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

Application of Pacific Gas and Electric
Company and Pacific Generation LLC to
Recover Helms Uprate Costs

(U 39 E)

Application 23-12-____
(Filed December ____, 2023)

**APPLICATION OF
PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) AND
PACIFIC GENERATION LLC TO RECOVER HELMS
UPRATE COSTS**

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Dated: December 20, 2023

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I. INTRODUCTION

Pacific Gas and Electric Company (“PG&E”) and Pacific Generation LLC (together, the “Joint Applicants”) hereby submit to the California Public Utilities Commission (“CPUC” or “Commission”) this Application for authorization to recover certain incremental capital costs associated with a project to increase the nameplate generating capacity of the existing Helms Pumped Storage Facility (“Helms”) located in the Kings River watershed in Fresno County, California (the “Helms Uprate Project”). Once fully constructed as proposed, the Helms Uprate Project will provide 150-180 incremental megawatts (“MW”) of cost-effective, long-duration energy storage capacity, coming online between 2029 and 2031, to help effectuate California’s affordability, climate, and reliability goals. As further described in this Application and the accompanying prepared testimony, it is prudent and reasonable to provide up-front assurance of cost recovery of the Helms Uprate Project at this time for two key reasons: (1) the Joint Applicants need to invest significant costs beginning in 2024 to secure key tax benefits and obtain the incremental capacity at a nominal incremental cost to otherwise needed maintenance and replacement work; and (2) in order to meet long-term State policy and planning goals for incremental storage – and long-duration storage in particular – the Joint Applicants need to move forward in the near-term with detailed design and long lead-time procurement.

By this Application, the Joint Applicants request authority to recover the actual costs for the Helms Uprate Project, up to its forecast of \$462 million. Because this forecast includes a low-end contingency by industry standards to address forecast uncertainty, the Joint Applicants also propose mechanisms to provide further reasonableness review of any adjustments to this cost recovery cap should events outside of the Joint Applicants' control materialize in the future that may require such an adjustment.

California's Legislature, regulatory agencies, and other policymakers have noted that long-duration energy storage will play an important role in ensuring reliability while achieving California's ambitious climate policies. With this in mind, PG&E evaluated the potential to uprate the existing three generation and pumping units at Helms as part of a needed major equipment lifecycle replacement project (the "Lifecycle Replacement Work"). PG&E identified the opportunity to secure significant incremental capacity benefits at Helms at a relatively low incremental cost to the Lifecycle Replacement Work. Ultimately, PG&E proposed in its 2023 General Rate Case ("GRC") application^{1/} to record the costs of the Helms Uprate Project into a memorandum account. Such costs would have included planning, engineering, permitting, equipment upgrades, construction, commissioning, testing, and other reasonable expenditures to implement the Helms Uprate Project. As part of a stipulation reached during the pendency of the GRC application (the "Energy Supply Stipulation"),^{2/} PG&E agreed to withdraw its request to establish the Helms-related memorandum account, and The Utility Reform Network ("TURN") agreed that PG&E may seek recovery of reasonable costs associated with the Helms Uprate Project if the Project is cost-effective and PG&E seeks approval for the project in a separate

^{1/} Application (A.) 21-06-021.

^{2/} A.21-06-021, PG&E GRC Opening Brief (Nov. 4, 2022), Appen. E (Stipulation of TURN and PG&E on Energy Supply Issues).

CPUC proceeding.^{3/} The CPUC approved the Energy Supply Stipulation in Decision (D.) 23-11-069.^{4/} Thus, the present Application is not duplicative with, and is incremental to, PG&E's request in the GRC.

The Joint Applicants submit this Application and the associated prepared testimony in support of their request for cost recovery and the related requests for relief set forth in Section VIII, below. The Joint Applicants respectfully request that the Commission act on this Application as soon as practicable and consistent with the recommended schedule set forth in Section VI.F, below.

II. DISCUSSION

A. Need for the Helms Uprate Project

California needs incremental capacity to store energy for long durations of time to integrate the grid's rapidly increasing volumes of intermittent renewable generation, mitigate ongoing grid stability challenges, and provide resiliency during periods of peak demand and emergencies.^{5/} While most energy storage being developed in California today consists of lithium-ion batteries intended to discharge at full capacity for only four hours, the Helms Uprate Project presents a unique opportunity to significantly and cost-effectively increase the capability of Helms to provide needed long-duration energy storage that can quickly respond to grid needs from a well-established storage technology.

^{3/} *Id.*, Appen. E, pp. E-3 to E-4; *Id.* p. 624. *See also id.*, p. 615 ("Unless otherwise directed by the Commission: (1) new utility owned generation capacity projects greater than 5 MW; or (2) new utility-owned generation capacity projects that are forecast to exceed \$20 million; or (3) utility owned generation projects that increase facility nameplate capacity by greater than 10 percent; or (4) utility owned generation projects that increase facility nameplate capacity that are forecast to exceed \$20 million, must be proposed in the Integrated Resource Plan proceeding or other proceeding that authorizes procurement (including, but not limited to, the Renewable Portfolio Standard Proceeding, or Resource Adequacy Proceeding or separate application), before requesting funding for the project in a GRC. This provision does not apply to reliability or efficiency projects (such as hydro turbine runner replacement or step-up transformer replacement.").

^{4/} D.23-11-069, p. 508.

^{5/} *See generally* Assembly Bill 2514 (Skinner, 2010), Ch. 469, Sec. 1, subdivisions (a)-(f).

The Joint Applicants are proposing the Helms Uprate Project as a unique and cost-effective opportunity to not only secure the reliability and energy needs of its bundled customers, but also to support important systemwide state policy and planning objectives. As further discussed in Chapter 3 of the Joint Applicants’ prepared testimony, the Commission in recent years has issued a series of decisions ordering load-serving entities (“LSEs”) across the State, including PG&E, to procure historic amounts of generation and storage capacity. The trend has been for the Commission to identify increasing amounts of both with each subsequent planning order or rulemaking. As an example, the Commission ordered the procurement of 1,000 megawatts (“MW”) – 200 MW of which is PG&E’s responsibility – of long-duration energy storage that must come online by 2028 (the “LDES Procurement Order”).^{6/} A pending Petition for Modification of that Decision may extend the requirement to 2031, given parties’ concerns over the difficulty of procuring such resources by 2028.^{7/}

The LDES Procurement Order is consistent with more general Commission determinations that California’s portfolio of energy storage needs greater technological diversity, rather than relying entirely on short-duration battery storage.^{8/} The Helms Uprate Project will provide diversity benefits both in terms of the technology and its capabilities and also in terms of the ownership model. As a utility-owned resource, the Joint Applicants’ customers will receive the reliability benefits of the incremental capacity at Helms for the full 38-year depreciable asset life of the Uprate, including any value that remains at the end of that book life.

^{6/} D.21-06-035 indicates the long-lead time (“LLT”) procurement “will be in two categories: a minimum 1,000 MW of long-duration storage, and a minimum of 1,000 MW of firm resources with zero on-site emissions or, if the resources have emissions, they must otherwise qualify under the RPS eligibility requirements...” (D.21-06-035, p. 35.) Therefore, half of the 2,000 MW LLT procurement requirement must be met by long-duration storage. Table 6 indicates PG&E’s total bundled obligation for the LLT procurement is 400 MW, half of which will need to be met with long-duration storage (i.e., 200 MW). (*Id.*, at p. 26). *See also* D.23-02-040, p. 2 (postponing requirements for procurement of LLT resources from D.21-06-035 to 2028).

^{7/} R.20-05-003, Petition for Modification of Decisions 23-02-040 and 21-06-035 of the California Energy Storage Alliance and the Western Power trading Forum to Address Long Lead-time Resource Compliance Deadlines (May 30, 2023).

^{8/} *See, e.g.*, D.21-06-035, p. 88, Finding of Fact 14 (identifying long-duration storage as needed to “help diversify the grid resources and improve reliability and renewables integration.”).

While the Helms Uprate Project is not currently scheduled to come online by the 2028 deadline to meet the current LDES Procurement Order, development of the project will provide backstop capacity in the event that other procured long-duration energy storage resources fail to come online, LSEs fall short of fulfilling their procurement requirements for such resources, or, as is highly likely, additional long-duration energy storage is ordered in the future.^{9/} The likely need for additional long-duration energy storage is not speculative; the Preferred System Plan (“PSP”) Portfolio adopted by the Commission in D.22-02-004 show a need for 17,648 MW of battery storage capacity generally and 1,000 MW of pumped storage capacity above the baseline capacity by 2035.^{10/} Similarly, the Commission’s recommended resource portfolios for use as key inputs in the California Independent System Operator’s (“CAISO”) 2023-2024 transmission planning process (“TPP”) base case include 28,381 MW of selected battery storage and 2,000 MW of selected pumped storage specifically above the baseline capacities by 2035.^{11/} Further, the California Air Resources Board’s Scoping Plan for achieving the State’s greenhouse gas (“GHG”) targets calls for even more incremental pumped storage – 2,900 MW – by 2035.^{12/} The

^{9/} To the extent that the Commission modifies the LDES Procurement Order in the future in a way that allows the Helms Uprate to count toward that Order, the Commission should, in the final decision resolving this Application, align the cost allocation approved for the Helms Uprate with the vintaging ordered in the LDES Procurement Order. *See* D.21-06-035, p. 97, OP 12 (“To the extent that any resources procured in response to this order are subject to allocation using the power charge indifference adjustment (PCIA), the date of that adjustment shall be vintaged by the date of this order.”)

^{10/} *See* D.22-02-004, p.193, OP 7. (The Decision adopts “[t]he core portfolio based on the 38 million metric ton greenhouse gas ... target by 2030 described in Section 4 of [the] decision, which includes the 2020 Integrated Energy Policy Report demand forecast utilizing the high electric vehicle assumptions ... as the portfolio for the [PSP] for 2021.”) The 2035 capacities associated with PSP can be seen in the Commission’s RESOLVE model, Excel workbook “CPUC IRP RESOLVE_Results_Viewer_2021-12-17_FINAL.xlsx”, “Dashboard” tab, lines 37-38, available at:

<https://files.cpuc.ca.gov/energy/modeling/2021%20PSP%20RESOLVE%20Package.zip>
(accessed Dec. 7, 2023).

^{11/} *See* D.23-02-040, p. 48, Table 4.

^{12/} *See* Energy+Environmental Economics, AB 32 GHG Inventory Sectors Modeling Data Spreadsheet from the 2022 CARB Scoping Plan (Nov. 14, 2022), available at: <https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-PATHWAYS-data-E3.xlsx>, (accessed Dec. 6, 2023).

Helms Uprate Project offers a cost-effective and diverse alternative to start on the path to realizing these statewide planning portfolios.

The Helms Uprate Project also supports PG&E's portfolio need to serve its bundled customers. PG&E's most recent, Commission-approved Integrated Resource Plan ("IRP") identified a bundled electric portfolio need for incremental new storage capacity over the next decade and beyond in order to meet the Joint Applicants' future reliability and GHG emission reduction requirements. Specifically, PG&E's planning scenarios in its 2022 IRP calls for 1,100 to 4,800 MW of additional energy storage to be added to PG&E's bundled generation portfolio by 2035.^{13/} The long-duration energy storage capability of the Helms Uprate Project presents a superior portfolio fit to meet this need and a unique opportunity to further diversify PG&E's bundled electric portfolio technology mix, a key objective of the IRP process and California Senate Bill ("SB") 350^{14/} that created that process.

As a long-duration energy storage resource, Helms provides additional benefits, even beyond the standard energy storage benefits modeled in the IRP scenarios. Helms offers tremendous long-duration energy storage potential. As further discussed in Chapter 3 of the prepared testimony, the maximum stored energy under optimal conditions at Helms is the energy equivalent of about 140 four-hour battery storage facilities, each with a capacity of 200 MW. The long generation duration, size, and flexibility of Helms is particularly beneficial in meeting the load during the late evening and early morning when there are typically few resources available. Additionally, pumped storage provides greater emission reduction benefits than typical battery storage. The Joint Applicants' testimony describes how pumped storage provides approximately 50 percent more greenhouse gas emissions reduction benefits than four-hour battery storage due to its greater operating flexibility. Finally, pumped storage helps maintain

^{13/} R.20-05-003, PG&E 2022 IRP (Nov. 1, 2022), pp. 34-36, Tables 7, 8 and 9.

^{14/} SB 350 (De Leon 2015), Stats. 2015, Ch. 547.

power system stability by providing voltage control and inertia support in response to grid interruptions.

The Helms Uprate Project will also help to meet local area capacity needs with cleaner resources. While the Greater Fresno Local Capacity Area in which Helms is interconnected is currently well supplied with electric generation to meet current electric demand, emitting generators are projected to provide 44 percent of local area capacity by 2028. Additionally, the local reliability capacity requirement in this area is expected to grow by 700 MW between 2024 and 2028.^{15/} The Helms Uprate Project can help meet this future load growth, increasing resiliency in the area, and also reduce reliance in the local area on fossil-fueled generation during times of transmission constraints.

B. Helms Uprate Project Description

The Helms Uprate Project is expected to increase the nameplate generation capacity of PG&E's existing Helms facility by 150-180 MW, which would increase the total new nameplate generating capacity at Helms to 1,362-1,392 MW, and would also avoid the need for Lifecycle Replacement Work that would otherwise occur. It would do this by increasing the size or capacity of key components within each of Helms' existing three generating units, taking advantage of the existing need to otherwise replace some of these components due to them reaching the ends of their serviceable lives.

1. Helms Uprate Project Scope

The Helms Uprate Project scope includes replacement of turbine, generator, and transformers, as well as replacement of balance of plant components. Additionally, interconnection requirements may trigger substation and/or transmission upgrades. The scope and cost estimate for the Helms Uprate Project are informed by preliminary studies by

^{15/} CAISO, 2024 Local Capacity Technical Study, Draft Report and Study Results (Apr. 5, 2023), available at: <<http://www.caiso.com/InitiativeDocuments/Draft-2024-Local-Capacity-Technical-Report.pdf>> (accessed Dec. 6, 2023).

engineering consultants and component manufacturers, as attached to Chapter 2 of the prepared testimony.

2. Helms Uprate Project Cost Forecast and Revenue Requirement

PG&E currently estimates that the Helms Uprate Project will result in capital expenditures of \$462 million (nominal dollars with escalation).^{16/} However, removing from that total forecast the estimated cost that PG&E would incur to undertake the otherwise needed Lifecycle Replacement Work and further subtracting an anticipated 30 percent federal investment tax credit (ITC), the net cost forecast to obtain the incremental capacity associated with the Helms Uprate Project is approximately \$27 million. The forecast revenue requirement associated with the Helms Uprate Project, including the flow-through of the anticipated ITC, is presented in Chapter 4 of the prepared testimony.

3. Helms Uprate Project Development Timeline

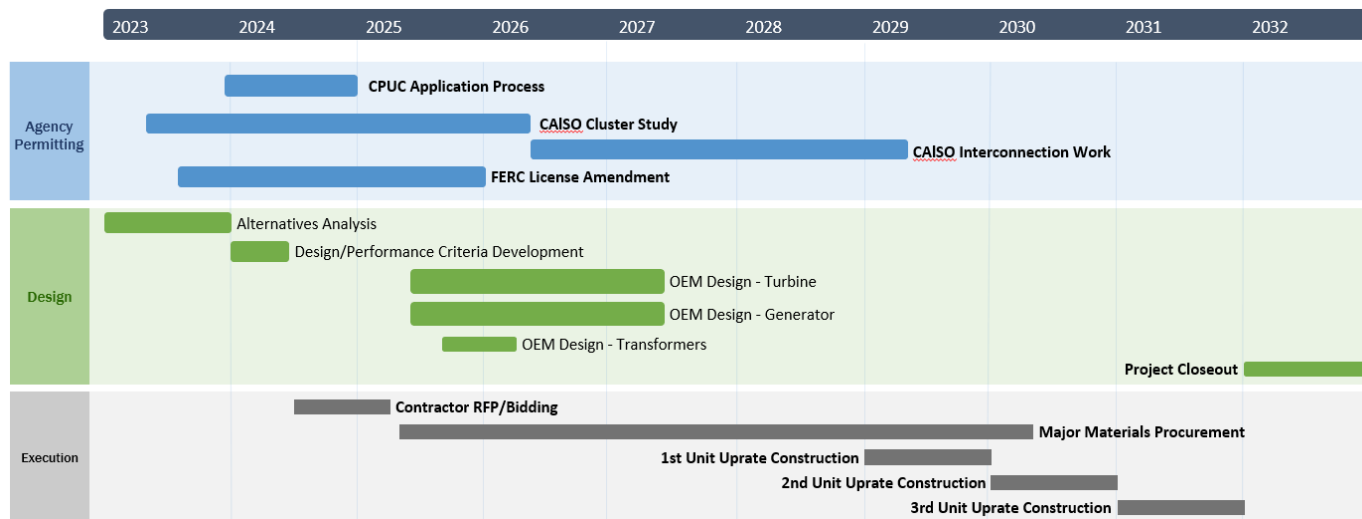
PG&E began conceptual design of the Helms Uprate Project in 2021 with the aid of the original equipment manufacturers (“OEMs”) of Helms’ major components. Using the high-level scope developed during those preliminary feasibility studies, PG&E prepared and submitted an application to the CAISO in Spring 2023 for interconnection of the incremental capacity. PG&E is also in the process of preparing an application to the FERC for a license amendment for the Helms Uprate Project, with a planned submission in the third quarter of 2024.

Preliminary design and performance criteria will be developed starting in early 2024, which will support the contracting with Helms Uprate Project contractors and major equipment suppliers. This process is expected to take more than a year, with most major contracts being in place by mid-2025, assuming Commission approval of this application prior to that time. Once these contracts are in place, the OEMs will perform detailed engineering in a cadence required to

^{16/} This cost forecast excludes any network upgrade costs that are ultimately required for interconnection, which would typically be reimbursed to PG&E over five years through rates approved by the Federal Energy Regulatory Commission (“FERC”) pursuant to the CAISO Tariff. PG&E proposes to submit a Tier 1 Advice Letter following its receipt of its Phase 2 Interconnection Study from the CAISO to inform the Commission and stakeholders of the total estimated interconnection costs, including reimbursable network upgrades.

support the long lead-time materials procurement and construction, which is targeted for 2029-2031. Each unit’s uprate and equipment replacement is expected to take approximately one year, with each unit’s outage being performed consecutively. Below is an illustrative timeline showing estimated durations and sequencing of the major activities.

Table 1: Project Timeline



4. Helms Uprate Project Operation

If constructed, PG&E will exercise operational control over the incremental capacity provided by the Helms Uprate Project, as it currently does with the existing Helms facility. PG&E, for itself or on behalf of its subsidiary,^{17/} would bid, or self-schedule, energy and ancillary services products from the uprated Helms facility into the CAISO market in support of optimizing the value of PG&E’s electric supply portfolio.

Revenues received from the CAISO market would flow to electric customers through existing normal Commission processes, including through the Energy Resource Recovery Account (“ERRA”) Forecast and Compliance proceedings.

C. Cost-Effectiveness of the Helms Uprate Project

In order to evaluate the cost-effectiveness of the Helms Uprate Project, the Joint

^{17/} See discussion regarding the interest of Pacific Generation LLC, below, Section IV.

Applicants calculated the net market value of the project and then compared that value against other contemporaneous offers for energy storage that it has received in its recent Mid-Term Reliability, Phase III solicitation (“MTR RFO”). The results of those calculations, detailed in Chapter 3 of the Joint Applicants’ prepared testimony, demonstrate that the Helms Uprate Project is a highly competitive project compared against other energy storage procurement options, in part because of the unique opportunity it presents to undertake the uprate as part of necessary maintenance on the existing facility, and at a time in which it is expected to receive a significant federal tax credit.

Energy storage systems can provide multiple benefits. Some of these benefits are more readily quantifiable. The Joint Applicants have quantitatively estimated values for Resource Adequacy (“RA”) capacity, energy, and ancillary services (e.g., regulation, spinning reserves, and non-spinning reserves) provided by the Helms Uprate Project. Tables in Chapter 3 of the prepared testimony show the resulting Net Market Value (“NMV”) of the Helms Uprate Project based on these quantifiable benefits. The first table shows the NMV expressed in net present value. The second table shows NMV in levelized dollars per kW-year, which is a metric that PG&E calculates for other third-party procurement opportunities using the same modeling methodologies and so can be readily compared. Two incremental capacity scenarios are shown, corresponding to the design objective of increasing nameplate generating capacity by 150-180 MW. The higher incremental capacity scenario, Scenario 1, is based on 156 MW and 78 MW of increased capacity for generation and pumping at the interconnection point, respectively.^{18/} The lower incremental capacity scenario, Scenario 2, is based on 129 MW and 0 MW of increased capacity for generation and pumping at the interconnection point, respectively. These scenarios are meant to provide reasonable “book ends” for the potential outcome of the project based on final engineering given the preliminary nature of the current design studies. Both scenarios have the same estimated project cost and project revenue requirement.

^{18/} The increase in capacity at the point of interconnection is less than the increase in nameplate capacity due to transmission and transformer losses.

Both capacity scenarios have a positive NMV. As shown in Chapter 3 of the prepared testimony, the net present value of the NMV for the Helms Uprate Project ranges from approximately \$15-96 million, and the levelized NMV ranges from \$12.70-67.20 per KW-year. As further detailed in that Chapter, the Helms Uprate Project's NMV compares very well against alternatives that PG&E is currently considering.

Moreover, the Helms Uprate Project also provides other not so easily quantifiable benefits as a long-duration pumped energy storage project, including its important role in uniquely helping to meet California's reliability, resource diversity, and GHG reduction objectives at the lowest cost. Finally, it is important to note that as a utility-owned resource, the Joint Applicants will secure the long-term reliability benefits of the Helms Uprate Project for their customers and the state over the 38 years of the depreciable useful life of the Uprate project. This provides a diversity benefit to the Joint Applicants' energy storage portfolio given that capacity storage agreements with third parties only provide benefits at their current prices during the limited contract terms with those third-parties.

As described in more detail in Chapter 3 of the prepared testimony, the Helms Uprate Project is expected to have a significantly positive NMV for long-term, large-scale, long-duration energy storage. Further, the resulting NMVs under all scenarios studied are highly competitive relative to other energy storage procurement opportunities available now, as verified by the report of the Independent Evaluator.^{19/} These data support a determination that the Helms Uprate Project is cost-effective. Where, as here, enhancements made to increase capacity of an existing utility-owned facility in lieu of routine maintenance meet critical State needs for technologically diverse, long-duration, quick-ramping energy storage and also compare favorably when compared to relevant third-party procurement opportunities, the Commission should authorize the Joint Applicants to recover their reasonably incurred costs up to the forecast.

^{19/} See PG&E Prepared Testimony, Ch. 3, Attachment C (public and confidential versions of the IE Report).

D. Other Approvals Required

1. Federal Energy Regulatory Commission (FERC) License Amendment

FERC has exclusive permitting jurisdiction over the Helms Uprate Project pursuant to the Federal Power Act, with the potential exception of any interconnection-related upgrades needed to Commission-jurisdictional distribution facilities.^{20/} PG&E will present an application and obtain FERC approval of an amendment to the existing Helms FERC License prior to beginning construction of the Helms Uprate Project. PG&E intends to file its application with FERC for the license amendment in 2024 following more detailed project scope definition. Because an application has not yet been presented to FERC and the outcome of the amended license may necessitate certain adjustments to costs in connection with any licensing requirements, the Joint Applicants have proposed, as part of its ratemaking approach described further below, a process to seek changes to the project cost forecast as may be needed in connection with the FERC license approval process.

2. CAISO Interconnection

The Joint Applicants anticipate that interconnection for the greater nameplate capacity created by the Helms Uprate Project may require replacement or installation of substation and/or transmission related components. The existing interconnection facilities for Helms include two 230 kilovolts generation tie transmission lines that connect the Helms Switchyard to the Gregg Substation.

As noted above, PG&E submitted an interconnection study request to the CAISO in March 2023. The request was included by CAISO in Cluster 15 of its study process. Thus, the Helms Uprate Project's interconnection study is slated to begin in April 2024 and is anticipated to take approximately two to three years to complete. The study will identify modifications to the electric grid that are required to accommodate the Helms Uprate Project. Although the

^{20/} PG&E is not currently aware of any such needed upgrades to CPUC jurisdictional facilities. However, PG&E will not be able to rule out the possibility of any such upgrades until the CAISO completes its interconnection studies. As described in Section VI.I, below, to the extent any such additional Commission approvals are necessary pursuant to the Commission's General Order 131, PG&E will file separately for approval of those upgrades.

detailed scope of the potential interconnection upgrades that will be needed and the related cost of these upgrades will be determined in the future as part of the process described above, the Joint Applicants have included reasonable proxy costs in their cost-effectiveness analysis. These include \$12 million for Interconnection Customer's Interconnection Facilities,^{21/} which would be recovered in CPUC-jurisdictional rates and are included in the proposed Cost Recovery Cap, and \$13.1-15.8 million in Network Upgrade^{22/} costs that are typically reimbursed to the interconnection customer by the Transmission Operator and would be separately recovered through FERC-jurisdictional rates.^{23/} As described in the ratemaking proposal, below, the Joint Applicants are also seeking a mechanism to update the cost forecast, if necessary, once the Cluster 15 study process provides an estimate of the costs of the Interconnection Customers' Interconnection Facilities. The Joint Applicants are further proposing to submit a Tier 1 Advice Letter to inform the Commission and stakeholders of the full scope of the Phase 2 Interconnection Study results, including those for reimbursable Network Upgrades, once that study is complete.

E. The Joint Applicants' Ratemaking Proposal

The annual forecasted revenue requirements for the period 2029-2034 are shown in Chapter 4 of the prepared testimony. The total forecasted revenue requirement is calculated

^{21/} The CAISO tariff defines Interconnection Customer's Interconnection Facilities as follows:

"All facilities and equipment, as identified in Appendix A of the Large Generator Interconnection Agreement, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the CAISO Controlled Grid. Interconnection Customer's Interconnection Facilities are sole use facilities." CAISO Tariff (Nov. 1, 2023), App. A.

^{22/} The CAISO tariff defines Network Upgrades as follows:

"The additions, modifications, and upgrades to the CAISO Controlled Grid required at or beyond the Point of Interconnection to accommodate the interconnection of the Generating Facility to the CAISO Controlled Grid. Network Upgrades shall consist of Delivery Network Upgrades and Reliability Network Upgrades. Network Upgrades do not include Distribution Upgrades." CAISO Tariff (Nov. 1, 2023), App. A.

^{23/} The network upgrade cost placeholder is based on the CAISO's maximum reliability network upgrade (RNU) reimbursement, escalated to January 1, 2031, as further described in Chapter 3 of the prepared testimony.

based on the total \$462 million in forecasted capital additions, less an anticipated 30 percent ITC of \$135 million that will be normalized over the book life of the assets. The Joint Applicants propose to include the ongoing revenue requirement for the Helms Uprate Project once the project is in operations in their base-year 2035 General Rate Case, since the three uprated units are expected to be in service by then.

The federal Inflation Reduction Act of 2022 (Act) provides incentives for green energy in the form of ITCs. The Joint Applicants will use all commercially reasonable efforts to secure and maximize the value of these ITCs and proposes to pass on to customers all such ITC value, in the form of reducing the revenue requirement associated with the Helms Uprate Project.

Although some uncertainties exist regarding exactly how the statutory provisions of the Act will be interpreted by the Internal Revenue Service (IRS), the Act generally provides for a base credit of six percent, which can be increased by five times to thirty percent if the project meets the prevailing wage and apprenticeship requirements. The Joint Applicants' revenue requirements presented above assume that the Joint Applicants will receive the thirty percent ITC rate for all Helms Uprate Project capital costs, except for interconnection costs.

In order to provide the Commission and stakeholders with additional transparency about the actual value of the ITCs realized by the Joint Applicants and passed on to customers for the Helms Uprate Project, the Joint Applicants propose to submit a Tier 1 Advice Letter if, at any time in the future, the Joint Applicants determine that either of them will realize less than 30% ITC on any portion of the capital cost of the Uprate, except for the interconnection costs. This provides the Commission with continuing oversight of the Joint Applicants' actions to obtain the anticipated ITC.

The Joint Applicants propose to recover the above-market costs associated with the Helms Uprate Project through the Power Charge Indifference Adjustment ("PCIA") rates via two separate vintages. The PCIA rate is authorized and implemented through the annual ERRA forecast proceeding. PG&E records billed PCIA revenues and authorized costs in the Portfolio Adjustment Balancing Account ("PABA") vintage subaccounts. In the year the resource is

forecast to become operational, the Joint Applicants will include the authorized revenue rate requirement in the PCIA forecast and will establish PCIA rates to recover the authorized costs from bundled and non-exempt departing load customers.

The Joint Applicants will continue PG&E's current practice of recovering the above market costs associated with the extant capacity of Helms through the Legacy Utility Owned Generation Subaccount, which records and recovers the above market costs associated with adopted revenue requirements related to PG&E owned generation installed before 2002 ("Legacy UOG"). The Helms facility currently qualifies for Legacy UOG treatment, which is how PG&E currently records net above market costs associated with the Helms facility.

The Joint Applicants request that Commission approve that the net above market costs associated with the proposed incremental capacity from the Helms Uprate Project be recovered via a new vintage subaccount. The Joint Applicants propose that total project capital and operations costs be allocated to the two PABA vintages based upon the proportion of generation capacity within each vintage, and verified after end of construction through final testing. The Joint Applicants submit that this cost allocation approach fairly allocates costs to their source while remaining administratively simple.

The Joint Applicants further propose to establish a memorandum account upon approval of this Application to track any incurred costs that exceed the authorized cost recovery cap. Costs recorded to the memorandum account could only be recovered in rates if they are subsequently authorized by the Commission after a reasonableness review in a separate proceeding.

Additionally, for certain categories of contingency costs outside of the Joint Applicants' control – namely, FERC licensing costs and costs for Interconnection Customer's Interconnection Facilities – the Joint Applicants propose that they be authorized to seek an increase in the initial cost recovery cap via a Tier 3 Advice Letter, in order to provide timely, up-front review of these costs, their impact on cost-effectiveness, and assurance of cost recovery.

The Joint Applicants would need to demonstrate in any such Tier 3 Advice Letter the continuing cost-effectiveness of the Helms Uprate Project with the revised cost recovery cap.

Finally, the Joint Applicants propose that the final decision on the Application permit updates to the Joint Applicants' tariffs or preliminary statements arising from this Application be presented to the Commission via a Tier 1 Advice Letter if the Commission approves the Helms Uprate Project, as further described in Chapter 4 of the prepared testimony. These updates would be limited to needed changes to conform the Joint Applicants' tariffs to the authorized ratemaking mechanisms approved as part of this Application.

F. Code of Conduct

Because the Helms Uprate Project was under development in parallel with PG&E's MTR RFO, PG&E put in place an internal Code of Conduct prohibiting PG&E's Helms Uprate Project development team, within PG&E's Power Generation organization, from receiving market-sensitive information regarding bids in the MTR RFO. The Code of Conduct identifies the team within PG&E's Energy Procurement and Policy organization that has access to and evaluates the MTR RFO bids, prohibits the bid evaluation team from providing bid information to the Helms Uprate Project development team, and also prohibits certain management and advisory personnel who interact with both teams from acting as a conduit to provide the MTR RFO bid information to the Helms Uprate Project development team.

In furtherance of this Code of Conduct, all development of revenue requirements and the NMV for both the Helms Uprate Project and third-party-owned energy storage proposals, and the comparison between those revenue requirements and values, was undertaken by PG&E staff outside of the Helms Uprate Project development team.

G. Guidance from PG&E's 2023 General Rate Case Decision Regarding Utility-Owned Generation Facilities

The Commission approved PG&E's 2023 GRC in D.23-11-069 on November 16, 2023. In that Decision, the Commission ordered PG&E to provide specific information in future GRCs regarding utility-owned generation when PG&E proposes new asset life extensions, incremental

capacity additions or changed functions.^{24/} Although the Commission ordered PG&E to address these specific questions only in future GRC filings, in order to provide transparency and to support the spirit of that Order, the Joint Applicants list each of these questions below, provides a summary response, and points to specific sections of the prepared testimony that provide more information responsive to each question.

1. The details of any PG&E proposal for new asset life extensions, incremental capacity additions, or changed functions for any of its UOG asset and why PG&E is undertaking these changes.

The Joint Applicants propose to increase the nameplate generation capacity of the existing Helms facility by 150-180 MW. Implementing this capacity addition in lieu of otherwise needed Lifecycle Replacement Work on the facility results in a cost-effective solution to California's need for additional long-duration energy storage to support a clean and reliable grid.

Further details on the proposal, including asset life extensions, incremental capacity additions, and changed functions are found in Chapter 2 of the prepared testimony (Project Scope, Cost Forecast, and Timeline).

2. On whose behalf the Joint Applicants are making these new investments.

The Joint Applicants propose to make these new investments in long-duration storage for the benefit of the Joint Applicants' bundled portfolio needs and to support State policies regarding the need for system-wide incremental storage additions. As described in more detail in Chapter 3 of the prepared testimony, California's grid needs additional long duration storage to ensure that excess generation is captured for future use during periods of overproduction and to release that energy during peak events when it is more needed; the Helms Uprate Project helps to

^{24/} D.23-11-069, p. 511 ("Accordingly PG&E is directed to include in its future GRC filings its position and any supporting evidence concerning (1) the details of any PG&E proposal for new asset life extensions, incremental capacity additions, or changed functions for any of its UOG assets and why it is undertaking these changes, (2) on whose behalf it is making these new investments, and (3) the appropriate vintaging treatment for each asset in light of this testimony along with any future GRC proposals.").

meet that identified need. The Joint Applicants note that the Helms Uprate Project not only expands capacity at Helms, but also avoids the need for separate Lifecycle Replacement Work necessary to ensure continued operations of the existing Helms capacity. The Joint Applicants thus believe that the Helms Uprate Project benefits both departed load customers and bundled customers, and therefore proposes to share the net costs for this work between these two groups on an equitable basis, as further described in Chapter 4 of the prepared testimony. Finally, PG&E intends that the Helms Uprate Project incremental capacity, if approved and constructed, will be owned by Pacific Generation LLC, an affiliate of PG&E, as further described in Section IV of this Application.

Further details on the proposal, including on whose behalf it is making these new investments and the need for the uprate, are included in Chapter 3 (Project Need, Benefits, and Cost-Effectiveness).

3. The appropriate vintaging treatment for each asset in light of this testimony.

Because the Helms Uprate Project both avoids the need for separate Lifecycle Replacement Work and adds incremental capacity, the Joint Applicants propose to recover all above-market costs associated with Helms through two separate PCIA vintages. First, the Joint Applicants propose that above-market costs associated with the extant capacity of Helms continue to be recovered through the Legacy Utility-Owned Generation Subaccount, while the above-market costs associated with the proposed incremental capacity realized by the Helms Uprate Project would be recovered via a new vintage subaccount. The Joint Applicants believe that this is appropriate because it allocates costs to the beneficiaries. While both bundled and departed load customers benefit from the existing capacity of Helms, bundled customers will benefit from the incremental capacity added from the incremental Uprate work. The Joint Applicants thus believe this is an appropriate vintaging treatment for a project that both maintains existing capacity while adding incremental capacity.

Further details on the proposal, including the appropriate vintaging treatment for the asset, is found in Chapter 4 (Ratemaking Proposal and Revenue Requirements), Section C (Cost Allocation).

H. Summary of Discussion

Based on the information set forth in the accompanying prepared testimony and summarized above, the Helms Uprate Project is a cost-effective means to provide needed, incremental, long-duration energy storage capacity to California's electricity grid, while also meeting the Joint Applicants' bundled electric portfolio needs. The Helms Uprate Project is a unique opportunity because it is designed to capture efficiencies through integration with otherwise needed Lifecycle Replacement Work at the Helms facility and to take advantage of currently available tax credits. Cost recovery authorization up to the reasonable forecast presented in this Application is needed in order to allow the Joint Applicants to move forward with program design expeditiously and to secure this opportunity for their customers.

III. PREPARED TESTIMONY AND WORKPAPERS

The public version of the Joint Applicants' direct testimony in support of the request for recovery of the Helms Uprate Project costs in rates is being served concurrently with the Application to expedite Commission approval. It consists of the following chapters:

Chapter 1: Executive Summary and Overview

Chapter 2: Project Scope, Cost Forecast, and Timeline

Chapter 3: Project Need, Benefits, and Cost-Effectiveness

Chapter 4: Ratemaking Proposal and Revenue Requirements

The prepared testimony includes attachments to both Chapters 2 and 3. The attachments to Chapter 2 are consultant and contractor preliminary design studies. The attachments to Chapter 3 include summary tables from PG&E's current IRP, a confidential attachment that compares the quantified value of the Helms Uprate Project against other relevant market procurement opportunities, and the report of the Independent Evaluator (both public and

confidential). The Joint Applicants have prepared a separate confidential, unredacted version of the prepared testimony, which they will serve concurrently on the Commission's staff and will provide to other parties upon request, consistent with the Commission's applicable confidentiality rules and procedures.

The Joint Applicants have also prepared workpapers supporting the quantitative conclusions in its prepared testimony. The Joint Applicants will make those workpapers available, in their native electronic format and/or in PDF format, available to parties and the Commission upon request and consistent with the Commission's existing rules regarding access to confidential, market-sensitive information, where applicable.

IV. INTEREST OF PACIFIC GENERATION LLC

In September 2022, PG&E jointly filed an application with its new subsidiary Pacific Generation LLC ("Pacific Generation") to allow PG&E to transfer substantially all of its non-nuclear generation assets to Pacific Generation (the "Pacific Generation Application").^{25/} The goal of that proposed transaction is to facilitate a sale of up to 49.9% of the equity interests in Pacific Generation to one or more third party investors, thereby allowing PG&E to efficiently raise equity capital while balancing other customer interests, as detailed in the Pacific Generation Application. If approved as proposed, Pacific Generation will become a Commission-regulated cost-of-service public utility.^{26/} Pursuant to a service agreement between PG&E and Pacific Generation, PG&E personnel will continue to operate and maintain Pacific Generation's assets, and PG&E will continue to schedule and dispatch output from generation facilities owned by Pacific Generation as part of an integrated resource portfolio using the same least-cost dispatch approach as at present.^{27/}

Pacific Generation was formed on September 26, 2022, as a Delaware limited liability company. Pacific Generation is currently a member-managed limited liability company managed

^{25/} See generally A.22-09-018.

^{26/} *Id.*, p. 2.

^{27/} *Ibid.*

by PG&E. PG&E currently owns, and has owned since Pacific Generation's formation, 100% of the equity interests of Pacific Generation.^{28/}

Upon the Commission's approval, PG&E will transfer to Pacific Generation all of its right, title, and interest in and to substantially all of its non-nuclear generation assets, including the existing and future rate base investments associated with the Helms facility and the uprate work then underway at Helms that is recorded as construction work in progress.^{29/}

PG&E's goal at the time of filing of the Pacific Generation Application was to receive necessary regulatory approvals and close the transaction by the end of 2023.^{30/} However, the Pacific Generation Application remains pending before the Commission as of the filing date of the present Application, and so the contemplated Pacific Generation transactions have not closed at the time of this filing. The Pacific Generation transactions will also require separate approvals from FERC.^{31/}

Although Pacific Generation has not yet been granted a Certificate of Public Convenience and Necessity ("CPCN") to operate as a regulated utility in California and has not yet taken ownership of the Helms facility, PG&E is filing the instant Application jointly with Pacific Generation because PG&E's intent and expectation is for Pacific Generation to own Helms, and therefore the Helms Uprate Project improvements, by the time that the Helms Uprate Project is expected to be constructed in 2029-2031. As noted above, any such transfer of ownership is being addressed and would be approved through the separate Pacific Generation Application, A.22-09-018.^{32/}

^{28/} *Id.*, p. 5.

^{29/} *See ibid.*

^{30/} *Id.*, p. 16.

^{31/} *See id.*, pp. 18-19.

^{32/} In the event that the Commission approves the pending A.22-09-018 and grants a CPCN to Pacific Generation during the pendency of the instant Application for the Helms Uprate, PG&E anticipates seeking to add Pacific Generation as a co-applicant and the real party in interest in this proceeding.

The Joint Applicants do not anticipate that the contemplated Pacific Generation transactions or their regulatory approval processes would impact the issues identified for resolution in the present Application. This is because under the proposed intercompany agreements between Pacific Generation and PG&E, PG&E would continue to construct, operate, maintain, repair, and support Pacific Generation's assets and operations in substantially the same manner as PG&E does today.^{33/} While Pacific Generation would receive any authorized revenue requirement for the Helms Uprate Project if the Pacific Generation transactions are approved by the Commission, nothing would change in the amount or manner of collecting that revenue requirement from the customers' perspective. Specifically, the revenue requirement would continue to be collected based on cost-of-service regulation and recovered from the same customer sets as today in the same proportions as under today's methodology.^{34/} The Joint Applicants' proposed Pacific Generation transaction specifically preserves existing PCIA methodologies for the PCIA-eligible resources that would be transferred to Pacific Generation, including Helms and the proposed Helms Uprate Project.^{35/}

In summary, PG&E expects the Helms Uprate Project capacity investments to be owned by its subsidiary and joint applicant Pacific Generation in the future, but that contemplated sale does not impact the core issues presented for resolution in this Application.

V. INDEPENDENT EVALUATOR

PG&E engaged an Independent Evaluator ("IE"), Wayne Oliver of Merrimack Energy, to provide an independent assessment of the methodology that PG&E used to evaluate the cost-effectiveness of the Helms Uprate Project opportunity. The IE's evaluation is intended to provide an objective assessment of the reasonableness and fairness of the Joint Applicants' comparison given that a utility-owned project is being compared against third-parties' offers for energy storage received through a competitive solicitation. The IE's engagement on this

^{33/} *Id.*, p. 21.

^{34/} *Id.*, p. 33.

^{35/} *Id.*, p. 34.

Application is a logical extension of the same IE's work on PG&E's MTR RFO. The IE's report, in both public and confidential versions, is provided as Attachment C to Chapter 3 of the prepared testimony.

VI. STATUTORY AND PROCEDURAL REQUIREMENTS

This Application is made pursuant to the general authority of the Commission, including its ratemaking authority, under the provisions of the California Public Utilities Code, including without limitation, Sections 451, 454, and 701, the Commission's Rules of Practice and Procedure, and prior decisions, orders, and resolutions of the Commission including, but not limited to, D.23-02-040, D.22-02-004, and D.21-06-035.

Public Utilities Code Section 701 provides that "the commission may supervise and regulate every public utility in the state and may do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction." While this does not give the Commission unlimited power, it provides the Commission with the authority to grant the relief requested in this Application, i.e., the authority to permit the Joint Applicants to recover certain costs to develop incremental pumped storage capacity in lieu of undertaking needed maintenance on the existing Helms facility.

A. Legal Name and Principal Place of Business (Rule 2.1(a))

The first Applicant's legal name is Pacific Gas and Electric Company. Since October 10, 1905, PG&E has been an operating public utility corporation, organized under California law. PG&E is engaged principally in the business of furnishing electric and gas service in northern and central California. PG&E's mailing address for this matter is 300 Lakeside Drive, Oakland, California 94612.

The second Applicant's legal name is Pacific Generation LLC, a limited liability company formed under the laws of the State of Delaware on September 26, 2022. The Application of Pacific Generation LLC for a CPCN to operate as a public utility corporation is pending before the Commission in A.22-09-018. Pacific Generation LLC's mailing address for this matter is 12840 Bill Clark Way, Auburn, CA 95602.

B. Correspondence and Communication Regarding this Application (Rule 2.1(b))

Communications regarding this Application, including service by e-mail, should be addressed to Grady Mathai-Jackson and Yvonne Yang at the addresses shown below:

M. Grady Mathai-Jackson
Pacific Gas and Electric Company
Law Department, 19th Floor
300 Lakeside Drive, Suite 210
Oakland, CA 94612
Telephone: (415) 652-5447
Facsimile: (510) 898-9696
E-Mail: Grady.Mathai-Jackson@pge.com

Yvonne Yang
Regulatory Affairs Department
Pacific Gas and Electric Company
300 Lakeside Drive, Suite 210
Oakland, CA 94612
Telephone: (415) 370-3873
Email: Yvonne.Yang@pge.com

C. Proposed Category (Rule 2.1(c))

The Joint Applicants propose that the proceeding be categorized as a ratesetting proceeding.

D. Need for Hearing (Rule 2.1(c))

The Joint Applicants anticipate that hearings may be required in this proceeding to the extent parties file protests and identify contested issues of material fact. Toward that end, the Joint Applicants have included the potential for evidentiary hearings in their proposed schedule for the proceeding, below. However, to the extent no party protests the Application or protesting parties raise policy issues that can be resolved in written comments and briefing, the Joint Applicants request that the Commission find that no evidentiary hearing is required to issue the relief sought.

E. Issues to be Considered (Rule 2.1(c))

The principal issue presented in this Application is whether the Commission should approve as reasonable the Joint Applicants' request to recover the incurred costs of the proposed

uprate of the Helms facility, up to an authorized cap. More specifically, the Joint Applicants propose the following issues be considered in this proceeding:

1. Should the Joint Applicants be authorized to record the revenue requirement associated with actual costs of the Helms Uprate Project up to the authorized cost recovery cap and to recover these costs through two separate PABA subaccounts that prorate the costs between PCIA vintages based upon the relative increase in nameplate generation capacity?
2. Should PG&E be authorized to file one or more Tier 3 Advice Letters seeking to demonstrate the cost-effectiveness of any proposed increase in the cost recovery cap for the Helms Uprate Project to the extent that future forecasts of the costs related to Interconnection Customer's Interconnection Facilities or FERC license amendment requirements make such an increase necessary?
3. Should the Joint Applicants be authorized to record into a memorandum account any incurred costs for the Helms Uprate Project that exceed the cost recovery cap established by the Commission, with recovery of those costs subject to reasonableness review in a separate proceeding?

F. Proposed Schedule (Rule 2.1(c))

Activity	Proposed Date
Application Filed	December 20, 2023
Protests or Responses	Notice + 30 Days [Rule 2.6(a)]
Reply to Protests or Responses	Protest/Response Deadline + 10 Days [Rule 2.6(e)]
Prehearing Conference	January 31, 2024
Scoping Memo	February 7, 2024
Intervenor Testimony	February 28, 2024
Rebuttal Testimony	March 20, 2024
Evidentiary Hearings, if needed	April 17, 2024
Opening Briefs	May 1, 2024
Reply Briefs	May 22, 2024
Proposed Decision	By August 20, 2024 [Rule 14.2(a)]
Opening Comments on Proposed Decision	September 9, 2024 [Rule 14.3(a)]

Activity	Proposed Date
Reply Comments on Proposed Decision	September 16, 2024 [Rule 14.3(d)]
Final Decision	First Voting Meeting Following September 16, 2024

G. Relevant Safety Considerations (Rule 2.1(c))

In D.16-01-017, the Commission amended Rule 2.1(c) requiring applications to clearly state relevant safety considerations. The Commission has previously explained that the “[s]afe and reliable provision of utilities at predictable rates promotes public safety.”^{36/} As demonstrated in this Application and the prepared testimony, PG&E’s proposal for an uprate at the Helms facility in this proceeding supports the safe and reliable provision of electric service and the establishment of predictable rates, all of which can help facilitate public safety.

The Joint Applicants further addresses project-specific safety considerations in Chapter 2 of their prepared testimony.

H. Articles of Incorporation (Rule 2.2)

A certified copy of PG&E's Amended and Restated Articles of Incorporation, effective June 22, 2020, was filed with the Commission on July 1, 2020, in A.20-07-002. These Articles are incorporated herein by reference.

A copy of Pacific Generation’s Limited Liability Company Agreement, a certified copy of Pacific Generation’s Certificate of Formation, and a Certificate of Status for Pacific Generation, evidencing Pacific Generation’s qualification to transact business in the State of California, were each filed with the Commission on September 28, 2022, in A.22-09-018.

I. Construction Or Extension of Facilities (Rule 3.1)

Rule 3.1 sets forth certain information required to be included in applications for a CPCN for the construction of new generation or transmission line facilities.^{37/} As more fully discussed in Section VII, below, because federal law fully occupies the field of permitting the construction,

^{36/} D.14-12-053, pp. 12-13.

^{37/} General Order (GO) 131-D Section III.A, “Certificate of Public Convenience and Necessity.”

operation, and maintenance of this hydroelectric project, the Commission's normally applicable requirements for a CPCN are preempted as to the work that is within FERC's exclusive jurisdiction.^{38/}

J. Authority to Increase Rates (Rule 3.2)

The Joint Applicants are providing material in this Application that complies with Rule 3.2. This Application is not a general rate increase application, so Rule 3.2(a) applies, except for subsections (4), (7) and (9).

K. Balance Sheet and Income Statement (Rule 3.2(a)(1))

PG&E's most recent balance sheet and income statement for the period ended September 30, 2023, was filed in A.23-12-001, on December 1, 2023, and is incorporated herein by reference.

Pacific Generation LLC has not yet been authorized to operate as a utility and so does not currently have income.

L. Statement of Presently Effective Rates (Rule 3.2(a)(2))

PG&E's presently effective electric rates were filed on July 28, 2023, in A.23-07-012, and are incorporated herein by reference.

^{38/} One exception to the general statement of preemption would be interconnection-related upgrades to the Gregg Substation in order to accommodate increased output or pumping requirements for the Helms Uprate. Although the Helms facility itself and the lines connecting it to the grid at the Gregg Substation are all subject to FERC's exclusive hydroelectric licensing jurisdiction, the Gregg Substation is not FERC-jurisdictional. However, it is not possible at this time to study any changes to the Gregg Substation pursuant to the California Environmental Quality Act ("CEQA") because it would be entirely speculative to determine what, if any, changes to the substation will be needed. As described above, the Helms Uprate Project has been submitted in the CAISO's Cluster 15 for interconnection studies, and it will likely take several years to obtain concrete results of that study process. PG&E has no indication today that upgrades to the Gregg Substation will be necessary. Further, any such upgrades would likely be able to be made within the existing substation boundaries without changing the high-side voltage of the substation, meaning that they would not meet the Commission's General Order 131-D requirements for requiring a discretionary permit and triggering CEQA. In the unlikely event that the Helms Uprate's Interconnection Studies did require upgrades to the Gregg Substation that trigger the Commission's discretionary siting authority and CEQA, PG&E would file a separate, future application pursuant to General Order 131-D and submit the necessary Preliminary Environmental Assessment for purposes of CEQA review at that time.

Pacific Generation LLC has not yet been authorized to operate as a utility and so does not have authorized rates currently in effect.

M. Statement of Proposed Rates Increase (Rule 3.2(a)(3))

Approval of this Application would increase electric rates by less than one percent. The Joint Applicants have described the proposed revenue requirement increase and rate structure in Section II.C, above and in further detail in Chapter 4 of the prepared testimony.

N. Summary of Earning (Rules 3.2(a)(5) and (6))

A summary of recorded 2022 revenues, expenses, rate bases, and rate of return for PG&E's Electric and Gas Departments was filed with the Commission on July 28, 2023, in A.23-07-012, and is incorporated by reference herein.

Pacific Generation LLC has not yet been authorized to operate as a utility and so does not have earnings.

O. Most Recent Proxy Statement (Rule 3.2(a)(8))

PG&E's most recent proxy statement dated April 6, 2023, was filed with the Commission on May 2, 2023, in A.23-05-005, and is incorporated herein by reference. PG&E is the parent company of Pacific Generation LLC.

P. Type of Rate Change Requested (Rule 3.2(a)(10))

The rate change sought in this Application is for a proposed addition to the Joint Applicants' rate base. Accordingly, this Application's proposed rate is not limited to the increased costs associated with services or commodities furnished by the Joint Applicants.

Q. Service and Notice of Application (Rule 3.2(b-d))

The Joint Applicants are serving this Application and their prepared testimony on the service lists in the following proceedings:

- Application of Pacific Gas and Electric Company for Authority, Among Other Things, to Increase Rates and Charges for Electric and Gas Service Effective on January 1, 2023: A.21-06-021
- Order Instituting Rulemaking to Continue Electric Integrated Resource Planning and Related Procurement Processes: R.20-05-003

- Order Instituting Rulemaking to Review, Revise, and Consider Alternatives to the Power Charge Indifference Adjustment: R.17-06-026

Within 20 days after filing this Application, the Joint Applicants will mail or send electronically a notice stating in general terms the proposed revenues, rate changes and rate making mechanisms requested in this Application to the parties listed in Exhibit A of this Application, including the State of California and cities and counties served by PG&E. Within 20 days, the Joint Applicants will also publish in newspapers of general circulation in each county in its service territory a notice of the filing of this Application and any proposed changes in rates. Within 45 days after filing this Application, the Joint Applicants will also include notices of the proposed changes in rates with the regular bills mailed or emailed to all customers affected by the proposed changes.

VII. THIS APPLICATION DOES NOT REQUIRE CEQA REVIEW BY THE COMMISSION (RULE 2.4).

CEQA applies to projects that require discretionary approval from a governmental agency that results in a physical change to the environment unless exempted by statute or regulation. CEQA review by the Commission is not triggered in this case because: (1) the Commission's jurisdiction over construction, operation, and maintenance of any foreseeable facilities related to the Helms Uprate Project is preempted by federal law; and (2) ratemaking decisions by the Commission do not independently trigger CEQA.

While under the federal framework governing hydroelectric facilities the Commission retains its jurisdiction over setting retail rates,^{39/} FERC has exclusive jurisdiction over the need determination, siting, construction, operation, and maintenance of hydroelectric pumped storage

^{39/} See 16 U.S.C. § 812 (Section 19 of the FPA) (preserving state authority over retail rates).

facilities under Part I of the Federal Power Act (“FPA”).^{40/} Accordingly, and as discussed above, the Joint Applicants intend to seek an amendment to PG&E’s FERC license for the Helms facility to undertake the Helms Uprate Project. FERC, as the acting agency, would then comply with the environmental review requirements of the National Environmental Policy Act, 42 U.S.C. § 4321 et seq. (“NEPA”). Further, the California State Water Resources Control Board (“SWRCB”) may have authority to issue a water quality certification for the Helms Uprate Project pursuant to Section 401 of the federal Clean Water Act, 33 U.S.C. § 1341, and, to the extent it determines that its discretionary approval is needed for the Helms Uprate Project, would conduct CEQA review as the lead agency. The FPA provides no such authority to the Commission.

Where, as here, federal law fully occupies the field of permitting the siting, construction, operation, and maintenance of a project, the Commission retains no jurisdiction or authority to place conditions on the physical design or potential impacts of that project. Accordingly, the Commission’s normally applicable requirements for a CPCN are preempted as to the work that is within FERC’s exclusive jurisdiction.^{41/} Thus, while governmental approvals of the construction, operation, and maintenance of the proposed project may result in a physical change to the environment -- and any such approvals will go through any required NEPA and CEQA review -- the Commission itself will not make any such discretionary approval in this case. Because the Commission has no discretionary approval authority over construction of the

^{40/} 16 U.S.C. § 791, et seq. *See, e.g., First Iowa Hydro-Electric Coop. v. FPC*, 328 U.S. 152 (1946) (holding that Part I of the FPA establishes a comprehensive regulatory scheme that preempts state laws requiring approval authority over the construction, operation, and maintenance of licensed projects); *Sayles Hydro Associates v. Maughan*, 985 F.2d 451 (9th Cir. 1993) (holding that Part I of the FPA “occupied the field” in terms of environmental regulation of FERC projects); *Commonwealth of Pennsylvania v. FERC*, 868 F.2d 592 (3rd Cir. 1989) (holding that the FPA preempted state laws relating to pollution, flood control, aesthetics, recreation, and natural resource conservation); *Town of Springfield v. McCarren*, 549 F. Supp. 1134 (D. Vt. 1982), *aff’d without opinion*, 722 F.2d 728 (2d Cir. 1983), *cert. denied*, 464 U.S. 942 (1983) (holding the Vermont Public Service Board’s right to issue a certificate of public good for a proposed hydroelectric project was preempted by the FPA).

^{41/} One exception to the general statement of preemption is discussed in footnote 38, *supra*.

facilities, it cannot be a lead or responsible agency with respect to that construction under CEQA.^{42/}

Second, it is long established that the act of ratemaking by the Commission, as requested in this Application, is exempt from CEQA review.^{43/} This is consistent with judicial holdings that exclude preliminary funding decisions from CEQA review.^{44/} As stated in the California Public Resources Code, the “establishment, modification, structuring, restructuring, or approval of rates, tolls, fares, or other charges by public agencies” is exempt from CEQA.^{45/}

Public policy considerations underscore why CEQA review is neither required nor appropriate in this case. First, due to the preemptive effect of the FPA, the Commission has no jurisdiction to regulate the design of the Helms Uprate Project through CEQA mitigation measures or otherwise, rendering CEQA review by the Commission moot. The Commission’s

^{42/} 14 CCR § 15381 (responsible agencies include only “public agencies other than the Lead Agency which have discretionary approval power over the project”); *see also* 14 CCR § 15040(b) (“CEQA does not grant an agency new powers independent of the powers granted to the agency by other laws”).

^{43/} *Petitions of Peninsula Commute and Transit Committee, et al. for Rehearing of D 81237 (EIR Reports) Denied and Decision Modified*, D.81484, 1973 Cal. PUC LEXIS 406, *7; 75 CPUC 243, June 19, 1973 (holding that “the legislature did not intend the EIR requirements to apply to all activities of private persons subject to Commission approval, but merely to those physical projects subject to Commission approval by the issuance of a lease, permit, license, certificate or other entitlement for use. Ratemaking proceedings do not fall within this definition.”); *Application of the County Sanitation Districts of Los Angeles County for an Order approving the provisions of Power Sales Agreements between the Southern California Edison Company and the County Sanitation Districts of Los Angeles County*,” D.86-06-060, 1986 Cal. PUC LEXIS 424, *29-30; 21 CPUC2d 287, June 25, 1986 (holding that an application for recovery of costs “is one which is quite clearly an exercise of our ratemaking authority to which CEQA does not apply”); *Application of Pacific Gas And Electric Company for an Order approving an agreement with Kings River Conservation District for the purchase of firm capacity and energy from the Dinkey Creek Hydroelectric Project*, D.86-10-044, 1986 Cal. PUC LEXIS 642, *16-18, 22 CPUC2d 114, Oct. 16, 1986 (holding that a ratemaking order does not constitute a “project” under CEQA).

^{44/} *See, e.g., Citizens to Enforce CEQA v. City of Rohnert Park* (2005) 131 Cal.App.4th 1594, 1601 (approval of a “mere funding mechanism” did not trigger CEQA review); *Concerned McCloud Citizens v. McCloud Community Services District* (2007) 147 Cal.App.4th 181, 197 (district’s conceptual agreement to sell water was not a project under CEQA); *Kaufman & Broad-South Bay, Inc. v. Morgan Hill Unified School District* (1992) 9 Cal.App.4th 464, 476 (formation of a Mello Roos district without determining specific school improvements was a funding mechanism that did not require CEQA review).

^{45/} Cal. Pub. Res. Code § 21080(b)(8).

lack of jurisdiction and conditioning authority can be distinguished from the SWRCB, which does have delegated authority under federal law to impose conditions on the Helms Uprate Project if that agency asserts its jurisdiction, making it appropriate for the SWRCB to conduct any necessary CEQA review as the lead agency. Second, since the detailed design of the Helms Uprate Project is not yet complete, environmental review would be premature even if the Commission did have siting jurisdiction. The Joint Applicants are seeking ratemaking review of the Helms Uprate Project now based on early-stage design criteria so that they may secure a unique opportunity for their customers, but the Joint Applicants would not be able to provide a meaningful Proponent's Environmental Assessment until the contemplated detailed design studies are completed.^{46/}

VIII. REQUESTED RELIEF

Wherefore, PACIFIC GAS AND ELECTRIC COMPANY and PACIFIC GENERATION LLC respectfully request the Commission to issue an order:

- (1) Finding that State policy has identified a statewide need for incremental long-duration energy storage, including specifically hydroelectric pumped storage, through the Integrated Resource Plan process;
- (2) Finding that the Helms Uprate Project would provide cost-effective, incremental long-duration energy storage capacity to California's electric grid and to PG&E's bundled portfolio;
- (3) Finding that the Helms Uprate Project provides additional, non-quantifiable

^{46/} CEQA does not require an analysis of future effects that is based on speculation or conjecture. *See Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 738 (“[W]here future development is unspecified and uncertain, no purpose can be served by requiring an EIR to engage in sheer speculation as to future environmental consequences.”); *Kaufman & Broad-South Bay, Inc. v. Morgan Hill Unified School District* (1992) 9 Cal.App.4th 464, 475 (“Cases have balanced the protection provided by conducting environmental review at the ‘earliest possible stage’ against the equally compelling practical demand that the decisionmaking process underlying a given ‘project’ be sufficiently developed to provide meaningful information for technical review.”); *Laurel Heights Improvement Assn. v. Regents of the University of California* (1988) 47 Cal.3d 376, 396 (As the California Supreme Court has recognized, “premature environmental analysis may be meaningless and financially wasteful.”).

benefits to the State, including through diversification of the energy storage capacity portfolio;

(4) Finding that the Joint Applicants have a bundled portfolio need for the Helms Uprate Project;

(5) Finding it reasonable for the Joint Applicants to seek necessary federal authorization to uprate each of Helms' three units by approximately 50-60 MW each, for a total increase of nameplate generating capacity of approximately 150-180 MW;

(6) Finding reasonable the Joint Applicants' forecast of \$462 million in capital expenditures to complete the Helms Uprate Project;

(7) Finding that the Joint Applicants' cost forecast for the Helms Uprate Project is comprised of costs that are incremental to costs authorized in PG&E's General Rate Case or in any other proceeding;

(8) Authorizing the Joint Applicants to recover without further reasonableness review the actually incurred costs to construct the Helms Uprate Project, up to a cap of \$462 million (nominal);

(9) Directing the Joint Applicants to take all commercially reasonable steps to secure the maximum federal tax benefits available for the Helms Uprate Project and to credit any realized tax benefits for the project to customers through reductions in the Helms Uprate Project revenue requirement;

(10) Authorizing the Joint Applicants to monetize any federal investment tax credits it receives for the Helms Uprate Project in any available way that maximizes the value of those credits to customers, including through the sale of those tax credits to third parties for cash;

(11) Directing the Joint Applicants to submit a Tier 1 Advice Letter within 45 days if, at any time in the future, either of the Joint Applicants determines that it will realize less than a 30% federal investment tax credit on any portion of the capital cost of the Uprate, except for the interconnection costs;

(12) Authorizing the Joint Applicants to submit a Tier 3 Advice Letter seeking a change to the initial cost recovery cap of \$462 million if the forecast cost for Interconnection Customer's Interconnection Facilities or FERC license requirements related to the project materially change during the course of development, subject to the Joint Applicants' burden to demonstrate in such Advice Letter that the project remains cost-effective with any such revised cost forecast;

(13) Authorizing the Joint Applicants to create a memorandum account to record any costs it incurs for the Helms Uprate Project that are above the authorized cost recovery cap, as that cap may be amended by the Commission, in order to provide the Joint Applicants the opportunity to seek after-the-fact reasonableness review of any such costs via a separate proceeding;

(14) Authorizing the costs of the Helms Uprate Project be included in the PCIA in two vintages, as described in the Joint Applicants' prepared testimony, and finding reasonable that the allocation of cost to each PCIA vintage be based upon the proportion of the incremental nameplate generating capacity created by the Helms Uprate Project to the pre-existing nameplate generating capacity of the Helms facility;

(15) Directing the Joint Applicants to submit a Tier 1 Advice Letter within 30 days of its receipt of a final Phase 2 Interconnection Study, or other similar interconnection study, that informs the Commission of the estimated cost of all interconnection upgrades required for the Helms Uprate Project, including network upgrade costs;

(16) Authorizing PG&E to submit a Tier 1 Advice Letter within 60 days of the approval of this Application to revise its tariffs and to establish a memorandum account as proposed in the Joint Applicants' prepared testimony;

(17) Finding that this ratemaking application does not require environmental review pursuant to CEQA by the Commission and that the Helms Uprate Project does not

otherwise require siting or design approval pursuant to the Commission's General Order 131-D due to federal preemption; and

(18) Granting such additional relief as the Commission may deem proper.

Respectfully Submitted,

M. GRADY MATHAI-JACKSON
DANIEL S. HASHIMI

By: /s/ M. Grady Mathai-Jackson
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Dated: December 20, 2023

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY,
and PACIFIC GENERATION LLC

VERIFICATION

I, DAVE GABBARD, say:

I am an officer of both Pacific Gas and Electric Company and Pacific Generation LLC, and I am authorized to make this Verification for and on behalf of said corporations and make this Verification for that reason. I have read the foregoing Application and am informed and believe that the matters contained therein are true, and, on that ground, I allege that the matters stated herein are true.

I declare under penalty of perjury that the foregoing is true and correct. Executed at Oakland, California this 20th day of December, 2023.

/s/ Dave Gabbard

DAVE GABBARD
Vice President – Pacific Generation
PACIFIC GAS AND ELECTRIC COMPANY

President
PACIFIC GENERATION, LLC

EXHIBIT A

SERVICE OF NOTICE OF APPLICATION

In accordance with Rule 3.2(b), Applicant will mail a notice to the following, stating in general terms its proposed change in rates.

State of California

To the Attorney General and the Department of General Services.

State of California
Office of Attorney General
1300 I St Ste 1101
Sacramento, CA 95814

and

Department of General Services
Office of Buildings & Grounds
505 Van Ness Avenue, Room 2012
San Francisco, CA 94102

Counties

To the County Counsel or District Attorney and the County Clerk in the following counties:

Alameda	Mariposa	Santa Clara
Alpine	Mendocino	Santa Cruz
Amador	Merced	Shasta
Butte	Modoc	Sierra
Calaveras	Monterey	Siskiyou
Colusa	Napa	Solano
Contra Costa	Nevada	Sonoma
El Dorado	Placer	Stanislaus
Fresno	Plumas	Sutter
Glenn	Sacramento	Tehama
Humboldt	San Benito	Trinity
Kern	San Bernardino	Tulare
Kings	San Francisco	Tuolumne
Lake	San Joaquin	Yolo
Lassen	San Luis Obispo	Yuba
Madera	San Mateo	
Marin	Santa Barbara	

Municipal Corporations

To the City Attorney and the City Clerk of the following municipal corporations:

Alameda	Colusa	Hanford
Albany	Concord	Hayward
Amador City	Corcoran	Healdsburg
American Canyon	Corning	Hercules
Anderson	Corte Madera	Hillsborough
Angels Camp	Cotati	Hollister
Antioch	Cupertino	Hughson
Arcata	Daly City	Huron
Arroyo Grande	Danville	Ione
Arvin	Davis	Isleton
Atascadero	Del Rey Oaks	Jackson
Atherton	Dinuba	Kerman
Atwater	Dixon	King City
Auburn	Dos Palos	Kingsburg
Avenal	Dublin	Lafayette
Bakersfield	East Palo Alto	Lakeport
Barstow	El Cerrito	Larkspur
Belmont	Elk Grove	Lathrop
Belvedere	Emeryville	Lemoore
Benicia	Escalon	Lincoln
Berkeley	Eureka	Live Oak
Biggs	Fairfax	Livermore
Blue Lake	Fairfield	Livingston
Brentwood	Ferndale	Lodi
Brisbane	Firebaugh	Lompoc
Buellton	Folsom	Loomis
Burlingame	Fort Bragg	Los Altos
Calistoga	Fortuna	Los Altos Hills
Campbell	Foster City	Los Banos
Capitola	Fowler	Los Gatos
Carmel	Fremont	Madera
Ceres	Fresno	Manteca
Chico	Galt	Maricopa
Chowchilla	Gilroy	Marina
Citrus Heights	Gonzales	Mariposa
Clayton	Grass Valley	Martinez
Clearlake	Greenfield	Marysville
Cloverdale	Gridley	McFarland
Clovis	Grover Beach	Mendota
Coalinga	Guadalupe	Menlo Park
Colfax	Gustine	Merced
Colma	Half Moon Bay	Mill Valley

Millbrae
Milpitas
Modesto
Monte Sereno
Monterey
Moraga
Morgan Hill
Morro Bay
Mountain View
Napa
Newark
Nevada City
Newman
Novato
Oakdale
Oakland
Oakley
Orange Cove
Orinda
Orland
Oroville
Pacific Grove
Pacifica
Palo Alto
Paradise
Parlier
Paso Robles
Patterson
Petaluma
Piedmont
Pinole
Pismo Beach
Pittsburg
Placerville
Pleasant Hill
Pleasanton
Plymouth
Point Arena
Portola
Portola Valley
Rancho Cordova
Red Bluff
Redding
Redwood City
Reedley
Richmond

Ridgecrest
Rio Dell
Rio Vista
Ripon
Riverbank
Rocklin
Rohnert Park
Roseville
Ross
Sacramento
Saint Helena
Salinas
San Anselmo
San Bruno
San Carlos
San Francisco
San Joaquin
San Jose
San Juan Bautista
San Leandro
San Luis Obispo
San Mateo
San Pablo
San Rafael
San Ramon
Sand City
Sanger
Santa Clara
Santa Cruz
Santa Maria
Santa Rosa
Saratoga
Sausalito
Scotts Valley
Seaside
Sebastopol
Selma
Shafter
Shasta Lake
Soledad
Solvang
Sonoma
Sonora
South San Francisco
Stockton
Suisun City

Sunnyvale
Sutter Creek
Taft
Tehama
Tiburon
Tracy
Trinidad
Turlock
Ukiah
Union City
Vacaville
Vallejo
Victorville
Walnut Creek
Wasco
Waterford
Watsonville
West Sacramento
Wheatland
Williams
Willits
Willows
Windsor
Winters
Woodland
Woodside
Yountville
Yuba City