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Study Says State Would Save Money, Prevent Pollution if Diablo Canyon Stayed Open

By Ingrid Lobet Published On: November 9, 2021



Keeping the Diablo Canyon Nuclear Power Plant running 10 years past the expiration of its federal operating licenses would save an estimated \$2.6 billion in power system costs and avoid a 10% rise in carbon dioxide emissions from gas-fired plants compared to 2017 levels, according to a report by Stanford University and the Massachusetts Institute of Technology.

Diablo Canyon has been forced to shut down a number of times because of coolant issues in one of the generating units over the last two years. But the report says that continuing to operate the plant a decade beyond the 2025 license expiration would avoid about 10.2 thousand watt-hours of production per year from natural gas plants and associated emissions.

But keeping the plant online would violate state law, including a decision by utility regulators to shut the plant down in 2025, when the Nuclear Regulatory Commission licenses for the two units end. It also would clash with a 2010 state ruling because the plant sucks in huge quantities of seawater to cool its turbines and expels heated wastewater into the ocean. The ruling said Diablo Canyon must retire or retool to slash water use in order to reduce the impact on fish and other aquatic wildlife.

"The state has made clear its position on nuclear energy and the plan to retire Diablo Canyon Power Plant has been approved by the California Public Utilities Commission and the state legislature," said Jim Jenson, spokesperson for plant owner Pacific Gas & Electric. "Our focus therefore remains on safely and reliably operating the plant until the end of its NRC licenses which expire in 2024 and 2025."

Back in January 2018, the CPUC approved PG&E's settlement with ratepayer and other advocates to close the plant because it was "no longer economic," former CPUC President Michael Picker said just before a 5-0 vote was cast. PG&E first requested permission in August 2016 to retire Diablo Canyon, the last remaining nuclear plant in the state, which provides about 8% of instate power. The utility decided against applying for an extension of its license.

The Stanford and MIT preliminary study released Nov. 8 does not include input from federal or state regulators or officials from San Luis Obispo County, where the two aging nuke units are located.

"Devoid of reality"

It smacks of an "ivory academic tower and is completely devoid of reality," said David Weissman, spokesperson for the Alliance for Nuclear Responsibility.

The study considers repurposing the nuclear plant to provide other services in addition to grid electricity–water desalination and production of emissions-free hydrogen. The nuclear units could split the hydrogen off the water molecule to create green hydrogen. It estimates the hydrogen costs would be far lower than today's costs: up to \$2.46 per kilogram compared to the current cost of around \$6 kilogram. But again lacking, is the ability to transport that fuel.

"This would be more credible if these academics represented a developer with the several hundred million dollars needed to take this fantasy through the permitting process," said John Geesman, former California Energy Commission member and Alliance attorney. "Licensing a Hindenburg-type explosive technology next to a nuclear plant surrounded by earthquake faults is not for the faint-hearted."

The study acknowledges the hurdles to keep the plant running, noting they "are substantial" but so too are the gains, it says.

It also projects that keeping the plant online for 20 years could create \$21 billion in power system cost savings and avoid the development of 90,000 acres of land for energy production.

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