

A Nuclear Fog

Governor Newsom wanted to keep Diablo Canyon open in the worst way, and that's how it's being done

On December 14, despite considerable input to the contrary, the California Public Utilities Commission ruled that there is not enough renewable energy on the state electrical grid to replace the output of the Diablo Canyon Nuclear Power Plant.



Thanks to everyone who responded to e-alerts from the Santa Lucia Chapter, Sierra Club California, and Mothers for Peace urging elected officials and CPUC to admit the obvious: California's success in ramping up renewable energy and battery storage over the last few years has effectively replaced Diablo's generating capacity several times over.

As the *Tribune* reported, "the commission found that California's electric system 'is much closer to a supply and demand balance than is comfortable for reliability purposes.' Although anti-nuclear advocates have long maintained that the state has enough clean energy sources coming online to replace Diablo Canyon in the coming years to maintain system reliability...the agency was required by SB 846 to only consider whether keeping Diablo Canyon open was prudent based on grid reliability issues concerning renewable and zero-carbon resources that 'have already been constructed and interconnected' by the end of 2023."

Two points:

First: In 2016, when PG&E's request to close Diablo Canyon by 2025 was approved, PG&E testified to the CPUC that Diablo Canyon was not needed for local or system reliability. Not only is Diablo not necessary for reliability, it's a threat to reliability. Women's Energy Matters pointed out to the CPUC the "Final Root Cause Analysis Mid-August 2020 Extreme Heat Wave, January 13, 2021," as prepared by California Independent System Operator (CAISO), California Energy Commission and (wait for it) the CPUC. The analysis found that Diablo Canyon was one of the major factors causing CAISO to trigger power outages due to the fear that if Diablo Canyon failed during such an event it could cascade into a catastrophic outage for the entire western U.S. power grid. Hence, the Governor's fear that a blackout may occur on his watch if Diablo is not still on the grid has the problem exactly backwards.

Second: As was [pointed out by multiple parties](#) prior to the Dec. 14 vote, more than three times the amount of energy needed to replace Diablo's capacity was added to the grid through the end of 2023, not counting rooftop solar and all industrial solar and energy storage added prior to 2020. To prevent all that additional energy from reaching a "comfortable" level, the CPUC need only cite ever higher potential demand based on a theoretical confluence of disasters befalling the electric grid at the same time, while ignoring all the other ways the state can maintain supply well in excess of demand that are much cheaper and less dangerous than keeping an aging nuclear plant running.

The commission's ruling checked off one more box on the road mapped out by the state legislature before Diablo's life extension can be approved. Still to come: Updates on the plant's seismic safety, and a ruling by the California Coastal Commission on whether the extension of Diablo's life is consistent with the Coastal Zone Management Act (CZMA).

The Coastal Commission – the only state agency whose appointees are not fully beholden to the governor – has made it clear that PG&E has a long way to go in that effort. In a Dec. 7 response to PG&E's attempt to certify CZMA consistency, the commission let the utility know that their application was incomplete, to put it mildly, and provided a ten-page list of everything PG&E will have to provide in order to show how the proposed action would "affect any land or water use or natural resource of the coastal zone" and whether the activity would be consistent with the enforceable policies of the state's approved California Coastal Management Program (CCMP). Here's a sample of what the utility needs to address before the Coastal Commission would sign off on an extended permit from the Nuclear Regulatory Commission (NRC):

"An action by the NRC to approve the proposed license extension would affect several coastal uses and resources that are components of the CCMP; however, as discussed below, PG&E's consistency certification does not adequately address these effects."

"Please revise the certification to apply the appropriate standards of review in the relevant analyses – i.e., whether results of the proposed federal action would affect any coastal use or resource and whether other known or anticipated development associated with the proposed license extension would be consistent with relevant CCMP policies."

"PG&E's certification states in several places that it intends to operate for about five years and appears to evaluate the project's effect over just that shorter operating period.... Where necessary, please augment the certification with analyses that consider the effects on coastal resources and uses over the full 20-year license period requested in PG&E's application to the NRC."

"The certification cites PG&E's most recent entrainment [to draw in and transport something, like fish, by the flow of a fluid] study showing that Diablo Canyon's use of seawater for cooling results in a loss of productivity equal to almost 700 acres of rocky reef habitat each year. However, the actual loss is substantially higher, as that study used a calculation based on a 50% confidence level instead of the 95% confidence level now used by the Coastal Commission and other state agencies to determine the type and extent of entrainment impacts

resulting from seawater intakes. Applying the 95% confidence level results in a loss of productivity during each year of operations roughly equal to that provided by well over 1,000 acres of reef habitat.”

“PG&E and other resource agencies have identified that Diablo Canyon’s thermal discharge is having adverse effects on nearby populations of black abalone, a species of special biological significance protected under the Endangered Species Act. Please provide relevant studies that describe those effects and identify the mitigation measures PG&E has implemented, or will implement, to avoid and reduce those effects.”

“Please provide an updated analysis or reevaluation of seismic hazards at DCPD which includes new information and science which has emerged since PG&E’s last comprehensive evaluation. The analysis should include an assessment of whether the plant design basis continues to protect against seismic hazards, and what additional development (if any) would be necessary to protect plant facilities and operations against seismic hazards over the proposed relicensing period (at a minimum).”

And so on.

In addition to Coastal Commission approval, all eyes should be on PG&E’s deep unwillingness to [test the welds on Diablo’s reactor domes](#) over the last twenty years, after the results of testing at that time indicated an ominous trend toward embrittlement in the welds holding together one of the pressure vessels. Senator John Laird has made it clear that PG&E needs to conduct those tests. He may need to pass a bill to make that happen.

Stay tuned.