PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE

September 14, 2021

Advice Letter 6204-E, 6204-E-A

Erik Jacobson
Director, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

SUBJECT: Evaluation of Clean Substation Pilot Project Opportunities Pursuant to D.21-01-018.

Dear Mr. Jacobson:

Advice Letter 6204-E, 6204-E-A effective as of September 9, 2021, Per E-5164 ordering paragraphs.

Sincerely,

Edward Randolph

Edward Randolph
Deputy Executive Director for Energy and Climate Policy/
Director, Energy Division

Pacific Gas and Electric Company

Sidney Bob Dietz II
Director
Regulatory Relations

Pacific Gas and Electric Company
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July 7, 2021

Advice 6204-E-A
(Pacific Gas and Electric Company U 39 E)

Public Utilities Commission of the State of California

Subject: **Supplemental: Evaluation of Clean Substation Pilot Project Opportunities Pursuant to D.21-01-018**

I. Purpose

PG&E submits this supplemental advice letter to provide further details regarding PG&E's plans to pursue two clean generation pilots at distribution microgrids in 2021, which will be funded from the Wildfire Order Investigating Investigation ("OII") Settlement.[1] The supplemental advice letter is submitted for informational purposes only to describe PG&E's ongoing work to evaluate the use of diesel alternative generation technologies at certain distribution microgrids during 2021. This supplemental advice letter supplements the original advice letter but does not replace it in its entirety.

II. Background

The Commission initiated Rulemaking ("R.") 19-09-009 to develop a policy framework to facilitate the commercialization of microgrids and related resiliency strategies, and to implement Senate Bill ("SB") 1339 (Stern, 2018).

In Track 1 of the proceeding, the Commission adopted D.20-06-017, ordering short-term actions to accelerate microgrid deployment and related resiliency solutions, including solutions to accelerate interconnection of resiliency projects in advance of the 2020 wildfire season; modernizing existing tariffs to maximize resiliency benefits; solutions to promote collaborative engagement between the utilities and local and tribal governments; and approving an array of resiliency proposals set forth by PG&E and San Diego Gas & Electric Company.

[1] Decision ("D.") 20-05-019 adopted a settlement agreement between PG&E and the Commission's Safety and Enforcement Division, the Commission's Office of the Safety Advocate, and the Coalition of California Utility Employees in Order Instituting Investigation (I.) 19-06-015.

On January 14, 2021, the Commission adopted D.21-01-018 in Track 2 of the proceeding, which, among other items, established a pathway for utilities to reserve temporary generation for 2021 fire season and begin the transition from diesel mobile generation to alternative, cleaner backup power generation. In the Track 2 Decision, the Commission authorized a utility to track the costs associated with reserving temporary generation in a memorandum account, including diesel as well as other temporary generation technologies, equipment, and services, for the purpose of providing power to the load of safe-to-energize substations during a PSPS outage, under certain conditions.[2] The Track 2 Decision also authorized the utilities to establish new balancing accounts to recover costs for, among other things, the deployment of approved "clean substation microgrid projects" (sometimes referred to herein as a "Clean Substation Pilot") up to a cap of $350 million per utility.

The Track 2 Decision required that PG&E submit a Tier 2 Advice Letter to "document [PG&E's] plans to establish clean substation microgrid projects [("Clean Substation Projects")] located at, or able to serve, at least one substation."[3] On March 5, 2021, PG&E submitted a Tier 2 Advice Letter (Advice Letter 6105-E) requesting authority to reserve temporary generation for use at substations in 2021. In the Tier 2 advice letter, PG&E conveyed that it was still evaluating bids for the Clean Substation Pilot and that it would submit one or more Clean Substation Project(s) for review and approval via a future Tier 3 Advice Letter. In a subsequent disposition letter, the CPUC's Energy Division stated that the portions of Advice Letter 6105-E addressing clean substation microgrid projects would be disposed of separately from the request to reserve temporary generation.[4] The Energy Division also stated in that letter that it expected that PG&E would provide additional information regarding clean substation microgrid projects prior to its consideration of an additional disposition.[5]

On June 9, 2021, PG&E submitted a Tier 3 Advice Letter (Advice Letter 6204-E) addressing the requirements in the Track 2 Decision related to clean substation microgrid projects. Specifically, the Advice Letter described PG&E's efforts to solicit substation-level generation projects, documented the infeasibility of deploying generation alternatives to diesel at substation-level microgrids in 2021 based upon the criteria set forth in the Decision and bids received, noted that PG&E was considering diesel alternative microgrid pilot projects for 2021 at the distribution feeder level, and proposed the expanded use of two existing demand response programs as a Clean Substation Microgrid Pilot Project for approval. Advice Letter 6204-E is pending disposition as of the date of this submission.

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[2] D.21-01-018, App. A, p. A-1.
[3] *Id.*, App. A, p. A-4.
[4] Disposition Letter from Edward Randolph, CPUC Energy Division, to Erik Jacobson, PG&E, April 14, 2021, p. 1.
[5] *Id.*, p. 7.

PG&E is submitting this supplement to Advice Letter 6204-E to provide further information on the diesel alternative microgrid pilot projects that PG&E is planning for 2021 at the distribution feeder level, which will be funded by shareholder dollars under the terms of settlement agreement adopted in Wildfire OII.

III. Description of Distribution Microgrid Clean Generation Pilots

PG&E is seeking to pilot diesel-alternative technologies at two distribution microgrids,[6] Angwin and Foresthill, in 2021 to support the transition toward cleaner generation for PSPS mitigation. The projects' intent is to pave the way to reduce the use of diesel in the future by demonstrating non-diesel technologies (a linear generator and battery energy storage, respectively) that can be paired with diesel generators. If successfully deployed, the two pilots will allow PG&E to measure the impact on overall emissions in addition to observing operational effectiveness and to use this data to inform PG&E's PSPS mitigation strategy in 2022 and beyond.

- Angwin is a census-designated-place located in Napa County. The Angwin Distribution Microgrid is designed to energize 48 service points, including a fire station, post office, medical office, and student housing.
- Foresthill is census-designated-place in Placer County. The Foresthill Distribution Microgrid is designed to energize 14 service points, including a high school (designated to act as a shelter during emergencies), water agency, grocery store, gas station, cell phone tower, bank, and restaurants.

These distribution microgrid pilot projects are intended, like Clean Substation Pilots, "to increase utility and market experience and understanding of alternatives to diesel generation to facilitate a transition away from diesel in future years."[7] In addition to informing the use of diesel-alternatives at additional distribution microgrids in future years, the lessons learned from these pilots will also benefit longer-term substation generation planning efforts.

These 2021 diesel-alternative distribution microgrid pilots are intended to act as building blocks toward a multi-year vision of deploying all-renewable microgrids with advanced controls for PSPS mitigation. They will enable incremental learning and innovation at a bounded set of sites, thereby allowing PG&E to maintain the integrity of its core operational objectives to conduct safe de-energization/re-energization and to support customers during resource intensive, dynamic PSPS events. By beginning with two

[6] PG&E uses the phrase "distribution microgrid" to refer to a microgrid that electrically islands a portion of the electrical load served by a substation. This is distinct from the substation-level microgrids that are the focus of the Track 2 Decision and Advice Letter 6204-E, which are designed to serve all of the safe-to-energize load within the substation service area. Distribution microgrids are sometimes referred to as "Main Street Microgrids," "Temporary Microgrids" or "Reslience Zones."

[7] D.21-01-018, App. A, p. A-1.

smaller sites with lower load and operational complexity, PG&E can gradually build towards larger, more complex locations.

While the procurement and development processes for these two pilots is still underway, PG&E plans to fund these two pilots with a portion of the $10 million set aside in the Wildfire OII Settlement for "accelerating commercialization of non-diesel temporary generation."[8]

A. Site Selection Criteria:

The two candidate distribution microgrid pilot sites were selected based upon the likelihood of PSPS impacts, the operational viability of the sites for the pilots, and the ability of the pilots to stimulate further market development of diesel-alternative microgrid technologies.

1. **High likelihood of use:**

- Distribution microgrids are generally sited on circuits with relatively high forecasted PSPS impact frequency (based on historical and projected conditions)
- Sites are designed to be safe to energize during most PSPS conditions, even when weather polygon lies overhead

2. **Operational viability:**

- Angwin and Foresthill have relatively low load (<1 MW)
- One of the pilot sites was operated during 2019 and 2020 PSPS events; PG&E already has experience operating this site and can build on experience with new technology
- Pre-installed interconnection hubs (PIHs) will be available to use at both of these sites in 2021

3. **Market benefits:**

- Proving out technology for this high-visibility use case in 2021 can expand procurement opportunities in 2022 and beyond
- One of these pilots is aligned with the scope of Electric Program Investment Charge ("EPIC") Grant 3.11B to research and standardize methods to leverage behind-the-meter ("BTM") distributed energy resources ("DERs") in microgrids and PSPS islands. For 2022, PG&E will explore leveraging and integrating existing BTM DERs at this location to reduce reliance on front-of-the-meter ("FTM")reciprocating engines during PSPS events. The integration of BTM DERs will be funded by the EPIC grant. The EPIC Grant 3.11B objectives are as follows:
    - Objective 1: maintain BTM DER operations during a PSPS event with no interaction/modification of the existing DERs.

[8] D.20-05-019, Appendix A – Settlement Agreement, p. 4.

- Objective 2: reduce FTM reciprocating engine run time by enabling charging/discharging of BTM DERs.

- Objective 3: explore the possibility of relying upon BTM DERs with an FTM reciprocating engine + battery combination.

IV. Protests

Since this supplemental advice letter is being submitted for informational purposes only, pursuant to CPUC General Order 96-B, Section 7.5.1, PG&E hereby requests that the protest period be waived.

V. Effective Date

In order to launch the Demand Response Clean Substation Microgrid Project for use in the 2021 fire season, PG&E requests that the Commission issue a final resolution approving the original Advice Letter 6204-E and this supplemental advice letter by no later than **August 19, 2021**.

VI. Notice

In accordance with General Order 96-B, Section IV, a copy of this Advice Letter is being sent electronically and via U.S. mail to parties shown on the attached list and the parties on the service lists **R.19-09-009 and R.18-10-007**. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: http://www.pge.com/tariffs/.

/S/
Sidney Bob Dietz II
Director, Regulatory Relations

cc: Service Lists R.19-09-009 and R.18-10-007

California Public Utilities Commission

ADVICE LETTER SUMMARY

ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Pacific Gas and Electric Company (U 39 E)

Utility type:
☑ ELC ☐ GAS ☐ WATER
☐ PLC ☐ HEAT

Contact Person: Stuart Rubio
Phone #: (415) 973-4587
E-mail: PGETariffs@pge.com
E-mail Disposition Notice to: SHR8@pge.com

EXPLANATION OF UTILITY TYPE
ELC = Electric GAS = Gas WATER = Water
PLC = Pipeline HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 6204-E-A

Tier Designation: Information-only

Subject of AL: Supplemental: Evaluation of Clean Substation Pilot Project Opportunities Pursuant to D.21-01-018

Keywords (choose from CPUC listing): Compliance

AL Type: ☐ Monthly ☐ Quarterly ☐ Annual ☑ One-Time ☐ Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.21-01-018

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL: N/A

Confidential treatment requested? ☐ Yes ☑ No

If yes, specification of confidential information:
Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? ☐ Yes ☑ No

Requested effective date: 8/19/21

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed[1]: N/A

Pending advice letters that revise the same tariff sheets: N/A

[1]Discuss in AL if more space is needed.

Clear Form

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102
Email: EDTariffUnit@cpuc.ca.gov

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Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

Clear Form

PG&E Gas and Electric
Advice Submittal List
General Order 96-B, Section IV

AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
California Cotton Ginners & Growers Assn
California Energy Commission

California Hub for Energy Efficiency Financing

California Alternative Energy and Advanced Transportation Financing Authority
California Public Utilities Commission
Calpine

Cameron-Daniel, P.C.
Casner, Steve
Cenergy Power
Center for Biological Diversity

Chevron Pipeline and Power
City of Palo Alto

City of San Jose
Clean Power Research
Coast Economic Consulting
Commercial Energy
Crossborder Energy
Crown Road Energy, LLC
Davis Wright Tremaine LLP
Day Carter Murphy

Dept of General Services
Don Pickett & Associates, Inc.
Douglass & Liddell

East Bay Community Energy Ellison Schneider & Harris LLP Energy Management Service
Engineers and Scientists of California

GenOn Energy, Inc.
Goodin, MacBride, Squeri, Schlotz & Ritchie
Green Power Institute
Hanna & Morton
ICF
IGS Energy
International Power Technology
Intestate Gas Services, Inc.
Kelly Group
Ken Bohn Consulting
Keyes & Fox LLP
Leviton Manufacturing Co., Inc.

Los Angeles County Integrated Waste Management Task Force
MRW & Associates
Manatt Phelps Phillips
Marin Energy Authority
McKenzie & Associates

Modesto Irrigation District
NLine Energy, Inc.
NRG Solar

Office of Ratepayer Advocates
OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy

Redwood Coast Energy Authority
Regulatory & Cogeneration Service, Inc.
SCD Energy Solutions
San Diego Gas & Electric Company

SPURR
San Francisco Water Power and Sewer
Sempra Utilities

Sierra Telephone Company, Inc.
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

TransCanada
Utility Cost Management
Utility Power Solutions
Water and Energy Consulting Wellhead Electric Company
Western Manufactured Housing Communities Association (WMA)
Yep Energy