

## Guest Commentary



# Gene Nelson: Diablo Canyon — a lifesaver for California

Oct 6, 2017 Updated 3 hrs ago

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Diablo Canyon Power Plant saves lives. Its safe, prodigious, emission-free power protects the very young and the very old from toxic gas and coal-fired power plants. It saves 50 to 500 lives a year, depending on the fossil fuel displaced.

However, there is another way Diablo could save lives in the future. Since the plant stores the energy it needs to operate for 18-20 months inside the reactor core, its 24/7 always-on power can be counted on after a large-scale disaster such as a big earthquake on the southern part of the San Andreas fault.

Large-diameter southern California natural gas pipelines will be inoperable during their substantial repair and inspection interval. Structures and pipelines in the Los Angeles basin, home to over 13 million, will suffer further damage because they sit on alluvial deposits of broken-up rocks and sand instead of the bedrock that sturdy Diablo is solidly built on.

Because California solar and wind generation are each on for only about a fifth of the time, they can't be counted on for the 24/7 loads such as pumping water into the L.A. basin, operating sewage treatment plants, hospitals, traffic lights, and for myriad other uses supporting post-disaster recovery.

What about rooftop solar panels supplying post-disaster power? They won't work because those installations are designed to shut off during blackouts to protect the workers who are restoring power.

Californians for Green Nuclear Power, Inc. (CGNP) an intervenor opposing PG&E's controversial pending application before the California Public Utilities Commission to abandon Diablo in 2025, learned there are only pitiful amounts of utility-scale energy storage, further hampering disaster recovery.

As the heart-rending photos and videos from Puerto Rico and the U.S. Virgin Islands show, their fragile solar and wind generation systems were destroyed by hurricanes. The Reuters headline, "**Hurricane Maria power outage puts old, vulnerable at risk in Puerto Rico,**" is a good summary of the unfolding humanitarian disaster.

Tornadoes also damage solar power plants, such as California's Desert Sunlight Solar Farm, which lost nearly 170,000 solar panels in late April 2015 from a weak twister. That plant was not completely repaired for eight months.

Hurricane Harvey tested nuclear power plants such as the South Texas Project near Houston. The plant ran at 100-percent output before, during and after Harvey produced torrential downpours over the region.

On the other hand, fossil-fired generation was curtailed. Having the plant's power for Hurricane Harvey disaster response doubtless saved many lives. The Onagawa nuclear plant, closer to the 2011 Japanese earthquake epicenter than Fukushima, suffered negligible damage. In fact, it was shelter for hundreds of local residents displaced by the tsunami. Diablo is similarly rugged and well-sited.

The wasteful, premature retirement of Diablo would allow PG&E to impose on ratepayers substantial construction costs of new, unneeded generation and transmission assets. Diablo should continue to operate for its design lifetime of a century. If California had a zero-carbon credit program like Illinois and New York state, the economics would benefit Diablo further.

The CPUC should deny PG&E's pending application, as it fails the primary test of any CPUC decision, which must be for the public good. The continued operation of Diablo protects ratepayers and the environment.

Diablo provides reliable power-source diversity, which as recent events have illustrated is critical to save lives and speed recovery after large-scale natural disasters.

*Gene Nelson serves in a volunteer capacity as the CGNP government liaison. CGNP's website is <http://CGNP.org>. Nelson recently taught engineering courses at Cal Poly and physical science courses at Cuesta College.*