BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company to Recover in Customer Rates the Costs to Support Extended Operation of Diablo Canyon Power Plant from September 1, 2023 through December 31, 2025 and for Approval of Planned Expenditure of 2025 Volumetric Performance Fees (U 39 E) Application 24-03-018 (Filed March 29, 2024)

OPENING BRIEF OF SAN LUIS OBISPO MOTHERS FOR PEACE

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I. <u>SUMMARY OF RECOMMENDATIONS</u>

San Luis Obispo Mothers for Peace ("SLOMFP"):

- 1) recommends that the Commission deny, in part, Pacific Gas & Electric Company's ("PG&E") Application to Recover in Customer Rates the Costs to Support Extended Operation of Diablo Canyon Power Plant ("DCPP") From September 1, 2023 Through December 31, 2025 and for Approval of Planned Expenditure of 2025 Volumetric Performance Fees ("Cost Recovery Application" or "Application") by declaring unlawful and declining to authorize recovery in rates of any *costs associated with extended operations* of DCPP Unit 1 from November 3, 2024 through 2030 and for Unit 2 from August 7, 2025 to 2030, or in the alternative;
- 2) recommends that the Commission deny, in part, PG&E's Cost Recovery Application by declaring unlawful and declining to authorize recovery in rates for *costs associated with extended operations* of DCPP Unit 1 from November 3, 2024 through December 31, 2025 and for Unit 2 from August 7, 2025 to December 31, 2025;
- 3) recommends that the decision in this proceeding include an express conclusion of law and/or ordering paragraph that any Commission approval of recovery in rates in any future cost recovery applications filed by PG&E include express findings that extended operations and costs relating thereto are (a) prudent, (b) cost-effective, (c) not too high to justify, consistent with SB 846 and (d) are just, reasonable and lawful under P.U.C. § 451; and
- 4) recommends that the decision in this proceeding include an express conclusion of law and/or ordering paragraph that if PG&E does incur costs for annealing or replacing the reactor pressure vessel, Coastal Act federal consistency compliance or seismic hazard upgrades, those costs must come from loan funds or "other non-ratepayer funds."

II. PG&E'S BURDEN AND STANDARD OF PROOF

The burden of proof is a term of art referring to the assignment of the obligation to establish the existence or nonexistence of a fact, by the requisite standard of proof, to a party in a proceeding. Depending on the proceeding, the requisite standard of proof may be preponderance of the evidence, clear and convincing proof, or by proof beyond a reasonable doubt. The

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¹ Evid. Code § 115.

² Conservatorship of O.B. (2020) 9 Cal.5th 989, 997-999; Evidence Code § 115.

standard of proof that applies to a particular determination serves to instruct the fact finder concerning the degree of confidence our society deems necessary in the correctness of factual conclusions for a particular type of adjudication, to allocate the risk of error between the litigants, and to indicate the relative importance attached to the ultimate decision." A preponderance calls for probability, while clear and convincing proof demands a high probability.⁴

The instant proceeding is a rate-setting proceeding.⁵ In rate-setting proceedings, the burden of proof is on the applicant utility.⁶ The standard of proof in rate-setting proceedings is the preponderance of evidence.⁷ The Commission has elaborated on this standard of proof by stating "Of course the burden of proof is on the utility applicant to establish the reasonableness...We expect a substantial affirmative showing by each utility with percipient witnesses in support of all elements of its application."⁸

III. <u>LEGAL FRAMEWORK & PROCEDURAL HISTORY</u>

A. MANDATED ONGOING REVIEW OF DIABLO CANYON NUCLEAR POWER PLANT (DCPP) EXTENDED OPERATIONS

Prior to the enactment of S.B. 846, DCPP's Nuclear Regulatory Commission's ("NRC") license expiration dates for Units 1 and 2 were November 2, 2024 and August 6, 2025, respectively. S.B. 846 states that "No later than December 31, 2023, and notwithstanding the 180-day time limitation in subdivision (b) of Section 25548.2 of the Public Resources Code, the commission shall direct and authorize extended operations at the Diablo Canyon powerplant until the new retirement dates specified in subparagraph (A) of paragraph (1) of subdivision (c)", but subject to conditions and "off-ramps". Specifically, S.B. 846 provided that "Notwithstanding any other law, within 120 days of the effective date of this section, the

⁵ Assigned Commissioner's Scoping Memo And Ruling, dated June 18, 2024, p. 7.

³ Conservatorship of O.B., supra, 9 Cal.5th 989, 997-998, citing Conservatorship of Wendland (2001) 26 Cal.4th 519, 546 and In re Winship (1970) 397 U.S. 358, 369–373.

⁴ *Ibid*.

⁶ D.00-02-046, p. 36, citing *Re Pacific Bell* (1987) 27 CPUC 2d 1, 21; D.87-12-067; see also *Re Energy Cost Adjustment Clauses* (1980) 4 CPUC 2d 693, 701; D.92496, *Re Southern California Edison Company* (1983) 11 CPUC 2d 474, 475.

⁷ D.24-05-007, p. 5.

⁸ D.24-03-006, p. 10, footnote 33, citing *Re Southern California Edison Company* D.83-05-036. (Emphasis Added.)

⁹ Public Utilities Code ("P.U.C.") § 712.8(c)(2)(A).

commission shall direct and authorize the operator of the Diablo Canyon Units 1 and 2 to take all actions that would be necessary to operate the powerplant beyond the current expiration dates, so as to preserve the option of extended operations, until the following retirement dates, conditional upon continued authorization to operate by the United States Nuclear Regulatory Commission:

For Unit 1, October 31, 2029.

For Unit 2, October 31, 2030"10

Per S.B. 846, the Commission can authorize new retirement dates of 2029/2030 for Units 1 and 2 respectively, or instead affirm the current 2024/2025 retirement dates, or establish new retirement dates which are earlier than the 2029/2030 retirement dates proposed by the legislature, if the Commission determines:

- 1) that operating DCPP is not cost effective or is imprudent, or both."11;
- 2) that "the Independent Safety Committee for Diablo Canyon's reports or recommendations cause the commission to determine, in its discretion, that the costs of any upgrades necessary to address seismic safety or issues of deferred maintenance that may have arisen due to the expectation of the plant closing sooner are too high to justify incurring, or if the United States Nuclear Regulatory Commission's conditions of license renewal require expenditures that are too high to justify incurring."12; or
- 3) that "new renewable energy and zero-carbon resources that are adequate to substitute for the Diablo Canyon powerplant and that meet the state's planning standards for energy reliability have already been constructed and interconnected by the time of its decision..."13

On December 15, 2023, the Commission issued D.23-12-036 approving conditionally but not definitively, extended operations and concluding that "Pacific Gas and Electric Company is directed and authorized to extend operations at Diablo Canyon Nuclear Power Plant (DCPP) until October 31, 2029 (Unit 1) and October 31, 2030 (Unit 2), subject to the following conditions: (a) the United States Nuclear Regulatory Commission continues to authorize DCPP operations, (b) the \$1.4 billion loan authorized by Senate Bill 846 is not terminated, and (c) the

P.U.C. § 712.8 (c)(1)(A).
 Public Resources Code ("P.R.C.") § 25548.3(c)(5)(C).

¹² P.U.C. § 712.8 (c)(2)(B).

¹³ P.U.C. § 712.8(c)(2)(D).

Commission does not make a future determination that DCPP extended operations are imprudent or unreasonable."¹⁴

Notably, the Commission gave this conditional approval for extended operations without making any finding as to whether extended operations is prudent, cost-effective or "too high to justify". On the issue of "too high to justify", the Commission found that: "Absent any actual recommendations and conditions from the DCISC and NRC, it is not possible for the Commission to assess at this time whether associated, unknown costs render the extension of Diablo Canyon operations 'too high to justify'." Due to PG&E's failure to timely procure the reports, the Commission also failed to review the updated seismic assessment and deferred maintenance reporting but stated that "[i]t is reasonable to assume many of the DCISC's recommendations concerning seismic safety and deferred maintenance will be available by the DCISC's next public meeting on February 21-22, 2024." This implies that the "too high to justify" determination - which requires review of DCSIC deferred maintenance and seismic assessment findings, as well as the NRC's licensing conditions - would be performed once those reports are available. They are now available.

On the issues of "prudency" and "cost-effectiveness" the Commission found in D.23-12-036 that "PG&E's cost forecast does not reflect all of the costs associated with DCPP extended operations, and therefore is not an adequate foundation upon which to evaluate the cost-effectiveness, prudence, or reasonableness of DCPP operations." Yet, the Commission also made clear that it would perform an ongoing prudency and cost-effectiveness review of extended operations at DCPP. Unlike with a "too high to justify" determination under P.U.C. § 712.8 (c)(2)(B), the Commission can make a determination on prudency and cost-effectiveness of DCPP continuing operations *without* knowing the NRC licensing conditions or *without* relying on the DCISC seismic or deferred maintenance findings.²⁰

B. COST RECOVERY APPLICATIONS RELATED TO DCPP EXTENDED OPERATIONS

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¹⁴ D.23-12-036, p. 135, Order Paragraph No. 1.

¹⁵ Id. at p. 127, Conclusion of Law No. 12.

¹⁶ D.23-12-036, p. 128, Conclusion of law No. 19.

¹⁷ P.U.C. § 712.8 (c)(2)(B).

¹⁸ D.23-12-036, p. 127, Conclusion of Law No. 16.

¹⁹ D.23-12-036, p. 127, Conclusion of Law No. 15; p. 127, Conclusion of Law No. 14.

²⁰ P.R.C. § 25548.3(c)(5)(C).

S.B. 846 states "[t]he commission shall authorize the operator to recover all reasonable costs and expenses necessary to operate Diablo Canyon Units 1 and 2 beyond the current expiration dates, including those in subdivisions (f) and (g), net of market revenues for those operations and any production tax credits of the operator, on a forecast basis in a new proceeding structured similarly to its annual Energy Resource Recovery Account forecast proceeding with a subsequent true-up to actual costs and market revenues for the prior calendar year via an expedited Tier 3 advice letter process, provided that there shall be no further review of the reasonableness of costs incurred if actual costs are below 115 percent of the forecasted costs. All costs shall be recovered as an operating expense and shall not be eligible for inclusion in the operator's rate base."²¹

To this end, the Commission in the SB 846-instigated Rulemaking decision D-23-12-036 ordered that: "PG&E should be directed, as part of its 2024 DCPP Extended Operations Cost Forecast application, to provide certain DCPP historical and forecast cost information as well as a copy of the CEC's Cost Comparison Report"²²; "[i]n general, PG&E's proposed ERRA-like forecast to recover forecast DCPP extended operations costs, with a subsequent true-up to actual costs and market revenues for the prior calendar year via an expedited Tier 3 advice letter process, complies with Pub. Util. Code Section 712.8(h)(1) and should be adopted,"²³ and that "[s]ubsequent DCPP Extended Operations Cost Forecast applications should be filed no later than March 31 every year thereafter, and should consider the following calendar year's forecasted DCPP extended operations costs, with the last application filed in 2029."²⁴

IV. ARGUMENT

A. PG&E HAS NOT MET ITS BURDEN TO SHOW THAT EXTENDED OPERATIONS AT DCPP IS PRUDENT (Scoping Memo Issues Nos. 1. and 1.a.)

1. The Entirety of Extended Operations Through 2030 Must be Reviewed for Prudency

As section III.A of this brief explains, an ongoing prudency review of DCPP extended operations is mandated by S.B. 846 and D.23-12-036. The prudency review must be of the entire

²¹ P.U.C. § 712.8(h)(1).

²² D.23-12-036 p. 127, Conclusion of Law No. 17.

²³ *Id.* at p. 132, Conclusion of Law No. 51.

²⁴ *Id.* at p. 132, Conclusion of Law No. 53.

period of extended operations through 2030, not just of the current record period ending 2025. The proper scope of the prudency review should not be subject to dispute. The Commission ordered PG&E to provide a *single* cost forecast for extended operations through 2030 for a reason - to allow the entire extension period to be reviewed in total, presumably for purposes of cost-effectiveness and prudency determinations.²⁵

Moreover, the Commission's conclusion of law in D.23-12-036 that "[i]t is well within the Commission's authority, and in ratepayers' best interest, to continue to evaluate the prudence and cost-effectiveness of continued DCPP operations" was unqualified. It is imperative that review of extended operations through 2030 be performed now, in this proceeding.

In D.23-12-036, the Commission failed to make an express finding that authorizing extended operations was prudent. The Commission declined to identify the ongoing prudence of extended operations as being within the scope of Phase 2 in the Rulemaking proceeding.²⁷ Thus, the instant proceeding is uniquely positioned to be the only proceeding where the *entire forecast* can be assessed for prudency *before* any cost recovery in rates is authorized. To hold otherwise would allow PG&E to impermissibly and illegally piecemeal the review, effectuating a circumvention of the legislature's intent that the issues of prudency and cost-effectiveness of extended operations through 2030 be definitively decided. The Commission cannot, in good faith, continue to allow PG&E to dodge section 451 of the Public Utilities Code. This interpretation of S.B. 846 and D.23-12-036 is supported by testimony from SLOMFP expert Peter Bradford, who testified that the entire period of extended operations must be assessed for prudency and cost-effectiveness, and that the assessment should not be piecemealed.²⁸

2. PG&E's Request to Recover Extended Operations Costs in Rates Should Be Rejected and The Commission Should Conclude That Extended Operations is Imprudent and Not Cost-Effective Because PG&E Has Failed to Meet its Burden of Proof that DCPP's Energy is Needed.

In D.23-12-036, the Commission concluded that "any subsequent DCPP prudency review by the Commission should focus on new or updated information" and that "ensuring system

²⁵ D. 23-12-036, p. 127, Conclusion of law No. 18.

²⁶ D. 23-12-036, p. 127, Conclusion of Law No. 15.

²⁷ See March 7, 2024 Reply Comments of San Luis Obispo Mothers For Peace On Preliminary Phase 2 Issues Listed In The Assigned Commissioner's Scoping Memo And Ruling, Dated April 6, 2023 in R.23-01-007; see also June 25, 2024 Assigned Commissioner's Amended Scoping Memo and Ruling for Phase 2 of Proceeding in R.23-01-007.

²⁸ E.g. Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p. 8, lines 8 to 28; Exh. SLOMFP-05, Rebuttal Testimony of Peter Bradford, p. 4, lines 23 to 26.

reliability is a key legislative rationale for the extension of DCPP operations." Despite D.23-12-036 statement about the legislature's purported intent to not require the Commission to continually reevaluate the need for DCPP for system reliability purposes, ²⁹ the Commission itself concluded that any subsequent prudency review by the Commission should take into consideration any new relevant evidence that has come to light since the 2023 decision. Thus, new evidence establishing that DCPP is no longer needed from a system-reliability standpoint must be factored into the prudency analysis required in this cost-recovery application proceeding. To hold otherwise would deprive ratepayers, and indeed, all Californians, of the complete protection of a statutorily-mandated full and robust prudency review; and would also undermine the clear legislative intent to preserve the option of DCPP continued operations until adequate renewable and carbon-free resources could meet demand. ³⁰ New evidence shows that time has come.

Peter Bradford has established that need for DCPP from a reliability standpoint is a key component of the prudency and cost-effectiveness review. ³¹ Other provisions of D.23-12-036 support the need to revisit DCPP's need in light of new information published since the time that decision was made. ³² Revisiting the question of need is also required to test the veracity of PG&E's own statement in this proceeding that DCPP is still needed. ³³

Peter Bradford explained that PG&E has a duty under P.U.C. § 451 to furnish and maintain efficient, just and reasonable service to the public and to establish that extended operations are prudent and cost-effective.³⁴ Bradford's testimony described the reasonable

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²⁹ D.23-12-036, p. 127, Conclusion of Law 20.

³⁰ P.R.C. § 25548.

³¹ Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p. 7, line 10 to p. 8, line 19.

³² See D.23-12-036, p. 128, Conclusion of Law No. 21 ["Any subsequent DCPP prudency review by the Commission should focus on new or updated information."]; p. 129, Conclusion of Law No. 27 ["Ensuring system reliability is a key legislative rationale for the extension of DCPP operations."].

³³ Exh. PG&E-02, Rebuttal Testimony of PG&E, p. 1-9, lines 26 to 27.

[&]quot;All charges demanded or received by any public utility, or by any two or more public utilities, for any product or commodity furnished or to be furnished or any service rendered or to be rendered shall be just and reasonable. Every unjust or unreasonable charge demanded or received for such product or commodity or service is unlawful. Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone facilities, as defined in Section 54.1 of the Civil Code, as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public. All rules made by a public utility affecting or pertaining to its charges or service to the public shall be just and reasonable." (P.U.C. § 451 (Deering, Lexis Advance through the 2024 Regular Session Ch 210).); See also D.95-05-020, Conclusion of Law No. 1 [Finding that utility was in breach of duty to serve under P.U.C. § 451].)

prudent manager standard embodied in P.U.C. § 451 as whether an act or decision is expected by the utility to accomplish the desired result at the lowest reasonable cost consistent with good utility practices, and the greater the level of money, risk and uncertainty involved in a decision, the greater the care the utility must take in reaching that decision.³⁵

PG&E's Cost Recovery Application and associated prepared testimony do not contain any meaningful analysis of whether DCPP is still needed, today, from an energy reliability standpoint. Had PG&E actually performed this analysis it would have come to the same conclusion as SLOMFP and other parties that DCPP is no longer needed. Without this analysis, PG&E cannot discharge its duty under P.U.C. § 451 or the reasonable prudent manager standard to show that a decision to extend operations at DCPP through 2030 will provide the public with efficient, just and reasonable service which will achieve the desired result of providing adequate renewable and zero-carbon power supply at the lowest possible cost.³⁶

PG&E's decision to forego this analysis has several fatal ramifications on its Cost Recovery Application. First, it means that PG&E is unable to meet its burden of proof that extended operations are prudent or cost-effective. Second, PG&E's breach of its duty under P.U.C. § 451 combined with the availability of low cost alternatives (see Section IV.B., infra), means that PG&E's request to recover costs associated with the service of providing extended operations at DCPP is unjust and unreasonable and therefore unlawful.³⁷ The preponderance of evidence supports this conclusion.

As Bradford observed:

"PG&E has not performed any meaningful analysis, as its duty under P.U.C., section 451 dictates, of whether it is prudent to continue extended operations in light of new data strongly suggesting that the need for DCPP from a reliability standpoint is even weaker now. In performing this analysis a prudently managed utility would constantly use available market and planning mechanisms to determine whether its commitments, especially one with the skyrocketing costs and uncertainties of the aging Diablo Canyon, could instead be used towards providing adequate power supply at the lowest cost (e.g. renewable energy). This duty is even clearer for a utility whose rates are now among the very highest in the country and whose commitments to subsidize continued Diablo

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³⁵ See Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p. 7, footnote 2, citing and incorporating by reference Exh. SLOMFP-03, Opening Testimony of Peter Bradford on Phase 1 Track 2 Issues [https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/R2301007/6411/512708456.pdf] in R.23-01-007.

³⁶ Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p.7, line 10 to p. 8, line 19.

³⁷ P.U.C. § 451 [Every unjust or unreasonable charge demanded or received for such product or commodity or service is unlawful].

Canyon operation through rates and taxes creates cost consequences not present in the case of other power supply options" 38

Bradford's testimony was based, in part, on the testimony of SLOMFP expert Rao Konidena.³⁹ Konidena testified in this proceeding that there is now surplus energy capacity in California⁴⁰ and that California can maintain power reliability without the 2,240 MW from DCPP, even during extreme heat events.⁴¹ As of April 2024, CAISO had more than 10,000 MW of energy storage capacity available.⁴² The California Energy Commission's April 15, 2024 report concludes that "from 2018 to 2024, battery storage capacity in California increased from 500 megawatts (MW) to more than 10,300 MW, with an additional 3,800 MW planned to come online by the end of 2024."⁴³ The 5,000 MW of demand response available combined with the significant increase in storage capacity is more than sufficient to ensure grid reliability even during extreme heat events.⁴⁴

The July 16, 2024 report on battery storage from the CAISO Department of Market Monitoring establishes that the capacity for battery storage capacity in its balancing area increased to 11,200 MW in June 2024.⁴⁵

The August 5, 2024 Joint Agency Reliability Planning Assessment SB 846 Combined Second and Third Quarterly Report demonstrates that California is scheduled to have at least 10,522 MW of excess capacity within the next few months.⁴⁶ If DCPP's operations are not extended past 2025, California will still not experience an energy reliability problem even in times of excessive heatwaves.⁴⁷

Given this reliability reality, PG&E should have, but did not, utilize available market and planning mechanisms to analyze whether continuing operations of an aging nuclear power plant with ever-increasing forecasted costs is prudent, or whether the plant could instead be repurposed

³⁸ Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p. 8, lines 10-19.

³⁹ Ibid

⁴⁰ Exh. SLOMFP-07, Rebuttal Testimony of Rao Konidena, p. 1, line 18 to p. 2 line 2.

⁴¹ Exh. SLOMFP-03, Corrected Opening Testimony of Rao Konidena, p. 15, lines 5 to 8; Exh. SLOMFP-03, Corrected Opening Testimony of Rao Konidena, p. 16, lines 25 to 26

⁴² *Id.* citing https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-storage-system-survey

⁴³ *Ibid*.

⁴⁴ Exh. SLOMFP-03, Corrected Opening Testimony of Rao Konidena, p. 16, lines 25 to 26

⁴⁵ Exh. A4NR-X-04, p. 2 of 4.

⁴⁶ Exh. SLOMFP-03, Corrected Opening Testimony of Rao Konidena, p. 15 lines 13 to 26

⁴⁷ *Id.* at p. 16, lines 25 to 26.

for providing adequate power supply at a lower cost, such as renewable and carbon free energy (e.g. off-shore wind transmission).⁴⁸ PG&E provides no analysis of whether DCPP's connectivity to the grid could be repurposed for off-shore wind transmission, a less costly source of energy.

The testimony of Bradford, Konidena and Cooper on the imprudence of continuing with extended operations from a reliability standpoint was not rebutted by PG&E. PG&E has proffered no testimony proving there is an ongoing need for DCPP from a reliability standpoint. PG&E seems to rely solely on a sentence from the written testimony of PG&E witness Erica Brown, citing the California Energy Commission's May 2024 Joint Reliability Assessment, that "There are no supply resources that can be brought on-line before the planned 2025 retirement of DCPP to meet the like-for-like energy generation of 18,000 GWh per year..." and that: "There is no mix of resources that can adequately replace the 2.2 GW of net peak capacity of DCPP by 2025." First, PG&E's testimony on the mix of resources that can adequately replace DCPP is too vague to serve any evidentiary purpose. Moreover, the statement only pertains to 2025 and underscores SLOMFP's point that the prudency review must be through the entire extension period ending 2030. The statement does not attempt to address the period between 2026 and 2030. Second, while PG&E keeps harping on "like-for-like" resources, that is not standard articulated by the statute which simply requires that renewable resources be adequate to meet demand. 50

More to the point, neither PG&E nor the CEC Report make any attempt to reconcile the statements cited by PG&E with other statements in the Joint Reliability Assessments from May and August 2024 (discussed in detail by SLOMFP witness Konidena) regarding improved demand response and that increased levels of storage capacity are available **right now and more**

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⁴⁸ Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p. 8, lines 12 to 16.

⁴⁹ Exh. PG&E-02, Rebuttal Testimony, p. 1-9, lines 22 to 25, citing CEC May 2024 Joint Agency Reliability Planning Assessment. However, Cooper responds by stating that "Like-for-like analysis is inane in a time of transition" especially where baseload capacity is a non-issue. Cooper further explains that by 2026, additions to capacity are twice as large as DCPP. (see Exh. SLOMFP-02, Opening Testimony of Mark Cooper, p. 16, lines 25 to 28. Id. at p. 18, lines 17-19; Exh. SLOMFP-06, Rebuttal Testimony of Mark Cooper, p. 4, lines 1 to 16; Exh. SLOMFP-06, Rebuttal Testimony of Mark Cooper, p. 4, line 17; *Id.* at p. 5, line 15 to 18).
⁵⁰ P.R.C. § 25548(b).

will become available by the end of 2024 – literally in 3 months from the date of this brief.⁵¹ Both the CEC and PG&E appear to be assuming, without justification, that the additional storage capacity should not be counted towards total available capacity for purposes of assessing the ongoing need for DCPP from a reliability standpoint under the prudency analysis required by P.U.C. § 451 and by S.B. 846.⁵²

Since PG&E has failed to perform any meaningful consideration or analysis of the ongoing need for DCPP, the Commission should find that PG&E has failed to meet its burden of proof and deny PG&E's request for recovery in rates of costs associated with extended operations of Unit 1 past November 2, 2024 and Unit 2 past August 6, 2025.

3. PG&E's Failure to Provide a Contingency Factor Places Californians at Risk

PG&E must utilize a contingency factor to determine whether extended operations are prudent in light of the forecasted costs through 2030.⁵³ D.23-12-036 did not exclude consideration of government-funded transition costs from the scope of *prudency* review.⁵⁴ D.23-12-036 purports to limit consideration of government-funded transition costs as it relates to cost-effectiveness in rate setting proceedings, but Bradford has explained the concept of prudency applies to protect ratepayers and taxpayers alike.⁵⁵ Bradford explained that a utility must act prudently even when assessing the impact of its actions on taxpayers.⁵⁶ But PG&E has failed to include a contingency factor in its costs forecast to account for a number of uncertainties related to preparatory costs (to be funded by loans) which the evidence shows are not beyond the bounds of foreseeability.⁵⁷ If or when one or more of these events occur, PG&E runs the risk of prematurely exhausting the loan funds, which could result in PG&E going back

⁵¹ See Exh. SLOMFP-03, Corrected Testimony of Rao Konidena p. 15, lines 4 to 21, citing Attachment D [Joint Agency Reliability Planning Assessment, Tables 4, 8 and 10]; see also Exh. SLOMFP-07, Rebuttal Testimony of Rao Konidena, p. 1, line 1 to p. 2, line 17.

⁵² P.R.C. § 25548.3(c)(5)(C); see also D.23-12-036, p. 127, Conclusion of Law No. 15; D. 23-12-036. p. 127, Conclusion of Law No. 14.

⁵³ Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p.7, line 10 to p. 8, line 19.

⁵⁴ D.23-12-036, p. 61.

⁵⁵ Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p. 7, line 10 to p. 8, line 19.

⁵⁶ Exh. SLOMFP-01, Opening Testimony of Peter Bradford, Opening Brief p. 7, footnote 2, citing *Exh.* SLOMFP_03 Opening Testimony of Peter Bradford on Phase 1 Track 2 Issues R.23-01-007, p. 9, lines 7-14.

⁵⁷ *Ibid*.; see also Exh. SLOMFP-05, Rebuttal Testimony of Peter Bradford, p. 3, lines 13 to 25; Exh. SLOMFP-04, Rebuttal Testimony of SLOMFP sponsored by Sabrina Venskus, p. 6, lines 1 to 22; Attachments A – C.

to the well at the expense of all Californians, not just all ratepayers. PG&E could have avoided such a result by including these uncertainties in its cost forecasts and demonstrating how the loan proceeds will be sufficient to cover these preparatory costs, but PG&E has failed to do so. As a result, PG&E has breached its duty under section 451 and the reasonable prudent manager standard.

- B. PG&E HAS NOT MET ITS BURDEN OF PROOF OF DEMONSTRATING THAT UNIT 1 AND UNIT 2 EXTENDED OPERATIONS IS COST-EFFECTIVE (Scoping Memo Issues Nos. 1. and 1.a.)
- 1. PG&E Failed to Perform an Apples-to-Apples Comparison of the Cost of DCPP Extended Operations and the Cost of Energy Alternatives and This Failure Is Fatal to a Cost-Effectiveness Determination in PG&E's Favor.

The reasonable prudent manager standard requires <u>PG&E</u> to make a showing that extended operations at DCPP will provide adequate GHG-free power supply at the lowest possible cost.⁵⁸ Thus, PG&E should provide a cost comparison between the cost of operating DCPP compared to the costs of alternatives.⁵⁹ SLOMFP Expert Mark Cooper testified that PG&E has actually shown that costs associated with extended operations at DCPP are the least cost-effective way to meet the energy needs of California.⁶⁰ Since section 451 of the Public Utilities Code prohibits unjust and unreasonable charges for a product, commodity, or service, it is axiomatic that energy supply that is significantly more expensive than an alternative, but just as reliable, cannot be charged to ratepayers.⁶¹

PG&E makes no meaningful showing of cost-effectiveness in its testimony or workpapers. The term "cost-effective" appears just once in PG&E's rebuttal testimony, and not in the context of a cost-comparison of DCPP and alternatives. Elsewhere, PG&E complains that A4NR's estimated \$/mwh of \$114.53 for DCPP extended operations is grossly inaccurate and that "[t]he DCPP extended operations total cost to customers, stated as a cost per MWh, is \$73.26 per MWh. When including transition costs of the DCPP extended operations tracked to the Diablo Canyon Transition Memorandum Account (DCTRMA) paid for through government

⁵⁸ Exh. SLOMFP-05, Rebuttal Testimony of Peter Bradford, p. 4, lines 9 to 28; see also Exh. SLOMFP-05 Rebuttal Testimony of Peter Bradford p. 6, lines 1 to 6.

⁵⁹ *Ibid*.

⁶⁰ Exh. SLOMFP-02, Opening Testimony of Mark Cooper, p. 4, lines 23 to 26.

⁶¹ P.U.C. § 451.

⁶² Exh. PG&E-02, Rebuttal Testimony, p. 5-9, lines 26 to 31.

funding streams and not paid for through customer rates, the cost of DCPP extended operations, stated as a cost per MWh is \$86.09."63

Notably, PG&E did not rebut SLOMFP expert Mark Cooper's testimony calculating the \$/MWh of DCPP power to be between \$91 on the extremely conservative side and \$146 per mwh on the upper end.⁶⁴ A4NR's \$/MWh for DCPP extended operations of \$114.53 falls squarely in the middle within the range found by Cooper, altogether proving that PG&E's \$/MWh for DCPP is not credible.

Putting the inaccuracy of PG&E's \$/MWh for DCPP extended operations aside, PG&E still failed to compare its \$/MWh for DCPP to alternatives. PG&E witness Brown also states "it is not clear that it is feasible to bring online incremental resources to obviate the need for Diablo Canyon—at any cost,"65yet apparently did not perform an adequate analysis.66 Unlike PG&E, Cooper provided a detailed comparison of the cost of DCPP extended operations.67 Cooper testified and described his approach to cost calculation in this proceeding.68 Cooper testimony's includes costs of alternatives as follows: 1) efficiency at \$35/MWh, 2) on-shore wind at \$49.5/MWh, 3) utility PV at \$60/MWh, 4) solar + storage at \$74/MWh, 5) on-shore wind + storage at \$78/MWh and 6) geothermal at \$81/5/MWh. Even at Cooper's extremely conservative value of \$91/MWh for DCPP extended operations, these 6 alternatives are much lower in cost than DCPP's power per MWh.69

Cooper explains how the "dramatic increase in battery installations has been driven by a sharp decline in the cost of the underlying technology, as shown in Attachment MNC-CR-5. Even without any further decrease in prices, the cost of batteries has fallen to a range that makes them highly competitive as a firm, or quasi-firm source of power."⁷⁰ Cooper testified that buying two tranches of wind or solar would fill any resource shortfall at a fraction (7%) of the cost.⁷¹

Thus, PG&E has not met is burden of proof to show that extended operations are cost-effective; on the other hand, preponderance of the record evidence demonstrates that DCPP

⁶³ Exh. PG&E-02, Rebuttal Testimony, p. 1-2, line 26 to p. 1-3, line 7.

⁶⁴ Exh. SLOMFP-02, Opening Testimony of Mark Cooper, p. 6, lines 8 to p. 7, line 25.

⁶⁵ Exh. PG&E-02, Rebuttal Testimony of PG&E, p. 1-9, lines 26 to 27.

⁶⁶ Exh. SLOMFP-02, Opening Testimony of Mark Cooper, at p. 15, lines 7 to 10.

⁶⁷ *Id.* at pp. 6 to 7

⁶⁸ *Id*, at pp. 9 to 12.

⁶⁹ Ibid.

⁷⁰ *Id.* at p. 13, lines 8 to 15.

⁷¹ *Id.* at p. 19, lines 10 to 12.

extended operations is not cost-effective relative to the alternatives. Accordingly, the Commission should deny PG&E's Cost-Recovery Application by declining to authorize any rate recovery for extended operations through 2030.

- C. PG&E'S APPLICATION SHOULD BE DENIED IN ITS ENTIRETY BECAUSE IT HAS FAILED TO COMPLY WITH THE REGULATORY REQUIREMENTS OF D.23-12-036. (Scoping Memo Issue No. 6)
- 1. PG&E Has Failed To Provide A Single Forecast Analysis Containing All Costs Associated With DCPP Extended Operations

To implement P.U.C. § 712.8(h)(1), the Commission in D.23-12-036 concluded that "[a]s part of its annual DCPP Extended Operations Cost Forecast applications, PG&E should: (a) provide detailed projections *of all costs and revenues associated with DCPP extended operations*, in a manner similar to PG&E's presentation in its GRC and ERRA Forecast proceedings; (b) quantify the impact of DCPP's extended operations on its common costs relative to the amount approved in its 2023 General Rate Case (GRC); and (c) demonstrate it will not double count the common costs it proposes for recovery in its GRC and DCPP Extended Operations Cost Forecast applications,⁷²; and that "Pacific Gas and Electric Company is directed to present the Diablo Canyon Nuclear Power Plant (DCPP) historical and forecast cost information described in this decision as part of its 2024 DCPP Extended Operations Cost Forecast application."⁷³

With respect to costs that should be included in the costs forecasts, but must not be recovered from customers in rates, P.U.C. § 712.8 (c)(1)(C), states "Actions taken by the operator pursuant to the commission's actions under this paragraph, including in preparation for extended operations, shall not be funded by ratepayers of any load-serving entities, but may be funded by the loan provided for by Chapter 6.3 (commencing with Section 25548) of Division 15 of the Public Resources Code or other non-ratepayer funds available to the operator. The commission shall not allow the recovery from ratepayers of costs incurred by the operator to prepare for, seek, or receive any extended license to operate by the United States Nuclear Regulatory Commission."⁷⁴

⁷² D.23-12-036 pp. 132-133, Conclusion of Law No. 54 (Emphasis added.)

⁷³ D.23-12-036, p. 135, Order Paragraph No. 2.

⁷⁴ P.U.C. § 712.8 (c)(1)(C).

PG&E has failed to comply with the directives contained in D.23-12-036 because PG&E has submitted a cost forecast that does not contain all costs associated with DCPP extended operations. PG&E's costs forecast omits the following critical items: a contingency factor (discussed above in Section IV.A.3.), annealing or replacing the Unit 1 reactor pressure vessel ("RPV"),⁷⁵ the Independent Spent Fuel Storage Installation ("ISFSI") modification project and related conditions,⁷⁶ seismic upgrades, and compliance with the California Coastal Act's coastal development permit requirements and federal consistency certification requirements.⁷⁷

2. PG&E Runs the Risk of Entering Extended Operations Without the Required Coastal Development Permit and Has Impermissibly Failed to Account for Costs Associated With This Risk and Requirement in its Cost Forecasts

The California Coastal Commission is conducting a concurrent review of PG&E's state coastal development permit application and its federal consistency certification application.⁷⁸ The evidence demonstrates that PG&E's federal consistency certification application to the California Coastal Commission has been deemed incomplete.⁷⁹ PG&E must acknowledge in its costs forecasts the risks inherent in the possibility of operating Unit 1 and potentially Unit 2 without a certification determination and without the state Coastal Development Permit (CDP) that is required by the California Coastal Commission, but for which PG&E has yet to provide all the requisite information to the Coastal Commission. As the Coastal Commission has already notified PG&E, the review process has a 6 month time frame commencing from the date the application is deemed complete.⁸⁰

3. PG&E Has Failed to Include a Contingency Factor in its Cost Forecasts and Therefore its Cost Forecasts are Inherently Unreliable.

PG&E should have included in its cost forecast "at least some value for the likelihood that costs will increase if seismic and Unit 1 pressure vessel project expenses are required," yet it failed to do so in the instant cost-recovery application. PG&E admitted that it does in fact

⁷⁹ *Ibid*.

⁷⁵ Exh. SLOMFP-04, Rebuttal Testimony of SLOMFP sponsored by Sabrina Venskus, p. 6, line 23 to p.

^{7,} line 5; Exh. SLOMFP-05, Rebuttal Testimony of Peter Bradford, p. 5, lines 10 to 20.

⁷⁶ Exh. SLOMFP-04, Rebuttal Testimony of SLOMFP sponsored by Sabrina Venskus, p. 6, lines 1 to 22; Attachments A – C.

⁷⁷ *Ibid.*; see also *Id.* at Attachment C, pp. 1-4.

⁷⁸ *Ibid*.

⁸⁰ *Ibid*.

⁸¹ Exh. SLOMFP-01, Opening Testimony of Peter Bradford, p. 8, lines 3 to 5.

utilize contingency factors in other rate-recovery proceedings and that it is PG&E, as the applicant utility, who has the burden of proof as to what that contingency factor is or should be.⁸² Therefore, PG&E has not met its burden of proof to show that extended operations are prudent or cost-effective.⁸³

Bradford's testimony describes the Commission's practice of requiring full attention to the impacts of uncertainty in its proceedings⁸⁴ and that seismic upgrades and Unit 1 pressure vessel integrity fall into the category of foreseeable high consequence low probability expenditures that demand consideration. Treating the cost of such events as zero is unsupported and not credible.⁸⁵ Bradford recommends the adoption of an upper bound contingency-based cost estimate 33% above that submitted by PG&E.⁸⁶

PG&E declined to include a contingency factor for annealing or replacing the Unit 1 reactor pressure vessel or seismic upgrades because, in PG&E's view, neither project will be needed in the near or far future.⁸⁷ PG&E made this prognostication even though it does not yet have the data that will come from the embrittlement testing of the Unit 1 reactor pressure vessel during the upcoming outage⁸⁸ and is aware of the NRC's determination that SLOMFP's petition for review raised sufficient concerns to cause the federal agency to take a second look at potential seismic hazards.⁸⁹

Unless PG&E has a crystal ball, then it cannot credibly claim that it knows the outcome of the Unit 1 reactor pressure vessel embrittlement testing or the NRC's upcoming review of seismic hazards at DCPP. This is especially risky given that PG&E admitted that it has not conducted studies into the costs of these uncertainties. 90 Thus, PG&E's failure to include a contingency factor for high consequence low probability expenditures associated with the Unit 1

10. at pp. 3 to 4.

⁸² Reporter's Transcript from Evidentiary Hearing, Vol. 1. p. 128, line19 to p. 129, line 5, Sponsored by Brian Ketelsen.

⁸³ Exh. SLOMFP-05, Rebuttal Testimony of Peter Bradford, p. 3, lines 13 to 25.

⁸⁴ *Id.* at pp. 3 to 4.

⁸⁵ Exh. SLOMFP-05, Rebuttal Testimony of Peter Bradford, p. 4, lines 9 to 28.

⁸⁶ Exh. SLOMFP-05, Rebuttal Testimony of Peter Bradford p. 6, lines 1 to 6.

⁸⁷ Reporter's Transcript from Evidentiary Hearing, Vol. 1. pp. 118 to 129, Sponsored by Brian Ketelsen.

⁸⁸ Reporter's Transcript from Evidentiary Hearing, Vol. 1. p. 124, lines 1 to 25, Sponsored by Brian Ketelsen.

⁸⁹ Reporter's Transcript from Evidentiary Hearing, Vol. 1. p. 127, lines 5 to 16, Sponsored by Brian Ketelsen.

⁹⁰ Exh. SLOMFP-09 and Exh. SLOMFP-10.

reactor pressure vessel and seismic hazards renders its application deficient and PG&E's request to recover in rates costs associated with extended operations should be denied.

V. <u>CONCLUSION</u>

Based on the foregoing, SLOMFP requests that the recommendations contained in Section I of this Opening Brief be adopted.

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