

ENERGY & ENVIRONMENT

California's Last Nuclear Power Plant Could Close

By **DIANE CARDWELL** JUNE 21, 2016



The Diablo Canyon Power Plant, near San Luis Obispo, is California's last operating nuclear plant. Mark Ralston/Agence France-Presse — Getty Images

California, among the first states to embrace [nuclear energy](#) in the 1950s, may be breaking things off for good.

Under a proposal announced on Tuesday, Pacific Gas and Electric would

shutter the Diablo Canyon Power Plant, the state's last operating nuclear facility, and would compensate for the lost output with technologies that do not emit greenhouse gases, including renewable energy.

The proposal, part of an agreement with environmental and labor groups, is intended to help meet California's aggressive clean energy goals, which have already transformed the power mix with a large and growing renewable energy fleet at a time of slowing electric demand. It also comes after years of public pressure to close the plant, near San Luis Obispo, because of safety concerns over its location, near several fault lines, and its use of ocean water for cooling.

Because of state energy policies, "there's just not going to be enough need to have to run your nuclear plant," Tony Earley, PG&E's chief executive, said in a conference call with reporters. "It's a much smaller generating system."

Under the proposal, which would require the approval of the California Public Utilities Commission, the plant's two reactors would be shut down in 2024 and 2025, when their operating licenses expire, as long as the State Lands Commission extends a permit set to expire in 2018 that grants access to the ocean for the cooling operation.

The future of many of the country's 99 nuclear reactors — a majority of which are more than 30 years old — [is looking grim](#). The flood of cheap [natural gas](#) and slowing demand for electricity have driven down power prices, making it difficult for the aging plants to compete in wholesale markets. In recent years, several plants have shut down before their licenses expired, and more early closings are planned or threatened around the country.

Outside of a few areas, there has been little recent appetite to replace the old-style plants, which can take decades to plan and license and are expensive to build. The Tennessee Valley Authority this month announced the start of power production at the second reactor of its Watts Bar plant, whose construction had been halted since 1985. In Georgia, Southern Company is building two new nuclear units. There is not much else in the pipeline.

But nuclear plants provide nearly 60 percent of the country's carbon dioxide-free power. So some state and federal officials and environmentalists have been scrambling to help save the plants to meet national goals to stem [climate change](#).

Some nuclear advocates were critical of the plan for Diablo Canyon and expressed skepticism that the utility could fill the gap without relying on fossil fuels. A rise in greenhouse gas emissions has tended to follow closings of nuclear plants, as they have most often been replaced by natural gas. That was the case in New England and California after Vermont Yankee and San Onofre shut down.

But the plan for Diablo Canyon, which began operating in 1985 and stirred controversy from the start, is aimed at avoiding that, its proponents say. Gavin Newsom, the lieutenant governor, helped jump-start discussions on closing the plant as a member of the State Lands Commission, in part to allow for a slower, greener transition. “The sudden closure of San Onofre, which ultimately led to not only significant job losses but also led to significant greenhouse gas emissions — that recent example highlighted my concerns around Diablo,” he said.

The state’s evolving policies require utilities to include 50 percent renewables in the power they provide by 2030, to sharply reduce electricity sales through efficiency measures like programs that pay customers to reduce use in times of high demand, and to include the use of energy storage technologies.

That, combined with the increasing availability of renewable energy from large-scale wind and solar farms, as well as rooftop systems spreading throughout the state, means that the need for conventional nuclear plants, whose output is difficult to adjust quickly, is diminished.

“Giant baseload nuclear power plants like Diablo Canyon cannot easily be taken offline, or ramped up and down, as system needs change,” said Ralph Cavanagh, co-director of the energy program at the Natural Resources Defense Council and the group’s lead negotiator on the agreement. “This worsening problem is forcing the California grid operator to shut down low-cost renewable generation that could otherwise be used productively.”

As part of the agreement, PG&E promised to exceed the state mandate by including 55 percent renewables in its generation mix by 2031, and plans to spend \$350 million on helping retain or retrain affected employees. Executives estimate that decommissioning the plant will cost roughly \$3.8 billion, a \$1.3 billion increase over its last estimate in 2012.

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