



February 23, 2023

Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
Attn: Andrea Veil

**Subject:** Clean Air Task Force and Carbon Free California Comment on Pacific Gas and Electric’s October 31, 2022, Letter Requesting an Exemption from 10 CFR § 2.109(b).

Dear Ms. Veil:

Clean Air Task Force (“CATF”) and Carbon Free California (“CFC”) are writing to you to express their support for Pacific Gas and Electric’s (“PG&E’s”) request for an exemption from 10 CFR § 2.109(b), prescribing a period of eligibility for application of the “timely renewal” standard in license renewal.<sup>1</sup> The timely-renewal standard allows a nuclear power plant to continue operations past its operating license expiration date, provided that a license renewal application is submitted five years prior to expiration of the license. PG&E’s exemption request was submitted for good cause in order to allow PG&E to obtain timely renewal regardless of the five-year requirement as the requested exemption is authorized by law, does not present an undue risk to the public health and safety, is consistent with the common defense and security, is in the public interest, and the absence of an exemption will result in undue hardship. It is imperative that Diablo Canyon Power Plant (“DCPP”) be granted this exemption in order to allow California to reduce carbon emissions in the state while meeting consumer electricity needs, and guard against serious grid reliability challenges,.

CATF is a global environmental nonprofit organization working to safeguard against the worst impacts of climate change by catalyzing the rapid development and deployment of low-carbon energy and other climate-protecting technologies. Through research, analysis and public advocacy leadership, CATF pushes for the technology and policy changes needed to achieve a zero-carbon emissions, high-energy planet at an affordable cost. CATF believes that climate change is too

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<sup>1</sup> Pacific Gas & Electric (“PG&E”) Letter DCL-22-085, “Request to Resume Review of the Diablo Canyon Power Plant License Renewal Application or, Alternatively, for an Exemption from 10 CFR 2.109(b), Concerning a Timely Renewal Application” dated October 31, 2022 (ADAMS Accession No. ML22304A691).

complex a challenge and the stakes are too high for us to limit the tools at our disposal, including the use of nuclear energy.

CFC is a 501(c)(3) nonprofit organization funded by California-based entrepreneurs that brings together leaders from business, labor, and the technology sector to focus on creating a pathway to a carbon-free future and securing the clean, reliable energy needed to power the world's fifth-largest economy. Carbon Free California believes all forms of emission-free energy must be pursued in order to address the climate crisis and achieve California's urgent emission reduction goals.

CATF and CFC believe that extending the operation of DCPD will bolster the grid in California with reliable carbon-free energy and enable the state to transition to increasing wind and solar power, while avoiding disruptive and costly rolling blackouts. In light of this, we write this comment letter to express our support for PG&E's request for an exemption from 10 CFR § 2.109(b) regarding its eligibility for "timely renewal" protection if the NRC's licensing review extends beyond the current expiration dates of the two licenses being considered for renewal.

An independently funded joint study by Stanford University's Precourt Institute for Energy and the Massachusetts Institute for Technology ("MIT") Center for Advanced Nuclear Energy Systems previously assessed DCPD's potential in helping California meet the challenges of climate change, and found that a combination of energy generation from DCPD and other renewables like wind and solar is crucial to providing zero-carbon energy to California.<sup>2</sup> The study found that even assuming a rapid buildout of other renewable energy sources, the continued operation of DCPD would significantly reduce California's use of natural gas for electricity production from 2025 to 2035 by approximately 10.2 terrawatt-hours ("TWh") per year. In doing so, DCPD would also reduce California carbon emissions by an average of 7 million metric tons ("MMt") CO<sub>2</sub> a year during the same time period, corresponding to an 11% reduction in CO<sub>2</sub> from the electricity sector relative to 2017 levels. Overall, this would result in a cumulative total reduction of 35 MMt CO<sub>2</sub> from 2025-2030 alone, while saving \$2.6 billion in costs. During this period, DCPD would also provide firm electric capacity during increasingly frequent electric reliability events. Over the long term, keeping DCPD online would save the state \$15-21 billion depending on land use constraints. Even if the emissions cap for the electricity system were to be replaced by a carbon tax, DCPD could save California as much as 50 Mt CO<sub>2</sub> in cumulative emissions through 2045.

A subsequent study by the Brattle Group<sup>3</sup> sponsored by Carbon Free California reached similar conclusions. The report found:

1. Even assuming an immediate doubling of the state's recent buildout rate for solar energy and the widespread availability of natural gas combined cycle ("NGCC") with carbon

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<sup>2</sup> An Assessment of the Diablo Canyon Nuclear Plant for Zero-Carbon Electricity, Desalination, and Hydrogen Production (Nov. 2021), <https://energy.stanford.edu/news/extending-diablo-canyon-nuclear-plant-would-help-california-meet-its-climate-goals-new-study>.

<sup>3</sup> Newell, et al., "Retaining Diablo Canyon: Economic, Carbon, and Reliability Implications" (June 9, 2022), [https://carbonfreeca.org/wp-content/uploads/2022/06/2022-06-09\\_Brattle-Report-on-Impacts-of-Diablo-Extension.pdf](https://carbonfreeca.org/wp-content/uploads/2022/06/2022-06-09_Brattle-Report-on-Impacts-of-Diablo-Extension.pdf).

capture and sequestration (“CCS”) after 2035, California will rely on substantial unabated gas-fired generation and imports. Retaining Diablo would displace gas-fired generation and emitting imports, especially during the first 10 years.

2. Retaining Diablo would massively reduce cumulative emissions by approximately 40 MMT CO<sub>2</sub>, more than an entire year’s worth of in-state electricity generation emissions, while also lowering other local air pollution from gas-fired plants.
3. Retaining Diablo would provide insurance for meeting both reliability standards and carbon goals in the event clean energy deployment rates do not double and future dispatchable clean technologies (e.g., NGCC with CCS or hydrogen (“H<sub>2</sub>”)) do not materialize at scale. Retaining Diablo would also continue to provide insurance against extreme events such as those that caused the August 2020 rolling blackouts.
4. Retaining Diablo would reduce system costs by more than \$4 billion by avoiding burning natural gas in California and gas/coal for imported energy, and by reducing capital and fixed costs for other resources otherwise needed to meet clean energy and reliability goals. Savings are positive under all the scenarios analyzed, even accounting for a conservatively higher estimate than MIT’s cost of new intake structures, and even if upgrades cost twice as much as that, and assuming no federal assistance.
5. Retaining Diablo could greatly help enable California to achieve a potentially accelerated goal of a carbon free-grid years earlier, by 2035, by lowering the cost of accelerated compliance by \$5 billion. Retaining Diablo would also make earlier compliance feasible by providing more time for the state to more than quadruple its current annual deployment rate of solar and wind, while delaying the need for CCS on NGCCs, or other novel technologies.

A further study by the Brattle Group on behalf of Carbon Free California<sup>4</sup> found that Diablo Canyon would be especially valuable in the coming few years for reliability purposes, closing large capacity gaps in the likely case that renewable energy and storage does not come online as swiftly as assumed in California Public Utility Commission (“CPUC”) orders. The Brattle Group conclusions concerning the reliability value of Diablo Canyon were confirmed in a subsequent study by the California Energy Commission and the California Independent System Operator.<sup>5</sup>

It is important to note that PG&E’s request for a waiver of the five-year notice provision is not the result of any lack of diligence on its part. Rather, circumstances have changed dramatically in California, leading the State’s Governor and Legislature to call for continued operation of the plant. On September 1, 2022, the California Legislature passed Senate Bill 846 which, among other

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<sup>4</sup> Newell et al, “Near-term reliability benefits of retaining Diablo Canyon” (August 2, 2022), [https://carbonfreeca.org/wp-content/uploads/2022/08/2022-07-25\\_Diablo-Reliability-Study\\_Deck88.pdf](https://carbonfreeca.org/wp-content/uploads/2022/08/2022-07-25_Diablo-Reliability-Study_Deck88.pdf).

<sup>5</sup> California Energy Commission and the California Independent System Operator, “Transitioning to a Clean Energy Future: Electric Reliability Outlook” (August 12, 2022), <https://www.energy.ca.gov/event/workshop/2022-08/joint-agency-workshop-diablo-canyon-power-plant>.

things, statutorily reversed earlier findings by the CPUC that the Diablo Canyon Power Plant should be retired at its current license expiration dates, mandated that relevant state agencies should facilitate the continued operation of the plant while assessing future needs, and made available financial support that may be required for extended operation of the plant.<sup>6</sup> Governor Newsom signed that legislation on September 2, 2022, and by the end of October, PG&E made the relevant applications to this Commission.

It is also noteworthy that pursuant to the state legislation cited above, the California Energy Commission staff more recently found that it is:

prudent for the state to pursue extension of the Diablo Canyon Power Plant through 2030 to mitigate the risks imposed by the dependence on an unprecedented speed and scale of development [of alternative energy sources] and of increased frequency and intensity of climate-driven extreme events. CEC staff has determined that this is consistent with the state’s emission reduction goals.<sup>7</sup>

We believe that there is sufficient basis for the NRC Staff to grant PG&E’s exemption request to allow submission of the renewal application less than five years before license expiration in a manner that is consistent with previous decisions regarding similar applications. Indeed, the NRC has previously approved several requests for exemptions from the timely renewal requirements for Oyster Creek, Clinton, Perry, Nine Mile, and Ginna. While there are some differences in the timing between those previous exemption requests and the relief requested by PG&E, as those licensees were granted exemptions at least three years prior to license expiration, there are also significant factors related to the energy needs in California necessitating the continued operation of DCP. <sup>8</sup>

Granting this exemption to PG&E will not result in a violation of the Atomic Energy Act of 1954, as amended, the APA, or the NRC’s own regulations, which allow for exemptions in cases such as this. Therefore, the exemption should be authorized by law. Notably, at least one other nuclear

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<sup>6</sup> In its findings, the Legislature noted, “Preserving the option of continued operations of the Diablo Canyon powerplant for an additional five years beyond 2025 may be necessary to improve statewide energy system reliability and to reduce the emissions of greenhouse gases while additional renewable energy and zero-carbon resources come online, until those new renewable energy and zero-carbon resources are adequate to meet demand. Accordingly, it is the policy of the Legislature that seeking to extend the Diablo Canyon powerplant’s operations for a renewed license term is prudent, cost effective, and in the best interests of all California electricity customers.” See SB 846, 25548(b).

<sup>7</sup> California Energy Commission, “Diablo Canyon Power Plant Extension-Draft CEC Analysis of Need to Support Reliability” (February 14, 2023), <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-ESR-01>.

<sup>8</sup> Approval of a timely renewal period less than five years is also consistent with the broader statutory scheme in place here. The NRC has had varying timely-renewal standards in the past, and previously proposed a modification to Section 2.109 that required license renewal applications to be submitted only three years prior to license expiration to be eligible for timely renewal protection. The five-years prior deadline was instead chosen “for consistency” with other NRC submittal deadlines. Nuclear Power Plant License Renewal; Final Rule, 56 Fed. Reg. 64,943, 64,962 (Dec. 13, 1991). Moreover, there is no statutory requirement for the NRC to require that license renewal applications be submitted years in advance. Instead, the Commission’s original embodiment of the Administrative Procedure Act at 10 CFR § 2.109 only provided for a 30-day timely renewal period. Nuclear Power Plant License Renewal; Proposed Rule, 55 Fed. Reg. 29,043, 29,051 (July 17, 1990).

power plant, Indian Point Nuclear Generating Units 2 and 3, has operated under “timely renewal” pending the NRC’s final approval of a renewal application.

California’s need to keep DCPD open is based, in part, on serious climate change impacts and the urgent need for the state to reach net-zero carbon emissions. Therefore, the NRC should grant PG&E’s requested exemption from 10 CFR § 2.109(b) as it is in the public interest to resume review of the license renewal application, confirm the applicability of the timely renewal standard, and enable DCPD to provide carbon-free energy for California to meet its net-zero carbon emissions goals.

Sincerely,

Armond Cohen, Executive Director, Clean Air Task Force

Dan Richard, President, Carbon Free California