effects of implemented energy savings actions on their bottom line.

The Energy Advisor Program brings together audits and related services to implement energy saving activities.

d) Quantitative Program Targets

The targets provided herein are best estimates, but nonetheless are forecasts of audits to be performed.

Table 5

	Audits Performed	
	Industrial	
	2013	2014
Pacific Gas & Electric	300	300

e) Advancing Strategic Plan goals and objectives

The Energy Advisor Program is designed to promote DSM coordination and the integration strategies of the Strategic Plan. Foremost are recognition of the linkage between energy and environmental policy and the importance of integrating energy efficiency, demand response and distributed generation to support California’s plan to reduce greenhouse gas emissions.

Specific near-term strategies proposed by the Strategic Plan that are addressed by the Energy Advisor Program include the following:

- Facilitate all State-Owned and Leased Buildings having a Retro-commissioning option.

By offering a dedicated retro-commissioning program, a mechanism is created whereby IOUs can facilitate the achievement of this goal as a coordinated effort with the IOU Government and Institutional Partnership Programs.

- Strengthen Tools and Practices for Building Commissioning.

Based on the IOUs' experience with managing the Retro-commissioning program, lessons learned and best practices can be integrated into the 2013-2014 offering. To increase market adoption of these program best practices, the IOUs will work in

cooperation with the California Commissioning Collaborative to disseminate relevant information to the retro-commissioning community. Services may be extended to all segments as deemed appropriate by each IOU.

- Identify New and Improved Tools and Strategies to Reduce Energy Consumption in industrial facilities.

Starting with energy conservation and proceeding to distributed generation and demand response opportunities, the benchmarking, CEI, NRA and RCx demonstrate to the customer a comprehensive, site-wide solution for near and longer term energy consumption and clearly state the positive greenhouse gas effects of their actions. Addressing customer energy needs through long-term solutions allows consideration of technologies and projects that benefit the state and planet for a decade or longer (e.g., HVAC systems, industrial/ agricultural processes and equipment, facility envelope upgrades and enhancements). Recommendations for retrofit opportunities within existing agricultural facilities contribute to California's zero net energy goals. Once implemented, recommendations for operation and maintenance (O&M) practices on on-going commissioning will ensure that customer facilities continue to operate in an efficient manner.

- Encourage State/Local Governments and Major Corporations to Commit to Achieve EE Targets

The Energy Advisor Program's offerings will seek to (1) gain corporate level commitment to energy efficiency as a core business operation; (2) develop corporate energy policies that establish measurable goals; (3) develop an actionable plan to achieve these goals; (4) guide customers to IOU programs that can help implement cost-effective EE projects; and (5) provide a feedback loop to measure performance. This codified process is designed to support the significantly greater energy efficiency performance desired by the Strategic Plan.

- Develop Tools to Reduce Energy in Industrial Facilities.

As part of the implementation of specific Energy Advisor Program offerings, the IOUs will partner with energy industry peers, industry associations, and DOE/CPUC-sponsored labs and consultants to enhance the use of existing tools and explore new tools to help industrial customers reduce initial energy usage at their facilities, then continue to operate their facilities in an efficient manner. Current tools used for benchmarking tools and resources include those developed by the EPA for ENERGY STAR and by Lawrence Berkeley National Lab (LBNL) with CEC funding:

- Management Standard for Energy SME2000-2008;
- LBNL Superior Energy Performance; and
- ISO-50001.

- Develop Business Models to Deliver Energy Management Solutions.

Energy Advisor Program's offerings will address the fundamental purpose to influence decision-making practices from Industrial customers to consider energy usage and sustainability as a core part of their daily operations. This level of commitment will help achieve greater penetration of energy efficiency in the agricultural market sector.

In addition, the Energy Advisor Program's offerings promote acceptable practices of accounting, auditing, and evaluation by:

- Offering integrated and focused audits, benchmarking, savings calculation assistance for retrofit and retro-commissioning opportunities; and simplifying the audit-to-project documentation process to bridge the gap between educating customers about energy solutions to environmental issues and taking action.
- Guiding and supporting customers as they implement technologies, processes and practices to achieve energy efficiency savings.
- Long term energy planning support.

6) Program Implementation

- Assessment and identification of the best way to support the use of the BEARS tool
- Enhancement of current Benchmarking workshops and continuation of Benchmarking and AB1103 technical support through established and new channels
- Emphasis and support of integration in emerging technologies and deeper energy measure opportunities
- In coordination with incentive programs, identification of ways to streamline the end-to-end process for customers wanting to participate in IOU energy saving programs

a) Statewide IOU coordination

- i. Program name: Industrial Energy Advisor Program
- ii. Program delivery mechanisms

The Energy Advisor Program will employ a variety of delivery mechanisms or channels. Most of the Energy Advisor Program's offering will use IOU customer energy efficiency staff and contractors, service and sales representatives, website and/or marketing, and outreach efforts. Other delivery channels may also be developed.

In addition, where applicable, IOU customer account representatives or program management staff will support this activity within the statewide industrial sector, as well as third parties, government partnerships, and local programs.

**iii.** Incentive levels

Not applicable.

**iv.** Marketing and outreach plans

A comprehensive audit marketing plan will be aligned and coordinated with the marketing plans for each of the IOUs, in order to maximize effectiveness, integrate offerings, and as appropriate refer customers to relevant DSM programs.

Additionally, IOUs may investigate piloting alternative channel marketing, such as social media tools, and outreach options that might include community-based organizations and/or third parties to recruit small businesses and influence them to take actions that result in energy efficiency improvements. IOUs may investigate and test efforts to leverage relationships with trade associations as a way to increase cost-effectiveness of reaching customer groups.

The IOUs will continue to develop an in-depth segmentation of the industrial market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs.

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

The Energy Advisor Program's energy recommendations will continue to recognize the regulations required by other bodies. For example, information about GHG reductions resulting from AB32 and water conservation efforts may be incorporated into the customer recommendations and factored into the projects cost-effectiveness, as appropriate.

Program offerings will collaborate and support the CEC's AB1103 mandate by assisting customers with technical and awareness activities. The Energy Advisor Program will advance the introduction of the BEARS and California Rating Tool where reasonable.

The Energy Advisor Program recognizes the efforts of the CEC's Green Building Initiative programs, DOE "ISO plant certification" programs, EPA Energy Star Portfolio Manager benchmarking, EPA Building Performance with Energy Star and other programs, USGBC LEED certification, and local and other government

incentive programs. The Energy Advisor Program will leverage such activities to the customer's benefit.

b) Program delivery and coordination

The sub-program will be coordinated with the following activities, as applicable:

i. Emerging Technologies (ET) program

The IOU Energy Advisor Program Management Team will stay abreast of and incorporate relevant emerging technologies into audit recommendations as appropriate.

ii. Codes & Standards program

The Industrial Energy Advisor Program implementation will include information about pending new codes and standards that may affect planning or prioritization of retrofit or new construction projects. Audit reports will include customer recommendations that are consistent with current governing codes.

iii. WE&T efforts

The Energy Advisor Program implementation will integrate with WE&T efforts, as needed, by providing CSI process, lessons learned, and case study input to energy engineering curriculum designers for community colleges and universities. This activity will be coordinated through the Statewide WE&T program team and will ultimately be integrated into the web portal that team is now developing. IOUs will assess and support specialized WE&T training to help target working energy management professionals, industry professionals, and those pursuing education in universities and colleges.

IOUs will also continue with WE&T coordination to bridge the linkages and integrate sector strategy approaches, as required.

iv. Program-specific marketing and outreach efforts

In 2013-2014, the Energy Advisor Program marketing campaigns will provide a wide range of action-oriented solutions targeting specific segments and sub-segments of business customers. In addition, Energy Advisor Program marketing efforts will be "bundled" as a menu of demand response, energy efficiency and conservation programs providing customers with a full array of EE and DR opportunities. By providing packaged energy management solutions for each industry segment, the IOUs will be better able to communicate with and serve customers.

Marketing activities will target business customers and select effective channels to reach entities such as trade associations, local business groups, and government

entities to generate interest and program participation. In addition, direct customer contact by account executives, phone and e-mail support may be utilized.

Marketing collateral and messages for energy efficiency will be integrated with other IOU programs. Through additional market segmentation and feedback from customers, IOUs will further adjust approaches based on the varied needs of targeted customers. Additional sub-program marketing will be accomplished by leveraging local third-party programs. Specific IOU marketing budgets are provided in Table 1 of the core industrial program.

Integrated and program-specific marketing efforts will complement and work in coordination with statewide ME&O to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU-specific programs providing reinforcement at a local level.

v. Non-energy activities of program

The IOU Energy Advisor Program team will participate in Statewide and national efforts to develop and enhance audit, benchmarking and retro-commissioning, and continuous energy improvement tools and practices. Such activities will likely occur in conjunction with ongoing industry efforts managed by the California Energy Commission (CEC), Consortium for Energy Efficiency (CEE), ENERGY STAR and the California Commissioning Collaborative (CCC).

CEI implementation will include non-energy activities such as recognition awards, local area or sector competitions, awareness campaigns, education about non-energy-related LEED points and definitions, and use of computerized financial analysis tools and cost estimating and forecasting tools

vi. Non-IOU programs

Energy Advisor Program reports will include information on Non-IOU Programs to expose customers to funding, such as from air or water agencies, to support integrated efforts. The Energy Advisor Program will partner with programs offered by CEC, ARB, Air Quality Management Districts, ENERGY STAR, and other government and quasi-governmental agencies to capitalize on opportunities to develop co-branded program information and marketing collateral targeted to industrial sector customers, as opportunities present themselves.

With respect to water conservation, IOU program managers will partner with the local water districts to co-brand marketing collateral, attend trade shows, and co-release notices for programs with interactive water and energy effects (ESPM, BEARS, California Rating Tool, Water Agencies and others).

vii. CEC work on PIER

Not applicable.

viii. CEC work on C&S

The Energy Advisor Program will not be implemented with a direct linkage to codes and standards efforts. However, the Energy Advisor Program will reflect code and standards regulation in its energy savings calculations, as deemed appropriate.

ix. Non-utility market initiatives

Education about federal tax incentives for energy efficiency investments is an example of non-IOU information and guidance that the Energy Advisor Program offerings will provide to customers. In addition, the IOUs will participate in state and national efforts to develop and/or improve benchmarking tools and services that can be used by customers to better facilitate their adoption of sustainable energy management practices.

c) Best Practices

The IOUs will continue to leverage best practices and lessons learned at regularly scheduled statewide program management meetings. These meetings are forums to discuss program design and implementation issues, and as appropriate provide statewide collaborated guidance in RFP solicitations and awareness of program offerings. This will ensure that customers operating multiple facilities across IOU service territories will receive the same customer experience.

Other best practices approaches apply the principles of well-known business continuous improvement programs, such as Lean Six Sigma and ISO standards, to facility and plant energy management, in order to achieve widespread adoption of long-lasting sustainable energy management practices in the industrial market sectors. As stated above, these principles are: (1) Commitment, (2) Assessment, (3) Planning, (4) Implementation, (5) Evaluation, and (6) Modification. This approach will continue through the two-year program cycle for 2013-2014, allowing longer-term and deeper project development engagement with customers.

d) Innovation

For 2013-2014, the IOUs are identifying and evaluating program processes to increase effectiveness, simplification and increase the benefits the program delivers. Each IOU's set of lessons learned from these efforts will be shared and implemented to enhance energy savings benefits to all California IOU customers.

The Energy Advisor Program will continue to improve as a new standard for packaging energy efficiency, demand response and self-generation products and services, aimed at

helping customers engage in long-term, strategic energy planning. It proposes to transform the market and reduce energy intensity through a comprehensive approach that includes addressing both technical and management opportunities.

Depending on the outcome of the 2012 process evaluation, CEI may consider customer incentives to accelerate project implementation (including IDSM projects), and reward customers for implementing strategic energy management. Other Energy Advisor Program offerings may also consider specialized incentive approaches based on delivery, target markets and/or other opportunities.

e) Integrated/Coordinated Demand Side Management

The Energy Advisor Program will provide a comprehensive approach for integrated audit services. Its services will have the flexibility of meeting every level of a customer's audits needs from integrated comprehensive audits to targeted or focused audits (which center on specific systems or processes), to assessments or general walk-through audits or online "do-it-yourself" audits (currently for small business customers). When properly applied, these audits can assist in identifying the areas of the customer's greatest energy interest, the customer's financial ability to invest in improving its energy use, and other programs that can be discussed to motivate a customer to move forward with the energy saving plan.

Energy Advisor Program services can coordinate the audit with retrofitting or retro-commissioning opportunities, benchmarking tools, or long-term planning. Audit reports can present a truly integrated analysis to customers, seamlessly providing information and recommendations regarding energy efficiency, distributed-generation, demand response, greenhouse gas emissions and water energy savings. Customers will be referred to other IOU programs that will help them implement the recommendations resulting from the audit report. As a result, they will receive a complete picture of their energy usage and options for reducing costs and using energy more efficiently.

f) Integration Across Resource Types

The Energy Advisor Program will focus on DSM integration.

The Energy Advisor Program implementation will include information on Non-IOU Programs to expose customers to funding, such as from air or water agencies, to support integrated efforts. IOU Energy Advisor Program managers will partner with the appropriate programs, when applicable, with government agencies in order to capitalize on opportunities to share program information, marketing collateral, and financial incentive analysis with customers.

Conventionally, each government agency and utility has operated natural resource and energy programs independently, missing opportunities to serve customers who must manage more than one resource type. For customers who are regulated by or interested

in more than one resource issue, CEI will provide information about the mutual benefit of combining complementary resource programs.

In the effort to promote Energy Advisor Program offerings, IOUs will seek out customers interested in complementary resource programs such as provided by water and air quality agencies. With respect to water conservation, IOU program managers will collaborate with the local water districts to produce marketing collateral, attend trade shows, and co-release brochures, for programs with interactive water and energy effects.

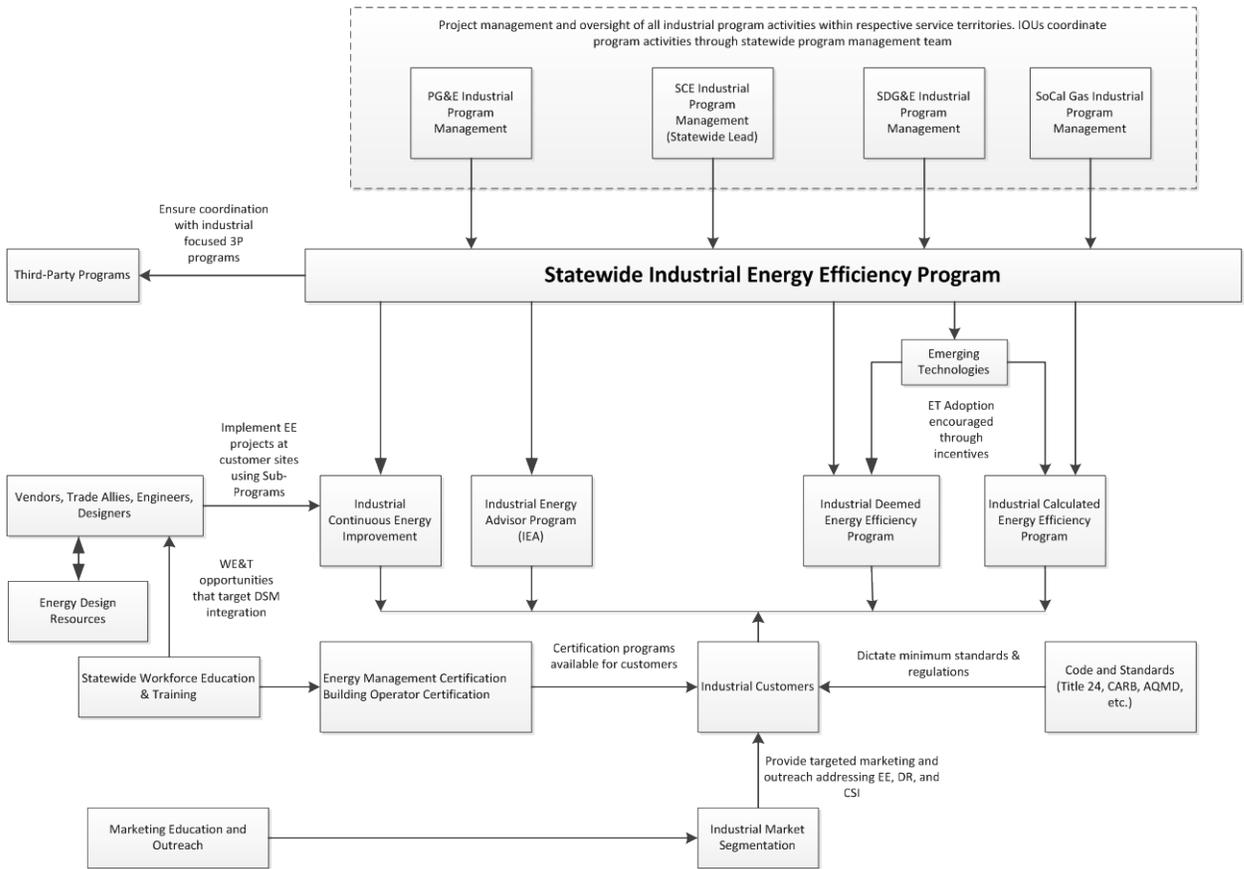
g) Pilots

Energy Advisor Program services may consider the development of test markets especially in the introduction of new energy benchmarking or saving tools.

h) EM&V

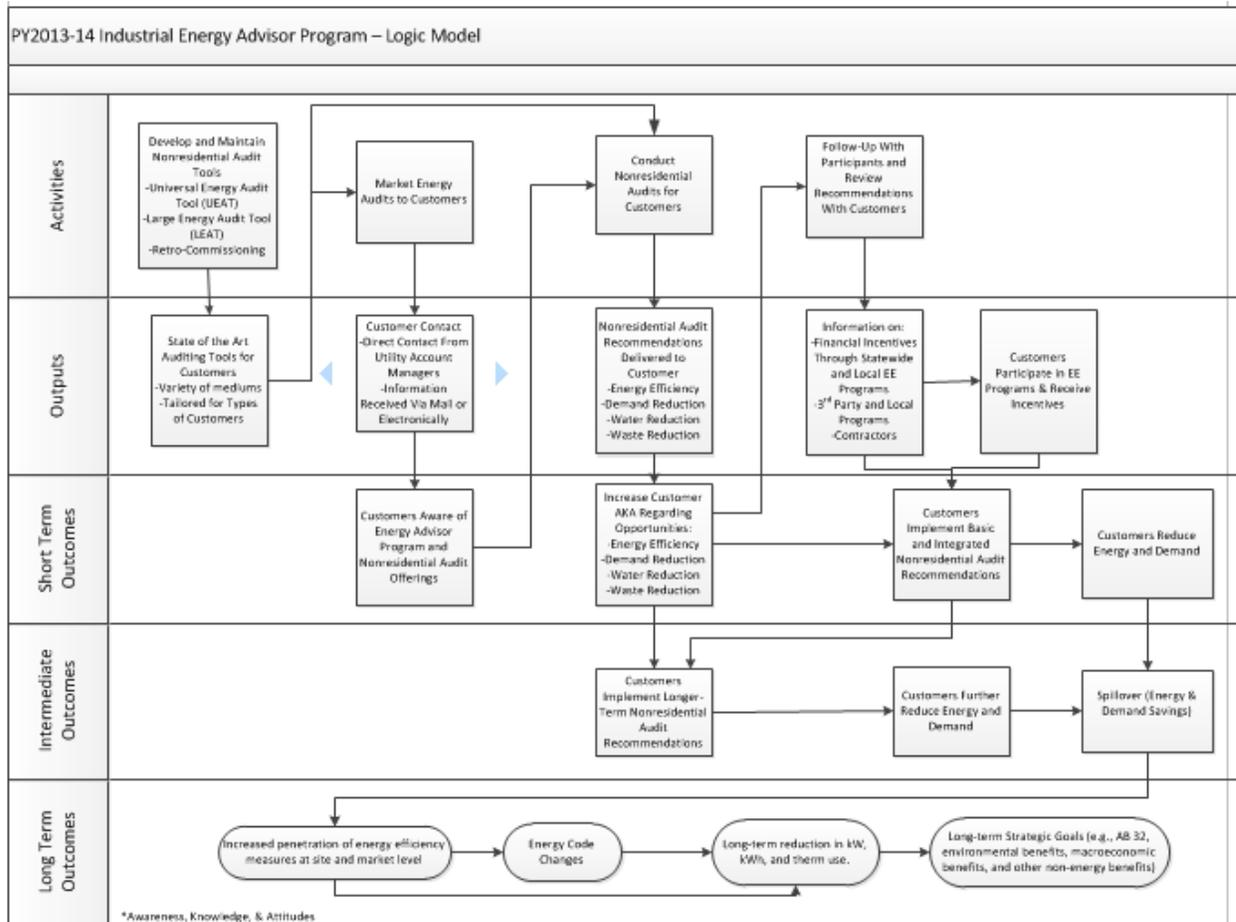
The IOUs will work with the Energy Division to develop and submit a comprehensive EM&V Plan after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies. More detailed plans for 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

Note: On December 2, 2010, the Commission issued Resolution E-4385, approving Program Performance Metrics (PPMs) for Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and San Diego Gas and Electric Company for 2010-2012 statement energy efficiency programs and subprograms. In addition, this Resolution approved updated logic models for the statewide programs. Below is the approved logic model for the Statewide Industrial Energy Advisor Program.



6.2) Industrial Calculated Incentives, core sub-program

4) Program Description

a) Describe program

The purpose of the Statewide Industrial Calculated Incentives Program is to provide services to improve the energy efficiency of industrial facilities in California, including financial incentives based on calculated energy savings. The energy savings are calculated for measures installed as recommended by comprehensive technical and design assistance for customized projects. Integrated projects are encouraged to combine energy efficiency and demand response. Eligible projects include new construction, retrofit, and retro-commissioning.

The Calculated Incentives Program is part of a suite of programs within the Statewide Industrial Energy Efficiency Program. The Calculated Incentives Program is utilized for projects where:

- a rebate is not available through the statewide Deemed Energy Savings Program,
- customized calculations provide the most accurate savings estimates, or
- interactive effects between measures are best captured through whole building or whole system modeling.

Because it presents a calculation method that can consider system and resource interactions, the program will become the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the California Long Term Energy Efficiency Strategic Plan (Strategic Plan).

Key features in the process include:

- Energy audits of facilities and processes with recommendations for energy efficiency, demand response, distributed generation technologies as well as opportunities for greenhouse gas reductions;
- Calculations/estimates of energy savings for exceeding Title 24 code or industry standard practice baselines;
- Technical assistance from IOUs through energy audits, facility walk-through surveys and calculated savings analyses that consider specific projects;
- Submission of project proposal for IOU review and approval;
- Pre-inspection by IOUs for the preliminary approval of retrofit projects;
- Post-inspections on approved and completed projects to verify performance; and
- Payment of incentives from IOUs.

Energy audits are an important tool in achieving deeper energy savings. Energy audits are not mandatory unless a single customer application contains three or more EE measures. Energy audits may be completed by customers directly or authorized participants. Authorized participants may include contractors, design teams, vendors, and energy service companies. The completed audit may then be submitted for review and approval.

For the energy audit feature, statewide consistent calculators are publicly available. The statewide IOU-created and maintained SPC Calculator can be used for retrofits and some new construction applications and is available online. For whole building construction projects, IOUs typically accept calculations generated with programs such as Energy Pro, Trane Trace 700, Carrier HAP (available for license), and the IOU-sponsored eQuest (available for free on the statewide Energy Design Resources website [www.energydesignresources.com](http://www.energydesignresources.com)), among others. Calculations must be submitted in open, unlocked, native format for review and consideration in the IOU's programs.

Retro-commissioning (RCx) is also eligible in the program for delivering energy savings. RCx is a systematic process to identify and correct operational problems or inherent repair and maintenance deficiencies that lead to excessive energy use. Unlike retrofits, which focus on equipment replacement, or operations and maintenance, which deal with routine maintenance, RCx focuses on identifying and correcting problems that may not be readily identified by a standard energy audit.

O&M items with an effective useful life greater than two years can also be identified through this assessment. Additionally, opportunities often exist to optimize existing systems to operate more efficiently than originally designed with minimal new capital outlay.

b) List of Measures

RCx will be offered as a bundle of products/services. RCx providers will perform several tasks to identify measures. These tasks include, but are not limited to:

- Initial benchmarking;
- Collecting data to quantify the owner's operational requirements;
- Performing detailed on-site audits to evaluate operational deficiencies and/or operational optimization opportunities, inclusive of improved and enhanced preventive maintenance and repair programs;
- Defining measures, quantifying implementation costs and savings;
- Assisting customers with measure implementation;
- Verifying completion of measures;
- Providing post installation documentation and training as well as other persistence techniques; and

- Posting project benchmark.

A broad range of measures are eligible for calculated incentives . The incentives for these measures are standard across the IOUs participating in the statewide Industrial Calculated Incentives Program.

The following measure categories are eligible for Calculated Incentives:

- Lighting
- HVAC
- Refrigeration
- Controls
- Building Envelopes
- Process
- Other
- Gas measures

A listing of measures and services to reduce energy within the Calculated Incentives sub-program may include, but not limited to the following:

#	Measure Name	Maximum Incentive Level
1	Interior linear fluorescent retrofits	\$.03-\$.25/\$100
2	Other interior linear fluorescent lighting	\$.03-\$.25/\$100
3	Bi-level - Interior linear fluorescent retrofits	\$.03-\$.25/\$100
4	Bi-level - Other interior linear fluorescent lighting	\$.03-\$.25/\$100
5	Bi-level- Exterior linear fluorescent retrofits	\$.03-\$.25/\$0
6	Interior HID retrofits	\$.03-\$.25/\$100
7	Other interior HID lighting	\$.03-\$.25/\$100
8	Exterior HID retrofits	\$.03-\$.25/\$0
9	Other exterior HID lighting	\$.03-\$.25/\$0
10	Interior induction retrofits	\$.03-\$.25/\$100
11	Other interior induction lighting	\$.03-\$.25/\$100
12	Exterior induction retrofits	\$.03-\$.25/\$0
13	Other exterior induction lighting	\$.03-\$.25/\$0
14	Interior LED integral lamps—Omnidirectional (A-lamps, etc.)	\$.03-\$.25/\$100
15	Interior LED integral lamps—Decorative lamps	\$.03-\$.25/\$100
16	Interior LED integral lamps—Directional lamps (BR, ER, PAR, MR, etc.)	\$.03-\$.25/\$100
17	Interior LED refrigeration case lighting	\$.03-\$.25/\$100
18	Other interior LED lighting	\$.03-\$.25/\$100
19	Interior LED recessed surface and pendant mounted downlights	\$.03-\$.25/\$100
20	Other interior LED lighting	\$.03-\$.25/\$100
21	Exterior LED advertisement sign/smart sign	\$.03-\$.25/\$0
22	Other exterior LED lighting	\$.03-\$.25/\$0
23	Interior LED fixture replacement (utilizing approved luminaires)	\$.03-\$.25/\$100
24	Interior LED parking garage luminaires	\$.03-\$.25/\$100
25	Interior LED track or mono-point directional lighting fixtures	\$.03-\$.25/\$100
26	Interior LED recessed, surface and pendant-mounted downlights	\$.03-\$.25/\$100

27	Interior LED under-cabinet shelf-mounted task lighting	\$.03-\$.25/\$100
28	Interior LED pool lighting	\$.03-\$.25/\$100
29	Other interior LED lighting	\$.03-\$.25/\$100
30	Exterior LED fixture replacements (utilizing approved luminaires)	\$.03-\$.25/\$0
31	Exterior LED street lighting	\$.03-\$.25/\$0
32	Exterior LED outdoor pole/arm-mounted area and roadway luminaires	\$.03-\$.25/\$0
33	Exterior LED outdoor pole/arm-mounted decorative luminaires	\$.03-\$.25/\$0
34	Exterior LED wall-mounted area luminaires	\$.03-\$.25/\$0
35	Exterior LED wall wash luminaires	\$.03-\$.25/\$0
36	Exterior LED bollards	\$.03-\$.25/\$0
37	Exterior LED advertisement sign/smart sign	\$.03-\$.25/\$0
38	Exterior LED pool lighting	\$.03-\$.25/\$0
39	Other exterior LED lighting	\$.03-\$.25/\$0
40	Interior compact fluorescent fixture retrofits—(excluding screw-in CFL)	\$.03-\$.25/\$100
41	Other interior compact fluorescent fixture lighting	\$.03-\$.25/\$100
42	Exterior compact fluorescent fixture retrofit—(excluding screw-in CFL)	\$.03-\$.25/\$0
43	Other exterior compact fluorescent fixture lighting	\$.03-\$.25/\$0
44	Lighting controls—energy management system (EMS)	\$.03-\$.25/\$100
45	Lighting controls—occupancy sensors	\$.03-\$.25/\$100
46	Day lighting controls—EMS	\$.03-\$.25/\$100
47	Day lighting systems with dimmable ballast	\$.03-\$.25/\$100
48	Other lighting controls	\$.03-\$.25/\$100
49	Dimming Ballasts—20% Tuning	\$.03-\$.25/\$100
50	Dimming Ballasts—20% Tuning + Auto Demand Response	\$.03-\$.25/\$100
51	Dimming Ballasts—20% Tuning + Occupancy Sensor	\$.03-\$.25/\$100
52	Dimming Ballasts—20% Tuning + Occupancy Sensor + Auto Demand Response	\$.03-\$.25/\$100
53	Dimming Ballasts—20% Tuning + Daylight Harvesting	\$.03-\$.25/\$100
54	Dimming Ballasts—20% Tuning + Daylight Harvesting + Auto Demand Response	\$.03-\$.25/\$100
55	Dimming Ballasts—20% Tuning + Occupancy Sensor + Daylight Harvesting with Side Lighting Photo Controls	\$.03-\$.25/\$100
56	Dimming Ballasts—20% Tuning + Occupancy Sensor + Daylight Harvesting with Side Lighting Photo Controls + Auto Demand Response	\$.03-\$.25/\$100
57	Lighting controls—aisle traffic sensor for refrigerated display cases	\$.03-\$.25/\$100
58	New Construction - Above Code Systems Design - Lighting Controls	n/a
59	New Construction - Above Code Systems Design - Lighting	n/a
60	New Construction - Above Code Systems Design - Daylighting Controls	n/a

c) List non-incentive customer services

The Industrial Calculated Incentives Program is primarily an incentive program designed to achieve energy savings through measure implementation; however it does provide such non-incentive measures as technical and calculation assistance to help customers navigate through the application process. This assistance ensures that the sub-program captures lost opportunities by not allowing projects to fall behind schedule simply because the customer does not have the resources to shepherd the project through the process.

5) Program Rationale and Expected Outcome

a) Quantitative Baseline and Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 3 – Refer to the overarching program for quantitative baseline metrics

b) Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics and goals are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 4 – Refer to the overarching program for market transformation metrics

c) Program Design to Overcome Barriers

The Industrial Calculated Incentives Program includes numerous features designed to overcome these barriers, as identified and discussed below.

Integrated Demand Side Management Approach

The program offers California's industrial segment a statewide suite of products and services to overcome market barriers to optimize energy management and meet the goals of the Strategic Plan. It overcomes multiple barriers through the implementation of strategies that provide an integrated solution to the customer, offer education and outreach to create awareness and promote continuous energy efficiency improvement. The program also enables a facility to attain resource management levels that exceed industry standards and gain them market and worldwide recognition.

CEI Program Offering

The Continuous Energy Improvement (CEI) program compliments the Industrial Calculated Incentives Program by helping customers implement energy efficiency measures that have been identified through energy efficiency audits or in-depth facility/process assessments. Such assessments may be jointly provided by the IOUs and the U.S. Department of Energy (DOE) or ANSI. It focuses on improving production and optimizing energy efficiency and provides integrated resource management solutions including greenhouse gas reduction. This approach overcomes such barriers as lack of awareness of energy efficiency opportunities and provides a highly skilled workforce educated towards energy efficiency, process optimization, and resource management.

#### Marketing and Outreach

To increase awareness of the program, a statewide centralized clearinghouse will be developed to give customers access to information on operating best practices in energy efficiency, industry relevant technical assistance, baselines, case studies, tools and computer based training. This clearinghouse addresses the issue of availability of information and qualified industry specialists to fully assess a building, system or process and help customers understand how energy efficiency can impact their emissions, resource consumption or waste discharge streams. It helps alleviate the problem often run into by non-residential customers of getting incorrect or out-of-date information from some local networks. It will also enable design engineers to specify energy efficient measures to exceed industry accepted baseline standards when constructing new or retrofitting existing buildings or systems, instead of specifying only what they know or what they are familiar with.

The program's information and services will be delivered primarily through account representatives, IOU call centers hotlines, local government partnerships, third parties, and IOU internet sites. Information will also be made available through industry events, such as the Plant Engineering Expo, through industry organizations, such as the California Manufacturing Association and the Building Owners and Managers Association (BOMA); and through advertising in industry and trade publications. Other avenues to reach out to customers and identify energy efficiency opportunities include non-resource programs such as Education and Outreach, Workforce Education and Training, or through Emerging Technologies Programs.

#### Education and Training

Highly skilled Energy Management Professionals may conduct technical training and seminars to educate the public as well as develop a highly trained energy efficiency workforce that is accessible to industry.

#### Emerging Technologies (ET)

In collaboration with ET and the CEC, ET may conduct studies, pilots, and demonstrations to prove the viability of promising emerging technologies and lower the risk of investment which in turn will speed up market penetration.

#### Financial Assistance

Rebates and incentives properly priced and based on energy savings quantified through technical assessments or basic audits, can help customers overcome internal financial hurdle rates. Skilled energy efficiency personnel may also assist customers and provide additional information about other opportunities for project assistance, such as State or Federal funds available for energy efficiency projects, tax incentives or other local sources of project funding.

d) Quantitative Program Targets

PG&E's quantitative program targets are included in its Table 2, Projected Program Gross impacts, section 3.

e) Advancing Strategic Plan goals and objectives

The Statewide Industrial Energy Efficiency Program supports all three goals in the Strategic Plan for the Industrial Sector. General advancement of the goals is presented in the program implementation plan for the Statewide Industrial Energy Efficiency Program. More specific support of the goals is presented here.

*Goal 1:* Support California Industry's adoption of energy efficiency by integrating energy efficiency savings with achievement of GHG goals and other resource goals.

*Strategy 1.1:* Develop coordinated energy and resource management program for CA's industrial sector, to enhance use of energy efficiency.

*Near-term:* Establish CARB AB32 Industry Team

The Calculated sub-program infrastructure is designed to facilitate the customer's implementation of large-scale projects that are supported by detailed energy calculations. There is an opportunity to augment the various tools used for preparing such calculations with GHG emission information that will allow customers to immediately quantify these benefits. This activity will be managed through the IOU CARB AB32 Industry Team, which is proposed as part of the core Industrial Energy Efficiency Program.

*Goal 2:* Build market value and demand for continuous improvement in industrial efficiency through branding and certification.

*Strategy 2.2:* Implement certification

*Near-term:* Plan pilot and recruit host sites (8-10 facilities)

The program will seek out opportunities to recruit host sites for the certification program by surveying project submittals for potential candidates.

*Goal 3:* Provide centralized technical and public policy guidance for California industrial energy and resource efficiency.

*Strategy 3.1:* Compile technical and resource management regulatory materials into centralized assistance repository.

*Near-term:* 1) Identify and incorporate priority energy and other data; 2) Develop clearinghouse or integration system.

The Calculated Incentives Program will give support by providing information on results and experience in the program, including case studies of innovative projects.

6) Program Implementation

a) Statewide IOU coordination

i. Program name: Industrial Calculated Incentives Program

ii. Program delivery mechanisms

Program delivery mechanisms for IOUs will include account representatives, technical services personnel, incentives processing staff, and inspection officials. Also important to program delivery will be customer facility owners and managers; energy efficient equipment manufacturers, distributors, and service contractors; industry trade associations; and others in the energy efficiency equipment value chain.

Industrial Calculated Incentives Program will be coordinated on a statewide level to unify the implementation of program aspects such as program name, program delivery mechanisms, incentive levels, marketing and outreach plans, and IOU program interactions. The Industrial Calculated Incentives Program will coordinate with the core Industrial Energy Efficiency Program to provide mutual support.

The high-level focus of this statewide coordination effort will enable the capture of new innovations and opportunities for program improvement, correct program weaknesses that reveal themselves during implementation, and ensure achievement of statewide targets across IOU service territories. Therefore, statewide focus on program unity and continuous program improvement over the course of the implementation cycle will be enabled.

IOU account representatives support this activity within the statewide industrial sector, as well as third parties, government partnerships, and IOU local programs.

iii. Updated Incentive levels

The IOUs have developed a framework for offering higher incentives for emerging technologies. The tiered incentive structure to be offered by the utilities in the 2013-2014 cycle distinguishes between “Basic” measures (generally those that are less costly and more well-established) and “Targeted” measures (generally those that are new, emerging, costly or hard-to-reach). This structure will allow the utilities to send pricing signals to the market and award a higher incentive rate to new/emerging technologies at the outset of their inclusion within the program. The structure also enables the utilities to shift measures from the Targeted to the Basic category when market conditions have evolved to the point where a measure no longer requires an elevated incentive rate.

Incentives will be as follows:

2010-12 Cycle		2013-14 Cycle		
Category		Category	Basic	Targeted
Lighting	\$.05/ kWh	Lighting	\$.03/kWh	\$.08/kWh
ACR I	\$.15/kWh	Non Lighting	\$.08/kWh	\$.15/kWh
ACR II	\$.09/kWh			
Other/Motors	\$.09/kWh			
Peak Demand Reduction	\$100/kW	Peak Demand Reduction	\$100/kW	\$100/kW
Gas	\$1/therm	Gas	\$1/therm	
RCx	\$0.09/kWh, \$1/therm, \$100 /kW	RCx	\$0.08/kWh, \$1/therm, \$100 /kW	

As a general rule, the composition of measures within the incentive categories falls along the following lines:

- **Targeted Lighting** includes LED retrofits and Advanced Lighting Controls measures.
- **Basic Lighting** includes all non-LED lighting retrofits (CFLs, linear fluorescents, etc).
- **Targeted Non-Lighting** rebrands the Air Conditioning and Refrigeration (AC&R) I category (generally, full system replacements or retrofits improving A/C system efficiency).
- **Basic Non-Lighting** rebrands the AC&R II/Other categories (generally, component retrofits or retrofits reducing operating load).

In addition, the IOUs will offer a 20% incentive bonus (the “**Comprehensiveness Bonus**”) in response to CPUC direction to incorporate strategies to encourage deeper energy retrofits and packages of measures.

- The 20% incentive bonus will be awarded to for projects that bundle measures from at least three of the following end-use categories:
  - HVAC – Cooling
  - HVAC – Heating
  - HVAC – Ventilation
  - Process – Cooling
  - Process – Heating
  - Process – Pumping

- Process – Compressed Air
  - Process – Other
  - Lighting
  - Refrigeration
  - Controls
  - Building Envelope
  - New RCx participation
  - New DR participation
- In order to ensure that the bonus truly drives deep retrofits, and that customers do not install small, inconsequential measures simply to access the bonus, each of the three end use-measures must contribute at least 10% of the customer’s overall project incentive to count as a qualifier toward the bonus.
  - Measures from all programs (e.g., Core Customized, Deemed, 3P, LGP) are eligible to participate. At least one customized measure is necessary in order to qualify. The bonus will be paid as 20% of the sum of the incentive payments associated with the qualifying measures, regardless of which program the measures originate from (Core, Deemed, 3P, LGP).
  - Comprehensiveness Bonus payments are capped at \$25,000 per project. RCx-only projects, regardless of the number and type of measure installed will not qualify for a comprehensiveness bonus.

The utilities consider the Comprehensiveness Bonus to be a trial of a new approach for encouraging deeper retrofits within the customized retrofit program. The bonus will be evaluated at the end of the program cycle to determine whether the approach shall continue into the 2015-2017 program cycle. A key metric in evaluating the success of the Comprehensiveness Bonus will be the increase in number of deep retrofits and packages of measures resulting from the bonus, which can be measured by comparing historical data with data collected after inclusion of the bonus.

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

The Industrial Calculated Incentives Program is marketed through IOU’s Account Executives, as well as through trade allies, education, outreach and other marketing activities. Marketing activities target business customers, ESCOs, trade associations, local business groups and government entities to generate interest and program participation. In addition, direct customer contact by Account Executives, Demand Response Program outreach, phone and e-mail support will be provided.

Marketing campaigns provide a wide range of action-oriented solutions targeted to “personas” identified through segmentation research. In addition, marketing efforts will be “bundled.” That is, a menu of demand response, energy efficiency and conservation programs will provide customers a full array of EE and DR options. By

providing packaged energy management solutions for each industry, IOUs will be better able to communicate with and serve customers.

Marketing efforts will incorporate a variety of marketing tactics/activities to promote the solutions in the program. Education, awareness, and outreach efforts will rely on a combination of mass media communication channels and targeted communication channels to ensure the messages reach the intended audiences with enough frequency to motivate attitude and behavior changes. The marketing strategies may include, but are not limited to, a mix of print, radio, TV, direct mail, e-mail, personal contact, trade shows, trade association meetings, customer workshops and seminars, energy related and other community events and partnerships with business and industry organizations, specialized collateral, case studies, website links and information with regular updates, bill inserts, press releases, and newspapers.

Market outreach to raise awareness of available EE programs will use a number of strategies, as follows:

- Providing a regular and consistent customer calling effort to key customers within this sector through account representatives;
- Providing additional expertise from IOU representatives, program management representatives, and field engineers;
- Participation and membership in one or two key trade associations affiliated with each high priority sub-segment within the industrial market sector;
- Attendance at the key trade shows for each high priority sub-segment within the industrial market sector;
- Hosting IOU-sponsored training events at the IOU's Customer Training Centers and other convenient locations within the IOU's service territory;
- Hosting IOU-sponsored webinars that provide sub-segment training and program adoption; and
- Linking written collateral pieces that give an overview of the IOU's Energy Efficiency programs to the appropriate IOU DSM web page.

The ideal marketing mix will be assessed for maximum awareness and participation. Marketing and outreach coordination is coordinated, to the extent possible, among the IOUs utilizing the statewide coordination process described above. Furthermore, industrial facilities are recognized as large energy and water consumers. IOUs will develop proposals, as appropriate, to facilitate water-energy nexus projects.

The IOUs will continue to develop an in-depth segmentation of the industrial market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs.

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

The Industrial Calculated Incentives Program will leverage the programs offered by CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information and marketing collateral with industrial customers, to the extent possible. Conventionally, each government agency and IOU has operated natural resource and energy programs independently, missing opportunities to serve customers who must manage more than one resource type.

With respect to water conservation, IOU program managers will partner with the local water districts to co-brand marketing collateral, attend trade shows and release joint notices for programs with interactive water and energy effects. Similarly, with ARB and Air Quality Management Districts, IOUs will offer customers Calculated sub-program incentives for energy efficient equipment that may also reduce water and greenhouse gas emissions.

vi. Similar IOU and POU programs

The IOUs will be delivering many third-party programs that utilize the Industrial Calculated Incentives Program infrastructure. This will ensure a consistent delivery of measure incentives to ensure that programs do not cannibalize each other and detract from achieving cost-effective energy savings.

b) Program delivery and coordination

i. Emerging Technologies program

The long-term EE vision of California can only be attained through the long-term and continuous development, verification, and acceptance of new technologies into the market. The achievement of long-term goals requires new technology as well as information, training and market development to maximize the EE benefits of cutting-edge technologies. In recognition of the importance of emerging technologies, the program will consider higher initial incentives for technologies being newly introduced to the market place through the Emerging Technologies Program. Once the new products have taken hold in the market, the incentives will be adjusted to reflect market conditions. In addition, portfolio staff actively works to incorporate promising emerging technologies and CEC projects.

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. It is important to manage the measure life cycle to take full advantage of providing incentives before moving them into codes and standards. 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. LEDs) made available as they transition from R&D, to Emerging Technologies, to incubation, and into the 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. During classes, time is dedicated to energy efficiency programs and how to participate. An Energy Efficiency representative will be present at appropriate classes to provide detailed information on the application process to the relevant energy efficiency program.

Specific workforce development efforts supporting the Industrial Calculated Incentives sub-program which include training on topics, not limited to as follows:

- Audits – Training will be developed in an effort to promote a consistent approach and format to facility audits.
- Financing
- Soft skills and Business training (including customer service, sales, and marketing).
- Benchmarking
- Program-specific training – Training will be developed to promote increased familiarity with the program’s eligibility requirements, application, processes, etc.).
- IDSM

The IOUs will explore voluntary incentive-based approaches to encourage contractors and other industry professionals to complete the full bundle of Industrial – Calculated workforce development training. For professionals who complete the pre-requisite courses and pass a high-road skill standards test, such approaches may include (as applicable):

iv. Program-specific marketing and outreach efforts

Marketing and outreach initiatives will include:

- Participation and membership in one or two key trade associations affiliated with each high priority sub-segment within the industrial sector, as appropriate;
- Attendance at key trade shows within the industrial sector;
- IOU-sponsored training events at the IOU’s Customer Training Centers and other convenient locations within the IOUs service territory;

- Hosting of IOU-sponsored webinars that provide sub-segment training and program adoption; and
- Development of case studies, web pages, and marketing material that provide an overview of the IOUs' energy efficiency programs.

Integrated and program-specific marketing efforts will complement and work in coordination with statewide ME&O to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU-specific programs providing reinforcement at a local level.

v. Non-energy activities of program

The program provides a significant challenge to integrating DSM initiatives to non-energy activities due to the general industry structure, the nature of market sector resource use, limited resource savings potential with smaller industrial businesses, and limits to small industrial business owner and operator bandwidth. Therefore, integrated audits that look across the various energy efficiency program offerings, as well as complementary options available through other entities (e.g. water agencies), will be used to identify the opportunities to be recommended to the specific industrial customer.

With respect to water conservation, IOU program managers will contact the local water districts to co-branding marketing collateral, , attend trade shows, attend trade shows and release joint notices for programs with interactive water and energy effects. Similarly, with ARB and Air Quality Management Districts, IOUs will offer customers incentives for energy efficient equipment that may also reduce water and GHG emissions.

In addition, the program will offer customers educational information about the non-energy benefits associated with energy efficiency measures, such as improved safety, indoor air quality, productivity, comfort, and appearance.

vi. Non-IOU Programs

The program will continue to engage with Air Quality Management Districts, CEC, ARB, 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

Not applicable.

viii. CEC work on codes and standards

Planned enhancements to Title 20 and 24 will be reflected in incentive levels and in eligible measures and services.

ix. Non-utility market initiatives

The program will support, educate customers, and/or facilitate such initiatives as AB32, renewables, ANSI certification, facility benchmarking, Continuous Energy Improvement, California Green Building Initiative, and other initiatives as directed. The IOUs will remain engaged in these efforts and work to influence the development of increasingly higher standards.

c) Best Practices

The Industrial Calculated Incentives Program builds upon the more than 10 years of experience that IOUs have offered such a program<sup>1</sup>. Deeper penetration into industrial process loads will be achieved by closely aligning the sub-program with the Industrial Energy Advisor and Industrial Continuous Energy Improvement Programs to ensure that there is an avenue for implementing a variety of customer projects. The infrastructure developed by the Industrial Calculated Incentives Program will also be used as the core processing backbone for targeted third-party programs in order to reduce the program administrative and processing costs of those programs.

d) Innovation

For the 2013-2014 program cycle, California IOUs will implement an incentive structure that emphasizes advanced controls that enable demand response motivating customers to participate in energy efficiency and demand response incentive programs as well as signing up demand response programs.

IOUs will continue working collaboratively on modifications to program Policies and Procedures to address ongoing changes in customer expectations, market conditions and program flexibility. Changes will (a) target ease of program understanding and participation, (b) measure eligibility, (c) increase of customer's economic benefits, and (d) identify policy restrictions that are barriers to participation. IOUs are implementing such process based on market studies conducted on the subject and preceding discussion of the policy change. Among other modifications that would be potentially discussed and implemented are incentive caps and redesign of measure/equipment early retirement according to the CPUC concept.

IOUs are planning to elaborate and utilize positive experience obtained using SBD Simplified tool and extend it to energy efficiency retrofit projects. Such tools substantially reduce application processing and review time, and minimize the number of hand-offs, without sacrificing accuracy of energy saving calculations.

An additional example of innovation is aimed at the strategic plan's transformational vision and goals around energy user behavior, market transformation and deeper energy savings. PG&E intends to provide upfront payments for installation of system-level

---

<sup>1</sup> Before 2009-2011, the Calculated Incentives Program was commonly referred to as the Standard Performance Program or "SPC."

controls (e.g. lighting, HVAC etc.) and/or energy management and information systems (EMIS). Customers receiving the payments would be enrolled in a statistically based pre- and post-measurement evaluation of data, using whole building measurement and verification protocols, from which savings will be determined and claimed.

Where possible, IOUs will use an integrated approach to addressing DSM opportunities. Innovative approaches will be used, such as merging energy efficiency and demand response analysis and converting recommendations to projects. In addition, streamlining programs through processing and reviewing energy efficiency and demand response measures in a single application, providing analytical information about applicable distributed generation solutions, will maximize customer adoption rates for most cost-effective energy management opportunities.

IOUs are planning to consolidate various calculating software such as SPC Software, Engage and other measure specific calculating tools to standardize our calculating methodology. This will ensure that calculations will be more uniform and consistent amongst all stakeholders. This will not limit the use of nationally recognized standard DOE toolsets for certain measures.

IOUs are planning to continue and expand their core RCx program in multiple target markets. RCx is a systematic process for optimizing an existing building or system's performance by identifying operational deficiencies and making necessary adjustments to correct the system. Measures may involve resetting, repair or replacement of existing system controls and components, and in general are low-cost projects with simple payback periods of less than four years.

After an energy audit is complete and applicable no-cost/low-cost measures are identified, the scope of work will be handed off to a RCx implementer who, in-turn, will follow RCx program protocols, execute the scope of work (measure implementation, EM&V plan, incentive payment for energy savings, etc.) and report final results to the core program office.

The IOUs are exploring innovative means of improving the Industrial Calculated Incentives Program based on Energy Division direction. One possible method to comply with the Energy Division's guidance to "achieve deeper energy savings retrofits and packages of measures" and to "raise incentive levels for Emerging Technologies" is to institute a scaled incentive mechanism that would provide higher incentives for more comprehensive projects. The IOUs are soliciting input from stakeholders and may institute a scaled incentive mechanism for the Industrial Calculated Incentives Incentive Program.

The RCx program is a key offering in the Calculated Sub-program. The audit components of the RCx program are also described in the non-residential audit section above. Enhanced RCx program elements will explore and may include but not be limited to:

- Innovative approaches to measure identification, automated baseline capabilities, and savings quantification;
- Continuous commissioning and monitoring-based commissioning;
- Solutions for small and medium commercial customers;
- Strategies to drive savings persistence;
- Appropriate alignment with retrofit activities;
- Overall program incentives, targeting, and delivery.

e) Integrated/coordinated Demand Side Management

Energy audits will include recommendations for not only energy efficiency, but also for demand response and other demand-side management opportunities. Participating customers will be encouraged to participate in other demand-side management opportunities, including demand response and distributed generation. Participating customers will also be encouraged to take a more comprehensive approach to demand-side management and strive for continuous improvement.

f) Integration across resource types

California's industrial sector faces a multitude of environmental and regulatory challenges that affect their competitiveness and, in some cases, survival. New regulations aimed at improving air quality, water quality and reducing toxic environmental pollutants are proving to be expensive and disruptive to business as usual, and in many cases will have the impact of increasing energy use in compliance.

To help deal with these challenges, the industrial program will coordinate with the regulating agencies and the programs they are operating to support mutually advantageous program designs, customer incentives, marketing opportunities, and implementation opportunities. IOUs will continue to offer targeted trainings to customers who share common regulatory challenges in an effort to educate customers on impending regulatory requirements for their business operation, and the most efficient solution options to consider for compliance. Future workshops may look at small and medium sized water and wastewater treatment options, steam system upgrades, and energy efficiency to meet AB32 industrial targets.

IOUs will pursue opportunities to partner with water agencies to offer joint energy and water conservation incentives to support projects that would reduce both resources. Partnering with other utilities will help reduce administrative cost and has a greater impact on societal benefits.

Where applicable, the Program will integrate topics such as GHG reduction and water conservation into targeted customer workshops, and marketing and communications, building on a strong track record from the past program cycle. Marketing and communications material will include savings opportunities and messaging.

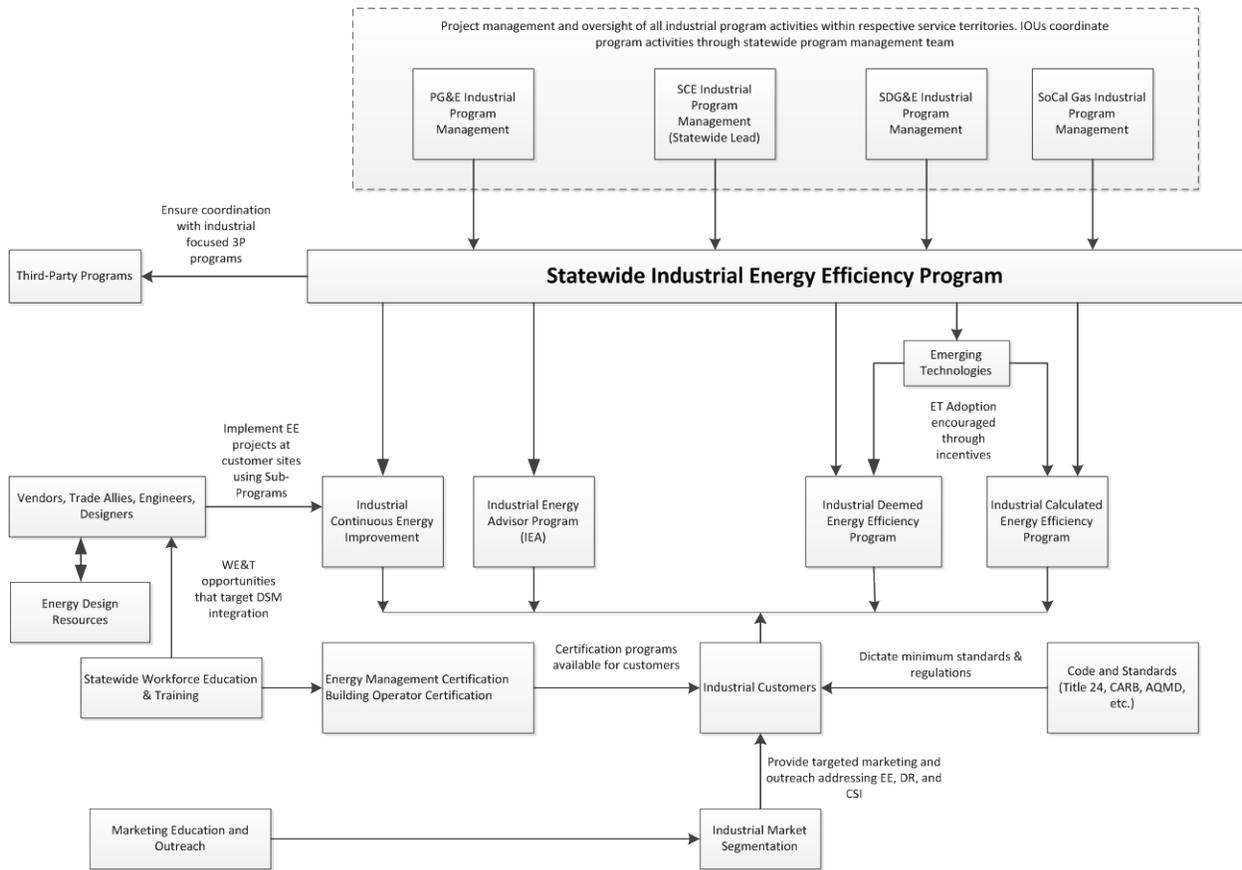
g) Pilots

Not Applicable.

h) EM&V

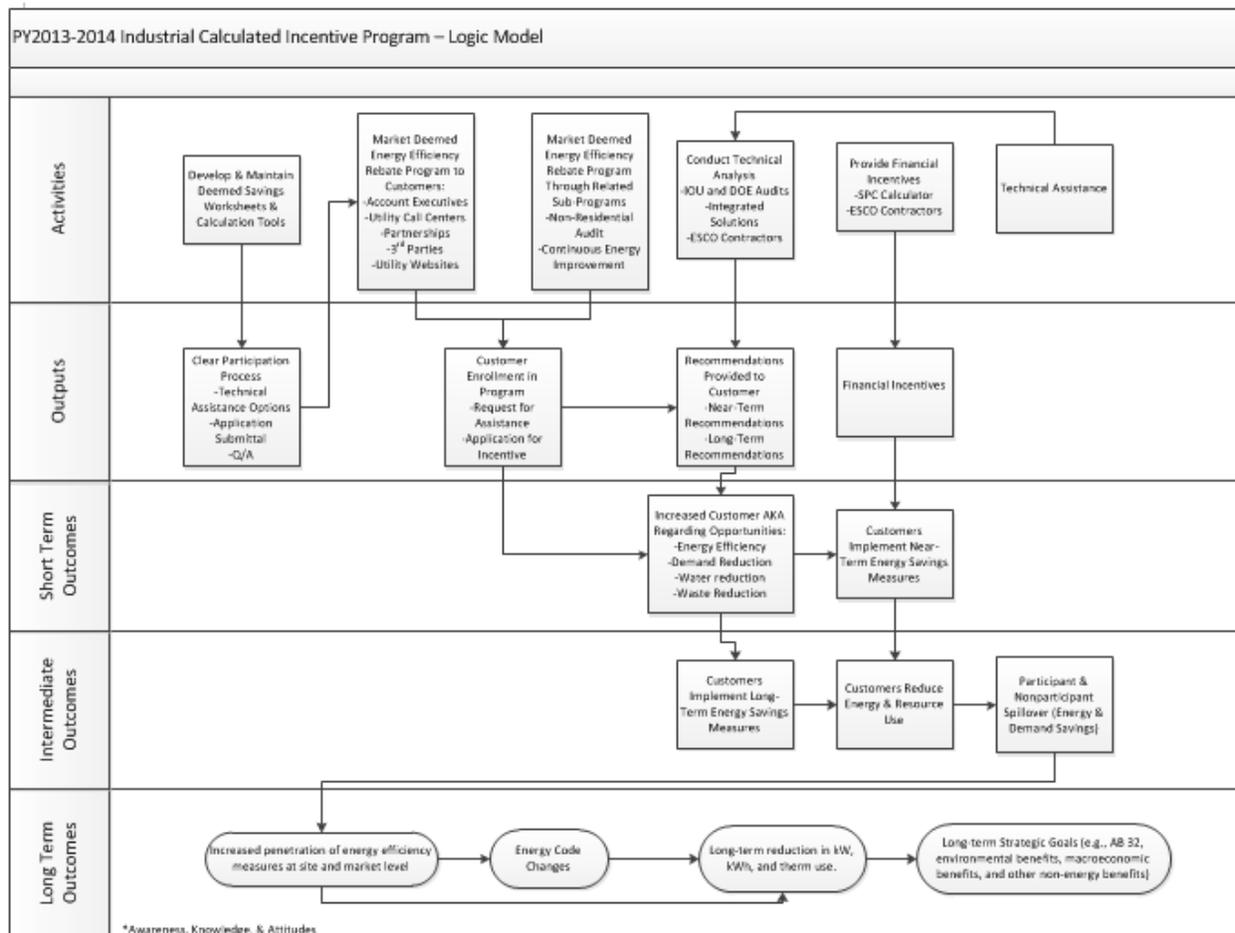
The IOUs are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan after the program implementation plans are filed. This plan will include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts will be developed collaboratively by the IOUs and Energy Division. Development of these plans will occur after the final program design is approved by the CPUC and, in many cases after program implementation has begun, since the plans need to be based on identified program design and implementation issues.

7) Diagram of Program



8) Program Logic Model

Note: On December 2, 2010, the Commission issued Resolution E-4385, approving Program Performance Metrics (PPMs) for Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and San Diego Gas and Electric Company for 2010-2012 statement energy efficiency programs and subprograms. In addition, this Resolution approved updated logic models for the statewide programs. Below is the approved logic model for the Statewide Industrial Calculated Incentives Program.



6.3) Industrial Deemed Incentives, core sub-program

The statewide Industrial Deemed Incentives sub-program, whose provisions correspond with those of statewide programs, commonly referred to as Express Efficiency, will pay rebates for the installation of new energy efficient equipment. Itemized retrofit measures have prescribed energy savings and incentive amounts. These measures are categorized under the following end uses:

- Lighting
- Air conditioning
- Food service
- Refrigeration
- Industrial Process
- Motors
- Plug loads
- High efficiency water heating

A listing of measures and services to reduce energy within the Deemed Incentives sub-program may include, but not limited to the following:

#	Measure Name	Maximum Incentive Level
1	High Performance Linear Fluorescent Fixtures & Retrofit Kits	\$17.50-\$20
2	Linear Fluorescent T-8 Lamp 32 watts to 28 watts	\$1.00
3	Linear Fluorescent T-8 Lamp 32 watts to 25 watts	\$1.50
4	Linear Fluorescent Fixture - T8 (including dimmable)	\$35.00
5	Linear Fluorescent Fixture - < 100-watt lamp existing, up to 64-watt replacement fixture	\$25.00
6	Linear Fluorescent Fixture - Linear Fluorescent Fixture - 101- to 175-watt lamp existing, up to 128-watt replacement fixture	\$35.00
7	Linear Fluorescent Fixture - 176- to 399-watt lamp existing, up to 192-watt replacement fixture	\$50.00
8	Linear Fluorescent Fixture - 400-watt lamp existing, 245- to 360-watt replacement fixture (Tier 2)	\$50.00
9	Linear Fluorescent Fixture - 400-watt lamp existing, up to 244-watt replacement fixture (Tier 1)	\$100.00
10	Linear Fluorescent Fixture - > 400-watt lamp existing, up to 600-watt replacement fixture	\$200.00
11	Exterior Metal Halide (PSMH / CMH) - < 100-watt lamp existing, up to 70-watt replacement	\$15.00
12	Exterior Metal Halide (PSMH / CMH) - 101- to 175-watt lamp existing, up to 100-watt replacement	\$20.00
13	Exterior Metal Halide (PSMH / CMH) - 176- to 200-watt lamp existing, up to 125-watt replacement	\$25.00
14	Exterior Metal Halide (PSMH / CMH) - 201- to 399-watt lamp existing, up to 175-watt replacement	\$25.00
15	Exterior Metal Halide (PSMH / CMH) - 400-watt lamp existing, up to 250-watt replacement	\$45.00
16	Exterior Metal Halide (PSMH / CMH) > 400-watt lamp	\$75.00

	existing, up to 750-watt replace	
17	Interior Induction Fixture - < 100-watt lamp existing, up to 70-watt induction lamp	\$35.00
18	Interior Induction Fixture - 101- to 175-watt lamp existing, up to 120-watt induction lamp	\$60.00
19	Interior Induction Fixture - 176- to 399-watt lamp existing, up to 180-watt induction lamp	\$75.00
20	Interior Induction Fixture - 400-watt lamp existing, up to 250-watt induction lamp (Tier 1)	\$125.00
21	Interior Induction Fixture - 400-watt lamp existing, up to 360-watt induction lamp (Tier 2)	\$60.00
22	Exterior Induction Fixture - < 100-watt lamp existing, up to 70-watt replacement fixture	\$25.00
23	Exterior Induction Fixture - 101- to 175-watt lamp existing, up to 100-watt replacement fixture	\$45.00
24	Exterior Induction Fixture - 176- to 200-watt lamp existing, up to 120-watt replacement fixture	\$50.00
25	Exterior Induction Fixture - 201- to 399-watt lamp existing, up to 180-watt replacement fixture	\$50.00
26	Exterior Induction Fixture - 400-watt lamp existing, up to 250-watt replacement fixture	\$100.00
27	LED Fixtures & Retrofit Kits - surface, accent, track, pendant, and recessed downlight: ≤ 25 watts	\$15-\$25
28	Bi-Level Stairwell/Hallway/Garage Fixtures	\$15.00
29	Screw-in compact fluorescent reflector lamp, 14–28 watts	\$7.00
30	Wall-box lighting sensor	\$20.00
31	Wall- or ceiling-mounted lighting sensor < 500 watts controlled	\$35.00
32	Wall- or ceiling-mounted lighting sensor > 500 watts controlled	\$55.00
33	Aisle traffic sensor for reach-in refrigerated case door lighting	\$100.00
34	Integrated sensor: < 150 watts	\$15.00
35	Integrated sensor: > 150 watts	\$40.00
36	Photocell	\$11.00
37	Time clock	\$36.00

The Deemed program directly addresses key market factors that lead to higher energy costs for California businesses. Providing a menu of prescribed common measures simplifies the process of reviewing project proposals and provides a "per-widget" rebate that reduces the cost of retrofitting outdated and inefficient equipment. This element makes it attractive for customers to spend money in the short run in order to achieve lower energy costs in the long run.

Audits are an important tool for marketing and increasing the uptake of EE measures. Nonetheless, an audit is not a prerequisite for deemed incentives. In fact, deemed incentives are specifically designed for ease of use—and our goal is to decrease, rather than increase, any administrative burden on customers opting for deemed incentives.

Using itemized energy efficiency measures is intended to overcome barriers that prevent many business customers from adopting energy efficiency alternatives. The barriers are addressed by itemizing common energy efficiency measures and rebates, stimulating the supply of high efficiency equipment and products (through higher demand), and offering

rebates that help offset higher start up and down payment expenses for energy efficient retrofits.

Furthermore, to ensure equity to all business customer segments, this program will continue to offer statewide-consistent, cost-offsetting itemized rebates to help customers with the cost of installing new energy efficient equipment. In the high efficiency water heating category, PG&E has a higher per MBtuh rebate than does Sempra due to the differences in the markets.

Incentives and savings payouts will be based upon deemed measures in the DEER database or through work papers.

Deemed Incentives Program for Businesses will be part of the integrated strategy to promote energy efficiency with non-residential customers. The Statewide Deemed Team will hold regular conference calls and in-person meetings to share successes challenges, and best practices in delivering energy efficiency via deemed incentives. When appropriate, the Commercial, Industrial, and Agricultural segments will meet as a statewide entity to share successes challenges, and best practices in delivering energy efficiency to each market sector and associated sub-segments.

Deemed Incentives Program will be primarily delivered via paper or online application. Measures will be the same across IOUs and incentive levels will also be aligned, unless markets in the individual IOUs require adjustments based on research, communication with industry, and/or changes in the economic landscape.

Deemed Incentives Program will work with the other sub-programs to design customer facing marketing materials that integrate EE offerings into a complete energy savings package that is focused on individual market segments.

Where appropriate, IOUs will coordinate with POUs to more effectively reach more California businesses to more deeply penetrate each customer segment and technology market. Each IOU will also coordinate internally with Government Partnership Programs to maximize effectiveness of Program offerings and minimize overlap and confusion.

a) **Statewide IOU Coordination**

Statewide coordination is important as it generally guarantees that the California IOU customers comprise at least 10% of an industry's national market. Consistent statewide specifications and rebate values make it easier for national chains and manufacturers to understand and support IOU rebate programs. Statewide coordination also includes regular meetings to share industry contacts, marketing strategies and lessons learned. Coordinated statewide participation at relevant industry events has reduced costs through sharing.

## Program Rationale and Expected Outcome

### b) Quantitative Baseline and Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 3 – Refer to the overarching program for quantitative baseline metrics

### c) Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics and goals are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 4 – Refer to the overarching program for market transformation metrics

### d) Program Design to Overcome Barriers

The Industrial Deemed Incentives Program is designed to overcome several barriers. The program directly addresses key market factors that lead to higher energy costs for California businesses. Providing a menu of prescribed common measures simplifies the process of reviewing project proposals and provides a "per-widgit" rebate that reduces the cost of retrofitting outdated and inefficient equipment. This element makes it attractive for customers to spend money in the short run in order to achieve lower energy costs in the long run.

Using itemized energy efficiency measures is intended to overcome barriers that prevent many business customers from adopting energy efficiency alternatives. The barriers are addressed by itemizing common energy efficiency measures and rebates, stimulating the supply of high efficiency equipment and products (through higher demand), and offering rebates that help offset higher start-up and down payment expenses for energy efficient retrofits.

Furthermore, to ensure equity to all business customer segments, this program will continue to offer statewide-consistent, cost-offsetting itemized rebates to help customers with the cost of installing new energy efficient equipment.

### e) Quantitative Program Targets

d) Advancing Strategic Plan goals and objectives

The Industrial Energy Efficiency Program supports all three goals in the Strategic Plan for the Industrial Sector. The Industrial Deemed Incentives Program supports at least two goals.

*Goal 2:* Build market value and demand for continuous improvement in industrial efficiency through branding and certification.

*Strategy 2.5:* Implement ME&O program to educate industry and consumers

*Near-term:* Form industrial collaboration mechanisms

The Deemed Incentives Program facilitates participation by allowing customers to apply for program participation in many ways, including mail, fax, internet and phone. SCE will implement marketing and outreach activities through account executives, trade associations, and in numerous other ways to stimulate participation. It will encourage participants to adopt a policy of continuous improvement.

*Goal 3:* Provide centralized technical and public policy guidance for California industrial energy and resource efficiency.

*Strategy 3.2:* Conduct statewide marketing and education effort to create demand for industrial information clearinghouse.

*Near-term:* 1) Develop ME&O Plan; 2) Implement Plan

SCE will participate in the development of the plan and then encourage industrial customers to use the clearinghouse as part of the implementation of the plan.

6) Program Implementation

a) Statewide IOU coordination

i. Program name: Industrial Deemed Incentives Program

ii. Program delivery mechanisms

Program delivery mechanisms for SCE will include account representatives, technical services personnel, incentives processing staff, and inspection officials. Also important to program delivery will be customer facility owners and managers; energy efficient equipment manufacturers, distributors, and services contractors; industry trade associations; and others in the energy efficiency equipment value chain.

At the statewide level, the Industrial Deemed Incentives Program will be coordinated to unify the implementation of program aspects such as program name, program delivery mechanisms, incentive levels, marketing and outreach plans, and IOU program interactions. The Industrial Deemed Incentives Program will coordinate with the core Industrial Energy Efficiency Program to provide mutual support.

The high-level focus of this statewide coordination effort will enable the capture of new innovations and opportunities for program improvement, correcting program weaknesses that reveal themselves during implementation, and ensuring achievement

of statewide targets across IOU service territories. Therefore, statewide focus on program unity and continuous program improvement over the course of the two-year implementation cycle will be enabled.

iii. Incentive levels

Incentive levels are based on measure type and will be set at uniform amounts across the state. Higher incentive levels will be provided for Emerging Technologies (ET) to spur traction in the market as feasible. The scale of increased incentive for emerging technologies will be evaluated on a measure by measure basis dependent on kW, kWh, equipment cost, other market factors and cost effectiveness.

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

The Industrial Deemed Incentives Program will be marketed through IOU account executives, as well as through trade allies, education, outreach and other marketing activities. Marketing activities will target business customers, ESCOs, trade associations, local business groups and government entities to generate interest and program participation. In addition, direct customer contact by account executives, phone and e-mail support will be provided.

Marketing efforts will incorporate a variety of marketing tactics/activities to promote the solutions in the program. Education, awareness, and outreach efforts will rely on a combination of mass media communication channels and targeted communication channels to ensure the messages reach the intended audiences with enough frequency to motivate attitude and behavior changes. The marketing strategies may include, but are not limited to, a mix of print, radio, TV, direct mail, e-mail, personal contact, trade shows, trade association meetings, customer workshops and seminars, energy related and other community events and partnerships with business and industry organizations, specialized collateral, case studies, website links and information with regular updates, bill inserts, press releases, and newspapers.

Market outreach to raise awareness of energy efficiency programs available will use a number of strategies, as follows:

- Providing a regular and consistent customer calling effort to key customers within this sector through account representatives;
- Providing additional expertise from IOU representatives, program management representatives, and field engineers will be available to provide additional expertise;
- Participation and membership in one or two key trade associations affiliated with each high priority sub-segment within the industrial market sector;
- Attendance at the key trade shows for each high priority sub-segment within the industrial market sector;

- Hosting IOU-sponsored training events at the IOU's Customer Training Centers and other convenient locations within the IOU's service territory;
- Hosting of IOU-sponsored webinars that provide sub-segment training and program adoption; and
- Linking written collateral pieces that give an overview of the IOU's Energy Efficiency programs to the appropriate IOU's IDSM web page.

The ideal marketing mix will be assessed for maximum awareness and participation. Marketing and outreach coordination will be coordinated, to the extent possible, among the IOUs utilizing the statewide coordination process described above.

The IOUs will continue to develop an in-depth segmentation of the industrial market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs.

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

The Industrial Deemed Incentives Program will leverage the programs offered by CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information and marketing collateral with industrial customers to the extent possible. Conventionally, each government agency and IOU has operated natural resource and energy programs independently, missing opportunities to serve customers who must manage more than one resource type.

With respect to water conservation, IOU program managers will partner with the local water districts to co-brand marketing collateral, attend trade shows and release joint notices for programs with interactive water and energy effects. Similarly, with ARB and Air Quality Management Districts, IOUs will offer customers program incentives for energy efficient equipment that may also reduce water and greenhouse gas emissions.

- vi. Similar IOU and POU programs

The long-term energy efficiency vision of California may be attained through the long-term and continuous development, verification, and acceptance of emerging technologies (ET) into the market. The achievement of long-term goals requires new technology as well as information, training and market development to maximize the EE benefits of cutting-edge technologies. In recognition of the importance of emerging technologies, the program is poised to adopt the efficiency potential of new

technologies through its programs. In addition, portfolio staff actively works to incorporate promising emerging technologies.

b) Program delivery and coordination

i. Emerging Technologies program (ETP)

To meet California's future energy efficiency goals, both in terms of overall usage and peak demand usage, new technologies and new applications of technology are needed. The Deemed sub-program will seek support from ETP's incubation and development of new technologies to meet the needs of the marketplace. ETP provides the pipeline of new technologies that Deemed looks to incorporate to maintain a robust selection of energy savings equipment. The program will look to ETP to provide customers with technology information, validating effectiveness as an unbiased and neutral expert.

ii. Codes and Standards program

The program relies on the Codes and Standards program to help 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. It is important to manage the measure life cycle to take full advantage of providing incentives before moving them into code. The program will coordinate with the Codes and Standards Planning & Coordination sub-program. 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 20 and 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., LEDs) are made available as they transition from research and development to mainstream program offerings..

iii. WE&T efforts

Workforce Education & Training (WE&T) efforts support the education and training of a robust network of industry trade allies, vendors, engineers, design teams and others who can support the market transformation strategies of the Strategic Plan. In the Industrial Energy Efficiency Program, WE&T efforts will focus in the near term on supporting national ANSI Energy Management Certification development efforts, as outlined in the Strategic Plan. Programs will closely coordinate with key stakeholders to ensure that California is poised to adopt this national standard and be a leader in this effort. Specifically, prerequisite trainings will be offered in DOE systems trainings to lay the groundwork for certification level trainings. These education and training offerings take place through IOU's energy centers and technology centers.

- iv. Program-specific marketing and outreach efforts (refer to Table 1 for budget information)

Marketing and outreach initiatives will include:

- Participation and membership in key trade associations affiliated with each high-priority sub-segment within the industrial sector, as appropriate;
- Attendance at key trade shows within the industrial sector;
- Building awareness and training of vendors of energy equipment and systems about the program eligibility requirements and participation procedures;
- Educating community based organizations (CBOs), faith based organizations (FBOs), other non-profit organizations, and other non-government organizations (NGOs) with unique access to certain industry segments;
- Informing enabling partners, such as financial institutions, law firms, and environmental organizations;
- Approaching other organizations with complementary value propositions from the customers' perspective, such as energy, water, materials management, recyclables, and corporate social responsibility;
- IOU-sponsored training events at the IOU's customer training centers and other convenient locations within the IOU's service territory;
- Hosting of IOU-sponsored webinars that provide sub-segment training and program adoption; and
- Development of case studies, web pages, and marketing materials that provide an overview of the IOU's energy efficiency programs.

Integrated and program-specific marketing efforts will complement and work in coordination with statewide ME&O to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU-specific programs providing reinforcement at a local level.

- v. Non-energy activities of program

The program will offer customers educational information about the non-energy benefits associated with energy efficiency measures, such as improved safety, indoor air quality, productivity, comfort, and appearance.

- vi. Non-IOU Programs

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, as appropriate and feasible.

vii. CEC work on PIER

Not applicable.

viii. CEC work on codes and standards

Planned enhancements to Title 20 and 24 will be reflected in incentive levels and in eligible measures and services

ix. Non-utility market initiatives

The program will support, educate customers, and/or facilitate such initiatives as AB32, renewables, ANSI certification, facility benchmarking, Continuous Energy Improvement, California Green Building Initiative, and other initiatives as directed. The IOUs will remain engaged in these efforts and work to influence the development of increasingly higher standards.

c) Best Practices

To maximize program effectiveness, best practices in program design and implementation will be employed and shared amongst IOUs.

Best practices in program design include:

- Ensure regular communication amongst IOUs
- Identify qualifying products simply and effectively (Examples; ENERGY STAR®, CEE, FSTC website).
- Seek input from industry in the development of new programs. The IOU programs are trying to change how an industry operates from manufacturer design to the customers purchasing and maintenance practices.
- Increase industry participation to increase program volume and accelerate market transformation.

Best practices in program implementation include the following:

- Striving to simplify messaging and participation for the customer. (Look for the ENERGY STAR label, purchase from a qualifying products list)
- Understanding the key motivators that drive an industry and use that information to market your program. Ensure outreach efforts make your program visible to your customers and the market that is catering to your customers.
- Continuously communicating program marketing and advertising plans in advance to appropriate industry channels. Advanced notice allows industry partners an opportunity to leverage off of IOU marketing efforts and reinforce the messaging we are trying to deliver to our customers.
- Never underestimate the power of market share or program visibility.

- Measure performance against targets, an activity central to the IOU plan. Ongoing process evaluations and adaptive management strategies will provide data to ensure the adequacy of resource plans and modify strategies to improve outcomes.

d) Innovation

Innovative aspects of the program include improving major program performance indicators, such as accuracy of energy saving calculation, higher realization rate, overcoming energy efficiency barriers, reducing application processing time and administrative costs, and integrated energy management.

For the new program cycle, California IOUs have implemented a new incentive structure that emphasizes peak demand reduction, addresses current economic downturn and better motivates customers to participate in energy efficiency incentive programs. During the 2013-2014 program cycle, the new incentive structure will be periodically evaluated and necessary changes may be made in order to enhance program benefits and performance, including measure bundling incentives. The IOUs will explore offering an audit to customers considering three or more measures in an effort to determine if the audit itself leads to implementation of deeper savings.

IOUs will continue working collaboratively on modifications to program Policies and Procedures to address ongoing changes in customer expectations, market conditions and program flexibility. Changes will (a) target ease of program understanding and participation, (b) measure eligibility, (c) increase of customer's economic benefits, and (d) identify policy restrictions that are barriers to participation. IOUs are implementing such process based on market studies conducted on the subject and preceding discussion of the policy change. Among other modifications that would be potentially discussed and implemented are incentive caps and redesign of measure/equipment early retirement according to the CPUC concept.

- Where possible, IOUs will use an integrated approach to addressing DSM opportunities. Innovative approaches will be used, such as merging energy efficiency and demand response analysis and converting recommendations to projects under Retro-commissioning and/or Calculated program. In addition, streamlining programs through processing and reviewing energy efficiency and demand response measures in a single application, providing analytical information about applicable distributed generation solutions, will maximize customer adoption rates for most cost-effective energy management opportunities.

e) Integrated/coordinated Demand Side Management

Once enrolled, participating customers will be encouraged to participate in other demand-side management opportunities, including demand response and distributed generation. Participating customers will also be encouraged to take a more comprehensive approach to demand-side management and strive for continuous improvement.

f) Integration across resource types

California's industrial sector faces a multitude of environmental and regulatory challenges that affect their competitiveness and, in some cases, survival. New regulations aimed at improving air quality, water quality and reducing toxic environmental pollutants are proving to be expensive and disruptive to business as usual, and in many cases will have the impact of increasing energy use in compliance.

To help deal with these challenges, the industrial program will coordinate with the regulating agencies and the programs they are operating to support mutually advantageous program designs, customer incentives, marketing opportunities, and implementation opportunities. IOUs will continue to offer targeted trainings to customers who share common regulatory challenges in an effort to educate customers on impending regulatory requirements for their business operation, and the most efficient solution options to consider for compliance. Future workshops may look at small and medium sized water and wastewater treatment options, steam system upgrades, and energy efficiency to meet AB32 industrial targets.

IOUs will pursue opportunities to partner with water agencies to offer joint energy and water conservation incentives to support projects that would reduce both resources. Partnering with other utilities will help reduce administrative cost and has a greater impact on societal benefits.

Where applicable, the Program will integrate topics such as GHG reduction and water conservation into targeted customer workshops, and marketing and communications, building on a strong track record from the past program cycle. Marketing and communications material will include savings opportunities and messaging.

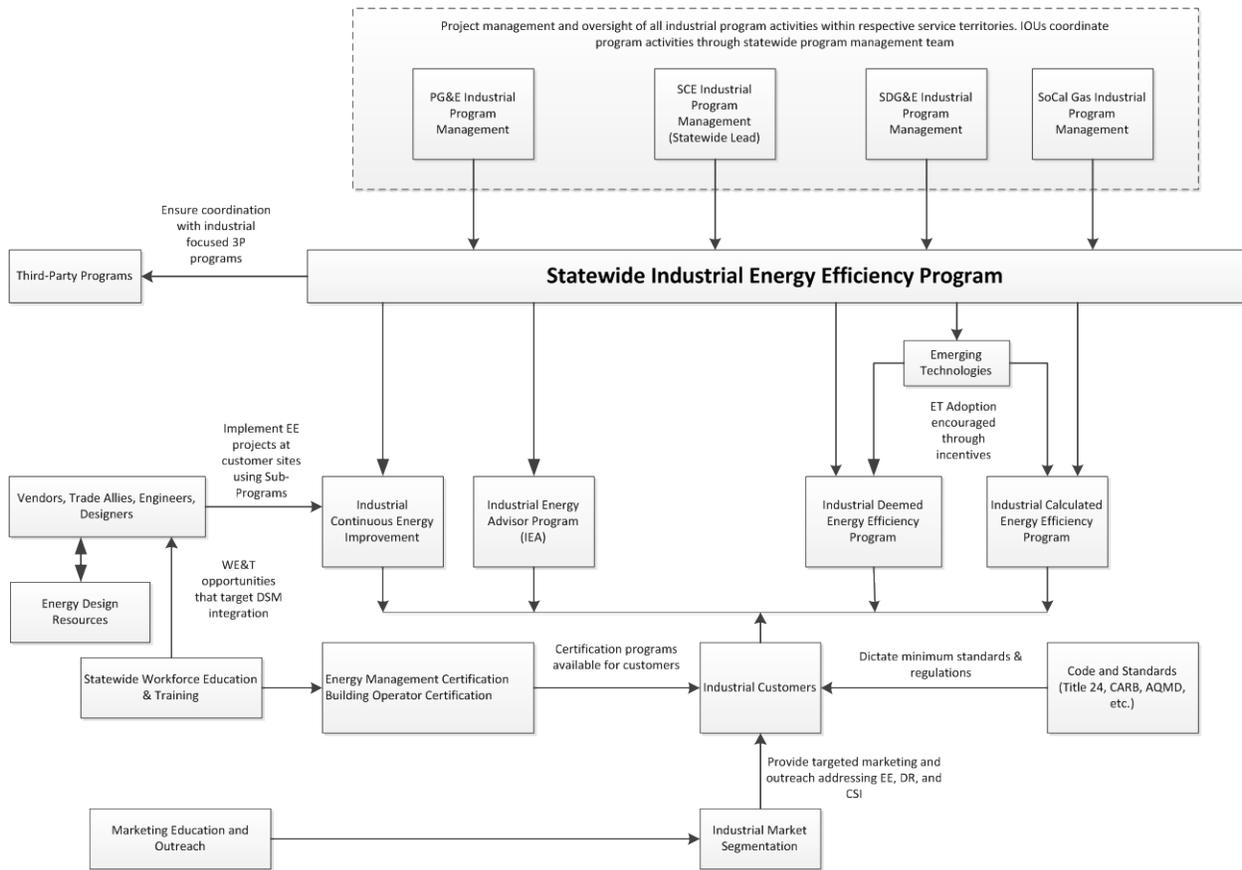
g) Pilots

Not applicable.

h) EM&V

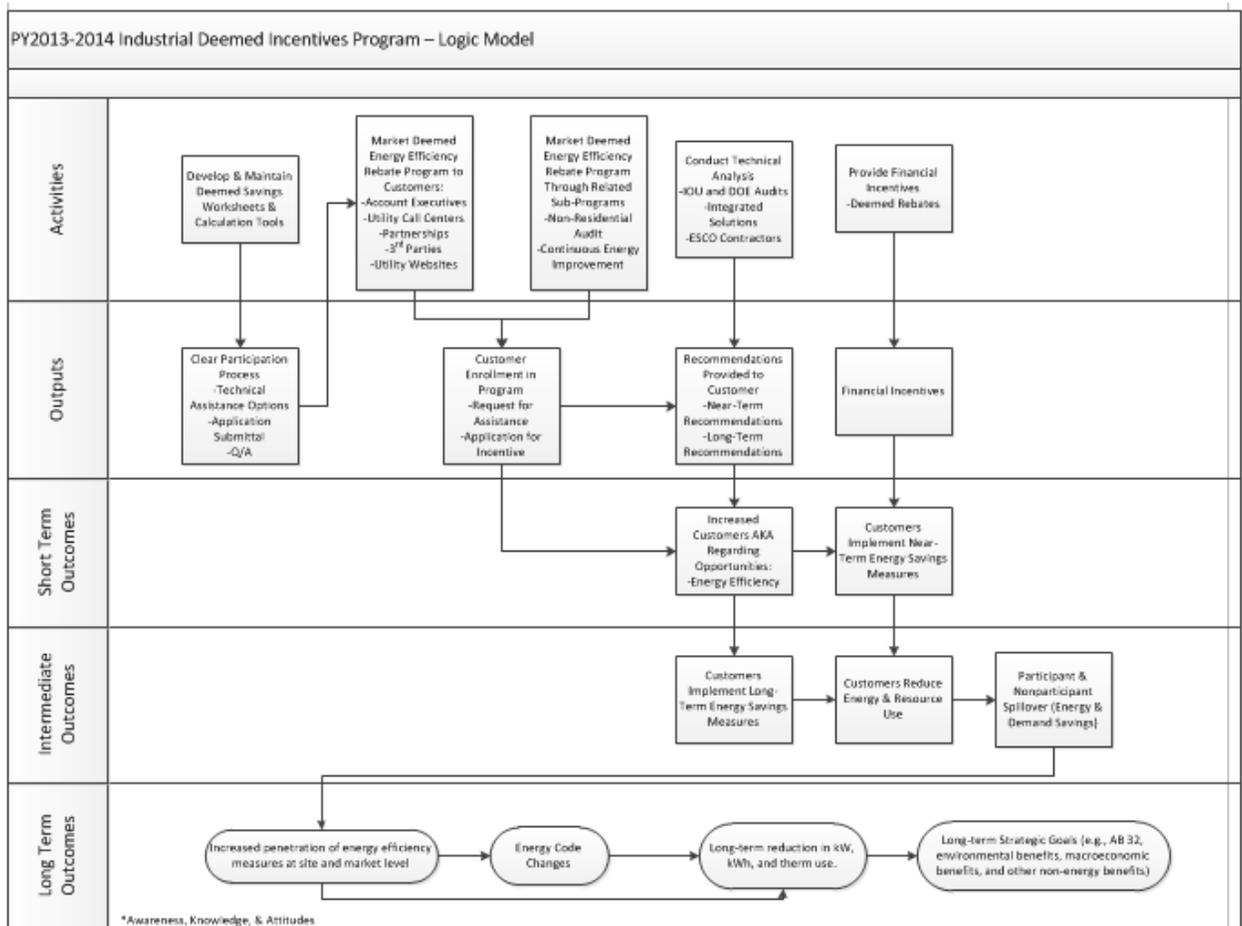
The IOUs will work with the Energy Division to develop and submit a comprehensive EM&V Plan for 2013-2014 after the program implementation plans are filed. This plan will include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts will be developed collaboratively by the IOUs and Energy Division. Development of these plans will occur after the final program design is approved by the CPUC and, in many cases after program implementation has begun, since the plans need to be based on identified program design and implementation issues.

7) Diagram of Program



8) Program Logic Model

Note: On December 2, 2010, the Commission issued Resolution E-4385, approving Program Performance Metrics (PPMs) for Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and San Diego Gas and Electric Company for 2010-2012 statement energy efficiency programs and subprograms. In addition, this Resolution approved updated logic models for the statewide programs. Below is the approved logic model for the Statewide Industrial Deemed Incentives Program.



6.4) Industrial Continuous Energy Improvement (CEI), core-subprogram

a) Describe program

Continuous Energy Improvement (CEI) is a consultative service that is aimed at helping industrial customers engage in long-term, strategic energy planning. Corporate energy management is not currently part of normal business operations for the majority of IOU customers and with current economic pressures forcing customers to reduce costs and focus more on their core business, it is likely to be further marginalized. CEI proposes to reintroduce the importance of energy management by transforming the market (and reducing energy intensity) through a comprehensive approach that addresses both technical and management opportunities and creates sustainable practices through a high-level energy commitment from executive and board-level management. CEI applies the principals of well-known business continuous improvement programs, such as Six Sigma and International Standards Organization (ISO) standards, to facility and plant energy management: (1) Commitment; (2) Assessment; (3) Planning; (4) Implementation; and (5) Evaluation and Modification. At each stage of customer engagement, there are a variety of complementary IOU and non-IOU products and services that can be customized to fit different customer profiles and optimize the cost effectiveness of the delivered energy management solution.

In 2013-14, CEI will be expanded to include select group of mid-sized non-residential customers. Available options to help target these customers may include an individualized, small group, or mass-market remote deployment approach.

CEI will coordinate its services with the Energy Advisor sub-program offerings. CEI offers customers what can be considered the pinnacle of audit offerings, guiding senior management to instill energy considerations in all management/business operational decisions and in long-term energy planning.

The CEI program implements the following steps:

- Commitment

CEI begins with a high-level management commitment to improving energy performance, which increasingly can be combined with other environmental and regulatory commitments that energy users are developing in response to market and political pressures. A corporate commitment sends the top-down message to employees, partners, shareholders and vendors that energy—like safety—is a priority issue requiring attention. Corporate commitment also paves the way for establishing the required company resources required to implement the steps of CEI. These resources can include capital, personnel like energy champions or teams, or technical systems and software required for energy management.

Gaining true customer commitment can take time, but it is critical. In implementation, IOUs will formalize the Commitment phase with more intensive customers through a CEI participation agreement. This agreement outlines the IOU CEI services being offered as well as minimum customer expectations.

- Assessment

Following Commitment, a comprehensive assessment is critical to identifying not only technical opportunities but also systemic energy management practices and cultural shifts. These can improve overall facility management practices and sustain continuous improvements towards long-term company targets. A component to the assessment will also include tools to help identify Energy Efficiency (EE), Distributed Generation (DG), and Demand Response (DR) opportunities.

There are many tools and resources – IOU and non-IOU, free and licensed – available to support comprehensive customer energy assessment. They include ENERGY STAR's Guidelines for Energy Management; customer energy management assessment software products like those developed by Envinta; benchmarking tools; Integrated Comprehensive Energy Audits; through the Industrial Energy Advisor sub-program, or local and third-party programs that can offer specialized technical expertise and assessment.

Based on screening criteria, IOUs will offer comprehensive energy assessment services utilizing, but not limited to, vetted sources like those described below, to develop a customer specific strategic energy plan.

- ENERGY STAR's Guidelines for Energy Management is housed on the ENERGY STAR website and provides step-by-step guidelines to customers to support CEI in general. It also guides customers to ENERGY STAR's numerous assessment tools. This option is a low-cost resource for smaller and medium customers interested in CEI.
- Energy Management Assessment Tools such as Envinta's One-To-Five, Achiever, or Challenger software products offer professionally facilitated energy management assessment with company decision makers. They also explore management practices and company priorities to develop a CEI roadmap for energy goals and actions.
- Integrated Comprehensive Energy Audits provide an inventory of technical facility end-uses and energy efficiency, demand response and self-generation investment opportunities. For a full description, see the Industrial Energy Advisor sub-program plan.

Benchmarking can measure the energy performance of a company, building, process, or piece of equipment to industry standards or comparable groupings. Benchmarking is a natural first step for the CEI process. Customers with multiple facilities find benchmarking useful to prioritize efficiency projects, track progress toward energy or

greenhouse gas (GHG) improvement goals, or drive competition among similar benchmarked facilities. Units of measurement vary widely. For industrial buildings, the unit is energy used/square foot for a unit of time. Benchmarking can also be applied to other resources and environmental issues such as water use, CO<sub>2</sub>, and emissions.

## Planning

Strategic energy planning involves setting energy goals and action plans around energy efficiency, demand response, and generation, as appropriate. Planning for customers will typically involve Account Representatives and/or consultants. As discussed in the Strategic Plan and in Section 6.e below, strategic planning can also include complementary non-energy considerations, such as greenhouse gas (GHG) reductions, water efficiency, and waste-stream minimization, all of which have embedded energy components.

Data and findings from a comprehensive customer Assessment are critical in developing any comprehensive energy plan. These include the results from technical audits or assessments, facility benchmarks, energy management assessments, and assessments of company priorities. This information is analyzed and used to develop realistic and achievable company goals and the prioritized shorter-term tactics that are needed to achieve them. Energy plans should be living documents revisited and revised regularly.

Energy goals can vary widely and include elements such as resource utilization (“Company X will reduce its overall energy intensity by 3% over the next 3 years”), carbon reduction goals (“Company X will be carbon neutral by 2014”), or management-oriented goals (“Company X will implement energy teams by 2013”). Goals can be internal documents or can be made public through press releases as part of larger sustainability plans. Publicized goals are increasingly important for large and public companies.

CEI will assist customers in developing and implementing action plans to execute the prioritized near-term activities in support of their company’s energy goals, as well as the resources, staff and schedule for tracking. Action plans typically include activities such as (a) prioritizing process systems or facilities based on benchmarking or company drivers, (b) identifying internal resources required for plan implementation, and (c) developing project justification and incentive application documentation lists and detailed schedules.

## Implementation

In the implementation stage, IOUs partner with customers to identify technical support and IOU and non-IOU resources available to support implementation of projects, such as rebates, incentives, third-party and government partnership programs, and state and national resources. These may include:

- Statewide Deemed rebates;

- Statewide Calculated incentives for new construction/tenant improvement, retrofit and retro-commissioning/repair;
- Third-Party and Government Partnership programs (described in the statewide and local third party filings);
- IOU and non-IOU financing options; and
- External and internal engineer support.

#### Evaluation and Modification

In any continuous improvement program, evaluation is an ongoing process of comparing actual performance against company goals, targets and action plans. It may include repeating the benchmarking and system or facility baseline process annually, assessing advancements in organizational and management practices that facilitate energy management improvements, or evaluating cost savings per unit of product. Regular evaluation will inform changes to goals and action plans moving forward.

#### b) List measures

CEI does not provide incentives to customers, but ultimately facilitates the customer's implementation of energy efficiency projects through incentive programs. However, depending on the outcome of the 2012 process evaluation, customer incentives may be offered.

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

CEI is a non-resource program that provides comprehensive strategic energy planning and consulting services for industrial customers. These services include energy management assessments, energy planning, baselining and benchmarking, project implementation support, customer recognition (e.g. "corporate sustainability awards"), and web-based energy resources.

### 5) Program Rationale and Expected Outcome

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

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 3 – Refer to the overarching program for quantitative baseline metrics

b) Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics and goals are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 4 – Refer to the overarching program for market transformation metrics

c) Program Design to Overcome Barriers

CEI is intended to address several market barriers that prevent wider adoption of energy efficiency practices. These barriers include:

- **Lack of information:** The CEI evaluation and modification process provides data that customers can use to reevaluate their commitment and/or modify their energy goals.
- **Performance uncertainties:** Through CEI’s comprehensive baselining and benchmarking assistance, customers will have access to real-time data that demonstrates how their facility is performing relative to their established goals.
- **Organizational customs:** The high-level customer commitment that is at the core of CEI increases the likelihood that corporate cultures that prevent successful implementation of comprehensive energy policies will be changed.

d) Quantitative Program Targets

The CEI targets provided herein are best estimates for the 2013-14 program cycle that are combined for the statewide Commercial, Industrial and Agricultural Programs.

<b>Continuous Energy Improvement (CEI)</b>	<b>Program Target for 2013-2014</b>
Large/Midsize Participants to Meet Short-Term Milestones	13
CEI Participants that will create an Energy Plan	13

e) Advancing Strategic Plan goals and objectives

The Industrial Energy Efficiency Program supports all three goals in the Strategic Plan for the Industrial Sector. General advancement of the goals is presented in the program implementation plan for the Industrial Energy Efficiency Program. More specific support of the goals in the Industrial CEI Program is presented here.

*Goal 1:* Support California Industry’s adoption of energy efficiency by integrating energy efficiency savings with achievement of GHG goals and other resource goals.

*Strategy 1.1:* Develop coordinated energy and resource management program for CA’s industrial sector, to enhance use of energy efficiency

The core deliverable through CEI is the development of a comprehensive energy management plan that customers can adopt as an operating strategy. This plan will allow customers to quantify and manage their GHG emissions in a responsible manner.

*Goal 2:* Build market value and demand for continuous improvement in industrial efficiency through branding and certification.

*Strategy 2.2:* Implement certification

*Near-term:* Plan pilot and recruit host sites (8-10 facilities)

The Continuous Energy Improvement sub-program will manage the statewide participation in the development of an industrial certification program. This certification program will be piloted in 2013-2014. It will leverage the various industrial sub-program tactics described throughout this program implementation plan to identify the best potential host sites. The lessons learned from this pilot will be used to expand the certification in the next program cycle.

*Goal 3:* Provide centralized technical and public policy guidance for California industrial energy and resource efficiency.

*Strategy 3.1:* Compile technical and resource management regulatory materials into centralized assistance repository.

*Near-term:* 1) Identify and incorporate priority energy and other data; 2) Develop clearinghouse or integration system.

The Continuous Energy Improvement sub-program will support the development of an industrial clearinghouse by providing information on results and experience in the program, including case studies of innovative projects and best practices about implementing comprehensive energy management plans at industrial facilities.

6) Program Implementation

a) Statewide IOU coordination

- i. Program name: Industrial Continuous Energy Improvement Program
- ii. Program delivery mechanisms

CEI will be coordinated to unify the implementation of program aspects such as program name, program delivery mechanisms, marketing and outreach plans, and IOU program interactions. The Industrial CEI Program will coordinate with the core Industrial Energy Efficiency Program to provide mutual support.

The high-level focus of this statewide coordination effort will enable the capture of new innovations and opportunities for program improvement, correct program weaknesses that reveal themselves during implementation, and ensure achievement of statewide targets across IOU service territories. Therefore, statewide focus on program unity and continuous program improvement over the course of the two-year implementation cycle will be enabled.

Where applicable, the IOU's account representatives will support this activity within the statewide industrial sector, as well as third parties, government partnerships, and IOU local programs.

iii. Incentive levels

Not applicable

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

As with other information and education programs, CEI will be delivered primarily by IOU customer energy efficiency staff and contractors, service and sales representatives, website and marketing and outreach efforts. Other channels of delivery may be developed.

The IOUs will continue to develop an in-depth segmentation of the industrial market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs.

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

The program will leverage the programs offered by CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information and marketing collateral with industrial customers.

vi. Similar IOU and POU programs

Over the next two years, the IOUs will seek to increase their interactions with the POUs, as applicable; to promote the CEI concept throughout the state. This may involve the creation of periodic California energy efficiency program summits that seek to increase awareness of the Strategic Plan and how programs could/should be designed to help meet its aggressive targets.

b) Program delivery and coordination

i. Emerging Technologies program

The CEI program management team will stay abreast of and incorporate relevant emerging technologies into audit recommendations. In addition, IOU field engineers, who play a large role in the delivery of CEI to industrial customers, are active contributors to the Emerging Technology (ET) process by their participation in ET Roundtable/Information meetings and continually seek to offer new technologies to customers.

ii. Codes and Standards program

CEI implementation shall include information about pending new code that may affect planning or prioritization of retrofit or new construction projects.

iii. WE&T efforts

CEI implementation will integrate with Workforce Education and Training efforts by providing CEI process, lessons learned, and case study input to energy engineer curriculum designers for community colleges and universities. This activity will be coordinated through the Statewide WE&T program team and will ultimately be integrated into the web portal that team is now developing. IOUs will assess and support specialized WE&T training to help target working energy management professionals, industry professionals, and those pursuing education in universities and colleges.

IOUs will also continue with WE&T coordination to bridge the linkages and integrate sector strategy approaches. Program costs will be shared with WE&T.

iv. Program-specific marketing and outreach efforts

A broad range of marketing activities will be used to promote audits and elevate customer engagement. The Industrial CEI program will be promoted via direct communication between customers and Account Executives with the support of Project Managers from individual programs, as well as through traditional advertising activities, such as internet, bill inserts, brochures, trade shows, etc. Marketing activities will be coordinated between IOUs, Demand Response and Distributed Generation departments within each IOU.

Integrated and program-specific marketing efforts will complement and work in coordination with statewide ME&O to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU-specific programs providing reinforcement at a local level.

v. Non-energy activities of program

Integrated energy audits are a key tool for identifying non-energy opportunities for specific customers. The energy audits can identify non-energy benefits associated with recommended measures, such as improved safety, productivity, indoor air quality, comfort and appearance.

vi. Non-IOU Programs

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

Not applicable.

viii. CEC work on codes and standards

See Section 6.b.ii.

ix. Non-utility market initiatives

Education about federal tax incentives for energy efficiency investments is an example of non-IOU information and guidance that CEI will provide customers. In addition, the IOUs will participate in national efforts to develop and/or improve benchmarking tools and services that can be used by customers to better facilitate their adoption of sustainable energy management practices.

c) Best Practices

The CEI approach applies the principles of well-known business continuous improvement programs, such as Lean Six Sigma and ISO standards, to facility and plant energy management: Commitment, Assessment, Planning, Implementation, Evaluation, and Modification in order to achieve widespread adoption of long-lasting sustainable energy management practices in the industrial market sector. This approach can now be successfully implemented given the two-year programs cycle allowing longer-term and deeper project development engagements with customers.

d) Innovation

Continuous Energy Improvement (CEI) is a new way of packaging energy efficiency, demand response and self-generation products and services aimed at helping customers engage in long-term, strategic energy planning. It proposes to transform the market and reduce energy intensity through a comprehensive approach that includes addressing both technical and management opportunities.

Depending on the outcome of the 2012 process evaluation, CEI may consider customer incentives to accelerate project implementation (including IDSM projects), and reward customer for implementing strategic energy management.

e) Integrated/coordinated Demand Side Management

CEI includes project analysis and implementation support of recommendations of statewide integrated energy audits which provide customers with an inventory of facility end-use breakdown and energy efficiency, demand response and self-generation investment opportunities. Over the last few years, traditional DSM programs have learned that successful customer participation in one program leads to a likelihood of repeat participation in the same program. Additionally, this successful participation makes these customers likely candidates for other similarly related types of programs. While a successful program experience leads to repeat participation, there has been difficulty in cross pollinating similarly related types of programs with these candidates due to program-specific silos. To overcome the historic siloing of DSM, the CEI sub-program will leverage lesson's learned from IDSM efforts by offering comprehensive, coordinated marketing and program delivery.

A primary issue when integrating energy efficiency and demand response programs is that the two programs are at financial odds with one another, as both programs often reduce the potential for each other's financial incentives. For example, energy efficiency may reduce the overall baseline which the demand response program's incentives are based upon. Since benefits from long term energy savings derived from technological measures outweigh the temporary demand reduction benefits derived from behavioral actions, the CEI sub-program will offer additional support and services for energy efficiency measures that enable demand response when customers enroll, or are already enrolled, in demand response programs. In so doing, the program seeks to maximize the potential for both types of programs.

A secondary issue when integrating energy efficiency and demand response programs is that communications of both types of DSM program are often non-coordinated, since energy efficiency is typically technology-based and demand response is often focused on behavior. Also, demand response efforts often happen prior to the summer "event season" and wane throughout the remainder of the year. To overcome these differences, the Program will offer integrated and coordinated year-round marketing through consolidates applications, collateral, web sites, and events, where applicable.

Through bundling program elements and offering one program application, customers will have the opportunity to enroll in demand response programs in addition to energy efficiency programs.

To support the integration of energy efficiency and demand response programs, the sub-program will focus on several tactics:

- Offering promotions and incentives for demand response in such a way as to stimulate energy efficiency first
- Providing integrated and coordinated year-round marketing (e.g., applications, collateral, websites, and events)
- Linking program eligibility requirements (e.g., customer size)
- Providing unified technical assistance through enhanced EE/DR audits through the TA Program to allow for cross-harvesting opportunities
- Providing integrated presence on IOU websites
- Regular coordination meetings between energy efficiency and demand response program management

CEI is recognized as a strategy to advance Statewide IDSM program's goals and objectives. IOUs will increase IDSM messaging and coordination within CEI.

PG&E will develop and promote integrated-measure offerings that include EE, DR, or DG technologies. These "bundles" will be tailored based on customer segment and offered in the CEI program. In order to promote integrated projects, increased incentives or incentive adders for bundled DSM offerings will also be explored. The CEI team will work with the IDSM Task Force on eventually optimizing/incorporating DSM bundles into integrated projects. Once DSM bundles have been piloted and optimized in the CEI program, they can then be considered for inclusion in other programs in support of PG&E's IDSM vision. Any additional best practices and lessons learned from the CEI program's IDSM-centric approach will also be shared with IDSM Task Force members and incorporated into current programs or future program designs where applicable.

As part of the shift to a relationship marketing strategy, PG&E will integrate relevant DSM solutions into its marketing and outreach activities for CEI. Marketing and outreach activities will be targeted to provide customer-specific solutions that reflect the DSM programs and services that are appropriate for the customer segment. Therefore, the marketing mix for promoting EE, DR, and DG will vary within the CEI program, based upon what is appropriate and relevant for the customer.

PG&E's CEI Program will coordinate with the statewide IDSM Task Force by providing program and integrated project updates and sharing lessons learned in PG&E's internal IDSM meetings. CEI activities, accomplishments, and lessons learned will also be recorded in the Joint IOU Quarterly IDSM Compliance and Tracking Report submitted to Energy Division. The objective of such close coordination is to pilot and optimize integrated program practices, activities and offerings in the CEI Program for ultimate adoption into other program areas where appropriate. The table detailing the DSM resources is available below:

DSM Program Promotion Matrix			
Utility	Energy Efficiency	Demand Response	Distributed Generation
PG&E	<ul style="list-style-type: none"> <li>Utilize technical audits program to allow for the proper identification of DSM resources.</li> <li>CEI Providers will market and promote EE, DR, and DG in every engagement</li> </ul>	<ul style="list-style-type: none"> <li>Utilize technical audits program to allow for the proper identification of DSM resources.</li> <li>CEI Providers will market and promote EE, DR, and DG in every engagement</li> <li>CEI to build additional incentives/promotions for providers to seek out DR and DG opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Utilize technical audits program to allow for the proper identification of DSM resources.</li> <li>CEI Providers will market and promote EE, DR, and DG in every engagement</li> <li>CEI to build additional incentives/promotions for providers to seek out DR and DG opportunities.</li> </ul>

f) Integration across resource types

CEI implementation will include information on Non-IOU Programs to expose customers to funding, such as from air or water agencies, to support efforts. IOU CEI sub-program managers will partner, as appropriate, with CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information, marketing collateral, and financial incentive analysis with customers. Conventionally, each government agency and IOU has operated natural resource and energy programs independently, missing opportunities to serve customers who must manage more than one resource type. For customers who are regulated by or interested in more than one resource issue, CEI will inform the customer about the mutual benefit of combining complementary resource programs.

In the effort to promote CEI, IOUs will seek out customers interested in complementary resource programs such as provided by water and air quality agencies. With respect to water conservation, IOU program managers will partner with the local water districts to produce co-branded marketing collateral, attend trade shows and release joint notices for programs with interactive water and energy effects.

g) Pilots

Not applicable

h) EM&V

The IOUs will work with the Energy Division to develop and submit a comprehensive EM&V plan after the program implementation plans are filed. This may include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies.

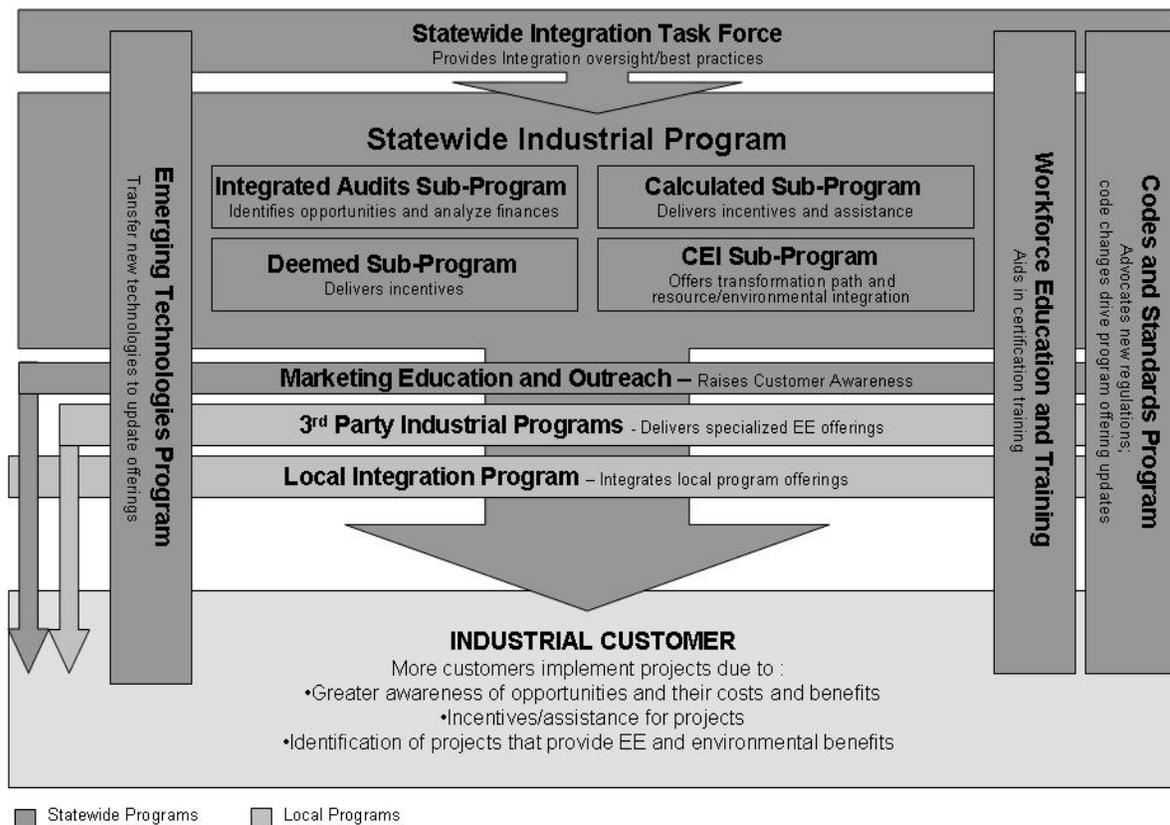
More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in

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

Once results of the 2010-2012 evaluations are ready, recommendations will be reviewed for modifying the CEI PIP accordingly.

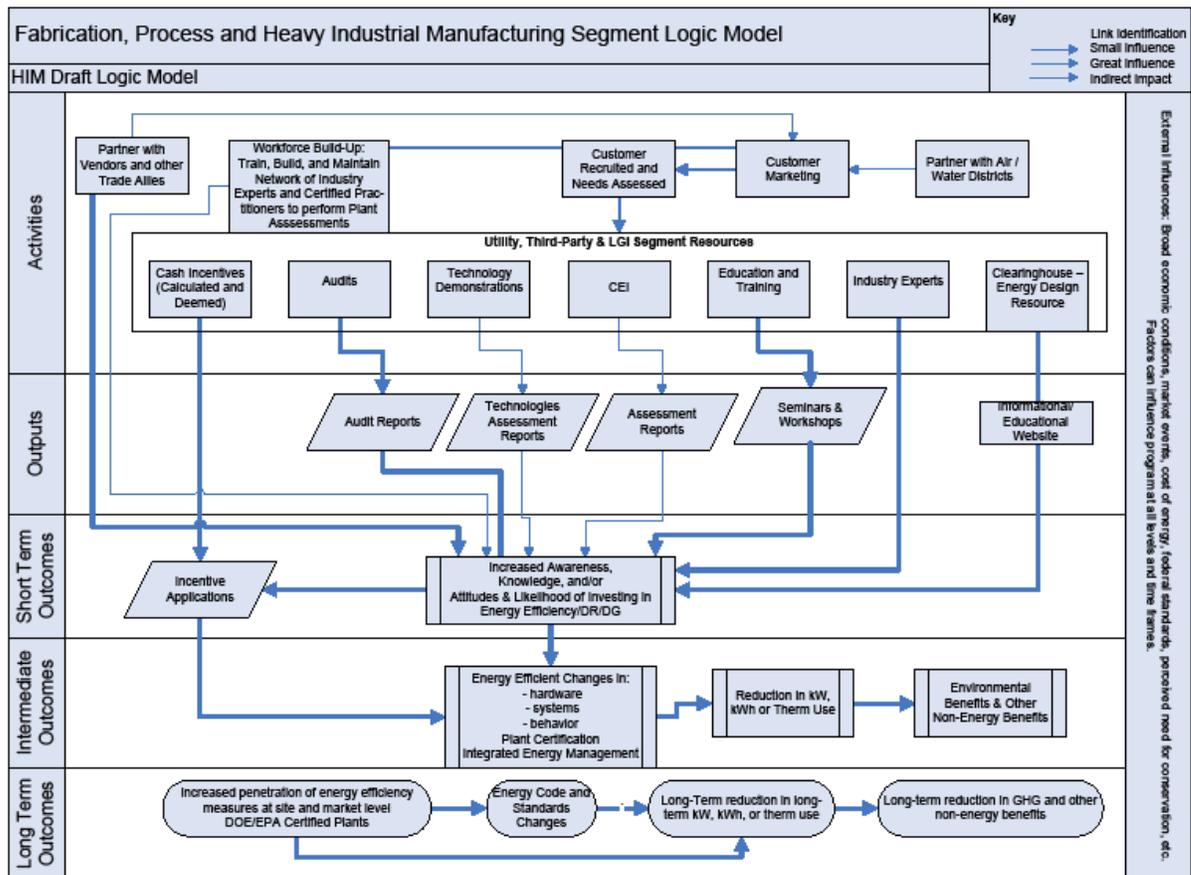
7) Diagram of Program

The Industrial Program, sub-programs, and linkages with other programs are represented in the following Program Diagram. Overlapping boxes indicate major areas of two-way coordination. Direct targets of influence are indicated by arrows. The Statewide HVAC Program, Statewide Lighting Program, and Government Partnerships are not represented in this diagram as the linkages are somewhat limited. Statewide and Local Integration Programs coordinate DR, DG and other IOU activities that are not indicated on this diagram.



8) Program Logic Model

Note: On December 2, 2010, the Commission issued Resolution E-4385, approving Program Performance Metrics (PPMs) for Pacific Gas & Electric Company, Southern California Edison Company, Southern California Gas Company, and San Diego Gas and Electric Company for 2010-2012 statewide energy efficiency programs and subprograms. In addition, this Resolution approved updated logic models for the statewide programs. Below is the approved logic model for the Industrial Program.



# Appendix 1

## Industrial Sector Alignment with California Long Term Energy Efficiency Strategic Plan

### Appendix 1 – Strategic Plan Crosswalk

The California Long-Term Energy Efficiency Strategic Plan (Strategic Plan) sets forth a statewide roadmap to maximize achievement of cost-effective energy efficiency in California’s electricity and natural gas sectors between 2009 and 2020, and beyond. Appendix 1 summarizes how the Industrial Sector Objectives and Strategies during the 2010-2012 program cycle contribute to the fulfillment of the Strategic Plan near-term actions and steps toward the plan’s longer term goals.

Strategic Plan			Industrial PIP	
Goal/Strategies	Partners	Near Term 2009 – 2011	Objective/Strategy	Reference/ Page number
<p>Goal 1: Integration with Other Resource Strategies</p> <p>Strategy 1-1 Develop coordinated energy and resource management program for CA’s industrial sector, to enhance use of energy efficiency</p>	<p>CARB</p> <p>CEC</p> <p>State Agencies for water, solid waste, and toxic substances</p> <p>Utilities</p> <p>Industry Reps</p>	<ul style="list-style-type: none"> <li>Establish CARB AB 32 Industry Team</li> <li>Study feasibility of implementing negotiated agreements</li> <li>Undertake pilot program with food processing sector</li> </ul>	<p>As appropriate, initiate or participate in interagency task force to explore key opportunities to coordinate CA’s regulatory, energy and water rules, programs, and incentive mechanisms.</p> <p>Work with CARB interagency team to explore the applicability of negotiated agreements for CA’s marketplace, as well as voluntary certification programs such as the ANSI plant certification program that will be piloted in CA.</p> <p>Utilize the food processing pilot to explore how a Continuous Energy Improvement approach (voluntary top down corporate commitment, 360 degree assessment and benchmarking, resource utilization reduction goal setting, and metrics and tracking) can be integrated with air, water, GHG, and other resource management goals to improve uptake and cost effectiveness.</p>	<p>Section 4.e, p. 9</p> <p>Section 4.e, p. 9</p> <p>Section 6.2.g, p. 42</p>
<p>Goal 2: Certification Program for Continuous Improvement</p> <p>Strategy 2-1: Participate in DOE/EPA’s national Plant Energy Efficiency Certification Program (E<sup>2</sup>).</p>	<p>DOE/ EPA</p> <p>SEPP participants</p> <p>Utilities</p> <p>Industry</p>	<ul style="list-style-type: none"> <li>Participate in planning process.</li> </ul>	<p>Actively coordinate with the national efforts and teams developing the tools, metrics and methodologies for ANSI plant certification. Coordinate with the CEC to plan a sequence of WET classes to support a workforce that can support this certification program as defined. (see 2-3)</p>	<p>Section 4.c, p. 5</p>
<p>Goal 2: Certification Program for Continuous Improvement</p> <p>Strategy 2-2: Implement certification</p>	<p>SEPP Program</p> <p>Utilities</p> <p>Industry</p>	<ul style="list-style-type: none"> <li>Plan pilot and recruit host sites (8-10 facilities).</li> <li>Implement and analyze pilots.</li> </ul>	<p>Utilize newly developed tools and templates for CEI to refine pilot design, budget, timelines, partners, and outcomes with other IOUs, the CEC, DOE, SEPP ANSI and ISO. Select candidates in industrial, FP, wine segment and initiate pilot. If available, Test monitoring</p>	<p>Section 6.4, pp. 50-51</p>

# Appendix 1

## Industrial Sector Alignment with California Long Term Energy Efficiency Strategic Plan

<p>Goal 2: Certification Program for Continuous Improvement</p> <p>Strategy 2-3: Develop and implement workforce training program (integrated with national training effort).</p>	<p>SEPP Program WE&amp;T Task Force Utilities Industry Universities</p>	<ul style="list-style-type: none"> <li>• Adopt the national curriculum for certification.</li> <li>• Consider curriculum enhancements for awareness- level training on integrating energy efficiency into the workplace and developing a new curriculum to fast track for future energy management professionals</li> <li>• Begin pilot courses with key industry segments.</li> </ul>	<p>Closely coordinate with SEP to ensure agreement on certification requirements.</p> <p>Coordinate with ANSI in development of curriculum. When available, integrate into training courses in CA.</p> <p>Coordinate with CEC to lay the groundwork for DOE industrial training sequences required for certification</p>	<p>Section 5.e., p. 9</p> <p>Section 6.0.b.iii, p. 13</p> <p>Section 6.b.iii, p. 13</p>
<p>Goal 2: Certification Program for Continuous Improvement</p> <p>Strategy 2-4: Create tracking and scoring systems to measure resource efficiency improvements.</p>	<p>Utilities Industry</p>	<ul style="list-style-type: none"> <li>• Develop systems.</li> <li>• Implement on test basis.</li> </ul>	<p>As part of the CEI toolkit, Plant Certification pilot in industry and FP, and through the ET work on Enterprise Energy Management, develop tools and resources to facilitate industry's tracking and management of energy and other resources.</p>	<p>Section 6.4., pp. 50-51</p>
<p>Goal 2: Certification Program for Continuous Improvement</p> <p>Strategy 2-5: Implement ME&amp;O program to educate industry and consumers</p>	<p>ME&amp;O Task Force Utilities Industry</p>	<ul style="list-style-type: none"> <li>• Form industrial collaboration mechanisms.</li> <li>• Develop Plan</li> </ul>	<p>Deliver message about CEI primarily through IOU customer energy efficiency staff and contractors, service and sales representatives, website and marketing, and outreach efforts. Other channels of delivery may be developed.</p>	<p>Section 6.4, 6.b.iv</p>
<p>Goal 3: Single Clearinghouse</p> <p>Strategy 3-1: Compile technical and resource management regulatory materials into centralized assistance repository</p>	<p>Utilities Industry Associations</p>	<ul style="list-style-type: none"> <li>• Inventory existing sources for technical and regulatory assistance for industrial energy efficiency and other environmental resource targets.</li> <li>• Identify and incorporate priority energy and other data</li> <li>• Develop clearinghouse or integration system.</li> </ul>	<p>Establish a statewide team to identify and compile industrial and agricultural program information, technical resources, ET research and studies, and best practices for clearinghouse, on energy and other resource programs. Include financing programs.</p> <p>Utilize the Energy Design Resources statewide funded website to expand content to include industrial and agricultural content, including emerging technologies and industry specific research. Link users to other non-CA resources and websites where they are comprehensive.</p>	<p>Section 5.c, p. 7</p> <p>Section 6.0.d, p. 18</p>
<p>Goal 3: Single Clearinghouse</p> <p>Strategy 3-2: Conduct statewide marketing and education effort to create demand for Industrial Information clearinghouse.</p>	<p>Utilities Industry Associations</p>	<ul style="list-style-type: none"> <li>• Develop ME&amp;O Plan.</li> <li>• Implement Plan</li> </ul>	<p>Promote the Industrial Information Clearinghouse through the ME&amp;O program.</p>	<p>Section 6.0.b.iv, p. 13</p>

Appendix 2 – Industrial Technology Roadmap



Industrial  
Technology Roadmap  
(Draft Document - For discussion purposes only)

Category	Technology	2008 Q4	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	
ET/TT	Parkville Battery Charger	ET Assessment		TT Development			Deployment										
PROGRAMS	Parkville Battery Charger																
C&S	Parkville Battery Charger																
ET/TT	Solar Powered Water Circulator	ET Assessment		TT Development			Deployment										
PROGRAMS	Solar Powered Water Circulator																
C&S	Solar Powered Water Circulator																
ET/TT	Mercubable Circulation & Stratification for Lagoon Wastewater Treatment	ET Assessment		TT Development			Deployment										
PROGRAMS	Mercubable Circulation & Stratification for Lagoon Wastewater Treatment																
C&S	Mercubable Circulation & Stratification for Lagoon Wastewater Treatment																
ET/TT	OE Field Water Management	ET Assessment			TT Development			Deployment									
PROGRAMS	OE Field Water Management																
C&S	OE Field Water Management																
ET/TT	Super Boiler	ET Assessment					TT Development			Deployment							
PROGRAMS	Super Boiler																
C&S	Super Boiler																
ET/TT	OE Pipeline Strag Reducing Agents	ET Assessment				TT Development			Deployment								
PROGRAMS	OE Pipeline Strag Reducing Agents																
C&S	OE Pipeline Strag Reducing Agents																
ET/TT	Wawa Mix Asphalt	ET Assessment						TT Development			Deployment						
PROGRAMS	Wawa Mix Asphalt																
C&S	Wawa Mix Asphalt																

Legend	
	Emerging Technologies
	Technology Transfer (Program Development)
	Programs & Deployment
	State Standards or Regulations
	Federal Specifications

1/21/2009

The technologies and timelines indicated on this roadmap are subject to change to reflect current conditions.