

**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).

Application 16-08-006  
(Filed August 11, 2016)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
ON PROPOSED DECISION APPROVING RETIREMENT OF  
DIABLO CANYON NUCLEAR POWER PLANT**

Donald C. Liddell  
DOUGLASS & LIDDELL  
2928 2nd Avenue  
San Diego, California 92103  
Telephone: (619) 993-9096  
Facsimile: (619) 296-4662  
Email: [liddell@energyattorney.com](mailto:liddell@energyattorney.com)

Counsel for the  
**CALIFORNIA ENERGY STORAGE ALLIANCE**

November 29, 2017

**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).

Application 16-08-006  
(Filed August 11, 2016)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE  
ON PROPOSED DECISION APPROVING RETIREMENT OF  
DIABLO CANYON NUCLEAR POWER PLANT**

In accordance with the Rules and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)<sup>1</sup> hereby submits these comments on the *Proposed Decision Approving Retirement of Diablo Canyon Nuclear Power Plant*, issued on November 8, 2017 (“Proposed Decision”).

**I. INTRODUCTION.**

CESA supports the Proposed Decision’s approval of Pacific Gas and Electric Company’s (“PG&E”) plan to retire the Diablo Canyon Nuclear Power Plant (“DCPP”) in 2024 and 2025

---

<sup>1</sup> 8minutenergy Renewables, Able Grid Energy Solutions, Adara Power, Advanced Microgrid Solutions, AES Energy Storage, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Brenmiller Energy, Bright Energy Storage Technologies, BrightSource Energy, Brookfield, California Environmental Associates, Consolidated Edison Development, Inc., Customized Energy Solutions, Demand Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, ElectriQ Power, eMotorWerks, Inc., Energport, Energy Storage Systems Inc., GAF, Geli, Green Charge Networks, Greensmith Energy, Gridscape Solutions, Gridtential Energy, Inc., Hitachi Chemical Co., IE Softworks, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Johnson Controls, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NICE America Research, NRG Energy, Inc., Ormat Technologies, OutBack Power Technologies, Parker Hannifin Corporation, Qnovo, Recurrent Energy, RES Americas Inc., Sempra Renewables, Sharp Electronics Corporation, SolarCity, Southwest Generation, Sovereign Energy, Stem, STOREME, Inc., Sunrun, Swell Energy, Viridity Energy, Wellhead Electric, and Younicos. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. (<http://storagealliance.org>).

when its federal Nuclear Regulatory Commission operating licenses expire. As noted in PG&E's application, DCPD has significant operating costs and is less needed in an electricity market where there is a growing need for flexible resources, rather than inflexible baseload generation, to integrate the increasing levels of renewables on the grid.<sup>2</sup> While DCPD is a source of zero-emissions generation, there are alternative sources such as energy storage and demand response that can provide the same clean energy benefits while adding flexibility to the grid to accommodate growing levels of variable generation.

CESA believes it is important to replace the output of DCPD with equivalent levels of zero-emissions generation resources, as originally intended by PG&E's application. In its original application, PG&E proposed three 'tranches' of replacement procurement that would address the transition period for DCPD retirement, including early energy efficiency procurement (Tranche 1), a combination of energy efficiency, Renewable Portfolio Standard ("RPS") eligible renewables, and energy storage (Tranche 2), and an increase in RPS procurement to 55% after 2030 (Tranche 3). However, in its revised application, PG&E only retained Tranche 1 procurement. CESA has previously commented that PG&E's modified approach does not address the future flexibility needs of the grid, because energy efficiency does not necessarily reduce load to align with dynamic supply conditions or with California's high-renewables generation portfolio.<sup>3</sup> In addition, rather than creating an early procurement carve-out for energy efficiency resources, CESA believes that an all-source procurement will best identify the least-cost, best-fit resources that ensure the optimal mix of zero-emissions replacement resources

---

<sup>2</sup> Proposed Decision, p. 10.

<sup>3</sup> *Response of the California Energy Storage Alliance to the 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*, filed September 15, 2016, pp. 6-7.

with the right flexibility attributes. CESA therefore supports the Proposed Decision in rejecting the \$1.3-billion Tranche 1 proposal for energy efficiency procurement to partially replace the output of DCP. Instead, CESA advocates for deferring all replacement procurement issues to be addressed in the Integrated Resources Planning (“IRP”) proceeding (R.16-02-007).

In deferring replacement procurement issues to the IRP proceeding, CESA recommends that the Commission also authorize an all-source procurement solicitation in the near term to ensure that the basic intent of PG&E’s application is upheld – *i.e.*, that zero-emissions resources be procured in a timely manner to support the transition toward DCP retirement. While the Proposed Decision prudently determines that energy efficiency should not constitute a pre-determined share of the replacement resources, an all-source solicitation open to all GHG-free resources and energy storage would ensure that replacement resources (i) would not increase greenhouse gas (“GHG”) emissions, (ii) would be sufficiently flexible to meet renewable integration needs, and (iii) would be the least-cost portfolio of GHG-free resources available.

In sum, CESA strongly supports the Proposed Decision and offers the following comments below, including a recommendation to provide as guidance for the IRP:

- The IRP proceeding is the appropriate venue to determine the most cost-effective and best-fit resource mix.
- A near-term all-source solicitation to replace the output of DCP is supported by both the application and early findings from the modeling done in the IRP proceeding.

**II. THE INTEGRATED RESOURCES PLANNING PROCEEDING IS THE APPROPRIATE VENUE TO DETERMINE THE MOST COST-EFFECTIVE AND BEST-FIT RESOURCE MIX.**

CESA supports the Proposed Decision’s determination that “it is not clear that PG&E could actually procure over 50% more energy efficiency than a goal that is already supposed to

include all cost-effective energy efficiency.”<sup>4</sup> It is also important to recognize that there are other zero-emissions resources that may be a better fit for the reliability needs and are also cost-effective, and even more so than energy efficiency. Rather than selecting a single resource for near-term replacement procurement without evaluating other possible options, CESA finds it more reasonable to conduct a rigorous evaluation of the cost-effectiveness and flexibility attributes across all preferred resource classes.

The IRP proceeding is well-designed to conduct the required analyses, as Energy Division, E3, and other various stakeholders have publicly vetted modeling tools to optimize resource selection around GHG constraints and renewable goals through 2030. While not perfect, the tools and scenarios built in the IRP proceeding are adequate to ensure DCPD output is met by GHG-free resources that maintain grid reliability. It is important to note that there is no downside to considering all GHG-free resources in the DCPD replacement procurement. If energy efficiency is truly the most cost-effective resource available and the best fit for the reliability need, that will be revealed in the IRP-directed solicitation. By the same token, if there are other resources that could provide zero-emission power at a lower cost and better fit, then ratepayers would be worse off if the Commission were to fail to consider those resources as replacement procurement.

**III. A NEAR-TERM ALL-SOURCE SOLICITATION TO REPLACE THE OUTPUT OF THE DIABLO CANYON NUCLEAR POWER PLANT IS SUPPORTED BY THE APPLICATION AND EARLY FINDINGS FROM THE MODELING DONE IN THE INTEGRATED RESOURCES PLANNING PROCEEDING.**

Although the Proposed Decision defers all replacement procurement to the IRP proceeding, CESA recommends that additional guidance or procurement authorization can be

---

<sup>4</sup> Proposed Decision, p. 21.

issued in this proceeding to ensure the intended outcomes for replacement procurement. The IRP Proposed Reference System Plan has already identified significant benefits and value for procuring renewable resources earlier than needed for RPS requirements to meet the state’s GHG goals in a cost-effective manner, due to current availability of soon-to-expire Federal Investment Tax Credit (“ITC”) and Production Tax Credit (“PTC”). Approximately 9,000 MW of new utility-scale solar and 1,100 MW of in-state wind resources are selected prior to 2022 and 2019 respectively to capture the tax credit benefits, as demonstrated in the RESOLVE modeling runs.<sup>5</sup>

Fortunately, the state’s GHG goals through 2030 have synergies with the goals for retiring DCP, which aims to ensure GHG-free replacement resources. Given the benefits of early renewables procurement in the IRP modeling and the goal of the DCP retirement to ensure a reliable and clean transition, CESA believes it is reasonable to authorize an all-source solicitation for preferred resources and energy storage to allow PG&E to realize the tax credit benefits of early procurement as well as ensure that the replacement resources are GHG-free and reliable. It is also important to note that energy storage resources paired with solar generation have the potential to take advantage of these tax credits as well, representing a significant but expiring opportunity to procure the needed flexible resources to replace DCP. Such an all-source solicitation would represent a “least regrets” amount of renewables determined to be “optimal” in the RESOLVE model, in addition to presenting a limited opportunity for PG&E to more cost-effectively procure a least-regrets amount of zero-emissions replacement resources. This amount does not have to replace the full amount of DCP output, considering DCP will still be online through 2024-2025. But some substantial amount that supports the transition

---

<sup>5</sup> *Administrative Law Judge’s Ruling Seeking Comment on Proposed Reference System Plan and Related Commission Policy Actions*, Attachment A, issued on September 19, 2017. p. 52.

toward DCPD retirement should be procured. At minimum, CESA recommends that the Commission provide procurement guidance to PG&E now in this proceeding as it prepares its 2018 Integrated Resource Plan.

Going forward, for future IRP cycles, CESA also recommends that the Commission provide modeling guidance that will inform the assumptions and scenarios of IRP modeling. Specifically, the Commission should ensure that DCPD output should not be replaced by any GHG-emitting resources, which should serve as a constraint in the RESOLVE model when the IRP cycle begins again in 2019. As the RESOLVE model has shown, energy from gas generation actually rebounds in 2026 due to DCPD closure.<sup>6</sup> However, it must be ensured that DCPD closure does not lead to GHG-emitting replacement resources through a constraint applied in the IRP modeling.

#### IV. CONCLUSION.

CESA appreciates the opportunity to submit these comments on the Proposed Decision and looks forward to working with the Commission and stakeholders to ensure a timely, reliable, and GHG-free transition toward DCPD retirement.

Respectfully submitted,



Donald C. Liddell  
DOUGLASS & LIDDELL

Counsel for the  
**CALIFORNIA ENERGY STORAGE ALLIANCE**

Date: November 29, 2017

---

<sup>6</sup> *Ibid*, p. 56.