



Application of Pacific Gas and Electric Company for Approval of the Retirement of Diablo Canyon Power Plant, Implementation of the Joint Proposal and Recovery of Associated Costs Through Proposed Ratemaking Mechanisms (U39E).

Application16-08-006 (Filed August 11, 2016)

REPLY COMMENTS OF TESLA, INC. ON PROPOSED DECISION APPROVING RETIREMENT OF DIABLO CANYON NUCLEAR POWER PLANT

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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company for Approval of the Retirement of Diablo Canyon Power Plant, Implementation of the Joint Proposal and Recovery of Associated Costs Through Proposed Ratemaking Mechanisms (U39E).

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Pursuant to California Public Utilities Commission ("Commission") Rule 14.3 Tesla, Inc.¹ ("Tesla") respectfully submits these reply comments to the *Proposed Decision Approving Retirement of Diablo Canyon Nuclear Power Plant*, issued on November 8, 2017 ("Proposed Decision"). Like the majority of parties who filed opening comments, Tesla supports the Proposed Decision. The Proposed Decision is well-reasoned, and factually, legally and technically sound.

The Commission should approve the Proposed Decision, but include a policy statement or firm commitment that power from the Diablo Canyon Nuclear Power Plant ("Diablo") should be replaced with greenhouse gas ("GHG")-free resources. In addition, while the Proposed Decision rejects the applicants' Tranche 1 procurement proposal, any plan the Commission may make for the early procurement of GHG-free resources to partly replace Diablo should also include renewable energy paired with storage and take advantage of expiring federal tax credits.

I. THE COMMISSION SHOULD ISSUE A POLICY STATEMENT FOR THE IRP PROCEEDING THAT COMMITS TO REPLACE DIABLO WITH GHG-FREE RESOURCES.

The opening comments of Pacific Gas and Electric Company ("PG&E"), Natural

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¹ Tesla is concurrently filing a "Notice of Party Name Change from SolarCity Corporation to Tesla, Inc.".

Resources Defense Council ("NRDC"), Friends of the Earth ("FOE"), Green Power Institute ("GPI"), and The Utility Reform Network ("TURN") recommend that the Proposed Decision be modified to include a policy statement or firm commitment for the IRP that Diablo should be replaced with GHG-free resources.² For example, the Joint Parties (which include PG&E, NRDC and FOE) proposed that the Commission adopt a policy directive that "the output of Diablo Canyon be replaced with GHG-free resources" and that the responsibility for, definition of, and cost of these [GHG-free] resources be addressed as a part of the IRP proceeding." The Commission should include such statements in the Proposed Decision.

California has an existing mandate to reduce emissions 40 percent below 1990 levels by 2030,⁴ and the aspirational goal of reducing emissions 80 percent by 2050.⁵ The proposition that GHG emissions should not increase because of Diablo's retirement is uncontroversial. Providing a statement that commits the Commission in the IRP proceeding to replacing Diablo with GHG-free resources reaffirms the Commission and the State's goal to not increase GHG commissions. Thus, the Commission should modify the Proposed Decision.

II. PARTIES SUPPORTING THE TRANCHE 1 PROCUREMENT PROPOSAL HAVE NOT SHOWN THAT ENERGY EFFICIENCY IS THE GHG-FREE RESOURCE THAT IS BEST SUITED TO REPLACE DIABLO'S OUTPUT AT THE LEAST COST.

The opening comments of PG&E, NRDC, and Center for Energy Efficiency and Renewable Technologies ("CEERT") recommend that the Proposed Decision be modified to

² See PG&E Opening Comments, at 1–2; NRDC Opening Comments, at 3–4; FOE Opening Comments, at 4 GPI Opening Comments, at 7–8; TURN Opening Comments at 3–4.

³ PG&E Opening Comments, at 2.

⁴ See Cal. Health & Safety Code § 38566.

⁵ See California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, at 99 (November 2017).

approve the Joint Parties' proposed "Tranche 1" procurement, which comprises 2,000 GWh of energy efficiency procured between 2018 and 2024. The parties advocating for approval of Tranche 1 procurement have not shown that energy efficiency is the GHG-free resource that is most cost-effective or best suited to meet the need arising from Diablo's retirement. Indeed, as other parties have pointed out, the Joint Parties' proposal does not ensure that the energy efficiency savings will still be available when Diablo goes offline, or that the efficiency measures will not exacerbate conditions of over-generation and renewable curtailment.

The Proposed Decision correctly determines that replacement resources should be identified in the Integrated Resource Planning ("IRP") proceeding. In the IRP proceeding, the Commission can balance the costs, benefits and operational attributes of *all* GHG-free resources with the specifics of the identified reliability need. The Commission can then determine the most cost-effective portfolio that best fits that need. While the Commission should replace Diablo's output with GHG-free resources, energy efficiency is not the only option that can meet this goal; other technologies, such as renewables paired with storage, may both be able to do so more cost-effectively and better match reliability needs.

Parties that support the Tranche 1 procurement proposal recommendation argue that if the energy efficiency procurement is not approved in 2017, the State will likely replace the output from Diablo with fossil fuel-powered, emissive generation in 2024. However, other state agencies have found that energy efficiency is not the only GHG-free resource available and other resources may be more cost-effective or have attributes that better meet the needs of the electrical grid.

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⁶ See PG&E Opening Comments, at 12 (Nov. 29, 2017); NRDC Opening Comments, at 4; CEERT Opening Comments, at 10–11.

⁷ See TURN Opening Brief, at 20 (May 26, 2017); Joint Opponents Opening Brief, at 4–5 (May 26, 2017).

⁸ See, e.g., CEERT Opening Comments, at 10–11; PG&E Opening Comments, at 4.

The California Independent System Operator's ("CAISO)" *Moorpark Sub-Area Local Capacity Alternative Study* recently examined which GHG-free resources might replace the proposed 262-MW Puente power plant. The CAISO determined that a portfolio of GHG-free resources — including demand response, solar PV, energy storage and efficiency — would be the optimal portfolio of GHG-free resources to meet the reliability need. Here too, the Commission should allow Diablo replacement procurement to potentially include *all* GHG-free resources that might be more cost-effective and have operational attributes that better fit the needs of the state's electrical grid, rather than only through *one* resource as recommended in the Joint Parties' Tranche 1 procurement proposal.

III. THE NEED TO HAVE REPLACEMENT RESOURCES ONLINE PRIOR TO DIABLO RETIREMENT DOES NOT JUSTIFY ADOPTION OF TRANCHE 1 PROCUREMENT.

To justify immediate approval of Tranche 1 energy efficiency procurement outside of the IRP, PG&E and NRDC argue long lead times are necessary to solicit, approve, plan and install energy efficiency measures. PG&E argues that since 2019 is the "earliest ... that additional EE quantities could be considered as part of an optimized IRP," five years (*i.e.*, between 2019 and 2024) is "not enough time to hold a solicitation, seek approval of winning bids, and install a meaningful amount of EE" The Commission should reject this argument to justify adoption of the proposed Tranche 1 procurement proposal.

PG&E provides no evidence for its implausible assertion that five years will be insufficient time. There are many examples of much more complicated projects than implementation of energy efficiency projects being completed with much less lead time. For

⁹ CAISO Moorpark Sub-Area Local Capacity Alternative Study, at 29–30 (August 16, 2017), *available at* https://www.caiso.com/Documents/Aug16_2017_MoorparkSub-AreaLocalCapacityRequirementStudy-PuentePowerProject_15-AFC-01.pdf.

¹⁰ See PG&E Opening Comments, at 12–13; NRDC Opening Comments, at 4.

¹¹ PG&E Opening Comments, at 13.

example, just 63 days following contract execution, Tesla completed installation of the world's largest grid-connected battery (a 100MW/129 MWh storage facility tied to a wind farm in Australia). Thus, the fact that Diablo is six years away from retirement fails to justify the immediate approval of the proposed Tranche 1 procurement.

IV. ANY EARLY PROCUREMENT OF GHG-FREE RESOURCES TO PARTLY REPLACE DIABLO SHOULD INCLUDE RENEWABLE ENERGY PAIRED WITH STORAGE AND TAKE ADVANTAGE OF FEDERAL TAX CREDITS.

If the Commission makes a determination that it is necessary to authorize near-term procurement of GHG-free resources outside of the IRP process to partly replace Diablo, that procurement should focus on preferred resources that can take advantage of soon to be reduced or phased out Federal Investment Tax Credits and Production Tax Credits. ¹³ Energy storage resources paired with solar generation that can take advantage of such federal tax credits should be eligible for any such early replacement procurement.

Including other GHG-free resources beyond energy efficiency in any solicitation to replace Diablo's output will also create a more *diverse portfolio* of resources better suited to *integrating renewable energy* — two directives required by SB 350.¹⁴ Besides replacing the capacity lost when Diablo retires, such solar plus storage resources can serve as a flexible generation that can be in locally constrained areas and potentially offer transmission deferral and other benefits.

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¹² See Chappell, Bill. "World's Largest Battery is Turned on in Australia as Tesla Ties into Power Grid." National Public Radio. December 1, 2017. A copy is available at: https://www.npr.org/sections/thetwo-way/2017/12/01/567710447/worlds-largest-battery-is-turned-on-in-australia-as-tesla-ties-into-power-grid.

¹³ See CESA Opening Comments, at 5.

¹⁴ Cal. Pub. Util. Code § 454.51.

Respectfully submitted,

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