PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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Agenda ID# 19755
ENERGY DIVISION RESOLUTION E-5164
September 9, 2021

R E S O L U T I O N

Resolution E-5164. Pacific Gas and Electric. Evaluation of Clean Energy Resource Opportunities for Substation Microgrids Pursuant to Decision (D.) 21-01-018.

PROPOSED OUTCOME:

- Orders Pacific Gas and Electric (PG&E) to pursue a clean substation microgrid project at one or more substations, as required by D. 21-01-018.
- Resolves outstanding issues from PG&E Advice Letter (AL) 6105-E and PG&E AL 6204-E.
- Approves PG&E request to use two existing Demand Response (DR) programs to reduce the use of temporary generation during Public Safety Power Shutoff (PSPS) events.

SAFETY CONSIDERATIONS:

- This resolution is expected to reduce the use of diesel generators as temporary generation during PSPS events, thus reducing harmful air pollutants like particulate matter and NOx.

ESTIMATED COST:

- No new costs are approved in this Resolution. This Resolution is expected to lead to increased use of already approved funds. Ordering PG&E to pursue a clean substation microgrid project is expected to lead to increased use of the funds approved in D. 21-01-018 for such projects. Approving PG&E's request to use two DR programs during PSPS will use the existing outreach budget for DR approved in D.18-11-029 and

will use the existing authorized funding for the Base Interruptible Program to make incremental monthly capacity payments.

By AL 6204-E, Filed on June 9, 2021, and AL 6105-E, Filed on March 5, 2021.

SUMMARY

This Resolution disposes of PG&E AL 6204-E, and also completes the disposition of AL 6105-E. Portions of 6105-E were previously approved through Energy Division disposition letter on April 14. This Resolution (1) requires PG&E to pursue a new clean substation microgrid project and (2) approves PG&E's proposed use of Demand Response (DR) programs during PSPS events. In D. 21-01-018, the Commission required that any utility reserving temporary generation to mitigate transmission-level PSPS events "document its plans to establish clean substation microgrid projects located at, or able to serve, at least one substation," or alternatively "document the specific conditions [for clean substation pilots] that have not been met in its Advice Letter."[1] We find that PG&E has not documented its plans to establish a clean substation microgrid project. We also find that PG&E has not adequately documented specific conditions that make such a project infeasible. Although PG&E provides evidence for the infeasibility of temporary projects, it did not provide adequate evidence for the infeasibility of permanent projects, which may still meet the requirements of D. 21-01-018. PG&E must meet its obligation under D. 21-01-018 by pursing a new clean substation project as ordered in this Resolution. PG&E shall issue a Request for Proposals that allows for permanent projects, and shall submit a Tier 3 Advice Letter requesting approval for at least one project through the framework approved in D. 21-01-018. This Resolution also approves PG&E's request to use two existing DR programs to reduce the use of temporary generation during Public Safety Power Shutoff (PSPS) events.

[1] Decision 21-01-018, Page A-4.

BACKGROUND

On January 21, 2021, the CPUC issued D. 21-01-018, which included an Appendix with guidelines for utilities seeking to reserve temporary generation to mitigate PSPS events. Section I.2 of that Appendix aims to "start the transition towards clean generation," and requires that a utility reserving temporary generation pursue at least one clean substation microgrid project as an alternative to diesel backup generation. In its Tier 2 Advice Letter seeking to reserve temporary generation, the utility must either (1) "document its plans to establish clean substation microgrid projects located at, or able to serve, at least one substation," or, (2) "document the specific conditions [for clean substation pilots] that have not been met."[2]

In compliance with the directives of D. 21-01-018, on March 5, 2021, PG&E submitted AL 6105-E to request approval to reserve 168 MW of temporary generation based on the five criteria laid out in D. 21-01-018, Appendix A, Section I.1. In this Tier 2 advice letter, PG&E conveyed that it had launched a Request for Proposals (RFP) for clean substation microgrid projects to provide generation support to substations de-energized during PSPS, and that it was still evaluating the bids submitted to that RFP. PG&E stated in AL 6105-E that it intended to submit one or more projects for review and approval via a future Tier 3 Advice Letter (i.e. AL 6204-E). In a subsequent disposition letter, the CPUC's Energy Division stated that the portions of Advice Letter 6105-E addressing clean substation microgrid projects would be disposed of separately from the request to reserve temporary generation.

On June 9, 2021, PG&E submitted AL 6204-E to inform the CPUC of the results of the Request for Proposals for a clean substation microgrid project. In AL 6204-E, PG&E ultimately did not submit any projects for approval based on the results of its RFP. Instead, the Advice Letter aims to "document the specific conditions [for clean substation pilots] that have not been met." PG&E states in its Advice Letter that none of the bids submitted to the RFP met the cost cap laid out in D. 21-01-018.

[2] Decision 21-01-018, Page A-4.

This Resolution, in disposing of AL 6204-E, also completes the disposition of PG&E's AL 6105-E.

AL 6204-E describes PG&E's efforts to solicit substation-level generation projects and documents its claim that deploying generation alternatives to diesel at substation-level microgrids in 2021 is infeasible based upon the criteria set forth in the Decision and bids received. AL 6204-E also requests CPUC approval to pilot the use of certain DR programs for the purpose of reducing the use of temporary diesel generation at substations during PSPS events.

Demand Response Pilot Proposal

In AL 6204-E, PG&E also requests that the CPUC authorize PG&E to pilot the use during PSPS events of two existing DR programs able to dispatch at the substation level. These programs would be used alongside diesel generation when portions of the distribution system are safe-to-energize but cut off from transmission level power, reducing the use of diesel temporary generation at substations and associated greenhouse gas emissions and criteria pollutants. PG&E proposes that these DR programs be triggered under the following conditions: "(1) a substation that is both intended to be, and actually is, energized during PSPS via a microgrid;
(2) the distribution feeder serving a particular enrolled DR customer or set of customers is safe to energize; and (3) enrolled DR customers fall within the microgrid and safe to energize boundaries."[3] PG&E also describes how piloting the use of these DR programs during PSPS events could be considered a clean substation microgrid project under D. 21-01-018.

PG&E provides the following description of the two DR programs. The two programs are also described in PG&E's tariff book.[4]

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[3] AL 6204, p. 7.

[4] Base Interruptible Program Tariff: https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_SCHEDS_E-BIP.pdf; Smart AC Tariff: https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_SCHEDS_E-CSAC.pdf

First, the Base Interruptible Program (BIP) is intended to provide load reduction on PG&E's system on a day-of basis when the California Independent System Operator (CAISO) issues a curtailment notice. Customers who voluntarily enroll in the program are required to reduce their load down to or below their Firm Service Level (FSL) when called to do so. Customers are given at least 30 minutes advance notice, and there is a maximum of one event per day and six hours per event. The program includes use limitations, including that there will not be more than 10 events per month, or 180 hours per year. Triggers for calling BIP include: when CAISO has determined that a Stage 1 emergency is imminent; a Stage 1, Stage 2, or Stage 3 emergency; during a transmission system contingency; or when needed based on forecasted system conditions. Customers may enroll directly with PG&E, or customers can sign up with third-party BIP Aggregators. BIP pays a monthly capacity payment, and there is a penalty if the enrolled customer fails to achieve the FSL during a called BIP event. There is no dispatch payment for each event.

Second, Smart AC is a voluntary DR program where a load control device at a customer's premise can temporarily disengage the customer's primary central air-conditioning unit or raise the temperature at the thermostat when the device is remotely activated. Smart AC pays a one-time up-front enrollment payment without any ongoing incentives.

PG&E notes that there are few customers currently enrolled in either the BIP or Smart AC programs served by one of the ten substations where PG&E plans to deploy temporary generation in 2021. Currently, there is 0.327 MW of enrolled DR potential at these substations, but 11 MW of potential load reduction from all eligible customers at these substations.[5]

PG&E requests CPUC approval of this new use case for these DR programs, but does not request any changes in the tariff language for either tariff.

[5] AL 6204-E, p. 9-10.

NOTICE

Notice of AL 6204-E was made by publication in the Commission's Daily Calendar. Pacific Gas and Electric states that a copy of the Advice Letter was mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

PG&E's Advice Letter 6204-E was timely protested by the California Energy Storage Alliance (CESA), jointly by the California Environmental Justice Alliance, Sierra Club, 350 Bay Area, Vote Solar, The Climate Center, and Local Clean Energy Alliance (Joint Protestors), and by the Public Advocates Office (PAO).

PG&E responded to the protests of CESA, Joint Protestors and PAO on July 7, 2021.

CESA Protest – June 29, 2021

In its protest, CESA identifies concerns with the RFP process PG&E used to evaluate the feasibility and costs of clean substation microgrid projects. According to CESA, the RFP "was structured in a way that was all but doomed to fail in terms of its ability to elicit robust market participation and a diversity of solutions."[6] CESA focuses their protest on the structure of PG&E's 2019 Distributed Generation Enabled Microgrid Services (DGEMS) RFP, arguing that the process was too rapid, that the performance and operational requirement were not aligned with D. 21-01-018, and that the RFP did not assess the full range of clean alternatives. CESA also argues that PG&E's proposed expansion of DR programs does not meet the requirements of a clean substation microgrid under D. 21-01-018.

CESA proposes that the CPUC direct PG&E to immediately issue a new clean substation microgrid pilot RFP with delivery deadlines starting in May 2022, 2023, and 2024—noting that D. 21-01-018 qualified its requirement that pilots be

[6] CESA protest at p. 2.

partially ready by 2021 by noting the potential for projects to run into delays, in this case a delay resulting from "inadequate consideration of the full range of alternatives."[7] CESA also argue that the CPUC should direct PG&E to include additional incentives for behind-the-meter energy storage resources.

Joint Protestors Protest – June 29, 2021

In their protest, the Joint Protestors (California Environmental Justice Alliance, Sierra Club, 350 Bay Area, Vote Solar, The Climate Center, and Local Clean Energy Alliance) call attempts by PG&E to meet the requirements in D. 21-01-018 "half-hearted" and argue that PG&E "has not sufficiently demonstrated either its proper consideration of clean alternatives or the infeasibility of such alternatives."[8] The Joint Protestors call for more transparency with regard to PG&E's claim that all bids in its RFP did not meet the cost cap requirement in D. 21-01-018. The Joint Protestors also object to PG&E calling its proposed expansion of two DR programs a 'clean substation microgrid pilot.'

The Joint Protestors propose that the CPUC require PG&E to implement additional non-generation load reduction measures. "These include enhanced Flex Alert emergency energy conservation programs and incentives, as well as accelerated energy efficiency and customer sited PV and storage programs."[9]

PAO Protest – June 29, 2021

In its protest, PAO recommends that the CPUC solicit developer feedback on PG&E's RFP process and require PG&E to submit an additional Advice Letter adequately documenting its plans to establish clean substation microgrids beyond the 2021 RFP. Additionally, if PG&E's proposed DR pilot is adopted, PAO argues that PG&E should be required to report on the extent to which the pilot depresses the use of diesel fuels.

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[7] CESA protest at p. 7.

[8] Joint Protestors protest at p. 1-2.

[9] Joint Protestors protest at p. 5.

PG&E Reply to Protests – July 7, 2021

In its reply to protests, PG&E argues (1) that no protestors object to its requested authorization for expanded use of two DR programs, (2) that PG&E has sufficiently described how it met the requirements of D. 21-01-018 referring to the results and process of its RFP for clean substation microgrids, and (3) that future work to transition to cleaner technology should be addressed in PG&E's ongoing Application 21-06-022, filed on June 30, 2021. Although multiple protestors objected to calling PG&E's request to use the BIP and Smart AC programs during PSPS events a 'clean substation microgrid pilot,' no protesters objected to the proposed expansion of these programs. PG&E noted that it provided a description of its temporary generation RFP in AL 6105-E, and that it is standard business practice to keep the details of specific submitted bids confidential. PG&E also emphasized that it has already submitted Application 21-06-022, which seeks review and authorization of a long-term investment framework for substation-level microgrids to mitigate PSPS impacts, as required in D. 21-01-018. PG&E argues that "additional work to procure cost-effective and clean substation microgrid solutions should be considered as part of that application."[10]

DISCUSSION

The Commission has reviewed the Advice Letter and the protests, and finds that PG&E must fulfill the requirement in D. 21-01-018 to move forward with at least one clean substation microgrid project. Specifically, PG&E has not demonstrated that a permanent clean substation microgrid project is infeasible under the conditions laid out in D. 21-01-018.[11] As such, we find it reasonable to direct PG&E to launch a Request for Proposal (RFP) that allows for permanent projects, and to seek approval for one of these projects from the CPUC through a future Advice Letter according to the process laid out in D. 21-01-018.

[10] PG&E reply at p. 5.

[11] Conditions 2.1 to 2.5 are listed in Decision 21-01-018, Page A-4 and A-5.

PG&E already pursued an RFP limited to temporary (i.e. 1-3 year) clean substation microgrid projects, and reported that no bids submitted to the RFP met the requirements established by D. 21-01-018. Although this is sufficient evidence for the infeasibility of temporary projects, PG&E has not sufficiently documented specific conditions that make permanent projects infeasible. As such, it has not yet fulfilled the requirement in D. 21-01-018 to either (1) "document its plans to establish clean substation microgrid projects located at, or able to serve, at least one substation," or, (2) "document the specific conditions [for clean substation pilots] that have not been met."[12] Because PG&E has failed to document specific conditions for clean substation pilots that have not been met, and thus the infeasibility of clean substation microgrid projects, we find it reasonable to direct PG&E to move forward with option (1) and pursue at least one project.

PG&E also proposed to pilot the use of two existing Demand Response (DR) programs to reduce the use of temporary generation during Public Safety Power Shutoff (PSPS) events. We find this proposal to be prudent and reasonable, and approve PG&E's request. However, the expansion of these DR programs does not fulfill PG&E's obligation under D. 21-01-018 to pursue at least one clean substation microgrid project.

In the Discussion section, we respond to various issues raised by party protests and comments, and we direct PG&E to issue a Request for Proposals open to permanent clean substation microgrid projects.

Temporary versus Permanent Clean Substation Pilots

D. 21-01-018 contains a flexible definition of clean substation microgrid projects, allowing these projects to be either temporary or permanent.[13] PG&E deals with temporary and permanent projects separately in its evaluation process for clean

[12] Decision 21-01-018, Page A-4.

[13] D. 21-01-018 allows for clean substation microgrid projects to be reserved and deployed for any amount of time. Roughly, temporary refers to projects reserved and deployed for three or fewer years, while permanent refers to projects reserved and deployed for four or more years.

substation microgrids. PG&E issued a RFP on January 20, 2021 "seeking to reserve temporary generation for use at substations and other temporary generation workstreams for reducing PSPS impacts."[14] The RFP included a request for non-diesel temporary generation, and a description of three potential substation pilot sites. None of the developer bids made in response to this request met the cost cap set forth in D. 21-01-018.[15] These results led PG&E to conclude in AL 6204-E "that a Clean Substation Project utilizing generation alternatives to diesel was infeasible for 2021 given the requirements set forth in the Decision."[16]

However, PG&E did not issue an RFP to evaluate the feasibility of permanent projects. Instead, PG&E addressed these projects in AL 6105-E:

> Given the highly dynamic and quickly evolving nature of PSPS risk modeling and grid hardening plans, PG&E does not believe it is prudent at this time to implement permanent solutions. Consistent with D. 21-01-018, PG&E expects to file an Application by June 30, 2021, in which it will propose a comprehensive framework for evaluating long-term solutions at substations.[17]

Additionally, PG&E noted that permanent projects would face many complexities due to the requirements in D. 21-01-018 that permanent projects meet a 90 percent reduction for particulates and NOx, achieve grid-average emissions by the 2022 fire season, and be fully renewable in their final stage. Finally, PG&E noted that it had requested deliverability data from the California Independent System Operator (CAISO), and many of the substations most affected by PSPS lack deliverable capacity, constraining a projects ability to receive any Resource Adequacy (RA) revenue. In accordance with D. 21-01-018, PG&E did identify three substations that appear to be the best current candidates for permanent

[14] AL 6204-E, p. 3-4.

[15] D. 21-01-018, Appendix A, p. A-4. "The cost of the project to ratepayers may not exceed twice the expected cost of utilizing backup diesel generation over the contract period."

[16] AL 6204-E, p. 5.

[17] AL 6105-E, p. 31.

generation: Hoopa, Willow Creek and Point Moretti substations. Of those three, only Point Moretti has deliverable capacity.

PG&E has adequately documented the infeasibility of temporary clean substation microgrid projects in 2021.

As documented in AL 6105-E and AL 6204-E, PG&E issued an RFP requesting temporary clean substation microgrid projects capable of being deployed in 2021. "In all bids, the primary energy source was natural gas. In bids involving battery storage, battery storage represented less than 1% of the energy needed in a 72- hour event."[18] PG&E submitted a summary of the results of this RFP to the Commission, and all of the bids for clean substation microgrid projects exceeded twice the cost of reserving the equivalent amount of Tier 4 diesel generators. As such, no projects meet the cost cap requirement in D. 21-01-018. PG&E has adequately documented the specific conditions that make it infeasible, within the requirements established by D. 21-01-018, to undertake a temporary clean substation microgrid project in 2021.

PG&E has not adequately documented the infeasibility of permanent clean substation microgrid projects.

PG&E did not conduct an RFP to document the infeasibility of permanent clean substation projects. Instead, PG&E argued that the projects were imprudent based upon (1) the uncertainty of the future scope of PSPS, and thus the risk involved in long term investment, (2) the complexity of meeting the various emission requirements in D. 21-01-018, and (3) the lack of deliverable capacity at substations heavily affected by PSPS, limiting permanent projects' access to RA revenue during 'blue sky' conditions.

The Commission does not consider these arguments to be adequate documentation of the infeasibility of permanent clean substation microgrid projects. Firstly, PG&E has already shown willingness to use current models to justify investments in locationally-specific PSPS mitigation. In AL 6105-E, PG&E

[18] AL 6204-E, p. 4.

argues that its 10-year historic lookback model is sufficiently accurate and certain to justify reserving and staging diesel generators at 10 specific substations in 2021. PG&E only reserves diesel generators for a single year, and thus the risk is smaller than with investment in a permanent project. On the other hand, only a single permanent clean substation microgrid project need be pursued under D. 21-01-018, compared to diesel staged at 10 separate substations. A permanent clean substation microgrid project also has the additional likely benefit, noted in D. 21-01-018, of increasing utility and market experience and understanding of alternatives to diesel generation and helping facilitate a transition to clean generation in future years. Finally, pursuing a permanent clean substation pilot project may make additional energy resources available during potential extreme weather in summer 2022, mitigating the potential need for rotating outages and benefiting the grid at large. As such, we find it reasonable to direct PG&E to pursue at least one permanent clean substation microgrid project under the same conditions of uncertainty that PG&E is currently reserving and staging temporary generation.

Secondly, the complexity involved in meeting the emission requirements in D. 21-01-018 is not sufficient reason to reject permanent projects outright. Although complex, the emission requirements are also flexible: D. 21-01-018 allows permanent clean substation microgrid projects to progress in stages, and permanent projects need only demonstrate a fully renewable microgrid when complete.

Thirdly, one of the top three candidate substations for permanent clean substation microgrid projects, Point Moretti substation, has deliverable capacity equal to its peak load. A permanent clean substation microgrid project pursued at this substation could provide RA value, and the cost of the project could be reduced relative to the RA value that could be credited back to the project.

PG&E provided no additional documentation for the infeasibility of permanent projects. As such, PG&E has not adequately documented the specific conditions that make it infeasible, within the requirements established by D. 21-01-018, to undertake a permanent clean substation microgrid project. Given that the infeasibility of such projects has not been established, now eight months after the

D. 21-01-018 was issued, we find it reasonable to direct PG&E to pursue at least one clean substation microgrid project.

PG&E's proposed expansion of DR programs does not fulfill its obligations under D. 21-01-018.

Although no parties objected to PG&E's proposed use of DR programs during PSPS events, CESA and the Joint Protestors both objected to them being considered clean substation microgrid projects under D. 21-01-018 and thus fulfilling PG&E's obligations under that decision. The Commission agrees that the proposed expansion of these DR programs does not fulfill PG&E's obligation under D. 21-01-018, Appendix A, Section I.2 to "document its plans to establish clean substation microgrid projects located at, or able to serve, at least one substation" or alternatively to "document the specific conditions [for clean substation pilots] that have not been met." Given that PG&E's DR proposal aims to complement and reduce the use of temporary generation as part of a microgrid powered by that generation, i.e. a temporary generation microgrid, it would not also qualify as a clean substation microgrid project under the Decision. However, PG&E's proposal does fit within the spirit and intent of the Decision.

It is reasonable and consistent with D. 21-01-018 for PG&E to pursue a permanent clean substation microgrid project at one or more substations.

Given that PG&E has not adequately documented the specific conditions that make it infeasible to pursue a permanent clean microgrid project, the Commission's prior orders require PG&E to pursue such a project. Pursuant to D. 21-01-018, PG&E should issue a RFP for such a project at one or more substations. After reviewing the results of that RFP, PG&E should file a Tier 3 Advice Letter seeking approval for one or more clean substation pilot projects through the framework established in D. 21-01-018. It is reasonable for RFP documents to be reviewed by Energy Division staff in advance of the public issuance of the bid documents, so that the RFP process may be improved by the identification of data gaps or the confirmation of compliance with the letter and spirit of D. 21-01-018 and of this Resolution.

Six days after D. 21-01-018 was approved at the January 14, 2021 Commission meeting (i.e. on January 20), PG&E issued its RFP seeking bids for temporary clean substation microgrid projects. Eight months later, we now consider this Resolution, and order PG&E to launch another RFP. D. 21-01-018 anticipated such potential delays, saying that "permanent projects may run into delays that make [a 2021 operational date] unfeasible."[19] Given the eight month delay between D. 21-01-018 and this Resolution, and the language in the decision that anticipates such potential delays, we find it reasonable and consistent with D. 21-01-018 to extend the deadlines for various requirements in that Decision by 1 year.

D. 21-01-018 required projects to be partially operational, meaning they reduce the use of diesel temporary generation during PSPS events, by September 2021. This requirement is no longer reasonable and is extended to September 2022. Similarly, projects must be estimated to achieve grid equivalent or lower GHG emissions, and a 90 percent reduction in particulate and NOx emissions, during a PSPS event of average duration by September 2023, rather than 2022.

Fully completed permanent clean substation microgrid projects must still demonstrate a fully renewable microgrid. In their comments, PG&E requested that the Commission clarify that demonstrating a fully renewable microgrid in this context could mean that a microgrid is capable of running entirely on generation that would qualify as eligible under California's Renewable Portfolio Standard.[20] We agree this would be one way of demonstrating a fully renewable microgrid. Alternatively, a clean substation microgrid project could depend in the short term on some amount of fossil temporary generation, but include a plan to evaluate and replace that generation with renewable and/or storage resources in 5 years. At that time, emerging technologies like long-duration storage may be further commercialized.

One goal of the pilot project would be to increase the knowledge and experience with substation-level microgrids, and thus facilitate a future transition to clean

[19] D. 21-01-018, Page A-6.

[20] PG&E Comments at p. 4.

generation. As such, it is reasonable for PG&E to pursue such a pilot in parallel with its work on a long-term investment framework for substation-level microgrids to mitigate PSPS impacts though Application 21-06-022.

PG&E's proposal to pilot the use of two existing DR programs to reduce the use of temporary generation during PSPS events is prudent and reasonable.

As PG&E noted in its reply, no party protested the use of the Base Interruptible Program (BIP) and the Smart AC program during PSPS events to reduce the use of temporary generation, nor did any party protest PG&E's proposed method for implementing these programs during PSPS events. Both CESA and the Joint Protestors called for additional expansion of DR beyond that proposed by PG&E. However, in their comments, the California Large Energy Consumers Association (CLECA) did object to PG&E's use of these programs. Specifically, CLECA argue that the BIP program is meant to be used when there is a lack of supply resources, and not to reduce air emissions. However, as discussed below, we find this use of DR to fit the language of 'distribution reliability needs' included in the current BIP tariff.

Even though they do not fulfill PG&E's obligation to pursue at least one clean substation microgrid project under D. 21-01-018, the Commission finds it reasonable for PG&E to utilize these demand response programs to reduce the use of temporary generation during PSPS events. We approve PG&E's request, which fits within the spirit and intent of the D. 21-01-018, despite it not being directly ordered therein.

However, due to the opposition from CLECA, we find it reasonable to add regulatory guardrails to PG&E's request. Specifically, we find it reasonable to approve PG&E's expansion of these programs on a limited basis, only when they apply to substations served by temporary generation reviewed and approved under the interim approach laid out in D. 21-01-018 (Appendix A, Section I). As such, this approval will expire once that interim approach is replaced by a longer-term framework. In addition, the approval applies only to BIP customers newly

recruited after the approval of this Resolution, and not to any previously existing BIP customers in the areas energized by these substation microgrids.[21]

It is reasonable to include within the definition of events that trigger the BIP and the Smart AC program, on a limited pilot basis, circumstances in which all of the following are true: (1) a substation that is both intended to be, and actually is, energized during PSPS via a microgrid; (2) the distribution feeder serving a particular enrolled DR customer or set of customers is safe to energize; and (3) enrolled DR customers fall within the microgrid and safe to energize boundaries.

Additionally, we find it reasonable that, again on a limited pilot basis, PG&E (1) use the existing marketing and outreach budget approved in Decision 18-11-029 for purpose of recruiting customers for to the expanded BIP and Smart AC programs, and (2) use the existing authorized funding for BIP to make incremental monthly capacity payments associated with the addition of new BIP customers for PG&E's proposed pilot of DR during PSPS events as described in this Resolution.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review. Any comments are due within 20 days of the date of its mailing and publication on the Commission's website and in accordance with any instructions accompanying the notice. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day review and 20-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments, and will be placed on the Commission's agenda no earlier than 30 days from today.

[21] According to PG&E's AL 6204-E, only 0.215 MW of DR resource from existing BIP customers exists in any of the currently identified substations. PG&E AL 6204-E at p. 9.

Comments on the draft Resolution were timely filed on August 24, by CESA, by the Joint Protestors (California Environmental Justice Alliance, Sierra Club, 350 Bay Area, Vote Solar, The Climate Center, and Local Clean Energy Alliance), by PG&E and by the California Large Energy Consumers Association (CLECA). These comments are addressed in the revised discussion section above, and briefly discussed below.

CESA Comments – August 24, 2021

In its comments, CESA is broadly supportive of the Resolution, but recommends that (1) there be sufficient time for the RFP process, including at least one month for a bid and proposal submittal window, (2) the RFP allow for creative, innovative solutions, including BTM resources and (3) the solicitation should allow for rolling commercial online dates (COD).

This Resolution does allow for projects to progress in stages, and for phased interconnection, construction, and COD to occur. In addition, the requirement that projects be partially operational by September 2022 means that a project should be ready to reduce the use of diesel during a PSPS event at this time, but not that a project be commercially operational during blue-sky conditions. Finally, we expect the RFP to be open to all resources, including BTM resources, as long as the project meets the requirements listed in D. 21-01-018 as amended and clarified in this Resolution.

Joint Protestors Comments – August 24, 2021

In their comments, the Joint Protestors are largely supportive of the Resolution but (1) recommend that the Resolution direct PG&E to provide sufficient time for bid submissions, (2) urge further expansion of Demand Response resources during PSPS, and (3) support adding language that references the Governor's July 30, 2021 Proclamation of a State of Emergency.

PG&E Comments – August 24, 2021

In its comments, PG&E requests that this Resolution be modified to find that PG&E did comply with the requirements of D. 21-01-018. PG&E also requests that consideration of longer-term substation microgrids be referred to PG&E's A. 21-06-022.

At minimum, PG&E requests that the Resolution be modified to (1) allow for microgrid projects at the distribution level as well as the substation level, (2) allow for a longer RFO and procurement timeframe, and (3) further define ambiguous terms.

Because D. 21-06-022 deals specifically with substation-level PSPS, this resolution also addresses the substation level. However, PG&E is encouraged to continue to work on clean microgrid projects at the distribution level and bring them to the Commission for review and approval elsewhere.

When requesting a longer RFO and procurement timeframe, PG&E identified the following general steps of a potential RFO: (1) identify prioritized sites with preferred microgrid solutions, (2) engage with local communities and agencies, (3) launch the RFO, (4) shortlist the offers, and (5) seek approval for the solution. The Commission notes that PG&E should already be engaged in steps (1) and (2) and should have these steps completed before the deadline to launch an RFO laid out in this Resolution. As discussed earlier, we find it reasonable to direct PG&E to pursue at least one permanent clean substation microgrid project under the same conditions of uncertainty that PG&E is currently reserving and staging temporary generation. As such, PG&E should not be waiting for new data or analyses to begin steps (1) and (2). Based on PG&E comments, and similar comments from CESA and the Joint Protestors, we find it reasonable to extend the timeline for steps (3), (4) and (5) by extending the deadline for PG&E top submit a Tier 3 Advice Letter seeking approval of at least one project. While the Draft Resolution listed a January deadline, this Final Resolution lists an April Deadline.

Further clarification of the ambiguous terms noted by PG&E is included in the discussion section above.

CLECA Comments – August 24, 2021

In its comments, CLECA noted that it did not protest PG&E AL 6204-E due to the press of other commitments, but that it objects to the findings and orders of the Resolution which relate to Demand Response (DR). Specifically, CLECA notes that the Base Interruptible Program (BIP) "is a reliability DR program to be used when there is a lack of sufficient supply resources, and not to reduce air emissions."[22] CLECA suggest that PG&E propose a new and separate voluntary DR program tailored to the specific conditions of PSPS.

The Commission finds substation-level PSPS events with safe-to-energize load to fit the language of 'distribution reliability needs' included in the current BIP tariff.[23] These are events where distribution load is cut off from the supply of power from the wider grid, and thus there are no standard supply resources available. The use of temporary generation as well as DR in these situations is responding to a distribution reliability need. The fact that DR is a preferrable resource to diesel temporary generation, and reduces air emissions compared to diesel, does not prevent both resources from being responses to a distribution reliability need during PSPS events. We clarify that this Resolution in no way intends to expand or modify the scope of the BIP tariff, which remains "a reliability DR program to be used when there is a lack of sufficient supply resources," as described by CLECA.

However, we take note of CLECA's comments and the opposition of some parties to PG&E's proposed use of DR programs during PSPS events, despite their failure to protest the relevant Advice Letter. Given these newly-raised concerns, we find it reasonable to add regulatory guardrails to PG&E's proposed pilot of these programs during PSPS as described above.

[22] CLECA Comments at p. 4.

[23] Electric Schedule E-BIP at Sheet 13.

FINDINGS

1. PG&E has adequately documented the specific conditions that make it infeasible, within the requirements established by D. 21-01-018, to undertake a temporary clean substation pilot project utilizing an alternative generation technology to diesel in 2021.
2. PG&E has not adequately documented the specific conditions that make it infeasible, within the requirements established by D. 21-01-018, to undertake a permanent clean substation pilot project.
3. PG&E has not yet fulfilled its obligation under D. 21-01-018 to either (1) document its plans to establish clean substation microgrid projects located at, or able to serve, at least one substation, or (2) document the specific conditions for clean substation pilots that have not been met.
4. It is reasonable to direct PG&E to pursue at least one clean substation microgrid project, because the infeasibility of such projects has not been established now eight months after the D. 21-01-018 was issued.
5. A permanent clean substation pilot project is likely to increase utility and market experience and understanding of alternatives to diesel generation and help facilitate a transition to clean generation in future years.
6. Pursuing a permanent clean substation pilot project may make additional energy resources available during potential extreme weather in summer 2022, mitigating the potential need for rotating outages.
7. It is reasonable to require PG&E to issue a Request for Proposal for a permanent clean substation pilot project at one or more substations.
8. It is reasonable to require PG&E to file a Tier 3 Advice Letter seeking approval for one or more clean substation pilot projects through the framework established in D. 21-01-018.
9. D. 21-01-018 allows permanent clean substation microgrid projects to progress in stages, and permanent projects need only demonstrate a fully renewable microgrid when complete.
10. It is reasonable for RFP documents to be reviewed by Energy Division staff in advance of the public issuance of the bid documents.
11. It is reasonable and consistent with D. 21-01-018 to extend the deadlines for various requirements in that Decision, given the actual delay in issuing an RFP and the language in the decision that anticipates potential delays.

12. PG&E's proposal to pilot the use of two existing Demand Response (DR) programs to reduce the use of temporary generation during Public Safety Power Shutoff (PSPS) events is prudent and reasonable.
13. It is reasonable to add regulatory guardrails to PG&E's proposed pilot, approving it only for substations served by temporary generation reviewed and approved under the interim approach laid out in D. 21-01-018 (Appendix A, Section I) and only for Base Interruptible Program (BIP) customers newly recruited after the approval of this Resolution.
14. It is reasonable to include within the definition of events that trigger the BIP and the Smart AC demand response programs, on a limited pilot basis, circumstances in which all of the following are true: (1) a substation that is both intended to be, and actually is, energized during PSPS via a microgrid; (2) the distribution feeder serving a particular enrolled DR customer or set of customers is safe to energize; and (3) enrolled DR customers fall within the microgrid and safe to energize boundaries.
15. It is reasonable for PG&E to use, on a limited pilot basis, the marketing and outreach budget approved in Decision 18-11- 029 for purpose of recruiting customers for to the expanded BIP and Smart AC programs.
16. It is reasonable for PG&E to use, on a limited pilot basis, the existing authorized funding for BIP to make incremental monthly capacity payments associated with the addition of new BIP customers for PG&E's proposed pilot of DR during PSPS events as described in this Resolution.

THEREFORE IT IS ORDERED THAT:

1. Pacific Gas and Electric Company shall issue a Request for Proposal (RFP), no later than November 2021, seeking proposals for a clean substation microgrid project. The RFP must: (1) Describe at least one candidate substation, including its hourly load profile, the available substation land area, available land in other PG&E easements; (2) Request a system of energy resources, capable of being controlled by the utility or on its behalf, that could safely and reliably power the substation during a 48-hour transmission outage; and (3) Allow for projects that may progress in stages and may operate over the long-term, i.e. may be permanent projects. Draft RFP bid documents, including bid evaluation criteria and a pro-forma contract, are to be reviewed by Energy Division staff in advance of the public issuance of the bid documents.

2. PG&E shall file a Tier 3 Advice Letter no later than April 2022 detailing specific plans to develop a clean substation microgrid project at one or more substations. This advice letter should include documentation of PG&E's RFP. For each project proposed by PG&E, the Advice Letter should estimate the cost of the project and request that the Commission approve the project as a clean substation microgrid project, funded through a balancing account according to Decision 21-01-018. Due to actual delays, anticipated in the decision, these projects cannot be operational in 2021. Instead, they should be partially operational by September 2022, and estimated to achieve grid equivalent or lower GHG emissions, and a 90 percent reduction in particulate and NOx emissions, during a Public Safety Power Shutoff (PSPS) event of average duration by September 2023.
3. The request of PG&E to use the Base Interruptible Program and Smart AC Program during PSPS events under certain conditions, as requested in Advice Letter 6204-E, is approved on a limited pilot basis. This pilot approval is limited to those substations where PG&E deploys temporary generation through the interim approach approved in D. 21-01-018, and to BIP customers newly recruited after the approval of this Resolution.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on September 9, 2021; the following Commissioners voting favorably thereon:

_____
Rachel Peterson
Executive Director