

Earth Day '23: A Newly Post-Nuclear Germany vs. California's Reactor Relapse

Germany's initiative calls out California's backpedaling

By Harvey Wasserman

This year's Earth Day marked a massive green energy triumph in Germany that stands in stark contrast to a bitter nuclear challenge in California.

A wide range of estimates puts the two regions at a virtual tie for the world's fourth and fifth-largest economies.

They also share a leading growth industry — renewable energy — with unprecedented investments in wind, solar, batteries, and efficiency. But when it comes to atomic power, they are headed in very different directions.

On April 15, 2023 Germany claimed a huge global landmark by becoming one of the world's wealthiest nations to pull the plug on atomic power.

The decision dates back to 2011, when Germany's powerful Green movement led a national demonstration aiming to shut the seventeen atomic reactors that, at the time, provided around a quarter of the nation's electricity.

Before the rally took place, four reactor buildings blew up in Fukushima, Japan, sending huge clouds of radioactive fallout into the air and ocean.

Germany's then-Chancellor Angela Merkel — who has a Ph.D. in quantum chemistry — ordered eight reactors immediately shut, and soon announced a plan to shut the remaining nine by December 31, 2022.

This “energiewende,” or “energy transition,” substitutes wind, solar, battery storage, and increased efficiency for nuclear reactors, moving Germany toward full reliance on renewables. Germany, since then, has invested billions in the renewables sector, transitioning whole towns to locally owned, rooftop solar power and corporate wind power pumped in from large turbines in the North Sea.

The shutdown of Germany's last three reactors was delayed by nearly four months due to natural gas shortages caused by the Russian war in Ukraine.

It was also complicated by a major atomic breakdown in neighboring France. Heavily reliant on nuclear power, France's more than fifty standard-design reactors succumbed to a wide range of problems, including generic structural flaws and warming rivers too hot to cool their super-heated radioactive cores. In 2022, with more than half its fleet of reactors under repair, France made up for the energy shortfall by importing power from Germany, much of it generated by the burning of coal.

This prompted the nuclear industry to criticize Germany's plan by pointing to a rise in the country's CO₂ emissions from burning increased quantities of coal, failing to note that much of that power was being exported to France to compensate for its own shuttered reactors.

California, whose economy may now be slightly larger than Germany's, has taken an opposite route.

Two of its last four reactors — at San Onofre, between Los Angeles and San Diego — were shuttered in 2012, and closed permanently in 2013, after flaws were found in the turbines and other components.

In 2016, a deal was reached to shut the Golden State's last two reactors, located at Diablo Canyon, nine miles west of San Luis Obispo. In the 1970s and 1980s, thousands of protestors were arrested at Diablo Canyon, more than at any other American nuclear reactor.

The 2016 shutdown deal involved another energiewende, based on blueprints to replace Diablo's power with a huge influx of new wind, solar, battery, and efficiency installations. The agreement was approved by the California state legislature, Pacific Gas & Electric (PG&E), the federal Nuclear Regulatory Commission (NRC) and the state Public Utilities Commission. It was signed by then-Governor Jerry Brown, then-Lieutenant-Governor Gavin Newsom, and a wide range of local governments, unions, and environmental groups, all of whom assumed the state would thus be nuke-free once



Reuters reported on December 16, 2022 that renewable sources like these wind turbines now produce over 46% of Germany's electricity.

Unit Two was shut in 2025 — the date its original forty-year license would expire.

But along the way, the state experienced two close calls with partial blackouts. During both incidents, Newsom, now the governor, asked consumers to dial back their energy use. Ironically, independent battery capacity — mostly controlled by individual owners — helped the state stay lit.

But Newsom reversed course and now argues that California must keep Diablo open. Infuriating the national safe energy movement, Newsom rammed through the legislature a \$1.4 billion midnight bailout for PG&E, to be funded by all of the state's consumers, including many who live hundreds of miles from the reactors, and receive no energy from it at all.

The Biden Administration also kicked in \$1.1 billion, money that safe energy advocates angrily argue would be far better spent on renewables.

In 2019, a statewide petition signed by Hollywood's Jane Fonda, Martin Sheen, Lily Tomlin, Eric Roberts, and some 2,500 other Californians demanded that Newsom facilitate an independent inspection. Nearing forty years of age, both Diablo reactors suffer a wide range of structural and age-related defects.

They are also surrounded by at least a dozen known earthquake faults, sitting just forty-five miles from the infamous San Andreas fault. Former NRC site inspector Michael Peck, who was stationed at Diablo for five years, has warned it might not survive a major earthquake, for which its owner, PG&E, has little or no private insurance. The state has never made public any plans to evacuate Los Angeles or other heavily populated areas in the event of an accident.

Newsom has also supported moves by state regulators to severely slash compensation paid by utilities to solar panel owners who feed their excess energy into the grid. While 1,500 workers are stationed at Diablo, some 70,000 work in the state's solar industry, which angrily charges that Newsom's pro-nuclear, anti-green positions are crippling the state's top job creator.

Indeed, the irony of these twin economies heading in opposite energy directions is hard to ignore. In the 1970s, much of America's early anti-nuclear movement was inspired by mass demonstrations led by German Greens (with the slogan “Atomkraft? Nein, danke!”). Both movements succeeded in massively moving their communities toward a renewable future.

But at this critical moment, Germany appears to be moving beyond nuclear power, while California clings to a hugely controversial technology it had once planned to transcend.

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Germany Shuttters Remaining Reactors

Germany has switched off the last of its nuclear power reactors for good.

The world's press made much of “Europe's largest economy” finally going nuclear-free, a renunciation of poison power that Germany has been planning for since 2011.

The country will replace the puny 6% of electricity provided by its last three plutonium/MOX-fueled behemoths with solar and wind generators, geothermal, conservation, and other renewables that already provide 46.9% of the country's electricity.

“The position of the German government is clear: nuclear power is not green. Nor is it sustainable,” Steffi Lemke, Germany's Federal Minister for the Environment and Consumer Protection and a Green Party member, told CNN. Minister Lemke told France's *Le Monde*, “The risks of nuclear power are ultimately unmanageable,” after making an April visit to Japan's Fukushima disaster zone.

Earlier, the 1986 reactor catastrophe at Chernobyl in Ukraine created a plume of radioactive fallout that doused large parts of Germany, and threw nuclear power in the doghouse for millions.

The March 2011 earthquake and tsunami that smashed and flooded the Fukushima-Daiichi complex in Japan resulted in three simultaneous reactor meltdowns and the largest radiation release to the environment — still ongoing — in history. For most in Germany, Fukushima was confirmation “that assurances that a nuclear accident of a large scale can't happen are not credible,” Miranda Schreurs, professor of environment and climate policy at the Technical University of Munich, told CNN.

Three days after the earthquake and tsunami, Germany's then-Chancellor Angela Merkel called Fukushima an “inconceivable catastrophe for Japan” and a “turning point” which it was, at least for Germany.

Plenty of other European countries are rejecting nuclear, CNN reported recently. Denmark passed a resolution in the 1980s not to build new reactors. Switzerland voted in 2017 to phase out nuclear. Italy closed its last reactors in 1990, and Austria's one reactor site has never operated. Lucky for them.

“Germany's phase-out of nuclear power is a historic event and an overdue step in energy terms,” Simone Peter, president of the German Renewable Energy Federation, told CNN. “It is high time that we leave the nuclear age behind and consistently organize the renewable age.” — *JL*