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*Comment Received From: Karl Petersen
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Diablo Canyon Power Plant, Docket 21-ESR-01

Diablo Canyon should remain open as long as possible. Nuclear power provides virtually carbon-free power with high reliability and uptime. Stability of the nuclear power base load is essentially to maintain energy security and to begin decarbonizing energy-intensive industry including chemical and manufacturing sectors.

With regard to nuclear safety, the relative risks of nuclear power and fossil fuel power generation have been poorly communicated to the public. The relative health risks due to release of trace airborne radioactive elements is extremely small. Importantly, the risk is not meaningfully lower with fossil fuels. The absolute quantity of radioactive material released from burning of coal or natural gas is similar in magnitude to the risk from nuclear plants. This is true particularly considering the gargantuan mass of fossil fuel that must be burned to equal the energy output of nuclear. In either case the direct health risk due to radioactive material is extremely small.

The respiratory disease health burden due to fossil fuel burning is not small. Air pollution due to fossil fuels, especially particulate matter, contributes to respiratory disease morbidity in a dose dependent manner. Particulate emissions from fossil fuel plants are compounded with local air pollution and personal smoking behavior to increase risk of death from respiratory illness. The WHO in 2019 listed the following:

• COPD: 3rd most common cause of death

• communicable respiratory disease: 4th most common (pre-COVID-19)

• respiratory and lung cancers: 6th most common

Germany stands as an example that nuclear power, where established, cannot be eliminated without a corresponding increase in fossil fuel power generation. This is due to demand for high reliability baseload that is generally not met by renewables. Given the public health impact of fossil fuels on respiratory disease, it is unconscionable to consider deactivating a nuclear power plant in the current energy demand environment.