

**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
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**COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY (U 39-M)
ON ENERGY EFFICIENCY BUSINESS PLAN METRICS**

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Pursuant to the *Administrative Law Judge's Ruling Seeking Comments on Energy Efficiency Business Plan Metrics* dated May 10, 2017 (ALJ Ruling), paragraph 1, Pacific Gas and Electric Company (PG&E) submits these comments in response to the questions in Attachment A to the ALJ Ruling (Comments).

I. INTRODUCTION

These comments address the Commission staff's comprehensive proposal for Energy Efficiency (EE) Business Plans metrics – Business Plan metrics in Attachment A of the ALJ's Ruling and sector-level metrics suggested by Commission staff. To inform the discussion at the May 26, 2017 metrics workshop, PG&E also provides overarching comments and observations on the Commission staff proposal, in addition to providing responses to the questions posed in Attachment A of the ALJ Ruling. PG&E may provide additional comments at the metrics workshop.

II. COMMENTS ON THE COMMISSION STAFF PROPOSAL FOR SECTOR-LEVEL METRICS

PG&E notes many of the sector-level metrics proposed by Commission staff are reasonable and workable, and similar to metrics PG&E proposed in its Business Plan. However, PG&E provides the following comments and recommendations on the Commission staff proposal for sector-level metrics:

- Business Plan metrics should align with the Commission’s metrics’ guiding principles for Business Plans,^{1/} rely on data that is readily available, and be designed such that they are “used and useful”^{2/}
- Per Commission guidance,^{3/} Business Plan metrics should contain sector-level metrics rather than program-specific metrics
- Some of the proposed metrics may be more appropriate as indicators, as the values may fluctuate over the proposed timeline
- Some of the proposed metrics may be more appropriate for Implementation Plans, instead of sectors

A. Business Plan metrics should align with the metrics’ guiding principles, rely on data that is readily available, and be designed such that they are “used and useful.”

PG&E largely supports the “Metrics Guiding Principles for Business Plans” presented in Table 2 of the ALJ ruling. However, some of the proposed metrics appear to be misaligned with these guiding principles. In particular, the Commission should not adopt metrics that require further studies because: 1) certain studies may be prohibitively expensive, such as determining square footage data, and 2) these metrics would not be tracked, and therefore “used and useful” until the studies’ completion.

1. Several of the proposed metrics require studies to enable reporting, contrary to the guiding principles that metrics should “rely on data used in program implementation” or be “output based.” For example:

- Energy intensity metrics (Residential, Commercial, and Public) require square footage data that are generally not readily available, requiring studies.
- Metrics for number of participants who applied training annually (Workforce Education and Training) requires one or more studies.
- Metrics on knowledge acquisition or participant activity after events (Emerging Technologies (ET)) requires one or more studies.

1/ ALJ Ruling, “Table 2. Metrics Guiding Principles for Business Plans pp. 3-4.
 2/ ALJ Ruling, p. 3.
 3/ D.15-10-028 p. 53.

- Metrics to estimate savings for non-resource programs (e.g. ET) require studies.

2. Several of the proposed metrics require data that is not currently available. For example:

- PG&E does not track individual multifamily units or buildings in our service territory. To implement the proposed multifamily metrics would require significant upgrades to PG&E’s billing system, which may be cost-prohibitive.
- PG&E does not track data such as language or building ownership as part of customers’ accounts, and thus is unable to determine the “percent of participation by customer defined as ‘hard to reach.’”
- PG&E does not maintain or collect customer data by census tract, which would preclude the use of the CalEnviroScreen Tool. PG&E’s customer information is tracked by zip codes.

3. PG&E supports the guiding principle that “metrics should be used and useful by program administrators.”

The value of certain proposed metrics is unclear. For example, PG&E supports a focus on disadvantaged communities and hard to reach customers, but is concerned that metrics tied to program administrators’ energy efficiency efforts in these areas may not provide useful information. Many of those served in disadvantaged communities may be low-income, and may already be served by program administrators’ low-income programs (e.g., Energy Savings Assistance (ESA) program), and not through the energy efficiency programs portfolio. Therefore, it is unclear how this metric would be used and useful to track success of the energy efficiency portfolios.

4. PG&E recommends Commission staff provide additional clarity for certain metrics so they are “used and useful.” For example:

Program administrators and Commission staff will need to clearly define terminology to ensure consistent reporting (e.g., “participants/participation, hard to reach, eligible population, new participants, disadvantaged,” etc.) For example, a definition for “Dollars of investments (all sources)” as included in the proposed Commercial and Public sectors metrics, is required. Furthermore, the draft metric “Percent of square feet of eligible population benchmarked”

(Commercial, Public) does not align with the concept of energy intensity. While a benchmarked building provides the energy intensity for that building,^{4/} simply knowing the “percent of square foot of buildings benchmarked” does not provide valuable insights on energy intensity.

B. Commission guidance stated Business Plan metrics should contain sector-level metrics rather than program-specific metrics (e.g., downstream programs).^{5/}

Some of the proposed metrics are program-specific rather than sector level-specific. For example, the Residential sector metric for “energy and demand savings” requires savings to be reported for all residential customers. However, customers who participate in upstream programs cannot be identified as “single family” or “multi-family” customers. Similarly, tenants in commercial buildings may participate in upstream programs, but savings from upstream programs are not tied to specific commercial customers. As such, sector level energy and demand savings metrics should not be tied to customers. As another example, the “depth of intervention” metrics require energy savings data per participant, project (building), or per square footage, and only work for downstream programs, not at the sector level.

C. Some of the proposed metrics may be more appropriate as indicators, as the values may fluctuate over the proposed timeframe.

PG&E conceives of an “indicator” as a value that will be tracked, but has no targets. Indicators provide context to the metric with which it is associated. For example, PG&E proposes to use business size as an indicator for Commercial sector energy savings, thus allowing PG&E and stakeholders to understand the savings by size, but not requiring specific targets by size, as targets would reduce flexibility within the portfolio. Additionally, savings as a percent of sectoral use (Commercial, Public, Industrial, Agricultural sectors) would be more appropriate as an indicator. Program administrators do not have control over total energy use

4/ A key metric of the Environmental Protection Agency’s (EPA) Energy Star benchmarking platform “Portfolio Manager” is energy use intensity, which is calculated by dividing the total energy consumed by the building in one year by the total gross floor area of the building.

5/ D.15-10-028 p. 53.

(e.g., businesses open or businesses fold), and the overall value may be very low.^{6/} Penetration (or participation) in eligible markets (Residential sector), or penetration by customer size (determined by energy use - Commercial, Industrial, Agricultural sectors) would be more appropriate as an indicator, as participation may fluctuate depending on program designs. With the move to statewide upstream programs, “participants” as currently defined, may decrease.

D. Some of the proposed metrics may be more appropriate for Implementation Plans, instead of Business Plan metrics.

One such example is metrics associated with facility benchmarking. PG&E’s Business Plan cites benchmarking as an example tactic for providing data for Commercial and Public sector customers to better understand whole building energy usage.^{7/} The benchmarking tactic will be program-specific, and will depend, in large part, on how third parties determine the most effective way to weave this tactic into future third party program design and delivery. As such, PG&E recommends proposed metrics that measure “Percent of buildings benchmarked” (Commercial and Public sectors) be reserved for Implementation Plans.

PG&E looks forward to discussing its comments in more depth at the metrics workshop and intends to use feedback from Commission staff and stakeholders to inform its June 26, 2017 filing of revised metrics.

III. PG&E DRAFT RESPONSES TO ATTACHMENT A, QUESTIONS FOR BUSINESS PLAN PROPONENTS, Q 1-6

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.

PG&E’s Business Plan-proposed primary metrics are electric energy, demand, and gas savings, measured in terms of gigawatt hour (GWh), megawatts (MW), and millions of therms

6/ For example, see PG&E’s Business Plan Commercial chapter appendix, Tables C1 and C2.

7/ Commercial sector p. 42 (Intervention strategy 2 – Data access to facilitate customer understanding of energy efficiency), and Public sector p. 33 (Intervention Strategy 4 – Technical assistance and tools to building energy efficiency capacity and knowledge).

(MMT), respectively, across all resource sectors (see Table 1, below). These metrics are direct indicators of targeted achievement of overall savings goals, taken cumulatively. Program uptake/penetration is a metric that was proposed in PG&E’s Business Plan, but not across all sectors. PG&E intentionally categorizes program uptake and/or penetration as a secondary metric/indicator since there will likely be scenarios where goals will be achieved through *lower* program uptake/penetration, for example, by targeting programs to a subset of customers most likely to achieve the greatest savings. Targeting is one strategy of PG&E’s Business Plan and demonstrates how individual metrics, such as program uptake, can provide a very incomplete picture of program achievements. Examples of such targeting could include heating, air conditioning, and ventilation (HVAC) programs targeted to inland versus coastal areas, or residential retrofit programs targeted to older more energy-intensive homes, among others.

Table 1: Electricity, Demand, and Gas Savings Targets (2018-2025)

Sector	Short-Term Target (2018-2020)	Mid-Term Target (2021-2022)	Long-Term Target (2023-2025)	Total
Residential				
GWh	98	102	109	817
MW	9	7	8	65
MMT	1.3	1.5	1.7	11.7
Commercial				
GWh	155	180	205	1416
MW	22	29	35	222
MMT	4.2	5.2	5.9	40
Industrial				
GWh	79	75	73	608
MW	9	8	8	67
MMT	5.0	4.8	4.7	38.6
Agriculture				
GWh	49	52	54	414
MW	11	11	12	89
MMT	0.5	0.5	0.5	3.8
Public				
GWh	62	65	66	511
MW	7	10	11	72
MMT	2.9	3.8	4.3	28.8
Codes and Standards				

GWh	1190	875	480	2545
MW	307	268	164	739
MMT	18	18	10	46.0

Note: Savings targets are net and reflect annual averages during the short, mid, and long-terms.

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

PG&E cannot provide accurate data in response to this question at this time because PG&E does not have definitive data records to identify properties as single family, multi-family units, or multi-family properties, in terms of the Title 24 definitions of those property types.

PG&E does not track the number of individual multi-family units or buildings in its service territory. As discussed in the Residential chapter of PG&E’s Business Plan, some multi-family buildings are master-metered, while other buildings have meters for each individual unit. For the former, PG&E receives one payment for the property and does not maintain records for the number of units within those buildings. Further, PG&E does not track multi-family buildings specifically, but instead tracks dwelling type. In PG&E’s billing system, multi-family residences should be catalogued with a dwelling type of “shared.” However, other buildings, including town homes and condominiums, are also catalogued as “shared.”

PG&E proposed an energy savings metric^{8/} for the multi-family sector because it recognizes the importance of increasing savings from multi-family properties. This metric ties directly to PG&E’s goal to deliver more savings to the multi-family sector and can be measured through information collected on customers that are enrolled in multi-family energy efficiency programs. This metric aligns with the ALJ Ruling’s guiding principle that “metrics should rely on readily available data to increase reporting efficiency and minimize costs.”^{9/}

8/ PG&E’s goal for the multifamily sector is to increase savings from multifamily properties. PG&E’s proposed metric to measure success against this goal is electricity and gas savings from multifamily properties. (PG&E Residential chapter p. 60.)

9/ ALJ Ruling, p. 3.

Questions applicable to all investor owned utilities (IOUs)

Regarding metrics

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

Evaluation measurements needed to support the development or revision of workpapers are not typically thought of as metrics with associated time-bound targets. Moreover, the current Business Plan metrics are generally based on tracking data, not evaluation. As such, they do not align well with workpaper needs. Additionally, PG&E's Business Plan includes portfolio and sector level strategies, and does not address individual programs and/or project requirements, which would likely be needed to provide actionable data to inform workpapers.

However, PG&E does support appropriate data collection by programs to inform project and program indicators/metrics as appropriate. This has been challenging for certain program implementation channels, such as upstream and midstream, where merely identifying program participants can be difficult. Although one of the guiding principles included in the ALJ Ruling states metrics are not a replacement for evaluation,^{10/} PG&E is interested in exploring how metrics could help contribute to providing actionable data to complete workpapers. PG&E recommends a discussion of this topic at the metrics workshop.

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

Project level information is more appropriately dealt with at the program level, and thus in Implementation Plans. PG&E's Business Plan does not address individual project or program requirements. However, individual projects may contribute information on savings, measures, and participants, as well as the quality of the program processes.

PG&E recommends that Implementation Plans should include project level data needed to inform incentive programs and future codes and standards.

10/ ALJ Ruling, p. 4.

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?

The number of a Program Administrator's training partners alone would neither indicate the quality of the partnership nor how well the spectrum of entities involved in the workforce is covered. However, the number of training partners could be one element used to understand the accomplishments of the WE&T program.

PG&E intends to track the number of its training partners as an indicator, but it does not intend to develop goals or metrics associated with the number of partners. In addition, however, PG&E proposes to explore other outcome-based metrics, such as: 1) how many of those training partners implement/include training materials; 2) how many of the partners focus on the high-energy-savings potential areas; and 3) how many of those training partners become self-sufficient and require fewer resources from PG&E.

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

PG&E did not provide any percentage increases in its targets for WE&T metrics.

Questions applicable to Pacific Gas and Electric Company (PG&E)

Portfolio

15. Pursuant to Ordering Paragraph 13 of D.16-08-019, PA Business Plans were to include the objectives and metrics that will be met through each statewide or third-party program or subprogram, whether a solicitation will be conducted, and the functional activities that are proposed to be conducted statewide. Do PG&E's proposed objectives apply uniformly to each and every third-party and statewide program and subprogram? What are the metrics that will be met with each and every third-party and statewide program and subprogram?

PG&E proposed portfolio- and sector-level goals as part of its Business Plan. PG&E anticipates that the objective of all of its third party programs and sub-programs would be to support the achievement of PG&E's portfolio and sector level goals. For each of the Business Plan metrics, the specific *targets* for a third party would be determined based on the budget, goals, objectives, and design of the program. Target setting and program-specific metrics will be developed as part of the Implementation Plan process. Third party implementers will be required

to report on their performance in terms of these program-specific metrics. Additionally, PG&E will require each third party program to report on the *sector level* metrics, depending on which sector the program supports.

Residential Sector

- 16. Multi-family sector mid- and long-term metrics are listed as “TBD.” Please provide multi-family sector mid- and long-term metrics, with reference to PG&E’s experience in and knowledge of progress made to date in the multi-family sector.**

PG&E’s short, mid-, and long-term metrics for the multi-family sector are electric energy savings and gas heat savings. PG&E provided a short-term *target* of a 10% increase in savings. However, the mid- and long-term *targets* are specified as TBD. PG&E will include revised mid- and long-term targets as part of its comprehensive revised set of metrics.

This metric ties directly to one of the Residential sector’s goals, which is to increase savings in the multi-family sector, and can be measured through information collected on customers that are enrolled in multi-family energy efficiency programs.

- 17. One of PG&E’s goals is to “increase customers’ ability to manage energy,” however this is not tied to any measurable outcome in terms of energy savings and PG&E defers metrics development to occur in the first three years of the business plan. Please provide a metric that links energy management for Residential customers to savings PG&E expects to achieve from energy management technologies (EMTs), with reference to prior experience with existing EMTs and PG&E’s knowledge of its customer base vis a vis AMI data.**

Ensuring that customers have the tools to understand their energy use is paramount to meeting many of PG&E’s objectives to drive cost-effective energy savings, and is especially important as customers transition to time-of-use (TOU) rates.

EMTs are just one strategy available to achieve the Residential sector’s overall energy savings goal. Notably, EMTs alone do not always result in energy savings. EMTs should be part of an integrated strategy that includes educating customers, and in some cases, offering financial support to overcome upfront cost barriers. Energy savings from specific EMTs also vary by technology and will change over time as new products are developed and introduced to the market.

As a result, PG&E believes it is reasonable to conclude that there is no specific metric linking energy management to savings. Within its Business Plan, PG&E has no specific metric linking energy savings to any specific technology or suite of technologies (i.e., HVAC), which allows flexibility in future program design to achieve additional savings within the Residential sector and the overall portfolio as a whole.

Commercial Sector

18. What are the objectives and metrics for third party Commercial sector programs?

The objectives and metrics for third party Commercial sector programs, like those of all sectors, will be set based on the design of the specific program and the individual intervention strategies proposed by third parties. These metrics will be included in future Implementation Plans.

Public Sector

Questions 19-26 refer to language PG&E included in “Section F: PG&E’s Approach to Achieving Goals.”^{11/} This language was not designed to be identified as metrics. Please note that the Excel file provided in the ALJ Ruling incorrectly includes language from the Public sector intervention strategies as PG&E’s Public sector level metrics. These are not included in PG&E’s Business Plan Public sector metrics, which are identified in “Section M: Metrics.”^{12/}

PG&E did not include specific metrics for each individual intervention strategy, per D.15-10-028.^{13/} Rather, PG&E’s Business Plan metrics occur at the sector level, and are based on a combination of intervention strategies. Specific metrics for an intervention strategy will be part of the Implementation Plans. However, PG&E has responded to Questions #19-26 to provide the proper context and to assist in the continued discussion of metrics.

11/ PG&E Business Plan Public Sector chapter pp. 24-38.

12/ PG&E Business Plan, Public Sector chapter, pp. 44-47.

13/ D.15-10-028, p. 53.

19. How will PG&E collect information about and quantify “an increase in energy savings actions, both inside and outside of traditional program models” (page 26)?

Please see overall comments under “Section D. Public Sector,” above. This language refers to projects that are encouraged by strategic partners. Some of these projects are expected to be supported by PG&E’s energy efficiency programs, but (depending on the partner and the nature of the partnership) it is possible that a strategic partnership would lead to energy savings or projects not financially supported by PG&E’s energy efficiency programs. The types of partnerships will be determined through the development of specific programs. As such, the specifics about how PG&E (and/or third parties) would collect information to quantify this would be part of the evaluation of the program(s). Program metrics would be developed during the Implementation Plan process and included in the Implementation Plans. Third party implementers will play a large role in determining new programs.

20. Could a metric for Intervention 2 (page 28) be constructed with higher granularity than the proposed “whether all public sector customers have access and can share data with a third party, and [...] whether all public sector customers have the ability to access community-wide data” (emphases added)? How can this binary metric be tracked year-to-year to show improvement?

PG&E did not propose a metric for this strategy. See overall comments under “Section D. Public Sector,” above. While this is best discussed during the Implementation Plan process, PG&E anticipates this type of metric may be *the percentage of all public sector customers* that have actively accessed their data, rather than a binary metric. Understanding energy use is believed to be a first step to reducing energy use.

21. Why does Intervention 3 (page 30-31), proposing to use data analytics, have no accompanying metrics to gauge success of the intervention? Please provide a potential metric for this intervention.

Please refer to overall comments under “Section D. Public Sector,” above. This strategy includes PG&E and third parties using data to better target programs to customers. While any measurement of this is best determined during the Implementation Plan process, future measurement could include seeing additional participation in the programs among the groups targeted.

- 22. How will PG&E quantify “whether public sector customers have the assistance they need in the short-term to take action in identifying energy efficiency opportunities, moving energy efficiency projects forward, or otherwise completing an energy efficiency activity” (page 32)?**

Please refer to overall comments under “Section D. Public Sector,” above. While this is best determined during the Implementation Plan process, this could be measured by the conversion from technical assistance (or guidance) to a project or energy saving action, as well as through a survey of customers that did not take actions to understand whether technical assistance remains the barrier to taking action.

- 23. Regarding the proposed metric for Intervention 5 (page 35), can PG&E show a direct correlation between an increase in customers taking energy efficiency actions and the implied attribution to the PA’s involvement in overcoming cost barriers through loans, rebates, and incentives? Assuming an increase in actions, how will the impacts of program financing be segregated from, e.g., increased awareness, increased budget, and shifting management priorities?**

PG&E did not propose a metric for this intervention strategy. Please see overall comments under “Section D. Public Sector,” above. Attribution methods for this sector would be consistent with past evaluation protocols. Financing-specific metrics and impact methods for this sector would also be consistent with the current discussions within the development of the financing programs. PG&E’s Business Plan attempts to neither specify the methods of measurement nor address how attribution would be established. PG&E recommends including this topic in future EM&V Roadmap discussions for the Public sector.

- 24. How will PG&E collect information about and quantify “increased engagement of communities in energy efficiency outside of traditional programs” (page 37)?**

Please refer to overall comments under “Section D. Public Sector,” above. The evaluation and data collection methods for programs and specific interventions strategies are outside the scope of the Business Plan. PG&E recommends that the discussion of evaluation and data collection methods occur under the EM&V framework. However, past efforts to collect this information include data collection by community-organizations, as they provide workshops or go door-to-door, and engagement of the community in online community-based competitions, among other things.

25. **Why are the measurements cited as useful for tracking success of each intervention strategy (namely, intervention 1: energy savings actions; intervention 4: customers have the needed assistance to identify EE opportunities and implement programs; intervention 5: customers taking EE actions and have access to financing; intervention 6: engagement of communities in EE outside traditional programs) not listed as metrics in Table 4.18?**

Please refer to overall comments under “Section D. Public Sector,” above. These comments reflect PG&E’s attempt to think beyond the Business Plan to the Implementation Plan process. Intervention strategy level metrics are more appropriate for Implementation Plans, and specifically those Implementation Plans where the intervention strategy comes into play. Most of PG&E’s future programs will be proposed, designed, and delivered by third parties. As such, third parties will propose and design the actual strategies and metrics for the programs. PG&E’s Business Plan metrics are not strategy specific. Rather, PG&E’s Business Plan metrics are designed to measure what all of the strategies together could accomplish within a particular sector.

26. **How do the metrics listed for “all interventions,” consisting of resource savings and operational efficiency, serve to verify the success of each intervention, especially interventions 1, 4, 5, and 6?**

Please refer to overall comments under “Section D. Public Sector,” above. PG&E’s Business Plan metrics are at the portfolio/sector level (aligned with the Commission staff sector-level metrics proposal).^{14/} Multiple intervention strategies work together to meet PG&E’s sector goals, metrics, and targets.

Metrics at an individual intervention strategy level will be included in the Implementation Plans. This was discussed with Commission staff and stakeholders at the California Energy Efficiency Coordinating Committee (CAEACC) meetings during development of the Business Plans.^{15/}

14/ Administrative Law Judge’s Ruling Seeking Comment on Energy Efficiency Business Plan Metrics, p. 2.

15/ CAEECC Meeting #8, August 9, 2016. Meeting notes documenting this conversation are available on the CAEECC website.

