

# **Preliminary Energy Division-Proposed Program Performance Metrics and Market Transformation Indicators**

**SCE AL XXXX-E  
PG&E AL XXXX-G/XXXX-E  
SoCalGas AL XXXX-G  
SDG&E AL XXXX-G/XXXX-E**

**September 15, 2010**

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## Categorization and Color Coding of Metrics

Color Code	Metric Type	Description	IOU Reporting	Adopted by Resolution?	Notes / Purpose
N/A	1	ST (2010-2012) <i>program</i> activity or output	N/A (IOUs track, but do <i>not</i> report)	N	Data that could be gathered via data request anyways, since the IOUs should already have. <b><i>Type 1 metrics are <u>not</u> included in this document.</i></b>
	2A	ST (2010-2012) <i>program</i> output or outcome	IOUs report <i>annually</i>	Y	Fulfills D.09-09-047 requirements related to PPM filing, <i>excluding consideration of MT indicators.</i>
	2B	ST (2010-2012) <i>program</i> output or outcome	IOUs report <i>at the end of the program cycle</i>	Y	Data that the IOUs need to be pushed to gather, or might not otherwise report if they have it. These are key metrics that staff and parties would be most interested in tracking.
	3	LT (2013-2030) <i>market</i> outcome (i.e., “MT indicators”)	N/A (Identified for future studies by ED or IOUs) *	Y	Fulfills D.09-09-047 requirements to identify “MT indicators and key data sources.”

\*The final number would be subject to the 2010-2012 EM&V work plan process (pursuant to D.10-04-029) and the prioritization and negotiations between ED (and its consultants) and the IOUs.



## Residential Statewide Program

	Mission
SW Program: <b>Residential</b>	Residential Energy Efficiency Program (REEP) is designed to offer and promote specific and comprehensive energy solutions within the residential retrofit and lighting markets. The residential customer base of California IOUs constitute one of the largest and most challenging groups of electricity consumers in the nation due to its diversity, complexity and size. The residential energy efficiency portfolio has been developed to deliver a wide array of programs and services to increase awareness of energy efficiency and to provide relevant energy efficient solutions. The residential program portfolio is designed to affect up-stream manufacturers, mid-stream retailers and channels, market actors and contractors, home-owners, tenants, and property-owners and managers with the goals to influence their short-term to long-term EE awareness, knowledge, attitude and behavior.

CA EESP Goals/Strategies Addressed by SW <u>Program</u> :	CA EESP Ref. pp. #
See subprograms.	

Short-term (2010-2012) "SMART" <u>Program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at program level. (See subprogram level.)	

Short-term <u>Program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
None proposed at program level. (See subprogram level.)			

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

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Long-Term (2013-2020) "SMART" Program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
<b>Objective 1:</b> Energy consumption in existing homes will be reduced by 20% by 2015 and 40% by 2020; <ul style="list-style-type: none"> <li>▪ 25% of existing SF homes have a 70% decrease in purchased energy from 2008 levels</li> <li>▪ 75% of existing SF homes have a 30% decrease in purchased energy from 2008 levels</li> <li>▪ 100% of existing multi-family homes have a 40% decrease in purchased energy from 2008 levels</li> </ul>	SP

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
MT Indicator 2: Average energy use/ft2 in existing homes (kwh, therms, KW)	SP	3	Y (may already be available)
MT Indicator 3: Percentage and number of homes where the energy use has reduced by 20%, 40% or 70% by 2013, 2017 and 2020 from 2008 baseline	SP	3	Y (may already be available)

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.



## Residential – Home Energy Efficiency Survey

	Mission
SW Program: <b>Residential</b>	This program is a continuation of the existing statewide Home Energy Efficiency Survey (HEES) program within the Residential energy efficiency portfolio. The program provides customers with information to help them become familiar with ways to control and reduce energy and water usage in their homes by offering customers up to four options (mail-in survey, on-line survey, phone survey, and in-home survey) in multiple languages (English, Spanish, Vietnamese, Chinese and Korean) including an action plan for implementation. The program also provides survey results to enable participants to understand how their energy use varies throughout the year and how their household compares with similar households. This multi-language approach enhances the program's ability to reach California's diverse culture and provides efficiency recommendations based on a whole-house system approach.
SW Sub-program: <b>Home Energy Efficiency Survey (HEES)</b>	

CA EESP Goals/Strategies Addressed by SW Sub-program:	CA EESP Ref. pp. #
Goal 2.1: 25% of existing homes have a 70% decrease in purchased energy from 2008 levels; 75% of existing homes have a 30% decrease in purchased energy from 2008 levels.	p. 19
CA EE SP Goal 2: Home buyers, owners and renovators will implement a whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g., HVAC systems), household appliances, lighting, and "plug load" amenities.	p. 11
CA EE SP Goal 8.3 – DSM Coordination and Implementation – Deliver integrated DSM options that include energy efficiency, demand response, energy management and self-generation measures, through coordinated marketing and regulatory integration. The HEES program will seek partnerships with local water agencies, municipals and other key stakeholders to develop and implement a comprehensive plan to promote water conservation. Further integration strategies will also include DSM (CSI, SDP, Peak Demand, etc.), LIEE and energy efficiency programs.	p. 72
CA EE SP Goal 9.2 – Workforce, Education and Training. Ensure that minority, low-income and disadvantage communities fully participate in training and education programs at all levels of the DSM and energy efficiency industry. For IOUs offering in-home surveys, the HEES in-home survey team will be comprised of a contracted (and in some cases utility staff) workforce who will be trained in areas of energy conservation and technologies towards an increased knowledge base of demand-side management and	p. 78

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energy efficiency. A comprehensive training curriculum will be implemented to formalize the knowledge base of the survey force. This strategy falls in line with a goal of the WE&T Strategic Plan intended to ensure that minority, low-income and disadvantage individuals fully participate in training and education programs at all levels of demand-side management and energy efficiency.	
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<b>Short-term (2010-2012) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. Achieve annual survey targets as identified in PIPs. (If not specified in PIPs, IOUs will provide.)	Staff
2. By 2012, increase HEES program participation among low-income and minority communities by X percent	Staff
3. By 2012, increase understanding of energy efficiency among program participants by X percent relative to 2006-2008 baseline	Staff
4. By 2012, X% of HEES participants subsequently participate in 1 or more additional programs (e.g. Whole House Retrofit, LIEE, ARP, or CSI)	Staff
5. By 2012, develop a comprehensive plan to promote water conservation in partnership with local water agencies, municipals and other key stakeholders	PIP (appended to SP Goal 8.3, as posted above)

<b>Short-term Sub-program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Percentage of HEES participants with increased understanding of energy efficiency	Staff	2b	Y
2. Percentage of HEES participants that enroll in another EE program	Staff	2a	N
3. Percentage of HEES participants who are members of low-income or minority communities relative to a 2006-2008 baseline	Staff	2a	Y

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\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
None proposed.	

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<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
None proposed.			

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Residential - Basic CFL Subprogram

	Mission
SW Program: <b>Residential</b>	The Advanced Consumer Lighting Program: The Residential Lighting Incentive Program that has run successfully for several years has been separated into two programs: the Basic CFL program, and the Advanced Consumer Lighting Products program. The basic lighting program aims to increase consumer purchase and installation of basic medium screw base (MSB) CFLs in homes (and businesses). It does this by rebating MSB bulbs sold by major manufacturers in California and enrolling retail outlets to sell the discounted bulbs.
SW <u>Sub-program</u> : <b>Basic CFL subprogram</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
<u>Goal 4 (residential)</u> : The residential lighting industry will undergo substantial transformation through the deployment of high-efficiency and high-performance lighting technologies, supported by state and national codes and standards.	p. 11
<u>Strategy 4-1</u> : Drive continual advances in lighting technology through research programs and competitions (near-term objectives)	p. 24
<u>Strategy 4-3</u> : Continuously strengthen standards. (near-term objectives)"	p. 24
<u>Strategy 4-4</u> : Coordinated phase out of Utility promotions for purchase of CFLs. (near-term objectives)	p. 24
<u>Strategy 4-5</u> : Ensure environmental safety of CFLs and other emerging lighting solutions. (near-term objectives)	p. 24
<u>Goal 3 (commercial)</u> : The commercial lighting industry will undergo substantial transformation through the deployment of high-efficiency and high-performance lighting technologies, spurred by state, national codes and standards and leading-edge incentive strategies.	
<u>Strategy 3-2</u> : Create demand for improved lighting products through demonstration projects, marketing efforts, and utility programs. (near-term objectives)	p. 41
<u>Strategy 3-3</u> : Coordinated phase out of Utility promotions for purchase of CFLs. (near-term objectives)	p. 41
<i>Note: CA EESP Goals/Strategies section needs to be updated to final adopted Strategic Lighting Plan</i>	

Short-term (2010-2012) "SMART" <u>Sub-program Objectives</u> :	Source (SP, AL, DR, PIP, or Staff)*
Objective 1: Achieve the quantitative program targets (increase participating retailer locations 10% annually increase products sold over 26 Watts 10% annually).	PIP
Objective 2: Increase the number of participating retailer locations in low-income neighborhoods by X% relative to 2008 levels.	PIP, Staff

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Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
PPM 1: Basic CFL: Design appropriate marketing material/activities to support local (program specific/quarterly campaign) and/or statewide (ME&O, etc) promotions consistent with program strategy (proposed as output PPM)	AL	1	N
PPM 2: Amount of shelf-space devoted to CFLs in low-income and other areas low-saturation areas targeted by the program vs. to incandescents	Staff	2b	Y
PPM 3: Number of retailer locations participating in program, including those in low-income neighborhoods	PIP, Staff	2a	N
PPM 4: Number of products over 26 Watts sold in participant retail stores	PIP, Staff	2a	Y

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\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
Objective 1: Achieve y% reduction in non-discounted basic CFLs price above 2008-09 levels by 2015.	Staff
Objective 2: Achieve 60% saturation of the eligible medium screw base (MSB) market in California by the end of 2012.	PIP, Staff

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Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
MT Indicator 1: Number of basic CFLs sold annually	Staff	3	N
MT Indicator 2: Market share of efficient and inefficient lighting	Staff	3	Y
MT Indicator 3: Price of non-discounted MSB CFLs	Staff	3	N
MT Indicator 4: Saturation of eligible sockets (MSB, non-dimming, interior) with CFLs or better	Staff	3	N

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## Residential – Advanced Consumer Lighting Subprogram

	<b>Mission</b>
SW Program: <b>Residential</b>	The Advanced Consumer Lighting Program: The Residential Lighting Incentive Program that has run successfully for several years has been separated into two programs: the Basic CFL program, and the Advanced Consumer Lighting Products program. The Advanced Consumer Lighting program also provides participating retailers with up-stream incentives in the form of buy-downs that reduce the cost of energy-efficient lighting products. The program introduces new and advanced energy-efficient lighting products to the market and strives to influence future purchasing behaviors of customers. The definition of advanced lighting is all lighting products excluding 30 watts or less bare spiral CFLs, non-dimmable.
SW <u>Sub-program</u> :  <b>Advanced Consumer Lighting Program</b>	

<b>CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<u>Goal 4 (residential)</u> : The residential lighting industry will undergo substantial transformation through the deployment of high-efficiency and high-performance lighting technologies, supported by state and national codes and standards. <u>Strategy 4-1</u> : Drive continual advances in lighting technology through research programs and competitions (near-term objectives)	p. 11 p. 24
<u>Strategy 4-2</u> : Create demand for improved lighting products through demonstration projects, marketing efforts, and utility programs. (near-term objectives)	p. 24
<u>Strategy 4-3</u> : Continuously strengthen standards. (near-term objectives)"	
<u>Strategy 4-4</u> : Coordinated phase out of Utility promotions for purchase of CFLs. (near-term objectives)	p. 24
<u>Strategy 4-5</u> : Ensure environmental safety of CFLs and other emerging lighting solutions. (near-term objectives)	p. 24
<u>Goal 3 (commercial)</u> : The commercial lighting industry will undergo substantial transformation through the deployment of high-efficiency and high-performance lighting technologies, spurred by state, national codes and standards and leading-edge incentive strategies.	p. 24
<u>Strategy 3-1</u> : Drive continual advances in lighting technology through research programs and competitions (near-term objectives)	p. 31
<u>Strategy 3-2</u> : Create demand for improved lighting products through demonstration projects, marketing efforts, and utility programs. (near-term objectives)	p. 41
<u>Strategy 3-3</u> : Coordinated phase out of Utility promotions for purchase of CFLs. (near-term objectives)	p. 41
<i>Note: CA EESP Goals/Strategies section needs to be updated to final adopted Strategic Lighting Plan</i>	

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<b>Short-term (2010-2012) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1: Increase percentage of advanced lighting fixtures (see list in PIP) incented by IOUs as compared to all lighting products incented by IOUs from yy% in 2010 to xx% in 2012	PIP, D0909047
Objective 2: Increase participation in advanced lighting incentive program among retailers and manufacturers by XX% and YY% by 2012 respectively as compared to 2010 participation levels	AL, PIP
Objective 3: Increase annually via the Plug-in Lamp Exchange Program the number (by location) of customer exchange events of incandescent table, desk and floor lamps for efficient lamps (IOU-incented), for LED light strings during holiday season	PIP
Objective 4: Via the Lighting Showroom Store Outreach program, increase customer purchase of efficient lighting products over 1,100 lumens by xx% by 2012 against 2009 baseline.	PIP

<b>Short-term Sub-program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
PPM 1: Number/percentage of advanced lamps/fixtures incented under IOU programs as compared to all lighting fixtures incented by IOUs	PIP, D0909047	2a	N
PPM 2: Number and percentage of Big Box (and "Mom & Pop") retailers located in IOU service territories participating in program;	PIP, Staff	2a	N
PPM 2a) Percentage of Big Box retail locations of participating Big Box retailers offering incented products	PIP, Staff	2a	N
PPM 3: Number of manufacturers/percentage of manufacturers selling to California market participating in upstream portion of program	PIP, Staff	2a	N
PPM 4: Number of program exchange events for lamps and LED holiday lights held as a result of the Plug-in Lamp Exchange Program	PIP, Staff	2a	N
PPM 5: Number of participating partners in the Lighting Showroom Store Outreach Program	PIP, Staff	2a	N
PPM 6: Number of new measures/technologies subjected to evaluation for program adoption, as a result of LMT & ETP's efforts	PIPs, Staff, DR (?)	2a	N

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\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
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Objective 1: Increase sales of LED products xx% by 2015 against 2010 baseline based on number of fixtures	PIP, Staff
Objective 2: California Super-CFL program- Increase sales of small, tapered and dimmable CFLs over 2010 baseline by ZZ% by 2015	PIP, Staff
Objective 3: Increase the lighting power density of all residential and commercial lighting applications by XX% and YY% respectively by 2015 over 2010 baseline	SP- Strategic Lighting Plan

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
MT Indicator 1: The average lighting power density of residential and commercial lighting applications	SP, Strategic Lighting Plan, Staff	3	Y (RASS?)

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*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*



## Residential – Appliance Recycling Subprogram

	Mission
SW Program: <b>Residential</b>	The Appliance Recycling program is well established, having been offered to SCE customers since 1994. Customers are offered a \$50 cash incentive for recycling their operating refrigerators or freezers. Recycled appliances are picked up by a 3rd party. The overall goal of this program is to reduce the number of inefficient, older fridges, room ACs and freezers in Californian homes.
SW <u>Sub-program</u> : <b>Appliance Recycling</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
<u>Goal 2 (residential)</u> : Home buyers, owners and renovators will implement a whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g., HVAC systems), household appliances, lighting, and "plug load" amenities.	p. 11
<u>Strategy 2-2</u> : Promote effective decision-making to create widespread demand for energy efficiency measures	p. 20
<u>Strategy 2-3</u> : Manage research into new/advanced cost-effective innovations to reduce energy use in existing homes	p. 20

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
Objective 1: Capture cost-effective energy savings and demand response opportunities for the benefit of all Californians.	AL
Objective 2: Promote support of and compliance with more stringent appliance and building standards.	AL
Objective 3: Develop public awareness and promote effective decision-making to create widespread demand for high efficiency measures.	AL
Objective 4: Increase consumer awareness of the need to recycle old appliances by X% (from 2008 levels) by 2012	Staff
Objective 5: By 2012, decrease by X% saturation levels of “inefficient, older refrigerators and freezers” (as defined by the program) in IOU customer homes from 2008 levels	Staff

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)

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PPM 1: Consumer awareness levels of the need to recycle old appliances in IOU service territories	Staff	2b	Y
PPM 2: Average age, size and efficiency of removed units.	Staff	2a	Y

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*\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.*

<b>Long-Term (2013-2020) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1: Move the residential market towards coordinated demand-side management, including self-generation and a "smart meter" initiative.	PIP
Objective 2: Promote the adoption of comprehensive residential retrofits	PIP
Objective 3: Contribute to the ultimate transformation of energy consumption patterns.	PIP
Objective 4: Eliminate the stock of "older, inefficient refrigerators and freezers" in IOU customer homes as defined by age, size and efficiency standards	Staff

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
MT Indicator 1: Saturation levels of "inefficient, older refrigerators and freezers" in California homes as demonstrated through appliance: age, size and efficiency.	Staff	3	Y

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*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Residential – Business and Consumer Electronics Subprogram

	<b>Mission</b>
<b>SW Program: Residential</b>	The BCE program is a new addition to the residential EE portfolio for 2009 -2011. The BCE provides midstream incentives to retailers to increase the stocking level and promotion activities for high-efficiency (ENERGY STAR®) electronic products including computers and monitors, cable and satellite set-top boxes, televisions, and additional business and consumer electronics as they become available in the market. The BCE will also provide incentives to manufacturers that sell directly to consumers or key accounts. Although the IOUs share similar program theory, each may implement its program differently. The program will leverage POS rebates and provide retailer support and a web-based information service to help consumers choose the most energy-efficient products.
<b>SW Sub-program:</b>	
<b>Business and Consumer Electronics Subprogram</b>	

<b>CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<u>Goal 3 (residential):</u> Develop comprehensive, innovative initiatives to reverse the growth of plug load energy consumption through technological and behavior solutions.	p. 21
<u>Strategy 3-1:</u> Drive continual advances in residential energy usage, including plug loads home energy management systems, and appliances.	p. 21
<u>Milestone 3-1:</u> 10% reduction in plug loads by 2012-2015; 25% reduction in plug loads by 2016-2020	p. 21
<u>Strategy 3-2:</u> In coordination with Strategy 2-2 above, develop public awareness of and demand for highly efficient products	p. 22
<u>Strategy 3-3:</u> Create demand for such products through market transformation activities	p. 22
<u>Strategy 3-4:</u> Continuously strengthen standards, including the expansion of both Title 24 and 20 to codify advances in plug load management	p. 22

<b>Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1: 80% of participating retailer stores receiving training and detailing by 2012	DR
Objective 2: Increase by XX the number of retailers participating in mid-stream program by 2012 as compared to 2010, including by (a): installing POS capacity; and/or (b) offering upstream rebated products	AL, Staff-modified

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Objective 3: By 2012, increase the number of manufacturers participating in upstream CBE rebate program and selling to key accounts or directly to California consumers as compared to 2010	AL
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Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
PPM 1: Percent of participating retailer stores receiving training and detailing annually	DR	2a	N
PPM 2: The number of retailers participating in the BCE mid-stream program by (a): installing POS capacity; and/or (b) offering upstream rebated products	AL, Staff-modified	2a	N
PPM 2a): The percent of all Big Box retailers located in IOU service territories that this number is estimated to represent	Staff	2a	N
PPM 3: The number of manufacturers participating in upstream CBE rebate program and selling to key accounts or directly to California consumers as compared to 2010	AL	2a	N
PPM 3a) The percent of manufacturers selling to key accounts or directly to California that this number is estimated to represent	AL, Staff-modified	2a	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
Objective 1: Increase the number of BCE-qualifying units sold as a percentage of total business and consumer electronics product sales. (candidate for quantitative target)	PIP, Staff
Objective 2: ENERGY STAR®-qualifying BCE appliances comprise XX% of purchases annually	PIP, SP, Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
MT Indicator 1: BCE-qualifying units sold as a percentage of total business and consumer electronics product sales	SP, Staff	3	Y
MT Indicator 2: ENERGY STAR®-qualifying BCE appliances as a percent of total business and consumer electronics product sales	SP, Staff	3	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Residential – Home Energy Efficiency Rebate Subprogram

	<b>Mission</b>
<b>SW Program: Residential</b>	The program encourages energy efficient choices when purchasing and installing household appliances and equipment by offering education, rebates, and other incentives, and expands the saturation of efficient equipment faster than would be case in the absence of the program. In addition to POS, on-line and mail-in rebates to the customer, the program will offer mid-stream incentives to retailers to increase the stocking of energy efficient appliances. The program also offers customers information on how to use household equipment efficiently. Rebates will be available to customers, depending on the measure, POS, online, and through the mail.
<b>SW Sub-program: Home Energy Efficiency Rebate (HEER)</b>	

<b>CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<ul style="list-style-type: none"> <li>CA EE SP Goal (2): Home buyers, owners and renovators will implement a whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g., HVAC systems), household appliances, lighting, and "plug load" amenities.</li> </ul>	<b>p. 11</b>
<ul style="list-style-type: none"> <li>CA EE SP 2-1.3: Energy consumption in existing homes will be reduced by 20% by 2015 and 40% by 2020</li> </ul>	<b>p. 11</b>
<ul style="list-style-type: none"> <li>CA EE SP 2-2: Promote effective decision-making to create widespread demand for energy efficiency measures</li> </ul>	<b>p. 20</b>
<ul style="list-style-type: none"> <li>CA EE SP 2-3: Manage research into new/advanced cost-effective innovations to reduce energy use in existing homes</li> </ul>	<b>p. 20</b>
<ul style="list-style-type: none"> <li>The goal of the program is to influence purchase behavior and improve and increase awareness, knowledge and attitude concerning benefits of Energy Star and Energy Efficiency.</li> </ul>	

<b>Short-term (2010-2012) "SMART" <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Define by 2010 and achieve by 2012 targets for collaborations with manufacturers, retailers, distributors, etc.	<b>Staff</b>
By 2012, X% of HEER participants subsequently participate in 1 or more additional programs (e.g. Whole House Retrofit, ARP, or BCE)	<b>Staff</b>
Participant "mom-and-pop" retailers as a percentage of all participant retailers shall increase (X%) from a	<b>Staff</b>

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2006-2008 baseline	
Participant “big-box” retailers as a percentage of all participant retailers shall increase (X%) from a 2006-2008 baseline	<b>Staff</b>
Increase number of participant retail locations using POS system relative to 2006-2008 baseline	<b>Staff</b>

<b>Short-term <u>Sub-program</u> PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
Percentage of HEER participants who subsequently participate in 1 or more additional programs (e.g. Whole House Retrofit, ARP, or BCE)	<b>Staff</b>	<b>2a</b>	<b>N</b>
Number of participating retailers using POS system	<b>Staff</b>	<b>2b</b>	<b>N</b>
Participant “mom-and-pop” stores as a percentage of all participant retailers	<b>Staff</b>	<b>2a</b>	<b>Y</b>
Participant “big box” stores as a percentage of all participant retailers	<b>Staff</b>	<b>2a</b>	<b>Y</b>

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Increase sales of ENERGY STAR-rated appliance to represent X% of the CA market by 2020	<b>Staff</b>

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
Statewide market penetration of ENERGY STAR appliances sold at retail level across various store sizes	<b>Staff</b>	<b>3</b>	<b>Y</b>
Median age of in-home appliances statewide in single-family and multi-family homes	<b>Staff</b>	<b>3</b>	<b>Y</b>

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Residential – Multifamily Energy Efficiency Rebate Subprogram

	Mission
SW Program: <b>Residential</b>	"Multifamily property owners and managers are a historically unresponsive market to energy efficiency efforts. As one of California’s largest industries, this unique customer segment warrants additional attention and effort to motivate property owners and managers to actively participate in energy efficiency programs. After some recent years of concerted energy efficiency efforts to target this sector, there are still areas with large concentrations of multifamily households that have not yet received energy efficiency installations as noted in the 2003 EM&V report for this sector. Market studies have noted that there are over 1.0 million multifamily units in Southern California Edison’s service territory contained in approximately 145,000 multifamily buildings. Having experienced only modest participation in utility programs to date, the multifamily segment holds tremendous savings potential. In SCE’s service area, the multifamily market sector has a consumption base well over 2 billion annual kilowatt hours generated by roughly 682,000 multifamily (tenant) service accounts (five or more units). Although participation levels have depleted program funding over several years, market penetration remains only about 12%. This program targets property owners and managers of multifamily complexes of 2 or more dwelling units, including mobile home parks and condominium complexes with common areas.
SW Sub-program: <b>Multi-Family Energy Efficiency Rebate (MFEER)</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
<i>CA EE SP Goal (2): Home buyers, owners and renovators will implement a whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g., HVAC systems), household appliances, lighting, and "plug load" amenities.</i>	<b>p. 11</b>
<i>CA EE SP 2-1: By 2020, 100% of existing multi-family homes have a 40% decrease in purchased energy from 2008 levels</i>	<b>p. 19</b>
<i>CA EE SP 2-2: Promote effective decision-making to create widespread demand for energy efficiency measures</i>	<b>p. 20</b>
<i>CA EE SP 2-3: Manage research into new/advanced cost-effective innovations to reduce energy use in existing homes</i>	<b>p. 20</b>

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*

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<i>Diversify energy efficiency measures such that non-lighting measures represent X% of program savings by 2012</i>	<b>Staff</b>
<i>Increase participation in LIEE, CARE and ARP programs subsequent to MFEER participation to represent X% of programs by 2012</i>	<b>Staff</b>
<i>Increase energy efficiency understanding among MF property owners</i>	<b>Staff</b>

<b>Short-term <u>Sub-program</u> PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
Percentage increase in energy efficiency understanding/behavior change among MFEER participants	<b>Staff</b>	<b>2b</b>	<b>Y</b>
Percentage of MFEER participants who subsequently enroll in an additional IOU program (e.g. LIEE, ARP, and CARE)	<b>Staff</b>	<b>2a</b>	<b>N</b>
Non-lighting measures as a percentage of total energy efficiency measures adopted under MFEER	<b>Staff</b>	<b>2a</b>	<b>N</b>
<i>Number of workshops for participating property owners/managers to understand program requirements and procedures (tie-in to EE loading order)</i>	<b>DR/IOU</b>	<b>1</b>	<b>N</b>

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 \*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
<i>By 2020, 100% of existing multi-family homes have a 40% decrease in purchased energy from 2008 levels</i>	<b>SP (p. 19)</b>
<i>Increase penetration of ENERGY STAR rated appliances in MF properties</i>	<b>Staff</b>
<i>Decrease average efficiency of fixtures in MF properties</i>	<b>Staff</b>

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
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<i>Percentage of MF Homes having a 40% decrease in purchased energy from 2008 levels</i>	<b>SP (p. 19)</b>	<b>3</b>	<b>Y</b>
<i>Average efficiency of common area fixtures in MF properties</i>	<b>Staff</b>	<b>3</b>	<b>Y</b>
<i>Penetration levels of ENERGY STAR rated appliances in MF properties</i>	<b>Staff</b>	<b>3</b>	<b>Y</b>

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Residential - Whole House Retrofit Subprogram

	Mission
SW Program: <b>Residential</b>	The Whole House Prescriptive Sub Program is a new addition to the 2010-2012 statewide residential portfolio. The Whole House Performance Program is a third party local program for each of the IOUs. Both Whole House programs are designed to offer customers and contractors an easy entry point on the path to home performance. The prescriptive program will allow customers to reduce energy usage while increasing the energy performance and comfort of their existing homes and minimizing lost opportunities for future comprehensive retrofit options. The programs will also educate contractors and customers on the benefits of implementing comprehensive whole house retrofits on existing buildings that will provide systematic reductions in energy use. Both of these programs will leverage and contribute to the pool of qualifying contractors, provide linkage to the local government programs to support financing (i.e., AB811 financing options, etc.) and support a cohesive integrated marketing and outreach efforts. An important goal for both programs (as adopted in D0909047) is to achieve 20% energy reduction for all treated homes.
SW <u>Sub-program</u> : <b>Whole House</b>  “ <b>Energy Upgrade California-Advanced and Basic Programs</b> ”	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
<u>Goal 2</u> : Home buyers, owners and renovators will implement a whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g., HVAC systems), household appliances, lighting, and "plug load" amenities.	p. 11
<u>Strategy 2-1</u> : Deploy full scale whole house programs.	p. 19
<u>Milestone 2-1</u> : By 2020: <ul style="list-style-type: none"> <li>▪ 25% of existing homes have a 70% decrease in purchased energy from 2008 levels</li> <li>▪ 75% of existing homes have a 30% decrease in purchased energy from 2008 levels</li> <li>▪ 100% of existing multi-family homes have a 40% decrease in purchased energy from 2008 levels</li> </ul>	p. 19
<u>Goal Result 2</u> : Energy consumption in existing homes will be reduced by 20% by 2015 and 40% by 2020 through universal demand for highly efficiency homes and products	p. 11
<u>Strategy 2-2</u> : Promote effective decision-making to create widespread demand for energy efficiency measures	p. 20
<u>Strategy 2-3</u> : Manage research into new/advanced cost-effective innovations to reduce energy use in existing homes	p. 20

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Strategy 2-4: Develop financial products and programs such as on-bill financing to encourage demand for energy efficiency building products, home systems, and appliances	p. 20
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Short-term (2010-2012) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
Objective 1: Enroll and complete upgrade work on the following number of homes by 2012: SCE - 11,820; SCG 10,644; PG&E - 15,500; SDG&E's - 3,606. (Goals will be adjusted based on the actual program roll-out date)	DR, PIP
Objective 2: Enroll an increasing number qualified contractor firms to participate in program each year (Targets for 2012 are: PG&E- 73; SCE- 63; SCG- 57; SDG&E- 17)	DR, PIP
Objective 3: Increase awareness by contractors and customers of benefits of comprehensive whole house retrofits and the "house as a system"	PIP
Objective 4: Decrease percentage of participating homes not passing QA/QC review	PIP
Objective 5: Energy savings per home for prescriptive and performance program participants achieve adopted target savings levels	PIP, D0909047

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
PPM 1: Number of homes treated in the program for 2010-2012 (prescriptive and performance participation indicated distinctly)	AL, DR, PIP	2a	N
PPM 2: Number of enrolled qualified contracting firms participating in the program	AL, DR, PIP	2a	N
PPM 3: Average Ex-ante savings per home as reported (average, kwh, therms, KW)	D0909047; Staff	2a	N
PPM 4: Average and range of evaluated energy savings per home (prescriptive and performance programs)	D0909047, Staff	2b	Y, Recommended-2010
PPM 5: Number/percentage of homes not passing QA/QC review, by IOU	Staff	2a	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
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Objective 2: By 2013, 2017 and 2020, costs to customers of whole house retrofits are decreased as compared to 2010 levels	Staff
Objective 3: Customers have increasing financing options for whole house retrofits, including options leveraged by and coordinated with IOU programs and those offered by other entities	SP, Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term <u>Sub-program</u> MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
MT Indicator 1: Increased awareness levels of home as a system by consumers and contractors	SP	3	Y
MT Indicator 4: Average total cost of whole house energy efficiency retrofit to consumers (sorted by level of energy savings or type of job)	Staff	3	Y
MT Indicator 5: Average amount of financing used for whole house retrofits and types of sources	Staff	3	Y

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\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## New Construction- Residential California Advanced Homes Subprogram

	<b>Mission</b>
<b>SW Program: New Construction</b>	The RNC subprogram supports transformation of California’s residential new construction consistent with the CEESP via incentive, education, outreach, marketing and training strategies aimed at the California building industry. The RNC subprogram consists of the California Advanced Home Partnership program (CAHP) coupled with Zero Net Energy Homes and an Energy Star Manufactured homes subprograms.
<b>SW Sub-program: California Advanced Homes Program</b>	CAHP utilizes a pay-for-performance sliding scale incentive structure based on a whole building approach. CAHP will increase market demand for energy efficient homes by encouraging builders to exceed Title 24 energy efficiency standards by 15-45%. Performance Bonus adders, Design Team Incentives and some prescriptive measure incentives will be included to encourage green building initiatives, energy star appliances, compact homes and solar thermal and photovoltaic installations. Non-incentive customer services will be offered such as technical support to Energy Analysts and Design Teams, Design Team Assistance, economic modeling/measure selection support to builders, marketing support and DSM coordination for builders. The CAHP will, in addition, work with AMI teams to test and develop in-home displays.

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b>	<b>CA EESP Ref. pp. #</b>
<u>Goal (1)</u> NC will reach ZNE performance (including clean, onsite distributed generation) for all new single and multi-family homes by 2020. A key element of this Goal is to develop ZNE example homes across the spectrum of housing options, including MF affordable housing in urban infill areas with access to public transportation.	p. 11
<u>Goal Results:</u> (a) 50% of new homes will surpass <sup>4</sup> T24 2008 (previously 2005) standards by 20% (previously 35%) by 2012 (previously 2011)	p. 16
<u>Goal Results:</u> (b) 10% of new homes will surpass T24 2008 (previously 2005) standards by 40% (previously 55%) by 2012 (previously 2011)	p. 11 as updated by D0909047
<u>Strategy 1-1:</u> Drive continual advances in technologies in the building envelope, including building materials and systems, construction methods, distributed generation, and building design.	p. 11 as updated by D0909047
<u>Milestones 1-1:</u> By 2012-2016, 90% of new homes exceed Title 24 by 35% and 40% of new homes exceed Title 24 by 55%; by 2016-2020, 100% of new homes exceed Title 24 by 35%, and 90% exceed Title 24 by 55%	p. 16
<u>Strategy 1-5:</u> Encourage local, regional, and statewide leadership groups to support pilots and foster communication among pioneering homeowners and builders.	p. 18

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<u>Goal (2)</u> Home buyers, owners and renovators will implement whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g. HVAC systems, household appliance, lighting, and "plug loads" amenities.	p. 11
<u>Strategy 3-1</u> Drive continual advances in residential energy usage, including plug loads, home energy management systems, and appliances <u>Milestones 3-1</u> 10% reduction in plug loads by 2012-2016; 25% reduction in plug loads by 2016-2020	p. 21
<u>Goal 4:</u> Plug loads will be managed by developing consumer electronics and appliances that uses less energy and provide tools to enable customers to understand and manage their energy demand.	p. 11
<u>HVAC Strategy 3-1:</u> Aggressively promote whole building design concepts that improve the overall thermal integrity of new and existing structures	p. 63
<u>HVAC Milestones 3-1:</u> Include standard program offerings that emphasize HVAC-related elements to whole building approaches. Incorporate radiant cooling, ductless systems, ground source heat pumps, etc. into 25% of more of new and existing construction by 2015 and 50% of new and existing construction by 2020	p. 63
<u>Strategic Lighting Plan:</u> Meet the lighting power density targets and best practices by 2020 by building type.	p. 23

<b>Short and Long term (2010-2012) "SMART" Program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1: Home builders of all production volumes in California will be encouraged to construct homes that exceed California's Title 24 energy-efficiency standards by at least 15%;	AL
Objective 2: By 2012, 50% of new homes built in California will be 20% more efficient than 2008 Title 24 standards and 10% will be 40% more efficient;	AL, SP (as updated by D 0909047)
Objective 3: Residential New Construction will work towards reaching "ZNE" performance for all single and multi family homes by 2020	AL

<b>Short-term (2010-2012) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1: By 2012, all participating home builders of all production volumes in California will construct homes that exceed California's Title 24 energy-efficiency standards by at least 15%;	PIP
(1a) 90% of CAHP participants will build homes that are 20% more efficient than Title 24 (2008);	DR, Staff-modified
(1b) 10% of CAHP participants will build homes that are 40% more efficient than Title 24 (2008)	SP
(1c) By 2012, IOUs have supported via design advice, incentives or other assistance 20 "near" (70+ % more efficient than Title 24 2008) or "ZNE" homes	DR, Staff-modified
Objective2: By 2012, 30%-50% of new housing units of all production types (SF/MF/affordable) participate in the program across California	PIP, DR, ED-IOU discussions, Staff

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Objective 3: A steadily increasing number (xx%) every year of CAHP program homes utilize incentives contributing to whole house approach including <i>each</i> of the following: (a) 30% above Title 24 NSHP \$1000 bonus; (b) Green Homes incentive; (c) kW reduction incentive (peak kW PV reduction); (d) compact home incentives; (e) IHD, PCT and other prescriptive measures added to plans, including CAHP-increased incentives for high efficiency appliances and lighting	PIP, Staff
Objective 4: By 2012, an increasing number of participant homes are located in high energy use areas; 5b) and areas with low code compliance	Staff

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
PPM 1: Number and percentage of CAHP participant homes registered with IOUs as exceeding 2008 T24 units (SF and MF) by 15%-19%, by 20%-39%, by 40%-70%, or "near ZNE" 70% +	DR	2a	N
PPM 2: Number and percentage of CAHP participant homes utilizing incentives contributing to whole house approach including <i>each</i> of the following: (a) 30% above Title 24 NSHP \$1000 bonus; (b) Green Homes incentive; (c) kW reduction incentive (peak kW PV reduction); (d) compact home incentives; (e) IHD and PCT and other prescriptive measures added to plan, including CAHP-increased incentives for high efficiency appliances and lighting	DR, Staff	2a	N
PPM 3: Percentage of California new housing starts of all market rates (SF/MF/affordable) estimated as participating in program	DR	2a	N
PPM 4: Number and percentage of program homes in high usage areas and low compliance jurisdictions	Staff (EM&V results)	2a	N
PPM 5: Number and percentage of CAHP participant new homes verified as built exceeding Title 24 (SF and MF) by 15%-19%; 20%-29%; 30%-39%; 40%-70%	DR, Staff	2b	N
PPM 6: Average lighting power density of participating SF and MF homes	Strategic Lighting Plan	2b	N

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\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

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<b>Long-Term (2013-2020) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1: By 2013-2016, 90% of new homes participating in program exceed Title 24 by 35% and 40% of new homes participating in program exceed Title 24 by 55%; by 2016-2020, 100% of new homes participating in program exceed Title 24 by 35%, and 90% of new homes participating in program exceed Title 24 by 55%	SP, Staff
Objective 2: By 2013-2016, homes participating in program achieve a 10% reduction in plug loads; by 2016-2020, homes participating in program achieve a 25% reduction in plug loads	SP, Staff
Objective 3: By 2015, CAHP standard program offerings emphasize HVAC-related elements to whole building approaches such that radiant cooling, ductless systems, ground source heat pumps, etc. are incorporated into 25% or more of participating homes; by 2020, 50% of participating homes incorporate HVAC-related whole house elements such that radiant cooling, ductless systems, ground source heat pumps, etc.	SP, Staff
Objective 4: CAHP program participant homes meet the lighting power density targets and best practices by 2020 by building type.	SP, Staff
Objective 5: Program is designed to support declining average costs for homes exceeding Title 24 and ZNE homes	SP, Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
MT Indicator 1: Total number/percentage of new homes of all production types (SF, MF, affordable) 15-45% above code in California (includes participants and non-participants)	SP	3	Y
MT Indicator 2: Number/percentage of ZNE, zero peak and highly efficient (70% above code) new homes of all production types (SF, MF, affordable) in California (includes participants and non-participants)	SP	3	Y
MT Indicator 3: Average cost of new homes more efficient than Title 24 (2008) (and subsequent code levels) by: 15%-19%; 20%-40%; 40%-70%; ZNE and zero peak homes	SP	3	Y
MT Indicator 4: Average electricity and energy use levels of California new homes (kwh and KW/ft2/year; BTU/ft2/year)	SP	3	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.



## New Construction - Residential ENERGY STAR® Manufactured Housing Subprogram

	Mission
SW Program: <b>New Construction</b>	The RNC subprogram supports transformation of California’s residential new construction consistent with the CEESP via incentive, education, outreach, marketing and training strategies aimed at the California building industry. The RNC subprogram consists of the California Advanced Home Partnership program (CAHP) coupled with Zero Net Energy Homes and an Energy Star Manufactured homes subprograms.
SW Sub-program: <b>ENERGY STAR® Manufactured Housing Subprogram</b>	The ENERGY STAR® Manufactured Homes Program promotes the construction of new manufactured homes that comply with ENERGY STAR® energy efficiency standards by encouraging manufacturers to go beyond HUD specifications to install high efficiency and right size HVAC systems. It also works to increase the efficiency of the whole home, moving the industry towards zero net energy.

CA EESP Goals/Strategies Addressed by SW Sub-program:	CA EESP Ref. pp. #
<u>Goal (1)</u> NC will reach ZNE performance (including clean, onsite distributed generation) for all new single and multi-family homes by 2020 Key element : develop ZNE example homes across the spectrum of housing options, including MF affordable housing in urban infill areas with access to public transportation.	p. 11 p. 16
<u>Strategy 1-1:</u> Drive continual advances in technologies in the building envelope, including building materials and systems, construction methods, distributed generation, and building design.	p. 16
<u>Strategy 1-5:</u> Encourage local, regional, and statewide leadership groups to support pilots and foster communication among pioneering homeowners and builders.	p. 18
<u>Goal (2)</u> Home buyers, owners and renovators will implement whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g. HVAC systems, household appliance, lighting, and "plug load" amenities.	p. 11

Short and Long term (2010-2012) “SMART” Program Objectives:	Source (SP, AL, DR, PIP, or Staff)*

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Objective 1: Home builders of all production volumes in California will be encouraged to construct homes that exceed California’s Title 24 energy-efficiency standards by at least 15%;	AL, SP
Objective 2: By 2012, 50% of new homes built in California will be 20% more efficient than 2008 Title 24 standards and 10% will be 40% more efficient;	AL, (SP, as updated by D 0909047)
Objective 3: Residential New Construction will work towards reaching “ZNE” performance for all single and multi family homes by 2020	AL

<b>Short-term (2010-2012) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1: To transform the marketplace by significantly increasing each year the penetration rates of ENERGY STAR® qualified manufactured homes as compared to homes that meet the existing HUD qualification	PIP
Objective 2: To consistently increase the number/percentage of manufactured home retailers participating in the program each year with a goal of xx% offering ENERGY STAR® qualified homes by 2012; and yy% by 2016	Modification of AL proposal, Staff

<b>Short-term Sub-program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
PPM1: Percentage and number of manufactured housing California retailers participating in program	Modification of AL proposal, Staff	2a	N
PPM 2: Number /percentage of participating projects utilizing: (a) whole house incentive for gas heat; (b) whole house incentive for electric heat; (c) prescriptive incentives; (d) zero-peak home incentive;	Based on PIP, Staff	2a	N
PPM 3: Number/percentage of units of participating manufacturers verified as zero energy or zero peak homes, and including AMI	Based on PIP, Staff	2b- EM&V study	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]  
 \*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
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Objective 1: To support the initiation of and increase over time the sales of zero net energy and zero peak manufactured homes in California, including coordinated DSM and AMI	PIP, Staff
Objective 2: To achieve increasing levels of energy savings per home in the California manufactured homes market in the most cost effective manner possible for customers	Staff

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
MT Indicator 1: Penetration rates of ENERGY STAR® manufactured homes in California as compared to homes meeting HUD specifications	Based on PIP, Staff	3	Y
MT Indicator 2: Incremental cost of ENERGY STAR® manufactured homes (single wide, doublewide etc) as compared to homes meeting HUD specifications	Staff	3	Y
MT Indicator 3: Average energy savings of ENERGY STAR® manufactured homes as compared to baseline (homes meeting HUD specifications in X year)	Based on PIP, Staff	3	Y
MT Indicator 4: Percentage and number of retailers that market ENERGY STAR® homes as their standard home	Based on PIP, Staff	3	Y

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## New Construction – Commercial Savings By Design Subprogram

	<b>Mission</b>
<b>SW Program: New Construction</b>	The New Construction Program is a statewide program that will continue the transformation process of California’s residential and nonresidential new construction markets consistent with the vision of the California Long Term Energy Efficiency Strategic Plan (CEESP) and a more sustainable energy efficient future, through four sub programs: Savings By Design (SBD), California Advanced Homes Program (CAHP), Zero Net Energy Homes (ZNEH), and Energy Star Manufactured Housing.
<b>SW Sub-program: Savings By Design</b>	<p>Savings By Design (SBD) is an energy efficiency program developed for the nonresidential new construction industry. Since 1999, SBD has provided statewide consistency, program stability, and savings. SBD seeks to protect and preserve natural resources by advancing the design and construction of sustainable communities and promoting green building practices. The program is designed to overcome customer and market barriers to designing and building high performance facilities. SBD provides the nonresidential new construction industry with a broad palette of technical and financial resources to aid the design of new facilities in the most cost- effective energy and resource efficiency standards.</p> <p>The program will incorporate new approaches for 2009 - 11 to advance integrated design and green building certification in support of the CLTEESP.</p> <p><i>(CEESP Section 3 – Goal 1)</i>  <i>The Strategic Plan spells out a variety of strategies to address energy reduction in California for homes, offices, factories, and farms. SBD advances CLTEESP’s comprehensive energy efficiency goals with:</i></p> <ul style="list-style-type: none"> <li><i>o Integrated design approach</i></li> <li><i>o Support of commissioning and M&amp;V</i></li> <li><i>o Support training activities</i></li> </ul> <p><i>Nonresidential new construction will be progressively more efficient and include clean, on-site distributed generation, moving towards Zero Net Energy (ZNE) by 2030</i></p>

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b>	<b>CA EESP Ref. pp. #</b>
CA EE SP Goal (1): New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030. Goal Results: An increasing percentage of the 50-120 million sq.ft. per year of new commercial construction will be progressively	AL/SP

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more efficient and all new construction will be zero net energy by 2030.	
CA EE SP Strategy 1-6: Develop a multi- pronged approach to advance the practice of integrated design.	AL/SP

<b>Short-term (2010-2012) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
By 2012, have at least 3 examples of net zero energy buildings for one or more of the following: office buildings and/or schools in representative climate zones.	Staff/SP
1) 5% of participant buildings will reach a minimum of 40% less energy than 2008 T24 codes requirements by 2012.	ZNE Goal, p 28 of PG&E PIP
Distribution of Statewide IOU projects that exceed T24 by 2012 75%: 10% - 19% above 2008 T24, 20%: 20% - 30% above 2008 T24, 5%: 31%+ above 2008 T24	Source IOUs DR
<i>By 2012, Integrate best practices in lighting advanced technologies in SBD program offerings/packages to reduce LPD from standard practice by building type.</i>	Staff/SP
By 2012, Integrate best practices through kicker incentives for HVAC technologies and practices such as radiant cooling, ductless systems, ground source heat pumps etc. into 5% of SBD program participating building to reduce peak demand from standard practice by building type.	(Derived from SP p. 63)
For SW SBD projects that receive "Whole Building" incentives by 2012: 2010: 20%; 2011: 20%; 2012: 20%	(PG&E PIP page 8)
For SW SBD using Whole Building Approach, projects where the Design Team receives the Integrated Design Team Stipend: 2010 - 10% of WBA projects, (DR: 5%); 2011 - 15% of WBA projects (DR: 10%); and 2012 - 15% of WBA projects of DTI projects.	(Source IOUs DR & PG&E PIP p.8)
Percentage of SW SBD projects that receive new 2010-12 kicker incentives 2010 - 5% of WBA projects , 2011 - 10% of WBA projects, 2012 - 15% of WBA projects.	(Source IOUs DR)

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<b>Short-term <u>Sub-program</u> PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
Average site energy use (kWh/sq ft & therms/building) and demand (kW/sq ft) (functional space) for participating CNC by building type.	Staff	2b	N
Percentage of participating buildings that reach a minimum of 40% less energy than 2008 T24 codes requirements.	PIP (PG&E page 28)	2b	N

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\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
By 2020, have at least 10 examples of net zero energy buildings for each building type.	Staff/SP
By 2030 100% of CNC will be designed to be ZNE	Staff/SP
An increasing percentage of the 50-120 million sq ft/year of new commercial construction will be progressively more efficient and all new construction will be ZNE by 2030	Staff/(SP p.31)
Meet the examples of LPD targets of the LMT Strategic Plan by 2020 by building and space type	Best practices p23 of SP Lighting
By 2015, include standard program offerings that emphasize HVAC related elements to WB approaches into 25% of new and existing construction.	Staff/SP 63
By 2020, incorporate radiant cooling, ductless systems, ground pumps etc. into 50% of new and existing construction.	Staff/SP 63
By 2015, increased penetration of high efficiency projects in the market that implement Integrated Design and Whole Building by xx% over 2008 baseline.	Staff
By 2020, all CNC in California's market implement Integrated Design and Whole Building.	Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
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Percentage decrease in average site energy use (kWh/sq ft & therms/building) and demand reduction (kW/sq ft) (functional space) for CNC by building type in California.	Staff	3	Y
Percentage of CNC buildings implementing: (a) Integrated Design (b) Whole Building approaches, in California	staff		

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*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

**Codes and Standards**

	<b>Mission</b>
<b>SW Program: Codes and Standards</b>	<p>The Codes and Standards (C&amp;S) Program saves energy on behalf of ratepayers by directly influencing standards and code-setting bodies to strengthen energy efficiency regulations, by improving compliance with existing codes and standards, and working with local governments to develop ordinances that exceed statewide minimum requirements.</p> <p>The C&amp;S Program conducts advocacy activities to improve building and appliance efficiency regulations. The principal audience is the California Energy Commission (CEC) which conducts periodic rulemakings, usually on a three-year cycle (for building regulations), to update building and appliance energy efficiency regulations. C&amp;S also seeks to influence the United States Department of Energy (DOE) in setting national energy policy that impacts California.</p> <p>Subprograms include:</p> <ul style="list-style-type: none"> <li>(1) Building Codes: Advocacy, Extension of Advocacy (EOA) and CASE Studies</li> <li>(2) Appliance Standards: Advocacy, Extension of Advocacy (EOA) and CASE Studies</li> <li>(3) Compliance Enhancement (CE): Measure-Based &amp; Holistic</li> <li>(4) Reach Codes</li> </ul> <p><i>SW Program Goal (1) The C&amp;S Program will provide a direct response to the CPUC’s first goal by specifically addressing each near-term strategy in the Strategic Plan. Through the advocacy activities, the program will:</i></p> <ul style="list-style-type: none"> <li>• <i>Continue to expand Title 24 Building and Title 20 Appliance Efficiency Regulations through improved research to identify current code and compliance shortcomings, new technologies and processes, and latest thinking on breadth (scope) and depth (stringency) of possible standards</i></li> <li>• <i>Develop aggressive proposals to accelerate regulations for both Title 20 appliance efficiency standards and Title 24 building standards</i></li> <li>• <i>Support leading activities such as statewide reach standards (e.g., codes that include California Green Building Standard) and the coordinated development and adoption of advanced local government ordinances.</i></li> <li>• <i>Coordinate with both internal and external organizations on an ongoing basis, including voluntary programs and national standards organizations</i></li> </ul> <p>(Ref: AL)</p> <p><i>SW Program Goal (2) To address goal 2, C&amp;S will expand Extension of Advocacy activities and launch the new Compliance Enhancement (CE) subprogram. The Program will leverage existing, and develop new education and outreach activities to equip both building and appliance industry market actors with the knowledge and tools needed to comply with Title 24 building energy efficiency standards and Title 20</i></p>



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appliance efficiency regulations. Expanding the Program to include CE will help ensure that the full potential of the state's codes and standards efforts are realized, and results in a comprehensive C&S Program.  
(Ref: AL)

CA EESP Goals/Strategies Addressed by C&S Program:	CA EESP Ref. pp. #
CA EE SP Goal (1) Continually strengthen and expand building and appliance codes and standards as market experience reveals greater efficiency opportunities and compelling economic benefits Goal Results: California's codes and standards will support this Plan's residential, commercial, and HVAC sector goals	AL
CA EE SP Strategy 1-1 Develop a phased and accelerated approach to more stringent codes and standards CA EE SP Strategy 1-2 Expand Titles 24 and 20 to address all significant energy end uses CA EE SP Strategy 1-3 Improve code research and analysis CA EE SP Strategy 1-4 Improve coordination of State energy codes and standards with other state and Federal regulations CA EE SP Strategy 1-5 Improve coordination of energy codes and standards with utility programs	AL
CA EE SP Goal (2) Dramatically improve code compliance and enforcement Results: Energy savings from codes and standards will be fully realized	AL
CA EE SP Strategy 2-1 Improve code compliance and enforcement	AL
CA EE SP Strategy 3-4 Continuously strengthen standards, including the expansion of both T 24 and T 20 to codify advanced in plug loads management	Staff/ SP page 22

Short-term (2010-2012) "SMART" Program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at program level. (See subprogram level.)	

Short-term Program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
None proposed at program level. (See subprogram level.)			

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

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Long-Term (2013-2020) "SMART" Program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2020, Codes and Standards will require ZNE for Residential Buildings.	Staff/SP page 68
2. By 2030, Codes and Standards will require ZNE for Commercial Buildings.	Staff/SP page 68
3. By 2015, establish Mandatory whole building code-based solutions.	Staff/SP page 63
4. By 2015 incorporate mandatory onboard diagnostic system in equipment standards.	Staff/SP page 66
5. By 2020 incorporate mandatory onboard diagnostic system in buildings codes.	Staff/SP page 66
6. By 2015, 80% of transactions that trigger T24 requirements for existing homes will comply with all applicable requirements.	Staff/SP, page 21
7. By 2016, current non-compliance rates with C&S is halved & by 2020, full compliance with most up to date C&S.	Staff/SP page 90
8. HVAC in commercial buildings: a. By 2015, 50% of HVAC installation in commercial sector comply with codes via permits b. By 2020, 90% of HVAC systems are installed to code and optimally maintained for systems' useful life. c. By 2020, 100% of HVAC systems are installed to quality standards.	Staff/SP page 38 & page 60
9. Code Compliance: a. By 2015, investigate tools, software programs, "incentives" and policies to simplify and streamline permit process. b. By 2015, apply feasible mechanisms to prove code compliance as a pre-requisite for partnership funding or incentives from the IOUs.	Staff/SP page 69
10. Advanced Voluntary Standards: a. In 2017, advanced voluntary standards towards Residential ZNE incorporated in T24. b. By 2020, T24 require all new homes to become ZNE.	Staff/SP page 17
11. Increase in regional consistency of adoption and compliance with reach codes (countywide or geographically contiguous jurisdictions) in jurisdiction in the IOUs service territories.	Staff/PGE PIP (page 83)

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
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1. % of buildings in California (a) Residential (b) Commercial that are built to comply with code targeting ZNE technologies, practices and design	Staff	3	Y
2. Number of utility incentivized EE measures that become part of the following code cycle (e.g. measures incentivized in 2006-2008 would be part of 2011 or 2014 code) targeting the following: a. advanced climate-appropriate HVAC technologies (equipment controls, including system diagnostics) b. Whole Building approaches in Commercial buildings c. Whole House approaches in Residential homes d. Advanced Lighting e. High efficient peak reduction technologies including plug loads	Staff		N
3. Compliance rates of T24 in (a) existing homes and (b) commercial buildings in California.	Staff	3	N
4. Compliance rates of T24 in (a) new homes (b) new commercial buildings in California.	Staff	3	N
5. % of building departments that adopt and use tools identified as industry best practices to improve permit application, tracking, and inspection processes and increase regional consistency.	Staff	3	Y (Need to identify existing practice as baseline)
6. Number of Voluntary beyond code standards and rating systems that are incorporated into mandatory T24 Standards in the Residential and Commercial Sectors.	Staff	3	N
7. Number of Jurisdictions in California implementing Reach Codes in the Residential and Commercial Buildings.	Staff	3	N

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\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Codes & Standards – Building Standards Advocacy Subprogram

	Mission
SW Program: <b>Codes &amp; Standards</b>	[Insert Sub-program mission]
SW <u>Sub-program</u> : <b>Building Standards Advocacy</b>	

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, X CASE Studies targeting ZNE technologies, practices and design including high efficiency plug loads, in Residential that are presented to and Y studies adopted by the CEC.	Staff/SP Strategies 1-2, page 17
2. By 2012, X CASE Studies targeting ZNE technologies, practices and design in Commercial that are presented to and Y studies adopted by the CEC, including the following: a. Integrated design in Commercial Buildings including: metering and data management; automated diagnostic systems; and sub-metering of tenant-occupied spaces. b. Whole Building approaches in Commercial Buildings including HVAC aspects.	Staff/(a)SP Strategies 1-2, page 34 & (b) SP Strategies 3-2, page 63
3. By 2012, adopt ANSI standards into T24 to replace current T24 optional quality control requirements with mandatory requirements (ANSI QI/QM).	Staff/SP page 60

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. <i>Number of Code Enhancement Proposals submitted to the CEC (mutually agreed upon by IOU and CEC, to address significant energy savings to the CEC docket, within authorized budget)</i>	AEO based on AL	2a	N
2. Number of CASE studies that are adopted by the CEC Rule-making (as the result of program advocacy) that address each of the following: (a) Whole Building and Integrated Design, including metering and data management, automated diagnostic systems, and sub-metering of tenant-occupied spaces Sector, with emphasis on HVAC aspects of Whole Building (b) ZNE technologies, practices, and design in Residential Sector (c) Peak efficient technologies including plug loads and HVAC technologies (d) Advanced Lighting Technologies	AEO based on SP	2b	N

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*\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.*

<b>Long-Term (2013-2020) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
None proposed at subprogram level. (See program level.)	

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
None proposed at subprogram level. (See program level.)			

## Codes & Standards – Appliance Standards Advocacy Subprogram

	<b>Mission</b>
SW Program: <b>Codes &amp; Standards</b>	[Insert Sub-program mission]
SW Sub-program: <b>Appliance Standards Advocacy</b>	

Short-term (2010-2012) “SMART” Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, X CASE Studies targeting plug loads, HVAC technologies, and advanced lighting that are presented to the DOE.	AEO/SP
2. <i>By 2012, submit xx proposals to federal standards proceedings to address high efficient plug loads</i> 3. <i>Develop code enhancement proposals to state and federal standards proceedings to address plug loads.(AL)</i>	AEO derived from AL & SP

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
3. Number of CA T20 Standards adopted into DOE Ruling (as the result of program advocacy) that address : (a) Plug loads (such as copy machines, printers, battery charges etc.) (b) Advanced Lighting Technologies (c) New climate appropriate HVAC technologies (equipment and controls, including systems diagnostics).	AEO based on SP	2b	N

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\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) “SMART” Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at subprogram level. (See program level.)	

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP,	Metric Type	Baseline Study

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	or Staff)*	(3)**	Required (Y/N)
None proposed at subprogram level. (See program level.)			

## Codes & Standards – Compliance Enhancement Subprogram

	<b>Mission</b>
SW Program: <b>Codes &amp; Standards</b>	[Insert Sub-program mission]
SW Sub-program: <b>Compliance Enhancement</b>	

Short-term (2010-2012) “SMART” <u>Sub-program Objectives:</u>	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, develop a compliance plan for existing homes to identify : a. Measures to support enforcement of local energy efficiency C&S and b. Opportunities for leveraging Title 24 and local codes enforcement.	Staff/SP p. 21
2. By 2012, adopt best options to ensure compliance with min standards in Commercial buildings renovation and expansion.	Staff/SP p. 38
3. By 2012: a. Provide XX comprehensive training and outreach programs targeting builders, contractors, designers, retailers, manufacturers and distributors of T20, T24 requirements b. Improve consumer awareness by x% of T20/T24 requirements of "targeted" measures as compared to 2008.	Staff/PG&E PIP p. 88

Short-term <u>Sub-program PPMs:</u>	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Compliance rates after building departments adopting improved compliance tools (resulting from IOUs training) in existing buildings (retrofits) and new construction.	Staff/PIP	2b	Y
2. Reported easier enforcement of T24 and T20 in IOUs service territories as a result of IOU training and (Tools) as compared to 2008.	Staff/SP	2b	Y

Long-Term (2013-2020) “SMART” <u>Sub-program Objectives:</u>	Source (SP, AL, DR, PIP, or Staff)*



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None proposed at subprogram level. (See program level.)	
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<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
None proposed at subprogram level. (See program level.)			

## Codes & Standards – Reach Codes Subprogram

	<b>Mission</b>
SW Program: <b>Codes &amp; Standards</b>	[Insert Sub-program mission]
SW <u>Sub-program</u> : <b>Reach Codes</b>	

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, map a trajectory for T24 mandatory and voluntary standards through 2020. goals	Staff/SP 21
2. By 2012, C&S develops SW reach code templates to streamline the reach code adoption and compliance support	Staff/PGE PIP page 83
3. By 2012, produce consistent package of "reach code" that applicable at time-of-scale" while remain consistent with current T24 climate designations to reduce potential market confusion	Staff/ (C&S PIP p.29).
4. By 2012, with the support of C&S program, CEC develops pre-approved model reach codes so as to eliminate duplicative LG development costs and facilitate subsequent adoption of code	Staff/ (C&S PIP p.29).
5. By 2012, IOUs encourage xx% of local government leadership and enforcement personnel to recognize benefits and support activities to optimize existing codes.	Staff/PG&E PIP page 87
6. By 2012, establish one or two-tiered voluntary standards for Commercial Buildings coordinated with green building rating systems; and align T24 target with AB32 goals and carbon reduction.	Staff/SP p34

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Number of jurisdictions in IOU Service territories implementing Reach Codes as a result of the RC sub-program activities, in residential and commercial sectors.	Staff	2b	Y

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\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) “SMART” Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*

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None proposed at subprogram level. (See program level.)	
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<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
None proposed at subprogram level. (See program level.)			

## HVAC – Upstream HVAC Equipment Subprogram

	<b>Mission</b>
<b>SW Program: Residential and Commercial HVAC Program</b>	<p>The Residential and Commercial HVAC Program is a Statewide program that will continue the transformation process of California’s HVAC market to ensure that:</p> <ul style="list-style-type: none"> <li>• HVAC technology, equipment, installation, and maintenance are of the highest quality;</li> <li>• Quality installation and maintenance practices are easily recognized and requested by customers;</li> <li>• The HVAC value chain is educated and understands their involvement with energy efficiency and peak load reduction; and</li> <li>• The above changes lead to sustained profitability for HVAC trade allies as the business model for installing and maintaining heating and cooling systems changes from a commodity-based to a value-added service business.</li> </ul>
<b>SW Sub-program: Upstream HVAC Equipment</b>	<p>This sub-program offers incentives to distributors who sell qualifying high-efficiency HVAC equipment. The logic that underscores this sub-program’s design is that a small number of distributors and manufacturers are in a position to impact hundreds of thousands of customers and influence their choice of equipment by increasing the stocking and promotion of high-efficiency HVAC equipment. The upstream model cost-effectively leverages this market structure and existing relationships. The sub-program also provides an online rebate application system to facilitate distributor sales and invoice tracking, which further reduces administrative costs as compared with paper application processing.</p>

<b>CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<p><u>Goal (4)</u> New climate-appropriate HVAC technologies (equipment and controls, including system diagnostics) are developed with accelerated market penetration</p> <p><u>Goal Results:</u> At least 15% of equipment shipments are optimized for California's climate by 2015 and 70% by 2020.</p>	p. 59
<p><u>Strategy 4-3:</u> Accelerate market penetration of advanced technologies by HVAC industry promotions and updating/expanding current utility programs to include new technologies as appropriate.</p>	p. 65

<b>Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
<p>1. By 2012 the sales weighted average efficiency of air conditioners sold by participating distributors will increase by XX%</p>	Staff

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2. By 2012, the stock-weighted average efficiency of air conditioners stocked by participating distributors will increase by xx%	Staff
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<b>Short-term <u>Sub-program</u> PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
1. The sales weighted average efficiency of air conditioners sold by participating distributors	Staff	2A	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) "SMART" <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2012, new climate-appropriate HVAC technologies particularly suited to California's climate will increase market share.	SP, page 64
2. At least 50% of equipment shipments are optimized for California's climate by 2020 and 70% by 2030	SP, page 58

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Market penetration of climate-appropriate HVAC technologies particularly suited to California's climate	Staff; SP pg 65	3	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## HVAC – Residential Energy Star Quality Installation Subprogram

	<b>Mission</b>
<p><b>SW Program: Residential and Commercial HVAC</b></p> <p>SCE-SW-007, PGE2106, SDGE3151, SCG3657</p>	<p>The Residential and Commercial HVAC Program is a Statewide program that will continue the transformation process of California’s HVAC market to ensure that:</p> <ul style="list-style-type: none"> <li>• HVAC technology, equipment, installation, and maintenance are of the highest quality;</li> <li>• Quality installation and maintenance practices are easily recognized and requested by customers;</li> <li>• The HVAC value chain is educated and understands their involvement with energy efficiency and peak load reduction; and</li> <li>• The above changes lead to sustained profitability for HVAC trade allies as the business model for installing and maintaining heating and cooling systems changes from a commodity-based to a value-added service business.</li> </ul>
<p><b>SW Sub-program:</b></p> <p><b>Residential Energy Star Quality Installation</b></p> <p>SCE-SW-007d, PGE21064, SDGE3145, SCG3651</p>	<p>This sub-program is applicable to installations of central air conditioning (CAC) systems and air-source heat pump (HP) systems, with a rated capacity up to 65,000 BTU/H. Through this sub-program, a financial incentive will be available to homeowners who have a system installed in accordance with the EPA HVAC Quality Installation Guidelines. The installation requirements are illustrated in detail in ANSI/ACCA 5 QI-2007: HVAC Quality Installation Specification. In addition to this incentive, homeowners will also receive an ENERGY STAR® certificate for their qualifying installation. Contractors will be actively recruited into the sub-program by being offered the opportunity to receive performance incentives, such as utility co-branding opportunities, and diagnostic equipment for reaching specific performance milestones.</p>

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b>	<b>CA EESP Ref. pp. #</b>
<p><u>Goal (2)</u> Quality installation and maintenance becomes the industry and market norm. The marketplace understands and values the performance benefits of Quality Installation and Quality Maintenance.</p> <p><u>Goal Results:</u> By 2020 100 percent of systems are installed to quality standards and optimally maintained throughout their useful life.</p>	p.61
<p><u>Strategy 2-1:</u> Create a statewide Quality Installation and Maintenance (QI/QM) brand that will be attached to systems/installations/contractors that meet quality standards.</p>	p.62
<p><u>Strategy 2-3:</u> Develop and provide expanded QI/QM training for contractors, technicians and sales agents.</p>	p.63
<p><u>Strategy 2-4:</u> Develop and implement comprehensive contractor accreditation program.</p>	p.63

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Short-term (2010-2012) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
<b>Objective 1</b> – By 2012, XX% of Residential HVAC systems in the IOUs’ service area are installed to the Energy Star Residential Quality Installation standard.	<b>Staff</b>
<b>Objective 2</b> – Residential customers begin to demand Commercial Quality Installations from contractors.	<b>Staff</b>

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
<b>PPM 1</b> – Percentage of participating contractors and technicians, as a share of the target market, trained and using Residential Quality Installation methods.	<b>Staff</b>	<b>2 B</b>	<b>Y</b>
<b>PPM 2</b> – Weighted average percentage of certified technicians among participating contractors (i.e., above the 70% eligibility rule).	<b>Staff</b>	<b>2 B</b>	<b>Y</b>

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-term (2013-2020) "SMART" Sub-program Objectives	Source (SP, AL, DR, PIP, or Staff)*
<b>Objective 1</b> – By 2020, 100% of Residential HVAC systems in California are installed to the Quality Installation standard.	<b>SP</b>
<b>Objective 2</b> – Residential customers demand Energy Star Quality Installations from contractors.	<b>Staff</b>

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
<b>MT Indicator 1</b> – Identify the percentage change in the use of Quality Installation guidelines among all California Residential HVAC installation contractors.	<b>Staff</b>	<b>3</b>	<b>Y</b>

## HVAC – Commercial Quality Installation Subprogram

\*\*\*Draft for Discussion Purposes \*\*\*

	<b>Mission</b>
<p><b>SW Program: Residential and Commercial HVAC</b></p> <p>SCE-SW-007, PGE2106, SDGE3151, SCG3657</p>	<p>The Residential and Commercial HVAC Program is a Statewide program that will continue the transformation process of California’s HVAC market to ensure that:</p> <ul style="list-style-type: none"> <li>• HVAC technology, equipment, installation, and maintenance are of the highest quality;</li> <li>• Quality installation and maintenance practices are easily recognized and requested by customers;</li> <li>• The HVAC value chain is educated and understands their involvement with energy efficiency and peak load reduction; and</li> <li>• The above changes lead to sustained profitability for HVAC trade allies as the business model for installing and maintaining heating and cooling systems changes from a commodity-based to a value-added service business.</li> </ul>
<p><b>SW Sub-program:</b></p> <p><b>Commercial Quality Installation</b></p> <p>SCE-SW-007c, SDGE21063, SDGE3146, SCG3652</p>	<p>This sub-program is applicable to installations of packaged HVAC systems, with a rated capacity up to 760,000 BTU/H. Through this sub-program, a financial incentive will be available to contractors who complete a system installation in accordance with the appropriate industry standards (e.g., ACCA, SMACNA and ASHRAE). Contractors will be actively recruited into the program by offering them the opportunity to receive financial and performance incentives such as utility co-branding opportunities, diagnostic equipment for reaching specific performance milestones, and assistance aligning with the ENERGY STAR® Service &amp; Product Provider program.</p>

<b>CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<p><u>Goal (2)</u> Quality installation and maintenance becomes the industry and market norm. The marketplace understands and values the performance benefits of Quality Installation and Quality Maintenance.</p> <p><u>Goal Results:</u> By 2020 100 percent of systems are installed to quality standards and optimally maintained throughout their useful life.</p>	p.61
<p><u>Strategy 2-1:</u> Create a statewide Quality Installation and Maintenance (QI/QM) brand that will be attached to systems/installations/contractors that meet quality standards.</p>	p.62
<p><u>Strategy 2-3:</u> Develop and provide expanded QI/QM training for contractors, technicians and sales agents.</p>	p.63
<p><u>Strategy 2-4:</u> Develop and implement comprehensive contractor accreditation program.</p>	p.63



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Short-term (2010-2012) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
<b>Objective 1</b> – By 2012, XX% of Commercial HVAC systems in the IOUs' service area are installed to the Quality Installation standard.	<b>Staff</b>
<b>Objective 2</b> – Commercial customers begin to demand Commercial Quality Installations from contractors.	<b>Staff</b>

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
<b>PPM 1</b> - Percent of participating contractors and technicians, as a share of the target market, trained and using Commercial Quality Installation methods.	Staff	2 B	Y
<b>PPM 2</b> – Weighted average percentage of certified technicians among participating contractors (i.e., above the 70% eligibility rule).	Staff	2 B	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-term (2013-2020) "SMART" Sub-program Objectives	Source (SP, AL, DR, PIP, or Staff)*
<b>Objective 1</b> – By 2020, 100% of Commercial HVAC systems in California are installed to the Quality Installation standard.	<b>SP</b>
<b>Objective 2</b> – Commercial customers demand Commercial Quality Installations from contractors.	<b>Staff</b>

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
<b>MT Indicator 1</b> – Percentage change in the use of Quality Installation guidelines among all California Commercial HVAC installation contractors.	Staff	3	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## HVAC – Quality Maintenance Development Subprogram

	<b>Mission</b>
<p><b>SW Program: Residential and Commercial HVAC</b></p> <p>SCE-SW-007, PGE2106, SDGE3151, SCG3657</p>	<p>The Residential and Commercial HVAC Program is a Statewide program that will continue the transformation process of California’s HVAC market to ensure that:</p> <ul style="list-style-type: none"> <li>• HVAC technology, equipment, installation, and maintenance are of the highest quality;</li> <li>• Quality installation and maintenance practices are easily recognized and requested by customers;</li> <li>• The HVAC value chain is educated and understands their involvement with energy efficiency and peak load reduction; and</li> <li>• The above changes lead to sustained profitability for HVAC trade allies as the business model for installing and maintaining heating and cooling systems changes from a commodity-based to a value-added service business.</li> </ul>
<p><b>SW <u>Sub-program</u>:</b></p> <p><b>Quality Maintenance Development</b></p> <p>SCE-SW-007e, PGE21065, SDGE3148, SCG3654</p>	<p>This sub-program may represent one of the more creative aspects of the HVAC “Big Bold Energy Efficiency Strategies.” It is based on the assumption that energy and demand savings are achievable through the regular application of quality maintenance (QM) procedures applied to existing residential and commercial HVAC equipment. This sub-program intends to:</p> <ul style="list-style-type: none"> <li>• Quantify those potential savings; and</li> <li>• Develop and implement both a residential and commercial maintenance program focused on comprehensive, continuously improving O&amp;M activities that capture those savings and provide a high return on investment to the end-user, thus driving the intense level of market transformation of the HVAC industry envisioned by the Strategic Plan.</li> </ul> <p><i>The program:</i></p> <ol style="list-style-type: none"> <li>(1) Promotes industry standard practices through a comprehensive approach to HVAC servicing.</li> <li>(2) Demonstrates a clear value proposition to contractors for a profitable business opportunity based on providing QM.</li> <li>(3) Provides an effective training program to ensure that technicians can properly implement QM services.</li> <li>(4) Promotes benefits of QM and certified contractors to end-users.</li> </ol>

<b>CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<p><u>Goal (2)</u> Quality installation and maintenance becomes the industry and market norm. The marketplace understands and values the performance benefits of Quality Installation and Quality Maintenance.</p>	p.61

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<u>Goal Results:</u> By 2020, 100 % of systems are installed to quality standards and optimally maintained throughout their useful life.	
<u>Strategy 2-1:</u> Create a statewide Quality Installation and Maintenance (QI/QM) brand that will be attached to systems/installations/contractors that meet quality standards.	p.62
<u>Strategy 2-3:</u> Develop and provide expanded QI/QM training for contractors, technicians and sales agents.	p.63
<u>Strategy 2-4:</u> Develop and implement comprehensive contractor accreditation program.	p.63

<b>Short-term (2010-2012) “SMART” <u>Sub-program Objectives:</u></b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
<b>Objective 1</b> –By 2012, Statewide Quality Maintenance standards are adopted and implemented in IOU programs	<b>Staff</b>

<b>Short-term <u>Sub-program PPMs:</u></b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
<b>PPM 1</b> – Adoption rate of implementation of the Quality Maintenance standards in IOU programs	Staff	2 B	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” <u>Sub-program Objectives:</u></b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
<b>Objective 1</b> –By 2020, 100% of HVAC systems are optimally maintained in California	<b>SP</b>
<b>Objective 2</b> – Increase in the percentage of homes and businesses awareness of and demand for Quality Maintenance services in California	<b>Staff</b>

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
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<b>MT Indicator 1</b> – Percent change in the employment of Quality Maintenance practices among all California HVAC contractors and technicians.	Staff	3	Y
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*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## HVAC – Technologies and System Diagnostics Subprogram

	Mission
<b>SW Program: Residential and Commercial HVAC Program</b>	<p>The Residential and Commercial HVAC Program is a Statewide program that will continue the transformation process of California’s HVAC market to ensure that:</p> <ul style="list-style-type: none"> <li>• HVAC technology, equipment, installation, and maintenance are of the highest quality;</li> <li>• Quality installation and maintenance practices are easily recognized and requested by customers;</li> <li>• The HVAC value chain is educated and understands their involvement with energy efficiency and peak load reduction; and</li> <li>• The above changes lead to sustained profitability for HVAC trade allies as the business model for installing and maintaining heating and cooling systems changes from a commodity-based to a value-added service business.</li> </ul>
<b>SW Sub-program: Technologies &amp; System Diagnostics Advocacy</b>	<p>HVAC Technologies and System Diagnostics Advocacy is a coordinative and advocacy program that addresses the priority need for immediate and comprehensive action addressing elements critical to increasing, optimizing and maintaining the energy and peak electricity efficiency performance of direct expansion (DX)/vapor-compression–based cooling equipment and accelerating the market introduction of a range of advanced evaporative-based cooling technologies. The sub-program will be implemented by the Western Cooling Efficiency Center (WCEC) and funded by the IOUs, and includes unprecedented participation by HVAC industry stakeholders in research, development, and design, continuous review and updating, and operation of HVAC-related IOU programs. This unprecedented cooperation and collaboration with the HVAC industry has the purpose of substantially advancing HVAC-related program quality and effectiveness. A continuous program improvement process will be introduced to provide an active, real-time means for improving program effectiveness and incorporating results between planning cycles.</p>

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b>	<b>CA EESP Ref. pp. #</b>
<u>Goal (4)</u> New climate-appropriate HVAC technologies (equipment and controls, including system diagnostics) are developed with accelerated market penetration (CEESP, p. 59) <u>Goal Results:</u> At least 15% of equipment shipments are optimized for California's climate	p. 59
<u>Strategy 4-3:</u> Accelerate market penetration of advanced technologies by HVAC industry promotions and updating/expanding current utility programs to include new technologies as appropriate.	p. 65
<u>Strategy 4-5:</u> Develop nationwide standards and/or guidelines for onboard diagnostic functionality and specifications for	p. 65

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designated sensor mount locations.	
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Short-term (2010-2012) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
By 2012, Industry-wide task force develops roadmap to support the development of a national standard diagnostic protocol	EESP, p. 65
By 2012, increase by xx% the availability of air conditioners with on board diagnostics, relative to 2010.	Staff

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
Completion of roadmap to support the development of a national standard diagnostic protocol (Y/N)	Staff	2A	N
Percent increase in availability of diagnostics in IOU service territory	Staff	2B	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]  
 \*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
By 2015, federal minimum standards for diagnostic techniques are adopted.	Staff and SP (pg 65)

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
Code adoption of diagnostic standards (Y/N)	SP (pg 65)	3	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]  
 \*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## HVAC – Workforce Education & Training Subprogram

	<b>Mission</b>
<p><b>SW Program: Residential and Commercial HVAC</b></p> <p>SCE-SW-007, PGE2106, SDGE3151, SCG3657</p>	<p>The Residential and Commercial HVAC Program is a Statewide program that will continue the transformation process of California’s HVAC market to ensure that:</p> <ul style="list-style-type: none"> <li>• HVAC technology, equipment, installation, and maintenance are of the highest quality;</li> <li>• Quality installation and maintenance practices are easily recognized and requested by customers;</li> <li>• The HVAC value chain is educated and understands their involvement with energy efficiency and peak load reduction; and</li> <li>• The above changes lead to sustained profitability for HVAC trade allies as the business model for installing and maintaining heating and cooling systems changes from a commodity-based to a value-added service business.</li> </ul>
<p><b>SW Sub-program: Workforce Education &amp; Training</b></p> <p>SCE-SW-007f, PGE21066, SDGE3150, SCG36556</p>	<p>This sub-program will deliver a dedicated, industry-specific effort that offers education and training opportunities targeted at all levels of the HVAC value chain. Prior to starting such an activity, and as outlined in the Strategic Plan, the sub-program will conduct a comprehensive training-needs assessment to determine industry skill gaps, identify opportunities for collaboration with existing HVAC education and training infrastructure, and implement recommendations needed to close gaps at all levels of the industry.</p>

<b>CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<p><u>Goal (2)</u> Quality installation and maintenance becomes the industry and market norm. The marketplace understands and values the performance benefits of Quality Installation and Quality Maintenance.</p> <p><u>Goal Results:</u> By 2020 100 percent of systems are installed to quality standards and optimally maintained throughout their useful life.</p>	p. 61
<p><u>Strategy 2-1:</u> Create a statewide Quality Installation and Maintenance (QI/QM) brand that will be attached to systems/installations/contractors that meet quality standards.</p>	p. 62
<p><u>Strategy 2-3:</u> Develop and provide expanded QI/QM training for contractors, technicians and sales agents.</p>	p. 63
<p><u>Strategy 2-4:</u> Develop and implement comprehensive contractor accreditation program.</p>	p. 63
<p><u>Goal (3)</u> Whole building design and construction practices fully integrate building performance objectives to reduce cooling and heating loads.</p>	p. 63

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<b>Goal Results:</b> Integrated design and construction practices are standard practice by 2020	
<u>Strategy 3-3:</u> Accelerate HVAC related aspects of whole building design in the educational and professional communities	p. 64
(1) Provides training to contractors and technicians on industry standards/practices.	p. 64
(2) Works with industry training providers to encourage existing training curriculum include consistent messaging about industry QI/QM standards.	p. 64

<b>Short-term (2010-2012) “SMART” Sub-program Objective: Curriculum Development</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1 – By 2012 increase the number of technicians trained and certified in Quality Installations by X %	Staff

<b>Short-term Sub-program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
PPM 1 – Number of contractors and technicians trained in Quality Installation and Quality Maintenance and passing certification.	Staff	2 A	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” Sub-program Objective: Course Availability</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1 – By 2020, the availability of Quality Installation and Quality Maintenance training courses and certification is widespread.	Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
MT Indicator 1 – Number of institutions offering Quality Installation and Quality Maintenance courses	Staff	3	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.



## Commercial Statewide Program

	Mission
SW Program: Commercial	[Insert mission]

CA EESP Goals/Strategies Addressed by SW Program:	CA EESP Ref. pp. #
2-1: Ensure all State-Owned and Leased Buildings are Retro-commissioned	SP p38, PIP (SCE p231)
2-3: Ensure compliance with minimum Title 24 codes and standards for building renovations and expansion.	SP p38, PIP (SCE p190; PGE p48)
2-5: Develop tools and strategies to use information and Behavioral strategies, commissioning, and training to reduce energy consumption in commercial buildings.	SP p38, PIP (SCE p190; PGE p48)
2-7: Develop business models that deliver integrated energy management solutions; comprehensive energy management retrofits.	SP p38, PIP (SCE p190; PGE p48)
2-8: Improve use of plug load technologies; support PIER, Office of the Future by developing new, additional incentives.	SP p38, PIP (SCE p190; PGE p48)

Short-term (2010-2012) "SMART" Program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, retrofit at least 375,000,000 million sq/ft of participating existing commercial space by 15 % beyond current Title 24 (2008).	SP p 31
1. By 2012, the percent of participation among small or hard-to-reach customers will increase by X/Y/Z%	DR, IOUs, Staff
2. By 2012, the percent of participant awareness of IDSM opportunities will increase by X%.	Staff, PIPs (SCE p293, PG&E p36)
3. By 2012, the percent of participant awareness of Continuous Energy Improvement steps will increase by X%.	IOUs, Staff

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Short-term Program PPMs: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Square footage of participating existing commercial space retrofitted 15 % beyond current Title 24 (2008).	SP, Staff	2a	N but need to collect sq/ft for cycle.
<b>1. Participation rate among small or hard-to-reach customers in each of the following subprograms: (a) Continuous Energy Improvement (b) Non-Residential Audits (c) Deemed Incentives and (d) Calculated Incentives</b>	IOUs, Staff	1	N
<b>2. Participant awareness of IDSM practices in each of the following subprograms: (a) Continuous Energy Improvement (b) Non-Residential Audits (c) Deemed Incentives and (d) Calculated Incentives.</b>	PIPs	2b	Y
<b>3. Participant awareness of Continuous Energy Improvement steps in each of the following subprograms: (a) Non-Residential Audits (b) Deemed Incentives and (c) Calculated Incentives.</b>	IOUs, Staff	2b	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" Program Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
1. By 2020, retrofit at least 3 billion sq/ft of existing commercial space in California by 15% beyond current Title 24 (2008).	SP, p. 31
2. <b>By 2015, the percentage of participants in each of the following subprograms who go on to implement a long-term energy plan under the Continuous Energy Improvement subprogram will exceed the following thresholds:</b> (a) Non-Residential Audit – X% (b) Calculated Incentives – Y% (c) Deemed Incentives – Z%	IOUs, Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term MT Indicators: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
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1. Square footage of existing commercial space in CA retrofitted 15 % beyond current Title 24 (2008).	Staff, SP	3	Y
2. <b>Percent of participants in each of the following subprograms who go on to implement a long-term energy plan under the Continuous Energy Improvement program:</b> <b>(a) Non-Residential Audit,</b> <b>(b) Calculated Incentives and</b> <b>(c) Deemed Incentives</b>	IOUs, Staff	3	N

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Commercial – Continuous Energy Improvement Subprogram

	Mission
SW Program: <b>Commercial</b>	Continuous Energy Improvement (CEI) is a consultative service aimed at helping large commercial and industrial customers engage in long-term, strategic energy planning. Corporate energy management is not currently part of normal business operations for the majority of utility 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 through a comprehensive approach that addresses technical opportunities and organizational change with a commitment from the executive level.
SW <u>Sub-program</u> : <b>Continuous Energy Improvement</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
2-1: Ensure all State-Owned and Leased Buildings are Retro-commissioned	SP p38, PIP (SCE p231)
2-5: Develop tools and strategies to use information and Behavioral strategies, commissioning, and training to reduce energy consumption in commercial buildings.	SP p38, PIP (SCE p231)
2-7 Develop business models and supplier infrastructure to deliver integrated and comprehensive "one-stop" energy management solutions	SP p38, PIP (SCE p231)

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
<b>1. By 2012, the percent of participant awareness of Integrated Demand Side Management (IDSMS) opportunities will increase by X%.</b>	Staff, PIPs (SCE p236, PG&E p84)
<b>2. By 2012, CEI Participants who meet their short term energy goals as identified in their long-term energy plan will increase by X%.</b>	PIPs (SCE p228, PG&E p76), Staff
<b>3. By 2012 lessons learned, best practices, and plan to ramp up the CEI Program (if desirable) will be developed (y/n metric)</b>	PIPs (SCE p230, PG&E p77,83), Staff
<b>4. By 2012, the percent of participant awareness of IDSMS opportunities as a result of participating in the CEI Program will increase by X%</b>	PIPs (SCE p236, PG&E p84), Staff

Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2015, the participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program will be X%.	PIPs (SCE p228 , PG&E p77), Staff
2. By 2015 commercial customers who have or are implementing a long-term energy plan via the CEI program without IOU support will increase by X%.	Staff
3. By 2015 the number of CEI Participants who achieve longer-term milestones as identified in their long-term energy plans increases by X%.	Staff
1. X% of CA corporations integrate clean energy solutions (EE, DR, and DG) into long-term energy plans.	PIPs (SCE p236, PG&E p84), Staff
2. X% of CA corporations will include GHG reduction measurement, monitoring, and reduction strategies in their long-term energy plans.	PIPs (SCE p228 , PG&E p76), Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Participant awareness of IDSM opportunities.	PIPs	2b	Y
2. Percent of CEI participants meeting their short-term milestones	PIPs, Staff	2a	N
3. Yes/No - lessons learned, best practices, and plan to ramp up the CEI Program are developed	PIPs, Staff	2a	N
4. Percent of participant awareness of IDSM opportunities as a result of participating in the CEI Program	PIPs, Staff	2b	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
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1. Percent of participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program.	PIPs, Staff	3	N
2. Percent of commercial customers in the IOUs service territories who continue to implement a long-term energy plan via the CEI program without IOU support.	Staff	3	N
3. Number of CEI Participants who achieve longer-term milestones as identified in their long-term energy plans.	Staff	3	N
4. Percent of CA corporations integrate clean energy solutions (EE, DR, and DG) into long-term energy plans.	PIPs, Staff	3	Y
5. Percent of CA corporations will include GHG reduction measurement, monitoring, and reduction strategies in their long-term energy plans.	PIPs, Staff	3	N

## Commercial - Non-Residential Audit Subprogram

Mission	
SW Program: <b>Commercial</b>	The Non-Residential Audits (NRA) sub-program is designed to deliver a coordinated statewide integrated demand side management activity that promotes energy efficiency, demand response, distributed generation and emerging technologies.
SW Sub-program: <b>Non-Residential Audits</b>	

CA EESP Goals/Strategies Addressed by SW Sub-program:	CA EESP Ref. pp. #
2-1: Ensure all State-Owned and Leased Buildings are Retro-commissioned	SP p38, PIP (SCE p176; PGE p31)
2-5: Develop tools and strategies to use information and Behavioral strategies, commissioning, and training to reduce energy consumption in commercial buildings.	SP p38, PIP (SCE p176; PGE p31)

Short-term (2010-2012) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012 the number of onsite audits that are integrated will exceed X%.	PIPs (SCE p 181, PG&E p29) / D.09-09-047 (p. 215), Staff
2. By 2012 NRA participants that also participate in another IOU sponsored EE, DR, or DG program exceeds X%.	D.09-09-047 (p. 215), PIPs (PG&E p29)
3. By 2012 X% of NRA participants implement measures without needing an IOU Incentive.	PIPs (SCE p 181, PG&E p35) / D.09-09-047 (p. 215), Staff
4. By 2012 each customer class receiving integrated and non-integrated audits will increase by X%	PIPs (SCE p173, PG&E p26), Staff
5. By 2012 the % of customers who received audits, that adopt audit recommended technical, processes, & practices will increase by X%.	PIPs (SCE p174, PG&E p 29), Staff

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP,	Metric Type	Baseline Study

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	or Staff)*	(2a or 2b)**	Required (Y/N)
1. Percent of onsite audits that are integrated.	PIPs, Staff	2a	N
2. Participation rate of NRA participants in another IOU EE , DG, or DR program.	PIPs, Staff	2a	N
3. Percent of NRA participants that initiate a non-rebate funded measure as a result of the NRA.	PIPs, Staff	2b	N
4. Participation rate of non-residential audits by customer class.	PIPs, Staff	2b	N
5. Adoption rate of audit-recommended technologies, processes and practices.	PIPs, Staff	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" Sub-program Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
1. <b>By 2015, the percent of audit program participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program will be X%.</b>	IOUs, Staff
2. By 2015, X percent of NRA recipients go on to implement long-term energy plans via CEI program.	PIP p. 27 – CEI Section

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
1. <b>Percent of audit, calculated incentive and deemed incentive program participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program.</b>	IOUs, Staff	3	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.



## Commercial – Deemed Incentives Subprogram

	Mission
SW Program: <b>Commercial</b>	The Statewide Commercial Deemed Incentives sub-program provides rebates for the installation of new energy efficient equipment. Deemed retrofit measures have prescribed energy savings and incentive amounts and are generally intended for projects that have well defined energy and demand savings estimates (i.e., T12 to T8 replacements). Main two objectives: <ul style="list-style-type: none"> <li>• Reduce the initial purchase costs of such equipments, and</li> <li>• Reducing the inconvenience of participating in utility rebate programs by offering simple application process</li> </ul>
SW <u>Sub-program</u> : <b>Deemed Incentive</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
2-3: Ensure compliance with minimum Title 24 codes and standards for building renovations and expansion.	SP p38, PIP (SCE p204; PGE p62)
2-5: Develop tools and strategies to use information and Behavioral strategies, commissioning, and training to reduce energy consumption in commercial buildings.	SP p38, PIP (SCE p204; PGE p62)
2-7: Develop business models that deliver integrated energy management solutions; stretch goal reward (iBonus) with integration; comprehensive energy management retrofits.	SP p38, PIP (SCE p204; PGE p62)
2-8: Improve use of plug load technologies; support PIER, Office of the Future by developing new, additional incentives.	SP p38, PIP (SCE p204; PGE p62)

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
<b>1. By 2012, the percent in the number of installed measures that are ETP or “advanced technology” relative to baseline will increase by X%.</b>	PIPs (SCE p208; PG&E p67)
<b>2. By 2012, the percent of participants receiving the Integrated Bonus (iBonus)<sup>1</sup> will exceed X%.</b>	PIPs (SCE p 212, PG&E p70)

<sup>1</sup> Integration Bonus (iBonus is a new incentive mechanism to promote greater integration of DSM resources. Available for customers:1) Sign up or are already signed up for a DSM program 2) Purchase, install, and/are eligible to receive a rebate for an energy saving device.

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3. By 2012, 85% of targeted commercial customers will be aware of the Deemed Incentives Program.	PIPs (SCE p209, PG&E p 65)
4. By 2012, the supply of qualified industrial specialists will increase by X%.	Staff, SP
5. By 2012, customer implementation of integrated opportunities (e.g., EE, DR, waste saving measures, etc.) will increase by X%.	IOUs, PIPs (SCE p221, PG&E p70)

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. <b>Participant adoption rate of installed measures that are ETP or “advanced technologies” relative to baseline.</b>	PIPs	2a	Y
2. Percent of commercial customers receiving the Integrated Bonus (iBonus).	PIPs	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
1. <b>By 2015, the percent of deemed incentive program participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program will be X%.</b>	IOUs, Staff
2. <b>By 2015, and every three years thereafter, all measures determined to be “standard practice” are moved out of the incentive program, and replaced by ETP or “Advanced Technology” measures.</b>	Staff
3. By 2015, 100 percent of HVAC units being installed will meet existing code.	SP, Staff
4. By 2015, 50 percent of HVAC systems installed will be optimally maintained.	SP, Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
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programs)			
1. <b>Percent of Deemed Incentive program participants who go on to implement a long-term energy plan under the CEI program.</b>	IOUs, Staff	3	N
2. <b>Measures determined to be “standard practice” are moved out of the program, and program focused on ET/Advanced technology (Y/N)</b>	Staff	3	N
3. Percent of HVAC units being installed that meet existing code.	SP, Staff	3	N
4. Percent of HVAC systems installed that are optimally maintained.	SP, Staff	3	N

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Commercial – Calculated Incentives Subprogram

	Mission
SW Program: <b>Commercial</b>	<p>The Statewide Commercial Calculated Incentives sub-program provides customers technical and calculation assistance, as well as incentives based on calculated savings, to influence the design and installation of energy efficient equipment and systems in both retrofit and added load applications.</p> <p>The Calculated Incentives sub-program is utilized for projects where a rebate is not available through the Statewide Deemed program, where project conditions require customized calculations to provide the most accurate savings estimates, or where project has interactive effects that are best captured through whole building or whole system modeling. Because calculated savings estimates are based on actual customer operating conditions, pre-inspections (for retrofit projects) and post-inspections are typically required as part of each utility’s project documentation.</p>
SW <u>Sub-program</u> : <b>Calculated Incentive</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
2-3: Ensure compliance with minimum Title 24 codes and standards for building renovations and expansion.	SP p38, PIP (SCE p190; PGE p48)
2-5: Develop tools and strategies to use information and Behavioral strategies, commissioning, and training to reduce energy consumption in commercial buildings.	SP p38, PIP (SCE p190; PGE p48)
2-7: Develop business models that deliver integrated energy management solutions; comprehensive energy management retrofits.	SP p38, PIP (SCE p190; PGE p48)
2-8: Improve use of plug load technologies; support PIER, Office of the Future by developing new, additional incentives.	SP p38, PIP (SCE p190; PGE p48)

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
1. <b>By 2012, the percent in the number of installed measures that are ETP or “advanced technology” relative to baseline will increase by X%.</b>	PIPs (SCE p193; PG&E p52)

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2. By 2012, 60% of measured savings from calculated projects will come from emerging technologies.	Staff, PIPs (SCE p193; PG&E p52)
3. Increase adoption of plug load technologies from PIER funded projects.	PIPs (SCE p193; PG&E p52)
4. By 2012, 85% of targeted commercial customers will be aware of the Calculated Incentives Program.	PIPs (SCE p192, PG&E p53)
5. By 2012, the supply of qualified industrial specialists will increase by X%.	Staff, SP
6. By 2012, customer implementation of integrated opportunities (e.g., EE, DR, waste saving measures, etc.) will increase by X%.	IOUs, PIPs (SCE p195,197, PG&E p53)

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
<b>1. Participant adoption rate of installed measures that are ETP or “advanced technologies” relative to baseline.</b>	PIPs	2a	Y
2. Percent of measured savings from calculated projects coming from emerging technologies (i.e. plug load technologies).	PIPs	2a	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
<b>1. By 2015, the percent of participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program will be X%.</b>	IOUs, Staff
<b>2. By 2015, and every three years thereafter, all measures determined to be “standard practice” are moved out of the incentive program, and replaced by ETP or “Advanced Technology” measures.</b>	Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
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3. Percent of program participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program.	IOUs, Staff	3	N
4. Measures determined to be "standard practice" are moved out of the program, and program focused on ET/Advanced technology (Y/N)	Staff	3	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Commercial – Direct Install Subprogram

	<b>Mission</b>
SW Program: <b>Commercial</b>	The Direct Install sub-program delivers free energy efficiency hardware retrofits, through installation contractors, to reduce peak demand and energy savings for commercial customers with monthly demand of less than 100 kW. The program targets very small and small businesses (those with monthly demand of less than 100 kW) in a staged delivery approach that provides program services in specific geographic areas at different times, allowing for a more concentrated, directed, yet comprehensive program.
SW <u>Sub-program</u> : <b>Direct Install</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
None listed	

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
<b>1. By 2012, the percent of participant awareness of Integrated Demand Side Management (IDSMS) opportunities will increase by X%.</b>	Staff, PIPs (SCE p222, PG&E p95)
<b>2.</b> Number of DI participants that participate in other resource programs, OBF, and/or put down a co-pay for EE measures.	Staff
<b>3.</b> Increase participation of hard-to-reach businesses, including non-English-speaking, previously untouched zip codes, and low concentrated zip codes by 25% by 2012.	Staff, PIPs (SCE p219, PG&E p92)
<b>4.</b> Increase the percentage of participants in facilities that have short-term leases.	PIPs (SCE p218, PG&E p91)
<b>5.</b> Increase the percent of low income and disadvantaged <sup>2</sup> program implementation staff who are employed for more than 6 months in auditing, retrofitting, outreach.	Staff, PIPs (SCE p221, PG&E p94)
<b>6.</b> By 2012, the percent of innovative measures (e.g., solid state lights, T8, DR) as a percent of all	PIPs (SCE p222, PGE&E p95)

<sup>2</sup> SCE PIP, 221.

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measures will exceed 10%.	
7. By 2012, the percent of targeted commercial customers who understand the information provided by contractors will exceed 30%.	Staff
8. By 2012, awareness of the Direct Install Program among targeted commercial customers will exceed 50%.	Staff, PIPs (SCE p220, PG&E p92 )
9. By 2012, the percent of targeted commercial customers who accept the claimed benefits of energy efficiency will exceed 50%.	Staff
10. By 2012, the percent of DI participants that participate in 3P programs will exceed 10%.	Staff

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Number of DI participants that participate in other resource programs, OBF, and/or put down a co-pay for EE measures.	IOUs, Staff	2a	N
2. Percent of participants that are non-English speaking businesses are located in previously untouched zip codes, and low concentrated zip codes.	IOUs, Staff	2a	N
3. Percent of participants in facilities that have long-term leases.	IOUs, Staff	2a	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
1. <b>By 2015, and every three years thereafter, all measures determined to be “standard practice” are moved out of the incentive program, and replaced by ETP or “Advanced Technology” measures.</b>	Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Industrial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)



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1. Measures determined to be “standard practice” are moved out of the program, and program focused on ET/Advanced technology (Y/N)	Staff	3	N
2. Energy Efficiency is routinely considered by 50% of the targeted market of DI participants when making capital purchases.	Staff	3	N

## Industrial Statewide Program

	<b>Mission</b>
<b>SW Program: Industrial</b>	To address energy challenges the industrial sector faces, 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 (IDSM) 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—such as those established by the ISO or DOE SEP program to document a facility’s attainment of high resource management levels—and 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.

<b>CA EESP Goals/Strategies Addressed by SW <u>Program</u>:</b>	<b>CA EESP Ref. pp. #</b>
1. Support California industry’s adoption of energy efficiency by integrating energy efficiency savings with achievement of GHG goals and other resource management objectives.	Goals, Page 45
2. Provide centralized technical and public policy guidance for resource efficiency and workforce training.	
3. By 2020, energy efficiency certification and benchmarking will become a standard industrial practice for businesses that are responsible for 80% of the sectoral energy usage.	
4. By 2020, energy intensity (per gross dollar of production value) will be reduced by at least 25%.	
5. There will be a trained workforce in energy management and systems energy efficiency.	

<b>Short-term (2010-2012) “SMART” <u>Program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>

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4. By 2012, the percent of participation among small or hard-to-reach customers will increase by X/Y/Z% (by NAICS or SIC code).	DR, IOUs, Staff
5. By 2012, the percent of participant awareness of integrated demand side management opportunities will increase by X%.	Staff, PIPs (SCE p293, PG&E p36)
6. By 2012, the percent of participant awareness of Continuous Energy Improvement steps will increase by X%.	IOUs, Staff

Short-term <u>Program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
4. Participation rate among small or hard-to-reach customers (by NAICS or SIC code) in each of the following subprograms: (a) Continuous Energy Improvement (b) Non-Residential Audits (c) Deemed Incentives and (d) Calculated Incentives	IOUs, Staff	1	N
5. Participant awareness of IDSM practices in each of the following subprograms: (a) Continuous Energy Improvement (b) Non-Residential Audits (c) Deemed Incentives and (d) Calculated Incentives.	PIPs	2b	Y
6. Participant awareness of Continuous Energy Improvement steps in each of the following subprograms: (a) Non-Residential Audits (b) Deemed Incentives and (c) Calculated Incentives.	IOUs, Staff	2b	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" <u>Program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
3. By 2015, the percentage of participants in each of the following subprograms who go on to implement a long-term energy plan under the Continuous Energy Improvement subprogram will exceed the following thresholds: (a) Non-Residential Audit – X% (b) Calculated Incentives – Y% (c) Deemed Incentives – Z%	IOUs, Staff
4. By 2015, energy intensity (per gross dollar of production value) will be reduced by least 25 percent.	SP

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5. By 2015, the percentage of large customers (businesses that are responsible for 80% of sectoral energy usage) that adopt energy efficiency certification and benchmarking will increase by X% [relative to a baseline]..	SP
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\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
5. Percent of participants in each of the following subprograms who go on to implement a long-term energy plan under the Continuous Energy Improvement program: (a) Non-Residential Audit, (b) Calculated Incentives and (c) Deemed Incentives	IOUs, Staff	3	N
6. Energy intensity (per gross dollar of production value) will be reduced by least 25 percent.	SP	3	Y
7. Percent of large customers (i.e., businesses that are responsible for 80% of sectoral energy usage) that adopt energy efficiency certification and benchmarking.	SP	3	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Industrial – Continuous Energy Improvement Subprogram

	Mission
SW Program: <b>Industrial</b>	Continuous Energy Improvement (CEI), a non-resource sub-program, describes a collection of strategic planning tools and resources that lay the groundwork for long-term integrated energy planning and serve as a launching platform for other utility and non-utility programs and services. Through analysis, benchmarking, long-term goal setting, project implementation support, performance monitoring, and potentially access to energy management certification
SW <u>Sub-program</u> : <b>Continuous Energy Improvement</b>	

CA EESP Goals/Strategies Addressed by SW Subprogram:	CA EESP Ref. pp. #
See program level.	

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012 lessons learned, best practices, and plan to ramp up the CEI Program (if desirable) will be developed (Y/N)	Statewide PIP (PG&E) p. 33
2. By 2012, X% of targeted industrial customers will implement long-term energy planning via CEI	
3. By 2012, X% of industrial CEI participants are meeting their short-term milestones	IOUs, Staff
4. By 2012, participant awareness of IDSM opportunities as a result of participating in the CEI program will exceed X%	PIPs

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Lessons learned, best practices, and a plan to ramp up the CEI Program are developed (Y/N)	PIP	2b	N

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2. Percent of targeted industrial customers who are implementing a long term energy plan via CEI		2a	
3. Percent of industrial CEI participants meeting their short-term milestones	IOUs, Staff	2a	N
4. Participant awareness of IDSM opportunities as a result of participating in the CEI program	PIPs	2b	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page ref when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2015, the percent of Calculated Incentive customers who go on to implement a long-term energy plan under the CEI program will increase by X%.	IOUs, Staff
2. By 2015, the number of CEI industrial participants who achieve longer-term milestones as identified their long term energy plans increases by X% [or X].	Staff
3. By 2015 industrial customers who are implementing a long-term CEI plan, without IOU support, will increase by X%	

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
1. Percent of industrial CEI participants who achieve longer-term milestones as identified in their long-term energy plans			
2. Percent of industrial IOU customers who continue to implement a long-term energy plan via the CEI program, without IOU support	IOUs, Staff	3	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Industrial – Non-Residential Audit Subprogram

Mission	
SW Program: <b>Industrial</b>	Nonresidential Audits, including basic audits and Integrated Audits plus Retro-Commissioning (RCx) audits, provide an inventory of technical project opportunities and financial analysis information that can be used to support a customer’s short- or long-term energy plan, and overcome both informational and technical customer barriers.
SW Sub-program: <b>Non- Residential Audits</b>	

CA EESP Goals/Strategies Addressed by SW Subprogram:	CA EESP Ref. pp. #
See program level.	

Short-term (2010-2012) “SMART” Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, the number of onsite audits that are integrated will exceed X%.	p. 3 – PIP/D 09-090047 (p. 215)
2. By 2012, NRA participants that also participate in another IOU-sponsored EE, DR or DG program exceeds X%.	D 09-09-047, p. 3
3. By 2012 X% of NRA participants implement measures without needing an IOU incentive	PIP p.2 Audit Section (audits table)
4. By 2012, the percent of each customer class receiving integrated and non-integrated audits will increase by X%.	PIP p.2 Audit Section (audits table)
5. By 2012, the percent of customers who receive audits that adopt audit-recommended technologies, processes and practices will increase by X%.	Staff

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Percentage of onsite audits that are integrated.	Staff, DR	2a	N

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2. Participation rate in another IOU-sponsored EE, DG or DR program.	PIPs	2a	N
3. Participation rate of non-residential audits by customer class.	Staff, DR	2a	Y
4. Proportion of customers who receive audits that go on to adopt audit-recommended technologies, processes and procedures.	PIP	2B	N

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.*

<b>Long-Term (2013-2020) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
None proposed at subprogram level. (See program level)	

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
None proposed at subprogram level (See program level)			

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*



## Industrial – Deemed Incentives Subprogram

	Mission
SW Program: <b>Industrial</b>	The Deemed rebate offering 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 energy saved/projects installed. 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.
SW <u>Sub-program</u> : <b>Deemed Incentives</b>	

CA EESP Goals/Strategies Addressed by SW Subprogram:	CA EESP Ref. pp. #
See program level.	

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, the percent of industrial customers who are aware of the Deemed Incentives program will increase by X%.	PIPs (PG&E p12)
2. By 2012, the supply of qualified industrial specialists will increase by X%.	Staff, SP
3. By 2012, customer implementation of integrated opportunities (e.g., EE, DR, waste management measures, etc.) will increase by X%.	PIPs (SCE p293, PG&E p14)
7. By 2012, the percent in the number of installed measures that are ETP or “advanced technology” relative to baseline will increase by X%.	PIPs (SCE p293-4, 322; PG&E p11)

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Participant adoption rate of installed measures that are ETP or “advanced	PIPs, DR?	2a	Y

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technologies.”			
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*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.*

Long-Term (2013-2020) “SMART” <u>Sub-program Objectives:</u>	Source (SP, AL, DR, PIP, or Staff)*
1. By 2015, and every three years thereafter, all measures determined to be “standard practice” are moved out of the Deemed program, and replaced by ETP or “Advanced Technology” measures.	Staff

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
1. Measures determined to be “standard practice” are moved out of the program, and program focused on ET/Advanced technology (Y/N)	Staff	3	N

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Industrial – Calculated Incentives Subprogram

	Mission
SW Program: <b>Industrial</b>	The Calculated program offering provides standardized incentives for customized and integrated energy efficiency/DR projects in new construction, retrofit, and RCx projects, and offers comprehensive technical and design assistance for each. It overcomes information, technical, and financial barriers. As a more customized calculation method that can consider system and resource interactions, it will also be the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the Strategic Plan.
SW Sub-program: <b>Calculated Incentives</b>	

CA EESP Goals/Strategies Addressed by SW Subprogram:	CA EESP Ref. pp. #
See program level.	

Short-term (2010-2012) “SMART” Sub-program Objectives: (Please note that items in <b>BOLD</b> are consistent with proposed objectives in the Statewide Commercial and Agricultural programs)	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, the percent of industrial customers who are aware of the Calculated Incentives program will increase by X%.	PIPs (PG&E p12)
2. By 2012, the supply of qualified industrial specialists will increase by X%.	Staff, SP
3. By 2012, customer implementation of integrated opportunities (e.g., EE, DR, waste management measures, etc.) will increase by X%.	PIPs (SCE p293, PG&E p14)
4. By 2012, the number of installed measures that are ETP or “advanced technology” relative to baseline will increase by X%.	PIPs (SCE p293-4, 322; PG&E p11)

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Participant adoption rate of installed measures that are ETP or “advanced technologies.”	PIPs, DR?	2a	Y

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*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.*

<b>Long-Term (2013-2020) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2015, and every three years thereafter, all measures determined to be "standard practice" are moved out of the incentive program, and replaced by ETP or "Advanced Technology" measures.	Staff

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Number of measures determined to be "standard practice" from the previous program cycle that remain in the current incentive program	Staff	3	Y

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Agricultural Statewide Program

	<b>Mission</b>
<b>SW Program: Agricultural</b>	The Statewide Agriculture Program offers California’s diverse agricultural customers a statewide-consistent suite of products and services to overcome the market barriers to optimized energy management. The program targets integrated energy management solutions, including energy efficiency, demand response, and distributed generation, through strategic energy planning support, technical support services, such as facility audits, pump tests, calculation and design assistance, and financial support through rebates and incentives. The Program adopts and supports the strategies and actions of the Agriculture and Industrial chapters of the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan).

<b>CA EESP Goals/Strategies Addressed by SW <u>Program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<b>Goal 1:</b> Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.	p. 51
<b>Strategy 1-1:</b> Develop knowledge base of efficiency solutions	p. 53
<b>Goal 2:</b> Achieve significant increases in the efficiency of electricity and natural gas use and on-site renewable utilization.	p. 51
<b>Strategy 1-1:</b> Develop knowledge base of efficiency solutions	p. 51
<b>Strategy 1-3:</b> Conduct research & development of new technologies and practices for agricultural efficiency	p. 53
<b>Strategy 1-2:</b> Ensure workforce has information and training necessary to apply efficiency solutions	p. 53

<b>Short-term (2010-2012) “SMART” <u>Program Objectives</u>:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2012, the percent of participation among small or hard-to-reach customers will increase by X/Y/Z% (by NAICS or SIC code).	DR, IOUs, Staff

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2. By 2012, the percent of participant awareness of integrated demand side management opportunities will increase by X%.	Staff, PIPs (SCE p293, PG&E p36)
3. By 2012, the percent of participant awareness of Continuous Energy Improvement steps will increase by X%.	IOUs, Staff

Short-term <u>Program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Participation rate among small or hard-to-reach customers (by NAICS or SIC code) in each of the following subprograms: (a) Continuous Energy Improvement (b) Non-Residential Audits (c) Deemed Incentives and (d) Calculated Incentives	IOUs, Staff	1	N
2. Participant awareness of IDSM practices in each of the following subprograms: (a) Continuous Energy Improvement (b) Non-Residential Audits (c) Deemed Incentives and (d) Calculated Incentives.	PIPs	2b	Y
3. Participant awareness of Continuous Energy Improvement steps in each of the following subprograms: (a) Non-Residential Audits (b) Deemed Incentives and (c) Calculated Incentives.	IOUs, Staff	2b	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" <u>Program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2015, the percentage of participants in each of the following subprograms who go on to implement a long-term energy plan under the Continuous Energy Improvement subprogram will exceed the following thresholds: (a) Non-Residential Audit – X% (b) Calculated Incentives – Y% (c) Deemed Incentives – Z%	IOUs, Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
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<p>1. Percent of participants in each of the following subprograms who go on to implement a long-term energy plan under the Continuous Energy Improvement program:</p> <ul style="list-style-type: none"> <li>(a) Non-Residential Audit,</li> <li>(b) Calculated Incentives and</li> <li>(c) Deemed Incentives</li> </ul>	IOUs, Staff	3	N
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*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Agriculture – Continuous Energy Improvement Subprogram

	Mission
SW Program: <b>Agriculture</b>	Continuous Energy Improvement (CEI), a non-resource sub-program, describes a collection of strategic planning tools and resources that lay the groundwork for long-term integrated energy planning and serve as a launching platform for other utility and non-utility programs and services. Through analysis, benchmarking, long-term goal setting, project implementation support, performance monitoring, and potentially access to energy management certification
SW Sub-program: <b>Continuous Energy Improvement (CEI)</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
<b>Goal 1:</b> Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.	p. 51
<b>Strategy 1-1:</b> Develop knowledge base of efficiency solutions	p. 53

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
<b>Objective 1:</b> By 2012 lessons learned, best practices, and plan to ramp up the CEI Program (if desirable) will be developed (Y/N)	Statewide PIP (PG&E) p. 33
<b>Objective 3:</b> By 2012 X% of targeted agriculture customers will implement a long-term energy plan via the CEI program.	Statewide PIP (PG&E) p. 5
<b>Objective 2:</b> By 2012, X% of CEI participants will meet their short term energy goals as identified in their long-term energy plan.	Statewide PIP (PG&E) – p. 30
<b>Objective 4:</b> By 2012, the percent of participant awareness of IDSM opportunities as a result of participating in the CEI Program will increase by X%	Statewide PIP (PG&E) p. 33

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)



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<b>PPM 1:</b> Lessons learned, best practices, and a plan to ramp up the CEI Program are developed (Y/N)	PIP	2b	N
<b>PPM 3:</b> Percent of targeted agriculture customers who are implementing or have implemented a long-term energy plan via CEI	PIP	2b	N
<b>PPM 2:</b> Percent of CEI participants meeting their short-term milestones	PIP	2b	N
<b>PPM 4:</b> Percent of participant awareness of IDSM opportunities as a result of participating in the CEI Program	PIP	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
<b>Objective 1:</b> By 2015 the number of CEI Participants who achieve longer-term milestones as identified in their long-term energy plans increases by x% or X.	Statewide PIP (PG&E) – p. 30
<b>Objective 2:</b> By 2015, the number of agriculture customers who continue to implement their long-term energy plan via the CEI program, without IOU support, will increase by X%.	Statewide PIP (PG&E) p. 5

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
<b>MT Indicator 1:</b> Number of CEI Participants who achieve longer-term milestones as identified in their long-term energy plans	PIP	3	N
<b>MT Indicator 2:</b> Percent of agriculture customers in the IOUs service territory who continue to implement a long-term energy plan via the CEI program, without IOU support.	PIP	3	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Agricultural – Non-Residential Audit Subprogram

Mission	
SW Program: <b>Agriculture</b>	Nonresidential Audits, including basic audits and Integrated Audits plus Retro-Commissioning (RCx) audits, provide an inventory of technical project opportunities and financial analysis information that can be used to support a customer’s short- or long-term energy plan, and overcome both informational and technical customer barriers.
SW Sub-program: <b>Non-Residential Audit</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
<b>Goal 1:</b> Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.	p. 51
<b>Strategy 1-1:</b> Develop knowledge base of efficiency solutions	p. 53

Short-term (2010-2012) “SMART” <u>Sub-program Objectives</u> :	Source (SP, AL, DR, PIP, or Staff)*
<b>Objective 1:</b> By 2012 the number of onsite audits that are integrated will exceed X%	PIP - p. 3 / D.09-09-047 (p. 215)
<b>Objective 2:</b> By 2012 NRA participants that also participate in another IOU sponsored EE , DR, or DG program exceeds X%	D.09-09-047, p. 3
<b>Objective 3:</b> By 2012 X% of NRA participants implement measures without needing an IOU Incentive.	PIP p. 2 Audit Section (audits table)
<b>Objective 4:</b> By 2012 the number of participants within each customer class receiving integrated and non-integrated audits will increase by X%	PIP p. 2 Audit Section (audits table)
<b>Objective 5:</b> By 2012, the % of customers who received audits, that adopt audit recommended technical, process, & practice improvements will increase by X%	Statewide PIP p. 3 Audit Section

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR,	Metric Type	Baseline Study

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	PIP, or Staff)*	(2a or 2b)**	Required (Y/N)
PPM 1: % of audits that are integrated.	p. 3 – PIP / D.09-09-047 (p. 215)	2a	N
PPM 2: % of NRA participants that participate in another IOU EE , DG, or DR program as a result of the NRA.	D.09-09-047, p. 3	2a	N
PPM 3: % of NRA participants that initiate a non-rebate funded measure as a result of the NRA.	PIP p. 2 Audit Section (audits table)	2b	N
PPM 4: # of customers in each customer class receiving an integrated audit	PIP p. 2 Audit Section (audits table)	2b	N
PPM 5: # of customers who received audits, that adopt audit recommended technical, process & practice improvements	Statewide PIP p. 3 Audit Section	2B	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at subprogram level. (See program level)	

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
None proposed at subprogram level. (See program level.)			

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Agricultural – Deemed Incentives Subprogram

	Mission
SW Program: <b>Agriculture</b>	The Deemed rebate offering 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 energy saved/projects installed. 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.
SW <u>Sub-program</u> : <b>Deemed</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
<b>Goal 1:</b> Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.	
<b>Goal 2:</b> Achieve significant increases in the efficiency of electricity and natural gas use and on-site renewable utilization.	
<b>Strategy 1-1:</b> Develop knowledge base of efficiency solutions	p. 51
<b>Strategy 1-3:</b> Conduct research & development of new technologies and practices for agricultural efficiency	p. 53
<b>Strategy 1-2:</b> Ensure workforce has information and training necessary to apply efficiency solutions	

Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, the number of installed measures offered by the Deemed Incentives sub-program that are ETP or “advanced technology” relative to baseline will increase by X%.	CEESP Strategy 1-3, p. 53 Statewide PIP, (PG&E) p. 23

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)

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1. Participant adoption rate of installed measures that are ETP or “advanced technologies” relative to baseline.	Statewide PIP, (PG&E) p. 23 / CEESP Strategy 1-3, p. 53	2b	Y
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\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2015, the percent of participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program as a result of participating in the Deemed sub-program will increase by X%.	CEESP Strategy 2-1, p. 54
2. By 2012, the supply of qualified agricultural energy specialists will increase by X%.	Statewide PIP, (PG&E) p. 23 / CEESP p. 52
3. By 2015, and every three years thereafter, all measures determined to be “standard practice” are moved out of the Deemed incentive program, and replaced by ETP or “Advanced Technology” measures.	Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
2. Percent of program participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program as a result of participating in the Deemed Incentive program.	Statewide PIP, (PG&E) p. 23 / CEESP p. 52	3	Y
3. Supply of qualified agricultural energy specialists	CEESP Strategy 1-3, p. 53 Statewide PIP p. 23 (PGE)	3	Y
4. Measures determined to be “standard practice” are moved out of the program, and program focused on ET/Advanced technology (Y/N)	Staff	3	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Agricultural– Calculated Incentives Subprogram

	<b>Mission</b>
SW Program: <b>Agriculture</b>	The Calculated program offering provides standardized incentives for customized and integrated energy efficiency/DR projects in new construction, retrofit, and RCx projects, and offers comprehensive technical and design assistance for each. It overcomes information, technical, and financial barriers. As a more customized calculation method that can consider system and resource interactions, it will also be the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the Strategic Plan.
SW Sub-program: <b>Calculated Incentives</b>	

<b>CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<b>Goal 1:</b> Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.	p. 51
<b>Goal 2:</b> Achieve significant increases in the efficiency of electricity and natural gas use and on-site renewable utilization.	p. 51
<b>Strategy 1-1:</b> Develop knowledge base of efficiency solutions	p. 51
<b>Strategy 1-3:</b> Conduct research & development of new technologies and practices for agricultural efficiency	p. 53
<b>Strategy 1-2:</b> Ensure workforce has information and training necessary to apply efficiency solutions	p. 53

<b>Short-term (2010-2012) “SMART” <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2012, the number of installed measures offered by the Calculated sub-program that are ETP or “advanced technology” relative to baseline will increase by X%.	CEESP Strategy 1-3, p. 53 Statewide PIP, (PG&E) p. 23

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Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Participant adoption rate of installed measures that are ETP or “advanced technologies” as a result of participation in the Calculated sub-program.	PIP, (PG&E) p. 23 / CEESP Strategy 1-3, p. 53	2b	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, the supply of qualified agricultural energy specialists will increase by X%.	Statewide PIP, (PG&E) p. 23 / CEESP p. 52
2. By 2015, the percent of customers who go on to implement a long-term energy plan under the Continuous Energy Improvement program as a result of participating in the Calculated sub-program will increase by X%.	CEESP Strategy 2-1, p. 54
3. By 2015, and three years thereafter, all measures determined to be “standard practice” are moved out of the Calculated incentive program, and replaced by ETP or “Advanced Technology” measures. (Yes/No Metric)	CEESP Strategy 1-3, p. 53 Statewide PIP p. 23 (PGE )

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
1. Supply of qualified agricultural energy specialists	Statewide PIP, (PG&E) p. 23 / CEESP p. 52	3	Y
2. Percent of customers who go on to implement a long-term energy plan under the Continuous Energy Improvement program as a result of participation in the Calculated sub-program.	CEESP Strategy 2-1, p. 54	3	N
3. Yes / No - By 2015, and three years thereafter, all measures determined to be “standard practice” are moved out of the Calculated Incentive program, and replaced by ETP or “Advanced Technology”	CEESP Strategy 1-3, p. 53 PIP p. 23 (PGE)	3	Y

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Agriculture – Pump Test & Repair Subprogram

	Mission
SW Program: <b>Agriculture</b>	The Pump Efficiency Services sub-program 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 IOU's 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 in the mid-term, this pump performance data aggregated at the statewide level will contribute to the development of metrics and targets for pump improvements, in support of the pumping focus in the Agricultural Strategic Plan.
SW Sub-program: <b>Pump Test &amp; Repair</b>	

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
Strategy 1-3: Conduct research & development of new technologies and practices for agricultural efficiency.	p. 53

Short-term (2010-2012) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, increase by X% customers knowledgeable about proper maintenance of pump equipment in order to reduce energy use and associated costs	Statewide PIP, p. 38

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Percent of customers knowledgeable about proper maintenance of pump equipment in order to reduce energy use and associated costs	Statewide PIP, p. 38	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*



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1. By 2015 increase by X% the number of participants of the pump test program who continue to maintain their equipment according to industry accepted maintenance schedules.	Statewide PIP, p. 35
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*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Percent of participants of the pump test program who continue to maintain their equipment according to industry accepted maintenance schedules	Statewide PIP, p. 35	3	N

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Emerging Technologies Program

	<b>Mission</b>
<b>SW Program: Emerging Technologies</b>	<p>The mission is to support increased energy efficiency market demand and technology supply (the term supply encompassing breadth, depth, and efficacy of product offerings) by contributing to development and deployment of new and under-utilized energy efficiency (EE) measures (that is, technologies, practices, and tools), and by facilitating their adoption as measures supporting California’s aggressive energy and demand savings goals.</p> <p>ETP includes seven sub-programs: (1) Technology Assessment, (2) Scaled Field Placement, (3) Demonstration Showcases, (4) Market and Behavioral Studies, (5) Technology Development Support, (6) Business Incubation Support/Technology Resource Incubator (TRIO), and (7) Technology and Testing Center (TTC/ZNE).</p>

<b>CA EESP Goals/Strategies Addressed by SW Program:</b>	<b>CA EESP Ref. pp. #</b>
<p><u>Goal 1:</u> Refocus utility and Energy Commission energy efficiency research and technology support to create demand pull and set the research agenda for both incremental and game-changing energy efficiency technology innovations.</p> <p><u>Goal Results:</u> Ratepayer-funded R&amp;D programs will explicitly support widely applicable whole-building improvement, lighting, and plug load solutions envisioned in this Plan and will be used to leverage other private and public funds for the deployment of new technologies.</p> <p><u>Goal 2:</u> Conduct targeted emerging technologies R&amp;D to support the Big, Bold Energy Efficiency Strategies and integrated energy solutions goals.</p> <p><u>Goal Results:</u> Profound improvement in equipment efficiency as well as new building materials and designs aimed at achieving more efficiency from new buildings than technically feasible today, and necessary to achieve Zero Net Energy and hot/dry climate HVAC outcomes.</p>	p. 84.
<p>CA EE SP Goal 1 (11): Create Demand Pull for New Technology</p> <p>CA EE SP Strategy 1-1: Apply systems approaches to establishing research priorities</p> <p>CA EE SP Strategy 1-2: Leverage private industry and Federally funded technology research and investment</p>	Page 16-17
<p>CA EE SP Goal 2 (11): Targeted R&amp;D</p> <p>CA EE SP Strategy 2-1: Develop general R&amp;D community support for support Big Bold Initiatives</p>	Page 19-20

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CA EE SP Strategy 2-3: Develop initiatives aimed at PIER to support larger gains in support of Big Bold Initiatives.	
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<b>Short-term (2010-2012) "SMART" Program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
By 2012, ETP will achieve the PIP objectives set for each of the ETP sub-program as well as the objectives included in this document.	Staff

<b>Short-term Program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
The number of new "proven" ET measures added into the EE Portfolio.	Staff/DR	2b	N
Potential energy impacts (energy savings and demand reduction) of the adopted ET measures into the EE portfolio.	Staff/DR	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) "SMART" Program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
(1) HVAC Technologies: (1-1) Incorporate radiant cooling, ductless systems, ground source heat pumps, etc. into 25 percent or more of new and existing construction by 2015. (1-2) Incorporate radiant cooling, ductless systems, ground source heat pumps, etc. into 50 percent or more of new and existing construction by 2020.	Staff/SP HVAC Chapter Strategies 3-1, page 63.
(2) By 2015, X number of ETP measures origination from 2006-2012 program period for which CASE studies are conducted by Codes and Standards program.	Staff
(3) By 2020, X number of ETP measures are adopted by the CEC and/or DOE.	Staff

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

<b>Long-Term ETP MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
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<p>(1) Market penetration (percent of buildings/percent of homes) of new climate-appropriate HVAC technologies (equipment and controls, including system diagnostics) resulting from ETP:</p> <ul style="list-style-type: none"> <li>(a) Existing Residential</li> <li>(b) Residential New Construction</li> <li>(c) Existing Commercial</li> <li>(d) Commercial New Construction</li> </ul>	<p>Staff/SP HVAC Chapter, Goal 4, page 58.</p>	<p>3</p>	<p>N</p>
<p>(2) Number of ETP measures adopted into building codes and/or appliance standards by CEC and/or DOE.</p>	<p>Staff</p>	<p>3</p>	<p>N</p>

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Emerging Technologies - Technology Assessment Subprogram

	<b>Mission</b>
<b>SW Program: Emerging Technologies</b>	The cornerstone of ETP remains assessment: testing EE technologies in laboratories or real-life settings to verify performance and energy savings/ demand reduction claims, and usability by customers and installation contractors.
<b>SW Sub-program: Technology Assessment</b>	Technology assessments will contribute to increased measure awareness, market knowledge and reduced performance uncertainties for ETP stakeholders and IOU customers. This will lead to changes in organizational practices and customs that may otherwise limit EE measure procurement and application. Technology assessments will also contribute to increased and improved technology supply, leading to further reductions in market barriers, increased intent to purchase/employ measures, and more EE rebates issued. Over time, they will support increasing use of measures by customers, aiding EE programs in achieving energy and demand savings targets, and meeting long term Strategic Plan and policy objectives.

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b>	<b>CA EESP Ref. pp. #</b>
<p><b><u>Residential Chapter CA EESP</u></b></p> <p><b>Goal (1)</b> New construction will reach “zero net energy” (ZNE) performance (including clean, onsite distributed generation) for all new single and multi-family homes by 2020.                      Goal Results:                          By 2011, 50% of new homes will surpass 2005 Title 24 standards by 35%; 10% will surpass 2005 Title 24 standards by 55%.                          By 2015, 90% will surpass 2005 Title 24 standards by 35%.                          By 2020, all new homes are ZNE.</p> <p><b>Goal( 2)</b> Home buyers, owners and renovators will implement a whole-house approach to energy consumption that will guide their purchase and use of existing and new homes, home equipment (e.g., HVAC systems), household appliances, lighting, and “plug load” amenities.                      Goal Results:                          Energy consumption in existing homes will be reduced by 20% by 2015 and 40% by 2020 through universal demand for highly efficient homes and products.</p> <p><b>Goal (3)</b> Plug loads will be managed by developing consumer electronics and appliances that use less energy and provide tools to enable customers to understand and manage their energy demand.</p>	p. 11

<p><u>Goal Results:</u> Plug loads will grow at a slower rate and then decline through technological innovation spurred by market transformation and customer demand for energy efficient products.</p> <p><u>Goal (4)</u> The residential lighting industry will undergo substantial transformation through the deployment of high-efficiency and high-performance lighting technologies, supported by state and national codes and standards.</p> <p><u>Goal Results:</u> Utilities will begin to phase traditional mass market CFL bulb promotions and giveaways out of program portfolios and shift focus toward new lighting technologies and other innovative programs that focus on lasting energy savings and improved consumer uptake.</p>	
<p><b><u>Commercial Chapter CA EESP</u></b></p> <p><u>Goal (1)</u> New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.</p> <p><u>Goal Results</u> An increasing percentage of the 50-120 million sq.ft. per year of new commercial construction will be progressively more efficient and all new construction will be zero net energy by 2030.</p> <p><u>Goal (2)</u> 50 percent of existing buildings will be equivalent to zero net energy buildings by 2030 through achievement of deep levels of energy efficiency and clean distributed generation.</p> <p><u>Goal Results:</u> 250 million square feet (1/20th of existing space) per year through 2030 reach deep levels of energy efficiency improvements and clean, distributed generation through whole building approaches.</p> <p><u>Goal (3)</u> The commercial lighting industry will undergo substantial transformation through the deployment of high-efficiency and high-performance lighting technologies, spurred by State and national codes and standards and leading-edge incentive strategies.</p> <p><u>Goal Results</u> Utilities will begin to phase out traditional mass market CFL bulb promotions and giveaways from program portfolios and shift toward new lighting technologies and innovative systems that focus on lasting energy savings and more rapid consumer uptake.</p>	p. 31
<p><b><u>HVAC Chapter CA EESP</u></b></p> <p><u>Goal (3)</u> Whole building design and construction practices fully integrate building performance objectives to reduce cooling and heating loads.</p> <p><u>Goal Results:</u> Integrated design and construction practices are standard practice by 2020.</p> <p><u>Goal (4)</u> New climate-appropriate HVAC technologies (equipment and controls, including system diagnostics) are developed with accelerated market penetration.</p> <p><u>Goal Results:</u></p>	P. 59

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<p>At least 15 percent of equipment shipments are optimized for California’s climate by 2015 and 70 percent by 2020.</p>	
<p><u>Residential Chapter (New Construction) CA EESP</u>  <u>Strategy 1-1:</u> Drive continual advances in technologies in the building envelope, including building materials and systems, construction methods, distributed generation, and building design.  Near Term (2010-12)  -Develop and participate in pilot projects in specific climates to prove technologies for next generation of lower and zero energy homes, including affordable housing projects.  -Continually monitor performance of pilot projects to provide feedback for next level of design and development of technologies.  - Advance technological innovation through collaboration of Energy Commission PIER and Emerging Technologies Programs, LBNL, NREL, Utilities, CBIA, and other appropriate organizations.  -Assess existing technologies and identify areas for strategic involvement in research and development.</p>	<p>p. 16</p>
<p><u>Residential Chapter (Existing Homes) CA EESP</u>  <u>Strategy 2-3:</u> Manage research into new/advanced cost effective innovations to reduce energy use in existing homes  -Gather and disseminate information on advanced retrofits.  - Advance technological innovation through collaboration of Energy Commission PIER and Emerging Technologies Programs, Utilities and other appropriate organizations.  - Promote commercialization of home energy management tools including AMI-based monitoring and display tools.</p>	<p>p. 20</p>
<p><u>Residential Sector (Plug Loads) CA EESP</u>  <u>Strategy 3-1</u> Drive continual advances in residential energy usage, including plug loads, home energy management systems, and appliances.  Near-Term (2010-12)  - Work with research organizations to develop smarter products with lower energy requirements.  - Work with manufacturers to raise product energy efficiency, both when in use and when in standby mode.  Mid-Term (2012-15): 10% reduction in plug loads  Long-Term (2016-20): 25% reduction in plug loads</p>	<p>P. 21</p>
<p><u>Commercial Chapter CA EESP</u>  <u>Strategy 1-3</u> Establish a “Path to Zero” Campaign to create demand for high-efficiency buildings.  Near-Term  Organize forums to develop and exchange experience and data on emerging technologies, practices and designs that deliver ultra-low and ZNE buildings.</p>	<p>p. 34</p>
<p><u>HVAC Chapter CA EESP</u>  <u>Goal: 3-1:</u> Aggressively promote whole building design concepts that improve the overall thermal integrity of new and existing structures.  Near Term:  Review priorities of PIER and Emerging Technologies program activities to more fully support newer HVAC technologies and</p>	<p>pp. 63-64</p>

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<p>systems.</p> <p><b>Goal 4:</b> New climate-appropriate HVAC technologies (equipment and controls, including system diagnostics) are developed with accelerated marketplace penetration.</p> <p>Near Term: Include standard program offerings that emphasize HVAC related elements to whole building approaches.</p> <p>Mid-Term: Incorporate radiant cooling, ductless systems, ground source heat pumps, etc. into 25 percent or more of new and existing construction by 2015.</p> <p>Long-Term: Incorporate radiant cooling, ductless systems, ground source heat pumps, etc. into 50 percent or more of new and existing construction by 2020.</p>	
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<b>Short-term (2010-2012) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
<p>1. During 2010-12, assess (121) xx EE measures including demand-side management measures (IDSM)</p> <p>PG&amp;E: 45 SCE: 36 SDG&amp;E: 20 SCG: 20</p>	PIP
<p>2. During 2010-12, transfer (47) xx EE measures from ETP into the EE programs, with the goal of producing energy savings and/or demand reduction.</p> <p>PG&amp;E: 20 SCE: 15 SDG&amp;E: 7 SCG: 5</p>	PIP
<p>3. By 2012, X number of technologies are incorporated into the EE portfolio.</p>	Staff
<p>4. By 2012, one or more technologies are assessed by ETP in the following areas:</p> <p>(a) Climate-appropriate HVAC technologies (equipment and controls, including system diagnostics)</p> <p>(b) High efficiency plug loads, home energy management systems, and/or appliances</p> <p>(c) Advanced lighting technologies (to achieve best practices as laid out in the Lighting Chapter of SP)</p>	Staff (based on SP)

<b>Short-term Sub-program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>



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<p>1. Number of ETP measures that are incorporated into the EE portfolio, including but not limited to each of the following:</p> <ul style="list-style-type: none"> <li>(a) Advance HVAC technologies</li> <li>(b) High efficiency plug loads and appliances</li> <li>(c) Advanced lighting technologies</li> </ul>	Staff	2b	N
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*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.*

<b>Long-Term (2013-2020) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
None proposed at subprogram level. (See program level.)	

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
None proposed at subprogram level. (See program level.)			

## Emerging Technologies - Scaled Field Placement Subprogram

	Mission
SW Program: <b>Emerging Technologies</b>	<p><b>SFP allows ETP managers the opportunity to "show and tell" the most promising yet underutilized EE measures to key influencers. By placing EE measures at multiple, targeted customer sites, the expectation is that these key stakeholders -- installers, builders, procurement officers, etc. -- will have a positive first-hand experience and recommend the technology to others, thus enhancing market traction.</b></p> <p>Scaled field placements will contribute to increased measure awareness, market knowledge and reduced performance uncertainties for ETP stakeholders and large scale customer decision makers and decision influencers. This will lead to changes in organizational practices and customs that may otherwise limit EE measure procurement and application.</p> <p>Scaled field placements can also contribute to a market tipping point, in which an influential buyer or decision maker responsible for large volume purchase decides to specify the EE measure – thus creating a spike in market demand and exposure for many people who experience the measure once it is implemented. Over time, scaled field placements may support increasing use of measures by customers, aiding EE programs in achieving energy and demand savings targets, and meeting long term Strategic Plan and policy objectives.</p>
SW <u>Sub-program:</u> <b>Scaled Field Placement (SFP)</b>	

CA EESP Goals/Strategies Addressed by SW Sub-program:	CA EESP Ref. pp. #
CA EE SP Goal 2 (11): Targeted R&D	Page 84
CA EE SP Strategy 2-2: Promote cost-effective near- term performance enhancements of existing technologies CA EE SP Strategy 2-4: Develop initiatives aimed at ET to support Big Bold Initiatives.	Page 88

Short-term (2010-2012) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
<p>1. During 2010-12, conduct at least (23) xx Scaled Field Placement to increase market understanding and tractions of new and underutilized measures.</p> <p>PG&amp;E: 10 SCE: 6</p>	PIP

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SDG&E: 4 SCG: 3	
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<b>Short-term Sub-program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Number of ETP measures coming out of SFP that are incorporated into the EE portfolio.	Staff	2b	N
2. Number of ETP measures purchased by targeted SFP customers.	Staff	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
None proposed at subprogram level. (See program level.)	

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
None proposed at subprogram level. (See program level.)			

## Emerging Technologies - Demonstration Showcases Subprogram

	<b>Mission</b>
SW Program: <b>Emerging Technologies</b>	DS provides customers the opportunity to "kick the tires" on proven yet underutilized combinations of EE measures that advance ZNE goals. Demonstration Showcases are awareness-generating projects that expose EE measures on a systems level to large groups of customers in real-world settings, thus creating broad public and technical community exposure and increased market knowledge. Demonstration showcases will contribute to increased measure awareness, market knowledge and reduced performance uncertainties for ETP stakeholders and IOU customers. This will lead to changes in organizational practices and customs that may otherwise limit EE measure procurement and application.
SW Sub-program: <b>Demonstration Showcases (DS)</b>	

CA EESP Goals/Strategies Addressed by SW Sub-program:	CA EESP Ref. pp. #
CA EE SP Goal 2 (11): Targeted R&D	p. 84
Strategy 2-4: Develop initiatives aimed at ET to support Big Bold Initiatives.	p. 88

Short-term (2010-2012) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. During 2010-12, develop (17) xx IOU Demonstration Showcases to expose stakeholders to the performance of measures.  PG&E: 7 SCE: 6 SDG&E: 2 SCG: 2	PIP

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
2. Number of ETP measures coming out of DS that are incorporated into the EE portfolio.	Staff	2b	N

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3. Increased knowledge amongst customers (customers exposed to the showcase either directly or by word of mouth) of targeted ET measures through DS.	Staff	2b	N
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\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at subprogram level. (See program level.)	

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
None proposed at subprogram level. (See program level.)			

## Emerging Technologies - Market and Behavioral Studies Subprogram

	<b>Mission</b>
SW Program: <b>Emerging Technologies</b>	<p><b>M&amp;B studies involve primary or secondary research on customer behavior, decision making, and perceptions, as well as market acceptance and potential for new measures. Market &amp; Behavior Studies support all of the other ETP elements.</b></p> <p>Market and behavioral studies will contribute to increased measure awareness, market knowledge and reduced performance uncertainties for ETP stakeholders and IOU customers. This will lead to changes in organizational practices and customs that may otherwise limit EE measure procurement and application. Market and behavioral studies will also contribute to increased and improved technology supply leading to further reductions in market barriers, increased intent to purchase/employ measures, and more EE rebates issued. Over time, they will support increasing use of measures by customers, aiding EE programs in achieving energy and demand savings targets, and meeting long term Strategic Plan and policy objectives.</p>
SW Sub-program: <b>Market and Behavioral Studies (M&amp;B)</b>	

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b>	<b>CA EESP Ref. pp. #</b>
CA EE SP Goal 1 (11): Create Demand Pull for New Technology	p. 85
CA EE SP Strategy 1-3: Enhance market intelligence and behavioral research activities related to energy efficient technologies.	P. 86

<b>Short-term (2010-2012) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
<p>(1) During 2010-12, perform targeted studies of customer behavior, decision-making, and market behavior to gain understanding of customer/market perception and acceptance, and to identify potential barriers to measure adoption.</p> <p>PG&amp;E: SCE:</p>	PIP

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SDG&E: SCG:	
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Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
Increased knowledge amongst customers (ET stakeholders and EE customers) of targeted ET measures through M&B education and marketing materials.	Staff	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]  
 \*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at subprogram level. (See program level.)	

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
None proposed at subprogram level. (See program level.)			

## Emerging Technologies - Technology Development Support Subprogram

	Mission
SW Program: Emerging Technologies	<p><b>TDS allows ETP the opportunity to lend assistance to private industry in the development of technology. Although product development is the domain of private industry, opportunities exist where the IOUs are well qualified or in a strong position to provide targeted, cost-effective assistance. This support increases market readiness, decreases innovator uncertainties, and allows ETP to have input.</b></p> <p>Technology development support will contribute to increased readiness and availability of EE measures for customers and EE program managers and reduced uncertainties for program participants. It also contributes to engagement in product development decision-making by ETP stakeholders and large-scale customer decision makers and decision influencers. This will lead to changes in organizational practices and customs and can lead to reduced maintenance and installation costs that may otherwise limit EE measure procurement and application.</p> <p>The increased and improved technology supply due to technology development support will also lead to further reductions in market barriers and increased intent to purchase/employ measures. Over time, this will support increasing use of measures by customers, aiding EE programs in achieving energy and demand savings targets, and meeting long term Strategic Plan and policy objectives.</p>
SW Sub-program: <b>Technology Development Support (TDS)</b>	

CA EESP Goals/Strategies Addressed by SW -program:	CA EESP Ref. pp. #
CA EE SP Goal 1 (11): Create Demand Pull for New Technology	pp. 84-85
CA EE SP Goal 2 (11): Targeted R&D	
CA EE SP Strategy 1-2: Leverage private industry and Federally funded technology research and investment	p. 86 and p. 88
CA EE SP Strategy 2-4: Develop initiatives aimed at ET to support Big Bold Initiatives.	

Short-term (2010-2012) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
(1) During 2010-12, ETP will screen, select, and implement (10) xx targeted technology development support projects to benefit EE product development.	PIP



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PG&E: 3 SCE: 3 SDG&E: 2 SCG: 2	
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Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
Number of ETP measures coming out of TDS that are incorporated into the EE portfolio.	Staff	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at subprogram level. (See program level.)	

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
None proposed at subprogram level. (See program level.)			

## Emerging Technologies – Business Incubation Support/Technology Resource Incubator Subprogram

	Mission
SW Program: <b>Emerging Technologies</b>	<p>TRIO is a statewide program designed to nurture new technologies from universities, entrepreneurs, and investors through symposiums and roundtables. Participants receive information on how utilities can help guide the commercialization of EE technologies and/or programs.</p> <p>Business incubation support will engender improved understanding of utility programs as well as of technology and business performance and market requirements for small entrepreneurs or large enterprises seeking to develop and/or introduce new EE measures successfully into the market. It will reduce uncertainties for program participants, increase the readiness and availability of EE measures, and increase participation in the IDEEA program as well as in EE incentive and education programs.</p> <p>Business incubation support will also contribute to increased and improved technology supply over the mid- and long-term, leading to reductions in other market barriers, increased intent to purchase / employ measures, and more EE rebates issued. Over time, it will support increasing use of measures by customers, aiding EE programs in achieving energy and demand savings targets, and meeting long term Strategic Plan and policy objectives.</p>
SW <u>Sub-program:</u> <b>Business Incubation Support/Technology Resource Incubator (TRIO)</b>	

CA EESP Goals/Strategies Addressed by SW Sub-program:	CA EESP Ref. pp. #
CA EE SP Goal 1 (11): Create Demand Pull for New Technology	Page 84
CA EE SP Strategy 1-2: Leverage private industry and Federally funded technology research and investment	Page 86

Short-term (2010-2012) “SMART” Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
Objective 1.1: Reach out to five universities, PIER, three investors, and other research organizations to solicit innovative EE concepts then screen those measures and bring them in as potential program participants.	PIP

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Objective 2.1: Provide one workshop per quarter, rotating between utilities, on “how to” do business with utilities.	PIP
Objective 2.2: (SCE only) Review 100 percent of the abstracts, submitted to the IDEEA program (SCE only), that are promising, but not developed to the appropriate stage for that program. In 2010-2012 the IDEEA solicitation will remain competitive and will now be offered year round.  By reviewing technologies and educating entrepreneurs more measures can be adopted in all IOU programs.	PIP

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
Number of ETP measures coming out of TRIO that are incorporated into the EE portfolio.	Staff	2b	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

Long-Term (2013-2020) “SMART” Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at subprogram level. (See program level.)	

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
None proposed at subprogram level. (See program level.)			

## Emerging Technologies – Technology & Testing Center Subprogram

	Mission
SW Program: Emerging Technologies	TTCs offer flexible and impartial laboratory testing, analysis, and technical expertise for refrigeration, air conditioning, and lighting EE technologies.
SW Sub-program: <b>Technology &amp; Testing Center (TTC/ZNE)</b>	<p>The new residential ZNE Test Center, slated for construction during the 2010-12 cycle, will allow SCE and its partners to assess and validate EE technologies on a systems level.</p> <p><b>PG&amp;E</b></p> <p><b>ZNE Lab Goal 1:</b> Provide a cost- and time-effective means to identify technologies that may enable ZNE homes, commercial buildings, and communities.</p> <p><b>ZNE Demo Home Goal 1:</b> Provide a one-stop solution to test and demonstrate integrated ZNE measures, train technical partners and educate the community.</p> <p><b>SCE</b></p> <p><b>TTC Goal 1:</b> Contribute to the technology evaluation efforts that accelerate the commercialization of energy efficient measures.</p> <p><b>TTC Goal 2:</b> Contribute to the Strategic Plan goal of ZNE residential construction by 2020, commercial ZNE, including existing buildings, by 2030.</p> <p><b>TTC Goal 3:</b> Contribute to increased EE awareness of California residents.</p>

CA EESP Goals/Strategies Addressed by SW Sub-program:	CA EESP Ref. pp. #
CA EE SP Goal 2 (11): Targeted R&D	p. 84
CA EE SP Strategy 2-4: Develop initiatives aimed at ET to support Big Bold Initiatives	p. 88

Short-term (2010-2012) “SMART” Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
Objective 3.1: Help advance at least 15 innovative measures and/or strategies to support Zero Net Energy New Residential Construction, Zero Net Energy New Commercial Construction, Zero Net Energy for Existing Buildings, HVAC Industry and Market Transformation, and related solutions during 2009–2011.	PIP
Objective 3.2 – SCE Technology Test Center: (SCE only)	PIP
TTC Objective 1.1: Perform independent, unbiased lab testing of existing products, new technologies and control schemes in support of EE goals.	

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TTC Objective 2.1: Expand test capabilities to include a ZNE Test Center.	
Objective 3.3: (PG&E only) Create the PG&E Zero Net Energy Laboratory resource for providing independent verification of the performance and energy savings of technologies with potential to help meet zero-net energy (ZNE) goals and support design of ZNE codes and standards. ZNE Lab Objective 1.1: By 2011 make operational a ZNE lab for testing ZNE measures and the integration of ZNE measures.	PIP

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
Number of ETP measures coming out of TTC/ZNE that are incorporated into the EE portfolio (and/or available in the market).	Staff	2b	N

Long-Term (2013-2020) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
None proposed at subprogram level. (See program level.)	

Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
None proposed at subprogram level. (See program level.)			

## Integrated Demand-Side Management Program

	<b>Mission</b>
<b>SW Program: Integrated Demand Side Management</b>	The California Long Term Energy Efficiency Strategic Plan (Strategic Plan) encourages programs that integrate the full range of demand-side management (DSM) options: energy efficiency (EE), demand response (DR), and distributed generation (DG) as fundamental to achieving California’s strategic energy goals. This program presents the coordinated effort that the IOUs will make in full collaboration with the CPUC Energy Division. The IOUs have identified integrated DSM (IDSM) as an important priority. In the IOUs’ 2009-2011 EE applications, each IOU has included separate exhibits on IDSM as well as specific integration activities within each PIP at the statewide and local program level, as instructed by the CPUC. In addition, each IOU has proposed individual series of activities, pilots and other programs in response to the Strategic Plan's DSM Coordination and Integration Strategy. Through all of these approaches, IDSM will be advanced in significant ways. In addition to each IOU’s individual IDSM activities and pilots, the IOUs are proposing a statewide IDSM effort that will establish a Statewide Integration Task Force (Task Force). Efforts of the Task Force will encompass activities that promote in a statewide-coordinated fashion IDSM strategies identified in the strategic Plan,

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b>	<b>CA EESP Ref. pp. #</b>
<b>Goal:</b> Deliver integrated demand side energy management options that include efficiency, demand response, energy management, and self-generation measures through coordinated marketing and regulatory integration.	p. 72
<b>Strategy 1-1:</b> Carry out integrated marketing of IDSM opportunities across all customer classes.	p. 73
<b>Strategy 1-2:</b> Contact IDSM delivery pilots in the residential, commercial, industrial, and agricultural sector.	p. 73
<b>Strategy 1-3:</b> Develop IDSM programs across resources, including energy, water, and transportation.	p. 73
<b>Strategy 1-4:</b> Promote development and support of new technologies that enable or facilitate IDSM coordination and integration.	p. 73

<b>Short-term (2010-2012) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2012, Utilities restructure internally to support integration of demand side resources in the form of program offerings, implementation, and funding / incentive processing, marketing, education, and outreach (yes/no objective).	IOU / ED Staff

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2. By 2012, Utilities establish lessons learned and best practices to support the above via their integrated pilot program offerings in every customer segment (commercial, residential, industrial, agriculture) to ramp up integrated program and incentive offerings. (yes/no objective).	D.09-09-047 p. 211 Statewide PIP p. 4 (PG&E)
3. By 2012 Water conservation, GHG and waste reduction strategies are significantly incorporated into integrated program offerings (yes/no objective).	D.09-09-047 p. 210
4. By 2011, complete a white paper on cost-effectiveness and evaluation methodologies (yes/no objective).	D.09-09-047 p. 210 Statewide PIP p. 2 (PG&E)
5. By 2012, complete a white paper with metrics & reporting mechanisms for tracking success of integrated efforts consistent w/ EM&V (yes/no objective).	D.09-09-047 p. 211 Statewide PIP p. 3 (PG&E)
6. By 2012 complete a white paper on recommendations for integrated program funding and recommended changes to inhibiting policies (yes/no objective).	Statewide PIP p. 6 (PG&E)
7. By 2012, 100 % of IOU program staff understand how integration relates to and impacts their programs (yes/no objective).	Statewide PIP p. 6 (PG&E)
8. By 2011, develop a process for identifying, recommending, and initiating promotion of enabling/supporting policies / technologies for inclusion in appropriate DSM programs (ex: Emerging Technologies Road Map – IDSM promoting technologies) (yes/no objective).	D.09-09-047 p. 211 Statewide PIP p. 3 (PG&E)
9. By 2012 all audits offered through utility funded programs are fully integrated (including EE, DR, DG recommendations) (yes/no objective).	D.09-09-047 p. 215
10. By 2012 complete a status report that identifies how well “integrated” (EE, DR, DG) all IOU demand side energy program offerings and components are (ex: CEI, Commercial, Ag, Industrial, Residential, Audits) including lessons learned, improvement plans, and how the program portfolio is addressing strategic planning goals and objectives / Decision directives with regard to integration including all PPM objectives included here. (Yes / No Metric)	

Short-term <u>Sub-program</u> PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
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1. 100% of IOU program staff understand how integration relates to and impacts their programs (Y/N)	Statewide PIP p. 6 (PG&E)	<b>2b</b>	<b>N</b>
2. All audits for non-residential and residential customers are fully integrated (Y/N)	D.09-09-047 p. 215	<b>2b</b>	<b>N</b>
3. Complete and make available an integrated on-line audit tool (Y/N)	D.09-09-047 p. 215	<b>2a</b>	<b>N</b>
4. A status report that identifies how well “integrated” (EE, DR, DG) all IOU demand side energy program offerings and components are (ex: CEI, Commercial, Ag, Industrial, Residential, Audits) including lessons learned, improvement plans, and how the program portfolio is addressing strategic planning goals and objectives / Decision directives with regard to integration and all the IDSM program objectives listed here is completed. (Y/N)	D.09-09-047 p. 211 Statewide PIP p. 4 (PG&E)	<b>2b</b>	<b>N</b>

<b>Long-Term (2013-2020) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2015, X% of customers aware of online and onsite integrated audits	D.09-09-047 p. 215
2. By 2015, X% of customers have participated in integrated audits and X% of integrated audit participants (by audit type) have implemented one or more of the audit recommendations (indicate how many incentivized vs. non-incentivized)	D.09-09-047 p. 215
3. By 2015, X% of customers in the different customer classes are aware of integrated programs or incentive opportunities as a result of local integrated marketing collateral	IOU / ED Staff Statewide PIP p. 6 (PG&E) D.09-09-047 p. 211 Statewide PIP p. 4 (PG&E)
4. By 2015 complete a process evaluation that identifies how well “integrated” (EE, DR, DG) all IOU demand side energy program offerings and components are (ex: CEI, Commercial, Ag, Industrial, Residential, Audits) including estimated savings of integrated programs and projects, lessons learned, improvement plans, and how the program portfolio is addressing strategic planning goals and objectives / Decision directives with regard to integration. (Y/N)	D.09-09-047 p. 211 Statewide PIP p. 4 (PG&E)

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
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1. Percent of customers who are aware of online and onsite integrated audits	D.09-09-047 p. 215	3	N
2. Percent of customers in each customer class who have received an integrated audit and percent of these customers (by audit type) who have implemented one or more of the audit recommendations (indicate how many incentivized vs. non-incentivized)	D.09-09-047 p. 215	3	N
3. Percent of customers in each customer classes who are aware of integrated programs or incentive opportunities as a result of local integrated marketing collateral (indicate how many of these customers have participated in an integrated program (one that promotes EE, DG, and DR)	IOU / ED Staff Statewide PIP p. 6 (PG&E) D.09-09-047 p. 211 PIP p. 4 (PG&E)	3	N
4. A process evaluation that identifies how well "integrated" (EE, DR, DG) all IOU demand side energy program offerings and components are (ex: CEI, Commercial, Ag, Industrial, Residential, Audits) including estimated savings of integrated programs and projects, lessons learned, improvement plans, and how the program portfolio is addressing strategic planning goals and objectives / Decision directives with regard to integration. (Y/N)	D.09-09-047 p. 211 Statewide PIP p. 4 (PG&E)	3	N

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Workforce, Education, and Training – Centergies Subprogram

	Mission
SW Program: <b>WE&amp;T</b>	The Statewide IOU Workforce Education and Training (WE&T) Program represents a portfolio of education, training, and workforce development planning and implementation funded by or coordinated with the Investor-Owned Utilities. Education and training are vital components of each of the IOU’s energy efficiency portfolio filings for 2009-2011 and are integral in supporting the achievement of IOU energy savings targets and the workforce objectives set forth in the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan). Workforce Education and Training has become an important crosscutting activity for the IOUs in an effort to not only educate and train current workers, but to prepare future workers to be better able to successfully perform the jobs needed to help achieve increased energy savings targets for the IOUs and California’s clean energy goals.
SW Sub-program: <b>Centergies</b>	The WE&T Centergies Sub-Program is generally organized around market sectors and cross-cutting segments to facilitate workforce education and training appropriate for achieving the energy savings, demand reductions and related energy initiatives required of the IOUs. The Energy Centers represent the largest component of this Sub-Program and provide WE&T curriculum and related deliverables—training courses, seminars, workshops, clean energy technology demonstration, equipment efficiency testing, interactive training exhibits and lectures—to promote industry trends and developments for advancing energy efficiency as a professional discipline.

CA EESP Goals/Strategies Addressed by SW <u>Sub-program</u> :	CA EESP Ref. pp. #
<b>Goal 1:</b> Establish energy Efficiency education and training at all levels of California’s educational systems.	p. 74
<b>Goal 2:</b> Ensure that all minority, low-income, and disadvantaged communities fully participate in training and education programs at all levels of the demand side energy management industry.	p. 74
<b>Strategy 1-2:</b> Support the community college and adult education efforts to support students to develop their education based on visible career paths in energy efficiency and related fields.	p. 77
<b>Strategy 1-3:</b> Incorporate EE and demand side energy management skills into traditional contractor and technician training.	p. 77
<b>Strategy 1-4:</b> Create or expand college and university programs with EE focus and foster green campus efforts to apply this knowledge in clear view of students and faculty	p. 77

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<b>Short-term (2010-2012) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2012, the number of Centergies program educational partnerships within all adult education levels (CCC, CSU, UC, Trade & Labor, Adult Education) increases by X% (identify proportion of partnerships that address low-income participants / communities).	CEESP (see above) / Statewide WE&T PIP p. 22 - 23
2. By 2012, the number of identified low-income (pre-determined criteria) Centergies program participants increases by X%.	CEESP (see above) / Statewide WE&T PIP p. 22
3. By 2012, the number of high school level continuing education outreach partnerships the IOU Centergies program supports increase by X%.	CEESP (see above) / IOU – Stakeholder workshops
4. By 2012, a significant number of Centergies training courses includes the subject of Integrated Demand Side Energy Management skillsets (EE, DR, DG) in a way that promotes understanding of all these resources and how they interact as well as the career and educational paths associated with them (Yes / No Metric)	CEESP (see above) / Statewide WE&T PIP p. 39

<b>Short-term Sub-program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Number of Centergies program educational partnerships within all adult education levels (CCC, CSU, UC, Trade & Labor, Adult Education)	CEESP (see above) / Statewide WE&T PIP p. 22 - 23	2B	N
2. Number of identified low-income (pre-determined criteria) Centergies program participants	CEESP (see above) / Statewide WET PIP p. 22	2A	N
3. Number of high school level continuing education outreach partnerships the IOU Centergies program supports	CEESP (see above) / IOU – Stakeholder workshops	2A	N
4. Number of Centergies training courses that include the subject of Integrated Demand Side Energy Management skillsets (EE, DR, DG) in a way that promotes understanding of all these resources and how they interact as well as the career and educational paths associated with them (Y/N)	CEESP (see above) / Statewide WET PIP p. 39	2A	N

\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]

\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2015, X% of Centergies past program participants state an interest in pursuing green careers as a result of program participation (identify figures for low-income participants).	CEESP (see above) / Statewide WE&T PIP p. 30

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2. By 2015, utilized job knowledge and skill sets that past participants received by participating in the Centergies program represents X%. (identify figures for low-income participants)	CEESP (see above) / Statewide WE&T PIP p. 30
3. By 2015, the number of Centergies participants that credit participation in the program as a significant reason they are currently working in a clean energy job represents X%. (identify figures for low-income participants).	CEESP (see above) / Statewide WE&T PIP p. 30
4. By 2015, most of the IOU WE&T portfolio of training programs address the gaps identified in the statewide WE&T Needs Assessment (includes low-income) and are significantly partnering with all levels of outside educational organizations to address these gaps (Yes / No Metric)	CEESP (see above) Statewide PIP p. 5, 14, 69–74, 87

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Percent of Centergies past program participants that state an interest in pursuing green careers as a result of program participation (identify figures for low-income participants)	CEESP (see above) / Statewide WE&T PIP p. 30	3	N
2. Percent of past Centergies participants that attribute the program for the job knowledge and skill sets they currently use in their job. (identify figures for low-income participants)	CEESP (see above) / Statewide WE&T PIP p. 30	3	N
3. Percent of past Centergies participants that attribute the program as a significant reason they are currently working in a clean energy job. (identify figures for low-income participants)	CEESP (see above) / Statewide WE&T PIP p. 30	3	N
4. IOU WE&T portfolio of training programs address the gaps identified in the statewide WE&T Needs Assessment (includes low-income) and are significantly partnering with all levels of outside educational organizations to address these gaps (Y/N)	CEESP (see above) Statewide PIP p. 5, 14, 69–74, 87	3	N

*\*SP=Strategic Plan, AL=Advice Letter, DR=Data Request Response, PIP=program plans, Staff=ED proposed. [Include page reference when applicable.]*

*\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.*

## Workforce, Education, and Training – Connections Subprogram

	<b>Mission</b>
<b>SW Program: WE&amp;T</b>	The Statewide IOU Workforce Education and Training (WE&T) Program represents a portfolio of education, training, and workforce development planning and implementation funded by or coordinated with the Investor-Owned Utilities. Education and training are vital components of each of the IOU’s energy efficiency portfolio filings for 2009-2011 and are integral in supporting the achievement of IOU energy savings targets and the workforce objectives set forth in the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan). Workforce Education and Training has become an important crosscutting activity for the IOUs in an effort to not only educate and train current workers, but to prepare future workers to be better able to successfully perform the jobs needed to help achieve increased energy savings targets for the IOUs and California’s clean energy goals.
<b>SW Sub-program: Connections</b>	The WE&T Connections Sub-Program is organized around downstream and upstream relationships between the IOUs and the educational sector, entry and intro-level community-based training efforts that support workforce development in energy efficiency, energy management, and new emerging green careers. This Sub-Program emphasizes education curriculum and related activities that inspire interest in energy careers, new and emerging technology, and future skills development to advance the energy initiatives and goals of the state. This Sub-Program involves expanded relationship-building to foster curriculum development and related training that result from existing and expanding industry needs. IOUs will work with education institutions, labor and communities to nurture interest in green careers by K-12, community college, occupational, vocational, and major university students, as well as assist in the growth of low-income and transitional workforce targeted clean energy training programs.

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b>	<b>CA EESP Ref. pp. #</b>
<b>Goal 1:</b> Establish energy Efficiency education and training at all levels of California’s educational systems.	p. 74
<b>Goal 2:</b> Ensure that all minority, low-income, and disadvantaged communities fully participate in training and education programs at all levels of the demand side energy management industry.	p. 74
<b>Strategy 1-2:</b> Support the community college and adult education efforts to support students to develop their education based on visible career paths in energy efficiency and related fields.	p. 77
<b>Strategy 1-3:</b> Incorporate EE and demand side energy management skills into traditional contractor and technician training.	p. 77
<b>Strategy 1-4:</b> Create or expand college and university programs with EE focus and foster green campus efforts to apply this knowledge in clear view of students and faculty	p. 77

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<b>Strategy 1-5:</b> Develop K- 12 curriculum to include EE fundamentals (e.g. math, science, behavior) and identify career options in energy-related fields.	
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<b>Short-term (2010-2012) "SMART" Sub-program Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2012, the number of Connections program educational partnerships (pre-determined criteria) within all adult education levels (CCC, CSU, UC, Trade & Labor, Adult Education, K - 12) increases by X% (identify proportion of partnerships that address low-income participants / communities).	CEESP (see above) / Statewide WE&T PIP p. 47
2. By 2012, the number of identified low-income (pre-determined criteria) Connections program participants / Schools in low-income communities increases by X%.	CEESP p. 74
3. By 2012, the number of high school level continuing education outreach partnerships the IOU Connections program supports increase by X%.	CEESP (see above) / IOU – Stakeholder workshops / Statewide WE&T PIP p. 47
4. By 2012, a significant number of Connections educational courses includes the subject of Integrated Demand Side Energy Management knowledge and awareness (EE, DR, DG) in a way that promotes understanding of how all these resources interact and mitigate GHG environmental impacts as well as the career paths associated with them (Y/N)	CEESP (see above) / Statewide WE&T PIP p. 67

<b>Short-term Sub-program PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Number of Connections program educational partnerships (pre-determined criteria) within all adult education levels (CCC, CSU, UC, Trade & Labor, Adult Education, K - 12) (identify proportion of partnerships that address low-income participants / communities).	CEESP (see above) / Statewide WE&T PIP p. 47	2B	N
2. Number of identified low-income (pre-determined criteria) Connections program participants / schools in low-income neighborhoods	CEESP p. 74	2A	N
3. Number of high school level continuing education outreach partnerships the IOU Connection program supports	CEESP (see above) / IOU – Stakeholder workshops / PIP p. 47	2A	N
4. Number of Connections educational courses that include the subject of IDSM (EE, DR, DG) in a way that promotes understanding of how all these resources interact and mitigate GHG environmental impacts as well as the career paths associated with them.	CEESP (see above) / PIP p. 67	2A	N

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\*\*Metric type: 2a = reported annually, 2b = reported by end of cycle.

<b>Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
1. By 2015, X% of past participating schools have continued to offer the programs and curricula originally developed via IOU / educational organization partnerships without continued IOU support.	CEESP (see above)
2. By 2015, X% of trainers at all educational levels that participated in Connections sponsored train-the-trainer programs continue to utilize this knowledge in their current teaching positions.	Statewide PIP p. 37, 45, 76, 92
3. By 2015, most of the IOU WE&T portfolio of training programs address the gaps identified in the statewide WE&T Needs Assessment (includes low-income) and are significantly partnering with all levels of outside educational organizations to address these gaps (Y/N)	CEESP (see above) Statewide PIP p. 5, 14, 69–74, 87

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<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
1. Percent of past participating schools that have continued to offer the programs and curricula originally developed via IOU / educational organization partnerships without continued IOU support.	CEESP (see above)	3	N
2. Percent of trainers at all educational levels that participated in Connections sponsored train-the-trainer programs that continue to utilize this knowledge in their current teaching positions.	Statewide PIP p. 37, 45, 76, 92	3	N
3. IOU WE&T portfolio of training programs address the gaps identified in the statewide WE&T Needs Assessment (includes low-income) and are significantly partnering with all levels of outside educational organizations to address these gaps (Y/N)	CEESP (see above) Statewide PIP p. 5, 14, 69–74, 87	3	N

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\*\*Metric type: 3 = data collection, tracking, and reporting [by IOUs, CPUC staff, and/or other entities] to be determined later.

## Marketing, Education and Outreach Program

	Mission
SW Program: <b>Marketing, Education &amp; Outreach (ME&amp;O)</b>	Increase consumer awareness and participation in the state's energy efficiency, demand-side management and clean energy efforts by becoming fully informed of the importance of energy efficiency and their opportunities to act. (p. 79 CEESP)

<b>CA EESP Goals/Strategies Addressed by SW Sub-program:</b> Create and launch an integrated, statewide Marketing, Education and Outreach effort for Energy Efficiency, including an energy efficiency brand, resulting in high levels of awareness statewide of the value of energy efficiency that leads to strong demand for energy efficient products, homes and services	<b>CA EESP Ref. pp. #</b>
<b>Strategy 1-1:</b> Establish a recognizable and trustworthy brand for California's Energy Efficiency and other DSM consumer products & services <b>2010-2012 Near Term:</b> 1. Research appropriate look and meaning of a California efficiency/GHG reduction brand: (done) 2. Launch integrated efficiency/DSM brand in 2010	p. 82
<b>Strategy 1-2:</b> Develop an integrated marketing plan for all Californians. <b>2010-2012 Near Term Goals:</b> 1. Conduct SW segmentation research, on interests, awareness and attitudes/perceptions related to EE and GHG messaging (done); 2. Establish objectives and metrics for public campaign; 3. Develop targeted and highly relevant EE and DSM marketing messages to incite behavior change/action; 4. Create partnerships with private industry and businesses to help motivate consumer and business sector action; 5. Define deliverables for each strategy.	p. 82
<b>Strategy 1-3:</b> Use social marketing techniques to build awareness and change consumer attitudes, and perceptions. <b>2010-2012 Near Term Goals:</b> 1. Develop a roadmap for a social marketing approach including exploration of behavioral science principles.	p. 82
<b>Strategy 1-4:</b> Develop a California energy efficiency web portal with statewide information on GHG reductions, efficiency and DSM awareness and options. (done in Sept. 2010) <b>2010-2012 Near Term Goals:</b>	p. 82



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1. Develop initial web portal for the energy efficiency/DSM industry 2. Begin pilot programs in using web portal	
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Short-term (2010-2012) "SMART" Sub-program Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2012, increase awareness of energy efficient products and behaviors by x%.	SP, PIP
2. By 2012, increase awareness of energy efficiency utility and non-utility programs by X%.	Staff
3. By 2012, increase knowledge of energy efficient products and behaviors by x%.	SP, PIP
4. By 2012, increase knowledge of energy efficiency utility and non-utility programs by x%	PIP
5. By 2012, increase the number of self-reported energy efficiency/conservation behaviors by x%.	SP, PIP
6. By 2012, increase the conversion of targeted customers to a Smart Energy Lifestyle by x%.	PIP
7. By 2012, the percent of resource program participants channeled via ME&O activities will exceed 10%.	PIP

Short-term Sub-program PPMs:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (2a or 2b)**	Baseline Study Required (Y/N)
1. Awareness of energy efficient products and behaviors.	SP, PIP	2a	Y
2. Awareness of energy efficiency utility and non-utility programs.	Staff	2b	Y
3. The number of self-reported energy efficiency/conservation behaviors.	SP, PIP	2a	Y
4. The percent of resource program participants channeled via ME&O activities	PIP	2a	Y

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Long-Term (2013-2020) "SMART" <u>Sub-program</u> Objectives:	Source (SP, AL, DR, PIP, or Staff)*
1. By 2020, xx% of Californians will have taken EE/conservation actions	SP, PIP
2. By 2020, xx% of Californians are aware of energy management strategies including EE, E conservation, DR and DG.	Staff
3. By 2020, the average number of actions taken per household will have increased by xx %.	Staff
4. By 2020, the percent of Californians that consider themselves an EE advocate will increase by x%.	Staff
5. By 2015 percent reduction in targeted households average energy consumption.	SP, PIP

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Long-Term Sub-program MT Indicators:	Source (SP, AL, DR, PIP, or Staff)*	Metric Type (3)**	Baseline Study Required (Y/N)
None proposed.			

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## Lighting Market Transformation Program

	<b>Mission</b>
SW Program: <b>Lighting Market Transformation (LMT)</b>	Statewide Lighting Market Transformation Program (LMT) establishes processes through which the IOUS can develop and test market transformation strategies for both emerging and existing lighting technologies across all market sectors. LMT, operating through funding leverage, includes market research and coordination activities, and an educational component for improving the information available to consumers, contractors, and other market actors. A major part of the program involves design and planning that can be transferred to pilots and market analyses in the context of product life cycle and existing programs. The program also seeks to advance development of increasingly efficient lighting technologies. LMT is a non-resource program.
SW <u>Sub</u> -programs: <b>Lighting Technology Advancement;</b> <b>Lighting Education and Information;</b> <b>Lighting Market Transformation</b>	

<b>CA EESP Goals/Strategies Addressed by SW <u>Program</u>:</b>	<b>CA EESP Ref. pp. #</b>
<u>Goal 1.</u> Develop and implement coordinated policies, procedures, and other market interventions that eliminate barriers, accelerate lighting market transformation* in California and provide incentives for best practice lighting technologies and systems. Goal Results: By 2020, existing policies and procedures in California will enable lighting technologies to contribute to zero net energy (ZNE)* consumption with negligible negative impacts on the environment.	Section 13, p.3
<u>Goal 2.</u> Define and advance best practices for design, installation, operation and maintenance of integrated systems* to achieve sustainable* lighting solutions for all spaces. Goal Results: By 2020, 100% of new and retrofit lighting installations will meet best practice standards and are optimally maintained throughout their useful lives.	Section 13, p.3
<u>Goal 3.</u> Create widespread end user desire for, purchase of, and use of best practice lighting technologies, and systems. Goal Results: By 2020, transform consumers' lighting preferences to best practices as demonstrated by an 80% decrease in perceived barriers to adoption and a 50% decrease in sales of inefficient lighting products in key market segments (over 2010 baselines).	Section 13, p.3
<u>Goal 4.</u> Develop research, development and demonstration (RD&D) networks to create, test, and deliver the lighting solutions needed to transform California's lighting market achieve ZNE goals. Goal Results: Create a broad RD&D portfolio of technologies that will support a 60-80% statewide reduction in electrical lighting energy consumption by 2020.	Section 13, p.3

<b>Short-term (2010-2012) "SMART" <u>Sub-program Objectives</u>:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
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Objective 1: Formalize a process by which the IOUs can rapidly introduce advanced lighting solutions and emerging technologies to the marketplace, improve existing lighting programs, and develop new program strategies;	AL (IOU PPM spreadsheet)
Objective 2: Address the pressing need for better and more accessible information on lighting technologies. This sub-program will provide improved access to information and education regarding existing and emerging lighting technologies among end-users, IOU staff, equipment suppliers, lighting designers, and equipment installation contractors.	PIP (SCE, p.548)
Objective 3: 1. (1) Clearly define “market transformation” for each technology by reviewing existing research (especially with regard to market data on technology saturation), identify research gaps, and propose/conduct additional research and data collection as appropriate to increase understanding of the technology (including rate of technology adoption); and (2) Develop appropriate metrics and guidelines for determining when market transformation has occurred and publicly-funded intervention is no longer appropriate, so as to define an end-point for strategies and set the course for new programs and goals.	PIP (SCE, p.548)

<b>Short-term <u>Sub-program</u> PPMs:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (2a or 2b)**</b>	<b>Baseline Study Required (Y/N)</b>
PPM 1: Increase in awareness and use of Best Practice technology, systems, and approaches	Staff	2b	Y
PPM 2: Degree of advancement of program selected technologies along their LMT pipeline plans	Staff	2a	N
PPM 3: Length of time from when a technology graduates from the ET program to when it's integrated into a core IOU program.	Staff	2b	N
PPM 4: Number of new program delivery strategies identified by the program	Staff	2a	N
PPM 5: Number of products introduced into the lighting market via the LMT program	Staff	2a	N
PPM 6: Degree of market availability of technologies selected by the program.	Staff	2b	N

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<b>Long-Term (2013-2020) “SMART” <u>Sub-program</u> Objectives:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>
Objective 1: By 2020, 100% of new and retrofit lighting installations will meet best practices.	SP (Lighting chapter, Goal 2 Result, p.3)

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Objective 2: By 2020, transform consumer’s lighting preferences to best practices as demonstrated by an 80% decrease in perceived barriers to adoption and a 50% decrease in sales of inefficient lighting products in key market segments (over 2010 baselines).	SP (Lighting chapter, Goal 3 Result, p.3)
Objective 3: Create a broad RD&D portfolio of technologies that will support a 60-80% reduction in electrical lighting energy consumption by 2020.	SP (Lighting chapter, Goal 4 Result, p.3)

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<b>Long-Term Sub-program MT Indicators:</b>	<b>Source (SP, AL, DR, PIP, or Staff)*</b>	<b>Metric Type (3)**</b>	<b>Baseline Study Required (Y/N)</b>
MT Indicator 1: Percentage of total lighting sales comprised of Best Practice technologies (by sector)	Staff	3	Y
MT Indicator 2: Number of technologies (by sector) for which market transformation is achieved (as defined by the program)	Staff	3	N
MT Indicator 3: Number of technologies by sector that no longer require IOU program interventions	Staff	3	N

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