

**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.

And Related Matters.

Application 17-01-013
(Filed January 17, 2017)

Application 17-01-014
Application 17-01-015
Application 17-01-016
Application 17-01-017

**RESPONSE OF SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) TO
QUESTIONS IN ATTACHMENT A OF ADMINISTRATIVE LAW JUDGE'S RULING
SEEKING COMMENT ON ENERGY EFFICIENCY BUSINESS PLAN METRICS**

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APPENDIX 1

RESPONSE TO RULING'S ATTACHMENT A

I. QUESTIONS APPLICABLE TO ALL PROSPECTIVE PROGRAM ADMINISTRATORS (PAs)

1. Demonstrate in a quantitative way, via table or graphic, how the proposed metrics cumulatively are useful and effective indicators of each PA’s likely achievement of targeted energy efficiency program uptake and overall savings goals.

Response

The proposed metrics presented in the SoCalGas Business Plan are all useful indicators of addressing identified barriers and achieving desired outcomes within each of the sectors. Of these metrics, selective metrics within the residential, commercial, industrial, agricultural, and public sectors, as well as the codes & standards cross-cutting sector, are also useful and effective indicators of likely achievement of sector energy savings targets. These energy savings-related sector metrics directly indicate the achievement of the gross annual energy savings targets by sector, presented in the Business Plan¹ and shown below.

| Sector | Metric | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|-------------------------------|--------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Residential | R2 | 4.73 | 4.73 | 4.98 | 5.24 | 5.49 | 5.74 | 5.99 | 6.25 |
| Commercial | C1 | 5.13 | 7.11 | 7.60 | 8.10 | 8.60 | 9.10 | 9.60 | 10.10 |
| Industrial | I1, I4 | 10.19 | 10.19 | 10.19 | 10.19 | 10.19 | 10.19 | 10.19 | 10.19 |
| Agricultural | A3 | 1.87 | 2.78 | 2.80 | 2.82 | 2.84 | 2.86 | 2.88 | 2.89 |
| Public | None | 2.58 | 2.78 | 2.93 | 3.08 | 3.23 | 3.39 | 3.53 | 3.69 |
| Market Sector Subtotal | | 24.50 | 27.59 | 28.50 | 29.43 | 30.35 | 31.28 | 32.19 | 33.12 |
| Cross-cutting: C&S* | CC1 | 12.70 | 12.60 | 12.20 | 10.90 | 10.30 | 9.60 | 9.10 | 9.10 |
| Total | | 37.20 | 40.19 | 40.70 | 40.33 | 40.65 | 40.88 | 41.29 | 42.22 |

*Codes & Standards (C&S) is the only cross-cutting sector shown, as it is currently the only cross-cutting sector with resource programs which claim energy savings

As for program uptake, selective metrics, as proposed, will signal customer uptake within certain markets in the sector but, with the exception of the public sector, they are not designed to provide a cumulative indication of customer uptake at the sector level. The sector metrics are also not meant as an indicator of individual program performance or uptake, as program metrics will be proposed in implementation plans.

¹ Business Plan, p. 18.

2. Provide the number of multi-family units and multi-family properties in your respective geographic areas.

Response

SoCalGas provides the following estimate for multi-family units within its service territory based on the best possible information available. The information is comprised of both individually metered and non-metered dwellings obtained from SoCalGas' customer information system (CIS). CIS is designed to capture data related to utility billing records and installed meters, and does not capture property lot details. Therefore, due to the challenges in identifying and mapping multi-family dwellings to specific property sites, SoCalGas does not have data to precisely report the number of multi-family properties in its service territory.

Multi-family units: 2,330,512²

² As of December 2016.

II. QUESTIONS APPLICABLE TO ALL INVESTOR OWNED UTILITIES (IOUs)

A. Regarding metrics

3. What metric would best ensure that projects provide actionable data to complete work papers?

Response

The California Energy Efficiency Coordinating Committee's (CAEECC) guiding principles for metric development³ states that metrics should:

- Rely on readily available data used in program implementation to increase reporting efficiency and minimize costs; and
- Not replace Evaluation, Measurement & Verification (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.

Following these principles, metrics that rely on sector-level energy savings, customer participation, incentives paid, customer sector type, and geography would best inform work paper development from a sector-level viewpoint. However, as stated above, metrics tracking should not be a replacement for EM&V functions such as discrete work paper development and data collection. As a result, the Energy Division recommended metrics that rely on capturing all project funding sources or building square feet are not appropriate sector or program-level metrics as they would cause an increase in tracking and reporting costs.

4. What metric would best ensure that projects provide information required by incentive programs or codes and standards?

Response

Consistent with the CAEECC's guiding principles, metrics should rely upon on readily available data used in program implementation to increase reporting efficiency and minimize costs. In support of this metric principle, proposed metrics that rely on sector-level energy savings, customer participation, incentives paid, customer sector type, and geography would best support

³ See Ruling, pp. 3-4.

incentive-based programs and C&S programs as these would not increase tracking and reporting costs.

B. Workforce Education and Training (WE&T)

5. How does the number of training partners indicate how well the spectrum of entities involved in the workforce is covered?

Response

Training Partners are used to help deliver a diverse variety of training material in type, method and channel in reaching the maximum number of market actors who potentially can help to deliver and increase energy savings outcomes. Increases in the number of these Training Partners (i.e., Strategic Partners) over time sends a signal that the program is succeeding in reaching market actors across the spectrum of WE&T subprograms identified in Table 6.⁴ This WE&T spectrum is focused on occupations in sectors demonstrating, or forecasted, to have the most potential for favorably impacting energy savings based on historical, current and future studies on energy savings potential and high-demand energy efficiency occupations.

6. Please provide more information on how all targets involving percentage increases were developed or determined.

Response

For each WE&T sector metric, SoCalGas relied upon a combination of current program performance (i.e., number of trainees, strategic partners); program management experience; and proposed WE&T sector plans to determine the proposed short, medium, and long-term targets. For example, the strategic partners identified in Table 6 of the Business Plan⁵ are key industry stakeholders that ultimately will develop career pathways through educational programs that will emphasize energy efficiency. The corresponding metric seeks to monitor these stakeholders' active engagement with the WE&T sector programs to support a statewide doubling of energy efficiency by 2030.⁶

⁴ Business Plan at 393.

⁵ Business Plan at 393.

⁶ Business Plan at 397-398, Table 7 – WE&T Program Metric Table.

VIII. QUESTIONS APPLICABLE TO SOUTHERN CALIFORNIA GAS COMPANY (SOCALGAS)

A. Public Sector

54. None of the metrics listed in Table 9 appear to measure customer engagement with the Intelligent Outreach and Financial Incentives intervention strategies. How will SoCalGas track the success of these strategies?

Response

Both Intelligent Outreach and Financial Incentives intervention strategies support the metrics presented in Table 9 – Public Sector Metric Table.⁷ These two strategies directly encourage and incent customers to participate in programs helping to reduce the identified sector-level market barriers and thereby helping to achieve the identified sector metric targets. Once programs are selected, program-level metrics will be developed that directly monitor the performance of these, and other, program-types.

55. Could an additional metric and associated short-, mid-, and long-term targets be used to address Desired Outcome 1 on Table 9 that will allow SoCalGas to track increased and improved adoption by previously participating customers, e.g., facilities that had previously received individual measures going on to perform deeper retrofits?

Response

The proposed corresponding sector metric for the Public-sector Desired Outcome 1, on Table 9, can be modified from a participation metric to an energy saving metric. Energy savings can be tracked, throughout the short-, mid- and long-term, for both new and current public-sector customers.⁸ This will facilitate monitoring of both deeper energy savings from previous years' participant group and the energy efficiency adoption rate of new participants. The current short-, mid-, and long- term targets can be changed to reflect energy savings targets for both new and pre-existing public-sector customers.

⁷ Business Plan at 283-285.

⁸ The metric should not factor in building energy usage as it tends to vary over time. Such potential changes in building usage should be evaluated on a retrospective basis through EM&V studies not associated with the metric target performance.

B. Emerging Technologies

56. What metric tracks the Emerging Technologies Program and Technology Priority Map alignment with state goals such as SB 350 and Zero Net Energy?

Response

SoCalGas has not proposed a sector metric that tracks alignment with state goals such as SB350 and Zero Net Energy, because new state goals will likely arise within the Business Plan period. SoCalGas expects that the Technology Priority Map (TPM) process will consider state goals, since the primary objective of the research being planned in the TPM is to help resource programs fulfill goals, which may include those state goals, among other savings and policy goals. State goals tend to revolve around savings and markets, the resource programs are equipped and charged to meet those goals. Emerging Technologies Program's (ETP) role is to support the resource programs in their efforts to meet state goals.

57. Please define "technologies," how that definition is related to a project, and how "technologies" will be tracked when transferred into the portfolio as deemed and custom measures.

Response

There is no standard taxonomy for technologies. Historically, ETP has identified technologies by end use, with modifiers to specify application and market segment when appropriate (e.g., residential drainwater heat recovery). Projects are activities performed by or through ETP or others to assess, demonstrate or showcase a particular technology, group of technologies, practices, program delivery approaches or hardware. There may not always be a one-to-one mapping between technologies, as more than one project may be initiated for the same technology over time for different purposes or to reflect different stages of the technology's life cycle or testing requirements. Technologies that are adopted into the portfolio as measures are assigned a Measure identification (ID) number, but these may change over time as new Measure IDs are assigned with each new application. ETP tracks the initial Measure IDs in the ETP database.

58. How will the metric be reported?

Response

The metric will be reported by the number of technologies that have been assigned a Measure ID, as included and regularly reported to the CPUC as a field in the ETP database.

59. How does SoCalGas propose to benchmark the reporting over time, to develop success criteria in the future?

Response

ETP proposes to use as a benchmark the number of reports and recommendations produced by ETP annually, as a function of budget. These reports inform programs and C&S about technologies the ETP has verified and are determined to merit consideration for inclusion in the portfolios. This metric is proposed in the ETP Business Plan chapter.⁹ ETP has several years of historical data available to use for benchmarking. This is a reasonable metric, as ETP's primary role is to assess new technologies and therefore has a greater degree of control over the number of assessments and their relevance and usefulness by the program managers, tempered only by the fact that ETP does not control how many or when new technologies are introduced into the market and require assessment.

60. Please provide a list of technologies that have moved from ET directly into code, with associated dates and therm savings.

Response

ETP does not track technologies that have moved from ETP directly into code.

61. Please provide a list of technologies that have moved from ET into the portfolio, with associated dates and therm savings.

Response

Please see Attachment 1, which is a high level list of the technologies in which ET played a role and informed programs or C&S for possible inclusion in their portfolios since approximately

⁹ Business Plan at 343-346.

2009, and which identifies which technologies were adopted into programs. Since ETP does not have a process to systematically track this information, and because measure numbers can change over time as new versions of the technology are offered to different sectors, this list may not be exhaustive. ETP typically adds only the initial measure number of a technology to the ETP database. ETP has not tracked therm savings, because ETP is not a resource program.

62. Please provide a list of technologies that have moved from ET first into the portfolio, then into code, with associated dates and therm savings.

Response

As discussed in the response to question 60, ETP does not track technologies that are eventually included in code. However, for this response, SoCalGas estimated and identified which technologies in Attachment 1 that moved into code. Because ETP is not a resource program, it has not tracked therm savings associated with technologies moving to code.

63. What metric could best quantify coordination with other technology development actors such as EPIC, CalSEED, and RocketFund (others identified in the 2012 Technology Development Actors Study)? This could be based on the number of projects that are passed from one to the other, and the number of projects that come into ET from other sources such as industry and direct application.

Response

There is no sector-level objective for ETP regarding coordination. Program-level issues such as coordination are best assessed during periodic process evaluations that can target specific technology development actors and provide specific recommendations to improve coordination. ETP defines successful coordination to include not duplicating work by another entity and leveraging participation, knowledge and funding by other entities, which would be difficult to capture in a metric.

C. Workforce Education and Training (WE&T)

64. How does the number of training partners indicate how well the spectrum of entities involved in the workforce is covered?

Response

Please see the response to Question 5.

65. Please provide more information on how percent increase targets were developed or determined.

Response

Please see the response to Question 6.

Attachment 1

Summary List of ETP Recommended Project Results

| ET Project ID | Technology Description | Measure ID | To Code |
|---------------|--|---|---------|
| NA | Commercial cooking pots and pans with finned bottoms for higher energy efficiency | Not available | |
| ET10SCG0006 | Dual setpoint boiler reset controller retrofit for apartments with common combination HW services | | |
| ET13SCG0004 | HVAC Fan-stop Delay, an Add-on Thermostat Retrofit to Extend Run Time | | |
| ET12SCG0017 | Adding VFD controls for fractional HP HW circulators with single service loop | WPSCGREWH161128A-Rev00-MSR001 | |
| ET12SCG0019 | Pre-rinse Spray Valve field tests | | |
| ET13SCG0002 | Energy Star Fryer Scaled Field Placement | | |
| ET14SCG0001 | Compact Furnace for ZNE Homes, lab-home testing | | |
| ET14SCG0015 | Vertical shower drain heat recovery lab test | | X |
| ET12SCG0014 | Residential HW Circulator Home Tests | | |
| ET12SCG0004 | Comparing competing products, Dual setpoint boiler reset controller for MFR combination services | | |
| ET13SCG0017 | Advanced Thermostats | WPSCGREHC160624A-Rev02-Msr001 | |
| ET12SCG0006 | RTU air conditioner condenser waste heat recovery to supplement water heating for restaurant and food service applications | WPSCGNRWH160726A-Rev00-Msr001 | |
| ET16SCG0011 | Automatic diverting tubspout paper research | | |
| ET13SCG0019 | SFR Combination System Field Assessment | | |
| ET09SCG0003 | A proprietary demand pump retrofit in a hotel | | |
| ET09SCG0004 | Whole House Performance (TA) | | |
| ET10SCG0027 | Whole House Field Report (TA) | | |
| ET10SCG0008 | GTI CEC Residential Water Heating Study (TA) | | |
| ET10SCG0010 | GTI CEC Study, Radiant Heating & Cooling in Hot Desert Climate | | |
| ET10SCG0015 | Test Ultra-low NOx Water Heater | | |
| ET12SCG0001 | LINC Beechwood Renewable & ZNE: CEC Pier RFP for Community Scale Renewable & ZNE PIER 12-503B (DS) | | |
| PoF 1 | Cold Water Default Clothes Washer | Not available | |
| PoF 2 | Laminar Flow Restrictor | | |
| PoF 3 | Residential Cold Water Detergent | | |
| PoF 4 | Residential Condensing Water Heaters | Not available | |
| PoF 5 | EnergyStar 2.0+ Commercial Dishwashers | ApgDsw001, FS-67513, FS004 (High Temp), ApgDsw002, FS-85137, FS005 (High Temp), ApgDsw003, FS-82265, FS006 (Low Temp), ApgDsw004, FS-54161, FS007 (Low Temp) | |
| PoF 6 | Residential EnregyStar Dryers | Res-Appl-EffCD-Elec-Std-Vented-Tier2 | |
| PoF 7 | Recirculation Pump Time Clocks | 160 measures, too Detailed to List | |
| PoF 8 | Modulating Gas Dryer Retrofit | Mod-NGValve-GenComAppDryer, Mod-NGValve-ComHospitalityOnSiteLDryer, Mod-NGValve-ComHealthCareOnSiteDryer, Mod-NGValve-ComContractDryer, Mod-NGValve-MFmCommonCoinOppDryer | |