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VIA E-MAIL DOCKET@ENERGY.CA.GOV

California Energy Commission
Docket Number 13-CCEJA-1
1516 Ninth Street
Sacramento, CA 95814-5512

Re: California Energy Commission Proposition 39 Draft Guidelines – Comments of Pacific Gas and Electric Company

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to provide comments on the California Energy Commission's (CEC) Proposition 39 Draft Guidelines.

The comments below are based, in part, on feedback from the CEC's Proposition 39 public workshops, conversations with schools customers, and discussions with other external stakeholders.

I. INTRODUCTION

Since the 1970s, PG&E has been a leader in energy efficiency and has worked closely with government, nonprofit, and private sector partners to design and implement programs and policies that allow Californians to do more with less energy. PG&E is dedicated to helping California meet its energy efficiency goals in existing buildings and is ready to complement Proposition 39 with utility programs and support.

PG&E is pleased to see that the Proposition 39 Draft Guidelines will utilize a wide array of tools and multiple pathways to achieve meaningful energy savings in schools, many of which are aligned with existing PG&E programs and initiatives. Strategies such as promoting cost-effective energy efficiency improvements, enhancing our clean energy workforce, increasing outreach and education, leveraging data, and promoting rebates and financing options, are all vital components in achieving the State's energy goals. PG&E looks forward to continuing collaboration with the CEC and other external stakeholders to ensure that Proposition 39 is successful.

Below is a summary of key points, described in more detail in the subsequent sections:

- PG&E recommends that the CEC add more language and emphasis on education and workforce development, as well as the need to integrate energy efficient projects with educational opportunities to take advantage of the "teachable moment".

- PG&E recommends adding clarification that behavioral projects, including operations and maintenance adjustments, energy usage feedback, normative comparisons, and education are eligible for Proposition 39 funds.

- PG&E supports the CEC's efforts to collect and aggregate energy usage data, and offers some recommendations to simplify the process.

- PG&E recommends that the CEC mandate project level Measurement and Verification (M&V) data rather than both site and project level data. Particularly on a campus, site level data includes too much "noise" and will not accurately portray the energy savings from energy efficiency projects without expensive and onerous M&V analysis.

The recommendations that follow are loosely organized in order of occurrence in the Draft Guidelines and page numbers are included as appropriate.

II. UTILITY USAGE/BILLING DATA

- PG&E recommends changing the term "time-of-use interval data" to "interval usage data" to avoid unnecessary confusion (p.13).

- PG&E recommends that the CEC request data that coincides with fiscal year terms, for the sake of simplicity and consistency, rather than data that will vary depending on when Local Education Agencies submit their requests. If necessary, this data could be for periods longer than 12 months, but the simplicity of providing information based on fiscal year, rather than arbitrary timing, outweighs other concerns. It is also important to have a contiguous school year, including winter/summer seasons, to accurately and consistently compare data (p.13).

- PG&E recommends clarifying the term "12 months of utility usage data" on page 13. A number of Local Education Agencies (LEAs) asked if the CEC would like to see 12 separate cost and usage data points per account or one annual total of cost and usage per account (p.13). PG&E recommends that "12 months of utility usage data" mean 12 separate cost and usage data points.

III. EDUCATION

- PG&E recommends adding to the description for the California Conservation Corps' "other related activities". These activities could include making presentations to the students about why energy efficiency is important and activities to reduce energy. This is a great partnership and opportunity to stress the "teachable moment". The educational community and utilities can supply information and resources to the California Conservation Corps for this purpose (p.1).

- PG&E recommends including language to encourage student participation in the California Conservation Corps, Bright Schools, or other programs to assist with the audits, energy surveys, benchmarking, etc. (p.15).

- PG&E recommends adding an entire section on education in general. Proposition 39 is an opportunity to integrate energy efficiency preparation and projects with classroom learning. There are many existing educational resources and programs (supported by PG&E and other utilities and nonprofits) that schools can leverage in conjunction with Proposition 39 funded energy projects.

IV. PROCESS, ELIGIBILITY, AND SCHEDULE

- PG&E recommends clarifying that the CEC is the administrator of the Proposition 39 funds (p.2).

- PG&E recommends clarifying how and where an organization should apply for a California Workforce Investment Board grant (p.3).

- PG&E recommends clarifying what happens when a private school leases a portion of a public school building and the public school is eligible for Proposition 39 funds (p.5). PG&E recommends that the proportion of the building utilized by the public school (based on square footage) be used in the cost effectiveness calculations.

- PG&E recommends clarifying the timeline on page 6. In particular, how will the CEC accept expenditure plans in December 2013 if the Guidelines will not be finalized by that time? In addition, how would an LEA complete an expenditure plan by October of each year when the award calculations will not be posted until November of each year?

V. ENERGY PLANNING ACTIVITIES

- PG&E recommends clarifying whether Retrocommissioning (RCx) and Analytics Enabled Retrocommissioning (AERCx) are included as eligible planning activities (p.9). PG&E recommends that these tools be included in the planning stages of an energy efficiency process.

- PG&E recommends clarifying whether LEAs can aggregate funds (p.10). Although this would add complexity to post installation reporting, PG&E recommends that LEAs be able to aggregate funds, enabling them to target larger projects across many campuses, gain more favorable terms with vendors, and pool resources to hire energy management support.

- PG&E recommends clarifying whether the mandate of $250,000 for larger LEAs can be used for projects across multiple campuses rather than at only one site. PG&E, in consultation with schools customers, recommends that the CEC allow bundling of projects across campuses in order to meet this requirement (p.11).

- PG&E recommends amending the bullet point "utility rebates" to say "utility programs" because there are many programs and support in addition to rebates and incentives (p.11).

VI. ENERGY MANAGERS

- PG&E recommends clarifying whether funds requested for planning, training, and energy managers will be included in the cost effectiveness calculations (savings to investment ratio) (p.12). Although it will lower the overall cost effectiveness of projects, PG&E recommends including all planning and projects in the overall calculations, because it will show a more accurate assessment of the cost effectiveness of the program.

- PG&E recommends clarifying the procedure for requesting funds for energy efficiency training of classified school employees or hiring an energy manager, as well as any reporting requirements to document these expenses (p.12).

- PG&E recommends that training be available for more than just "classified" employees. This could include teachers, janitors (who are sometimes the ad hoc energy managers), and other personnel which might have a direct impact on the energy usage in a school (p.12).

- PG&E recommends clarifying whether funds under the "energy manager" umbrella can be used for training/support for existing energy managers or staff (p.12). PG&E recommends that funds can be utilized to support existing energy managers and/or staff.

VII. PROJECT RECOMMENDATIONS

- PG&E supports CEC's focus on the loading order, which prioritizes energy conservation and energy efficiency before other projects. To make it clear-cut to all stakeholders, PG&E recommends placing more emphasis in the Guidelines on the loading order to encourage energy conservation and efficiency before renewable energy projects.

- PG&E, in collaboration with the California Lighting Technology Center (CLTC), strongly encourage the removal of the 28W lamp recommendation. Instead, PG&E suggests the CEC recommend LED conversion kits for 2x4 fixtures and/or entire high performance fixture replacements. These projects will lead to greater savings, longer life, reduced maintenance, and are better suited for controls (p.17 & 36).

- Furthermore, advanced dimming will be required by the CEC's Title 24 2014. 28W lamps are generally not recommended for controls systems, including dimming or occupancy sensors. To mitigate potential negative impacts to future retrofits and code compliance, PG&E recommends changing the project example (p.17 & 36).

- In the section for gymnasium fixtures, PG&E recommends replacing "fluorescent T5 or T8 high-output (HO) fixtures" with "high efficacy fluorescent, LED, or induction with integrated controls" (p.36).

- PG&E recommends replacing "photocell control" with "occupancy control" (p.36).
- PG&E recommends adding the term "bi-level" for all exterior lighting (LED, induction, fluorescent), not just LED, as the recommendation is inconsistent with Title 24 2014.
- Additionally, PG&E suggests adding the following lighting project recommendations:
    - Bi-level, sensor-based exterior lighting for parking, areas, and pathways
    - Bi-level, sensor-based lighting in all stairs, corridors, and along paths of egress
    - Retrofit incandescent applications to LED (direction and omnidirectional) lamps
    - Occupancy sensors in all bathrooms
    - Daylighting controls in perimeter spaces, lobby/entry spaces, and with skylights
    - High efficacy lighting with integrated controls in all classrooms using CHPS guidelines

VIII. AUDITS AND ENERGY SURVEYS

- PG&E recommends clarifying how long a new audit will be relevant. For existing audits, the CEC states that an energy survey or audit completed within the last three years will be relevant. However, if an LEA completes an audit in Year 1 of the 5 year Proposition 39 cycle, will the audit still be relevant and usable in Years 4 and 5? PG&E recommends that any audit done in the Proposition 39 cycle be relevant throughout the cycle.
- Option Two states that ASHRAE level 2 energy audits must include "a proposed schedule for implementation of the projects." This is not a normal part of an ASHRAE Level 2 audit and is not information that an energy audit provider is in a position to provide. PG&E recommends that this information should instead be included in the energy expenditure plan as detailed on page 21. This will provide flexibility to LEAs regarding which party develops the project schedules (p.18).
- PG&E recommends clarifying what "documentation of prior technical validation of the technology by a local utility" means (p.19).
    - Specific questions include:
        - What entity will do the qualifying?
        - What does a qualification mean?

- If one utility in the state qualifies a data analytics process or company, is it then eligible for other projects across the state or will each utility have to qualify the tool in its own territory?

- How will the LEA prove that the tool is qualified or will the CEC maintain a running list?

- PG&E recommends that technical validation can be provided by a single utility in California as long as the data analytics tool includes the following:

  - An estimate of energy savings potential at the whole building level and for each end use (e.g., lighting, cooling, heating);

  - A unique disaggregation of energy consumption into the building's end uses based on that building's specific meter data;

  - A comprehensive set of recommendations related to both retrofit and operational improvements applicable to the building;

  - Relevant commentary, data/analysis, and visualizations to support recommendations.

- PG&E recommends clarifying whether no/low touch audits (data analytics) are allowed as a replacement for ASHRAE Level 2 audits or as a precursor. Depending on the needs and resources of the LEA, PG&E recommends that schools be allowed to employ a no/low touch audit without then having to also fund an ASHRAE Level 2 audit.

- Additionally, PG&E recommends allowing data analytic enabled customer-driven audits (self-service audit tools) as a replacement for walk-through ASHRAE Level 2 audits. Current software tools, such as the universal audit tools developed by the California statewide IOUs in 2012 allow a school to collect similar information as would be collected by an auditor. This information can then be used to identify top energy efficiency opportunities and helps customers create an energy savings plan that can be digitally interacted with, thus supporting continuous engagement and improvement.

IX. EXPENDITURE PLANS

- PG&E recommends clarifying whether an LEA should submit an expenditure plan for the entire LEA (regardless of how many schools are included) or one expenditure plan for each school that is requesting funds (p.20). PG&E recommends that one expenditure plan per LEA be sufficient as long as all the schools are identified.

- PG&E recommends clarifying whether there is a maximum number of schools that can be included in one expenditure plan (p.20).

- If each school does not submit a single expenditure plan, PG&E recommends clarifying how the LEAs should spell out all of the different schools in a single expenditure plan (p.20).

- PG&E recommends clarifying that the CEC will not mandate certain projects. In the public workshops to discuss the Draft Guidelines there was considerable confusion about which projects are mandatory, and it is not entirely clear that the CEC instead wants the LEAs to prioritize their own projects (p.20).

- PG&E recommends that the CEC indicate expected turn-around for review and approval of expenditure plans. Many LEAs expressed concern with a lengthy process, particularly in conjunction with a CDE and DSA review (p.23).

X. CONTRACTING

- PG&E recommends clarifying the contracting parameters. In particular, how do these requirements complement or contradict Government Code Section 4217 governing contracting and sole sourcing for schools (p.29).

XI. FINANCING

- PG&E recommends clarifying whether ECAA loans can be used to pay the costs for a solar PPA. PG&E recommends that ECAA loans not be allowed to pay for solar PPAs or other financing costs (p.30).

- PG&E recommends that loan applications for ECAA funds must demonstrate how the funding requested is not available through other internal or external funding sources (e.g. private capital) (p.30).

XII. MEASUREMENT AND VERIFICATION

- The current Guidelines require site and project level measurement and verification. There are two main limitations to site-level measurement and verification with respect to a school campus:

    - The pre- and post-EUI analysis takes into account equipment performance and usage for all equipment within a site. The results of the analysis will show any and all changes (i.e., site occupant behavior, occupancy, equipment or building envelope changes, etc.) but cannot determine the specific cause. The Guidelines assume that the only changes to a site will be due to the Proposition 39 projects, but this might not always be the case. It is common for schools to add/subtract energy consuming equipment including computers, cooking equipment, or portable classrooms, change annual enrollment (due to demographic shifts), or shift operating hours. These site changes, or “noise”, can skew the results of the energy savings of a specific project.

  - Furthermore, it is possible that the energy savings from Proposition 39 projects may be less than 10% of the overall energy usage for a given site. The International Performance Measurement and Verification Protocol (IPMVP) states that the projected energy savings must be at least 10%[1] of the total utility bill. If the savings are less than 10%, then the savings may be lost in the normal variation of the utility bills.

  - In the Draft Guidelines meetings, CEC staff stated that if a site-level analysis shows less energy savings than expected then the LEA should list the reasons for the energy savings reduction. However, calculating the adjustment to the baseline is a significant cost and onerous step for the LEAs.

- PG&E recommends that the energy savings verification not require a site-level analysis to demonstrate project energy savings due to the limitations above as well as the cost of calculating the baseline adjustment. Determining the energy savings at the project level will provide sufficient verification of the energy savings and eliminate the possibility of false negative savings (p.26).

- PG&E recommends that simple projects (e.g. lighting and HVAC measures) use Option A as outlined on page 27 (rather than having the choice of Option A or B). In addition, PG&E recommends adding the following language to Option A: "This method is appropriate for standard lighting, HVAC, and refrigeration measures, and most projects will likely use this methodology."

- PG&E recommends adding the following language to Option D (for complex projects) on page 27: "Note that only a small portion of rebated projects, usually complex or new measures, will be able to use this option."

- PG&E recommends adding language that all fuel-specific EUIs will need to be converted to kBtu/ft^2 and aggregated to develop one EUI metric per school. PG&E recommends clarifying the conversions that need to be made from kWh/therms to Btus. One option would be to first convert the total fuel usage (kWh/therms) to kBtu and then divide the total kBtu by ft^2. Unless there is a reason to indicate fuel specific usage, it would be easier to first convert to total fuel usage, aggregate the fuel usage, and then divide the final kBtu by ft^2 (p.45).

- PG&E recommends clarifying whether the savings will be evaluated by multiplying avoided consumption by either (a) the pre-project unit costs of supply (i.e. $ per kWh or per therm), increased by an approved annual escalator, or (b) the actual unit costs post-project (p.47). PG&E recommends having one $/unit energy as a consistent number across the state because it will reduce complexity and allow for better comparisons.

[1] Efficiency Valuation Organization. (2012). International Performance Measurement & Verification Protocol.

- PG&E recommends increasing the maximum allowable for maintenance savings from 2% to 25%. In many cases, e.g., LED lights, the maintenance savings are a significant proportion of the actual cost savings and should be included in the SIR calculation (p.47).

XIII. NON-ENERGY BENEFITS

- PG&E recommends clarifying what happens with a project that is implemented to increase indoor air quality (or another non-energy benefit), but actually increases the energy usage (e.g., adding air conditioning to provide better air quality would increase energy) (p.47).

- PG&E recommends increasing the calculation for non-energy benefits from 3% of total project installation cost to 10% of total project installation cost. 10% is a rule of thumb used in a number of energy evaluation practices and was referenced on page 25 in the Proposition 39 Guidance Document from May 2013 (p.48).

XIV. BEHAVIOR

- PG&E recommends adding language in the Guidelines to encourage behavioral measures and projects. These include improved operations and maintenance, feedback on energy usage and costs, normative comparisons, and education and prompts for energy conserving practices of students, faculty, and operations and maintenance staff.

- PG&E recommends that any documentable savings from such behavioral projects be included in cost-effectiveness calculations. Savings could be based on measurement and verification results from behavioral programs currently implemented in schools.

XV. CONCLUSION

PG&E thanks the CEC for the opportunity to review and provide comment on the Proposition 39 Draft Guidelines. PG&E looks forward to continued collaboration with the CEC on this subject in the future.

Sincerely,

Joey Barr