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**RE: Pacific Gas and Electric Comments in Response to the Air Resources Board's
June 21, 2018 Workshop on Amendments to the Cap-and-Trade Regulation**

Pacific Gas and Electric Company (PG&E) appreciates this opportunity to provide feedback in response to the Air Resources Board's (ARB) June 21, 2018 workshop regarding amendments to the Cap-and-Trade Regulation (Regulation) pursuant to Assembly Bill 398 (AB 398) and ARB Board Resolution 17-21 (BR 17-21).

PG&E continues to strongly support California's greenhouse gas (GHG) emission reduction goals as established in AB 32 and SB 32. Maintaining a well-designed Cap-and-Trade Program that is sufficiently flexible and responsive will be critical to our progress towards these goals as they increase in difficulty between 2020 and 2030. To this end, PG&E provides comments in response to the June 21st workshop below. These comments are divided into the following sections:

- I. Natural Gas Allocation
- II. "Overallocation" and Post-2020 Caps
- III. Allowance Budgets and Distribution of Removed Allowances
- IV. Establishing a Price Ceiling
- V. Sales at the Price Ceiling
- VI. Reserve Tiers (Price Containment Points)
- VII. Post-2020 Reserve Sales Mechanism
- VIII. Banking and Holding Limits
- IX. Use of Allowance Value
- X. Direct Environmental Benefits of Offsets

I. Natural Gas Allocation

PG&E continues to urge ARB to return to a ~2% annual reduction for the natural gas allowance allocation. Doing so would acknowledge the higher costs that Renewable Natural Gas (RNG) procurement will impose on customers. Additionally, this would align with ARB's methodology for the electric sector allocation, which accounts for the cost burden from the Renewable Portfolio Standard program and other complementary policies.

Efforts to decarbonize the natural gas pipeline are already underway. PG&E and other stakeholders are actively pursuing a state-wide program that would foster cost-effective procurement of RNG in California. In addition, PG&E has filed an Advice Letter with the California Public Utilities Commission (CPUC) in support of a Voluntary RNG Procurement Pilot that seeks to purchase RNG to meet the compressed natural gas (CNG) vehicle fuel demand from PG&E's 28 CNG stations that has recently been approved. Per SB 1383, the CPUC's dairy pilot biomethane solicitation program is also underway and will approve at least five dairy biomethane projects for pipeline interconnection to investor-owned utilities in California by the end of 2018.

In light of these and future efforts and the important role a decarbonized natural gas system will play in helping to achieve the state's Short-Lived Climate Pollutant reduction goals, PG&E believes it would be appropriate to maintain the current rate of decline into the post-2020 period for the natural gas sector to protect customers, as noted in BR 17-21.

II. "Overallocation"/Post-2020 Caps

PG&E appreciates ARB Staff providing additional explanation of their assessment of post-2020 caps during the June 21 workshop. While we agree with Staff that there are significant uncertainties in forecasting California GHG emissions through 2030, we believe Staff's finding that "post-2020 caps constrain emissions to support steadily increasing carbon price signal" is reasonable (ARB Staff Presentation for June 21 workshop). Accordingly, we reiterate our previous comments on this issue. The Cap-and-Trade Program is working as intended – filling the gap between cumulative emissions achieved by complementary measures and the state's GHG goals, as reflected in ARB's adopted allowance budgets, and is doing so cost-effectively. Existing design features, including the auction reserve price, rapidly declining post-2020 caps, and transferring unsold allowances to the Reserve after two years are sufficient to ensure a steadily increasing carbon price signal. Adjusting post-2020 caps to remove excess allowances will lead to higher costs for households and businesses.

III. Allowance budgets and distribution of removed allowances

PG&E reiterates our prior workshop comments on the distribution of removed allowances. We recommend that the 52.4 MMT that ARB planned to add to the post-2020 Reserve be placed in the post-2020 Reserve tiers to help expand the capability of the Reserve tiers to function as intended. In addition, we recommend that ARB not remove additional allowances from the post-2020 budgets, including the 23 MMT Staff has proposed to remove due to changes in the offset usage limit. We discourage ARB from responding to the Legislature’s action to tighten the post-2020 program via lower offset usage limits with further actions to tighten the post-2020 program by removing allowances from the market.

IV. Establishing a Price Ceiling

PG&E reiterates our prior workshop comments on the price ceiling. We also agree with Staff’s comments at the workshop that the price ceiling should not be reached quickly. However, we believe that where the price ceiling is set has far less of an impact on when that ceiling is reached. As Borenstein et al¹ have shown, California’s marginal abatement cost curve after complementary measures could be quite steep. This implies that setting the price ceiling higher may not meaningfully delay when the price ceiling is reached.

We believe that other design elements, like the size of the “speed bumps” along the way, can better achieve this objective of delaying the price ceiling. We believe ARB should look primarily to the six criteria laid out in AB398 and the prospects for the political viability of California’s carbon pricing program at various allowance prices in determining the price ceiling.

V. Sales at the Price Ceiling

PG&E supports a Price Ceiling sales structure that allows entities to procure allowances prior to compliance events. ARB’s proposals to restrict purchases appear reasonable and consistent with the intent of AB 398’s language to support sufficient supply for compliance.

VI. Establishing Reserve Tiers (Price Containment Points)

The Reserve Tiers should provide effective cost containment from rapidly escalating allowance prices to protect customers and provide an early signal to compliance entities to prepare for higher prices. The Reserve Tiers should also be set low enough to give the Independent Emissions Market Advisory Committee time to evaluate and recommend options to manage rising prices. PG&E refers ARB to our March 2 and April 26 comments for our specific Reserve Tiers design and implementation proposal.^{2,3} Our design recommendation is critically dependent on the setting of a reasonable price ceiling. If the price ceiling is set too high, the Reserve Tiers

¹ Available at: <https://ei.haas.berkeley.edu/research/papers/WP281.pdf>

² PG&E Comments in Response to March 2, 2018 Cap-and-Trade Workshop: <https://www.arb.ca.gov/lists/com-attach/47-ct-3-2-18-wkshp-ws-VWUBNFRkVzIFMgQ8.zip>

³ PG&E Comments in Response to April 26, 2018 Cap-and-Trade Workshop: www.arb.ca.gov/lists/com-attach/1209-ct-4-26-18-wkshp-ws-BTFddIZIVDELIAQ1.pdf

would not be effective at containing costs and an alternative approach to setting the price of the tiers should be considered.

VII. Post-2020 Reserve Sales Mechanism

For clarity, PG&E supports a sale structure that aligns with the existing program design. ARB should continue with its current Quarterly Reserve Sales. Alternative approaches that increase the difficulty of procuring instruments needed for compliance prior to the reaching the Price Ceiling should be avoided. As noted in the section above, ARB's current proposal for sales at the Price Ceiling is already sufficiently restrictive. Additional restrictions on Reserve Tiers sales would add an unnecessary administrative burden for both ARB and compliance entities. Market participants should have the flexibility to procure from the Reserve prior to potentially being pushed into the Price Ceiling sale.

VIII. Banking and Holding Limits

PG&E reiterates its comments from the March and April workshops that current banking and holding rules should be maintained for the post-2020 period. PG&E also maintains that compliance instruments should not have expiration dates, and those in private accounts post-2020 should not be de-valued.

IX. Use of Allowance Value

Staff proposed specific language in the second version of the Preliminary Discussion Draft that restricts electric and natural gas utilities from using allocated allowance proceeds for activities other than as described. PG&E has two main concerns with the proposed regulation text:

1. Eligible uses seem to exclude support for education and outreach activities, such as costs associated with outreach efforts related to distribution of the California Climate Credit. This applies to both the Electric Distribution Utility and the Natural Gas Supplier sections (§ 95892 and § 95893).
2. As written, the amended text offers many more allowable cost categories for electric distribution utilities than is offered for natural gas suppliers. For example, allowable uses include “construction of eligible renewable energy resources,” “support for renewable energy resources,” “purchase of generation from eligible renewable energy resources,” “switching from natural gas,” and “infrastructure projects or other projects supporting active transportation, zero-emission vehicles, or public transportation” with nothing comparable in the Natural Gas Suppliers section. In the interest of equitable treatment and to drive the most cost-effective and innovative GHG reduction strategies, we encourage Staff to address this discrepancy by including allowable cost categories for renewable natural gas infrastructure, renewable natural gas integration, and other projects supporting GHG emissions reductions and near-zero emissions vehicles or public transportation.

X. Interpreting “Direct Environmental Benefits”

In the most recent workshop presentation, ARB interpreted the AB 398 “direct environmental benefits”, or DEBS, requirement as “in addition to GHG reductions or removals that [the] Program credits”.⁴ PG&E has been, and remains, a strong proponent of offsets as real GHG emission reductions from uncapped sectors that, in some cases, can be achieved at lower cost than other GHG emission reductions, reducing the overall cost of the Cap-and-Trade program and thereby its economic impact on California consumers. Offsets are intended to reduce GHG emissions. Requiring projects to provide additional benefits may introduce new costs that lessen or eliminate the cost-containment and cost-saving benefits of these projects. PG&E supports a healthy and robust offset supply and believes that cost-effectiveness is a critical part of a sustainable program.

PG&E reiterates our previous comments that: a) the DEBS requirement should not preclude out-of-state projects that may provide in-state benefits, b) offset projects located within the state of California should automatically earn designation as a DEBS, both for past and future Air Resources Board Offset Credit (ARBOC) issuances, and c) ARB should consider ways to recognize the significant DEBS that Ozone Depleting Substances destruction projects provide. These recommendations support the cost-containment benefits of a healthy offset supply while meeting the spirit of the DEBS provision.

Finally, PG&E agrees with other stakeholders that the DEBS requirement should not be applied retroactively to projects that have already received issuance. Retroactive application would incur significant costs to CARB, offset developers, and owners. It would also disrupt the offset marketplace. Evaluating over 90 million issued offsets would impose a significant administrative burden on ARB, which would be counter to ARB’s stated desire that their approach be practical and implementable.

XI. CAISO EIM Proposal

The California Independent System Operator (CAISO) and ARB have devised an approach for capturing the GHG “leakage” that is caused by imports into California scheduled by the Energy Imbalance Market (EIM) and assigning responsibility for allowances to cover the leakage to buyers of EIM energy in CAISO. While the approach is not perfect, it may be adequate, especially given that the energy transacted in EIM is much less than the energy transacted in the Day-Ahead market in CAISO. However, PG&E would suggest that CAISO and ARB track the leakage calculated in EIM and ensure that there is not a systematic distortion that participants may use to their advantage or that distorts the energy market.

⁴ Air Resources Board June 21st workshop on “Potential Amendments to the Cap-and-Trade Regulation”, slide 26

For each resource in an EIM Entity that participates, EIM will use the base schedule and bid submitted to define the maximum import into CAISO that EIM can schedule from the resource. This will be used as a limit by EIM. After EIM develops schedules and ascribes imports to resources, CAISO and ARB will determine the amount of GHG emissions that were not captured by the EIM model to define the leakage. CARB will define the additional GHG allowances that must be surrendered to cover the leakage. California entities buying energy in the EIM will be responsible for purchasing the allowances to cover the leakage. The drawback of the approach is that the cost of the allowances for leakage will not be considered in the EIM least cost dispatch and so the market cannot respond to these costs. Once the allowances for leakage are included, it may well be that the EIM dispatch is no longer least cost resulting in a loss of efficiency. In addition, EIM may not be able to adjust the dispatch to avoid the leakage of GHG emissions even if there were another dispatch with lower emissions and costs. PG&E would request that CAISO and ARB track this to evaluate whether this is a material problem.

XII. Legacy Contracts

PG&E reiterates its recommendation to not include any provisions that would re-insert allowance allocations for a Legacy Contract Generator without an Industrial Counterparty. PG&E understands that Staff seeks to: (1) encourage renegotiation of Legacy Contracts, and (2) determine if post-2020 allocation is necessary and appropriate. It is PG&E's belief that those two actions fundamentally conflict: the ability to request and obtain a free allocation of allowances from ARB can hinder a meaningful and complete renegotiation of contracts to address GHG costs.

Conclusion

PG&E continues to support Cap-and-Trade as a program that will help the state meet its aggressive environmental goals while maintaining a healthy economy. We look forward to working with ARB staff to further refine the Regulation in line with AB 398 and BR 17-21.

Please feel free to contact me if you have any questions or concerns.

Sincerely,

/s/

Fariya Ali