

Decision 21-01-018 January 14, 2021

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking
Regarding Microgrids Pursuant to
Senate Bill 1339 and Resiliency
Strategies.

Rulemaking 19-09-009

**DECISION ADOPTING RATES, TARIFFS, AND RULES FACILITATING THE
COMMERCIALIZATION OF MICROGRIDS PURSUANT TO SENATE BILL
1339 AND RESILIENCY STRATEGIES**

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Appendix A - Diesel Reservation & Clean Energy Transition

**DECISION ADOPTING RATES, TARIFFS, AND RULES FACILITATING THE
COMMERCIALIZATION OF MICROGRIDS PURSUANT TO SENATE BILL
1339 AND RESILIENCY STRATEGIES**

Summary

This decision adopts microgrid rates, tariffs, and rules for large investor owned electrical corporations. These microgrid rates, tariffs, and rules facilitate the commercialization of microgrids pursuant to Senate Bill 1339. This decision is just one of many future steps in pursuit of the commercialization of microgrids. This proceeding remains open to facilitate future tracks to take up such consideration. First, we direct Southern California Edison Company (SCE) to revise its Rule 2 to permit installing added or special facilities microgrids. Second, we direct SCE and Pacific Gas and Electric Company (PG&E) to revise their Rule(s) 18, and San Diego Gas & Electric Company (SDG&E) to revise its Rule 19, to allow microgrids to serve critical customers on adjacent parcels. A subscription limit of ten Rule 18 or Rule 19 microgrid projects is permitted across each of the large investor-owned electrical corporations' service territories.

Third, SCE, PG&E, and SDG&E shall each form a new microgrid tariff for their respective service territories. Fourth, SCE, PG&E, and SDG&E shall jointly develop a Microgrid Incentive Program. Fifth, we direct SCE, PG&E, and SDG&E to develop pathways for the evaluation and approval of low-cost, reliable electrical isolation methods.

This decision also creates a Resiliency and Microgrids Working Group. Through the Resiliency and Microgrids Working Group, this decision directs the Commission's Energy Division to identify microgrid-specific policy issues, if any, that are not adequately addressed by existing venues at the Commission, California Energy Commission, California Air Resources Board, and California Independent System Operator and create a workplan for considering these issues

within the Resiliency and Microgrids Working Group and Track 3 of this proceeding. This decision also directs the Energy Division to include the subject of codifying standards and protocols necessary to meet California electrical corporation and California Independent System Operator microgrid requirements in the Resiliency and Microgrids Working Group work plan. This decision requires SCE, as the lead investor-owned utility, in coordination with Energy Division Staff, to report to the Commission and stakeholders on direct current metering activities occurring outside of this proceeding to facilitate the commercialization of microgrids.

This decision directs the Energy Division to engage – through the State of California procurement process – a neutral, third-party program evaluator to review and evaluate the microgrid tariff, rates, rules, incentive programs, and pilot studies to help the Commission determine whether any changes to the adopted policies would be in the public interest. Finally, this decision adopts an interim approach for minimizing emissions from generation during grid outages.

All proposals and comments submitted by parties were considered but given the large number of parties and issues, some proposals and comments may receive little or no discussion in this decision. Issues within the scope of the proceeding that are not addressed here, or only partially addressed, may be addressed in Track 3 of this proceeding.

This proceeding remains open.

1. Background

In September 2019, the California Public Utilities Commission (Commission or CPUC) initiated this rulemaking¹ to develop a policy framework

¹ Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339 and Resiliency Strategies, September 12, 2019.

facilitating the commercialization of microgrids and related resiliency strategies in furtherance of Senate Bill (SB) 1339 (Stern, 2018). SB 1339 requires the Commission, in consultation with the California Energy Commission (CEC), and the California Independent System Operator (CAISO), by December 1, 2020, to take specific actions to facilitate the commercialization of microgrids for distribution customers of large electrical corporations. Components of microgrid commercialization are determined by SB 1339, and must include: (1) rates, tariffs, and rules, as necessary; that (2) remove barriers for deploying microgrids across the large investor-owned utility service territories; without (3) shifting costs onto non-benefiting customers.

1.1. Track 1

Track 1 of this proceeding was preliminarily initiated through the December 2019 Energy Division workshop.² This workshop facilitated discussion with a diverse set of stakeholders that focused on short-term actions related to microgrids and other resiliency strategies targeted toward Summer 2020 implementation.

Following this workshop, the Track 1 assigned Commissioner's Scoping Memo and Ruling was issued on December 20, 2019.³ Since the issuance of the Track 1 Scoping Memo and Ruling, a great deal of activity occurred in this proceeding. This includes, but is not limited to, the following: (1) the issuance of a Track 1 Energy Division Staff Proposal; (2) the submittal of Track 1 large electrical corporation investor-owned utility (IOU) resiliency proposals for the 2020 wildfire season; and (3) the adoption of Decision (D.) 20-06-017, that

² December 4, 2019 Administrative Law Judge's Ruling Noticing Microgrid Workshop.

³ Assigned Commissioner's Scoping Memo and Ruling, December 20, 2019.

promulgated an array of rules to accelerate microgrid deployment pursuant to Senate Bill 1339 and various resiliency solutions.

Well in advance of the December 1, 2020 statutory deadline of SB 1339, D.20-16-017 satisfied many of Senate Bill 1339's requirements by implementing the following:

1. Permitting Requirements 8371, subdivision (a)
 - a) Required the development of template-based application process for specific behind-the-meter project types to prioritize, streamline, and expedite applications and approvals for key resiliency projects.
2. Barrier Reduction 8371, subdivision (b)
 - a) Required the development of template-based application process for specific behind-the-meter project types to prioritize, streamline, and expedite applications and approvals for key resiliency projects.
 - b) Added dedicated staff to the utilities distribution planning teams that specialize in resiliency project development for local jurisdiction.
 - c) Allowed energy storage systems, in advance of Public Safety Power Shutoff (PSPS) events, to import from – but not export to – the grid, in support of preparedness in advance of a grid outage.
 - d) Removed the storage sizing limit for large net energy metering (NEM)-paired storage and maintained existing metering requirements.
 - e) Required the development of a separate access-restricted portal for local jurisdictions that gives information to support local community resiliency projects.
 - f) Approved the Pacific Gas and Electric's (PG&E) Community Enablement Program which provides incremental technical and financial support on a

prioritized basis for community requested microgrids for PSPS mitigation purposes.

- g) Approved PG&E's Make-Ready Program for the period of 2020 through 2022 which includes enabling each of the prioritized substations to operate in islanded mode.
 - h) Approved PG&E's Temporary Generation Program which involves leasing mobile generators for temporary use during the 2020 wildfire season.
 - i) Approved San Diego Gas & Electric's (SDG&E) request to procure a local area distribution controller.
3. Rates and Tariffs 8371(d)
- a) Allowed energy storage systems, in advance of PSPS events, to import from – but not export to – the grid in support of preparedness in advance of a grid outage.
 - b) Removed the storage sizing limit for large NEM-paired storage and maintained existing metering requirements.
4. Standards and Protocols 8371(e)
- a) Developed template-based application process for specific behind-the-meter project types to prioritize, streamline, and expedite applications and approvals for key resiliency projects.
 - b) Approved SDG&E's request to procure a local area distribution controller.

1.2. Track 2

After the adoption of D.20-06-017 in June 2020, the assigned Commissioner issued her amended Scoping Memo and Ruling for Track 2 on July 3, 2020.⁴ This amended Scoping Memo and Ruling focuses on the continued implementation of SB 1339. SB 1339 requires the Commission to implement microgrid standards, protocols, guidelines, methods, rates, and tariffs as well as reduce barriers to

⁴ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

microgrid deployment statewide. SB 1339 requires the Commission, when implementing its legislation, to prioritize system, public, and worker safety while avoiding cost shifts between ratepayers. In other words, SB 1339 requires us to ensure that non-benefiting microgrid customers remain indifferent to costs.

1.3. Track 2 Staff Proposal Summary

On July 23, 2020, the assigned Administrative Law Judge issued a ruling⁵ with a proposal prepared by the Commission's Energy Division, titled, *Facilitating the Commercialization of Microgrids Pursuant to Senate Bill 1339* (Staff Proposal).

The Staff Proposal made an array of recommendations addressing many of the SB 1339 requirements that D.20-06-017 did not resolve. This includes the following requirements from the Public Utilities Code:⁶ Sections 8371(b), 8371(d), 8371.5 as well as Sections 8371(c) and 8371(f). Sections 8371(c) and (f) are addressed as secondary proposals (Secondary Proposals) in the Staff Proposal. We discuss the Staff Proposal's recommendations in detail, below.

1.3.1. Parties Response to Staff Proposal

Parties filed comments on August 14, 2020. The parties are: (1) 350 Bay Area; (2) Anterix Inc. (Anterix); (3) Applied Medical Resources Corporation (AMRC); (4) Bioenergy Association of California (BAC); (5) Bloom Energy, Inc.; (6) California Choice Energy Authority, San Jose Clean Energy, East Bay Community Energy, Marin Clean Energy, Pioneer Community Energy, San Diego Community Power, Peninsula Clean Energy Authority, Sonoma Clean Power Authority, Monterey Bay Community Power, Redwood Coast Energy Authority (Joint CCAs); (7) California Clean DG Coalition (CCDG); (8) Clean

⁵ Administrative Law Judge's Ruling, July 23, 2020.

⁶ All subsequent references are to the Public Utilities Code unless otherwise specified.

Coalition; (9) California Energy Storage Alliance (CESA); (10) California Environmental Justice Alliance (CEJA); (11) California Independent System Operator Corporation (CAISO); (12) California Solar & Storage Association (CalSSA); (13) Center for Accessible Technology (CforAT); (14) Center for Energy Efficiency and Renewable Technologies (CEERT); (15) Center for Sustainable Energy (CSE); (16) Clean Coalition; (17) Concentric Power Inc. (Concentric Power); (18) Connect California LLC (ConnectCA); (19) County Of Los Angeles (LA County); (20) Doosan Fuel Cell America, Inc. (Doosan); (21) Dr. Barbara R. Barkovich (Barkovich); (22) EMerge Alliance; (23) Enchanted Rock LLC (Enchanted Rock); (24) FuelCell Energy, Inc; (25) Google LLC (Google); (26) Green Hydrogen Coalition (GHC); (27) Green Power Institute (GPI); (28) GRID Alternatives; (29) City of Long Beach, Board of Harbor Commissioners (Long Beach); (30) Local Government Sustainable Energy Coalition (LGSEC); (31) Microgrid Resources Coalition (MRC); (32) National Fuel Cell Research Center (NFCRC); (33) Newworld Energy, LLC (Newworld); (34) Pacific Gas and Electric Company (PG&E); (35) Public Advocates Office (Cal Advocates); (36) Rural County Representatives of California (RCRC); (37) San Diego Gas & Electric Company (SDG&E); (38) Scale Microgrid Solutions; (39) Schneider Electric North America (Schneider Electric); (40) Sierra Club; (41) Small Business Utility Advocates (SBUA); (42) Solar Energy Industries Association (SEIA); (43) Southern California Edison Company (SCE); (44) Southern California Gas Company (SoCalGas); (45) Sunrun, Inc. (SunRun); (46) Tesla, Inc. (Tesla); (47) The Climate Center, Vote Solar (VSCC); (48) The Utility Reform Network (TURN); (49) Utility Consumers' Action Network (UCAN); (50) Vehicle-Grid Integration Council (VGIC); and (51) Wild Tree Foundation (Wild Tree).

Reply comments were filed on August 28, 2020. Parties that filed reply comments are: (1) 350 Bay Area; (2) BAC; (3) Bloom Energy; (4) Cal Advocates; (5) Camptonville Community; (6) CCDC; (7) CCVS; (8) CEERT; (9) CESA; (10) CforAT; (11) CHBC; (12) Clean Coalition; (13) CSE; (14) CSSA; (15) CUE; (16) Emera Technologies; (17) Fuel Cell; (18) GHC; (19) Google; (20) GPI; (21) GRID Alternatives; (22) Joint CCAs; (23) Long Beach; (24) MRC; (25) NFCRC; (26) Peterson Power; (27) PG&E; (28) Placer; (29) SBUA; (30) SCE; (31) Schneider Electric; (32) SDG&E; (33) SEIA; (34) Sierra Club; (35) SoCalGas; (36) Tesla; (37) TURN; (38) UCAN; and (39) Wild Tree.

1.4. Interim Approach for Minimizing Emissions from Generation During Transmission Outages

On August 25, 2020, Energy Division held an all-day online public workshop discussing the challenges and demands associated with energizing safe-to-energize substations during public safety power shut off (PSPS) events. Officials from the Commission as well as the California Air Resources Board (CARB) and the CEC were present.

On September 4, 2020, following the Energy Division workshop, the assigned Commissioner and ALJ issued a ruling⁷ seeking comment on policy questions and proposed an interim approach for minimizing emissions from generation during transmission outages. The interim approach for minimizing emissions generation during transmission outages proposed a process for transition to clean temporary generation in 2022 and beyond.

⁷ Assigned Commissioner and Administrative Law Judge's Ruling Seeking Comment on Policy Questions and an Interim Approach for Minimizing Emissions from Generation During Transmission Outages, September 4, 2020.

1.4.1. Parties Response to Staff Proposal

Comments were filed on September 25, 2020 by parties. The parties are:

(1) BAC; (2) Barkovich; (3) Bloom; (4) Cal Advocates; (5) CEERT; (6) CEJA; (7) CESA; (8) Doosan; (9) FCE; (10) GHC; (11) Joint CCAs; (12) MRC; (13) NFCRC; (14) Peterson Power; (15) PG&E; (16) PowerSource; (17) RCRC; (18) SCE; (19) SDG&E; (20) Sierra Club; (21) SoCalGas; (22) Sunrun; (23) Tesla; (24) TURN; and (25) VSCC.

Reply comments were filed on October 2, 2020 by parties. The parties are:

(1) BAC; (2) Bloom; (3) Cal Advocates; (4) CEERT; (5) CEJA; (6) CforAT; (7) CHBC; (8) Clean Coalition; (9) CSE; (10) CSSA; (11) CUE; (12) Doosan; (13) Enchanted Rock; (14) FCE; (15) Joint CCAs; (16) MRC; (17) NFCRC; (18) Peterson Power; (19) PG&E; (20) SCE; (21) SDG&E; (22) SoCalGas; (23) Tesla; and (24) VSCC.

2. Issues Before the Commission

Track 2 of this proceeding addresses the Commission's continuing goal of facilitating the commercialization of microgrids pursuant to SB 1339. With this in mind, the issues within scope of Track 2 are:

1. Develop microgrid service standards necessary to meet state and local permitting requirements, pursuant to Section 8371(a).
2. Develop methods to reduce barriers for microgrid deployment, without shifting costs between ratepayers, pursuant to Section 8371(b).
3. Develop guidelines to determine what impact studies are necessary for microgrids to connect to the electrical corporation grid, pursuant to Section 8371(c).
4. Develop separate rates and tariffs, that are just and reasonable, to support microgrids, pursuant to Section 8371(d).

- a) Ensure that the separate rates and tariffs shall not compensate a customer for the use of diesel backup or natural gas generation, except as either of those sources is used pursuant to Section 41514.1 of the Health and Safety Code, or except for natural gas generation that is a distributed energy resource, pursuant to Section 8371(d).
- b) Ensure that the development of microgrids ensures system, public, and worker safety, pursuant to Section 8371(d).
- 5. Facilitate the formation of a working group to develop and codify standards and protocols needed to meet California electrical corporation and California Independent System Operator microgrid requirements, pursuant to Section 8371(e);
- 6. Develop a standard for direct current metering in Electric Rule 21 to streamline the interconnection process and lower interconnection costs for direct current microgrid applications, pursuant to Section 8371(f), including net energy metering paired with storage systems and microgrids.

Furthermore, in D. 20-06-017, the Commission specifically identified the following topics that may be addressed in Track 2 or a later track, of this proceeding:

- 1. Examine the use of advanced metering infrastructure to enable electrical isolation as a viable resilience strategy and potentially adopt a pilot program.
- 2. Determine if large NEM-paired storage should be required to be capable of islanding.
- 3. Develop supplementary parameters for the local and tribal government's separate, access-restricted portal.
- 4. Address policy questions related to local area distribution controllers, such as, but not limited to, third-party integration, operation, and control of a microgrid.

5. Continue activity to shape the transition from diesel generation to alternative, clean backup power generation.

We address these issues in our discussion below.

3. Discussion

Pursuant to Article XII, Sections one through six of the California Constitution, the Commission “has broad authority to regulate utilities.”⁸ The California Legislature enacted the Public Utilities Act which authorized the Commission to supervise and regulate every public utility in California and to do all things which are “necessary and convenient in the exercise of such power and jurisdiction.”⁹ Specifically, Article XII, Section 3 of the California Constitution provides that “the production, generation, transmission, or furnishing of heat, light, water, power” fall under the jurisdiction of the legislature. California Public Utilities statutes are enforced by the Commission.¹⁰

Section 451 requires rates, terms and conditions of utility service must be just and reasonable.¹¹ Further, under Section 454.51, the Commission is entrusted with assuring that public utilities develop a portfolio of energy resources that assure the reliability of the state’s long-term electric supply.¹² Section 8371 requires the Commission to facilitate the commercialization of microgrids.

The Commission has taken several formal steps to facilitate the commercialization of microgrids through D.20-06-017. With this context in mind,

⁸ *Ford v. Pacific Gas & Electric Company* (1997) 60 Cal. App.4th 696, 700, citing to *San Diego Gas & Electric Company v. Superior Court*, (1996) 13 Cal. 4th 893, 914-915.

⁹ Section 701.

¹⁰ Article XII, Section 5.

¹¹ Sections 451, 454 and 728.

¹² Section 454.51, subds. (a) and (b).

we discuss the Staff Proposal's recommendations, the parties' positions on those recommendations, and the ultimate microgrids rates, tariffs, and rules that we adopt, below.

3.1. Revising Tariff Rules to Install Microgrids as Added or Special Facilities

Consistent with the Scoping Memo and Ruling,¹³ the Administrative Law Judge's Ruling¹⁴ asked parties an array of questions regarding the Staff Proposal's recommendations to allow the investor owned utilities (IOUs) to install microgrids as added or special facilities. We summarize the Staff Proposal's recommendations and discuss the parties' positions to the Staff Proposal, below.

3.1.1. Staff Proposal Summary

The Staff Proposal recommends SCE revise its Rule 2 Tariff to permit the installation of microgrids as added or special facilities.¹⁵ Contextually, Rule 2 defines electric service specifications for each of the IOU's customers. Such electric service specifications include: (1) guidelines on voltage; (2) load requirements; (3) maximum demand allowed; and (4) maximum main switch capacity allowed. Rule 2 also includes sections that define added or special

¹³ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

¹⁴ Administrative Law Judge's Ruling, July 23, 2020.

¹⁵ In each large investor owned utility's (IOU) version of electric Rule 2, there is a section that describes added/special facilities. Specifically, these provisions are included in PG&E Rule 2, Section I, Special Facilities; SCE Rule 2, Section H, Added Facilities; and SDG&E Rule 2, Section I, Special Facilities and Maintenance. SCE's Rule 2, Section H defines such added facilities as: (a) Facilities requested by an applicant which are in addition to or in substitution for standard facilities (such as SCE's standard line and service extension facilities), which would normally be provided by SCE for delivery of service at one point, through one meter, at one voltage class under its tariff schedules, or (b) pro rata portion of the facilities requested by an applicant, allocated for the sole use of such applicant, which would not normally be allocated for such sole use.

facilities, which generally, are facilities and equipment either requested by a customer or required by the IOU that are in addition to, or in substitution for, the standard facilities and equipment that an IOU would normally be required to provide its customers.

The Staff Proposal reasons that Rule 2 could pose a barrier to microgrid commercialization where control systems for islandable assets are installed in an added/special facilities agreement.¹⁶ The Staff Proposal recommends revising the Rule 2 Tariffs to clarify that the installation of microgrids as added or special facilities is permissible and provides three options for implementing the Rule 2 Tariff Revisions.¹⁷ The options are: (1) require each IOU to amend its respective version of Rule 2 to explicitly state that IOU operated microgrid controllers and generation and storage control devices are covered as added/special facilities under Rule 2; (2) require SCE to amend its Rule 2 to not specify any examples of added/special facilities; and (3) maintain the status quo.¹⁸ The Staff Proposal recommends the adoption of Option 2.

3.1.2. Parties' Positions

The parties were generally split on whether to adopt Option 1 or Option 2, however, most support Option 2.¹⁹ Some opposed all three options. Option 3 was the least supported position. We discuss the parties' positions below.

¹⁶ *Id.*

¹⁷ Administrative Law Judge's Ruling, July 23, 2020, Attachment 1 – Staff Proposal at page 5-6.

¹⁸ *Id.*

¹⁹ The following parties took no position any of the options under Proposal 1: (1) BAC; (2) Bloom; (3) Camptonville Community; (4) CEJA; (5) CHBC; (6) CAISO; (7) CforAT; (8) CEERT; (9) CSE; (10) Concentric; (11) Emerge Alliance; (12) Google; (13) GHC; (14) GPI; (15) GRID; (16) Newworld Energy; (17) Placer; (18) Peterson; (19) RCRC; (20) SBUA; (21) SEIA; (22) SunRun; (23) TURN; (24) Unison Energy; and (25) VGIC.

Regarding Option 1, AMR supports Option 1 contending it eliminates ambiguities surrounding Rule 2 microgrid development.²⁰ CalSSA supports either Option 1 or 2, but prefers the certainty that Option 1 likely provides microgrid developers.²¹ Clean Coalition supports Option 1, reasoning that it proactively removes all inhibitions for the creation of microgrids as special facilities and openly informs prospective customers of exactly what qualifies.²² LA County supports Option 1, arguing it will streamline the commercialization of microgrids and will avoid any unnecessary regulatory barriers.²³ FuelCell Energy states that either Option 1 or Option 2 are improvements over the status quo, but Option 1 appears as the best choice to create uniformity and clarity in Rule 2 for microgrid developers.²⁴

Tesla supports Option 1 urging it is most clear in terms of ensuring that Rule 2 does not pose a barrier.²⁵ UCAN supports Option 1 because it removes regulatory uncertainty.²⁶

Others support Option 2. For example, CESA supports Option 2, stating that Option 2 creates a “level playing field for utility-owned microgrids across the three largest IOU territories.”²⁷ ConnectCA supports Option 2 but recommends that the Commission remove limiting language that conveys

²⁰ AMR Opening Comments at 4-5.

²¹ CALSSA Opening Comments at 2-3.

²² Clean Coalition Opening Comments at 5-7.

²³ LA County Opening Comments at 2.

²⁴ FuelCell Energy Opening Comments at 2-3.

²⁵ Tesla Opening Comments at 3.

²⁶ UCAN Opening Comments at 2.

²⁷ CESA Opening Comments at 3.

microgrids as “rare and capital intensive” – asserting that microgrids come in many shapes and sizes.²⁸

Additionally, Enchanted Rock supports Option 2.²⁹ Doosan supports Option 2.³⁰ NFCRC supports Option 2.³¹ Joint CCAs support Option 2 but with various recommendations for modification.³² PG&E reasons that Option 2 provides a consistent application of special, or added facilities amongst the IOUs while Option 3 maintains flexibility in applying special facilities.³³

SDG&E supports Options 2 and 3 reasoning that these options preserve its flexibility in Rule 2 to apply the special facilities provision where needed and when mutually agreed between the applicant and SDG&E to implement the software and hardware necessary to provide customers with microgrid capability.³⁴ SCE supports Option 2.³⁵ Sierra Club supports Option 2.³⁶ SoCalGas supports Option 2 asserting that it will standardize requirements across all electric IOUs and eliminates the unnecessary step of seeking CPUC authorization to deviate from Rule 2.³⁷ Cal Advocates supports Option 3.³⁸

²⁸ ConnectCA Opening Comments at 5-6.

²⁹ Enchanted Rock Opening Comments at 3.

³⁰ Doosan Opening Comments at 4.

³¹ NFCRC Opening Comments at 4-5.

³² Joint CCAs Opening Comments at 5-6.

³³ PG&E Opening Comments at 3-4.

³⁴ SDG&E Opening Comments at 4-5.

³⁵ SCE Opening Comments at 3.

³⁶ Sierra Club Opening Comments at 3.

³⁷ SoCalGas Opening Comments at 2.

³⁸ Cal Advocates Opening Comments at 5.

350 Bay Area recommends that communities should lead the way on microgrid development rather than the IOUs.³⁹ Barkovich argues that the IOUs should pay for the microgrid facilities in which case, Rule 2 would not apply.⁴⁰ MRC opposes all of the options under Proposal 1.⁴¹ Schneider Electric opposes all of the options under Proposal 1.⁴² VSCC oppose all three options under Proposal 1.⁴³ Wild Tree opposes all three options under Proposal 1.⁴⁴

3.1.3. SCE Shall Ensure Its Tariff Rule 2 Allows Microgrids as Added or Special Facilities.

Section 8371(b) requires the Commission, without shifting costs between ratepayers, to develop methods to reduce barriers for microgrid deployment. Section 8371.5 states electrical corporation development or ownership of a microgrid should not be discouraged or prohibited.

To fulfill these statutory requirements, we adopt Proposal 1, Option 2's amendments to Rule 2. We agree with both CDCC and Enchanted Rock, that Option 2 is a practical, reasonable solution to remove barriers for microgrid deployment⁴⁵ and it will provide a consistent set of rules statewide.⁴⁶ At the same time, Proposal 1, Option 2 balances our other statutory obligations to ensure ratepayers who do not benefit from Rule 2 added or special facilities microgrids remain indifferent to their costs. Our change to Rule 2 eliminates the

³⁹ 350 Bay Area Opening Comments at 6-7.

⁴⁰ Barkovich Opening Comments at 2-3.

⁴¹ MRC Opening Comments at 13.

⁴² Schneider Electric Opening Comments at 5.

⁴³ VSCC Opening Comments at 7-8.

⁴⁴ Wild Tree Opening Comments at 2-3.

⁴⁵ CCDC Opening Comments at 3.

⁴⁶ Enchanted Rock Opening Comments at 2.

potential for the Commission needing to approve every project of this type that an IOU and microgrid developer wish to pursue. In this way, we promote regulatory certainty and simplicity.

We direct SCE to file a Tier 2 advice letter within 30 days upon issuance of this decision, amending SCE Tariff Rule 2. SCE's amendments to Rule 2 shall remove any language and/or any examples of added or special facilities to ensure added or special facilities microgrids can be installed. SCE's Rule 2 amendments must clearly provide certainty that a Rule 2 deviation is not needed for an added or special facilities microgrid. There should be no confusion that microgrid control system and equipment may be installed as added or special facilities where the customer requests the IOU own and operate the units. With respect to PG&E and SDG&E, neither IOUs' Rule 2 facilities language appear to constrain or prohibit the development of added or special facilities microgrids.

We disagree with the parties who opposed this change to Rule 2 - particularly, MRC. We reject MRC's assertion that utility development of microgrids as added or special facilities is "opposite of and creates barriers to commercialization"⁴⁷ and that the "[C]ommission should restrict development of microgrids as special facilities..."⁴⁸ Section 8371.5 makes clear that electrical corporation development or ownership of a microgrid should not be discouraged or prohibited. Accordingly, we reject MRC's recommendation to "restrict" the designation of microgrids as added or special facilities as it would patently contradict our statutory requirements under Section 8371.5. We also reject MRC's assertion that Option 2 causes cost shifting. Costs of added or special

⁴⁷ MRC Opening Comments at 14.

⁴⁸ *Id.*

facilities are always paid in full by the customer requesting them – these costs are not shared by ratepayers. Now, we turn to our reasoning for adopting this Rule 2 amendment, below.

First, pursuant to Section 8371(b), we remove barriers for microgrid commercialization by directing SCE to amend its Rule 2. Amending SCE Rule 2 permits the installation of microgrid control systems and equipment as added or special facilities microgrids where the customer requests that the IOU own and operate the equipment. By directing SCE to amend its Rule 2 to take a less prescriptive approach with its handling of identifying examples of added or special facilities, we provide regulatory certainty and promote microgrid deployment across SCE's service territory.

Second, under these SCE Rule 2 amendments, an added or special facilities microgrid will not need to request a Rule 2 deviation under the Commission's General Order 96-B, General Rule 3.4. This will reduce market confusion and provide SCE and microgrid developers regulatory certainty that added or special facilities microgrids can interconnect within SCE's service territory under an existing tariff.

Third, Option 2 eliminates SCE's need to seek our approval for any potential deviation from Rule 2 in connection with the installation of microgrid control or other equipment as an added or special facility where the customer requests that the IOU own and operate the equipment. As CESA states, this Rule 2 amendment creates a "level playing field for utility-owned microgrids across the three largest IOU territories."⁴⁹

⁴⁹ CESA Opening Comments at 3.

Fourth, by requiring SCE to amend Rule 2, we prevent cost shifting to ensure that non-benefitting ratepayers remain indifferent pursuant to Sections 8371(b) and (d). Under each of the IOUs' Rule 2, the applicant for the installation of special facilities is responsible for the excess costs for the installation of standard equipment. Inherent in Rule 2's design, the IOU and the microgrid applicant will identify which customers will benefit from the installed microgrid and can allocate costs accordingly.

Fifth, we agree with the Staff Proposal that an applicant must pay for ongoing operation and maintenance costs of added or special facilities microgrids, as specified in Rule 2. These requirements only apply to situations where a customer requests that the IOU own and operate microgrid equipment as added or special facilities. Thus, any changes to SCE's Rule 2 should allow installation of such equipment as added or special facilities in cases where the customer requests that the IOU own and operate such units.

Sixth, we recognize that there may be a need for coordination between the IOUs, developers, and other interested stakeholders, regarding the implementation of Rule 2 revisions. We direct the IOUs and interested parties to collaborate informally, outside of the tariff structure, to create or modify guidance to reflect the Rule 2 amendments adopted here.

Finally, some parties argue that the cost of ownership charges specified in Rule 2 need to be revised⁵⁰ and that the definition of connected load also needs to

⁵⁰ Joint CCAs Opening Comments at 6; LGSEC Opening Comments at 7; Sierra Club Opening Comments at 6.

be revised.⁵¹ After careful consideration of these requests, we find that these issues are out of scope of this proceeding at this time.

In summary, we direct SCE to file a Tier 2 advice letter within 30 days upon issuance of this decision, to revise its Rule 2 to remove any examples of added or special facilities that might prohibit the construction of microgrids. SCE's Rule 2 revisions should remove any ambiguity that a Rule 2 deviation will be required to construct added or special facilities of microgrids.

3.2. Direct PG&E to Revise Tariff Rule 18, SCE to Revise Tariff Rule 18, and SDG&E to Revise Tariff Rule 19 to Allow Microgrids to Serve Critical Customers on Adjacent Parcels.

Consistent with the Scoping Memo and Ruling,⁵² the Administrative Law Judge's Ruling⁵³ asked parties an array of questions regarding the Staff Proposal's recommendations to direct the IOUs to revise their Rules 18 and 19 to allow microgrids to serve critical customers on adjacent parcels. We summarize the key elements of the Staff Proposal and the parties' positions to it, below.

3.2.1. Staff Proposal Summary

The Staff Proposal recommends that PG&E and SCE revise their respective Rule(s) 18 and SDG&E revise its Rule 19, to allow microgrids to serve critical customers on adjacent parcels.⁵⁴ The Staff Proposal reasons Rule 18 and Rule 19 may be a barrier for microgrid commercialization because it limits a microgrid's use and benefit.⁵⁵

⁵¹ CalSSA Opening Comments at 3; CSEA Opening Comments at 5; and VGIC Opening Comments at 6.

⁵² Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

⁵³ Administrative Law Judge's Ruling, July 23, 2020.

⁵⁴ Administrative Law Judge's Ruling, July 23, 2020, Attachment 1 – Staff Proposal at page 8-9.

⁵⁵ *Id.*

The Staff Proposal provides three options to implement the revision of Rules 18 and 19. These options are: (1) exempt critical facilities owned by municipal corporations from the IOU's respective electric rules, Rule(s) 18 and 19 and permit – subject to the limits of Section 218 – premises to supply the electricity to an adjacent premise to conduct emergency and/or critical operations during a grid outage; (2) exempt critical facilities owned by municipal corporations from electric Rule(s) 18 and 19 but set a subscription limit of 10 microgrid projects for the IOU territories. Then, once capacity is reached, the CPUC and the IOUs will revisit the exemption to determine if exemption should continue and/or if there are any modifications needed based on observing the exempt projects; and (3) do not change Rule(s) 18 and 19.⁵⁶ Staff recommends the adoption of Option 2.

3.2.2. Parties' Positions

The parties were generally split among support and opposition to Options 1, 2, and 3. However, most support Option 2.⁵⁷ Some opposed all three options. We discuss the parties' positions below.

BAC supports Option 1 to revise Rules 18 and 19 but recommends not setting a limit on the number of microgrid projects that could subscribe under any changes to Rule 18 and Rule 19.⁵⁸ CalSSA also supports Option 1.⁵⁹

⁵⁶ *Id.* at 9-11.

⁵⁷ The following parties took no position any of the options under Proposal 1: (1) Anterix; (2) Camptonville Community Partnership; (3) CEJA; (4) CHBC; (5) CforAT; (6) CEERT; (7) Emera Technologies; (8) Emerge Alliance; (9) GHC; (10) Grid Alternatives; (11) Newworld Energy; (12) Placer; (13) Peterson; (14) SEIA; (15) TURN; and (16) VGIC.

⁵⁸ BAC Opening Comments at 10.

⁵⁹ CalSSA Opening Comments at 4.

Clean Coalition supports Option 1, stating it is an important step towards reducing the “stranglehold” that the Section 218 “over-the-fence rule” creates on multi-parcel microgrids.⁶⁰ LA County supports Option 1, arguing Option 1 addresses major local government barriers for microgrid deployment.⁶¹

Enchanted Rock supports Option 1, but recommends that revisions to Rule 18 and Rule 19 be expanded by not limiting the definition of “critical facilities” or “critical infrastructure” solely to those owned by municipal corporations or those listed in Decision (D.) 19-05-042, the Decision Adopting De-Energization Guidelines.⁶² GPI supports Option 1 but argues its application should be expanded to include any microgrid facility owner, not just municipal corporations.⁶³

Joint CCAs support Option 1 but recommend that Option 1 eliminate its language limiting the eligibility to critical facilities owned by municipal corporations.⁶⁴ Sierra Club supports Option 1,⁶⁵ arguing that priority should be given to disadvantaged communities, communities at higher risk from the severity or likelihood of outages, and to environmentally responsible projects.⁶⁶

SoCalGas supports Option 1, but argues that limiting eligibility to critical facilities owned by municipal corporations may unintentionally prioritize one customer or community’s resiliency needs over another.⁶⁷ Tesla supports

⁶⁰ Clean Coalition Opening Comments at 8-9.

⁶¹ LA County at 5-6.

⁶² Enchanted Rock Opening Comments at 3.

⁶³ GPI Opening Comments at 2.

⁶⁴ Joint CCA at 6-7.

⁶⁵ Sierra Club Opening Comments at 4-5.

⁶⁶ *Id.* at 6.

⁶⁷ SoCalGas at 3.

Option 1, but argues that limiting the exemption to critical facilities owned by municipal corporations is not needed nor appropriate.⁶⁸

UCAN supports Option 1 but asserts that if Option 2 is adopted, the 10 project cap should be applied for each IOU service territory.⁶⁹ Finally, 350 Bay Area states that Option 1 is the “least bad” but argues that the proposal should be modified to have no restrictions beyond Section 218.⁷⁰

Alternatively, Bloom supports Option 2 but suggests broadening it to all critical facilities, allowing for non-municipal facilities, and lifting the 10-project cap.⁷¹ CESA supports Option 2.⁷²

Long Beach states that Option 2 correctly identifies Rule 18 as a barrier to microgrid development but recommends various modifications, including eliminating the proposed cap of 10 projects for all three IOU service territories.⁷³ Concentric supports Option 2 but does not support the real property limitations which confine microgrids to 1-2 contiguous parcels.⁷⁴

ConnectCA supports Option 2.⁷⁵ Doosan supports Option 2 with amendments, specifically allowing for microgrid ownership to extend beyond

⁶⁸ Tesla Opening Comments at 4-6.

⁶⁹ UCAN Opening Comments at 2-3.

⁷⁰ 350 Bay Area Opening Comments at 6.

⁷¹ Bloom Opening Comments at 7.

⁷² CESA Opening Comments at 4.

⁷³ Long Beach Opening Comments at 8-10.

⁷⁴ Concentric Opening Comments at 3-4.

⁷⁵ ConnectCA Opening Comments at 6-7.

municipalities.⁷⁶ FuelCell Energy generally supports both Options 1 and 2, arguing both are an improvement to the status quo.⁷⁷

NFCRC supports Option 2 with amendments, arguing it should more broadly apply to municipal microgrids for critical facilities, without limiting ownership to municipal corporations because it is uncommon for the municipality to own and operate the microgrid.⁷⁸

PG&E supports Option 2.⁷⁹ Cal Advocates supports Option 2 because it allows a microgrid to transfer electricity to adjacent premises only during emergencies that occur during grid outages.⁸⁰ RCRC supports Proposal 2 and its efforts to allow municipal corporations to power their critical facilities with microgrids, including powering facilities on adjacent properties during a power outage.⁸¹

SDG&E supports Option 2 but recommends that Option 3 maintain the existing Rule 18/19 language while incorporating staff's recommendation of Option 2 within the new microgrid tariff envisioned in Proposal 3.⁸² SDG&E also recommends that any new tariff language should eliminate the possibility of configuring a microgrid that uses "master metering."⁸³ SBUA supports Option 2

⁷⁶ Doosan Opening Comments at 6.

⁷⁷ Fuel Cell Energy Opening Comments at 4.

⁷⁸ NFCRC at 6.

⁷⁹ PG&E at 6-9.

⁸⁰ Cal Advocates at 7-9.

⁸¹ RCRC Opening Comments at 3.

⁸² SDG&E Opening Comments at 7-8.

⁸³ *Id.*

but recommends that the 10 project limit apply on a per IOU basis to PG&E and SCE, plus 5 projects for SDG&E.⁸⁴

SCE supports Option 2, to the extent that the *exemption* from Rule 18 is limited to the situation in which both the microgrid and the critical facilities it serves are owned by municipal corporations, does not operate in parallel with the grid during normal grid operating conditions, and is subject to all of the necessary requirements to assure safe operations.⁸⁵

SunRun argues Proposal 2 should be modified, so that all microgrids are exempted from Section 218.⁸⁶ CAISO did not take a position on any of the options but asserts it is critical for the Commission to expressly state that microgrid service is limited to single transmission-distribution interface.⁸⁷

The following parties opposed Proposal 2 and/or all options presented: (1) AMRC;⁸⁸ (2) MRC;⁸⁹ (3) Schneider Electric;⁹⁰ (4) CCDC;⁹¹ (5) CSE;⁹² (6) Google;⁹³ (7) CUE;⁹⁴ (8) VSCC;⁹⁵ (9) Wild Tree;⁹⁶ and (10) Barkovich.⁹⁷

⁸⁴ SBUA Opening Comments at 3-4.

⁸⁵ SCE Opening Comments at 7-9.

⁸⁶ SunRun Opening Comments at 3.

⁸⁷ CAISO Opening Comments at 4.

⁸⁸ AMRC Opening Comments at 6.

⁸⁹ MRC Opening Comments 14.

⁹⁰ Schneider Electric Opening Comments at 6.

⁹¹ CCDC Opening Comments at 4.

⁹² CSE Opening Comments at 4.

⁹³ Google Opening Comments at 3-8.

⁹⁴ CUE Reply Comments at 2-4

⁹⁵ VSCC Opening Comments at 9.

⁹⁶ Wild Tree Opening Comments at 4.

⁹⁷ Barkovich Opening Comments at 4.

3.2.3. SCE and PG&E Shall Revise Their Rule(s) 18 and SDG&E Shall Revise its Rule 19, to Allow Microgrids to Serve Critical Customers on Adjacent Parcels in the Event of a Grid Outage.

Section 8371(b) requires the Commission, without shifting costs between ratepayers, to develop methods to reduce barriers for microgrid deployment. Section 218, commonly referred to as the “over-the-fence rule,” requires any entity who wishes to sell energy to more than two contiguous parcels or across the street to become a regulated, electrical corporation as defined under Section 216, within certain limited exceptions. Generally, if an entity becomes an electrical corporation, it is a public utility subject to our regulation. When an entity is subject to our jurisdiction, it is our duty to ensure that the public utility is meeting public customer service expectations, public safety standards, maintains just and reasonable rates, as well as just and reasonable terms and conditions of utility service.⁹⁸ Further, we have a duty to the people of California to ensure that regulated electrical corporations develop a portfolio of energy resources that assure the reliability of the state’s electric supply.⁹⁹

With these statutes in mind, we turn next to the IOUs’ applicable electrical rules. The IOUs’ Rule(s) 18 and 19 govern the supply of electricity to separate premises and prohibit one premise from supplying electricity to another premise. Thus, if electricity is delivered by an IOU to a premise, Rule(s) 18 and 19 prohibit the receiving premise to supply electricity to another premise. For their parts, PG&E Rule 18 and SDG&E Rule 19 prohibit electricity supplied through the same meter, even if the separate premise is owned by the same customer. SCE

⁹⁸ Sections 451, 454 and 728.

⁹⁹ Section 454.51, subds. (a) and (b).

Rule 18 does not have a similar clause for separate premises owned by the same customer.

The Staff Proposal states Rule 18 and Rule 19 may be a barrier for microgrid developers who wish to maximize the use and benefit of their microgrid by supplying power to adjacent premises in the event of grid outages, either owned by them or someone else.

To overcome these barriers, the Staff Proposal recommends that we direct the IOUs to revise their Rule(s) 18 and 19 to allow microgrids to serve critical customers on adjacent parcels. The Staff Proposal also recommends, subject to the limitations of Section 218, to allow premises to supply the electricity to an adjacent premise for emergencies and/or critical operations during a grid outage. Additionally under the Staff Proposal's recommendations, a municipal corporation, or the adjoining premises, or the microgrid customer would be required to install a device, subject to the utilities' review and approval, that prohibits parallel operation of the service line between the premises during normal operation.

The Staff Proposal also recommends initially, setting a subscription limit under a revision of Rule 18 and Rule 19 to ten (10) microgrid projects for all the three IOU service territories to gain an understanding of these revisions' effectiveness. Once capacity is reached, the Staff Proposal recommends revisiting the exemption to determine if it should continue, or if any modifications are warranted.

We adopt the Staff Proposal's Proposal 2, Option 2 with modification. We direct the IOUs to revise their respective Rules 18 and 19 to allow microgrids to serve customers on adjacent premises in the event of a grid outage. This rule modification is ownership agnostic. Thus, microgrids owned by public agencies

which are state, county, local, and tribal agencies or by a third-party that primarily serves a facility operated by a public agency will be allowed to supply electricity to a critical facility operated by a municipal corporation on an adjacent premise to conduct emergency and/or critical operations during a grid outage. We agree with SCE¹⁰⁰ that focusing on entities that serve the public interest ensures more accountability to the public because a public entity is focused on protecting the public from undue costs and unsafe conditions.

Barkovich,¹⁰¹ BAC,¹⁰² Bloom,¹⁰³ Clean Coalition,¹⁰⁴ Concentric,¹⁰⁵ Enchanted Rock,¹⁰⁶ GPI,¹⁰⁷ Joint CCAs,¹⁰⁸ LA County,¹⁰⁹ Sierra Club,¹¹⁰ SoCalGas,¹¹¹ Tesla,¹¹² and UCAN¹¹³ suggest that such a process – that is, limiting this exemption to 10 microgrid projects for each of the IOU service territories – is insufficient to advance microgrid commercialization. We disagree. This is a project cap, as we discuss below, that enables the Commission and stakeholders to collect data and evaluate the efficacy of the Rule 18 and Rule 19 modifications.

¹⁰⁰ SCE Reply Comments at 7.

¹⁰¹ Barkovich Opening Comments at 5;

¹⁰² BAC Opening Comments at 10.

¹⁰³ Bloom Opening Comments at 7.

¹⁰⁴ Clean Coalition Opening Comments at 19.

¹⁰⁵ Concentric Opening Comments at 6.

¹⁰⁶ Enchanted Rock Opening Comments at 2.

¹⁰⁷ GPI Opening Comments at 2.

¹⁰⁸ Joint CCAs Opening Comments at 7.

¹⁰⁹ LA County Opening Comments at 5,

¹¹⁰ Sierra Club Opening Comments at 17.

¹¹¹ SoCalGas Opening Comments at 3.

¹¹² Tesla Opening Comments at 4.

¹¹³ UCAN Opening Comments at 3.

To be sure, nothing here precludes new considerations in the future context of microgrid commercialization. We are puzzled by the fervent opposition from a minority of parties toward limiting the number of microgrids proposed by this rule. We adopt this approach because it is reasonable given the complexity of deploying microgrids as a new technology with new configurations. Nothing forecloses revisiting this with lessons learned. We decline to speed through the deployment of a new technology at the cost of safety and reliability.

PG&E, SCE, and SDG&E shall submit a Tier 2 advice letter within 30 days upon the issuance of this decision implementing Rule 18 and Rule 19 revisions, pursuant to Section 3.2.3 of this decision, to allow microgrids to serve customers on adjacent premises and to enact a subscription limit of no more than 10 such microgrid projects for each service territory. These Rule 18 and Rule 19 revisions will help commercialize microgrids while offering resiliency benefits during grid outages. Additionally, we believe that more projects per IOU service territory should be permitted. Therefore, we adopt a subscription limit of ten microgrid projects for each IOU service territory. Within 30 days of the tenth project having completed the interconnection process and received permission to operate in a particular IOU service territory, we direct the IOUs to file an advice letter, notifying Energy Division that they have reached the subscription limit. In this advice letter, the IOU may also request permission to interconnect remaining applications, or to make modifications, or request permission to lift the cap.

Further, once the fifth microgrid project within a service territory receives authorization from the respective IOU to operate, the IOU shall file a Tier 2 advice letter making a recommendation of: (1) whether to continue the Rule 18 or 19 tariff rule amendment for future projects; or (2) whether to make any modifications to the existing amendment.

Before we discuss our reasoning for adopting the modifications to electric Rules 18 and 19, we must address the confusion some parties have with respect to our authority – or lack thereof – over Section 218’s “over-the-fence-rule.” There is a fervent, but incorrect, assertion put forward that by the stroke of a pen, we can simply modify Section 218. This assertion conflates two related but different requirements: (1) electric Rule 18 and Rule 19; and (2) Section 218, itself.

The first requirement, Rules 18 and 19, which we discuss above in detail, governs the resale of electricity and delivery of electricity across property lines. Authority of Rule 18 and Rule 19 falls squarely within the Commission’s jurisdiction. Simply put, through formal Commission due process, we may modify Rules 18 and 19 as we do here.

On the other hand, the second requirement is Section 218. Section 218 is a statute in the California Public Utilities Code. We have no authority to change or modify any statute within the California Public Utilities Code on our own. Changes to statutes like Section 218 fall squarely within the powers of the California Legislature. Any modifications to Rules 18 and 19 must be made in conformance with Section 218.

We reject those parties who argue that the Commission should amend Rule 18 and Rule 19 in such a way to materially affect Section 218. Rules 18 and 19 are important to adequately serve and protect customers and should not be casually dismissed. Nor is this proceeding the appropriate venue to address any changes to established tariff rules that could impact many parties which, given the targeted focus of this proceeding on microgrid-related issues, have not intervened or been heard on this matter. Rules 18 and 19 prohibit one premise from supplying electricity to another premise to ensure safe and reliable distribution of power at reasonable rates. Allowing private entities outside of

Commission jurisdiction to build electrical distribution systems and deliver power to customers presents serious risks to public safety and welfare. Without our oversight, there is no way to ensure these entities operate their assets safely and reliably and are not charging unreasonable rates when providing this essential service.

Yet, that is precisely the outcome sought by some. We reject their push to permit – through this docket - the establishment of private utilities to sell power under contractual arrangements to nearby third-parties without any Commission oversight and without regard to the existing regulatory and legislative requirements that are reflected in Section 218 and other parts of the Public Utilities Code. These arguments are without merit. Section 218 reflects the Legislative directive that the Commission adopt tariffs that support the public good. To be sure, the California Constitution and California statute designate the Commission as the principal body through which the State exercises its police power in the case of essential utility network services. Section 451 gives the Commission broad authority to regulate public utility services and infrastructure as necessary to ensure they are operated in a way that provides for the health and safety of Californians:

Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone facilities, as defined in Section 54.1 of the Civil Code, as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.¹¹⁴

¹¹⁴ Section 451. *See also PG&E v CPUC*, 237 CA 4th 812, 824 (2015) (upholding \$14.35 million penalty for failure to keep essential gas safety records in violation of section 451).

Moreover, the California Constitution and the Public Utilities Code also provide the Commission with broad jurisdiction on matters regarding the safety of electric utility facilities and operations, including authority to promulgate regulations regarding the safety of overhead power lines.¹¹⁵ Rules 18 and 19 were put in place to safeguard consumers from being overcharged for an essential service, assure that facilities are operated in a safe and reliable manner, and avoid the duplication of utility infrastructure as protected against by the utility franchise provisions.

These same parties argue that entities should be allowed to distribute power to more than two contiguous parcels or across a street without becoming a public utility provided they are serving only certain identified customers (i.e., the public dedication doctrine). However, such an interpretation would give unregulated entities free rein to serve entire cities or regions without any Commission oversight. This is in direct conflict with the intent of Section 218 and would lead to duplicative service unless the entities assumed the incumbent utility's obligation to serve. These are exactly the types of unintended consequences we are trying to avoid by taking a measured approach to revising Rules 18 and 19. Finally, we reject the assertion that under Section 2780, we can exempt "microutilities" from the requirements applicable to electrical corporations. The reliance of this section is at best, misplaced. We now discuss our reasoning for modifying electric Rule 18 and Rule 19, below.

¹¹⁵ D.09-09-030 at 8.

First, by directing the IOUs to revise Rules 18 and 19 and adopting a subscription limit of ten microgrid projects per IOU service territory, we meet multiple statutory objectives. We strike a reasonable balance between our competing statutory duties to ensure safe, reliable service at just and reasonable rates while developing tariffs that commercialize microgrids without shifting costs between ratepayers. This approach allows both the Commission and stakeholders to evaluate the effectiveness of the Rule 18 and 19 exemptions and then determine whether the exemption should continue or if any modifications warrant attention. Second, this approach affords public safety benefits as well – including resiliency during broader grid outages. As Cal Advocates states, permitting exemptions to Rule 18 and Rule 19 allow microgrids to transfer electricity to adjacent premises only during emergencies that occur during a grid outage.¹¹⁶ This is a clear resiliency benefit microgrids can offer IOU customers during an emergency.¹¹⁷

Third, this approach also establishes guardrails to protect against unintended consequences. The Commission and stakeholders can gain experience, learn lessons, collect data and information for analyses, and then determine if this exemption should continue or be modified. Nothing here forecloses the potential for the continuation of these exemptions.

Fourth, we direct the IOUs when implementing this requirement, to use the existing critical facilities list¹¹⁸ and processes as adopted by D.19-05-042 or in subsequent decisions. Various parties argued for expanding the list of critical facilities beyond those of D.19-05-042. We reject those arguments. D.19-05-042

¹¹⁶ Cal Advocates Opening Comments at 7.

¹¹⁷ *Id.*

¹¹⁸ D.19-05-042, Appendix A- *Adopted Definitions*.

directs the IOUs to manage the critical facilities list and processes in partnership with local governments. If parties are seeking to expand the critical facility list and/or modify the processes in partnership with local governments, they should pursue those changes through the avenues contemplated under D.19-05-042 – not here. Any deviation from D.19-05-042 through this proceeding would create regulatory confusion and uncertainty. Such an approach is not appropriate nor in the public interest.

Fifth, Google and other parties¹¹⁹ recommend that the revisions to Rule 18 and Rule 19 should be agnostic to the ownership and intended use of a grid-tied, customer-sited microgrid. We agree, in part. The Rule 18 and Rule 19 modifications are agnostic as to the ownership of the microgrid itself. The facility primarily served by the microgrid, and the critical facility on the adjacent premise that may be served by the microgrid during an emergency, must be under the control of a public agency. These conditions provide flexibility to public agencies and tribal agencies while ensuring that any benefits arising from this new exemption to long-standing provisions of Rules 18 and 19 are directed toward public, and not private, interests.

Finally, we clarify some issues parties found ambiguous in the Staff Proposal. The microgrid service is limited to a single transmission-distribution interface. In other words, during an outage, microgrid generators cannot use the transmission system to serve distribution grids that are otherwise separate.¹²⁰ Also, multi-customer microgrids that are eligible under the Rule 18 and Rule 19

¹¹⁹ Doosan Opening Comments at 6; Google Opening Comments at 4; GPI Opening Comments at 2; and NFRC Opening Comments at 6.

¹²⁰ CAISO Opening Comments at 4.

arrangements adopted here, are eligible for Microgrid Incentive Program funding, which is discussed below.

Next, customers are required to install appropriate equipment to ensure that the supply line between them can only be utilized during times when the wider grid is de-energized, and both customers are electrically isolated from the larger grid.¹²¹ Microgrid operations should only operate in a manner that is consistent with the safety of the public and the safe operation of IOU facilities in the area. The facilities connected to the microgrid will be subject to the IOU's review and approval to ensure that the microgrid systems perform as required under normal and abnormal grid conditions.¹²² Lastly, non-utility electrical equipment shall adhere to all applicable safety standards, including the National Electrical Code.¹²³

In summary, first, PG&E, SCE, and SDG&E shall submit a Tier 2 advice letter within 30 days upon the issuance of this decision implementing Rule 18 and Rule 19 revisions, pursuant to Section 3.2.3 of this decision, to allow microgrids to serve critical customers on adjacent parcels and to permit a subscription limit of 10 microgrid projects for each service territory. Second, once the fifth microgrid project within a service territory receives authorization from the IOU to operate, the IOU shall file a Tier 2 advice letter making a recommendation of: (1) whether to continue the Rule 18 or 19 tariff rule amendment for future projects; or (2) whether to make any modifications to the existing amendment.

¹²¹ PG&E Opening Comments at 6-10.

¹²² SCE Opening Comments at 9-10.

¹²³ PG&E Opening Comments at 7.

3.3. Direct the IOUs to Form a New Microgrid Tariff.

Consistent with the Scoping Memo and Ruling,¹²⁴ the Administrative Law Judge's Ruling¹²⁵ asked parties an array of questions regarding the Staff Proposal's recommendations to direct the IOUs to develop a new microgrid tariff. We summarize the Staff Proposal's recommendations and the parties' positions to it, below.

3.3.1. Staff Proposal Summary

The Staff Proposal identifies three main barriers to microgrid commercialization.¹²⁶ They are: (1) rate complexity (*i.e.*, regulatory barrier); (2) high initial start-up costs (*i.e.*, financial barrier); and (3) high operating costs (*i.e.*, financial barrier). The Staff Proposal recommends directing the IOUs to develop a microgrid tariff to facilitate the commercialization of customer-sited, customer facing microgrids.¹²⁷ In support of this Proposal's recommendation, the Staff Proposal offers several options for implementation.

Option 1 directs, within 30 days upon issuance of a Commission decision, the IOUs to file an advice letter seeking authority to create a separate rate schedule for customer-sited, customer-facing microgrids composed of

¹²⁴ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

¹²⁵ Administrative Law Judge's Ruling, July 23, 2020.

¹²⁶ The Staff Concept paper provides an overview of the perceived financial barrier to microgrids involving nonbypassable charges, departing load charges and standby charges. It describes these charges, provides historical perspective, and explains policy objectives and regulatory concepts driving their existence. Staff's analysis acknowledges the differing stakeholder perspectives regarding departing load charges and standby charges. It includes analysis of the applicability of standby charges to microgrid operations, recognizes that by virtue of microgrid features and capabilities, that changes to address financial barriers may be warranted. Notably, the Staff Concept Paper acknowledges that policy surrounding these charges for applicability to microgrids should be examined to consider their reduction, restructuring or elimination.

¹²⁷ Administrative Law Judge's Ruling, July 23, 2020, Attachment 1 – Staff Proposal at page 8-9.

technologies that individually and collectively meet the requirements of Rule 21.¹²⁸ Option 1 would form the tariff to consolidate component technologies into a single rate schedule.¹²⁹ The rate schedule under Option 1 is subject to CPUC re-evaluation after five years and the IOUs would be mandated to file an annual report to track the quantity of microgrids that take service under this new rate schedule.¹³⁰

Option 2 contains all elements of Option 1, but specifies that customers are not allowed to elect service under NEM or to export power.¹³¹

Option 3, again, contains all elements of Option 1 except that enrollment in this rate schedule is limited to a maximum of 1,200 megawatts statewide, allocated to each large electrical corporation according to 2019 load share.¹³²

Option 4 contains all elements of Option 1, except that no additional exemptions for cost responsibility surcharges would be granted.¹³³

Finally, Option 5 would direct a microgrids working group to study and recommend prudent cost responsibility surcharges in conjunction with a new microgrids rate schedule for customer-sited, customer facing microgrids.¹³⁴ Additionally, under Option 5, a rate schedule would include a two-year phase-in or transition period beginning January 1, 2021 during which the customer-behind the meter microgrids remains interconnected with the IOU and pay the

¹²⁸ *Id.* at 13.

¹²⁹ *Id.*

¹³⁰ *Id.* at 14.

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

extant charges until the workgroup evaluated and redefined applicable non-bypassable charges, standby charges, and departing load charges that would be changed to ensure bundled customer indifference and to ensure that departing load pays their fair share.¹³⁵

The Staff Proposal recommends the adoption of Proposal 3, Option 4.

3.3.2. Parties' Positions

The parties were generally split among the options.¹³⁶ We discuss the parties' positions below.

350 Bay Area supports Option 1 and asserts that incremental load should not be subject to standby reservation charges and long duration or indefinite islanding should not be subject to departing load charges.¹³⁷ BAC¹³⁸ supports Option 1. CalSSA supports Option 1, but argues that the tariff should not exempt critical facilities from non-bypassable charges.¹³⁹ CalSSA also argues that if the Commission were to adopt the proposed re-evaluation process for the tariff after five years, then the tariff must include a legacy provision that allows participants to remain on the tariff either indefinitely or for an extended time frame.¹⁴⁰

¹³⁵ *Id.*

¹³⁶ The following parties took no position any of the options under Proposal 1: (1) Anterix; (2) CEERT; (3) CEJA; (4) CSE (does not explicitly endorse any of Proposal 3's options but does recommend that coordination and streamlining are priority to the valuation proposition of microgrids. *CSE Opening Comments at 3.*); (4) Joint CCAs (do not explicit support any of the Options but offer an array of recommended principles for our consideration, *Joint CCA Opening Comments at 12*); (5) CUE; (6) Emera Technologies; (7) Emerge Alliance; (8) Google; (9) Newworld Energy; (10) Placer; (11) Peterson; (12) RCRC; (13) Schneider Electric; (14) SoCalGas; and (15) VGIC.

¹³⁷ 350 Bay Area Opening Comments at 8.

¹³⁸ BAC Opening Comments at 10-11.

¹³⁹ CalSSA Opening Comments at 7.

¹⁴⁰ *Id.*

CCDC claims Option 1 comes closest to providing a pathway toward the widespread deployment of microgrids but opposes Option 4.¹⁴¹ Clean Coalition supports Option 1.¹⁴² Concentric Power supports Option 1 but argues that the Commission should not limit the size of microgrids to 10 megawatts or under.¹⁴³

LA County¹⁴⁴ supports Option 1, but: (a) opposes any exemptions to unfairly shift costs to non-benefiting ratepayers, (b) suggests providing a payment to microgrid customers covering the avoided costs to ratepayers from the implementation of reliability projects; and (c) suggests a methodology to quantify the avoided cost value to all ratepayers within an IOU's territory from local microgrid projects developed to increase system reliability.¹⁴⁵

GHC supports Option 1, asserting it allows for the export of power, maintains net energy metering eligibility, and does not impose a megawatt cap on enrollment.¹⁴⁶ GPI supports Option 1 for non-community microgrids however, it urges the Commission to consider adopting a microgrid market-adjusting tariff for community microgrids.¹⁴⁷

MRC supports Option 1 and urges the Commission to develop a pro forma tariff that provides neutral treatment of microgrids across the state and then, consider variances from the pro forma tariff.¹⁴⁸ SEIA supports Option 1, but

¹⁴¹ CCDC Opening Comments at 5-6.

¹⁴² Clean Coalition Opening Comments at 13.

¹⁴³ Concentric Power Opening Comments at 7.

¹⁴⁴ LA County Opening Comments at 8-10.

¹⁴⁵ *Id.*

¹⁴⁶ GHC Opening Comments at 7-9.

¹⁴⁷ GPI Opening Comments at 4-6.

¹⁴⁸ MRC Opening Comments at 17-19.

asserts that the microgrid rate schedule should be open to microgrids under all ownership structures.¹⁴⁹

Sunrun supports Option 1, asserting it allows the lowest burden to initial microgrid development of any of the options contemplated under Proposal 3.¹⁵⁰

Tesla supports Option 1, claiming it provides the greatest level of flexibility and support for customers but has concerns regarding the technology eligibility language.¹⁵¹ VSCC supports Option 1 and offers an array of modifications, including the elimination of departing load charges for all customer-sited microgrids that utilize the new rate schedule.¹⁵² Wild Tree supports Option 1 and strongly opposes Option 4.¹⁵³

CHBC supports Option 2, stating it would help overcome microgrid barriers to market entry.¹⁵⁴ Doosan supports Option 2, arguing that net energy metering eligibility should not be required for the standardized microgrid tariff and there should not be a cap or project size cap placed on the rate schedule.¹⁵⁵

FuelCell Energy supports Option 2, asserting that this option affords the greatest flexibility to develop and commercialize behind the meter microgrids that will not export power to the grid.¹⁵⁶ NFCRC supports Option 2, with an

¹⁴⁹ SEIA Opening Comments at 10.

¹⁵⁰ SunRun at 9.

¹⁵¹ Tesla Opening Comments at 8-10.

¹⁵² VSCC Opening Comments at 11-12.

¹⁵³ Wild Tree Opening Comments at 6.

¹⁵⁴ CHBC Opening Comments at 3.

¹⁵⁵ Doosan Opening comments at 7-8.

¹⁵⁶ FCE Opening Comments at 5-6.

array of amendments regarding net energy metering eligibility, prohibition on cap enrollment, and permissive export of energy under a new tariff.¹⁵⁷

Bloom supports Option 4 so long as long duration or indefinite islanding microgrids are exempted from all cost responsibility surcharges.¹⁵⁸ CESA partially supports Option 4 but suggests that the Commission convene a workshop to create the new microgrid tariff.¹⁵⁹

CAISO¹⁶⁰ and ConnectCA¹⁶¹ support Option 4. CforAT supports Option 4 because it eliminates the risk of cost shifting by declining to institute any exemptions to cost responsibility surcharges.¹⁶²

PG&E supports Option 4, arguing it meets the dual purposes of facilitating commercialization of behind-the-meter microgrids while also protecting the public interest.¹⁶³ Cal Advocates supports Option 4 and Option 5 but does not support microgrid exports receiving net energy metering credits automatically under Option 4.¹⁶⁴ SDG&E supports Option 4 with modification, arguing that the project cap size limit of 10 megawatts poses an unnecessary obstacle for microgrid deployment and should be removed.¹⁶⁵ SCE supports Option 4 if the new tariff could be a master tariff that includes relevant sections of existing

¹⁵⁷ NFCRC Opening Comments at 7-8.

¹⁵⁸ Bloom Opening Comments at 11-12.

¹⁵⁹ CESA Opening Comments at 10.

¹⁶⁰ CAISO Opening Comments at 4.

¹⁶¹ ConnectCA Opening Comments at 7.

¹⁶² CforAT Opening Comments at 2-3.

¹⁶³ PG&E Opening Comments at 12-19.

¹⁶⁴ Cal Advocates Opening Comments at 10-12.

¹⁶⁵ SDG&E Opening Comments at 11-14.

tariffs that would apply to the development of microgrids and certain sections of the tariff specifying interconnection cost responsibilities.¹⁶⁶

Sierra Club supports Option 4 but opposes introduction of any fossil-fuel generation eligibility to net energy metering under a microgrid component contract.¹⁶⁷ SBUA supports Options 4 and 5 with modification,¹⁶⁸ arguing that a working group should be charged to evaluate and refine applicable standby charges and departing load charges to ensure bundled customer indifference, avoiding cost shifting while not burdening economic microgrid options.

TURN supports Option 4, and advocates for no additional exemptions from departing load or non-bypassable charges.¹⁶⁹ UCAN supports Option 4, in conjunction with Option 5, asserting that rate simplification and rate certainty benefits microgrid development.¹⁷⁰

Long Beach supports Option 5, contending that a working group might be best positioned to develop a microgrid rate schedule.¹⁷¹ LGSEC supports Option 5 because it argues that this option supports the creation of a microgrid tariff that is flexible, can accommodate multiple customers, provides financial benefits to microgrid customers, and avoids unfair cost shifting.¹⁷² Finally, AMRC¹⁷³ opposes all the options contemplated under Proposal 3.

¹⁶⁶ SCE Opening Comments at 14.

¹⁶⁷ Sierra Club Opening Comments at 8-9.

¹⁶⁸ SBUA Opening Comments at 6.

¹⁶⁹ TURN Opening Comments at 3-5.

¹⁷⁰ UCAN Opening Comments at 3-4.

¹⁷¹ Long Beach Opening Comments at 10-11.

¹⁷² LGSEC Opening Comments at 10.

¹⁷³ AMRC Opening Comments at 12

3.3.3. PG&E, SCE, and SDG&E Shall Form a New Microgrid Tariff.

Section 8371(b) requires the Commission to, without shifting costs between ratepayers, develop methods to reduce barriers for microgrid deployment. Section 8371(d) also requires the Commission to, without shifting costs between ratepayers, develop separate large electrical corporation rates and tariffs, as necessary, to support microgrids, while ensuring that system, public, and worker safety are given the highest priority.

Section 8371(d) further states that the separate rates and tariffs shall not compensate a customer for the use of diesel backup or natural gas generation, except as either of those sources is used pursuant to Section 41514.1 of the Health and Safety Code, or except for natural gas generation that is a distributed energy resource.

In short, components of microgrid commercialization are determined by statute, and must include: (1) rates, tariffs, and rules, as necessary; that (2) remove barriers for deploying microgrids across the large investor-owned utility service territories; without (3) shifting costs onto non-benefiting customers. When viewed with additional statutory granularity, microgrid commercialization must reflect just and reasonable rates alongside safe and reliable service.

After careful consideration of the Staff Proposal's recommendations and the parties' responses to it, we adopt Proposal 3, Option 4 and Option 5 with modification to form the new microgrid tariff. In adopting this approach, we believe we can achieve SB 1339's broader goals to: (a) establish separate microgrid rates, tariffs, and rules; (b) eliminate the risk of cost shifting by not instituting exemptions for cost responsibility surcharges; and (c) promote the

best combination of addressing regulatory barriers, such as complex rate schedules, while avoiding the risk of inappropriate and unfair cost shifting.

In totality, this microgrid tariff preserves the Commission's multiprong responsibilities to keep rates affordable for customers, while advancing the availability and scale of microgrids, and offering resiliency benefits to communities that are otherwise overburdened by the effects of climate change and PSPS events.

Therefore, within 90 days upon the issuance of this decision, PG&E, SCE, and SDG&E shall each file a Tier 3 advice letter, pursuant to Section 3.3.3 of this decision, that:

- Creates a new microgrid tariff within each of the IOU's electric tariff books applicable to systems that: (1) meet the definition of microgrid contained in SB 1339; (2) involves a single customer establishing a microgrid at a single account; (3) consists of resources that are interconnected under the terms of Electric Rule 21; and (4) consist of resources that are individually eligible for a net energy metering successor schedule that reflects the orders in D.16-01-044;
- Without changing or redefining terms, incorporates applicable existing tariffs into the new microgrid tariff by reference, including tariffs that encompass the utility's NEM Multiple Tariffs program;
- Incorporates the new microgrid tariff into the resiliency project engagement guide required by D.20-06-017, Ordering Paragraph 9; and
- Incorporates the new microgrid tariff into all other relevant materials, including any websites or portals, where other related rate schedules are presented.

PG&E, SCE, and SDG&E are directed to coordinate with each other prior to submitting this Tier 3 advice letter to ensure their tariffs complement and are streamlined with one another, to the extent practicable.

Before we discuss our reasoning for modifying Proposal 3, Option 4 and 5 – which constitutes the new microgrid tariff – we again, remind parties that Section 8371(d) prohibits us from shifting microgrid costs to customers not directly served by microgrids. TURN highlights this mandate, arguing that if the Legislature intended to apply the cost-shifting prohibitions selectively, the Legislature would have ordered that.¹⁷⁴

By contrast, some parties¹⁷⁵ ask us to overlook our constitutional mandates, our various – and often times competing – statutory requirements, and continuity of service policies for tariffs, rates, and rules to serve a narrow set of specific interests. It is true, as SDG&E puts it,¹⁷⁶ that some parties think there is another “gold rush”¹⁷⁷ underway in California, particularly in this docket. This is indeed, evidenced by the number of intervening parties hoping to profit from microgrids by advocating for arrangements that could excessively burden the average California electric customer. We reject those arguments because they are expressly prohibited by statute. We have no basis for burdening a single ratepayer, let alone the broader ratebase. The majority of parties to this docket – who cross the spectrum – agree that any rules adopted here must be consistent

¹⁷⁴ TURN Opening Comments at 6.

¹⁷⁵ MRC, The Climate Center, Clean Coalition, 350 Bay Area, GPI, VSCC, and CEDMC, *Motion for a Comprehensive Microgrid Tariff Development Process* filed October 1, 2020.

¹⁷⁶ SDG&E Reply Comments at 7.

¹⁷⁷ *Id.*

with SB 1339. There can be no cost shifts between ratepayers. Our record predicates no other result.

Yet, among other things, these parties¹⁷⁸ ask us to adopt a microgrid tariff that effectively results in cost shifting to non-participating microgrid customers. Some costs they seek to avoid include, but are not limited to: (1) distribution system costs; (2) wildfire mitigation expenditures; (3) catastrophic wildfire costs; (4) transmission revenue requirements; (5) net above-market generation costs that are included in the Cost Allocation Mechanism and Power Cost Indifference Adjustment; and (6) public purpose program costs collected through non-bypassable charges. A non-participating customer is the average ratepayer, small business, or medium-large commercial customer that is not receiving any microgrid service or benefit. Suggesting that a non-benefiting customer pay microgrid service costs is unreasonable and disingenuous, as it is prohibited by Section 8371(b) and (d). These parties are trying to mix-and-match claims to bypass costs that are not avoidable given the plain language of Section 8371. This is not lost on the Commission.

Alternatively, if we adopted such a position, we would permit microgrid customers to shift their share of costs on to non-participating ratepayers, which is again, clearly prohibited by Section 8371(b) and (d). In that way, we would allow microgrid customers to avoid paying their fair share of collective cost obligations to a grid that is heavily funded by the larger body of ratepayers.

It is unreasonable for non-participating ratepayers to pay a larger share of such costs, including higher distribution and transmission rates. While many parties asserted that there is an incremental value to non-participating

¹⁷⁸ *Id.*

customers to offset any portion of these costs, the record shows insufficient evidence to support that assertion. For example, Bloom claims that “microgrids bring value not only to the installing customer but also to the grid writ large.”¹⁷⁹ In support of its claim, Bloom incorrectly cites the Staff Concept Paper, which states only that it is *possible* that a microgrid could provide additional value to non-participants. Similarly, in its reply comments, Clean Coalition states that “the value of the benefits microgrids provide exceeds the value of any cost responsibility and standby charge exemptions”¹⁸⁰ but fails to substantiate that claim in any way. It is possible that parties could offer evidence during Track 3 that could justify changes to surcharges or compensation under the new microgrid tariff. Here, however, that burden has not been met.

Finally, we take a moment to discuss what a tariff is and what a tariff does. A tariff outlines how an energy provider (electric or natural gas) interacts with and charges a customer for their energy-related products and services. Tariffs are publicly available to ensure non-discriminatory treatment of customers. Tariffs refer to rate schedules, rules, contracts and deviations, and forms, all of which must be approved by the Commission. The new microgrid tariff formed under this decision is a rate schedule that explicitly makes terms of existing tariffs available to combinations of resources that meet California’s statutory definition of a microgrid. The new tariff does not change any compensation that would otherwise be available to individual resources. Instead, this new tariff creates regulatory identification in the utilities’ tariff books for a new, statutorily defined entity (a microgrid) pursuant to SB 1339. Since all salient policy matters

¹⁷⁹ Bloom Opening Comments at 13.

¹⁸⁰ Clean Coalition Opening Comments at 6.

related to the development of this new tariff have been litigated by parties in this proceeding, and are addressed in this decision, approval of the new tariff is a ministerial function appropriately handled through the advice letter process. This microgrid tariff, which we discuss in more detail below, fulfills the obligations and limitations of Section 8371.

Now, we turn to discussing our reasoning for modifying Proposal 3, Option 4, and Option 5. We begin with our modifications to Option 4. Then, we turn to our discussion modifying Option 5.

First, various parties oppose the project cap size for all projects under Proposal 3, Option 4. For example, SDG&E,¹⁸¹ Sierra Club,¹⁸² Clean Coalition,¹⁸³ and Concentric Power¹⁸⁴ argue that 10 megawatts may be too limiting to encourage projects designed for multiple parcels, community scale microgrids, and large load customers. Indeed, a 10 megawatts project cap size could impede, rather than promote, the commercialization of microgrids because the amount or type of customers served by a particular microgrid project would be capped. This would undermine the statutory objectives of Section 8371 for facilitating widespread commercialization of microgrids. Accordingly, we eliminate the project size cap requirement for all projects. We remind parties that while the 10-megawatt overall limit is removed, the applicable project size limits from the applicable NEM tariffs remain.

Next, we turn to restricting eligibility to NEM resources under Proposal 3, Option 4. We agree with TURN that there is no basis for providing

¹⁸¹ SDG&E Opening Comments at 12.

¹⁸² Sierra Club Opening Comments at 13.

¹⁸³ Clean Coalition Opening Comments at 17

¹⁸⁴ Concentric Power Opening Comments at 10.

nonrenewable-fueled generation with export credits that were designed exclusively for renewable-fueled NEM-eligible generation.¹⁸⁵ To crystalize the distinction between renewable and non-renewable resources, only NEM-eligible resources are eligible under this microgrid tariff. This means that while the microgrid project may consist of multiple components of different technologies and fuels, only the portions of the project using NEM-eligible technology are eligible to take service under the microgrids tariff.¹⁸⁶ Storage resources that are currently allowed under the applicable NEM tariffs would similarly be eligible for the new microgrids tariff under the same terms and conditions. Limiting applicability to NEM-eligible resources, while constraining the use of non-renewable generation for backup power, may facilitate rapid implementation of a simple microgrid tariff as a foundational step, and is consistent with the state's goal of eliminating greenhouse gas emissions. Projects that seek to include a fossil fuel-based generation component may utilize the NEM MT tariff as a companion to the microgrids tariff.

Additionally, we direct the CPUC Resiliency and Microgrid Working Group (discussed in detail in Section 3.6.3 below) to consider: (1) whether to provide compensation to energy exports generated by nonrenewable resources in a microgrid that takes service under the new microgrids tariff; (2) what a prudent level of compensation to nonrenewable exports should be, if any; (3) how any interrelated impacts to the wholesale distribution access tariff should be resolved; and (4) how to ensure that the use of nonrenewable resources in

¹⁸⁵ TURN Opening Comments at 4.

¹⁸⁶ See D.16-01-044. A microgrid project's ability to receive compensation for exports is restricted to only those NEM-eligible resources and the associated applicable NEM rate schedule.

microgrids, if any, is consistent with other state law and policies. Within the CPUC Resiliency and Microgrid Working group, parties will have another venue to pursue prudent and equitable cost allocation, guided by the legislative prerogative to prevent cost shifting and while preserving bundled customer indifference for new market developments.

Now, we turn to the timely and efficient implementation of the new, dedicated microgrid tariff. In the interests of time, economies of scale, and practicality, the IOUs shall fashion the new microgrid tariff by incorporating by reference the existing tariffs that are applicable to the individual resources that comprise the eligible customer-facing microgrids. This new microgrid tariff will create a regulatory identity for microgrids that will serve as a foundation for any future microgrid policy development that the Commission finds to be in the public interest. Since the new tariff does not change the compensation available to microgrid component technologies but instead creates a simplified tariff, this approach balances our need to expeditiously develop a microgrid tariff while meeting our broader constitutional and statutory mandates to ensure safety, just and reasonable rates, and the promotion of a diverse energy portfolio that supports customer choice.

We agree with PG&E¹⁸⁷ that this approach reduces unintentional duplication of tariff provisions and negates the need to revise the IOUs billing systems, which is expensive and time consuming.¹⁸⁸ In reality, time will provide valuable lessons on whether the tariff needs any changes or modifications to advance the deployment of microgrids. Therefore, within five years of adopting

¹⁸⁷ PG&E Opening Comments 13.

¹⁸⁸ *Id.* at 13-14.

this microgrid tariff, the Commission and interested stakeholders shall evaluate each of the IOUs' microgrid tariffs to measure their respective effectiveness. This evaluation will consider whether the new microgrid tariff is facilitating the commercialization of microgrids successfully. While under evaluation, the new microgrid tariff will remain in effect until the Commission makes any changes or modifications based on the review.

Now, we address some ambiguities parties perceived in Option 4. First, this decision does not change any exemptions previously or subsequently granted by prior Commission decision. Bloom¹⁸⁹ states that D.08-09-012 holds customer generation departing load is not responsible for the new generation related to non-bypassable charges because the IOUs are not procuring generation for the load represented by customer generation departing load customers. We agree with Bloom's interpretation of this part of D.08-09-012, but only to the extent that such load departures are currently included in the load forecasts that predicate procurement decision making. We do not intend for Option 4 to change this.

Second, we are not interpreting the definitions of "cost responsibility surcharge," "non-bypassable charges," and "departing load" any differently from prior Commission decisions. The IOUs and stakeholders are directed to interpret these terms as they have been defined and applied by prior Commission decisions.

Third, tariffs can be closed at any time upon Commission approval of an application by the IOU or on the motion of Energy Division, including the tariff

¹⁸⁹ Bloom Opening Comments at 20.

established by this decision. Parties should remember this because we intend to avoid the legacy issues that persisted with NEM.

Now, we shift focus to our Proposal 3, Option 5 modifications. First, we decline to adopt the two-year phase-in period recommended by the Staff Proposal. A phase-in period presents unnecessary delays to the adoption of an initial microgrid tariff. We do not see the value or need for pre-determining a phase-in period for tariff changes that have not yet been developed.

Second, when implementing Option 5, we direct the CPUC Resiliency and Microgrid Working Group to examine the costs and value propositions of microgrids as a basis for preventing cost shifting pursuant to Section 8371(b) and (d). Representative charges that should be considered by the CPUC Resiliency and Microgrids Working Group include, but are not limited to: (a) cost responsibility surcharges; (b) non-bypassable charges; (c) standby charges; (d) departing load charges; (e) stranded costs; or (f) other relevant but unspecified costs that may involve disparate impacts. The CPUC Resiliency and Microgrid Working Group shall be guided by Section 8371(d) to ensure bundled customers remain indifferent.

Third, when implementing Option 5, we direct the CPUC Resiliency and Microgrids Working Group to consider: (1) whether to provide compensation to energy exports generated by nonrenewable resources in a microgrid taking service under the new microgrid tariff; (2) what prudent level of compensation to nonrenewable exports should be, if any; (3) how any inter-related impacts to wholesale distribution access tariff should be resolved; and (4) how to ensure that the use of nonrenewable resources in microgrids, if any, is consistent with other state law and policies. These topics may predicate future action in this proceeding.

Fourth, microgrid commercialization involves many cross-over policy touchpoints. This includes customer generation policies like the Self Generation Incentive Program, the NEM interconnection policies under Rule 21, the wholesale distribution access tariff, the utilities' General Rate Case grid modernization plans, the development of tariffs under the Commission's integrated distributed energy resources proceeding, resource adequacy proceeding, and more broadly, across the Commission's decarbonization proceedings. Therefore, we direct the CPUC Resiliency and Microgrids Working Group to analyze these topics and present recommendations that reflect the need to avoid duplication of effort and to establish a consistent policy framework regarding the microgrid cross-over issues during Track 3.

Finally, we decline to define the term "community microgrid" for purposes of Proposal 3, Option 5. While many parties argue that we need to define the term, we find that Track 3 is the proper venue for addressing this issue. Instead, we redirect parties who need resolution on this term to the Energy Division Track 3 Concept Paper.¹⁹⁰ The Concept Paper provides a rigorous, analytical foundation to start the conversation regarding this term and definition. We intend to establish a clear understanding about the different types of microgrids that various parties would like to see benefit from Commission policymaking in Track 3.

In summary, within 90 days upon the issuance of this decision, PG&E, SCE, and SDG&E shall each file a Tier 3 advice letter, pursuant to Section 3.3.3 of this decision.

¹⁹⁰ Administrative Law Judge's Ruling, July 23, 2020, Staff Concept Paper.

PG&E, SCE, and SDG&E are directed to coordinate with each other prior to submitting this Tier 3 Advice letter to ensure their tariffs complement and are streamlined with one another, to the extent practicable.

3.4. Direct the IOUs to Develop a Microgrid Incentive Program.

Consistent with the Scoping Memo and Ruling,¹⁹¹ the Administrative Law Judge's Ruling¹⁹² asked parties an array of questions regarding the Staff Proposal's recommendations to direct the IOUs to develop a microgrid incentive program. We summarize the Staff Proposal's recommendation and the parties' positions to it, below.

3.4.1. Staff Proposal Summary

To mitigate project costs, the Staff Proposal recommends directing the IOUs to develop an incentive program to fund clean community microgrids that support the critical needs of vulnerable populations most likely to be impacted by grid outages.¹⁹³ This recommendation includes, but is not limited to:

(1) developing a program delivery plan which will describe program guidelines, project eligibility and scoring criteria, and program implementation process; (2) establishing program eligibility criteria to ensure that incentives are dispersed accordingly with the emphasis listed in the proposal; and (3) reviewing project proposals and distributing incentives to eligible projects.¹⁹⁴

Staff recommends the adoption of the following: Proposal 4(A), Option 2; Proposal 4(B), Option 1; Proposal 4(C), Option 2; Proposal 4(D), Option 1; and

¹⁹¹ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

¹⁹² Administrative Law Judge's Ruling, July 23, 2020.

¹⁹³ Administrative Law Judge's Ruling, July 23, 2020, Attachment 1 – Staff Proposal at 18-20.

¹⁹⁴ *Id.*

Proposal 4(E), Option 1. The Staff Proposal recommends requiring the IOUs submit a Tier 1 advice letter to implement this program.

3.4.2. Parties' Positions

The parties' positions varied greatly in response to Proposal 4. Some parties generally opposed Proposal 4 while others supported or supported with modification only.¹⁹⁵ We discuss the parties' positions below.

CESA argues Proposal 4 does not go far enough to encourage commercialization of microgrids.¹⁹⁶ CEJA generally supports Proposal 4 but offers several modifications including expanding the definition of critical facilities.¹⁹⁷ CforAT generally supports the program but argues that the Commission should clearly establish eligibility criteria to advance equity.¹⁹⁸

CSE generally supports Proposal 4 but asserts that the Commission can go farther in promoting equity goals, by ensuring ratepayer funded microgrids focus solely on underfunded communities.¹⁹⁹ ConnectCA generally supports Proposal 4. Enchanted Rock argues that any program contemplated under Proposal 4 should not interfere with the application of resiliency microgrid solutions already available in the commercial market.²⁰⁰

¹⁹⁵ The following parties took no position any of the options under Proposal 4: (1) 350 Bay Area; (2) Anterix; (3) Barbara Barkovich; (4) CHBC; (5) CAISO; (6) Long Beach; (7) Concentric Power; (8) Los Angeles County; (9) CUE; (10) VGIC; (11) Emera Technologies; (12) Emerge Alliance; (13) Emera Technologies; (14) Newworld; (15) SBUA; and (16) SEIA.

¹⁹⁶ CESA Opening Comments at 15.

¹⁹⁷ CEJA Opening Comments at 6-7.

¹⁹⁸ CforAT Reply Comments at 3.

¹⁹⁹ CSE Opening Comments at 5.

²⁰⁰ Enchanted Rock Opening Comments at 5.

PG&E generally supports Proposal 4 but encourages further discussion on the complex issues prior to finalization.²⁰¹ Similarly, SCE is generally supportive of Proposal 4 but encourages the Commission to host one or more workshops to further define and refine program elements.²⁰² Cal Advocates generally supports Proposal 4 but disagrees with the first-come, first-served approach and offers alternative recommendations.²⁰³

Sierra Club supports the establishment of a microgrid program that is specifically tailored to serving vulnerable communities, low-income communities, disadvantaged communities, and/or populations with high quantities of ratepayers with access and functional needs or medical baseline customers.²⁰⁴ SoCalGas recommends eliminating any community criteria and microgrid type restrictions to allow fast implementation for vulnerable communities.²⁰⁵ Sunrun generally supports Proposal 4 and recommends that the IOUs should develop a microgrid program that utilizes a competitive process to select a program administrator.²⁰⁶ VSCC supports the intent behind Proposal 4 but disagrees with its approach and use of ratepayer funds.²⁰⁷

²⁰¹ PG&E Opening Comments at 20-21.

²⁰² SCE Opening Comments at 2; see also 22-24.

²⁰³ Cal Advocates Opening Comments at 16-18.

²⁰⁴ Sierra Club Opening Comments at 13-14.

²⁰⁵ SoCalGas Opening Comments at 3-4.

²⁰⁶ SunRun Opening Comments at 14.

²⁰⁷ VSCC Opening Comments at 12-13.

Others, like Clean Coalition,²⁰⁸ UCAN,²⁰⁹ and RCRC²¹⁰, generally support Proposal 4, but advocate that the funding source should not be from the same region because that would burden vulnerable populations further.

Other parties were less supportive of Proposal 4. For example, Tesla,²¹¹ AMRC,²¹² BAC,²¹³ CCDC,²¹⁴ FCE,²¹⁵ GHC,²¹⁶ GPI,²¹⁷ Grid Alternatives,²¹⁸ Joint CCAs,²¹⁹ LGSEC,²²⁰ MRC,²²¹ NFCRC,²²² Schneider Electric,²²³ and Wild Tree Foundation²²⁴ either opposed Proposal 4 or offered mixed support, and would only support Proposal 4 with significant modification. SDG&E requests an exemption from Proposal 4, asserting that it has already developed microgrids in its service territory and wants to avoid duplicative efforts.²²⁵

²⁰⁸ Clean Coalition Opening Comments at 20-21.

²⁰⁹ UCAN Opening Comments at 3-4.

²¹⁰ RCRC Opening Comments at 4.

²¹¹ Tesla Opening Comments at 15-16.

²¹² AMRC Opening Comments at 13.

²¹³ BAC Opening Comments at 11.

²¹⁴ CCDC Opening Comments at 7.

²¹⁵ FCE Opening Comments at 10.

²¹⁶ GHC Opening Comments at 10.

²¹⁷ GPI Opening Comments at 11.

²¹⁸ Grid Alternatives Opening Comments 12-13.

²¹⁹ Joint CCAs Opening Comments at 13-15.

²²⁰ LGSEC Opening Comments at 15-16.

²²¹ MRC Opening Comments at 6.

²²² NFCRC Opening Comments at 10.

²²³ Schneider Electric Opening Comments at 9.

²²⁴ Wild Tree Opening Comments at 10.

²²⁵ SDG&E at Opening Comments at 21-22.

TURN supports Proposal 4 so long as the program involves testing new technologies or regulatory approaches to inform future action.²²⁶ Doosan²²⁷ opposes Proposal 4 arguing that a pilot program is not rapid commercialization of microgrids. Similarly, CEERT²²⁸ and Google argue that Proposal 4 duplicates existing pilot programs.²²⁹

3.4.3. PG&E, SCE, and SDG&E Shall Develop a Microgrid Incentive Program.

Section 8371(b) requires the Commission, without shifting costs between ratepayers, to develop methods to reduce barriers for microgrid deployment. Section 8371(d) also requires the Commission, without shifting costs between ratepayers, to develop separate large electrical corporation rates and tariffs, as necessary, to support microgrids, while ensuring that system, public, and worker safety are given the highest priority.

Additionally, Section 451 provides that rates, terms and conditions of utility service must be safe, just and reasonable.²³⁰ Section 454.51, subdivisions(a) and (b) require the Commission to assure the public that California's large investor owned public utilities develop a portfolio of energy resources that assure the reliability of the state's electric supply.²³¹

The Commission also has a duty to mitigate the effects of a natural or man-made emergency that results from the degradation or disruption of utility

²²⁶ TURN Opening Comments at 6.

²²⁷ Doosan Opening Comments at 10-11.

²²⁸ CEERT Reply Comments at 7.

²²⁹ Google Opening Comments at 9.

²³⁰ Sections 451, 454 and 728.

²³¹ Section 454.51, subds. (a) and (b).

service and service quality in times of disaster.²³² Indeed, natural and manmade disasters are becoming more frequent and their effects are more widespread. Preserving the safety and the security of Californians in the wake of natural and manmade disasters is critical. Microgrids are becoming a resiliency strategy to mitigate and recover from such social and physical insecurity.

To reduce barriers for microgrid deployment while not shifting costs between ratepayers, the Staff Proposal recommends directing PG&E, SCE, and SDG&E to develop a microgrid incentive program to fund clean energy microgrids to support the critical needs of vulnerable populations impacted by a grid outage. Among other recommendations, Proposal 4 suggests that low-income residents,²³³ people with access and functional needs, as defined by D.19-05-042, and customers on medical baseline or electricity-dependent Medicare patients be targeted for this incentive program. Staff Proposal 4 suggests the costs and funding for these programs be borne by the counties in which the incentive programs are implemented.

We have a duty to balance our various statutory obligations under Section 451, Section 454.51, and Section 8371. With this balancing, we agree with CforAT that without increased resiliency, the burden of extended power shutoffs will continue to fall most heavily and inequitably upon “a small number of highly impacted counties.”²³⁴ Therefore, we adopt Proposal 4 with modification, which we discuss below.

²³² D.19-07-015 at 9.

²³³ As measured by the California Alternative Rates for Energy and Family Electric Rate Assistance Program participation or eligibility.

²³⁴ CforAT Opening Comments at 4.

We direct PG&E, SCE, and SDG&E to develop a microgrid incentive program pursuant to Section 3.4.3 of this decision. Within 30 days upon the issuance of this decision, PG&E, SCE and SDG&E shall submit a joint, Tier 1 advice letter that includes:

- Description of implementation details and timeline for convening public workshops to solicit a range of positions on the program elements to form a full program implementation plan.

Then, contingent upon the approval of the Tier 1 advice letter, we direct PG&E, SCE, and SDG&E to file a proposed joint implementation plan into the proceeding within 120 days of the approval. The proposed joint implementation plan shall comprehensively discuss the implementation details of this microgrid pilot incentive program. At a minimum, we direct PG&E, SCE, and SDG&E to include the following information in their joint implementation plan:

- Description of the program administrator's reporting requirements and timeline, such as program status reports, project status reports, and quarterly budget status reports;
- Discussion of the approach for allocating program funding amongst the individual IOUs;
- Discussion of the accounting treatment and ratemaking, such as specification that the program may only recover costs once expenditures have been incurred and may not be proactively collected;
- Discussion of the method used to control program administrative expenses, such as implementing a cap on overhead of not more than 10% of the total project cost;
- Development of a program delivery plan handbook as a resource for potential participants;
- Description of approach for program evaluation;

- Description of the public workshops that were convened, including but not limited to the number and type of participants, and their inputs in the discussions; and
- Authorize PG&E to propose changes to its Community Microgrid Enablement Program that may be necessary to integrate that Program more fully with the Microgrid Incentive Program.

Parties will have the opportunity to comment on the joint implementation plan. The Commission will subsequently issue a decision to formally adopt the Microgrid Incentive Program.

In D.20-06-017, we adopted PG&E's Community Microgrid Enablement Program (CMEP) and we permitted PG&E to appropriate one-time matching funds to offset some portion of utility infrastructure upgrade costs associated with implementing an islanding function. In this decision, we take the next step to harmonize this approach from D.20-06-017 with SCE and SDG&E. We direct SCE and SDG&E to ensure their customers have access to a one-time matching funds payment to offset some portion of the utility infrastructure upgrade costs associated with implementing the islanding function of the microgrid. The one-time matching funds payment are in addition to the total program's budget for eligible costs

A clean energy, microgrid incentive program for PG&E, SCE, and SDG&E is likely to offer many benefits. The benefits may include, but are not limited to: (1) increases electricity reliability and resiliency for critical public facilities in communities that are at higher risk of electrical outages; (2) prioritizes serving communities with higher proportions of low-income residents, access and functional needs residents, and electricity dependents; (3) enables communities with lower ability to fund development of backup generation to maintain critical services during grid outages; and (4) provides an opportunity for testing new

technologies or regulatory approaches to inform future action to the benefit of all ratepayers. In adopting the microgrid incentive program, we make some modifications. The modifications are: (1) funding source; (2) project eligibility; and (3) project subscription limit.

We begin our discussion with modifying the funding source for the microgrid incentive program. The Staff Proposal recommends that projects for this incentive program be funded by the ratepayers from the same county the project is located in, and the cost recovery accounting treatment for the program incentives will come directly from the participant county ratepayers. We disagree with this proposed approach because we are persuaded by CforAT and TURN who argue that this is inequitable to an already vulnerable group of customers.

CforAT and TURN oppose localizing microgrid resiliency program costs for public health and welfare purposes on a specific group of vulnerable customers within a particular location of an IOU service territory.²³⁵ CforAT argues that the brunt of hotter summers, more severe wildfires, and de-energization events have hit these vulnerable populations across the state much harder than others.²³⁶ In essence, CforAT advocates that we promote microgrids in vulnerable communities for the sake of resiliency and for purposes of equity.²³⁷ We agree.

Therefore, funding for these microgrid incentive projects will not be strictly borne by a small set of vulnerable communities within an IOU service territory. Rather, these costs shall be allocated to all distribution customers of

²³⁵ CforAT Opening Comments at 4; TURN Opening Comments at 7.

²³⁶ CforAT Opening Comments at 4.

²³⁷ *Id.*

the relevant IOU. This approach satisfies multiple objectives, including:

(1) advancing microgrid technology for climate response resiliency;
(2) advancing system benefits of microgrids equitably to disadvantaged and vulnerable populations, for the purpose of public health, safety, and welfare;
(3) alleviating the potential that existing inequities would worsen for counties hardest hit by climate and de-energization impacts with already vulnerable populations and too few ratepayers; and (4) lessons learned from these incentive programs shall inform future regulatory action to the benefit of all ratepayers. This approach also fulfills our duties to deploy microgrids²³⁸ while ensuring just and reasonable rates, terms, and conditions²³⁹ while ensuring the reliability of the state's electric supply.²⁴⁰

Next, we turn to our modifications regarding project eligibility. The Staff Proposal recommends that a project will receive funding on a first-come, first-served basis. We decline to adopt a first-come, first-served approach. Alternatively, we adopt Cal Advocates' recommendation²⁴¹ for a scoring system that targets the projects contemplated under this microgrid incentive program for resiliency and equity. We agree with Cal Advocates that the use of a scoring prioritization system will ensure that the available incentives are not immediately booked by parties with advance knowledge and the means to navigate the application process. This approach should put all projects on equal footing, so that the best projects meet resiliency and equity objectives.²⁴² All

²³⁸ Section 8371(b).

²³⁹ Section 451.

²⁴⁰ Section 454.51(a)-(b).

²⁴¹ Cal Advocates Opening Comments at 17-18.

²⁴² *Id.*

other requirements listed in the staff proposal are affirmed. The scoring criteria shall be developed through a stakeholder process during the working groups and/or public workshops that PG&E, SCE, and SDGE convenes.

Now, we turn to our modifications regarding the project subscription limit. The Staff Proposal recommends that the program will be paused when the project subscription reaches 15 projects. Since we adopted Cal Advocates approach to approve projects based on scoring, a 15-project subscription limit may not be necessary at this point. We agree with PG&E²⁴³ that a project cap is a topic better left for discussion in future stakeholder workshops. So, for now, we decline to adopt a project subscription limit to ensure PG&E, SCE, and SDG&E solicit a robust response for projects. However, we do require eligible projects to meet a commercial operation deadline, which we discuss in more detail below.

Next, we shift our focus to discuss: (1) project commercial operation criteria; (2) the program budget; (3) single customer project participation; and (4) cost effectiveness criterion. First, the Staff Proposal recommends that we set the project commercial operation deadline for January 31, 2022. Numerous parties objected to this deadline, arguing it was too ambitious. CalSSA²⁴⁴ and Tesla²⁴⁵ recommend extending the timeline by 12 months. We agree. The complexity of the program, the time to develop project proposals that are compliant with program criteria, coupled with the timeline to negotiate with counterparties necessitates the need for more time.²⁴⁶ Therefore, the commercial operation deadline for the individual projects supported by this microgrid

²⁴³ PG&E Opening Comments at 21.

²⁴⁴ CalSSA Opening Comments at 10.

²⁴⁵ Tesla Opening Comments at 19.

²⁴⁶ *Id.*

incentive program shall reach commercial operation within 24 months of the Commission's adoption of a final joint Microgrid Incentive Program implementation plan.

Second, the total program budget shall be set at \$200 million. Under the Staff Proposal, the total program budget was \$225 million with a cost cap per project of \$15 million and a project subscription limit of 15 projects. Since we are not limiting this incentive program to a set number of projects, the budget cap should be modified to \$200 million. A budget of \$200 million strikes a reasonable balance between parties who preferred no funding cap at all, parties who supported the Staff Proposal's \$225 million budget, and other parties, like TURN,²⁴⁷ who supported a lower overall funding cap.

Third, single customer projects are excluded from this incentive program. While several parties argued that single customer projects should be permitted,²⁴⁸ we agree with Cal Advocates²⁴⁹ and Sierra Club²⁵⁰ that these types of projects do not meet the performance criteria of Proposal 4. Parties must bear in mind that this program is intended for projects that are more complex with longer islanding duration for multiple customers as well as being targeted toward addressing the needs of vulnerable communities. Our focus on longer duration, more complex multi-property requirement addresses a policy gap not filled by other programs. Given that complex, multi-property microgrids are currently rare, we anticipate this approach will provide invaluable lessons to

²⁴⁷ TURN Opening Comments at 9.

²⁴⁸ CCDG Opening Comments at pg.7; Doosan Opening Comments at 3; Enchanted Rock Opening Comments at 5; GPI Opening Comments at 11; MRC Opening Comments at 6; NFRC Opening Comments at p. 10; and SE Opening Comments at 9.

²⁴⁹ Cal Advocates Reply Comments at 5.

²⁵⁰ Sierra Club Reply Comments at 3.

inform future regulatory action regarding the benefits of microgrids as a resiliency resource for all ratepayers, future planning, and engagement with partners at the local level. This program is also intended to complement the current and future work related to the testing of policy and ratemaking applications of tariffs.

Fourth, we adopt a cost effectiveness criterion for project selection as several parties suggest.²⁵¹ We depart from the Staff Proposal's recommendation in which cost-effectiveness would be analyzed only after the fact as a part of overall program evaluation. Instead, a project cost-effectiveness criterion will include, but not be limited to, the ability of a project to reduce ratepayer costs by serving as a substitute for replacing traditional infrastructure. We direct the program administrator-workshop groups to discuss the cost effectiveness criterion requirements further, as well as the community criteria requirements.

Finally, we offer the clarifications on the following topics: (1) third-party microgrid development; (2) utility-stakeholder program design collaboration; and (3) project cap versus project budget. First, some parties argue that Section 218 prohibits a third-party from developing a microgrid. We disagree. Section 218 does not prohibit the utilities from entering into contracts with microgrid developers to design and build such projects. We encourage such partnerships between the utilities and microgrid developers.

Second, we clarify that these directives are meant to be a general framework and not a full program implementation plan. We direct the IOUs to collaborate with interested stakeholders via workshops and meetings during the

²⁵¹ BAC Opening Comments at 11; Barkovich Opening Comments at 9; CalSSA Opening Comments at 18; and LA County Opening Comments at 23.

development of the program delivery plan to further refine program design and implementation details.

With this directive, we must place guardrails around IOU-stakeholder program design collaboration to facilitate timely and quality program development. Simply put: the IOU engagement with stakeholders is not an opportunity to relitigate settled issues or disrupt program development. The objective for this engagement is for the IOU to: solicit voluntary suggestions from interested stakeholders regarding their perspectives that must rationally and legitimately relate to and advance the broader public interest, further the objectives of this decision, as well as inform the general implementation details that may, ultimately aid the full program implementation plan. While consensus in these forum would be ideal, consensus is not required. To repeat, this is not a forum to relitigate settled issues, rehash prior positions that were not adopted, or be framed to serve a narrow set of interests that do not ultimately serve the public interest. We direct the IOUs to coordinate with Energy Division when establishing these stakeholder forums. With this focus, such forums between the IOUs and parties may aid the successful development of comprehensive and coherent design implementation.²⁵² We encourage parties to stay active and collaborative for positive, future outcomes.

We also clarify that while projects supported by the Microgrid Incentive Program ideally, should be capable of islanding all critical loads for 96 hours this is an ideal and should come as close as reasonably practicable. Finally, we clarify that \$15 million is a per project cap, but not a per project budget. The cap, as TURN suggests, is not designed to be a “potential windfall for technology

²⁵² PG&E Opening Comments at 20.

vendors.”²⁵³ The original intent of the \$15 million cap per project is to fully fund a microgrid system that a community would otherwise not be able to afford. Additionally, we agree with Cal Advocates that in the stakeholder workshops, the program administrator should review the following concepts for consideration: (1) how projects will justify the requested costs; (2) what type of supporting documentation will be submitted to support the project’s justification; and (3) create an incentive disbursement where a higher microgrid score results in more funding that a project may receive.²⁵⁴

In summary, we direct PG&E, SCE, and SDG&E to develop a microgrid incentive program as contemplated under Proposal 4, with the modifications described above. Within 30 days upon the issuance of this decision, PG&E, SCE and SDG&E shall submit a joint, Tier 1 advice letter that includes:

- Description of implementation details and timeline for convening public workshops to solicit a range of positions on the program elements to form a full program implementation plan.

Then, contingent upon the approval of the Tier 1 advice letter, we direct PG&E, SCE, and SDG&E to file a proposed joint implementation plan into the proceeding within 120 days of the approval. The proposed joint implementation plan shall comprehensively discuss the implementation details of this microgrid incentive program pursuant to Section 3.4.3. of this decision. We direct PG&E, SCE, and SDG&E to include at least, but are not limited to, submitting the following information in this joint implementation plan:

²⁵³ TURN Opening Comments at 10.

²⁵⁴ *Id.*

- Description of the program administrator's reporting requirements and timeline, such as program status reports, project status reports, and quarterly budget status reports;
- Discussion of the approach for allocating program funding amongst the individual IOUs;
- Discussion of the accounting treatment and ratemaking, such as specification that the program may only recover costs once expenditures have been incurred and may not be proactively collected;
- Discussion of the method that shall be used to control program administrative expenses, such as implementing a cap of not more than 10% of the total project cost;
- Development of a program delivery plan handbook as a resource for potential participants;
- Description of approach for program evaluation;
- Description of the public workshops that were convened, including but not limited to the number and type of participants, and their inputs in the discussions.
- Authorize PG&E to propose changes to its Community Microgrid Enablement Program that may be necessary to integrate that Program more fully with the Microgrid Incentive Program.

3.5. Direct the IOUs to Evaluate Low-Cost, Reliable Electrical Isolation Methods.

Consistent with the Scoping Memo and Ruling,²⁵⁵ an Administrative Law Judge's Ruling²⁵⁶ asked parties an array of questions regarding the Staff Proposal's recommendations to direct the IOUs to conduct pilot studies of low-cost, reliable electrical isolation methods. We summarize the Staff Proposal's recommendation and the parties' positions to it, below.

²⁵⁵ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

²⁵⁶ Administrative Law Judge's Ruling, July 23, 2020.

3.5.1. Staff Proposal Summary

The Staff Proposal recommends requiring IOUs to develop a pilot program to evaluate the safety and reliability of utilizing low-cost methods to provide electrical isolation for backup power applications and to identify and propose solutions for any implementation and deployment issues.²⁵⁷ This recommendation includes an array of requirements for program development, products, evaluation criteria, safety and reliability criteria, objectives and goals, technology performance criteria, and program funding.²⁵⁸

Under this proposal, there are two implementation options. First, under Option 1, the IOUs would implement a pilot program focused on approaches using the integral remote disconnect switch, found in most smart meters, to provide low-cost electrical isolation at a single customer premises for behind the meter backup power applications.²⁵⁹ Alternatively, under Option 2, the IOUs would develop a pilot program that includes approaches using the integral remote disconnect switch, again, found in most smart meters, as well as other approaches to provide disconnection of a premises' entire electrical service to provide electrical isolation during wider grid outages.²⁶⁰

The Staff Proposal recommends the adoption of Option 2.

²⁵⁷ Administrative Law Judge's Ruling, July 23, 2020, Attachment 1 – Staff Proposal at 24.

²⁵⁸ *Id.* at 24-25.

²⁵⁹ *Id.*

²⁶⁰ *Id.* at 26.

3.5.2. Parties' Positions

Most parties generally support Proposal 5. Particularly, parties support Option 2. Other parties objected to Proposal 5. We discuss the parties' positions below.²⁶¹

CalSSA supports Option 2 because it may dramatically streamline deployment of distributed energy resources by leveraging utility meter sockets but urges the Commission to adopt a timely process by which third-party technologies can be proposed and potentially incorporated.²⁶² CESA supports Option 2 because it is reasonably tailored to broaden commercialization of microgrids and is also inclusive of Option 1.²⁶³

CAISO asks to be included in any potential pilots because developers want access to the wholesale markets.²⁶⁴ Clean Coalition supports Option 2 asserting that it not only encompasses the use of grid isolation technology for microgrids but also supports how grid technology can be used to create microgrids.²⁶⁵ ConnectCA supports Option 2 because it leverages existing investments in smart meters to provide safe, reliable, utility-controlled islanding and enables backup power systems.²⁶⁶

²⁶¹ The following parties took no position any of the options under Proposal 1: (1) 350 Bay Area; (2) Anterix; (3) Barkovich; (4) Bloom; (5) CCDC; (6) Camptonville Community; (7) CEJA; (8) CHBC; (9) CEERT; (10) CSE; (11) Concentric Power; (12) Long Beach; (13) LA County; (14) CUE; (15) Emera Technologies; (16) Emerge Alliance; (17) Enchanted Rock; (18) Google; (19) GHC; (20) Grid Alternatives; (21) LGSEC; (22) Placer; (23) RCRC; (24) Sierra Club; (25) SoCalGas; and (26) UCAN.

²⁶² CalSSA Opening Comments at 10-11.

²⁶³ CESA Opening Comments at 20-21.

²⁶⁴ CAISO Opening Comments at 5.

²⁶⁵ Clean Coalition Opening Comments at 24-25.

²⁶⁶ ConnectCA Opening Comments at 8.

CforAT supports both Options 1 and 2.²⁶⁷ GPI supports Option 2 because it is more inclusive of different technology options.²⁶⁸ Newworld supports Option 2, while offering several modifications.²⁶⁹

PG&E supports Option 2, stating that exploring the use of smart meters is a key mechanism for isolating loads for microgrids.²⁷⁰ Cal Advocates supports Option 2 but argues the costs and benefits of the pilot are unknown and therefore, recommends the Commission require the IOUs to consult with stakeholders to develop a scope, schedule, and cost estimate for each of their respective pilot programs.²⁷¹

SBUA supports Option 2 unless the interconnection approval will cause significant delay.²⁷² SEIA supports Proposal 5, stating it will encourage research and development of low-cost products to island but also argues that the goals are too narrow to facilitate commercialization of microgrids.²⁷³

SCE supports Option 2 while recommending that projects be cost-effective and technology agnostic.²⁷⁴ SCE highlights that coordination with the other IOUs is essential.²⁷⁵ SDG&E supports Option 2 and recommends that we preserve the Rule 21 requirement for a visible disconnect.²⁷⁶

²⁶⁷ CforAT Opening Comments at 9.

²⁶⁸ GPI Opening Comments at 14.

²⁶⁹ Newworld at 3-5.

²⁷⁰ PG&E Opening Comments at 28-29.

²⁷¹ Cal Advocates Opening Comments at 24-25.

²⁷² SBUA Opening Comments at 8.

²⁷³ SEIA Opening Comments at 12-13.

²⁷⁴ SCE Opening Comments at 35.

²⁷⁵ *Id.*

²⁷⁶ SDG&E Opening Comments at 29.

Sunrun supports Option 2, stating that Option 2 confers the most flexibility and allows for the lowest cost solutions to prevail.²⁷⁷ Tesla supports Option 2, but suggests various modifications.²⁷⁸

TURN supports Option 2 because it is inclusive of Option 1 and unlocks greater functionality and value from existing smart meters in which ratepayers have heavily invested.²⁷⁹ VGIC supports Option 2, stating that Option 2 represents an innovative opportunity to implement near-term vehicle-grid integration.²⁸⁰ VSCC supports Option 2 and proposes two additional technical performance criteria for our consideration.²⁸¹

For their parts, Joint CCAs support Option 1 with modification, arguing there should be a comprehensive study providing guidelines and conclusions for widespread, real-world use of remote shut-off capability of smart meters for microgrid islanding and mitigating impacts of PSPS.²⁸²

While the above parties support Proposal 5 and its various Options, some parties, in the alternative, oppose Proposal 5. Wild Tree Foundation²⁸³ and AMRC oppose Options 1 and 2.²⁸⁴ BAC supports the goal of Proposal 5 but opposes the specific options because they are limited to inverter-based generation.²⁸⁵

²⁷⁷ SunRun Opening Comments at 15.

²⁷⁸ Tesla Opening Comments at 22.

²⁷⁹ TURN Opening Comments at 10-11.

²⁸⁰ VGIC Opening Comments at 2-4.

²⁸¹ VSCC Opening Comments at 16-17.

²⁸² Joint CCAs Opening Comments at 16-17.

²⁸³ Wild Tree Opening Comments at 12.

²⁸⁴ AMRC Opening Comments at 14.

²⁸⁵ BAC Opening Comments at 12.

NFCRC²⁸⁶ and Doosan oppose Option 1 and Option 2, arguing they take resources away from supporting new rates and tariffs.²⁸⁷ FuelCell Energy opposes Options 1 and 2, arguing they do not go far enough to support microgrid commercialization.²⁸⁸ MRC opposes Options 1 and 2, arguing pilots are not needed but rather, the IOUs should be directed to promptly consider low-cost interconnection options in their standard interconnection tariffs.²⁸⁹ Schneider Electric opposes Proposal 5, asserting there is no need for more pilots.²⁹⁰

3.5.3. PG&E, SCE, and SDG&E Shall Develop a Pathway for Diverse Technologies to Support Electrical Isolation of a Premises' Entire Electrical Service During a Grid Outage.

Section 8371(b) requires the Commission, without shifting costs between ratepayers, to develop methods to reduce barriers for microgrid deployment. Additionally, Section 451 provides that rates, terms and conditions of utility service must be safe, just and reasonable.²⁹¹ Section 454.51(a)-(b) requires the Commission to assure the public that public utilities develop a portfolio of energy resources that assure the reliability of the state's electric supply.²⁹²

We adopt Proposal 5, Option 2 with modification. We agree with TURN that Proposal 5, Option 2 unlocks greater functionality and value from existing

²⁸⁶ NFCRC Opening Comments at 12.

²⁸⁷ Doosan Opening Comments at 12.

²⁸⁸ FCE Opening Comments at 12.

²⁸⁹ MRC Opening Comments at 24.

²⁹⁰ Schneider Electric Opening Comments at 9.S

²⁹¹ Sections 451, 454 and 728.

²⁹² Section 454.51, subds. (a) and (b).

smart meters in which ratepayers have already invested billions of dollars.²⁹³ Furthermore, Proposal 5, Option 2 contains a broad set of technology options that further our objectives under Section 451.51(a)-(b) which requires us to develop electrical corporations' portfolio with a diverse set of energy resources for electricity reliability. It also appears likely to lower the costs of installing backup power and energy storage systems which furthers our objectives under Section 451 to ensure safe, reliable service through just and reasonable rates. Finally, and importantly, it develops another program to commercialize microgrids as a broader technology option pursuant to Section 8371.

While we adopt Proposal 5, Option 2, we also make some modifications. We agree with Tesla²⁹⁴ and SBUA²⁹⁵ that Proposal 5, Option 2's pilot program could deter electrical isolation technology innovation by prescribing a one-size-fits-all approach through a pilot program. Therefore, instead of a pilot program, we direct PG&E, SCE, and SDG&E to develop a clear pathway by which diverse technologies can provide disconnection of a premises' entire electrical service to support electrical isolation during a wider grid outage. PG&E, SCE, and SDG&E shall include such technologies that use the integral remote disconnect switch, found in most smart meters, as well as other technologies and approaches that support electrical disconnection during a wider grid outage.

This flexible approach supports innovation as some technologies are unlikely to need full pilot scale evaluation because they will not leverage the smart meter disconnection. Rather, they may be predominantly covered by existing national standards, such as the UL 414 Standard for Meter Sockets and

²⁹³ TURN Opening Comments at 10-11.

²⁹⁴ Tesla Opening Comments at 22.

²⁹⁵ SBUA Reply Comments at 12.

UL 1741 Inverters, Converters, Controllers, and Interconnection System Equipment for Use with Distributed Energy Resources. Aside from the UL 1741 Inverters,²⁹⁶ these other types of technology may not require much evaluation or testing by the IOUs.

Within 30 days upon issuance of this decision, PG&E, SCE, and SDG&E shall file Tier 2 advice letters that suggest definitions for the criteria and evaluation process to assess the different isolation technologies pursuant to section 3.5.3 of this decision. The criteria and evaluation to assess the different isolation technologies should be aimed at evaluating and approving for use legitimate, utility-scale technologies capable of addressing California's complexity and diversity. This includes, but is not limited to, the following:

- Process for submittal of isolation technology by a third party to the IOU;
- Required timeframe for the IOU to respond to the third party with a specific evaluation plan for the submitted technology;
- Required timeframe for completion of an initial evaluation by the IOU;
- Process for engaging with and providing IOU feedback to the submitter of the technology,
- Expectations for engagement by and response to IOU feedback from submitter of the technology;
- Process for identifying which, if any, standards or safety requirements are applicable and must be certified or tested by a Nationally Recognized Testing Laboratory (e.g., Intertek, UL);
- Identification of which evaluation steps can be completed prior to certification or testing by a Nationally Recognized

²⁹⁶ UL 1471 inverters, because of their novelty, may require both lab and field evaluation by an IOU to ensure safety and reliability.

Testing Laboratory and which must be completed after certification or testing;

- Discussion of circumstances when lab or field testing by IOU will be required in addition to certification by a Nationally Recognized Testing Laboratory to applicable standards (e.g., UL 414, UL 1741);
- Justification by IOU for repeating any testing (e.g., high-voltage, environmental performance testing) already completed as part of certification to a national standard by a Nationally Recognized Testing Laboratory ;
- Identification of an evaluation approach for examining the use of advanced metering infrastructure, and technologies that leverage it, to enable electrical isolation as a viable resilience strategy, as identified on page 4 of the July 3, 2020, R.19-09-009 scoping ruling;
- Discussion of circumstances when customer-supplied technology would be allowed and justification by IOU for any circumstances requiring IOU-supplied technology;
- Discussion and justification of circumstances when IOU believes ownership of any customer-supplied technology must be transferred to the IOU;
- Process and proposed timeframe for completing detailed evaluation by the IOU, inclusive of a determination and explanation regarding whether the proposed technology is approved for use and for reflecting that determination in the utility's service rules; and
- Process and frequency for reporting, to the CPUC, summaries and outcomes of technology evaluations undertaken by the IOU, including information from the perspective of the submitter of the technology and a summary of any irresolvable disputes between the evaluating utility and the submitter of the technology.

PG&E, SCE, and SDG&E shall record the costs for implementing Proposal 5, Option 2 in a new one-way balancing account and shall recover them in distribution rates through the Annual Electric True-up advice letter filing.

Now we turn to the overall cost cap for Proposal 5, Option 2. We agree with SBUA that an overall cost cap of \$3 million allocated across the IOUs is more appropriate than the Staff Proposal's recommendation of \$1 million per IOU. This approach promotes coordination and collaboration between the IOUs on their evaluation plans and reduces the potential for duplicative effort. If the IOUs need a larger budget, they may include in their Tier 2 advice letter a request for a budgetary increase along with supporting justification demonstrating the need.

In summary, within 30 days upon issuance of this decision, PG&E, SCE, and SDG&E shall file Tier 2 advice letters, pursuant to Section 3.5.3 of this decision, that define the criteria and evaluation process to assess the different isolation technologies.

3.6. Public Utilities Code Section 8371(c)

Consistent with the Scoping Memo and Ruling,²⁹⁷ an Administrative Law Judge's Ruling²⁹⁸ asked parties an array of questions regarding the Staff Proposal's recommendations regarding implementation of Section 8371(c). We summarize the Staff Proposal's recommendation and the parties' positions to it, below.

²⁹⁷ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

²⁹⁸ Administrative Law Judge's Ruling, July 23, 2020.

3.6.1. Staff Proposal Summary

The Staff Proposal offers an array of options to implement proposals for enhancing microgrid interconnection studies pursuant to Section 8371(c).

Option 1 utilizes the Resiliency and Microgrids Working Group to support the development of any additional streamlining or improvements to Rule 21, and to ensure that the improvements are applicable to microgrids.

Option 2 utilizes the Resiliency and Microgrids Working Group to identify attributes or characteristics of microgrids, such as microgrid controllers, that are not adequately addressed by Rule 21 requirements and create a workplan to consider these issues.

Finally, Option 3 utilizes the Resiliency and Microgrids Working Group to coordinate with IOUs and the CAISO to ensure microgrid attributes and characteristics are adequately addressed by the wholesale distribution access tariff, wholesale distribution tariff, CAISO tariffs, and to suggest transferring any applicable improvements to be made to Rule 21 to facilitate the application process for microgrids within this proceeding. The Staff Proposal recommends we adopt Secondary Proposal Section 8371(c) Options 1, 2, and 3.

3.6.2. Parties' Positions

Parties are generally split over the Section 8371(c) Secondary Proposal. We discuss the parties' positions below.²⁹⁹

²⁹⁹ The following parties took no position any of the options under the Section 8371(c) Secondary Proposal: (1) 350 Bay Area; (2) Anterix; (3) Barkovich; (4) Bloom; (5) CCDC; (6) Camptonville Community; (7) CEJA; (8) CHBC; (9) CEERT; (10) CSE; (11) Clean Coalition; (12) Long Beach; (13) LA County; (14) CUE; (15) Emera Technologies; (16) Emerge Alliance; (17) Enchanted Rock; (18) Google; (19) GHC; (20) Grid Alternatives; (21) Joint CCAs; (22) LGSEC; (23) Newworld Energy; (24) Placer; (25) Peterson; (26) RCRC; (27) Sierra Club; (28) SBUA; (29) SEIA; (30) SunRun; (31) Tesla; (32) TURN; (33) UCAN; (34) VGIC; (35) SCC; and (36) Wild Tree.

Generally, the following parties support the Section 8371(c) Secondary Proposal – either some or all its options, or its general intent.

CalSSA supports Options 1, 2, and 3.³⁰⁰ CAISO makes an array of recommendations including, that at a minimum, we should ensure continuity and collaboration between the various working groups, the Commission, and the CAISO.³⁰¹ Doosan supports Options 1, 2, and 3 to broadly address interconnection issues.³⁰²

Concentric Power supports Option 1, 2, and 3 to maintain consistency in applying interconnection tariffs and to ensure a technology neutral process.³⁰³ NFCRC supports Options 1, 2, and 3 to broadly address interconnection.³⁰⁴

PG&E supports Options 1, 2, and 3. SCE supports Options 1, 2, and 3 in concept but urges the Commission to ensure that they align with other Commission efforts.³⁰⁵ Cal Advocates supports Options 1, 2, and 3, asserting that the microgrids working group could develop additional recommendations for improvement to the interconnection process for microgrids.³⁰⁶

Alternatively, some parties oppose the Section 8371(c) Secondary Proposal. For example, BAC opposes the options presented under the Secondary Proposal of Section 8371(c).³⁰⁷ FuelCell Energy opposes Options 1,2, and 3 arguing the

³⁰⁰ CalSSA Opening Comments at 12.

³⁰¹ CAISO Opening Comments at 5-6.

³⁰² Doosan Opening Comments at 13.

³⁰³ Concentric Power Opening Comments at 14.

³⁰⁴ NFCRC Opening Comments at 13.

³⁰⁵ SCE Opening Comments at 38-41.

³⁰⁶ Cal Advocates Opening Comments at 26-27.

³⁰⁷ BAC Opening Comments at 12.

existing interconnection working groups and interconnection processes is the correct approach for incorporating microgrids.³⁰⁸ GPI opposes Options 1, 2, and 3 arguing all are inadequate and urging the Commission to “think bigger.”³⁰⁹

SDG&E opposes Options 1, 2, and 3 arguing it is not needed because the guidelines required by Section 8371(c) are already developed.³¹⁰ MRC opposes Options 1, 2, and 3.³¹¹ AMRC opposes Option 1, arguing the interconnection rulemaking is not well suited to consider microgrid stakeholder interests, but supports Options 2 and 3 to use the Resiliency and Microgrids Working Group to develop solutions.³¹²

3.6.3. The Resiliency and Microgrids Working Group Shall Identify Attributes or Characteristics of Microgrids, If Any, That Are Not Adequately Addressed by Rule 21 and Shall Create a Workplan to Consider These Issues.

Section 8371(c) directs the Commission to develop guidelines that determine what impact studies are required for microgrids to connect to the electrical corporation grid.

We adopt Secondary Proposal Section 8371(c) Options 1, 2, and 3. The Resiliency and Microgrids Working Group shall study and report on the particular questions presented in Options 1, 2, and 3. Then, the Resiliency and Microgrids Working Group shall make recommendations based on its findings to the Commission during Track 3 of this proceeding.

³⁰⁸ FCE Opening Comments at 13.

³⁰⁹ GPI Opening Comments at 16-17.

³¹⁰ SDG&E Opening Comments at 31-21.

³¹¹ MRC Opening Comments at 25-26.

³¹² AMRC Opening Comments at 15.

The Resiliency and Microgrids Working Group is not a Rule 21 interconnection working group as some parties misconstrue. The Resiliency and Microgrids Working Group shall focus on, and prioritize issues related to, microgrids rather than broader issues, such as those concerning Rule 21 interconnection topics within the scope of R.17-07-007.

3.7. Public Utilities Code Section 8371(e).

Consistent with the Scoping Memo and Ruling,³¹³ an Administrative Law Judge's Ruling³¹⁴ asked parties an array of questions regarding the Staff Proposal's recommendations for implementing Section 8371(e).

3.7.1. Staff Proposal Summary

The Staff Proposal offers three options to fulfill Section 8371(e)'s requirement to establish a Resiliency and Microgrids Working Group to further explore issues related to electrical corporation and CAISO microgrid requirements, as well as other issues relevant to the further development of microgrid policy. Launching the working group consists of: (1) developing a draft charter covering objectives, deliverables, ground rules for participation and governance, meeting frequency, and meeting format; (2) convening a kickoff meeting³¹⁵ to confirm a charter and identify priority issues; and (3) develop a schedule and milestones for addressing each issue.³¹⁶

The proposals to facilitate the formation of a working group are as follows: (1) Option 1, direct utilities to hire a third-party facilitator for the working group,

³¹³ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

³¹⁴ Administrative Law Judge's Ruling, July 23, 2020.

³¹⁵ On October 13, 2020, Energy Division convened the Microgrids Working Group with stakeholders.

³¹⁶ Administrative Law Judge's Ruling, July 23, 2020, Attachment 1 – Staff Proposal at 33-34.

similar to the approach used to support the Interconnection rulemaking;

(2) Option 2, Energy Division Staff will facilitate the Resiliency and Microgrids Working Group, similar to the approach used for the Modeling Advisory Group that has supported the CPUC's Integrated Resource Planning process; and

(3) Option 3, direct stakeholders to convene their own working groups, similar to the approach used for the second phase of the Power Charge Indifference Adjustment proceeding.³¹⁷

Staff recommends the adoption of Option 2.

3.7.2. Parties' Positions

Parties are generally split over the Section 8371(e) Secondary Proposal. We discuss the parties' positions below.³¹⁸

The parties that took a position in support of Section 8371(e) Secondary Proposal either supported both Options 1 and 2 or one of the options. For example, CalSSA supports Options 1, 2, and 3 and argues the Commission should continue the interconnection streamlining process by requiring the utilities to develop new template single line diagrams for large systems.³¹⁹

Others support Option 2 only. Specifically, BAC supports Option 2 in concept, but only if the working group is given specific tasks and a timeline for

³¹⁷ *Id.*

³¹⁸ The following parties took no position any of the options under the Section 8371(e) Secondary Proposal: (1) 350 Bay Area; (2) Anterix; (3) Barkovich; (4) Bloom; (5) CCDC; (6) Camptonville Community; (7) CESA; (8) CEJA; (9) CHBC; (10) CforAT; (11) CEERT; (12) CSE; (13) Clean Coalition; (14) Long Beach; (15) Concentric Power; (16) ConnectCA; (17) LA County; (18) CUE; (19) Emera Technologies; (20) Emerge Alliance; (21) Enchanted Rock; (22) Google; (23) GHC; (24) Grid Alternatives; (25) Joint CCAs; (26) LGSEC; (27) Newworld Energy; (28) PG&E; (29) Placer; (30) Peterson; (31) Cal Advocates; (32) RCRC; (33) SDG&E; (34) Sierra Club; (35) SBUA; (36) SEIA; (37) SunRun; (38) Tesla; (39) TURN; (40) UCAN; (41) Unison Energy; (42) VGIC; (43) VSCC; and (44) Wild Tree.

³¹⁹ CalSSA Opening Comments at 12.

completion for the Commission's review and adoption.³²⁰ Doosan also supports Option 2³²¹ only. NFCRC supports Option 2 and opposes Option 3.³²²

SCE supports Option 2, with Energy Division facilitating the Resiliency and Microgrid Working Group.³²³ FuelCell Energy recommends using the existing working group and interconnection processes for developing integration policies that maintain a safe and reliable grid while incorporating microgrids.³²⁴

3.7.3. Energy Division Shall Include Codifying Standards and Protocols Needed to Meet California Electrical Corporation and CAISO Microgrid Requirements in Resiliency and Microgrids Working Group Work Plan.

Section 8371(e) requires the Commission to form a working group to develop to recommend codification of standards and protocols needed to meet California electrical corporation and CAISO microgrid requirements. As stated above, the Staff Proposal offers three options for our consideration to fulfill Section 8371(e).

We adopt Option 2 with no changes. Therefore, we direct Energy Division to facilitate the Resiliency and Microgrids Working Group. Energy Division's facilitation of this group shall be similar in its approach used for the Modeling Advisory Group that has supported the CPUC's Integrated Resource Planning process. As part of this endeavor, Energy Division shall include codifying standards and protocols needed to meet California electrical corporation and

³²⁰ BAC Opening Comments at 13.

³²¹ Doosan Opening Comments at 13.

³²² NFCRC Opening Comments at 13.

³²³ SCE Opening Comments at 41.

³²⁴ Fuel Cell Energy Opening Comments at 13.

CAISO microgrid requirements in the Resiliency and Microgrids Working Group Work Plan.

3.8. Public Utilities Code Section 8371(f)

Consistent with the Scoping Memo and Ruling,³²⁵ an Administrative Law Judge's Ruling³²⁶ asked parties an array of questions regarding the Staff Proposal's recommendations for implementing Section 8371(f).

3.8.1. Staff Proposal Summary

For developing direct current (DC) metering standards under Section 8371(f), the Staff Proposal recommends two options for implementation. Option 1 recommends approving the use of power control-based options with all NEM-eligible, inverter-based generators that are direct current-coupled with electrical storage for purposes of ensuring NEM integrity. Option 2 requires IOUs to report on direct current metering development activities pursuant to D.19-03-013.

Staff recommends the adoption of both Option 1 and 2.

3.8.2. Parties' Positions

Parties are generally split over the Section 8371(f) Secondary Proposal. The following parties support both Options 1 and 2: (1) AMRC;³²⁷ (2) Doosan;³²⁸ (3) NFCRC;³²⁹ (4) Cal Advocates³³⁰; (5) SDG&E;³³¹ and (6) SCE.³³²

³²⁵ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

³²⁶ Administrative Law Judge's Ruling, July 23, 2020.

³²⁷ AMRC Opening Comments at 15.

³²⁸ Doosan Opening Comments at 13.

³²⁹ NFCRC Opening Comments at 14.

³³⁰ Cal Advocates Opening Comments at 28.

³³¹ SDG&E Opening Comments at 38.

³³² SCE Opening Comments at 41-43.

Distinguishably, Sunrun supports Option 1 only.³³³ PG&E only supports Option 2.³³⁴ And Emerge Alliance opposes Option 2.³³⁵

3.8.3. SCE, as lead IOU, Shall Report to the Commission and Stakeholders on the Direct Current Metering Activities with Energy Division Participation.

Section 8371(f) directs the Commission to develop a standard for DC metering in the Commission's Electric Rule 21 to streamline the interconnection process and lower interconnection costs for DC microgrid applications.

We adopt Secondary Proposal Section 8371(f) Option 1 and Option 2, with modification. Options 1 and 2 support the development of DC microgrid configurations which may support the deployment of distributed energy resources generally. Additionally, we agree with Cal Advocates that DC-coupled systems may have lower capital costs.³³⁶ Therefore, this approach may help lower the interconnection process costs for direct current microgrid projects,³³⁷ making them more accessible to residential and small commercial customers. This is likely to support more widespread deployment of microgrids which in turn, could promote resiliency for customers during power outages.³³⁸

We note that D.20-09-035 directs the IOUs to modify their Rule 21 tariffs to allow the use of power control-based options for non-export and limited-export applications.³³⁹ Here, with respect to Option 1, we decline to resolve the use of

³³³ SunRun Opening Comments at 17.

³³⁴ PG&E Opening Comments at 32-33.

³³⁵ EMerge Alliance Opening Comments at 10-12.

³³⁶ Cal Advocates Opening Comments at 28.

³³⁷ *Id.*

³³⁸ *Id.*

³³⁹ D.20-09-035 OP 50 at 223.

power control-based options with all NEM-eligible, inverter-based generators that are DC-coupled with electrical storage. Other open Commission proceedings are contemplating such topics. We must preserve the ongoing regulatory processes of such proceedings as R.14-07-002 and/or R.20-08-020. Now, we address some issues parties raised under Secondary Proposal Section 8371(f) that require clarification.

First, SCE,³⁴⁰ EMerge Alliance,³⁴¹ and Emera Technologies LLC³⁴² state that Option 2 implementation should focus on ANSI C12.32 for the development of DC metering standards. SCE, EMerge Alliance, and Emera Technologies, LLC argue that the ANSI C.12.32 standard for DC metering is the most holistic approach and is nearest to completion. We agree. Therefore, because ANSI C12.32 is nearly completed, it should receive a primary focus within this context.

Second, SDG&E argues that it is unnecessary and potentially duplicative for each IOU to participate in the development process for DC metering.³⁴³ We agree. We direct SCE, as it suggested,³⁴⁴ to act as the lead IOU responsible for completing the reporting task to the Commission on DC metering because SCE is actively participating in EMerge Alliance's standards and development process for ANSI C12.32 under D.19-03-013.

Third, we direct Energy Division to monitor the progress toward timely finalization of ANSI C12.32. We modify Option 2 to direct Energy Division to monitor the timely finalization of ANSI C12.32 and upon completion, notify the

³⁴⁰ SCE Opening Comments at 41-43.

³⁴¹ EMerge Alliance Opening Comments at 11-12.

³⁴² Emera Technologies LLC Opening Comments at 4.

³⁴³ SDG&E Opening Comments at 38.

³⁴⁴ SCE Opening Comments at 41-42.

service lists of R.19-09-009 and R.17-07-007 once the standard is ratified by ANSI. Energy Division's monitoring of this process will provide accountability for the Commission for tracking the on-going progress and completion of the DC metering standard.

3.9. Program Evaluation

Consistent with the Scoping Memo and Ruling,³⁴⁵ an Administrative Law Judge's Ruling³⁴⁶ directed parties to comment on the Staff Proposal's recommendations for program evaluation.

3.9.1. Staff Proposal Summary

The Staff Proposal recommends that a neutral third party evaluate all of Track 2's activities once they are implemented. The Staff Proposal recommends that a program evaluation review the following:³⁴⁷

- Costs and benefits to customers who directly participate in a microgrid;
- Costs and benefits to other customers;
- Progress towards achieving the objectives of SB 1339, including microgrid commercialization;
- Extent of incremental contribution to achieving related state and CPUC policy goals and objectives;
- Effectiveness of appropriate coordination with related programs and policies, such as the Self Generation Incentive Program;
- Impact of activities on resiliency;
- Whether any temporary activities, programs, or rate schedules should be extended.

³⁴⁵ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

³⁴⁶ Administrative Law Judge's Ruling, July 23, 2020.

³⁴⁷ Administrative Law Judge's Ruling, July 23, 2020, Attachment 1 – Staff Proposal at 39.

The Staff Proposal also recommends that the CPUC conduct a competitive solicitation for a program evaluator through the State of California Department of General Services contracting process.³⁴⁸ Upon CPUC authorization, Energy Division would develop a budget change proposal for reimbursable funds to be used for program evaluation.³⁴⁹ The Staff Proposal recommends a \$1 million budget for program evaluation.³⁵⁰

3.9.2. Parties' Positions

Most parties did not provide comment on the Staff Proposal's recommendation for a program evaluator. However, MRC supports a third-party evaluator, arguing a thorough review by an independent third party could be valuable if it encompasses a broad view of the future of the grid.³⁵¹

3.9.3. A Neutral-Third Party Shall Review and Evaluate the New Microgrid Tariff, Rates and Rules, the New Incentive Programs, and the Pilot Studies to Assure Competitiveness and Ratepayer Best Interests.

The Staff Proposal recommends that Energy Division hire a neutral third-party contractor through the State of California Department of General Services contracting process to evaluate the activities authorized by this decision and D.20-06-017. The Staff Proposal recommends that the third-party contractor evaluate an array of items, as summarized above.

We agree with the Staff Proposal's recommendation that a neutral third-party should evaluate the activities undertaken by this decision and D.20-06-017. A neutral third-party evaluator shall ensure that conduct, when

³⁴⁸ *Id.*

³⁴⁹ *Id.*

³⁵⁰ *Id.*

³⁵¹ MRC Opening Comments at 7.

implementing this decision, does not favor or otherwise promote inappropriate preferential treatment, promotes financial indifference, and implements microgrid commercialization and policies pursuant to this decision in the public interest.

To promote transparency, we direct Energy Division to hold a workshop addressing topics concerning the scope that will govern the third-party evaluator's work. We adopt Cal Advocates recommendation that this workshop should discuss the following: (1) evaluation length of time; (2) budget; and (3) metrics governing the evaluation.³⁵²

Once the evaluator is selected through the State of California procurement process, and the program evaluation has concluded, we direct Energy Division to solicit comment from all interested parties on the program evaluator's findings and recommendations.³⁵³ Finally, we modify the Staff Proposal's recommendation of a \$1 million budget for program evaluation. We adopt the \$1 million budget for program evaluation as a budget cap, subject to downward adjustment by Energy Division.

3.10. Interim Approach for Minimizing Emissions from Generating During Transmission Outages

Consistent with the Scoping Memo and Ruling,³⁵⁴ an Assigned Commissioner and Administrative Law Judge's Ruling³⁵⁵ directed parties to comment on an interim approach for minimizing emissions from generation during transmission outages.

³⁵² Cal Advocates at 8.

³⁵³ *Id.*

³⁵⁴ Assigned Commissioner's Amended Scoping Memo and Ruling, July 3, 2020.

³⁵⁵ Assigned Commissioner and Administrative Law Judge's Ruling, September 4, 2020.

3.10.1. Parties Positions

Overall, the parties' support for the interim approach for minimizing emissions from generation during transmission outages varied in support or opposition.

Some parties favor the use of clean energy where it is technologically and economically feasible³⁵⁶ or outright argued for zero-emissions sources as permanent and immediate solutions.³⁵⁷

Others opposed the interim approach broadly, because: (1) some utilities do not have the need to de-energize as other IOUs do;³⁵⁸ (2) PG&E has a unique set of issues separate from SCE and SDG&E, and should be handled accordingly;³⁵⁹ (3) such costs could be excessive for ratepayers to bear;³⁶⁰ and (4) other proceedings are already tackling this issue with infrastructure hardening and therefore, ratepayers should avoid bearing duplicative costs.³⁶¹

3.10.2. Keeping the Lights on is a Priority Objective for Community Continuity.

To minimize the number of customers affected by a transmission outage during a PSPS event, we adopt an interim approach³⁶² for reserving temporary

³⁵⁶ RCRC Assigned Commissioner and ALJ Response to September 4, 2020 Ruling at 2-6; Sierra Club Assigned Commissioner and ALJ Response to September 4, 2020 Ruling 1-5.

³⁵⁷ Tesla Assigned Commissioner and ALJ Response to September 4, 2020 Ruling at 5; SunRun E Assigned Commissioner and ALJ Response to September 4, 2020 Ruling at 2-4.

³⁵⁸ SDG&E Assigned Commissioner and ALJ Response to September 4, 2020 Ruling 2-8.

³⁵⁹ SCE Assigned Commissioner and ALJ Response to September 4, 2020 Ruling at 4.

³⁶⁰ TURN Assigned Commissioner and ALJ Response to September 4, 2020 Ruling at 3-5.

³⁶¹ Cal Advocates Assigned Commissioner and ALJ Response to September 4, 2020 Ruling 2, and 3-4.

³⁶² This Decision's Appendix refines the approach illustrated in the Joint Assigned Commissioner and Administrative Law Judge's Ruling (September 4, 2020) for adopting an interim approach for minimizing emissions from generation during transmission outages.

generation for safe-to-energize substations for 2021, as well as a process for transitioning to clean temporary generation after 2021. The interim approach is attached as Section I of Appendix A to this decision. This is an interim step that may inform our regulatory approach beyond 2021, *if* the utility has filed an application for a transition to clean temporary generation. The process for transitioning to clean temporary generation *after* 2021 is attached as Section II of Appendix A. A ratemaking process corresponding to the interim approach is attached as Section III of Appendix A of this decision.

The Interim Approach in Section I of Appendix A allows utilities to begin procurement of clean alternatives where clearly reasonable to do so, taking an immediate first step in the transition to clean generation. As part of reserving temporary generation, the Interim Approach requires that the utilities pursue at least one clean substation microgrid project. No process or method for completing the transition to clean generation has been adequately reviewed or presented for thorough comment in this proceeding. As such, the process to complete the transition to clean generation should be taken up and deliberated in the utility application required by Section III of Appendix A.

For cost recovery purposes in 2021-2022, if an IOU seeks to implement a temporary generation program for the specific purpose of providing power at substations during a transmission outage, they may track associated expenditures in the Microgrids Memorandum Account, using separate annual subaccounts. If the IOU intends to recover these costs, they must either file an application or include these costs as part of their respective 2023 general rate cases.

For 2021-2022 clean microgrids projects, we allow the IOUs to recover in rates the costs for clean substation microgrid projects. These costs may include,

but are not limited to, capital investment, permanent generation or, if the IOU has contracted for power purchases, the resulting expenses for the power purchasing agreement. These costs are subject to \$350 million cap. An IOU must file a Tier 3 advice letter seeking Commission authorization for such rate recovery.

Keeping the lights on to preserve community continuity is a priority objective for the public health, welfare, and safety of all Californians. As we stated above in Section 3.4.3, we have a duty to balance our various statutory obligations under Section 451, Section 454.51, and Section 8371. With that balancing, we agreed with parties that without increased resiliency, the burden of extended power shutoffs will continue to fall most heavily and inequitably upon “a small number of highly impacted counties.”³⁶³ Therefore, expenditures for clean substation microgrids projects shall be allocated to all distribution customers to ensure the strain of wildfire events and PSPS events are not unevenly borne by a small number of highly impacted counties.

Finally, in D.20-06-017, we approved PG&E’s temporary generation program for 2020 only, and its Make Ready program for 2020-2022. We also directed PG&E to record the costs for its Make Ready and temporary generation programs in separate subaccounts in the Microgrids Memorandum Account for a reasonableness review which we anticipated would be reviewed in a separate track of this proceeding. Instead we direct PG&E to file a separate application for cost recovery consideration of its 2020 temporary generation program and its 2020 Make Ready program.

³⁶³ CforAT Opening Comments at 4.

4. Conclusion

In conclusion, this decision adopts microgrid rates, tariffs, and rules for large investor-owned electrical corporations. These microgrid rates, tariffs, and rules facilitate the commercialization of microgrids pursuant to Senate Bill 1339. First, we direct SCE to revise its Rule 2 to permit installing added or special facilities microgrids. Second, we direct SCE and PG&E to revise their Rule 18, and SDG&E to revise its Rule 19, to allow microgrids to serve critical customers on adjacent parcels. A subscription limit of ten Rule 18 or Rule 19 microgrid projects is permitted across each of the large investor-owned electrical corporations' service territories.

Third, SCE, PG&E, and SDG&E shall each form a microgrid tariff for their respective service territories. Fourth, SCE, PG&E, and SDG&E shall jointly develop a Microgrid Incentive Program. Fifth, we direct SCE, PG&E, and SDG&E to develop pathways for the evaluation and approval of low-cost, reliable electrical isolation methods.

This decision also creates a Resiliency and Microgrids Working Group. This decision directs the Commission's Energy Division to identify microgrid-specific policy issues that are not adequately addressed by existing venues at the Commission, California Energy Commission, California Air Resources Board, and California Independent System Operator, if any, and to create a workplan for considering these issues within the Resiliency and Microgrids Working Group and Track 3 of this proceeding. This decision also directs the Energy Division to include the subject of codifying standards and protocols necessary to meet California electrical corporation and California Independent System Operator microgrid requirements in the Resiliency and Microgrids Working Group work plan. This decision requires SCE, as the lead investor-owned utility,

to report to the Commission and stakeholders on direct current metering activities occurring outside of this proceeding, in coordination with Energy Division Staff, to facilitate the commercialization of microgrids.

This decision directs the Energy Division to hire a neutral, third-party program evaluator to review and evaluate the microgrid tariff, rates, rules, incentive programs, and pilot studies to help the Commission determine whether any changes to the adopted policies would be in the public interest. Finally, this decision adopts an interim approach for minimizing emissions from generation during grid outages.

5. Comments on Proposed Decision

The proposed decision of ALJ Rizzo in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on December 28, 2020 by the following parties: (1) Applied Medical Resources Corporation (AMRC); (2) Bloom Energy (Bloom); (3) California Energy Storage Alliance (CESA); (4) California Environmental Justice Alliance (CEJA); (5) California Hydrogen Business Council (CHBC); (6) California Solar & Storage Association (CalSSA); (7) Center for Accessible Technology (CforAT); (8) Center for Sustainable Energy (CSE); (9) Clean Coalition; (10) Clean DG Coalition (CDGC); (11) Connect California LLC; (12) Diesel Technology Forum, Inc.; (13) Emera Technologies LLC (Emera); (14) Enchanted Rock; (15) FuelCell Energy; (16) Google LLC (Google); (17) Green Power Institute (GPI); (18) Grid Alternatives; (19) Joint Community Choice Aggregators (Joint CCAs); (20) Long Beach, California (Long Beach); (21) Microgrid Resources Coalition (MRC); (22) National Fuel Cell Research Center (NFCRC); (23) Pacific Gas and Electric Company (PG&E); (24) Peterson Power

Systems, Inc. (Peterson Power); (25) Placer APCD (Peterson); (26) Public Advocates Office (Cal Advocates); (27) San Diego Gas & Electric Company (SDG&E); (28) Sierra Club; (29) Small Business Utility Advocates (SBUA); (30) Southern California Edison Company (SCE); (31) Southern California Gas Company (SoCalGas); (32) Sunrun Inc.; (33) Tesla, Inc.; (34) The Utility Reform Network (TURN); and (35) Vote Solar and The Climate Center (VSCC).

Reply comments were filed on January 4, 2021 by the following parties: (1) AMR; (2) Bloom Energy; (3) CEJA (7) CSE; (8) Clean Coalition; (9) Coalition of Utility Employees; (10) Connect California LLC; (11) FuelCell Energy; (12) Grid Alternatives; (13) Joint CCAs; (14) MRC; (15) NFCRC; (16) PG&E; (17) Peterson Power Systems, Inc.; (18) Cal Advocates; (19) SDG&E; (20) Sierra Club; (21) SCE; (22) SoCalGas; ; (23) Tesla, Inc.; (24) TURN; and (25) VSCC.

We have carefully considered the suggested changes proposed by parties in their comments and their reply comments to this Decision. The suggested changes that we have accepted are reflected in the revised version of this decision. However, we take a moment to directly address some suggested changes by some parties, below.

First, several parties urge that this Decision does not go far enough to eliminate some perceived barriers to private investment in microgrids. For example, Google argues “we believe the Commission should facilitate any such projects capable of implementation”³⁶⁴ and urge that a handful of mostly dated court and Commission decisions support this principle. Their arguments do not, however, pay significant heed to the Commission’s duties to assure the safety and reliability of proposed microgrids to the public/customers or their potential

³⁶⁴ Google Comments at p. 4.

impacts on the state's electric grid and load serving entity accounting, state environmental mandates regarding long-term energy supply procurement, or the reasonableness of rates charged to relevant customers, all which are also of key concern to the Commission under California law.

For example, *Story v. Richardson* (1921) 186 Cal. 162, 167, considered the state property tax implications of an electricity and steam production system with respect to the definition of a public utility; but did not consider the safety, ratemaking, environmental or grid reliability issues implicated by our development of new microgrid rules. Further, as discussed in *Independent Energy Producers Assn., Inc. v. State Bd. of Equalization* (2004) 125 Cal. App. 4th 425, (assuming the myriad legal and policy underlying the Commission's duties to assure reliable energy at reasonable rates allow us to apply such analysis to the microgrids context) the question of whether a private entity has dedicated its property to public use to such an extent that it becomes a public utility under Section 218 appears to be a factual analysis that is to be determined on a case-by-case basis.³⁶⁵ Even were such analysis appropriate for a generally applicable rulemaking proceeding, we do not have sufficient record here to make such determinations.³⁶⁶

The subject of facilitating commercialization of microgrids raises a great many potential conflicts between different sections of the California law. For example, Bloom urges that NEM surcharges and departing load charges to microgrids should be eliminated based upon the evidence already in the

³⁶⁵ *Independent Energy Producers Assn., Inc. v. State Bd. of Equalization* (2004) 125 Cal. App. 4th 425 at 443.

³⁶⁶ See Commission Rules of Practice and Procedure, Article 2 regarding Applications Generally.

record.³⁶⁷ These charges were developed pursuant to California law and were subject to thorough due process. We do not believe the current record shows sufficient identification or debate of the complex policy, legal and evidentiary questions raised by these arguments with appropriate due process for us to eliminate or limit the applicability of such rules and tariffs at this time. Contrary to Bloom's assertion, the Commission has defined a share of costs due from NEM customers in the prior proceedings.³⁶⁸ The record in its current state does not as yet support dispensing with these rules.

Bloom also argues Section 8371, subdivision (d), which states that only distributed generation that comply with state Air Resources Board emissions standards may be compensated under Commission-approved rates and tariffs, implies that non-renewable resources must be compensated immediately.³⁶⁹ MRC makes a similar argument. First, such arguments ignore that the Commission must also select and oversee development of a portfolio of long-term energy resources that "rely upon zero carbon-emitting resources to the maximum extent reasonable . . .".³⁷⁰ State law, existing Commission decisions, and the record at hand support focusing on prioritizing the use of renewable resources to support microgrid development in this decision. Contrary to MRC's argument, these choices are legally justified.³⁷¹ While the Commission may consider compensation for microgrids supported by fossil fueled resources based

³⁶⁷ Bloom Opening Comments to the Proposed Decision 8-11.

³⁶⁸ See Bloom Opening Comments to the Proposed Decision at 10-11.

³⁶⁹ Bloom Opening Comments to the Proposed Decision at 4-5.

³⁷⁰ Section 454.51.

³⁷¹ See MRC Opening Comments to the Proposed Decision at 10 ("We see no legal justification for excluding microgrids meeting the statutory definition, from a 'microgrid tariff' as the Proposed Decision purports to do.")

on a fully developed record in the future, we do not have that record before us at this time.

Second, we also remind these parties that this decision does not preclude fuel cells from using non-renewable resources from taking service under existing tariffs such as the Net Energy Metering for Fuel Cell Customer-Generators (NEMFC) Tariff. The NEMFC tariff is applicable to customers who are served under a: (1) Time-of-Use rate schedule who; (2) install an eligible fuel cell electrical generating facility with; (3) generating capacity no greater than 5,000 kilowatt, located on or adjacent to the customer's owned, leased, or rented premises; and (4) is interconnected and operates in parallel with the IOU's grid while the grid is operational and is sized to offset part or all of the customer's electrical requirements. Though eligible technologies must achieve reductions in emissions of GHGs pursuant to Section 2827.10, non-renewable resources are eligible under this tariff if they meet the requirements of the California Air Resources Board Fuel Cell Net Energy Metering Greenhouse Gas Emission Standards.³⁷²

In short, contrary to suggestions by Google, Bloom and MRC the Commission may not throw out or limit its existing rules and tariff language without due process regarding the legal, policy and factual bases upon which those rules and tariffs are predicated.

Next, we have stated repeatedly that Section 8371(d) prohibits us from shifting microgrid costs to customers not directly served by microgrids. CforAT argues that there is no need revisit the issue of cost-shifting.³⁷³ Yet, some parties,

³⁷² California Code of Regulations Section 95408.

³⁷³ CforAT Comments to the Proposed Decision at 3-4.

like Bloom,³⁷⁴ persist that they should be exempt from standby charges. Again, we reject this argument. One might expect that simply reading Section 8371(d), one would eliminate any claim that cost shifting is appropriate. Alternatively, one might expect that when seeking such an outcome, a proponent would submit into the record compelling legal arguments and factual proof to support such claims. Yet, such predication has not been offered.

Cal Advocates states, “Bloom inaccurately states that fire risk and recent de-energization events make standby charges inapplicable to grid- connected microgrids, and that microgrids should only pay charges associated with drawing power from the grid. The Commission should disregard Bloom’s recommendation and adopt the [Proposed Decision’s] Microgrid Tariff, which currently prevents cost shifts by applying standby charges to microgrids.”³⁷⁵ We agree.

6. Assignment of Proceeding

Genevieve Shiroma is the assigned Commissioner and Colin Rizzo is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. Senate Bill 1339 requires the Commission to develop standards, protocols, guidelines, methods, rates, and tariffs to support and reduce barriers for microgrid commercialization across California.
2. Senate Bill 1339 requires the Commission to facilitate commercializing microgrids across California while prioritizing system, public, and worker safety.
3. Senate Bill 1339 prohibits microgrid cost shifting between ratepayers.

³⁷⁴ Bloom Opening Comments to the Proposed Decision at 8.

³⁷⁵ Cal Advocates Opening Comments to the Proposed Decision at 2-3.

4. Each large investor-owned electric utility has an electric tariff Rule 2 that describes added or special facilities that are an addition to, or a substitute for, standard utility equipment required to interconnect to the electric utility's system.

5. Southern California Edison Company's Electric Rule 2 may pose a barrier for microgrid commercialization because Rule 2 does not specifically refer to generation control devices or microgrid controllers.

6. A large investor-owned electric utility like Southern California Edison Company may need to seek Commission approval to allow an added or special facility microgrid for a customer who requests such service.

7. Seeking Commission approval every time a customer requests an added or special facility microgrid creates a barrier to microgrid commercialization because of approval uncertainty, delays, and regulatory complexity.

8. Requiring Southern California Edison Company to amend its Rule 2 to cover utility operated microgrid, generation, and storage control devices as added or special facilities removes a barrier for microgrid commercialization.

9. Each large investor-owned electric utility has an electric tariff Rule 18 or Rule 19 that governs the supply of electricity to separate premises and the use of electricity by others.

10. Under Rule 18 or Rule 19, if electricity is delivered by the utilities to a premise, these rules prohibit that premise from supplying electricity to a different premise.

11. Pacific Gas and Electric Company's Rule 18 and San Diego Gas & Electric Company's Rule 19 prohibit electricity supplied to separate premises through the same utility billing meter even if the separate premises are owned by the same customer.

12. Southern California Edison Company's Electric Rule 18 does not have a specific clause for a separate premise owned by the same customer.

13. Electric Rule 18 and Rule 19 may be a barrier to microgrid commercialization because they may inhibit maximizing the use and benefit of a microgrid to supply power to adjacent premises in the event of a grid outage.

14. Requiring the large investor-owned electric utilities to revise their respective electric tariff Rule 18 or Rule 19 to allow microgrids to serve customers on adjacent premises may help commercialize microgrids and offer resiliency benefits during a grid outage.

15. A subscription limit of ten Rule 18 or Rule 19 microgrid projects per large investor-owned electric utility service territory can help limit any unintended, negative consequences of relaxing some Rule 18 or Rule 19 requirements.

16. Modifications to Rule 18 or Rule 19 does not alter the large investor-owned electric utilities' existing responsibilities to ensure grid safety.

17. Rate complexity, high initial costs, and high operating costs present barriers for microgrid commercialization.

18. Requiring the large investor-owned electric utilities to form a new microgrid tariff establishing a new microgrid rate schedule applicable to a single customer establishing a microgrid located at a single account with net energy metering-eligible systems that meet Senate Bill 1339's definition of a microgrid will help commercialize microgrids.

19. Requiring the large investor owned electric utilities to develop a new microgrid tariff that is explicitly available to microgrids that meet the statutory definition of a microgrid, will help commercialize microgrids. .

20. Requiring the large investor-owned utilities to incorporate a new microgrid tariff into the resiliency project engagement guide required by Decision 20-06-017, Ordering Paragraph 9, will help commercialize microgrids.

21. Requiring the large investor-owned utilities to incorporate a new tariff into all other relevant materials, including any websites or portals, where other related rate schedules are presented will help commercialize microgrids.

22. A joint clean energy microgrid incentive program for large investor-owned utilities may help support the needs of critical and vulnerable customers impacted by grid outages while also alleviating high upfront project costs for microgrid developers.

23. A cost-effectiveness metric will reduce the risk of cost-shifts.

24. A clean energy microgrid incentive program for each large investor-owned utility may increase electricity reliability for critical public facilities in communities that are at higher risk of electrical outages in the next five-years.

25. A clean energy microgrid incentive program for each large investor-owned utility may help improve electric service in communities with higher proportions of low-income residents, access and functional needs residents, and electricity dependent customers.

26. A clean energy microgrid incentive program supports the ability of communities with a lower ability to fund development of backup generation to maintain critical services during grid outages.

27. Any new incentives provided to generation or storage resources that are included in a clean energy microgrid incentive program should be limited to resources in front of customers' meters to avoid redundancy with existing behind-the-meter generation programs.

28. To safely provide backup power from distributed generation or a storage resource to customer loads during a wider grid outage, the loads and the distributed generation providing the backup power must be electrically isolated from the larger grid.

29. Electrical isolation allows the formation of an intentional electrical island and eliminates the possibility of backfeeding electricity from the distributed generation or storage resource onto the larger grid during an outage.

30. Electrical isolation can occur through various types of equipment.

31. A process for large investor owned utilities to evaluate the safety and reliability of low-cost, utility-scale technologies and methods to provide electrical isolation may allow additional isolation methods to be available prior to the 2021 wildfire season and help commercialize microgrids.

32. New electrical isolation devices shall be demonstrated to be safe and reliable prior to deployment or implementation beyond field testing or pilot program installations.

33. A Resiliency and Microgrid Working Group is best suited for identifying any outstanding microgrid policy issues not adequately addressed by existing venues at the Commission, California Energy Commission, California Air Resources Board, or California Independent System Operator.

34. A neutral third party is best able to assess whether California's new microgrid tariffs, rates, and rules are effective, competitive, and in California ratepayer's best interests.

35. Keeping the lights on is a primary objective for community continuity.

36. A large investor-owned utility should be allowed to track the all-inclusive costs associated with reserving and deploying temporary generation specifically

for safe-to-energize substations for 2021 *if* the utility has filed a Tier 2 advice letter that demonstrates need and the consideration of clean alternatives.

Conclusions of Law

1. California Public Utilities Code Section 451 requires just and reasonable rates, terms, and conditions for utility service.

2. California Public Utilities Code Section 454.51 entrusts the Commission with assuring that public utilities develop a portfolio of energy resources that assure reliability of the state's electricity supply.

3. California Public Utilities Code Section 8371 requires the Commission to commercialize microgrids.

4. California Public Utilities Code Section 8371(b) requires the Commission, without shifting costs between ratepayers, to develop methods to reduce barriers for microgrid deployment.

5. California Public Utilities Code Section 8371(c) directs the Commission to develop guidelines that determine what impact studies are required for microgrids to connect to the electrical corporation grid.

6. California Public Utilities Code Section 8371(d) requires the Commission, without shifting costs between ratepayers, to develop separate large electrical corporation rates and tariffs, as necessary to support microgrids, while ensuring that system, public, and worker safety are given the highest priority.

7. California Public Utilities Code Section 8371(d) states that the separate rates and tariffs shall not compensate a customer for the use of diesel backup or natural gas generation, except as either of those sources is used pursuant to Section 41514.1 of the Health and Safety Code, or except for natural gas generation that is a distributed energy resource.

8. California Public Utilities Code Section 8371(e) requires the Commission to form a working group to codify standards and protocols needed to meet California electrical corporation and CAISO microgrid requirements.

9. California Public Utilities Code Section 8371(f) directs the Commission to develop a standard for direct current metering in the Commission's Electric Rule 21 to streamline the interconnection process and lower interconnection costs for direct current microgrid applications.

10. California Public Utilities Code Section 8371.5 states that electrical corporation development or ownership of a microgrid should not be discouraged or prohibited.

11. California Public Utilities Code Section 218, commonly referred to as the "over-the-fence rule," requires any entity who wishes to sell energy to more than two contiguous parcels or across the street to become a regulated, electrical corporation as defined under Public Utilities Code Section 216.

12. It is reasonable to require Southern California Edison Company to revise its electric tariff Rule 2 to permit microgrids as added or special facilities so that a barrier of microgrid commercialization is removed.

13. It is reasonable to require Southern California Edison Company to file a Tier 2 advice letter within 30 days upon issuance of this decision to revise its Rule 2 so that any language and/or any examples of added or special facilities are removed.

14. It is reasonable to require Pacific Gas and Electric Company and Southern California Edison Company to revise their respective electric tariff Rule 18, and San Diego Gas & Electric Company to revise its electric tariff Rule 19, to allow municipal corporation microgrids to serve municipal critical facilities on adjacent parcels.

15. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to ensure that Rule 18 and Rule 19 microgrids that serve critical customers on adjacent premises are ownership agnostic so municipal corporations have more flexibility to develop a microgrid project that can supply electricity to adjacent premises during an emergency and/or support critical operations during a grid outage.

16. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to implement a subscription limit of ten microgrid projects for each service territory to reflect the Rule 18 and Rule 19 revisions.

17. It is reasonable for Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to review and approve the Rule 18 and Rule 19 microgrid projects connected to the microgrid to ensure the microgrid system performs as required under normal and abnormal grid conditions.

18. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to form a new microgrid tariff pursuant to Section 3.3.3 of this decision.

19. It is reasonable to direct the Commission's Resiliency and Microgrid Working Group to identify microgrid specific policy issues, if any, that are not adequately addressed in other forums and create a workplan. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to develop a microgrid incentive program pursuant to Section 3.4.3 of this decision.

20. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to develop

a pathway for diverse technologies to support disconnection of a premise's entire electrical service to support electrical isolation during a wider grid outage pursuant to Section 3.5.3 of this decision.

21. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to work together under the Commission's regulatory supervision in order to jointly evaluate, or to compare their independent evaluations of, electrical isolation technologies pursuant to Section 3.5.3 of this decision.

22. It is reasonable to direct the Commission's Resiliency and Microgrid Working Group to identify microgrid policy issues that are not adequately addressed by existing venues at the Commission, California Energy Commission, California Air Resources Board, or California Independent System Operator and to create a workplan to consider these issues pursuant to Section 3.6.3 of this decision.

23. It is reasonable to direct the Commission's Energy Division to include the subject of codifying standards and protocols needed to meet California electrical corporations' and the California Independent System Operator's microgrid requirements in the Resiliency and Microgrids Working Group work plan pursuant to Section 3.7.3 of this decision.

24. It is reasonable to direct Southern California Edison Company, on behalf of Pacific Gas and Electric Company and San Diego Gas & Electric Company, to report to the Commission and stakeholders on the direct current metering activities with Energy Division participation pursuant to Section 3.8.3 of this decision.

25. It is reasonable to direct Energy Division to engage – through the State of California procurement process – a neutral, third-party evaluator to review the

effectiveness of the new microgrid tariff, the changes to the electric rules, the new incentive programs, and the pilot studies adopted by this decision to assure ratepayer best interests.

26. It is reasonable to allow Pacific Gas and Electric Company, or Southern California Edison Company, or San Diego Gas & Electric Company to track the costs of temporary generation specifically for safe-to-energize substations affected by transmission-level public safety power shutoffs in 2021 *if* the utility has filed a Tier 2 advice letter that demonstrates need and the consideration of cleaner alternatives, pursuant to Appendix A of this decision and that advice letter has been approved.

27. It is reasonable to allow Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company each to track the all-inclusive costs of temporary generation specifically for safe-to-energize substations affected by transmission-level public safety power shutoffs *after* 2021 *if* the utility has filed an application in accordance with a clean generation transition pursuant to Appendix A of this decision, and the utility has filed a Tier 2 advice letter demonstrating need and the consideration of cleaner alternatives, and that advice letter has been approved.

28. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company each to submit a Tier 3 Advice Letter requesting authorization for approval of expenses incurred for developing clean microgrid programs.

29. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company each to request rate recovery for temporary generation expenditures specifically for safe-

to-energize substations in 2020, 2021, and 2022 by filing an application for reasonableness review or in its general rate case.

30. It is reasonable to authorize Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to record expenses for developing clean microgrid projects in a new one way balancing account if such expenses are incurred pursuant to Appendix A, Section I.2 of this decision.

31. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company each to submit a Tier 3 advice letter requesting authorization for approval of expenses incurred for developing clean microgrid projects and proposed method of cost allocation to distribution customers and recovery, if they pursue such projects through Appendix A, Section I.2 of this decision..

32. It is reasonable to require Pacific Gas and Electric Company to request rate recovery for its Make Ready Program and Temporary Generation Program authorized by D.20-06-017 by filing an application for reasonableness review.

33. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company each to request rate recovery for expenses related to providing temporary generation specifically for safe-to-energize substations affected by transmission-level public safety power shutoffs incurred in 2021 and 2022 by filing an application for reasonableness review or in its general rate case, if they have reserved temporary generation pursuant to Appendix A of this decision.

34. It is reasonable to require Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company each to file a Tier 1 advice letter, modifying their respective electric preliminary statements

to create a new Clean Substation Microgrid Program subaccount in their Microgrids One Way Balancing Account to record expenditures for clean substation microgrid projects, if they intend to pursue such projects through Appendix A, Section I.2 of this decision.

O R D E R

IT IS ORDERED that:

1. Southern California Edison Company shall file a Tier 2 advice letter, within 30 days upon issuance of this decision, amending its Rule 2 so any language and/or any examples of added or special facilities is removed pursuant to Section 3.1.3 of this decision. Southern California Edison Company shall frame this Tier 2 advice letter so that a Rule 2 deviation is not needed for an added or special facilities microgrid project, and that microgrid control system and equipment may be installed as added or special facilities where the customer requests that the investor-owned utility own and operate the units.

2. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each file a Tier 2 advice letter, within 30 days upon the issuance of this decision, implementing Rule 18 and Rule 19 revisions pursuant to Section 3.2.3 of this decision. In this Tier 2 advice letter, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each explicitly state that microgrids owned by public agencies or by a third party that primarily serves facilities owned or operated by, or on behalf of, public agencies are permitted to supply electricity to critical facilities owned or operated by or on behalf of a public agency on an adjacent premises. In this Tier 2 advice letter, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each also form a pathway for the Rule 18 or Rule 19

microgrid projects to become live, and shall adhere to the subscription limit of 10 microgrid projects for each service territory pursuant to Section 3.2.3 of this decision, including review and approval by Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company of the facilities connected to the microgrid to ensure the microgrid system performs as required under normal and abnormal grid conditions.

3. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall file, individually, a Tier 2 advice letter once the fifth microgrid project within its service territory has received authorization from the respective investor-owned utility to operate. In this Tier 2 advice letter filing, the submitting investor-owned utility shall recommend: (1) whether to continue the Rule 18 or 19 tariff rule amendment for future projects; or (2) whether to make any modifications to the existing amendment.

4. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each file a Tier 3 advice letter, within 90 days upon issuance of this decision, that forms a new microgrid tariff pursuant to Section 3.3.3 of this decision. In this Tier 3 advice letter, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each:

- Create a new microgrid tariff within each of the IOU's electric tariffs books applicable to systems that: (a) meets the definition of a microgrid contained in Senate Bill 1339; (b) involves a single customer establishing a microgrid at a single account; (c) consists of resources that are interconnected under the terms of Electric Rule 21; and (d) consists of resources that are individually eligible for a net energy metering successor schedule that reflects the orders in Decision 16-01-044;

- Without changing or redefining terms, incorporates applicable existing tariffs into the new microgrid tariff by reference, including the tariffs that encompass the investor-owned utility's Net Energy Metering Multiple Tariffs program;
- Incorporates new microgrid tariff into the resiliency project engagement guide required by Decision 20-06-017, Ordering Paragraph 9; and
- Incorporates the new microgrid tariff into all other relevant materials, including any websites or portals, where other related tariffs are presented.

5. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall jointly file a Tier 1 advice letter, within 30 days upon the issuance of this decision, that provides a description of the timeline for the convening stakeholder working groups and/or meetings to solicit a range of positions on the program elements to form a full program implementation plan for a Microgrid Incentive Program pursuant to Section 3.4.3 of this decision.

6. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall jointly file an implementation plan, within 120 days upon the issuance of this decision, that comprehensively discusses the implementation details of a Microgrid Incentive Program pursuant to Section 3.4.3 of this decision. At a minimum, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall include the following information in their joint implementation plan:

- Description of the program administrator's reporting requirements and timeline, such as program status reports, project status reports, and quarterly budget status reports;

- Discussion of the approach for allocating program funding amongst the individual investor owned utilities;
- Discussion of the accounting and ratemaking treatment, such as specification that the program may only recover costs once expenditures have been incurred and may not be proactively collected;
- Discussion of the method used to control program administrative expenses, such as implementing a cap of not more than 10 percent of the total project cost;
- Development of a program delivery plan handbook as a resource for potential participants;
- Description of approach for program evaluation;
- Southern California Edison Company and San Diego Gas & Electric Company customers shall have access to a one-time matching funds payment to offset some portion of the utility infrastructure upgrade costs associated with implementing the islanding function of the microgrid; and
- Description of the public workshops that were convened, including but not limited to, the number and type of participants, and their contributions to the discussion.

7. Pacific Gas and Electric Company, Southern California Edison Company and San Diego Gas & Electric Company shall each file, within 30 days upon the issuance of this decision, a Tier 1 Advice Letter that modifies their respective electric preliminary statement to establish a new Microgrid Memorandum Account, if one does not exist, and add a specific subaccount to track: (a) the costs incurred to develop the Microgrid Incentive Program pursuant to Section 3.4.3 of this decision prior to approval of the program implementation details; and (b) the other implementation requirements for fulfilling Section 3.4.3 of this decision.

8. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each file Tier 1 advice letters, within 30 days upon issuance of this decision, that modifies their respective preliminary statements to establish a Microgrid One Way Balancing Account. The Microgrids One Way Balancing Account shall have two subaccounts: (1) electrical isolation technology evaluation; and (2) microgrids evaluation..

9. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each file Tier 2 advice letters, within 60 days upon issuance of this decision, that define the criteria and evaluation process to assess the different isolation technologies pursuant to Section 3.5.3 of this decision. Costs for implementation shall be recorded in a new one-way balancing account and recovered through distribution rates via the Annual Electric True-up advice letter filing.. Additionally, in this Tier 2 advice letter, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall include the criteria and evaluation to assess the different isolation technologies aimed at evaluating legitimate, utility-scale technologies capable of handling California's complexity and diversity. This includes, but is not limited to, the following:

- Process for submittal of isolation technology by a third party to the investor owned utility;
- Required timeframe for the investor owned utility to respond to the third party with a specific evaluation plan for the submitted technology;
- Required timeframe for completion of an initial evaluation by the investor owned utility;
- Process for engaging with and providing investor owned utility feedback to the submitter of the technology,

- Expectations for engagement by and response to investor owned utility feedback from submitter of the technology;
- Process for identifying which, if any, standards or safety requirements are applicable and must be certified or tested by a Nationally Recognized Testing Laboratory (e.g., Intertek, UL);
- Identification of which evaluation steps can be completed prior to certification or testing by a Nationally Recognized Testing Laboratory and which must be completed after certification or testing;
- Discussion of circumstances when lab or field testing by investor-owned utility will be required in addition to certification by a Nationally Recognized Testing Laboratory to applicable standards (e.g., UL 414 and UL 1741);
- Justification by investor owned utility for repeating any testing (e.g., high-voltage, environmental performance testing) already completed as part of certification to a national standard by a Nationally Recognized Testing Laboratory; Identification of an evaluation approach for examining the use of advanced metering infrastructure, and technologies that leverage it, to enable electrical isolation as a viable resilience strategy, as identified on page 4 of the July 3, 2020, R.19-09-009 scoping ruling;
- Discussion of circumstances when customer-supplied technology would be allowed and justification by investor owned utility for any circumstances requiring investor owned utility-supplied technology;
- Discussion and justification of circumstances when investor owned utility believes ownership of any customer-supplied technology must be transferred to the investor owned utility;
- Process and proposed timeframe for completing detailed evaluation by the investor owned utility, inclusive of a determination and explanation regarding whether the

proposed technology is approved for use and for reflecting that determination in the utility's service rules; and

- Process and frequency for reporting, to the Commission, summaries and outcomes of technology evaluations undertaken by the investor owned utility, including information from the perspective of the submitter of the technology and a summary of any irresolvable disputes between the evaluating utility and the submitter of the technology.

10. Energy Division shall facilitate the Resiliency and Microgrids Working Group, which shall identify microgrid-specific policy issues that are not adequately addressed by existing venues at the Commission, California Energy Commission, California Air Resources Board, or California Independent System Operator, if any, such as:

- Identifying attributes or characteristics of microgrids that are not adequately addressed by Rule 21;
- Assessing what impact studies are required for microgrids to connect and recommend to the larger electrical grid; and what standards and protocols are needed to meet large investor owned electrical corporation and California Independent System Operator requirements;
- Determining whether there should be compensation for energy exports generated by resources in a microgrid taking service under the new microgrid tariff;
- Assessing what a prudent level of compensation should be, if any, for energy exports in a microgrid taking service under the new microgrid tariff;
- Resolving how inter-related impacts to the wholesale distribution access tariff should be resolved; and Assess whether the use of resources is consistent with overall state laws and policies.

11. Southern California Edison Company shall act as the lead investor-owned utility, on behalf of Pacific Gas and Electric Company and San Diego Gas & Electric Company, for reporting to the Resiliency and Microgrids Working Group on direct current metering activities pursuant to Section 3.8.3 of this decision.

12. Energy Division shall engage a neutral third-party contractor to review and evaluate the effectiveness of the changes to the electric rules adopted by this decision and Decision 20-06-17, the new microgrid tariff, the new microgrid incentive programs, and the pilot studies to assure competitiveness and ratepayer best interest pursuant to Section 3.9.3 of this decision. Costs for the third-party contractor shall be recorded in a new one-way balancing account and recovered in distribution rates through the Annual Electric True-up advice letter filing.

13. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company may each record costs to their respective Microgrid Memorandum Accounts for temporary generation programs specifically for safe-to-energize substations, affected by transmission-level public safety power shutoff events, *for 2021 provided that:* (1) the utility has filed a Tier 2 advice letter that demonstrates need and consideration of cleaner alternatives pursuant to Appendix A, Section I of this decision; and (2) the Commission authorized the investor owned utility's request. This order does not limit or affect the ability of Pacific Gas and Electric Company, Southern California Edison Company, or San Diego Gas & Electric Company to reserve temporary generation for other purposes (*e.g.*, providing power to community resources centers or critical facilities during grid outage events).

14. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company may each record costs to their respective Microgrid Memorandum Accounts for temporary generation programs specifically for safe-to-energize substations affected, by transmission-level public safety power shutoff events *for years after 2021 provided that:* (1) the utility has filed an application in accordance with a clean generation transition pursuant to Appendix A, Section II of this decision; and (2) the investor-owned utility has a Tier 2 advice letter demonstrating need and consideration of cleaner alternatives pursuant to Appendix A, Section I of this decision; and (3) the Commission authorized the investor owned utility's request. This order does not limit or affect the ability of Pacific Gas and Electric Company, Southern California Edison Company, or San Diego Gas & Electric Company to reserve temporary generation for other purposes (*e.g.*, providing power to community resources centers or critical facilities during grid outage events).

15. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each file a Tier 3 advice letter if they intend to seek cost authorization for costs incurred to develop a clean substation microgrid project, pursuant to the requirements in Appendix A, Section I.2 of this decision.

16. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each file a Tier 1 advice letter that modifies their respective electric preliminary statements to create a new Clean Substation Microgrid Program subaccount in their Microgrids One Way Balancing Account if they intend to pursue any upcoming clean substation microgrid projects, pursuant to the requirements in Appendix A, Section I.2 of this decision.

17. Pacific Gas & Electric Company, Southern California Edison Company and San Diego Gas and Electric Company are individually authorized to allocate the recorded expenditures for the clean substation microgrid projects to all distribution customers, and shall seek approval for the specific method of cost allocation and recovery via rates as part of the Tier 3 Advice Letter required pursuant Appendix A, Section I.2 of this decision if they pursue such projects.. The recorded expenditures shall be limited to the cap stated in Appendix A, inclusive of the independent evaluator.

18. Pacific Gas and Electric Company shall file an application, by September 30, 2021, if it intends to request cost recovery for its 2020 Temporary Generation Program and/or Make Ready Program expenditures, as authorized in Decision 20-06-017.

19. Pacific Gas and Electric Company's September 25, 2020 Motion to File Supplemental Report and to Exceed Page Limit Set Forth in Assigned Commissioner and Administrative Law Judge's Ruling is granted.

20. All outstanding motions and requests in this proceeding that are not specifically addressed in this decision are denied.

21. Rulemaking 19-09-009 remains open.

This order is effective today.

Dated January 14, 2021, at San Francisco, California.

MARYBEL BATJER

President

MARTHA GUZMAN ACEVES

CLIFFORD RECHTSCHAFFEN

GENEVIEVE SHIROMA

Commissioners

Appendix A

I. Interim Approach for Reserving Temporary Generation for Safe-to-Energize Substations for 2021

The interim approach, outlined below, has two guiding aims:

1. Keep the lights on: To maximize the ability to keep power on during a transmission outage where safe to do so in 2021, while ensuring just and reasonable rates.
2. Start the transition towards clean temporary generation: To increase utility and market experience and understanding of alternatives to diesel generation to facilitate a transition away from diesel in future years.

1. Keep the Lights On:

CPUC regulated utilities have recently been allowed to utilize Public Safety Power Shutoffs (PSPS) to reduce the risk of wildfire ignition from electrical facilities during high wind events. Since SDG&E started utilizing this tool in 2013 and PG&E in 2018, the usage of this tool has increased resulting in dramatic, and previously unexpected, customer disruptions to utility service based on utility-controlled transmission outages. To minimize the number of customers affected by a transmission outage during a PSPS event, the utility is authorized to reserve temporary generation in advance specifically to have the capability to power the load of safe-to-energize substations. This temporary generation is intended to keep the lights on specifically during a transmission outage caused by a PSPS event, a circumstance that was not previously envisioned during the past few decades of utility transmission and substation electric grid planning.

This authorization does not limit or affect in any way the ability of a utility to reserve temporary generation for other purposes, such as providing power to community resource centers or critical facilities during events or serving load during routine grid maintenance, which fall outside the scope of this framework. Throughout the following document, ‘temporary generation’ refers to this specific use case above, where temporary generation is reserved for energizing safe-to-energize substation load subject to PSPS transmission outages. A utility seeking to reserve temporary generation for this specific use case would be required to submit a Tier 2 Advice Letter detailing how the conditions described below have been met.

This framework is an interim step that may apply beyond 2021 if and only if 1) the utility has filed an application pursuant to the process for transitioning to clean generation described below under section II and; 2) the CPUC has not yet issued a decision on that application.

The CPUC authorizes a utility to track the costs associated with reserving temporary generation in a memorandum account, including diesel as well as other temporary generation for the purpose of providing power to the load of safe-to-energize substations during a PSPS outage, under the following conditions:

- 1.1. The utility reserves temporary generation capacity equivalent to 120% or less of the coincident peak deployment of temporary generation in the immediately previous year.
Or
The utility justifies the scope and scale of the need for providing temporary generation by

providing the basis and justification why it is reasonable to prepare for specific substations to be de-energized, including but not limited to:

- a. Historical meteorological data showing probability of public safety power shutoff.
- b. Historical outage data.
- c. Fire spread modelling and incorporation of consequences to customers.
- d. Transmission asset condition information; and
- e. Transmission operability assessment information.

Rationale: Meeting this condition indicates that the utility is reserving the appropriate quantity of temporary generation.

- 1.2. The utility's previous temporary generation program, if any, has proven effective at serving loads of safe-to-energize substations that would have otherwise been without power during PSPS or other outage events, if and when it was activated to do so.

Rationale: Meeting this condition indicates that the Temporary Generation Program contributes to the aim of keeping the lights on where safe to do so.

- 1.3. The utility provides evidence that there is resource scarcity that makes it prudent to pay a nonrefundable reservation fee which guarantees generator availability for the duration of fire season in advance of need, or that advance reservation is necessary for logistical reasons to safely mobilize and stage equipment.

Rationale: Meeting this condition indicates that it is reasonable to reserve temporary generation in advance.

- 1.4. The utility demonstrates that it has undertaken an analysis of the all-inclusive costs associated with reserving and deploying the temporary generation and that the costs are reasonably close to that associated with deploying similar equipment under normal conditions, such as for a planned maintenance outage.

Rationale: Meeting this condition indicates that the costs associated with reserving and deploying temporary generation are reasonable.

- 1.5. The utility demonstrates ongoing consultation with local air quality agencies,³⁷⁶ aimed at ensuring the deployment of temporary generation at substations complies with applicable regulations.

Rationale: Use of the California Air Resources Board (ARB) Portable Engine Reservation Program (PERP) program is not intended to thwart local air district jurisdiction and applicable permitting requirements for new stationary sources of air pollution. Meeting this

³⁷⁶ Local air quality agencies may include local air pollution control districts or air quality management districts.

condition demonstrates that PG&E has addressed legal and regulatory issues related to emissions and public health with local air districts.

In addition, the utility may reserve or contract to make available temporary generation resources for up to 3 years. Any generation contracted for more than a year must reduce PM and NO_x emissions compared to a Tier 2 diesel engine by at least 90 percent.

Given the particularly high emissions of harmful air pollutants from Tier 2 diesel engines and conventional diesel fuel, the Commission expects a utility to minimize its use of Tier 2 diesel—and use alternative fuels like hydrotreated vegetable oil (HVO)—where alternatives are safe, cost effective, and feasible.

For purposes of transparency, the utility shall file a compliance filing in this proceeding by March of the following year, containing a report detailing the use of temporary generation under this framework. This report shall detail: (a) the total number of diesel generators employed; (b) each deployment location and run time of generators by date and time; (c) the reasons why the use of backup power was needed; (d) Cal EnviroScreen percentile for the generator location; (e) number of customers served; (f) fuel types used, extent of use by fuel types, and description of the refueling logistics; (g) a summary of emissions by greenhouse gas (GHG) and criteria air pollutant emissions factors; (h) lessons learned from an after-event analysis of the fire season experience; and (i) recommendations for continuous improvement.

2. Start the Transition towards Clean Generation

A utility seeking to reserve temporary generation under this framework would also be required, in its Tier 2 Advice Letter, to document its plans to establish clean substation microgrid projects located at, or able to serve, at least one substation. This opportunity is intended to be open to projects that are novel or not commercially tested, i.e. pilot projects, as well as permanent projects in general, even if they are commercially tested and available.

In order to facilitate the development of projects that primarily involve stationary installation of generation at substations for longer than 3 years, the utility must identify three top candidate substations that best fit condition 2.2 below, in its Tier 2 advice letter.

If the utility determines, based on the conditions described below, that it is not feasible to move forward with such projects, it must document the specific conditions that have not been met in its Advice Letter.

The following conditions apply to the clean substation microgrid pilot projects:

- 2.1. Projects may be either mobile or stationary, and either temporary or permanent.
- 2.2. Projects that involve stationary installation of generation at a substation for longer than 3 years can only be pursued at substations where, with high confidence:
 - a. Transmission lines serving the substation may be de-energized because of the fire risk, despite safe-to-energize load at the substation. The probability of transmission-level power loss affecting otherwise safe-to-energize load is relatively high and expected to persist; and
 - b. Either, the utility does not have ongoing, planned, or proposed grid hardening investments that would significantly reduce the risk of de-energization at this substation over the next 10 years; or
- c. Or, alternatively, the cost of proposed grid hardening investments exceed \$10 million multiplied by the peak substation load in MW, and a permanent microgrid would replace the need for grid hardening.³⁷⁷
- 2.3. Proposed projects must be judged technically feasible, safe, and financially competitive by the utility. At minimum, these solutions should meet the following requirements:
 - a. Design should be capable of islanding for 48 hours.
 - b. Design should be able to black start the substation load.
 - c. Design should meet cold load pickup requirements.
 - d. Design must meet frequency and frequency response requirements.
 - e. Design should meet protection requirements or include protection upgrades.
 - f. The cost of the project to ratepayers may not exceed twice the expected cost of utilizing backup diesel generation over the contract period. In total, the cost

³⁷⁷ The \$10 million figure comes from taking the Commission's estimate for the cost of diesel rental (used as a proxy for back up generation), multiplying that by 15 years to reflect the likely contract period for permanent solutions, and rounding up.

may not exceed the expected cost of 20 years of diesel rental and operation.

- 1.1. Proposed solutions should meet the following general criteria:
 - a. If safe to do so, it is permissible for a subset of the project generation and/or storage resources to enter operation before the entire project is completed, allowing the project to progress in stages.
 - b. By the 2022 fire season, September 1, 2022, emission from islanding the substation during PSPS events should be significantly reduced, including:
 - i. At least a 90 percent reduction in PM emissions and NO_x emissions compared to what would have been emitted if large Tier 2 Diesel Generators had been used instead of the project.
 - ii. Greenhouse gas emissions roughly equivalent to, or less than, emissions from the current grid mix.
 - iii. Although only criteria (b) above need to be met by the 2022 fire season, as an interim milestone, completed permanent projects must demonstrate a fully renewable microgrid.
 - iv. The project may be capable of export during normal conditions, but it is not required to do so.

- 2.5 Total cost of all projects over their expected useful life may not exceed \$350 million.

Requiring a utility to initiate clean substation microgrid projects gives room for multiple different solutions to be tested, and a broader baseline of knowledge be developed, while working on a full framework in 2021 for future years (see process proposal below). The accompanying conditions ensure that projects are feasible, clean, cost-effective, and low risk. Based on the threshold costs and limited number of projects in the earlier CPUC proposal, expenditures by the utility may not exceed a total of \$350 million dollars.³⁷⁸

³⁷⁸ Given the earlier proposed limit of no more than three projects with a cost cap of \$500 per kw-year, and assuming substations of average size among those with safe-to-energize load (about 15 MW) and contracts of 15 years, the total expenditures could be as high as \$350 million over the three projects' lifetimes. With the limit on the number of projects removed, it makes sense to cap total expenditures at \$350 million.

Although these alternatives should be partially or fully ready for commercial operation by the 2021 fire season, permanent projects may run into delays that make this date unfeasible. Thus, as a contingency or fallback plan, the Commission would authorize the utility to reserve temporary generation to cover these three substations as well, to the extent the utility determines this is necessary.

II. Process for Transitioning to Clean Generation for Safe-to-Energize Substations After 2021

In order to make investments to provide power to customers subject to transmission outages during PSPS events that are served by safe-to-energize substations, a utility must file an application by June 30, 2021. The Application will demonstrate the utilities' plan for transitioning to clean sources of generation in future years to power customers during PSPS events. The application must detail the utility's plan for generation investments, justified with a comparative analysis of alternatives considered, the expected persistence of the need and why it will not be reduced or eliminated by other infrastructure investments, and its proposed procurement framework for the generation.

In detailing its plan, the utility must provide information about the locations³⁷⁹ that will remain unmitigated (and thus subject to potential public safety power shutoffs) due to lack of cost-effective and feasible wires solutions. The utility will also need to include the basis for why the transmission lines and/or distribution lines and/or distribution circuits are unable to remain energized during adverse weather conditions including assessments of transmission line condition in high fire threat areas and their propensity to fail under specific conditions. For example, the utility must provide a detailed explanation of the rationale for each transmission line de-energization previously initiated during recent fire seasons PSPS events in its Application.

This also means that the utility would provide specific information such as a list of substation locations where transmission related PSPS outages are expected to persist for 3 years or longer or where other alternatives including but not limited to hardening, reconstruction, or undergrounding of utility infrastructure to eliminate, mitigate, or reduce incidences of PSPS are shown to be uneconomic over any timeframe. The utility may rely on or refer to its Wildfire Mitigation Plan and other documents or data from other proceedings in preparing the Application.

A section of the Application will include analysis of the alternatives considered for addressing the problem statement and proposed solution at each substation. This analysis would form the basis and justification supporting the IOUs' capital investment plan for the resilience solutions that the IOU proposes in its Application. By presenting the alternatives considered and a comparative analysis, stakeholders would have open transparent information to understand the IOUs recommendation with full visibility to the investments under consideration in the IOU Wildfire Mitigation Plan. The utilities have indicated in this and other proceedings that they may use and

³⁷⁹ Including substation name, related distribution circuits, prior PSPS events, county, peak megawatt served, addressable megawatt, number of total customer accounts, and number of addressable customer accounts.

include the results of modeling techniques and actual experience gained during prior fire seasons to justify the need for generation.

The comparative analysis of available alternatives should incorporate the results of advanced modelling such as weather modelling, transmission system powerflow modelling, wildfire fire spread modelling, and transmission line condition assessment. It should also consider grid hardening, undergrounding, enhanced vegetation management, sectionalizing, and other mitigation strategies that would be options for enabling the distribution circuit to remain energized when safe to do so.

Utilities' applications must address the following topics:

1. How will the utility scope the need for temporary generation? Indicate how these methods may be improved over time to enhance accuracy and precision regarding how much generation is needed and where it should be deployed.
2. How will the utility minimize the need for temporary generation over the next 5/10 years in a cost-effective way? Provide an approximate timeline detailing, at minimum:
 - a. Transmission line exclusion from PSPS scoping.
 - b. Tower Replacement, for example, PG&E Wildfire Mitigation Plan (WMP) Section 5.3.3.15.
 - c. Targeting undergrounding for certain transmission circuits or portions of transmission circuits, per WMP section 5.3.3.16.
 - d. Transmission Line System hardening or equipment replacement, per WMP Section 5.3.3.17.5.
 - e. Increased grid flexibility and sectionalizing.
 - f. Permanent microgrid development.
3. How will the utility support the development of clean temporary generation resources? This support should include, but is not limited to:
 - a. A testing process for vendors of cleaner temporary generation products, so that products that meet the technical requirements in controlled tests can be quickly field tested and the utility can gain confidence in the logistical and operational capabilities of new vendors.
 - b. A review to validate the technical and logistical requirements for temporary generation, focusing on the requirements that present the largest barriers to the use of clean generation resources.
4. Present an overall timeline, detailing how the combination of improvements in scoping, minimization of the need for temporary generation, and support for cleaner temporary generation products will reduce the need to deploy diesel and other fossil resources over the next 5/10 years.
5. Referring to the overall timeline and other included information, lay out a set of criteria and/or targets for the procurement of temporary generation resources that could apply over the next 5/10 years.
6. Referring to the overall timeline and other included information, lay out a set of criteria and/or targets for the development of permanent generation resources that replace the need for temporary generation over the next 5/10 years.
 - a. Address whether resilience needs and resource adequacy needs would be addressed within this form of procurement.
 - b. Address whether, due to the circumstances of the Governor's emergency proclamation related to the stage 3 emergency of August 2020, there are short term

reliability and resiliency needs that need to be expedited, and how should these circumstances be addressed in this procurement process.

- c. In the event ARB offsets are used, ensure they are fully compliant with 17 Code of California Regulations, section 95970.
7. Establish and justify clear targets for reducing the emissions associated with temporary generation and permanent generation.
8. Identify criteria to be used to evaluate generation and storage technologies and vendors to be considered in the long-term plan for temporary or permanent generation.
9. Describe a process for subjecting any proposed contracts with temporary or permanent generation providers to oversight and review.
10. Document any solicitation protocols to be used to procure resources needed to provide temporary or permanent generation over time.
11. Describe a process for engaging the local air quality agencies, community choice aggregators (CCAs) and local governments for their input regarding the development of permanent generation resources to replace temporary generation that is consistent with CPUC jurisdiction.
12. Propose an approach for cost control, allocation, and recovery for all costs associated with temporary or permanent generation over the covered period of the application that addresses the rate treatment of bundled and unbundled customers served by the generation.
13. Propose an ongoing process for subjecting the utility's temporary or permanent generation emissions targets, needs, plans, evaluation criteria, solicitation protocols, and costs to oversight and review.

III. Ratemaking

- a) 2021 temporary generation: Allow a utility to track all-inclusive operating and maintenance expenditures for leasing or renting and deploying temporary generation, as specified in Section I.1 above, in a Microgrids Memorandum Account using separate annual subaccounts . If such an account does not exist, it should be created. Recovery would be requested by the utility transmitting an Application requesting reasonableness review and rate recovery, either as an Application, or, in its General Rate Case. This process will be used until the Commission has approved an alternative ratemaking process pursuant to Section II of this appendix.
- b) 2021 clean substation microgrid projects: Allow a utility to recover in rates the cost for clean substation microgrid projects, as specified in Section I.2 above. This may include, but is not limited to, capital investment in permanent generation or, if the utility has contracted for power purchases, the resulting expenses for the power purchase agreement. The amount would be subject to a cap described in Section I above, and would be authorized upon approval of Tier 3 Advice Letter in 2021. The Advice Letter should be served on the Wildfire Mitigation Plan Proceeding, R.18-10-007, so that it can be considered in coordination with other PSPS mitigation programs being evaluated as part of the wildfire mitigation plans. . The expenditures shall be recorded in a one way balancing account for allocation to all applicable distribution customers, in a manner proposed within the Tier 3 advice letter.
- c) 2023 and future years' temporary generation: Ratemaking treatment for 2023 and future years must be addressed in a utility's application that discusses their plan for a transition to clean generation pursuant to Section II of this appendix. The process described for 2021 will be utilized until the Commission has approved an alternative ratemaking process.

(END OF APPENDIX A)