

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of Pacific Gas and Electric Company
(U 39 M) for Approval of its Proposal for a Day-
Ahead Real Time Rate and Pilot to Evaluate
Customer Understanding and Supporting
Technology

Application No. 20-10-011
(Filed October 23, 2020)

**RESPONSE OF THE VEHICLE-GRID INTEGRATION COUNCIL TO
THE APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY (U
39 M) FOR APPROVAL OF ITS PROPOSAL FOR A DAY-AHEAD REAL
TIME RATE AND PILOT**

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November 30, 2020

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In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Vehicle-Grid Integration Council (“VGIC”) hereby responds on behalf of its members to the *Application of Pacific Gas and Electric Company (U 39 M) (“PG&E”) for Approval of its Proposal for a Day-Ahead Real Time Rate and Pilot (“Application”)*. Pursuant to Rule 2.6 and Rule 1.15 of the Rules of Practice and Procedure, VGIC timely files this response on November 30, 2020.

I. INTRODUCTION.

A. *Overview of VGIC*

VGIC is a 501(c)6 membership-based advocacy group committed to advancing the role of electric vehicles (“EVs”) and vehicle-grid integration (“VGI”) through policy development, education, outreach, and research. VGIC supports the transition to decarbonized transportation and electric sectors by ensuring the value from EV deployments and flexible EV charging and

discharging is recognized and compensated in support of achieving a more reliable, affordable, and efficient electric grid.

B. VGIC generally supports the increased use of dynamic pricing as an option for retail rate customers with EVs

As a general principle, VGIC supports dynamic pricing options for Electric Vehicle customers. VGIC believes that dynamic pricing options – if designed appropriately – and other VGI strategies can help contribute to the following policy objectives:

- advance the state’s transportation electrification goals by reducing the total cost of EV ownership,
- deliver increased value to utility customers, including both EV and non-EV owners,
- enhance reliable operations of the grid, and
- foster a growing market for VGI services.

VGIC appreciates PG&E’s continued efforts towards developing more dynamic EV rate options and commends the company for its innovative proposal for a Commercial Electric Vehicle day-ahead hourly real-time pricing (“DAHRTP-CEV”) rate and pilot. VGIC is continuing to review the specific details of PG&E’s proposal, however based on its initial review VGIC believes the proposal could be a constructive step towards enabling more EV customers access to dynamic rate options and VGI services. VGIC stresses that Commission approval of VGI strategies, including dynamic rate options, is critical for market participants to accelerate product development activities. VGIC also reserves the right to provide more detailed feedback at a later date, including any recommendations for how the proposal could be improved.

II. ISSUES TO BE CONSIDERED.

A. *Customer eligibility and target customers*

Decision (“D”) 19-10-055 ordered PG&E to “file an application for a dynamic rate option for CEV-S and CEV-L customers no later than 12 months after the effective date of this decision.”¹ In its prepared testimony, PG&E states the DAHRTP-CEV pilot can begin to address certain key information gaps, but that

...given its narrow focus on PG&E CEV Account Holders, it may not be possible to recruit a sufficient number of participants to conclude observed relationships are statistically significant. It is also uncertain whether the participating customers will be diverse enough to indicate customer understanding and benefits...²

VGIC agrees that the limited number and diversity of participants may impact the ability to draw “statistically significant” conclusions. However, VGIC believes that targeted refinements could help to address this shortcoming. For example, eligibility could be expanded to include additional customer types, such as those with combined EV charger and building/facility load. This would be consistent with Electric Power Research Institute (“EPRI”) Study attached to PG&E’s prepared testimony which states that “Most [participants] expressed an interest in combined EV charger and building/facility load.”³ Increasing the diversity of customer types eligible to participate may provide a stronger indication of customer understanding and benefits. Combined EV charger and building/facility loads may also help to enable other VGI strategies, such as vehicle-to-load (“V2L”) for both customer bill management or backup power / resiliency applications. Several automotive original equipment manufacturers (“OEMs”) and EV supply

¹ D.19-10-055, Ordering Paragraph 9 at 76.

² *PG&E Commercial EV Day-Ahead Hourly Real Time Pricing Pilot Prepared Testimony* (“PG&E Prepared Testimony”), Ch. 1 at 1-24.

³ *Id.* Attachment A at 1-AtchA-38.

equipment (“EVSE”) providers currently offer commercially-available and certified bi-directional technologies to enable these strategies, and more models will become available in the near-term.⁴

Additionally, the Commission’s directive does not appear to limit PG&E from proposing similar dynamic rate constructs to other types of EV customers. As such, VGIC believes the DAHRTP-CEV pilot could serve as a useful model not just for commercial customers, but also for residential customers in the future and should be evaluated from that perspective as well.

B. Technology incentive and customer-side integrations

In prepared testimony, PG&E proposes a technology incentive “with no more than 3 total unique customer-side integrations for the duration of the pilot.”⁵ VGIC strongly supports PG&E’s intentions in proposing the Technology Incentive to mitigate technology provider risk, for example the risk taken by EV service providers (“EVSP”) to develop software that integrates with PG&E’s pricing communication platform. As a general observation, VGIC notes that

⁴ See, for example, ABB <https://cleantechnica.com/2020/10/14/11-kw-bi-directional-abb-chargers-coming-to-france-uk-germany-italy-belgium/>, Audi <https://electrek.co/2020/07/24/audi-bi-directional-charging-electric-cars-store-solar-energy/>, Blue Bird <https://www.electrive.com/2020/09/16/v2g-charging-with-electric-school-buses-in-the-usa/>, Coritech <https://coritech.com/v2g-architecture>, Daimler <https://www.axios.com/electric-school-buses-vehicle-to-grid-power-19f7b6b1-662b-4501-a96e-dcf3fd57a886.html>, Delta <https://www.prnewswire.com/news-releases/brandenburgische-technische-universitat-and-delta-pave-the-way-for-a-future-smart-grid-for-emobility-301154128.html>, Fermata <https://www.greencarcongress.com/2020/09/20200920-fermata.html>, Lucid Motors <https://www.autoblog.com/2020/08/19/lucid-air-ev-charging-v2g-300kw-900v-electrify-america/>, Mitsubishi <https://www.theverge.com/2019/3/6/18252883/mitsubishi-dando-drive-home-power-battery-electric-car-plug-in-hybrid>, Nissan <https://cleantechnica.com/2018/11/29/nissan-using-vehicle-to-grid-technology-to-power-us-operations/>, Nuvve <https://www.prnewswire.com/news-releases/how-nuvves-vehicle-to-grid-v2g-technology-and-electric-school-buses-can-help-curb-power-blackouts-301117324.html>, Ossiaco <https://cleantechnica.com/2020/08/02/ossiaco-has-built-the-one-home-solar-inverter-to-rule-them-all/>, OVO <https://www.current-news.co.uk/news/ovo-claims-world-first-install-of-domestic-v2g-charger>, PRE <http://www.pr-electronics.nl/en/news/58/pre-power-developers-leader-in-v2g-charger-modules/>, Proterra <https://www.raconteur.net/infrastructure/v2g-school-buses/>, Rhombus Energy Solutions https://www.prweb.com/releases/rhombus_energy_solutions_announces_ul_1741sa_certification_for_its_ac_dc_high_power_conditioning_systems_for_fleet_electric_vehicles/prweb17308158.htm, and Wallbox <https://electrek.co/2020/01/06/wallbox-quasar-tesla-nissan/>.

⁵ *Id.* Ch. 3 at 3-10.

technology providers capable of integrating with PG&E’s platform and interfacing with CEV customers may include other entities not traditionally considered EVSPs, such as automotive OEMs. Additionally, VGIC has some concern regarding the initially proposed cap of three integrations considering the fast-growing EV technology provider marketplace and the range of potential use cases under the proposed pilot. This could be problematic due to the fact that 1) some EVSP’s only focus on certain narrowly defined market segments within the Commercial class, and 2) pilot participants could include a broad range of potential EVSP companies including aggregators, EVSE manufacturers, OEMs, etc. Limiting the program to a number of participants that is too small could restrict PG&E’s learning opportunities across a large sample of customer types and EVSP provider types. Meanwhile, VGIC recognizes that a higher cap may dilute the funding amount (assuming a fixed budget) available to any one entity, which would be counterproductive toward the Technology Incentive’s objective of mitigating financial risk to the technology provider. VGIC suggests that a modest expansion of the proposed cap (e.g. from 3 to 6 participants) could be considered to help accommodate the needs of the growing VGI marketplace.

III. CATEGORIZATION, HEARINGS, AND SCHEDULE.

VGIC agrees that this Application should be categorized as a “ratesetting” proceeding. VGIC also agrees that evidentiary hearing are likely necessary.

IV. SERVICE.

Service of notices, orders, and other correspondence in this proceeding should be directed to VGIC at the address set forth below:

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V. **CONCLUSION.**

VGIC appreciates the opportunity to submit this response to PG&E's innovative DAH RTP rate and pilot. We look forward to further collaboration with the Commission and stakeholders on this initiative.

Respectfully submitted,

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