BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U338E) for Approval of Energy Efficiency Rolling Portfolio Business Plan.	Application 17-01-013 (Filed January 17, 2017)
And Related Matters.	Application 17-01-014 Application 17-01-015 Application 17-01-016 Application 17-01-017

SOUTHERN CALIFORNIA GAS COMPANY'S (U 904 G) REVISED SECTOR-LEVEL METRICS PROPOSALS

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July 14, 2017

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REVISED SECTOR-LEVEL METRICS PROPOSALS

Pursuant to, and in compliance with, the Administrative Law Judge's Ruling Seeking Comment on Energy Efficiency Business Plan Metrics, dated May 10, 2017, (Ruling) and the Administrative Law Judges' Ruling Modifying Schedule (issued June 9, 2017); Southern California Gas Company (SoCalGas) hereby files and replaces in their entirety portfolio and sector-level metrics originally submitted as part of SoCalGas' Energy Efficiency Business Plan, filed January 17, 2017, along with suggested targets as presented in Appendix 1 of this filing.

Respectfully submitted on behalf of
SOUTHERN CALIFORNIA GAS COMPANY,

By: */s/ Johnny J. Pong*
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APPENDIX 1

SOCALGAS' REVISED PORTFOLIO AND SECTOR-LEVEL METRICS

SoCalGas' Revised Portfolio and Sector-Level Metrics

I. INTRODUCTION

The Ruling directed Program Administrators (PAs) who filed Energy Efficiency Business Plans with the California Public Utilities Commission (Commission or CPUC) in January 2017 to file and serve revised proposed metrics, along with suggested targets no later than June 26, 2017.[1] The Ruling included suggested metrics provided by the Commission's Energy Division (ED) along with Metric Guiding Principles to provide further guidance to PAs in revising metrics for Commission consideration and approval. This deadline for submission was later extended by Administrative Law Judge's Ruling Modifying Scheduling to July 14, 2017.[2]

II. BACKGROUND

A. Metric Purpose

The Ruling directed PAs to propose revised portfolio and sector-level metrics along with corresponding suggestions for targets. In part, the Ruling pointed to the need to evaluate program and portfolio success, both for the individual PAs and across all sectors. The Ruling also indicated the need "to ensure that the state's policy goals are being met over time."[3] To this end, the Ruling "proposes common sector-level metrics, along with a small number of portfolio-level metrics, to be reported annually by all program administrators."[4] The ED's proposed common sector-level metrics are meant to:

[1] *See* Administrative Law Judge's Ruling Seeking Comment on Energy Efficiency Business Plan Metrics (Ruling), dated May 10, 2017, at Ordering Paragraph (OP) 4.
[2] *See* Administrative Law Judges' Ruling Modifying Schedule, dated June 9, 2017, at OP 1.
[3] *See* Ruling at 1-2.
[4] Ruling at 5.

- Consolidate metrics around common problems identified by most program administrators for each sector,
- Enable consistent tracking and progress assessment for the whole sector, and
- Enable comparisons across and within sectors, and
- Enable tracking of high-level portfolio progress over a period of time.[5]

B. Energy Division's Proposed Metrics

The Ruling included ED's initial proposed set of portfolio and sector-level metrics for PA consideration and interested stakeholder input. Specifically, ED developed a set of common metrics for all PAs that focus on portfolio and sector performance. On May 26, 2017, ED held a workshop to discuss its proposed metrics with PAs and interested stakeholders. This was followed-up by two ad hoc California Energy Efficiency Coordinating Committee (CAEECC) meetings. SoCalGas participated in the metrics workshop and the additional ad hoc CAEECC meetings to discuss metrics. These three workshops resulted in discussions regarding measurement of proposed metrics in the Ruling, and questions regarding the value of certain metrics proposed in the Ruling. Based on these discussions, participants advocated that further clarifications were needed from ED to determine whether PAs should include certain metrics in their July 14, 2017 filings. ED agreed to provide these clarifications, but these were not provided until after the close of business on July 10, 2017.

The ED clarifications received on July 10 modified the original set of proposed metrics, which included several new metrics, removed existing metrics, and made many other metric-specific clarifications. Although the metrics originally proposed in the Ruling were subject to extensive discussion with Commission staff, other PAs, and stakeholders, these new set of metrics have not been similarly reviewed and afforded the same level of scrutiny. These new metrics are identified in Attachment B. SoCalGas relied upon ED's initial set of proposed metrics and stakeholder input to shape its revised metrics put forth in this filing. Due to the extensive changes made to ED's original metrics, SoCalGas recommends that these new metrics be subjected to the same level of vetting with PAs and interested stakeholders. For metrics for which the clarification resulted in a significant restatement of the metric, SoCalGas is not able to conduct the necessary review, including the development of necessary baselines and associated targets, given the short

[5] Ruling at 5-6.

notice for the changes. SoCalGas suggests that ED's revised metrics be publicly-vetted (e.g., through informal CAEECC meetings) and seeks direction from the Commission on this process. After the completion of informal discussions with interested stakeholders and among PAs, the PAs should be extended the opportunity to revise metrics within two weeks after these discussions are concluded.

C. Metric Guiding Principles

In development of both its original and revised sector-level metrics, SoCalGas has relied upon the Metric Guiding Principles (Principles) reflected in the Ruling[6] as shown in Attachment C. As stated in the Ruling, these Principles were developed as a part of the CAEECC process and based on lessons learned from previous Commission metric efforts.[7] As such, they serve as foundational guidance to SoCalGas' proposed metrics and suggested targets.

III. REVISED METRICS, SUGGESTED TARGETS, AND RECOMMENDED IMPROVEMENTS

SoCalGas hereby submits revised metrics and corresponding suggested targets covering program years 2018 through 2025, as shown in Attachment A. SoCalGas generally accepted ED's originally-proposed common metrics, dated May 10, 2017. SoCalGas' revised metrics and targets should be approved because they were developed in following the Principles and ED guidance, using the best available information. In cases where insufficient data exists to propose baselines and targets, SoCalGas provides proxy data and/or explains the additional research needed or new processes that are required to track and report the requested information. In Attachment A, SoCalGas has lined out certain metrics in response to ED's recently revised proposal which removed or significantly restated original metrics. SoCalGas notes the ED's proposed common metrics, both original and newly revised, can be further improved upon, as discussed below.

Consistent Common Metrics: ED's proposed common metrics are not common among like sectors. For example, ED, in its latest set of metrics, proposes two customer and industry

[6] Ruling at 3-4.
[7] Id. at 3.

satisfaction metrics unique to the commercial sector. This seems more appropriate as a customer satisfaction survey, not a sector metric. SoCalGas suggests the Commission create a set of common metrics that apply to all customer sectors or, at a minimum, greater consistency among sector metrics while shifting any outlier metric to the implementation-level, where practicable. Both the industrial and agricultural sector metrics, proposed by ED, are good examples of how common metrics could be approached.

A Reasonable Number of Common Metrics: In its most recent set of proposed metrics, ED proposes more than 75 common metrics. It appears a significant number of these metrics could be incorporated at the implementation plan-level or simply removed.[8] Moreover, ED proposed over 20 new metrics on July 10. SoCalGas reminds the Commission this will likely cause a noticeable increase in the administrator, implementer, and regulatory workload in monitoring and reporting on such a vast number of metrics. SoCalGas recommends the Commission consider the prudence in adding any new metrics at this time, and reduce the number of metrics while simplifying their implementation - similar to the ED's proposed industrial and agricultural sector metrics.

Levelized Cost as a Sector Metric: ED's proposal contains a levelized cost metric for each customer-based sector. At the sector-level, a levelized cost metric may likely send a signal to PAs to constrain investment in longer-term energy efficiency (i.e., energy efficiency investments/technologies not yet cost-effective but may prove so in the future) to reduce costs, thereby creating greater importance on cost-effectiveness at the discrete sector levels. This approach could be viewed as contrary to current Commission policy which applies cost-effectiveness monitoring at the portfolio level. SoCalGas suggests to the Commission that the levelized cost metric be applied exclusively at the portfolio level.

Application of Disadvantaged Communities Definition: The ED proposal includes sector-level metrics focused on increased program participation in disadvantaged communities (DAC) and among hard-to-reach (HTR) customers. Although SoCalGas included both metric

[8] Reasons for removal may include: proposed metric is more appropriate as performance indicator or metric is too specific to a segment/sub-segment within a sector and would not be appropriate as a sector-level metric.

types as suggested by the ED, the Commission may consider applying DAC-related metrics at the portfolio-level and in the residential sector, exclusively. A DAC-related metric in the commercial sector, and possibly other sectors, can be more effectively monitored at the program-level since specific program's will likely be designed to increase energy efficiency levels in DAC locations for various customer segments, sub-segments, and/or groups.

As for the perceived overlap among DAC and the Commission's longstanding HTR policy, if the Commission maintains its current HTR definition in addition to the new legislatively-directed DAC definition,[9] then SoCalGas suggests HTR be implemented through a set of common statewide zip codes. Specifically, SoCalGas suggests applying only the Population Characteristic Scores from CalEnviroScreen 3.0 Results Spreadsheet to identify customers who potentially fall into the current Commission-adopted HTR definition. The Population Characteristics Score was derived from the following socioeconomics factors:

CalEnviroScreen Tool's Population Characteristic Scores[10]	
Education:	Percent of population over 25 with less than a high school education
Linguistic Isolation:	Percent limited English speaking households
Poverty:	Percent of population living below two times the federal poverty level
Unemployment:	Percent of the population over the age of 16 that is unemployed and eligible for the labor force
Housing Burden:	Percent of housing burdened low income households

This approach will allow for a consistent implementation across all PAs and better align with legislative direction. Alternately, the Commission can allow PAs the flexibility to self-define HTR within their service areas to allow for greater focus on specific customer groups and/or geographical areas to address customer energy efficiency needs, similar to locational energy efficiency targeting which helps maintain system reliability.

The Ruling also allows individual PAs to propose additional sector-level metrics beyond what is proposed by ED. SoCalGas appreciates the opportunity afforded by the Ruling. However, after comparing the ED's proposed metrics with SoCalGas' initially proposed metrics

[9] DACs are designated by the California Environmental Protection Agency, pursuant to Senate Bill 535 Section 2 39711.
[10] This information is readily available in column "BC" of the CalEnviroScreen Tools Population. Characteristic Scores. https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30#downloads.

coupled with a desire to maintain a manageable amount of sector-level metrics, SoCalGas limits its proposed metrics to align with the ED's original set of common metrics along with the aforementioned metric recommendations.

A. Suggested Metric Targets

In accordance with the Ruling's direction to the PAs to suggest targets associated with each proposed sector-level metric,[11] SoCalGas provides its suggested targets for each metric in Attachment A. In the development of the suggested targets, SoCalGas mainly relied upon 2015-2016 baseline information, proposed 2018-2025 sector energy savings targets,[12] and extensive program experience. The suggested targets may be revisited from time to time depending on actual portfolio/sector performance or non-market influences such as energy efficiency goals updates or Commission policy changes.

B. Business Plan Approach to Metrics

In its Business Plan, SoCalGas proposed a portfolio-level energy savings metric and a set of metrics assigned to each sector. The initial sector-level metrics followed a simple yet consistent logic which directly connected a sector-metric to a specific market-based problem statement identified during the portfolio planning process in conjunction with stakeholder input. This approach allows SoCalGas to continuously monitor the market's reaction to its program offerings and quickly adapt the portfolio, as necessary, to achieve the predetermined desired outcome. In general, market-focused metric development followed this process outlined below:

1. Identify key market barriers and/or opportunities to establish a market-based problem statement.
2. Create a desired outcome directly tied to the market-based problem statement.
3. Suggest a set of proposed intervention strategies[13] to overcome perceived market barriers and/or to utilize existing/upcoming market opportunities.
4. Develop a metric that will enable SoCalGas to monitor the sector's progress and, if necessary, to adapt and adjust the sector offerings towards achieving the desired

[11] *See* Ruling, at OP 4.
[12] Business Plan at 18.
[13] Program intervention strategies are common types of approaches used to intervene into the marketplace and should not be construed as specific programs.

outcome.

On the other hand, the ED's proposed common metrics serve a slightly different purpose, i.e., one of oversight and evaluation of portfolio and program success across all sectors and among individual PAs.[14] SoCalGas recognizes the importance of ED's common metric approach as it will help to inform the Commission and other policymakers on the on-going progress of the energy efficiency portfolios in California.[15] As a result, SoCalGas will apply the market-based metric approach at the program implementation-level so that market-based metrics can be directly linked to a specific program's logic model to retain the connectivity among market-based problems and program solutions.

IV. FUTURE METRIC ADJUSTMENTS AND DATA SOURCES

A. Future Metric Adjustments

The adopted metrics and/or suggested targets may be revisited by SoCalGas from time to time depending on actual portfolio/sector performance or non-market influences such as Commission energy efficiency goals updates or policy changes. In some cases, metrics and/or targets may fall short in properly monitoring the portfolio/sector performance. In those instances, metrics may be removed or reshaped and targets reset. SoCalGas proposes such potential changes to adopted metrics be addressed as part of the annual energy efficiency budget advice letter process or through an Administrative Law Judge ruling. For target resets related to approved metrics, SoCalGas suggests PAs be allowed the flexibility to reset targets on a prospective basis if necessary, during the annual planning process, without further Commission approval.

B. Data Sources

Metrics are only effective if reliable data exists to support their development and implementation. Consistent with the Principles, SoCalGas relied on readily available data sources in the calculation of target setting, as presented in Attachment D. SoCalGas depended mainly on

[14] Ruling at 4.
[15] Presented by ED staff as the primary purpose of the portfolio and sector metrics at the Commission-sponsored metric workshop, held on May 26, 2017.

its customer programs tracking database, customer billing system, and publicly available data sources (e.g., CEC-reported information) as its data sources. In a few instances data were not readily available to support target setting. For such metrics, SoCalGas footnotes the specific metric with a proposal to capture data along with an estimated timeframe.

The data sources for each metric are shown in SoCalGas' revised metrics. The corresponding data types/definitions are presented in Attachment D. SoCalGas did not rely on proxies in the development of metrics and targets. Therefore, it does not propose plans nor offer corresponding cost estimates to expand data collection efforts, with the exception of treated square feet or "other" customer funding sources. In these cases, customer-provided information could be tracked. However, the Commission should take notice that reliance on customer-provided information, which cannot be reasonably verified, as in these two cases, will likely be an unreliable data source. Alternately, the Commission could allow the application of a standard set of square foot assumptions based on customer size. Also, the Commission could direct PAs to conduct market research studies to identify alternate funding sources relied upon by customers to fund their energy efficiency projects.

SoCalGas also suggests that the Commission enhance the current energy efficiency cost-effectiveness tool (CET) to allow for sector level analysis and reporting. The current CET provides portfolio and measure level information. SoCalGas recommends an enhanced CET that will enable PAs, large or small, to easily conduct sector-level analysis and reporting.

V. CONCLUSION

SoCalGas appreciates the opportunity to file its revised portfolio and sector-level metrics, including suggested improvements to the metric approach, along with suggested metric targets, in their entirety, for the Commission's consideration. SoCalGas requests that the Commission adopt SoCalGas' revised metrics and targets without modification.

Attachment A – SoCalGas Revised Portfolio and Sector-Level Metrics

Table 1: SoCalGas - Portfolio-level Metrics								
Common Problem	Ref.	Metric	Baseline	Metric Source	Type	Targets		
						Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
						Cumulative (MM Therms)		
Capturing energy savings	P-1	**Energy Savings:** Net and gross annualized energy savings (Therms).	SoCalGas Annual EE forecast (2018-2025)	Annual EE Report	Net	80.76	160.55	213.94
					Gross	118.09	239.95	323.46
Disadvantaged communities[1]	P-2	**Disadvantaged Communities:** Net and gross annualized energy savings (Therms) of the top 25% zip codes as defined by the CalEnviroScreen Tool.[1]	2015-2016 EE Participation Levels (Avg).	Annual EE Report	Net	10.19	20.25	26.99
				CalEnviroScreen Tool by zip code (top 25%).	Gross	14.90	30.27	40.81
Hard to reach markets[2]	P-3	**HTR:** Net and gross annualized energy savings (Therms) of the HTR customer groups.[2]	2015-2016 EE Participation Levels (Avg).	Annual EE Report	Net	10.85	21.57	28.74
				CalEnviroScreen Tool by zip code (top 25%, Population Characteristic factors only).	Gross	15.86	32.23	43.45
Cost per unit saved	P-4	**Levelized cost** (PAC) of energy efficiency by therm.[3]	2013-2015 reported PAC Levelized Cost (Avg).	Annual EE Report	Non-cumulative	$0.31	$0.31	$0.31

1 - Disadvantaged Communities are based on geographic, socioeconomic, public health, and environmental hazard criteria, and may include, but are not limited to, either of the following: (1) Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation; (2) Areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment.

2 - Hard to reach (HTR) residential customers are defined as Top 25% zip codes of population based on the CalEnviroScreen Population Charareterstic factors score exclusively. Factors include: Education, Linguistic Isolation, Poverty, Unemployment and Housing Burden.

3- Levelized costs is a direct function of program expected costs and enery savings. This will be know after implementer are selected. As a result, we applied the baseline across the 2018-2025.

Table 2A: SoCalGas - Residential Sector Metric Table - Single-family (SF)								
10-year Vision Residential energy use will be transformed to ultra-high levels of energy efficiency. All cost-effective potential for energy efficiency will be routinely realized for all residential properties and will fully integrate with other customer demand-side management options including clean renewables, on a site-specific basis.								
Problem Statement	Ref.	Metric	Baseline	Metric Source	Type	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
						Cumulative (MM Therms)		
Capturing Energy Savings	RSF-1	**Energy Savings:** Net and gross reported 1st year annualized energy savings (therms) for Single-family segment.	SoCalGas Annual EE forecast (2018-2025)	Program tracking data.	Net	3.20	6.83	9.51
					Gross	5.58	11.95	16.68
Depth of interventions	RSF-2	**Average** net and gross reported annualized energy savings (therms) per Single-family participant.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system.	Net	11.6	12.5	13.0
					Gross	20.3	21.7	22.7
Penetration of energy efficiency programs in the eligible market	RSF-3	**Percent** of all program participation to overall number of residential Single-family customers.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system.	Non-cumulative	9.758%	10.444%	10.935%
	RSF-4	**Percent** of all program participation with DA communities to overall number of Single-family customers.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data and CalEnviroScreen Tool by zip code (top 25%).	Non-cumulative	0.050%	0.054%	0.057%
	RSF-5	**Percent** of all program participation within HTR groups to overall number of Single-family customers.	2015-2016 EE Participation Levels. (Avg.)	CalEnviroScreen Tool by zip code (top 25%, Population Characteristic factors only).	Non-cumulative	0.039%	0.042%	0.044%
Cost per unit saved	RSF-6	**Levelized cost** (PAC) of energy efficiency by therm in Single-family segment.[1]	2013-2015 EE reported PAC Levelized Cost (Avg).	Annual EE Report	Non-cumulative	$0.31	$0.31	$0.31
Energy intensity	RSF-7	**Average energy use intensity** of single family homes (average usage per household – not adjusted)	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing data.	Non-cumulative	662	709	742

1- Levelized costs is a direct function of program expected costs and enery savings. This will be know after implementers are selected. As a result, we applied the baseline across the 2018-2025.

Table 2B: SoCalGas - Residential Sector Metric Table - Multi-family (MF)

10-year Vision

Residential energy use will be transformed to ultra-high levels of energy efficiency. All cost-effective potential for energy efficiency will be routinely realized for all residential properties and will fully integrate with other customer demand-side management options including clean renewables, on a site-specific basis.

Problem Statement	Ref.	Metric	Baseline	Metric Source	Type	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
						Cumulative (MM Therms)		
Capturing Energy Savings	RMF-1	**Energy Savings:** Reported 1st year annualized energy savings (therms) for Multi-family segment.	SoCalGas Annual EE forecast (2018-2025)	Program tracking data.	Net	5.32	11.34	15.80
					Gross	8.86	18.96	26.47
Depth of interventions	RMF-2	**Average** Reported annualized energy savings (therms) per Multi-family participant.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system.	Net (non-cumulative)	50.09	53.61	56.13
						83.41	89.27	93.46
	RMF-3	**Average** Reported annualized energy savings (therms) per Multi-family project.	2015-2016 EE Participation Levels. (Avg.)	Program and IOU billing data. External data.	Net	Data unavailable[1]	Data unavailable[1]	Data unavailable[1]
					Gross	Data unavailable[1]	Data unavailable[1]	Data unavailable[1]
Penetration of energy efficiency programs in the eligible market	RMF-4	**Percent** of all program participation to overall number of residential Multi-family customers by unit and by property.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system.	Non-cumulative	7.56%	8.10%	8.48%
	RMF-5	**Percent** of treated sqft to the overall Multi-family segment sqft. population.[2]	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system. External sources.	Non-cumulative	7.56%	8.10%	8.48%
	RMF-6	**Percent** of all program participation with DA communities to overall number of Multi-family customers by unit and property.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system. CalEnviroScreen Tool by zip code (top 25%).	Non-cumulative	1.46%	1.56%	1.64%
	RMF-7	**Percent** of all program participation within HTR groups to overall number of Multi-family customers.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system. HTR = CalEnviroScreen Tool by zip code (top 25%,	Non-cumulative	1.47%	1.57%	1.64%
Cost per unit saved	RMF-8	**Levelized cost** (PAC) of energy efficiency by therm in Multi-family segment.[3]	2013-2015 reported PAC Levelized Cost (Avg).	Annual EE Report	Non-cumulative	$0.31	$0.31	$0.31
Energy intensity	RMF-9	**Average energy use intensity** of multi-family buildings (average usage per square foot – not adjusted – and including in-unit accounts)	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing data. External data sources.	Non-cumulative	531	569	595

1 - Net/gross aggregation to the MF properly level (RMF-3) is not available. (Will need to rely upon external real estate database to match with CIS. Est. time to complete minimum 6 months).

2 - Treated sq. ft. for the MF sector is unknown. (Will need to collect treated sq ft information. Est. time to complete minimum 6 months).

3- Levelized costs is a direct function of program expected costs and enery savings. This will be know after implementers are selected. As a result, we applied the baseline across the 2018-2025.

Table 3: SoCalGas - Commercial Sector Metric Table

10-year Vision

Commercial buildings will realize the highest natural gas efficiency levels to support a pathway to doubling of energy efficiency for all new, and a substantial proportion of existing, buildings. Innovative technologies, enhanced building design, and operational practices will dramatically grow in use in the coming years.

Problem Statement(s)	Ref.	Metric	Baseline	Metric Source	Type	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
						Cumulative (MM Therms)		
Capturing Energy Savings	C-1	**Energy Savings:** Reported 1st year annualized energy savings (therms)	SoCalGas Annual EE forecast (2018-2025)	Program tracking data.	Net	10.86	24.99	35.78
					Gross	19.84	45.64	65.34
	~~C-2~~	~~**Percent of reported 1st year annualized energy savings in all programs relative to sector usage.**~~[1]	~~2015-2016 EE Participation Levels. (Avg.)~~	~~Program tracking data. IOU billing system.~~	~~Net~~	~~0.37%~~	~~0.37%~~	~~0.37%~~
					~~Gross~~	~~0.64%~~	~~0.64%~~	~~0.64%~~
Depth of interventions	C-3	Energy savings (therms) per project	2015-2016 EE Participation Levels. (Avg.)	Average net reported annualized energy savings (therms) per participant.	Net (non-cumulative)	1,559	1,793	1,925
	~~C-4~~	~~Energy savings (therms) per square foot~~[1]	~~2015-2016 EE Participation Levels. (Avg.)~~	~~Program tracking data. IOU billing system. CEC sqft. data.~~	~~Net~~	~~11.33%~~	~~13.04%~~	~~14.00%~~
Penetration of energy efficiency programs and benchmarking in the eligible market	C-5	**Percent of participation** in all programs among eligible small, medium, and large (S/M/L) customer groups.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing data. S/M/L defintions.[1]	Small	0.85%	0.97%	1.05%
					Medium	5.22%	6.01%	6.45%
					Large	7.07%	8.13%	8.73%
	C-6	**Percent of square feet** of eligible population	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system. CEC sqft. data.	Non-cumulative	1.25%	1.44%	1.55%
	C-7	**Percent of participation** in all programs among customers within HTR customer groups.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing system. HTR = CalEnviroScreen Tool by zip code (top 25%, Population Characteristic factors only).	Non-cumulative	0.25%	0.29%	0.31%
Cost per unit saved	C-8	**Levelized cost** (PAC) of energy efficiency by therm.2	2013-2015 reported PAC Levelized Cost (Avg).	Annual EE Report	Non-cumulative	$0.31	$0.31	$0.31
~~Investment in energy efficiency~~	~~C-9~~	~~**Dollars of investments** (all public funding sources)~~[1]	~~2015-2016 EE Participation Levels. (Avg.)~~	~~Participant self-reported information.~~		~~$0.00~~	~~$0.00~~	~~$0.00~~
~~Energy intensity~~	~~C-10~~	~~Percent of square feet of eligible population benchmarked~~[1]	~~2015-2016 EE Participation Levels. (Avg.)~~	~~Program tracking data. IOU billing system. CEC sqft. data.~~		~~Data unavailable.~~	~~Data unavailable.~~	~~Data unavailable.~~

1 - SoCalGas has lined out certain metrics in response to ED's recently revised proposal which removed or significantly restated original metrics.

2 - Levelized costs is a direct function of program expected costs and enery savings. This will be know after implementers are selected. As a result, we applied the baseline across the 2018-2025.

Table 4: SoCalGas - Industrial Sector Metric Table								
10-year Vision								
California industry will be vibrant, profitable and double its level of energy efficiency by 2030 through a suite of energy efficiency programs intended to: facilitate, sustain, and transform the long-term delivery and adoption of energy efficient products and services; cultivate, promote and sustain lasting energy-efficient operations and practices; and offer a range of simplified solutions that address the customer's energy efficiency needs.								
Problem Statement(s)	**Ref.**	**Metric**	**Baseline**	**Metric Source**	**Type**	**Short Term Target (1-3 years)**	**Mid Term Target (4-7 years)**	**Long Term Target (8-10+ years)**
						Cumulative (MM Therms)		
Capturing Energy Savings	I-1	**Energy Savings:** Reported 1st year annualized energy savings (therms)	SoCalGas Annual EE forecast (2018-2025)	Program tracking data.	Net	15.45	30.90	41.20
					Gross	30.57	61.14	81.52
Penetration of energy efficiency programs and diversity of participants	I-2	**Percent of participation** in all programs among eligible small, medium, and large (S/M/L) customer groups.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing data. S/M/L defintions.[1]	Small	0.15%	0.15%	0.15%
					Medium	1.11%	1.11%	1.11%
					Large	1.11%	1.11%	1.11%
New participation	I-3	Percent of customers participating that are **new participants** (annually)	2015-2016 EE Participation Levels.	Program tracking data.	Non-cumulative	66.01%	66.01%	66.01%

Table 5: SoCalGas - Agricultural Sector Metric Table								
10-Year Vision Energy efficiency will support the long-term economic and environmental success of California agriculture.								
Problem Statement(s)	Ref.	Metric	Baseline	Metric Source	Type	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
						Cumulative (MM Therms)		
Capturing Energy Savings	A-1	**Energy Savings:** Reported 1st year annualized energy savings (therms)	SoCalGas Annual EE forecast (2018-2025)	Program tracking data.	Net	3.91	8.38	11.41
					Gross	7.45	15.97	21.74
Penetration of energy efficiency programs and diversity of participants	A-2	**Percent of program participants** within the sector for the eligible small, medium, and large (S/M/L) customer groups.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing data. S/M/L defintions.1	Small	0.00%	0.00%	0.00%
					Medium	1.32%	1.41%	1.44%
					Large	5.54%	5.94%	6.06%
Cost per unit saved	A-3	**Levelized cost** (PAC) of energy efficiency by therm.[1]	2013-2015 reported PAC Levelized Cost (Avg).	Annual EE Report	Non-cumulative	$0.31	$0.31	$0.31

1 - Levelized costs is a direct function of program expected costs and enery savings. This will be know after implementers are selected. As a result, we applied the baseline across the 2018-2025.

Table 6: SoCalGas - Public Sector Metric Table

10-year Vision

The public sector customers are generally governed by a centralized decision-making authority that are uniquely positioned to permanently transform their respective organization's decision-making process that will result in deeper energy efficiency and adoption of other DSM solutions including clean renewables.

Problem Statement(s)	Ref.	Metric	Baseline	Metric Source	Type	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
						Cumulative (MM Therms)		
Capturing Energy Savings	P-1	**Energy Savings:** Reported 1st year annualized energy savings (therms)	SoCalGas Annual EE forecast (2018-2025)	Program tracking data.	Net	4.54	9.85	13.80
					Gross	8.29	17.99	25.21
	~~P-2~~	~~Percent of reported 1st year annualized energy savings in all programs relative to sector usage.~~[1]	~~2015-2016 EE Participation Levels. (Avg.)~~	~~Program tracking data. IOU billing system.~~	~~Net~~	~~1.69%~~	~~1.83%~~	~~1.92%~~
					~~Gross~~	~~2.70%~~	~~2.93%~~	~~3.08%~~
Depth of Interventions	P-3	Energy savings (therms) **per project** (building)	2015-2016 EE Participation Levels. (Avg.)	Program tracking data.	Net, Non-cumulative	10,768	11,681	12,274
	~~P-4~~	~~Energy savings (therms) per square foot~~[1]	~~2015-2016 EE Participation Levels. (Avg.)~~	~~Program tracking data.~~		~~0.44~~	~~0.48~~	~~0.51~~
Penetration of energy efficiency programs and benchmarking in the eligible market	P-5	**Percent of participation** in all programs within sector.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing data.	Non-cumulative	4.14%	4.50%	4.72%
	P-6	**Percent of treated sqft** to the overall sector's sqft.	2015-2016 EE Participation Levels. (Avg.)	Program tracking data. IOU billing data.	Non-cumulative	4.14%	4.50%	4.72%
Cost per unit saved	P-7	**Levelized cost** (PAC) of energy efficiency by therm.[2]	2013-2015 reported PAC Levelized Cost (Avg).	Annual EE Report	Non-cumulative	$0.31	$0.31	$0.31
~~Investment in energy efficiency~~	~~P-8~~	~~Dollars of investments (all public funding sources)~~[1]	~~2015-2016 EE Participation Levels. (Avg.)~~	~~Participant self-reported information.~~		~~$0.00~~	~~$0.00~~	~~$0.00~~
~~Energy intensity~~	~~P-9~~	~~Percent of square feet of eligible population benchmarked~~[1]	~~2015-2016 EE Participation Levels. (Avg.)~~	~~Program tracking data. IOU billing system. CEC sqft. data.~~		~~Data unavailable~~	~~Data unavailable~~	~~Data unavailable~~

1 - SoCalGas has lined out certain metrics in response to ED's recently revised proposal which removed or significantly restated original metrics.

2 - Levelized costs is a direct function of program expected costs and enery savings. This will be know after implementers are selected. As a result, we applied the baseline across the 2018-2025.

Table 7A: SoCalGas - Emerging Technologies Sector Metric Table							
10-year Vision							
ETP's vision is to anticipate the latest emerging technology trends in order to bring innovative, verified gas and electric technologies to EE offerings.							
Problem Statement(s)	**Ref.**	**Metrics**	**Baseline**	**Metric Source**	**Short Term Target (1-3 years)**	**Mid Term Target (4-7 years)**	**Long Term Target (8-10+ years)**
Input from other groups is not being tracked	**ET-1**	Number of TPMs initiated	2018	Program tracking system.	6 TPMs (gas and electric combined) initiated (including 1 technology-focused pilot planning effort to assess market barrier reduction tactics)[1]	2 TPMs (gas and electric combined) initiated	3 TPMs (gas and electric combined) initiated
	ET-2	Number of TPMs updated	2018	Program tracking system.	3 TPMs updated	3 TPMs updated	3 TPMs updated
Need to track project activity	**ET-3**	Number of technology projects initiated	2013-2014 program tracking data.	Program tracking system.	183[2] Projects Initiated	244 Projects Initiated	183 Projects Initiated

1 - Target may be updated once all third party contracts have been awarded.

2 - This averages 61 projects per year; this number will be updated once all third party contracts have been awarded.

Table 7B proposes program indicators to track program information. These are distinct from metrics provided in Table 7A.

Table 7B: SoCalGas - Emerging Technologies Sector Indicator Table							
Problem Statement(s)	Ref.	Indicators	Baseline	Indicator Source	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Targets (8-10+ years)
Stakeholders would like to track savings	ETI-1	Prior year: % of new measures added to the portfolio that were previously ETP technologies	Program Database	Program Tracking Data	Pending results of program implementer selections and corresponding implementation plans.		
	ETI-2	Annual savings of measures currently in the portfolio that were supported by ETP, added since 2009	Program Database	Program Tracking Data	Pending results of program implementer selections and corresponding implementation plans.		
Stakeholders would like to track input from other groups	ETI-3	Prior year: % of new codes or standards that were previously ETP technologies	Program Database	Program Tracking Data	Pending results of program implementer selections and corresponding implementation plans.		
	ETI-4	Number and source of ETCC project ideas submitted outside of TPM process.[1]	Program Database	Program Tracking Data	Pending results of program implementer selections and corresponding implementation plans.		
	ETI-5	Number and source of TPM project ideas[2]	Program Database	Program Tracking Data	Pending results of program implementer selections and corresponding implementation plans.		
Stakeholders would like to track alignment of ETP with longterm goals	ETI-6	Annual number of ET projects and technologies aligned with specific statewide goals	Program Database	Program Tracking Data	Pending results of program implementer selections and corresponding implementation plans.		
	ETI-7	List of ET projects and their statewide goal alignment	Program Database	Program Tracking Data	Pending results of program implementer selections and corresponding implementation plans.		

1 - Categories of sources (e.g., PA, national lab, manufacturer, technology incubator, etc.) will be developed collaboratively, and self-reported by submitter.
2 - Categories of sources (e.g., PA, national lab, manufacturer, technology incubator, etc.) will be developed collaboratively, and attributed by ETP based on ETP's expert judgment.

Table 8: SoCalGas - Codes & Standards Sector Metric Table							
Problem Statement	**Ref.**	**Metric**	**Baseline**	**Metric Source**	**Short Term Target (1-3 years)**	**Mid Term Target (4-6 years)**	**Long Term Target (7-9 years)**
Capturing energy savings	**CS-1**	**MMTherms Savings** (Net)[1]	Average of 4.61 Net MM Therms / year across 2011-2015	EE Annual Report. CPUC evaluation reports.	37.5 (net MM Therms)	30.8 (net MM Therms)	18.2 (net MM Therms)
Activity in advocating for codes and standards tied to adoption in CA	**CS-2**	**Number of measures supported** by CASE studies in rulemaking cycle (current work)[2]	18 Title 20; 12 Title 24	IOU supported proposals from program tracking related to CASE studies	18 Title 20; 12 Title 24	18 Title 20; 12 Title 24	18 Title 20; 12 Title 24
	CS-3	**Number of measures adopted** by CEC in rulemaking cycle (indicator of past work)[3]	18 Title 20; 12 Title 24	IOU supported proposals from program tracking related to CASE studies; "adopted" from CEC Rulemaking process	18 Title 20; 12 Title 24	18 Title 20; 12 Title 24	18 Title 20; 12 Title 24
Activity in advocating for codes and standards tied to adoption at the federal level	**CS-4**	**% of DOE appliances added** to federal register supported by IOUs (# IOU supported/ # DOE adopted)[4, 5]	100%	Federal register and program tracking databases	100%	100%	100%
Local government participation and success in adoption of reach codes	**CS-5**	Number of **reach codes implemented**	6 during the past 12 months	CEC list of reach codes adopted by local jurisdictions	30 reach codes per Title 24 code cycle	30 reach codes per Title 24 code cycle	30 reach codes per Title 24 code cycle
Compliance improvement	**CS-6**	% increase in **code compliance knowledge** pre/post training	~26 percentage points	Knowledge assessment surveys conducted by compliance improvement program staff; baseline is average from 760 2015 and 2016 class surveys	20%	20%	20%

1 - Will be reported in absolute terms, as well as in the context of the portfolio (i.e., % of net MMTherms based on portfolio forecasts); and the context of CEC's SB350 forecast (i.e., % of SB 350 based on future CEC forecast). Targets are SoCalGas-specific. Each IOU will have individual targets. The baseline and Targets will be finalized/adjusted upon completion of the most recent codes & standards impact

2 - Targets for the first two metrics are from the potential/goals study data request response listing 2016-18 Title 20 and Title 24 measures. Actual number of measures that will need to be supported in the short-, mid- and long-term could go up or down.

3 - The C&S program cannot control the number adopted; results will be reported in absolute terms and as a percent of total standards proposals adopted. Please also note that while Title 24 follows a three-year cycle, Title 20 measures are not introduced on a regular cycle.

4 - This is the percent of DoE appliances, equipment and lighting standards added to federal register final rule that IOUs advocated for.

5 - (IOUs will also report out the total number and a list: Number of federal standards adopted for which a utility advocated)

Table 9: SoCalGas - Workforce, Education & Training (WE&T) Sector Metric Table

10-year Vision

WE&T curriculum and implementation support SoCalGas sectors and California's educational and training network on the goal of doubling energy efficiency savings by 2030.

Problem Statement	Ref.	Sector Metric	Baseline	Metric Source	Short Term Target (1-3 years)	Mid Term Target (4-7 years)	Long Term Target (8-10+ years)
Leveraging effective partnership	W-1	Number of collaborations (with documented description of outcomes and metrics for each)[1]	3 collaborations that are similar in nature to meeting the current definition[2]	(contract / agreement); Program tracking information	3-8 active collaborations depending on budget	3-8 active collaborations depending on budget	3-8 active collaborations depending on budget
	W-2	Percentage of collaborations that achieve mutual goals and outcomes.	2016 Collaborations[1]	(contract / agreement); Program tracking information	100% over timeframe specified in agreement	100% over timeframe specified in agreement	100% over timeframe specified in agreement
Penetration of training and diversity of participants	W-3	Number of participants by pre-defined workforce categories[3]	2016 trainees - common occupations - 5,879; high priority occupations - 4,438; Other occupations - 4,296	Program tracking, specifically registration data for trainings in common pre-defined workforce categories	Maintain 2016 training levels among the various workforce categories in support of all sectors with identified need	Maintain 2016 training levels among the various workforce categories in support of all sectors with identified need	Maintain 2016 training levels among the various workforce categories in support of all sectors with identified need
	W-4	Percent of participation relative to eligible target population for training focused on high-priority occupations doing high EE potential work.	None[4]	Program tracking data and industry-reported target populations.	Target identified after baseline information is gathered through study.		
	W-5	Percent of disadvantaged participants trained *(specific definition for disadvantaged still under discussion)*	9%	Registration zip codes for training participants in program databases matched to disadvantaged zip codes	9% of all trainees (in line with population of disadvantaged)	9% of all trainees (in line with population of disadvantaged)	9% of all trainees (in line with population of disadvantaged)

1 - The WE&T program will employ different types of collaborations to reflect different types of relationships with partners, and likely different outcomes or benefits. Collaborations will document the agreed-upon effort and outcomes of the collaboration.

2 - While WE&T does not have any collaborations that currently meet the definition above, collaborations identified for baseline consideration, are those similar in nature to the definition, and reasonable candidates to be formalized into the baseline.

3 - Occupation Categories: Architect/Designer; Facilities Mgr.; Engineer; HVAC Contractor; HVAC Technician; Building Operators/Plant Mgr. + Energy /Sustainability Consultant; Bldg. Dept. Plan Checker; Bldg. Dept. Inspector; Carpenters; New Construction Builder/Developer; Equipment Manufacturer & Sales Rep; Electricians & Electrical Contractor; General Contractor; Bldg. Dept. Inspector; Carpenters; HERS Rater; Home Performance Contractor; HVAC / Mechanical Engineer; Lighting Contractor; Lighting Designer; Plumbers/Pipe Fitters; Sheet Metal Worker; Solar Contractor; Stationery Engineers

4 - This metric requires a study to contribute to prioritization, review available employment data and other secondary sources, or gather additional market intelligence on the total numbers eligible. Depending on the needs of the other PAs, we anticipate that this would be a joint IOU study.

The baseline and targets above assume the definition of a disadvantaged worker that received WE&T stakeholder support in 2015—an individual who lives in a ZIP code that meets at least one of these criteria: 1) High unemployment zip code where unemployment rate is at least 150% of the median unemployment rate for the county or for the state or 2) Low income zip code where average household income is 50% below Area Median Income (AMI). A disadvantaged worker can also be a referral from collaborating CBOs, state agencies, etc.. The WE&T Energy Centers will compare data collection and reporting for this metric to improve the accuracy of this data, where possible.

How targets were set: The targets are set based on the relative population of disadvantaged workers in SoCalGas territory.

Attachment B – Energy Division's Original and Revised Common Metrics

ED Common Metrics (Dated May 10, 2017)

Residential Sector – Single Family

Common Problem	Common Metric
Capturing energy savings	Annual gas, electric, and demand savings for Single Family Customers
Depth of interventions	Average gas, electric, and demand savings per participant
Penetration of energy efficiency programs in the eligible market	Percent of participation relative to eligible population Percent of participation in disadvantaged communities (defined by zip code and/or census tract in CalEnviroScreen Tool) Percent of participation by customers defined as "hard to reach"
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm, and kW
Energy intensity	Average energy use intensity of single family homes (average usage per household – not adjusted)

Residential Sector – Multi-family

Common Problem	Common Metric
Capturing energy savings	Annual gas, electric, and demand savings for multi-family customers (in-unit, common area, and master-metered accounts, tracked separately)
Depth of interventions	Average gas, electric, and demand savings per participant Average gas, electric, and demand savings per project (property level)
Penetration of energy efficiency programs in the eligible market	Percent of participation relative to eligible population (by unit and by property) Percent of square feet of eligible population

Common Problem	Common Metric
	participating (by property) Percent of participation in disadvantaged communities (defined by zip code and/or census tract in CalEnviroScreen Tool) Percent of participation by customers defined as "hard to reach"
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW
Energy intensity	Average energy use intensity of multi-family buildings (average usage per square foot – not adjusted – and including in-unit accounts)

Commercial Sector

Common Problem	Common Metric
Capturing energy savings	Annual gas, electric, and demand savings Annual gas, electric, and demand savings as a percentage of overall sectoral usage
Depth of interventions	Energy savings (kWh, kW, therms) per project (building) Energy savings (kWh, kW, therms) per square foot
Penetration of energy efficiency programs and benchmarking in the eligible market	Percent of participation relative to eligible population for small, medium, and large customers Percent of square feet of eligible population Percent of participation by customers defined as "hard to reach"
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW
Investment in energy efficiency	Dollars of investments (all sources)

Common Problem	Common Metric
Energy intensity	Percent of square feet of eligible population benchmarked

Public Sector

Common Problem	Common Metric
Capturing energy savings	Annual gas, electric, and demand savings Annual gas, electric, and demand savings as a percentage of overall sectoral usage
Depth of interventions	Energy savings (kWh, kW, therms) per project (building) Energy savings (kWh, kW, therms) per square foot
Penetration of energy efficiency programs and benchmarking in the eligible market	Percent of participation relative to eligible population Percent of square feet of eligible population
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW
Investment in energy efficiency	Dollars of investments (all sources)
Energy intensity	Percent of square feet of eligible population benchmarked

Industrial Sector

Common Problem	Common Metric
Capturing energy savings	Annual gas, electric, and demand savings Annual gas, electric, and demand savings as a percentage of overall sectoral usage
Penetration of energy efficiency programs and diversity of participants	Percent of participation relative to eligible population for small, medium and large customers
New participation	Percent of customers participating that are new participants (annually)

Agricultural Sector

Common Problem	Common Metric
Capturing energy savings	Annual gas, electric, and demand savings Annual gas, electric, and demand savings as a percentage of overall sectoral usage
Penetration of energy efficiency programs and diversity of participants	Percent of participation relative to eligible population for small, medium and large customers
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm, and kW

Workforce Education and Training

Common Problem	Common Metric
Leveraging effective partnerships	Number of partnerships by sector (defined by curriculum developed jointly + agreement)
Penetration of training and diversity of participants	Number of participants by sector Percent of participation relative to eligible target population for curriculum Percent of disadvantaged participants trained (identified by zip code and/or census tract)
Impact of training	Number of participants who report they applied the training annually Number of projects implemented in applying the training annually

Codes and Standards (C&S)

Common Problem	Common Metric
Capturing energy savings	Annual gas, electric, and demand savings
Activity in advocating for codes and standards tied to adoption in CA	Annual number of case studies Annual number of case studies used to implement adopted codes and standards

Common Problem	Common Metric
Local government participation and success in adoption of reach codes	Annual number of local government Reach Codes implemented (joint utility and regional energy network effort)
Activity in advocating for codes and standards tied to adoption at the federal level	Annual number of federal standards adopted for which a utility advocated

Emerging Technologies (ET) Program

Common Problem	Common Metric
Savings are not being tracked	Annual number of technologies that have moved from the ET program: -into the portfolio, with associated dates and kW and kWh (estimated and achieved) net and gross savings. -directly into code, with associated dates and kW and kWh (estimated and achieved) net and gross savings. -first into the portfolio, then into code, with associated dates and kW and kWh (estimated and achieved) net and gross savings.
Input from other groups is not being tracked	Annual number of recommendations received from/recommendations implemented from: -C&S/code readiness -industry groups -architect/implementer/builders groups -other ET programs -zero net energy implementation teams
Output from ET is not explicitly aligned with long- term goals	Annual number of ET projects and technologies aligned with specific statewide goals List of ET projects and their statewide goal alignment

Common Problem	Common Metric
ET project results are not always aligned with work paper requirements	Percentage of ET-originated work papers requiring additional information before submission
ET event success is not tracked	Metric measuring either the knowledge acquisition or increased activity of participants after events
ET has not increased the focus on market studies as recommended by evaluation results	Percent of ET projects that include a market and barrier identification study
ET is not utilizing other programs to confront barriers to market penetration	Annual number of WE&T programs created around ET projects Annual number of marketing, education, and outreach programs created around ET projects

Revised ED Common Metrics (Dated July 10, 2017)

Commission Staff Additional Clarifications for July 14th Program Administrator Filing of Revised Statewide (Common) Sector/Cross-Cutting Level Metrics

Residential – Single Family

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) for Single Family Customers	PA proposed/revised metric of "First year annual ex ante gas, electric and demand savings, gross and net" is reasonable
Greenhouse Gas Emissions	Greenhouse gasses (MT CO2eq) Net kWh savings, reported on an annual basis	This is a new metric for this sector. Annual net greenhouse gas emissions, reported as the weight of CO2 with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Depth of interventions	Average savings per participant	Based on discussions with PAs, this could be revised to distinguish between opt-in programs (Home Upgrade, for example) and opt-out (Home Energy Reports) as well as down-, mid- and upstream efforts. While it may be difficult to determine participant savings from upstream (lighting) programs, the IOUs/PAs may be able to extrapolate participant savings from mid-stream efforts, in which incentives go to retailers or contractors), using existing historical downstream participant data .

Penetration of energy efficiency programs in the eligible market	Percent of participation relative to eligible population	Commission staff believes this should be a sector level metric. The PAs should leverage their experience and knowledge of their own customer base(s) to develop a sense of what their overall target market is and how much of it they intend to reach over the short-, mid-, and long-term. With regard to concerns about penetration of Hard to Reach (HTR) and Disadvantaged Communities (DAC) populations- Commission staff's understanding is that the competing Commission definitions of HTR will be clarified. For DAC, PAs need to identify by a specific date whether they can map census tract to zip code. If there is overlap between HTR, DAC and low income, PAs need to propose a way to clarify that overlap.
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use	Use TRC and PAC for levelized cost
Common Problem	**Common Metric**	**Commission Staff Clarification**
	both TRC and PAC)	
Energy intensity	Average energy use intensity of single family homes (average usage per household – not adjusted)	PA feedback states that the PAs need to develop a common definition of MF to develop a data query to determine SF and MF. The PAs need to establish a date by which making this distinction will be feasible. The PAs can work to refine this distinction over the life of the business plan.

Residential – Multi Family

Common Problem	Common Metric	Commission Staff Clarification

Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts)	Commission staff acknowledges that PAs may not be able to calculate upstream savings for measures that are installed in MF properties by tenants. PAs could explore using EM&V data/results to determine what percentage of upstream/midstream rebated measures go to this market segment. This bifurcation by customer account types should remain and the PAs should differentiate these accounts in their CIS systems in the future.
Depth of interventions	Average savings per participant Savings per project (property) I'm open to using the Commercial property metrics (below): Energy savings (kWh, kw, therms) per project (building) Energy savings (kWh, kw, therms) per square foot	
Penetration of energy efficiency programs in the eligible market	Percent of participation relative to eligible population (by unit, and property) Percent of square feet of eligible population participating (by property)	
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	Use TRC and PAC for levelized cost
Energy intensity	Average energy use intensity of multifamily buildings (average usage per square foot – not adjusted and including in-unit accounts)	New metric added to address concerns about the influence by non-EE factors (EV adoption, PV penetration, etc.) since these
Common Problem	**Common Metric**	**Commission Staff Clarification**
	Average energy use intensity of multifamily units.	types of loads cannot appear on a MF sub metered account.

Commercial

Common Problem	**Common Metric**	**Commission Staff Clarification**

Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) First year annual ex-ante gas, electric, and demand savings (gross and net) as a percentage of overall sectoral usage	
Greenhouse gas emissions	Greenhouse gasses (MT CO_2eq) Net kWh savings, reported on an annual basis	This is a new metric for this sector. Annual net greenhouse gas emissions, reported as the weight of CO2 with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Depth of interventions	Energy savings (gross kWh, therms) as a fraction of total project consumption.	
Penetration of energy efficiency programs in the eligible market	Percent of participation relative to eligible population for small, medium, and large customers Percent of square feet of eligible population Percent of participation by customers defined as "hard to reach"	PAs do not collect square footage now but should moving forward.
Penetration of benchmarking in the eligible market	Percent of benchmarked customers relative to eligible population for small, medium, and large customers Percent of benchmarked square feet of eligible population Percent of benchmarking by customers defined as "hard to reach"	
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	Use TRC and PAC for levelized cost
Use of whole building metered data to estimate savings	Fraction of total projects utilizing Normalized Metered Energy Consumption (NMEC) to estimate savings Fraction of total savings (gross kWh and therm) derived from NMEC analysis	
Common Problem	**Common Metric**	**Commission Staff Clarification**
Program Satisfaction	Improvement in customer satisfaction Improvement in trade ally satisfaction	Compute change in satisfaction scores relative to a baseline period using a common survey technique.
Investment in energy efficiency	Fraction of total investments made by ratepayers and private capital	

Public

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) across Public Sector	
Greenhouse Gas Emissions	Greenhouse gasses (MT CO_2eq) Net kWh savings, reported on an annual basis	Annual net greenhouse gas emissions, reported as the weight of CO2 with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Depth of interventions	Average percent energy savings (kWh, kw, therms) per project building or facility Average annual energy savings (kWh, kw, therms) per project building floor plan area Average annual energy savings (kWh, kW therms) per annual flow through project water/wastewater facilities	• Total annual net kWh, kW, and therm savings divided by total counterfactual kWh, kW, and therm consumed at all Public Sector project sites: [net kWh, kW, or therm savings] / [kWh, kW, or therm consumed + net kWh, kW, or therm savings] • Annual net kWh, kWh, and therm savings from building interventions (i.e. retrofits, retrocommissioning, BROs--not entire Public Sector) divided by total square footage of project buildings • Annual net kWh, kW, and Therm savings from water/wastewater projects divided by annual treated volume (million gallons) of water/wastewater through project facilities; only include water/wastewater treatment-specific interventions
Penetration of energy efficiency programs and benchmarking in	Percent of Public Sector accounts participating in programs Percent of estimated floorplan area of all Public Sector buildings	• Number of utility accounts directly enrolled in current Public Sector programs (resource or non-resource) divided by total number of Public Sector accounts;

Common Problem	Common Metric	Commission Staff Clarification
the eligible market	participating in building programs Percent of Public Sector water/wastewater flow enrolled in water/wastewater programs	accounts participating in multiple programs are counted only once for this metric • Floorplan area of Public Sector buildings enrolled in one or more program (resource or non-resource) divided by estimated total building floor plan area within Public Sector • Flowrate of Public Sector water/wastewater facilities enrolled in one or more program (resource or non-resource) divided by total flowrate of all water/wastewater facilities within Public Sector
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	Use TRC and PAC for levelized cost
Investment in energy efficiency	Total program-backed financing distributed to Public Sector customers requiring repayment (i.e. loans, OBF)	
Energy intensity	Average energy use intensity of all Public Sector buildings Percent of Public Sector buildings with current benchmark Percent of floorplan area of all Public Sector buildings with current benchmark	• Total Energy Use (combined electric and gas) of Public Sector water/wastewater treatment facilities divided by total nominal Public Sector water/wastewater flowrate (million gallons per day) • Cumulative total number of buildings with current benchmark divided by estimated total number of buildings in Public Sector • Cumulative total building floor plan area benchmarked divided by estimated total floor plan area of all buildings in Public Sector

Industrial

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year annual ex-ante gas, electric, and demand savings (gross and net) in industrial sector	
Greenhouse Gas Emissions	Greenhouse gasses (MT CO_2eq) Net kWh savings, reported on an annual basis	Annual net greenhouse gas emissions, reported as the weight of CO2 with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Penetration of energy efficiency programs and diversity of participants	Percent of participation relative to eligible population for small, medium and large customers	Commission acknowledges that "large customers" would be hard to aggregate across all PAs as they use different definitions based on demand
New participation	Percent of customers participating that have not received an incentive for the past three years, annually, by small, medium and large customer categories	
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and KW (use both TRC and PAC)	Use TRC and PAC for levelized cost

Agricultural

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings	First year ex ante annualized gas, electric, and demand savings in agriculture sector, gross and net	
Greenhouse Gas Emissions	Greenhouse gasses (MT CO2eq) Net kWh savings, reported on an annual basis	Annual net greenhouse gas emissions, reported as the weight of CO2 with equivalent global warming potential, saved through annual net electric and therm savings, accounting for estimated emissions related to generation and transmission for same year
Penetration of energy efficiency programs and diversity of participants	Percent of participation relative to eligible population for small, medium and large customers	
Cost per unit saved	Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)	Use TRC and PAC for levelized cost

Codes and Standards

Common Problem	Common Metric	Commission Staff Clarification
Capturing energy savings (for any resource program)	Net Energy Savings: GWH, MMTherms and MW (demand)	

Common Problem	Common Metric	Commission Staff Clarification
Activity in advocating for building codes (T-24) tied to adoption in CA	Number of CASE studies or proposed measures within CASE studies and a subset of the number that actually were used to implement codes and standards. Additional metric of percent of codes that were supported by IOU CASE studies and other work products. (optional)	It is important to measure the CASE studies in addition to the percentage of CASE studies adopt for the reasons and examples below: • If the IOUs do not provide the information the CEC needs, then it is likely that it will not become a standard due to lack of information. It is likely that the percent of CEC standards supported by the IOUs will be 100% all of the time. The exception is if the denominator includes federal standards that are adopted into T-20 (but these should be excluded because they are accounted for under the federal standard advocacy) The two scenarios below illustrate the value of providing discrete number of CASE studies and not just percentages. • CASE 1: IOUS provide one CASE study and CEC implements one new standard. The CEC may not implement more because they do not have enough information, even though if they had the information they would implement another standard. As a result, the metric result based on percentage is 100% • CASE 2: If the IOUs had provided two CASE studies and enabled two CASE studies and the CEC implemented two new standards and doubled the savings. As a result, the metric is still 100%. • The IOUs concern may be that if the CPUC sets a discrete amount of CASE studies, then the CPUC might conclude that the IOUs are not achieving their goal; in addition, one large CASE study can save as much as many small CASE studies. On the other hand, there could be many small low energy savings studies implemented instead of one large one. However, because an additional metric measures kWh and therm savings metric, this would account for the aggregated savings of all measures. The energy savings and number of studies together provide a complete picture.

Common Problem	Common Metric	Commission Staff Clarification
Activity in advocating for appliance, lighting and equipment standards tied to adoption in CA	Number of CASE studies or proposed measures within CASE studies and a subset of the number that actually were used to implement codes and standards. Additional metric of percent of codes that were supported by IOU CASE studies and other work products. (optional)	Same clarifications as previous metric
Activity in advocating for codes and standards tied to adoption at the federal level	Number of federal standards adopted for which a utility advocated (IOUs to list advocated activities) Percent of DoE appliances, equipment and lighting standards added to federal register final rule that IOUs advocated for.	Cannot give credit for the same code or standard if: • It was first a California standard (T-20) and was adopted by the federal government • It was first a federal standard and was automatically adopted by T-20 Exceptions are: • if the federal standard is more stringent than the current California standard • If advocacy efforts prevent the federal government from implementing standards that are lower than the California standard. IOUs suggested a metric of "Percent of DoE appliances, equipment and lighting standards added to federal register final rule that IOUs advocated for". This by itself is not adequate because it is not unprecedented that the federal government will put a moratorium on federal standards, in which case the denominator will be zero. This is not a reflection of the IOUs efforts. Because the IOUs do not implement standards it is important to measure what standards they enabled even if not implemented for the budgetary and political reasons of the CEC and the DoE.
Local government participation and success in adoption of reach codes	The number of local government Reach Codes implemented (this is a joint IOU and REN effort)	
Compliance Improvement	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g., building officials, builders, architects, etc.) and the total size (number) of the target	

Common Problem	Common Metric	Commission Staff Clarification
	audience by sector. Increase in code compliance knowledge pre/post training.	

Work force Education and Training

Common Problem	Common Metric	Commission Staff Clarification
Leveraging effective partnerships	Number of partnership by sector (complete "partnership" defined by curriculum developed jointly + agreement)	Based on the comments from the California Community Colleges and the Coalition for Energy Efficiency the utilities shall work with these stakeholders to incorporate the Community Colleges' proposed framework of using existing industry partner metrics for the partnership metrics. Commission staff agrees with the proposed general definition of collaborations and their category title.
Penetration of training and diversity of participants	Number of participants by sector Percent of participation relative to eligible target population for curriculum Percent of disadvantaged participants trained (ID by zip code)	• "Number of participants by pre-defined workforce categories (occupations, industry, etc.--i.e., engineers, architects, HVAC technicians, building operators.)" is reasonable. Use list of 25 occupations, prioritized by high priority categories based on Potential and Goals study, as recommended by IOUs. • "Percent of participation relative to eligibletarget population for training [focused onhigh-priority occupations doing high EE potential work.]" is reasonable. Eligible target populations could be occupations (as prioritized above), incumbent worker populations, and students.

Emerging Technologies Program

Common Problem	Common Metric	Commission Staff Clarification
Need to track Technology Priority Map (TPM)	ETP-M1: 6* TPMs (gas and electric combined) initiated within the first 3 years (including 1 Technology-focused Pilot TPM identifying market barriers for a diverse range of high-impact technologies through studies, and subsequently breaking down identified	This is edited from the version submitted to the CAEECC meeting on 6/30 for more clarity.

Common Problem	Common Metric	Commission Staff Clarification
development	barriers via cooperative projects initiated in coordination with WE&T, ME&O, and other relevant IOU programs) * This number will be updated once all third party contracts have been awarded.	
Need to track TPM updating activity	ETP-M2: 3 TPMs updated within the first 3 years	This was submitted in the Business Plans, but removed by the IOUs in their most recent iteration. Commission staff believes this is a useful metric as the statewide TPM development will need to be an iterative process.
Need to project activity	ETP-M3: 183* projects initiated within the first 3 years *This averages 61 projects per year; this number will be updated once all third party contracts have been awarded.	Taken directly from the IOU's most recent iteration of metrics. This was a portion of another metric directly from the BPs that has now been separated out.
Need to track event activity	ETP-M4: Host 15 outreach events with technology developers with products <1 year from commercialization within the first 3 years, including new technology vendors, manufacturers, and entrepreneurs.	
Need to track event activity	ETP-M5: Host 6 outreach events with technology developers with products <5 years from commercialization within the first 3 years, including new technology vendors, manufacturers, and entrepreneurs.	These were in the Business Plans, but removed from the latest iteration of the metrics from the IOUs. Commission staff believes outreach should be tracked to ensure a minimum level of activity, and the separate outreach at different points in the technology development cycle would enable early awareness of technologies for ETP projects or TFPs
ETP is not utilizing other programs to confront barriers to market penetration	ETP-M6: 2* projects initiated with cooperation from other internal IOU programs associated with each Technology-focused Pilot *This number may be updated according to the results of the TPM development working group process	This is to ensure that the TFPs are executed properly. Multiple projects must be initiated to support these technologies against market barriers. The TPM development stakeholder working group sessions may help determine whether two projects is an appropriate target.
Need to track Technology-focused Pilot (TFP) TPM efforts	ETP-M7: 3* Technology-focused Pilots initiated as part of the TFP TPM within the first 3 years *This number may be updated according to the results of the TPM development working group process	New metric. This is to ensure that the TFP TPM is made up of several technology directions to diversify risk and increase learning opportunities from this early pilot. Technologies suitable for this approach will be identified during the TPM development stakeholder work group sessions, leading to a possible adjustment of this target.

Common Problem	Tracking for ETP	Commission Staff Clarification
Savings are not being tracked	• ETP-T1: Prior year: % of new measures added to the portfolio that were previously ETP technologies • ETP-T2: Prior Year: # of new measures added to the portfolio that were previously ETP technologies • ETP-T3: Prior year: % of new codes or standards that were previously ETP technologies • ETP-T4: Prior Year: # of new measures added to the portfolio that were previously ETP technologies • ETP-T5: Savings of measures currently in the portfolio that were supported by ETP, added since 2009. Ex-ante with gross and net for all measures, with ex-post where available	For ETP-T2, need the absolute number as well as the impact on the portfolio. For ETP-T5, Ex-ante and ex-post were determined to be easily available once the ETP and savings databases were matched up. Therefore ex-ante will allow comparison across all years, while ex- post will allow more accurate tracking and comparison among years where ex-post is available.
Input from other groups is not being tracked	• ETP-T6: Number of ETCC project ideas submitted outside of TPM process by source. [Note: Categories of sources (e.g. PA, national lab, manufacturer, technology incubator, etc.) will be developed collaboratively with ED, and self-reported by submitter.] Project source also labeled in the ETP database. • ETP-T7: Number of TPM project ideas by source, if available [Note: Categories of sources (e.g. PA, national lab, manufacturer, technology incubator, etc.) will be developed collaboratively, and attributed by ETP based on ETP's expert judgment.] Project source also labeled in the ETP database.	IOUs were concerned that some technologies may not have a clear source, so an exemption was made. Commission staff will coordinate on this to ensure that all sources are identified if possible, with remaining technologies' source attributed to their technology developer.
Output from ETP is not explicitly aligned with long-term goals	ETP-T8: Mapping of ETP projects and technologies aligned with specific statewide goals, with specificity as to what aspect of each goal it is fulfilling. For example: "4 ETP projects are aligned with statewide ZNE-readiness" in addition to "a list of ETP projects aligned with ZNE-readiness are as follows:". Goals will also be labeled in the ETP database. A list of eligible goals will be developed collaboratively with ED.	

Attachment C - Metric Guiding Principles

Metrics should…	Explanation
Be used and useful by program administrators to manage their portfolio	Metrics that are used by program administrators to manage programs and portfolios can be valuable to improve implementation. Otherwise, they can become a cost-effectiveness-reducing resource drain.
Be timely	Data collection frequency for metrics should support decision-making frequency.
Rely on data used in program implementation	Metrics should rely on readily available data to increase reporting efficiency and minimize costs. Metrics that require extensive research cause reporting delays and reduce program cost effectiveness. Additional challenges include research funding and identifying appropriate research leads.
Be simple to understand and clear of any subjectivity	Metrics should not rely on subjective assessments.
Be output-based	Output metrics (e.g. number of trainings completed, number of program participants, total incentives paid, etc.) can require synthesis to interpret, but they have the advantages of being readily available and unambiguous.
Have a readily interpretable meaning, with context added, if needed	Metrics provide data points into portfolio/program performance, but will not provide a complete story.
Not be a replacement for evaluation, measurement, and verification (EM&V)	Metrics should not replace EM&V because energy efficiency program interventions are centered on customers and other market actors. Their behavior and decision making are too complex and evolving to capture completely in metrics. However, metrics can inform the need for EM&V. For example, metrics may be used to indicate “red flags,” upon which a targeted process evaluation may be initiated to understand whether program course correction is needed.
Have longevity	Metrics are most useful if they can show trends across time and are resistant to changes in baseline and to goal displacement.

Attachment D – Data Sources & Calculations

Table 1: SoCalGas - Portfolio-level Metrics Data Definitions & Sources						
Common Problem	**Ref.**	**Metric**	**Data Sources**	**Calculation**		**Future Data Improvements**
Capturing energy savings	**P-1**	Energy Savings: Net and gross annualized energy savings (Therms).	Annual EE Report	Energy savings (net, gross) as reported in Annual EE Report.		None.
Disadvantaged communities[1]	**P-2**	Disadvantaged Communities: Net and gross annualized energy savings (Therms) of the top 25% zip codes as defined by the CalEnviroScreen Tool.1	Annual EE Report	Numerator	Total DAC energy savings (gross and net) over	None.
			CalEnviroScreen Tool 2.0 (top 25%).	Denominator	Total portfolio energy savings (gross and net).	
Hard to reach markets[2]	**P-3**	HTR: Net and gross annualized energy savings (Therms) of the HTR customer groups.2	Annual EE Report	Numerator	Total HTR energy savings	None.
			CalEnviroScreen Tool by zip code (top 25%, Population Characteristic factors only).	Denominator	Total portfolio energy savings (gross and net).	
Cost per unit saved	**P-4**	Levelized cost (PAC) of energy efficiency by therm.	Annual EE Report	Levelized cost (PAC) as reported in Annual EE Report.		Revise CET to output levelized cost at segment/sector level.

Table 2A: SoCalGas - Residential Segment – Single-family						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metric**	**Data Sources**	**Calculations**		**Future Data Improvements**
Capturing energy savings	**RSF-1**	Energy Savings: Net and gross reported 1st year annualized energy savings (therms) for Single-family segment.	Annual EE Report Residential = SF segment based on billing system. Upstream = split SF/MF based on billing system.	Energy savings (net, gross) as reported in Annual EE Report.		None.
Depth of interventions	**RSF-2**	Average net and gross reported annualized energy savings (therms) per Single-family participant.	Annual EE Report Participant = 1 or more EE resource engagements per customer account. Resource and/or Nonresource participation.	Numerator Denominator	Annualized therm saved by all SF participant over Number of SF participants	None.

Table 2A: SoCalGas - Residential Segment – Single-family						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metric**	**Data Sources**	**Calculations**		**Future Data Improvements**
Penetration of energy efficiency programs in the eligible market	**RSF-3**	Percent of all program participation to overall number of residential Single-family customers.	As presented above.	Numerator	Number of SF program participants over	None.
			SF energy usage = based on billing system as of end of previous year (12/31).	Denominator	Total number of SF customers	
	RSF-4	Percent of all program participation with DA communities to overall number of Single-family customers.	As presented above.	Numerator	Number of SF program participants in DAC zip codes over	None.
			Program = resource or nonresource			
			Participant = 1 or more EE engagement per customer account	Denominator	Total number of SF customers	
			DAC = CalEnviroScreen			
	RSF-5	Percent of all program participation within HTR groups to overall number of Single-family customers.	As presented above.	Numerator	Number of SF program participants in HTR zip codes over	None.
			HTR = CalEnviroScreen Tool by zip code (top 25%, Population Characteristic factors only).	Denominator	Total number of SF customers	
Cost per unit saved	**RSF-6**	Levelized cost (PAC) of energy efficiency by therm in Single-family segment.	Annual EE Report. Portfolio levelized cost value until CET is revised.	Per Cost-effectiveness Tool (CET)		Revise CET to output levelized cost at
Investment in energy efficiency	**RSF-7**	Average energy use intensity of single family homes (average usage per household – not adjusted)	Usage = Total annual SF customers	Numerator	Total number of SF customers	None.
			Usage = Total annual SF home	Denominator	Annual energy use	

Table 2B: SoCalGas - Residential Segment – Multi-family						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metric**	**Data Sources**	**Calculations**		**Future Data Improvements**
Capturing energy savings	**RMF-1**	Energy Savings: Reported 1st year annualized energy savings (therms) for Multi-family segment.	Annual EE Report Residential = MF (including Mobile Home) Upstream = split SF/MF based on billing	Energy savings (net, gross) as reported in Annual EE Report.		None.
Depth of interventions	**RMF-2**	Average Reported annualized energy savings (therms) per Multi-family participant.	As presented above.	Numerator	Annualized therm saved by all MF participant over	None.
			Participant = 1 or more EE resource engagements per customer account. Resource and/or Nonresource participation.	Denominator	Number of MF participants	
	RMF-3	Average Reported annualized energy savings (therms) per Multi-family project.	As presented above.	Numerator	Annualized therm saved by all MF participant over	None.
			Property = Program Application.	Denominator	Number of MF participants	

Table 2B: SoCalGas - Residential Segment – Multi-family						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metric**	**Data Sources**	**Calculations**		**Future Data Improvements**
Penetration of energy efficiency programs in the eligible market	**RMF-4**	Percent of all program participation to overall number of residential Multi-family customers by unit and by property.	As presented above.	Numerator	Number of MF program participants over	None.
			Unit = Building	Denominator	Number of MF units	
			Property = resource program application.	Numerator	Number of MF program participants over	
				Denominator	Number of MF properties	
	RMF-5	Percent of treated sqft to the overall Multi-family segment sqft. population.2	As presented above.	Numerator	Treated sector sqft. over	None.
			Sqft. = CEC data.			
			Participation = resource program only.	Denominator	Total segment's sqft.	
	RMF-6	Percent of all program participation with DA communities to overall number of Multi-family customers by unit and property.	As presented above.	Numerator	Number of participating MF units in DAC zip codes over	None.
			Program = resource or nonresource	Denominator	Total number of MF units	
			Participant = 1 or more EE engagement per customer account	Numerator	Number of participating MF properties in DAC zip codes over	
			DAC = CalEnviroscreen	Denominator	Total number of MF properties	
	RMF-7	Percent of all program participation within HTR groups to overall number of Multi-family customers.	As presented above.	Numerator	Number of program participants in HTR zip codes over	None.
			HTR = CalEnviroScreen Socioeconomic view only 2.0 (top 25%).	Denominator	Total number of customers	
Cost per unit saved	**RMF-8**	Levelized cost (PAC) of energy efficiency by therm in Multi-family segment.3	Annual EE Report. Portfolio levelized cost value until CET is revised.	Per Cost-effectiveness Tool (CET).		Revise CET to output levelized cost at segment/sector level.
Energy intensity	**RMF-9**	Average energy use intensity of multi-family buildings (average usage per square foot – not adjusted – and including in-unit accounts)	Population = MF homes	Numerator	Total MF usage	None.
			External Data Sources (unavailable)	Denominator	Total MF number of customers	

Table 3: SoCalGas - Commercial Sector						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metric**	**Data Sources**	**Calculations**		**Future Data Improvements**
Capturing energy savings	**C-1**	Energy Savings: Reported 1st year annualized energy savings (therms)	Annual EE Report Commercial = Billing system (w/o Public). Upstream splits among Com'l. and Public based on billing system.	Energy savings (net, gross) as reported in Annual EE Report.		None.
	~~**C-2**~~	~~Percent of reported 1st year annualized energy savings in all programs relative to sector usage.~~	~~As presented above.~~	~~Numerator~~	~~Energy savings (net, gross) over~~	~~None.~~
			~~Usage = billing system for non-Public Commercial accounts.~~	~~Denominator~~	~~Commercial sector usage as of the end of calendar year.~~	
Depth of Intervention	**C-3**	Energy savings (therms) per project	As presented above.	Numerator	Energy savings(net, gross) over	None.
			Participant = Program Application (resource only)	Denominator	Number of resource program participants.	
	~~**C-4**~~	~~Energy savings (therms) per square foot~~	~~As presented above and assumed sqft per participant.~~	~~Numerator~~	~~Treated sector sqft. over~~	~~None.~~
			~~Sqft. = CEC data.~~	~~Denominator~~	~~Total sector's sqft.~~	
Penetration of energy efficiency programs and benchmarking in the eligible market	**C-5**	Percent of participation in all programs among eligible small, medium, and large (S/M/L) customer groups.	As presented above. Customer size per future CPUC direction, else Large = >50k, Medium = >10k-50k, and Small = 10k and below.	Numerator	Number of resource program participants S/M/L groups over	None.
			Programs = all, resource and nonresource. Customer = Commercial account per billing system.	Denominator	Number of overall customers in S/M/L groups	

Table 3: SoCalGas - Commercial Sector Data Definitions & Sources						
Common Problem	**Ref.**	**Metric**	**Data Sources**	**Calculations**		**Future Data Improvements**
Penetration of energy efficiency programs and benchmarking in the eligible market	**C-6**	Percent of square feet of eligible population	Population = building over 50k sqft.	Numerator	Number of treated sqft. over	Revise tracking systems to caputure participant-reported treated sqft. (cost to track and verify information - TBD)
			CEC benchmarked data.	Denominator	Commercial sqft. eligible	
	C-7	Percent of participation in all programs among customers within HTR customer groups.	As presented above.	Numerator	Number of program participants in HTR zip codes over	None.
			HTR = CalEnviroScreen Tool by zip code (top 25%, Population Characteristic factors only).	Denominator	Total number of customers	
Cost per unit saved	**C-8**	Levelized cost (PAC) of energy efficiency by therm.	Annual EE Report. Portfolio levelized cost value until CET is revised.	Per Cost-effectiveness Tool (CET).		Revise CET to output levelized cost at segment/sector level.
~~Investment in energy efficiency~~	~~**C-9**~~	~~Dollars of investments (all public funding sources)~~	~~Not available~~	~~Assume alternate public funding (i.e., non-private funding) sources. Participant self-reported information.~~		~~Revise tracking systems to caputure self-reported alternate public funding source information. (Cost – TBD)~~
~~Energy intensity~~	~~**C-10**~~	~~Percent of square feet of eligible population benchmarked~~	~~Population = building over 50k sqft.~~	~~Numerator~~	~~Number of benchmarked sqft. over~~	~~CEC modified reporting to provide benchmarking information. (Cost – unvailable)~~
			~~CEC benchmarked data.~~	~~Denominator~~	~~Number of all sqft. eligible for CEC benchmarking~~	

1 - Large = >50k, Medium = >10k-50k, and Small = 10k and below.

2 - Disadvantaged Communities are based on geographic, socioeconomic, public health, and environmental hazard criteria, and may include, but are not limited to, either of the following: (1) Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure, or environmental degradation; (2) Areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment.

3 - Hard to reach (HTR) residential customers are defined as Top 25% zip codes of population based on socioeconomic score exclusively. See, footnote 1, item 2. (EnviroScreen)

Table 4: SoCalGas - Industrial Sector						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metric**	**Data Sources**	**Calculations**		**Future Data Improvemen**
Capturing Energy Savings	**I-1**	Energy Savings: Reported 1st year annualized energy savings (therms)	Therm = reported per RRM. Industrial = Billing system.	Energy savings (net, gross) as reported in Annual EE Report.		None.
Penetration of energy efficiency programs and diversity of participants	**I-2**	Percent of participation in all programs among eligible small, medium, and large (S/M/L) customer groups.	As presented above. Customer size per future CPUC direction, else Large = >50k, Medium = >10k-50k, and Small = 10k and below. Programs = all, resource and nonresource.	Numerator Denominator	Number of resource program participants over Number of overall customers in	None.
New participation	**I-3**	Percent of customers participating that are new participants (annually)	As presented above. New = participants who have not participated in any pgm. Other past 3 calendar years.	Numerator Denominator	Number of new ıber of particip	None.
1 - Large = >50k, Medium = >10k-50k, and Small = 10k and below.						
2 - Existing participants = participation in any EE program during the previous 3 calendar years.						

Table 5: SoCalGas - Agricultural Sector						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metrics**	**Data Sources**	**Calculations**		**Future Data Improvements**
Capturing Energy Savings	**A-1**	Energy Savings: Reported 1st year annualized energy savings (therms)	Therm = reported per RRM. Agricultural = Billing system.	Energy savings (net, gross) as reported in Annual EE Report.		None.
Penetration of energy efficiency programs and diversity of participants	**A-2**	Percent of program participants within the sector for the eligible small, medium, and large (S/M/L) customer groups.	As presented above. Customer size per future CPUC direction, else Large = >50k, Medium = >10k-50k, and Small = 10k and below.	Numerator Denominator	Number of resource program Number of overall customers in sector	None.
Cost per unit saved	**A-3**	Levelized cost (PAC) of energy efficiency by therm.	Annual EE Report. Portfolio levelized cost value until CET is revised.	Per Cost-effectiveness Tool (CET).		Revise CET to output levelized cost at segment/sect

1 - Large = >50k, Medium = >10k-50k, and Small = 10k and below.

2 - Existing participants = participation in any EE program during the previous 3 calendar years.

Table 6: SoCalGas - Public Sector						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metrics**	**Data Sources**	**Calculations**		**Future Data Improvements**
Capturing energy savings	**P-1**	Energy Savings: Reported 1st year annualized energy savings (therms)	Therm = reported per RRM. Public = Billing system (w/o Commercial). Upstream splits among Com'l. and Public	Energy savings (net, gross) as reported in Annual EE Report.		None.
	~~**P-2**~~	~~Percent of reported 1st year annualized energy savings in all programs relative to sector usage.~~	~~As presented above.~~	~~Energy savings (net, gross) as reported in Annual EE Report.~~		~~None.~~
Depth of Intervention	**P-3**	Energy savings (therms) per project (building)	As presented above.	Numerator	Energy savings(net, gross) over	None.
			Particapant = Application for resource projects	Denominator	Number of resource program participants.	
	~~**P-4**~~	~~Energy savings (therms) per square foot~~	~~As presented above.~~	~~Numerator~~	~~Treated sector sqft.~~	~~None.~~
			~~Sqft. = CEC data.~~	~~Denominator~~	~~Total sector's sqft.~~	
Penetration of energy efficiency programs and benchmarking in the eligible market	**P-5**	Percent of participation in all programs within sector.	As presented above.	Numerator	Number of program participants S/M/L groups over	None.
			Programs = all, resource and nonresource.	Denominator	Number of overall customers in S/M/L groups	
	P-6	Percent of treated sqft to the overall sector's sqft.	As presented above. Sqft - CEC data.	Numerator	Number of public participants (same as Pub-3 denominator)	None.
				Denominator	Number of public customers	

Table 6: SoCalGas - Public Sector						
Data Definitions & Sources						
Common Problem	**Ref.**	**Metrics**	**Data Sources**	**Calculations**		**Future Data Improvements**
Cost per unit saved	**P-7**	Levelized cost (PAC) of energy efficiency by therm.	Annual EE Report. Portfolio levelized cost value until CET is revised.	Per Cost-effectiveness Tool (CET).		Revise CET to output levelized cost at segment/sector level.
~~Investment in energy efficiency~~	~~**P-8**~~	~~Dollars of investments (all public funding sources)~~	~~Not available~~	~~Assume alternate public funding (i.e., non-private funding) sources. Participant self-reported information.~~		~~Revise tracking systems to caputure self-reported alternate public funding source information. (Cost - TBD)~~
~~Energy intensity~~	~~**P-9**~~	~~Percent of square feet of eligible population benchmarked~~	~~CEC data~~	~~Numerator~~	~~Benchmarked sector sqft. over~~	~~None.~~
				~~Denominator~~	~~Total sector's sqft.~~	