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Extend Diablo Indefinitely

Please see attached.

Additional submitted attachment is included below.

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Thank you for your time in considering the future of Diablo Canyon.

I am a Registered Professional Engineer in the State of California. I hold a Bachelor's and Master's degree from Cal Poly San Luis Obispo with a focus in Structures and have taught there since 2006. I worked at Diablo Canyon as a consultant for 7 years (2011-2018) and have been an advocate for the plant since 2013. I live in San Luis Obispo, in the "shadow" of the plant.

The Intergovernmental Panel on Climate Change (IPCC) shows a 2-5x expansion of nuclear in all of its decarbonization modeling scenarios. The <u>IPCC</u>, National Renewable Energy Labs (<u>NREL</u>), and United Nations Economic Commission for Europe (<u>UNECE</u>) show nuclear amongst or as the very lowest lifecycle emissions source of energy. Long term operation (LTO) of nuclear is the cheapest form of energy, per the International Energy Agency (<u>IEA</u>). Electricity from Diablo Canyon is exceedingly cheap.

Last year, in 2021, California generated **50%** of its <u>in-state electricity</u> from climate-change-causing Natural Gas.

Replacing one source of low carbon energy, particularly one show to be the very lowest, with other sources of low carbon energy does <u>not</u> move us **FORWARD** on climate change and just treads water in our battle against climate change. Keeping Diablo Canyon open **AS LONG AS POSSIBLE** is the best thing we can do for our grid and ensure that we are the climate leader we claim to be.

Diablo can also support desalination to aid in our State's water shortage. MIT and Stanford conducted a joint study on Diablo being able to provide this benefit as well as producing clean Hydrogen. These efforts would provide additional societal benefits, with value to the tune of <u>billions</u> of dollars.

Several of the speakers on this panel have expressed interest in some of Diablo's transmission infrastructure, in favor of using it for a proposed offshore wind project. Offshore wind is the most expensive form of energy generation according to multiple global scientific and industry organizations (refer to lifecycle emissions sources provided above).

I have heard a number of falsehoods persist about the condition of Diablo, namely its seismic safety. Diablo Canyon has been analyzed and reanalyzed numerous times over the years, and the Nuclear Regulatory Commission (NRC) has deemed it safe. The State long ago pushed the NRC to establish unique seismic requirements for Diablo Canyon, by including a program called the Long Term Seismic Program (LTSP) and through the creation of the Diablo Canyon Independent Safety Commission (DCISC). Both these mechanisms have been in place the entire duration of the operation of Diablo. The fault lines near the plant have been reanalyzed through unprecedented means and methods and reviewed by a host of academics and seismic professionals in a robust, transparent process. Per the NRC, no seismic upgrades are necessary for the plant to continue operation. I understand and appreciate that people may have "concerns" in this area, but these concerns are akin to having concerns about vaccines. The science is overwhelmingly in support of the safety of Diablo Canyon.

The storage of spent nuclear fuel is unchanged from the existing condition for extended operations. Several more fuel casks will need to be added to the storage pad, until or unless the federal government takes possession of them as promised long ago. Spent nuclear fuel is in the form of ceramic pellets, sealed inside welded rods which are bundled together into fuel assemblies. Those assemblies are utilized in the reactor for ~5 years, and typically remain in the spent fuel pools for another ~5 years before being transferred into dry cask storage. Thirty-two (32) assemblies are placed into stainless steel canisters which are welded shut. Those canisters are placed inside a double-steel walled, concrete lined cask and bolted to a very thick slab. The casks are monitored remotely with radiation sensors and require only occasional inspection for any signs of degradation.

Thank you again for your consideration in this manner.

Respectfully,

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