

Comments of the Western States Legal Foundation in Opposition to the Proposed Operating Life Extension of the Diablo Canyon Nuclear Power Plant

Submitted to the California Energy Commission by Jacqueline Cabasso,
Executive Director, Western States Legal Foundation, wslf@earthlink.net

August 19, 2022

Western States Legal Foundation (WSLF), based in Oakland, California, a nonprofit, tax-exempt organization, was established in 1982 to provide legal support for nonviolent protesters challenging the construction of the Diablo Canyon Nuclear Power Plant.

We oppose the proposed extension of Diablo Canyon’s operating life and call for full implementation of the 2016 Joint Proposal by Pacific Gas and Electric Company (PG&E), Friends of the Earth, Natural Resources Defense Council, Environment California, International Brotherhood of Electrical Workers Local 1245, Coalition of California Utility Employees, and Alliance for Nuclear Responsibility to retire the Diablo Canyon nuclear power plant upon expiration of the current operating licenses and replace it with a portfolio of greenhouse-gas-free resources.¹ The agreement was codified by the California State Legislature and signed into law (SB 1090) in 2018.²

In 1976 the California State Legislature passed the landmark Nuclear Safeguards Act – still in effect, which placed a moratorium on new reactors until a solution to radioactive waste disposal was in place.³ The Diablo Canyon nuclear power plant, which was already in the pipeline, came online in 1985.

In 2016, PG&E announced that it would not seek to renew the plant’s two operating licenses with the Nuclear Regulatory Commission. Instead, the company agreed to close Diablo Canyon’s Unit 1 by November 2, 2024, and Unit 2 no later than August 26, 2025, when their current licenses expire.

We will not comment in depth about issues that will be addressed in detail by other commentors. However, a couple of those points are summarized below.

Diablo Canyon is old and faces numerous safety and maintenance issues. With its “once-through cooling system,” the two reactors draw in millions of gallons of sea water a day from Diablo Cove for cooling, then discharge the heated water back into the cove. This has resulted

¹ [JointProposal.pdf \(pge.com\)](#)

² [Diablo Canyon Legislation Signed into Law by Governor Brown | NRDC](#)

³ [NM655.qxd \(nirs.org\)](#)

in significant destruction of marine species and habitat. Diablo's once-through cooling system is now unlawful and would be very expensive to replace.

Diablo Canyon is surrounded by a convergence of 13 known fault lines on the seismically active "Pacific Ring of Fire" earthquake and tsunami zone. The "Diablo Cove Fault" and the "San Luis Range/"IOF" Thrust," run directly under the Diablo Canyon nuclear plant. The Diablo Cove Fault extends through the foundation, under the power plants' Unit One turbine generator and reactor containment vessel.

The Diablo Cove Fault runs east-west offshore and intersects with the nearby Shoreline Fault, which in turn is connected to the Hosgari Fault Line, a component of the San Andreas Fault System. The power stored within this network of seismically linked faults could create an earthquake sufficient to exceed Diablo Canyon's safeguards.⁴

PG&E has been planning to close Diablo Canyon by 2025 given the high cost of making the necessary repairs and safety upgrades needed to shore up the plant against earthquake risk. The danger of this latter runs beyond meltdown to the large inventory of highly radioactive waste stored at the precarious site.

Every day the plant operates, it generates more lethal, long-lived radioactive waste, currently stored in cooling ponds that are vulnerable to fire caused by an accidental or intentional loss of cooling water.⁵ No solution has been found to the problem of radioactive waste disposal. Extending Diablo Canyon's operating life would violate the intent of the 1976 California Nuclear Safeguards Act. It would also violate the closure agreement established by PG&E, environmental, and labor organizations in 2016 and codified by the California State Legislature in 2018.⁶

The world is currently experiencing two major crises resulting from the operation of nuclear power plants. Russia is occupying the Zaporizhzhia facility in Ukraine – the largest nuclear plant in Europe. While Russia and Ukraine accuse each other of shelling the facility, UN Secretary General Antonio Guterres – who previously called shelling at the plant "suicidal" – said on August 11, 2022, that he was "gravely concerned."

Guterres continued, "We must be clear that any potential damage to Zaporizhzhia or any other nuclear facilities in Ukraine, or anywhere else, could lead to catastrophic consequences not only for the immediate vicinity, but for the region and beyond."⁷

Speaking from St. Petersburg, Russia via Zoom to an international conference on July 30, Oleg Bodrov, an engineer-physicist, environmentalist, peace activist, Chairman of the Public

⁴ [The devilish dangers of Diablo Canyon | Beyond Nuclear International](#)

⁵ [PG&E Announces Plans to Shut Down Diablo Canyon \(mothersforpeace.org\)](#)

⁶ [Diablo Canyon Legislation Signed into Law by Governor Brown | NRDC](#)

⁷ UN Secretary-General quoted in [Zaporizhzhia nuclear plant in Ukraine facing 'grave hour,' UN watchdog says | CNN](#)

Council of the South Coast of the Gulf of Finland, and Coordinator of the Northwest Russia Peace Movement,⁸ said:

“[O]n March 4 Russia already used a new type of nuclear weapon in Ukraine. For the first time in world history, the Zaporozhye nuclear power plant was captured with the support of heavy military equipment.

Such actions are forbidden by the Geneva Convention and IAEA resolutions, but this is today’s reality!

Zaporozhye NPP is the largest NPP in Europe. Dozens of tons of plutonium-239 are contained in spent nuclear fuel on the grounds of this nuclear power plant. If extracted, they can be used to make several thousand bombs like those dropped on Nagasaki. But there is no need to extract this plutonium! Destroying such a nuclear power plant, even with a non-nuclear weapon, means detonating a dirty atomic bomb. Plutonium with a half-life of 24 thousand years and other radionuclides could contaminate many thousands of square miles across Europe.

The Zaporozhye NPP is now run by Ukrainian specialists under the control of the Russian military. The International Atomic Energy Agency confirms that it is impossible to guarantee its safety under such conditions. Zaporozhye NPP has effectively become a Russian military base that cannot be attacked because of the dangers of its destruction.

What happened in Ukraine means that countries that have nuclear power plants on their territory can become nuclear victims in a military conflict with countries that do not have nuclear weapons.

The main conclusion from this story is that there is no differences between so-called military and peaceful nuclear technologies. They are all dangerous.”⁹

M.V. Ramana, a nuclear physicist, is the Simons Chair in Disarmament, Global and Human Security and Professor at the School of Public Policy and Global Affairs, University of British Columbia in Vancouver, Canada.¹⁰

In an article published on August 16, 2022, he wrote;

“Broadly speaking, there are three scenarios that might result in the expulsion of radioactive materials from some facility at the Zaporizhzhia complex. The first is the damage to one of the reactors from a direct hit by a rocket or missile.

The second is damage to one of the pools of water where spent fuel — the radioactive nuclear fuel that has been removed after it has generated electricity — is stored for cooling. The third

⁸ [Oleg Viktorovich Bodrov | IPB - International Peace Bureau](#)

⁹ [OLEG BODROV: A MESSAGE OF PEACE AND SOLIDARITY FROM THE RUSSIAN COAST OF THE BALTIC SEA – Campaign for Peace, Disarmament and Common Security \(cpdcs.org\)](#)

¹⁰ [M. V. Ramana | School of Public Policy and Global Affairs \(ubc.ca\)](#)

possibility could result even without any direct attack on Zaporizhzhia: If the electricity supplied to the plant is interrupted and the plant loses all backup means to generate electricity.

The last might seem the most unusual but the underlying reason for that possibility is the same as the other two scenarios. Any irradiated fuel contains large quantities of radioactive fission products. These elements are produced when each nucleus of uranium or plutonium breaks apart to produce energy.

Besides being a source of harmful radiation, radioactive decay of these fission products also produces heat. Unless this heat is removed promptly, the (spent) fuel will melt down and release radioactive materials.

That was what happened in Japan at the Fukushima nuclear plant. The initial earthquake cut off external power supplies. Even though the reactors were quickly shut down after that earthquake, the tsunami came soon after and knocked out the cooling system.

There was then no way to cool their radioactive cores. That eventually led to the meltdowns and hydrogen explosions seen around the world on television sets as well as the release of radioactive materials.”¹¹

Fast forward 11 years. The Japanese Government and TEPCO (Tokyo Electric Power Company) are planning to discharge over 1.2 million tons of treated water from the Advanced Liquid Processing System stored in tanks on the Fukushima Daiichi Nuclear Power Plant site into the Pacific Ocean for more than 40 years, starting in 2023. As a result, dangerous radionuclides could flow across the ocean to Russia, Alaska, Canada, Hawaii, and the U.S. West Coast.

There is no precedent in Japan or any other country for a “disposal method” such as “treating” a large amount of radioactively contaminated water generated from contact with molten fuel debris at a nuclear reactor after a severe accident. There is no previous experience in diluting such water with an even more enormous amount of seawater, then systematically releasing it into the ocean over several decades. This treated water will contain more than 60 radionuclides, including carbon-14, cesium-137 and strontium-90, which the Advanced Liquid Processing System cannot altogether remove.

The London Convention and London Protocol prohibit intentionally discharging radioactive water into the ocean.¹² Such a discharge also violates the human rights of people not only in Japan but also in many other countries that share the Pacific Ocean. The UN Special Rapporteurs have expressed concern that this decision could threaten human health and the environment.¹³

While neither of these exact scenarios are likely to occur at Diablo Canyon, in today’s increasingly volatile and uncertain world, they should be regarded as major red flags. In addition, California is seen as a world leader in green energy and innovation. It would indeed be regressive for California to backtrack on its decision to close its last operating nuclear reactor.

¹¹ [Three Mile Island, Chernobyl, Fukushima: And now Zaporizhzhia? \(downtoearth.org.in\)](https://downtoearth.org/in/Three-Mile-Island-Chernobyl-Fukushima-And-now-Zaporizhzhia/)

¹² [Ocean Dumping: International Treaties | US EPA](https://www.epa.gov/ocean-dumping-international-treaties)

¹³ [UN Experts Decry Japan's Plan to Dump Radioactive Fukushima Wastewater Into Ocean \(commondreams.org\)](https://www.commondreams.org/un-experts-decry-japan-s-plan-to-dump-radioactive-fukushima-wastewater-into-ocean)

Draft legislation submitted to the California State Legislature, would keep Diablo Canyon open through 2035 – continuing to create highly radioactive waste, in part by giving PG&E a \$1.4 billion forgivable loan – essentially a grant.¹⁴

This would be a tragic misallocation of taxpayer dollars. Instead, these funds should be devoted to demonstrating California’s leadership in mitigating climate change through development of true renewables, conservation, and efficiency.

As M.V. Ramana concludes, “[B]ecause a nuclear accident can result in transboundary contamination, even countries that are in the geographical vicinity of a nuclear plant are at some risk. There is only one sure way of avoiding such accidents: Global phaseout of nuclear power.”¹⁵

¹⁴ [California could lend PG&E \\$1.4 billion to save Diablo Canyon nuclear plant \(msn.com\)](#)

¹⁵ Cited *supra* at ⁸