

BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric)	
Company for Compliance Review of Utility)	
Owned Generation Operations, Portfolio)	
Allocation Balancing Account Entries, Electric)	
Energy Resource Recovery Account Entries,)	Application 21-03-008
Contract Administration, Economic Dispatch of)	(Filed March 1, 2021)
Electric Resources, Utility Retained Generation)	
Fuel Procurement, and Other Activities for the)	
Record Period January 1 through)	
December 31, 2020.)	
_____ (U 39 E))	

ALLIANCE FOR NUCLEAR RESPONSIBILITY'S RESPONSE

JOHN L. GEESMAN

DICKSON GEESMAN LLP

P.O. Box 177

Bodega, CA 94922

Telephone: (510) 919-4220

E-Mail: john@dicksongeesman.com

Date: March 18, 2021

Attorney for
ALLIANCE FOR NUCLEAR RESPONSIBILITY

RESPONSE

Pursuant to Rule 2.6 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Alliance for Nuclear Responsibility (“A4NR”) files its Response to the Application of Pacific Gas and Electric Company (“PG&E”) in the 2020 Electric Energy Resource Recovery Account (“ERRA”) Compliance proceeding.

A4NR is concerned that PG&E’s request that review of outages at the Diablo Canyon Nuclear Power Plant (“DCNPP”) related to the Unit 2 Main Generator “be delayed to the 2021 Compliance review to ensure a complete record on the operating issue”¹ is unduly dilatory and PG&E’s justification (“ongoing and still under evaluation”²) excessively ambiguous. PG&E’s history of misleading statements concerning Unit 2 Main Generator expenditures³ compels closer scrutiny to determine whether any root cause analyses already conducted provide sufficient information for the Commission to review the prudence of PG&E’s management of Unit 2 as a potential contributor to the 2020 outages. The fact that similar Unit 2 outages have persisted into 2021 does not, *a priori*, mean there would be no regulatory benefit to taking up the 2020 issues now.

In fact, just the opposite may be the case. The 2021 outages, even if similarly caused, may present different questions of prudent asset management. And one inescapable lesson

¹ PG&E Application, p. 2.

² *Id.*

³ A4NR documented this evolving narrative in both PG&E’s 2017 General Rate Case and 2020 General Rate Case (“GRC”).

from the 2017 – 2020 wildfires and 2010 San Bruno experiences is that, with PG&E, deferred Commission oversight appears to mean diminished Commission oversight.

For years, PG&E has stumbled through a chain of contradictory decisions on what to do about replacing the Unit 2 Main generator’s primary component, an aged stator:

- In June 2015, when refurbishment spending only totaled \$.6 million, PG&E’s “Major Project Business Case” Gate 1 assessment described a “project off-ramp” scheduled for September 2016 “to allow the project team to terminate further cost and project execution” in the event that Diablo Canyon licensing extension was not pursued.⁴
- Despite PG&E’s announcement one year later that it would not pursue Diablo Canyon’s licensing extension, this “project off-ramp” was not taken.⁵
- The June 2015 “Major Project Business Case” assessment had promised a “bridging strategy” would be developed in the event that Diablo Canyon’s licensing extension was not pursued,⁶ but—once developed—such “bridging strategy” consisted “solely of routine monitoring of generator health during online operations.”⁷
- PG&E acknowledged that its Unit 2 Main Generator Stator Replacement Project bridged the approximately six-year period of remaining “license life”⁸ with a “25 years or so” asset⁹ that it intends to fully amortize over the compressed remaining

⁴ A.18-12-009, Exhibit 255, WP 3-220.

⁵ A.18-12-009, Transcript, p. 2630, line 24 (PG&E—Harbor).

⁶ A.18-12-009, Exhibit 255, WP 3-220.

⁷ A.18-12-009, Transcript, p. 2639, line 27 – p. 2640, line 1 (PG&E—Harbor).

⁸ A.18-12-009, Transcript, p. 2637, line 25 – p. 2638, line 2 (PG&E—Harbor).

⁹ A.18-12-009, Transcript, p. 2637, lines 14 – 17 (PG&E—Harbor).

“operational life of Diablo Canyon and not beyond.”¹⁰ PG&E did not address the reasonableness of filling an at-most six-year need with a “25 years or so” solution.

- The 2017 GRC Settlement Agreement, filed August 3, 2016 in the aftermath of PG&E’s June 2016 Diablo Canyon retirement announcement and immediately prior to the envisioned “project off-ramp,” withdrew PG&E’s request for Commission pre-approval of the stator replacement project.
- Five months later, obliquely noting the changed circumstances created by the Diablo Canyon retirement announcement but with no assessment of the impact on Unit 2 operating economics from the accelerating erosion of bundled load and metastasizing above-market costs, the internal January 2017 Gate 2 recommendation to PG&E’s Executive Project Committee warned,

With both Alliance For Nuclear Responsibility (A4NR) and The Utility Reform Network (TURN) having objections to the reasonableness of this project in light of the decision not to re-license DCP, it is reasonable to expect significant review of the costs versus benefits of this project in the 2020 GRC.¹¹

- As revealed in the 2020 GRC, PG&E never compared the economics of stator replacement against simply retiring Unit 2¹² (or both Unit 1 and Unit 2¹³), notwithstanding the assertion of PG&E’s Diablo Canyon witness that “none of us really wanted to do a full project. Only if it’s absolutely necessary.”¹⁴

¹⁰ A.18-12-009, Transcript, p. 2649, lines 21 – 23 (PG&E—Harbor).

¹¹ A.18-12-009, Exhibit 147, p. 3-243.

¹² A.18-12-009, Transcript, p. 2642, lines 7 – 8 (PG&E—Harbor).

¹³ A.18-12-009, Transcript, p. 2642, lines 1 – 3 (PG&E—Harbor).

¹⁴ A.18-12-009, Transcript, p. 2632, lines 16 – 18 (PG&E—Harbor).

Noting that “whatever is needed to safely and reliably operate the plant will be of primary concern,” D.20-12-005 accepted PG&E’s eventual rationale that stator replacement was required for safety reasons:

The plant’s expected shutdown in 2024 and 2025 will be considered as an important factor but does not overcome the need to consider safety as the primary issue when looking at the necessity of projects and their costs ... The inspection [by the Unit 2 Main Generator’s manufacturer] revealed progressive degradation of certain components likely to lead to the eventual failure of the generator stator which could lead to an unplanned outage of 100 days or more. More importantly, failure of the generator increases safety risks associated with potential hydrogen fire at the plant. Parties opposing the project did not challenge the safety aspect ... Based on the evidence and arguments presented, we find the project and settlement costs reasonable and necessary in order to continue operating DCPD safely and reliably for this GRC cycle.¹⁵

However, PG&E has been dismissive of the safety risks associated with the hydrogen leaks associated with the new stator, although they have repeatedly caused Unit 2 to shut down since July 2020. As the minutes of the October 22, 2020 meeting of the Commission’s Diablo Canyon Independent Safety Committee (“DCISC”) record the explanation of the Diablo Canyon Station Director (the same witness who testified about the Unit 2 stator in the 2020 GRC):

Mr. Harbor reported on October 15, 2020, Unit 2 was shut down after hydrogen leakage was identified in the stator cooling water system of the main electrical generator. Investigation continues to identify the source of the problem. Previously, In July 2020, Unit 2 was shut down when a leak was identified in the stator cooling water feeder ring for the main generator which involved work done as part of the stator replacement project performed in 2019. The Siemen's firm which constructed the stator made repairs at that time and performed vibration modal analysis to determine if vibration was the cause but failed to identify any specifics which may have caused the problem and the plant was returned to service. Mr. Harbor reported that in connection with the most recent shutdown another crack has been identified in the same header ring, albeit in a different location than in July...

¹⁵ D.20-12-005, p. 152.

... In response to Dr. Lam's inquiry concerning the potential consequences including to safety-related equipment if the header ring were to rupture, Mr. Harbor replied the main generator is not associated with any nuclear safety-related systems and the header ring is located within the generator stator and does not affect DCCP's ability to safely shutdown the plant or to address any postulated accident sequences. He reported the leaking hydrogen gas is vented into the standard cooling water system and the hydrogen is kept at a higher pressure than the stator cooling water and is designed to vent into a line, which is how the hydrogen leak was detected in July and October. Mr. Harbor confirmed Dr. Peterson's observation that as the vent system was designed with the potential for hydrogen leakage it vents in a way that does not raise any risk associated with fire and Mr. Harbor stated there is a relief valve in the cooling water system and the hydrogen ejects through that relief valve and therefore would not normally accumulate in excess of combustible or explosive limits. However, Mr. Harbor observed that there is always the chance, such as with a generator fire or other catastrophic event, that combustion or an explosion could occur but the plant systems are designed to minimize that potential.¹⁶

Having authorized the replacement of the old Unit 2 Main Generator stator under the rubric of “whatever is needed to safely and reliably operate the plant” and “safety risks associated with potential hydrogen fire at the plant,”¹⁷ the Commission is now confronted with a new stator whose malfunction severely reduced Unit 2 operating hours in 2020 but “does not raise any risk associated with fire.”¹⁸ PG&E’s application in this proceeding gives no explanation for the benign safety ramifications of hydrogen leaks from the new stator compared to the potentially hazardous leaks expected from the old, and summarily deflects inquiry into the degradation of Unit 2 reliability until next year “to ensure a complete record on the operating issue.”¹⁹ The Commission should expect a fuller explanation from PG&E of the precise insufficiency in currently available information that precludes a proper evaluation of the

¹⁶ Agenda Packet for DCISC February 16 – 17, 2021 meeting, pp. B.3-4 – B.3-5, accessible at <https://www.dcisc.org/>

¹⁷ D.20-12-005, p. 152.

¹⁸ Agenda Packet for DCISC February 16 – 17, 2021 meeting, p. B.3-5.

¹⁹ PG&E Application, p. 2.

multiple 2020 hydrogen-related DCNPP Unit 2 outages and their accompanying impacts on PG&E electricity supply costs.

Even if there is some credible deficiency of available stator evidence, it may still be useful for this proceeding to review the July 2020 unrelated, but overlapping, multi-day Unit 2 outage caused by a “pinhole leak” (see PG&E picture attached hereto) in the auxiliary feedwater (“AFW”) piping. As recorded in the minutes of the DCISC’s October 22, 2020 meeting:

He [Mr. Harbor] reported the corrosion of the piping for the AFW System was not immediately apparent or visible due to the pipe having been wrapped with lagging and the leak was identified and found to be the result of a pinhole leak caused by corrosion build-up between the pipe and the lagging which caused water to escape from the lagging around the pipe. Although discovered at the same time as Unit 2 was shut down for the July 2020 generator issue, the two issues were not related. The lagging was removed and ultrasonic testing was performed which determined the piping to have sufficient wall thickness such that even with the leak the AFW System remained capable of performing its function. Mr. Harbor stated the NRC conducted independent oversight of the investigation into the AFW leak and concurred with DCPD findings and actions. The base metal piping for the AFW System for both units is being restored and a section of piping for Unit 1 is to be cut out and replaced. Mr. Harbor reported the origin for this issue goes back to the original installation of the AFW System piping and were that piping to be installed today it would not be covered by lagging. He reported the NRC is expected to issue a finding on this issue due to the fact there was similar operating experience from another plant many years ago but DCPD's process concerning evaluating operating experience at that time did not identify the issue as one which could potentially affect DCPD. Mr. Harbor reported that the process for addressing operating experience has now evolved from what it was at that time and therefore the issue is not indicative of current performance.²⁰

PG&E’s application and accompanying testimony do not identify the amount of time the AFW leak would have caused Unit 2 to remain offline had the hydrogen-related outage not occurred. Nor has PG&E suggested any reason why that separate incident ought not to be

²⁰ Agenda Packet for DCISC February 16 – 17, 2021 meeting, pp. B.3-7 – pp. B.3-8.

analyzed in this proceeding. This seems especially pertinent in light of the adverse finding against PG&E by the Nuclear Regulatory Commission concerning the AFW matter.

At a time when the Commission has been told by respected academics that “the average price of residential electricity in California’s three large IOUs is out of line with the rest of the country” and that PG&E electricity rates are 80% higher than the national average,²¹ enhanced vigilance over demonstrable pratfalls at PG&E’s primary generation cost center²² seems logical. PG&E’s reliance on a settlement with the Office of Ratepayer Advocates (“ORA,” now Public Advocates) in the 2017 ERRR Compliance proceeding to defer review of outages at the Humboldt Bay Unit 3 fossil facility and the Pit 5 Unit 4 hydro facility appears misplaced, as these incidents had considerably smaller economic consequences to ratepayers (including those departing customers who remain liable for such costs through the Power Charge Indifference Adjustment).

The 2013 ERRR Compliance review of a five-day outage at DCNPP Unit 2 in July 2013 (which had prompted ORA to recommend a \$4.7 million disallowance) showed a Commission willingness to accept new information after a second, similar Unit 2 outage in 2014 caused PG&E to revise its initial root cause evaluation of the 2013 incident. PG&E’s revisions removed two of the three contributing causes it had previously identified for the 2013 outage and identified them as no longer valid. Despite incorrectly including a new potential cause which

²¹ “Designing Electricity Rates for An Equitable Energy Transition,” February 2021, University of California Energy Institute Working Paper 314, p. 4.

²² PG&E acknowledged in its 2020 GRC that DCNPP’s annual above-market costs had climbed from \$410 million in 2018 to a projected \$1.258 billion in 2020, and that the share of these costs absorbed by departing load (i.e., Community Choice Aggregation and Direct Access customers) would grow from 41% in 2018 to 57% in 2020. A.18-12-009, Exhibit 253, p. 1; Exhibit 254, p. 1; Exhibit 256, pp. 3, 5.

had to be withdrawn, PG&E's revised root cause evaluation was sufficiently persuasive that ORA retracted its disallowance recommendation. PG&E's current application provides no reason why the Commission should lack confidence that the 2020 ERRA Compliance review would be similarly open-minded about considering new information that becomes available. Rule 13.14 expressly provides for reopening the record when necessary to incorporate additional evidence or argument.

A4NR has no objections (or further comments at this time) regarding PG&E's statements on the proposed category, need for hearing, other issues to be considered, or proposed schedule for the 2020 ERRA Compliance proceeding. A4NR looks forward to participating as a party and envisions conducting discovery and sponsoring testimony. The undersigned will be A4NR's principal contact in this proceeding, but A4NR also asks that the following two individuals be placed in the "*information only*" category of the Service List:

Rochelle Becker
rochelle@a4nr.org

David Weisman
david@a4nr.org

Respectfully submitted,

By: /s/ John L. Geesman

JOHN L. GEESMAN
DICKSON GEESMAN LLP

Date: March 18, 2021

Attorney for
ALLIANCE FOR NUCLEAR RESPONSIBILITY

ATTACHMENT

PG&E Presentation Slide re: U2 AFW Piping Leak Root Cause Evaluation

Russ Prentice, Director, Risk and Compliance & Root Cause Sponsor

DCISC February 16, 2021 meeting

Event Summary – Observed Leak

