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## Critical Role of Nuclear Power to Reduce Emissions

Dear CEC, I am a citizen who advocates strong emphasis on nuclear power for California. The US Navy discovered the SAFETY and effectiveness of nuclear power over 60 years ago and now uses it in 100 major US Navy vessels. Tens of thousands of crew have rotated through duty stations on board these vessels starting in 1950 without a SINGLE INJURY OR DEATH FROM RADIATION OR OTHER REACTOR OPERATION ISSUES.

Crew sleep, eat and work mere feet from very powerful reactors with no harm whatsoever - and they often serve for years in these positions. Nuclear power is miraculous to me. These Navy ships can go as long as 33 years without refueling!

False information has been circulated for a long time about safety issues with nuclear power. Sixty years of US Navy experience, and US reactor experience disproves all these fear-generating claims.

Putting too much $CO_2$ into earth's atmosphere has caused excessive global warming and that directly hurts California's crops and animal stock. We have had some rain this year but U. of Santa Cruz scientists predicted ten years ago loss of ice and snow in the Arctic would bring a long and permanent drought to the western US, California in particular. This is not a cyclical drought as many desperately hope it is because they don't follow the science. It is essentially a new, permanent condition.

By building more nuclear plants California can lead the way in America and the world to install new, exciting, even safer nuclear technology - molten salt reactors. These leave tiny waste with short radioactivity half life. These new designs can BURN waste in storage at current and former reactor sites as fuel.

Reactors can serve as desalination plants as a byproduct of making electrical power. This is an ideal technology for California with vast Pacific Ocean at our doorstep. A few powerful, new generation reactors could solve California's water shortage.

If we are to reach the Governor's goal of 50% renewable power by 2030 we must do it with increased nuclear power. Nuclear power provides 63.3% of the emission-free electrical energy in the US according to the Nuclear Energy Institute.

There has been a misconception that nuclear energy cannot supply flexible power to the grid. This is untrue and specifically is able to fill in the gaps created when wind, solar and other renewals are unavailable due to the sporadic nature of how they output power according to sun or wind conditions. These renewables would impossible without nuclear to fill in the inevitable power gaps on demand.

Studies have shown it deeply difficult or impossible to de-carbonize energy production without nuclear power (Scientific American or see UC Davis policy institute on the subject). France has given the world a shining example how to radically cut emissions by going to 80% power production using nuclear. They've done it without accidents or fatalities. They have the lowest per capita emissions of any modern country.

Our mid Coast California group, Californians for Green Nuclear Power, urge our State to give deep and serious study to how to increase clean, emission-free power using reactors. Let's be first in bringing on line new technology

such as molten salt Thorium reactors. (The US built and operated the first one at Oak Ridge Labs in the 60's. It was scrapped because it could not make Cold War nuclear weapons). We can get started with currently available improved reactors such as the A P 1000 reactors being installed in the UK. Let's get California and the US out of last place in nuclear technology development and implementation and into our usual, rightful leadership role.