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Mr. Samuel Wade Branch Chief, Transportation Fuels Branch California Air Resources Board 1001 "I" Street Sacramento, CA 95814

RE: Pacific Gas and Electric Comments on Proposed Amendments to the Low Carbon Fuel Standard Regulation

Pacific Gas and Electric Company (PG&E) appreciates this opportunity to comment in response to the Air Resources Board's (ARB) release of Modified Text for the Proposed Amendments to the Low Carbon Fuel Standard (LCFS) Regulation on August 13, 2018. PG&E continues to strongly support California's greenhouse gas (GHG) emission reduction goals as established in Assembly Bill 32 and Senate Bill 32. Maintaining a well-designed LCFS program that advances low-carbon fuels will play a key role in achieving the state's 2030 GHG emissions reduction targets. We believe that the increased use of electricity, natural gas, and hydrogen as transportation fuels is critical for the success of the LCFS program.

PG&E and other utilities are in a unique position to offer broad solutions to our customers, including our brand-neutral 'Clean Fuel Rebate' program that returns LCFS credit revenue to residential electric vehicle (EV) owners, EV infrastructure programs like the EV Charge Network program for workplaces and multi-unit dwellings, and recently approved EV programs like 'FleetReady' and 'DC Fast Charge' that will build infrastructure for light- and heavier-duty vehicles. Additionally, our existing natural gas infrastructure provides access to renewable and conventional natural gas to support low and near-zero emission vehicles.

PG&E's comments on the modifications to the proposed amendments are divided into the following sections:

- I. Statewide Point-of-Purchase EV Rebate Program
- II. Multi-family Residential EV Charging
- III. Smart Charging Lookup Table Pathways
- IV. Zero-Emission Vehicle Infrastructure Capacity Crediting Programs
- V. Credit Transactions

I. Statewide Point-of-Purchase EV Rebate Program

PG&E supports ARB's leadership to create a statewide point-of-purchase (POP) rebate program for EVs funded by the electric distribution utilities' (EDU) revenues from residential EV charging base credits. This program will provide California consumers with an additional incentive to purchase EVs by providing a rebate at the point of purchase to reduce the upfront cost of the vehicle. In addition, the program will be statewide, allowing for a common offering for all Californians, rather than separate EV incentives within each utility territory. PG&E supports these efforts to accelerate EV adoption across the state.

PG&E does, however, have concerns about the disparity between the level of LCFS credits contributed by investor-owned utilities (IOU) and large publicly-owned utilities (POUs). PG&E believes that the IOUs and large POUs should contribute the same share of their respective credits (or revenues) to the statewide POP program. This would ensure that all Californians can equally benefit from the residential LCFS credits that are managed by the states' EDUs. PG&E notes that the Executive Officer will provide recommendations to the Board "for further increasing utility contributions to the point of purchase rebate program," by January 1, 2025. PG&E recommends that the Board clarify that the intent of these recommendations is to ensure that IOUs and large POUs contribute the same percentage (67%) of their LCFS credits or revenues as soon after 2025 as possible.

II. Multi-family Residential EV Charging

PG&E supports keeping the EDUs as the eligible credit generator for EV charging at multifamily residences. Since the EDUs will be using a portion of the revenues from the EV charging residential base credits to fund a statewide point-of-purchase EV rebate program, it is important that multi-family EV charging credits are treated consistently with single-family charging and similarly used to contribute to the statewide rebate program, which will be offered to all Californians in all residence types. PG&E appreciates ARB's reconsideration of this issue and the change to maintain the EDUs as the eligible credit generator.

III. Smart Charging Lookup Table Pathways

PG&E supports the new methodology for determining the hourly electricity carbon intensities by using the marginal emission signal from the California Public Utilities Commission (CPUC)'s Avoided Cost Calculator (ACC). The ACC model has been used in many cost-effectiveness

¹ PG&E recognizes that the revenues generated by medium and small POUs residential LCFS credits are relatively small and administration of those funds could represent a substantial share of those revenues. As a result, a smaller contribution share for those entities may be appropriate.

proceedings, and calculates the marginal greenhouse gas emissions from actual day-ahead prices in the California Independent System Operator (CAISO) energy market, adjusted for increased penetration of renewables going forward. The revised carbon intensities using this methodology will more accurately reflect actual curtailment and marginal heat rates. Further, the ACC methodology will ensure that carbon intensity values are more aligned with the proposed IOU time-of-use rate periods.

PG&E notes that the ACC outputs are designated in Pacific Standard Time (PST), and therefore suggests that ARB clarify that the "Hourly Windows" in the footnote to Table 7.2 refer to PST. ARB should also consider re-calculating Table 7.2 based on Pacific Prevailing Time (PPT) in future updates to the regulation. PG&E appreciates ARB staff's attention to the Smart Charging Lookup Table issue and the revisions made to the methodology for greater accuracy.

IV. Zero-Emission Vehicle Infrastructure Capacity Crediting Programs

PG&E supports California's policies that advance hydrogen and electricity as clean transportation fuels. PG&E recognizes the need for publicly accessible zero-emission vehicle infrastructure, and the challenges associated with making investments in alternative fuel stations at this early phase of the market. Expansion of zero-emission vehicle fueling infrastructure, like DC fast chargers and hydrogen (H2) stations, will help accelerate the market for both fuel cell and battery-electric technologies, and make refueling more accessible to California residents who do not currently have access to home charging or a nearby hydrogen station.

ARB Staff's proposal for capacity crediting programs for DC fast chargers and H2 stations is an innovative approach to incentivize additional clean transportation infrastructure. However since it is a significant departure from the traditional LCFS crediting program, PG&E reiterates its recommendation that ARB and stakeholders carefully monitor the effects of these new capacity crediting programs on the overall LCFS market.

PG&E also notes that the regulation limits the infrastructure credits generated by DC fast chargers to the capital cost of the station, but does not apply the same limit to H2 stations. PG&E believes that both zero-emission fuels should be treated consistently and recommends that the same rules be applied to both infrastructure crediting programs.

V. Credit Transactions

PG&E continues to request clarification from ARB on how the Credit Seller and Credit Buyer should coordinate on initiating and completing the transfer request in the Credit Transfer Form (CTF) provided in the LCFS Reporting Tool and Credit Bank & Transfer System (LRT-CBTS), as described in §95487(b)(1)(C-E). In ARB's existing regulation, the responsibilities of the Credit Seller to the Credit Buyer are explicit on the handoff between releasing the credit transfer, and confirming the credit transfer. While the proposed timing on the transfer and confirmation

would change based on the draft amendments to the regulation, stating that "the Seller and the Buyer must initiate and complete the transfer request" (Type 1) or "must report the following" (Type 2), leaves confusion and duplicative responsibilities. This could lead to unnecessary correction requests requiring review and approval by the Executive Officer. ARB should provide clear instructions (similar to the existing regulation) on how the responsibilities should transition from Seller to Buyer to complete the transaction.

PG&E appreciates ARB's clarification that the "date" on all anticipated deliveries is the "expected date" and may not be the actual date of transfer (§95487(b)(1)(D)(5)). However, PG&E recommends that ARB also provide clear instruction on completing Type 2 transfers. The proposed regulation only addresses reporting the transaction within 10 days of the Date of Transaction Agreement and provides no information on the requirements or process for completing the transfer or amending the report in the LRT-CBTS. Additionally, PG&E recommends ARB provide clarity around any consequences or additional processes that could result if the credit delivery timing described in §95487(b)(1)(B)(1-2) for Type 1 and Type 2 transfers is not adhered to by one or both parties.

Considering that the implementation of a new Credit Transfer process between Parties, and the ability to transfer credit through an authorized clearing service provider, will change existing processes, PG&E requests that ARB conduct workshops to demonstrate the end-to-end process in the LRT-CBTS for each Type of Transfer listed in §95487(b)(1)(B). These workshops should be held in early Q4 2018 to allow regulated entities adequate time to ensure revised internal processes are in place prior to 2019 implementation.

Conclusion

PG&E continues to support the Low Carbon Fuel Standard as a program that will help the state meet its aggressive climate goals while maintaining a healthy economy, and appreciates the opportunity to comment on these amendments.

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

Sincerely,

/s/

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Pacific Gas and Electric