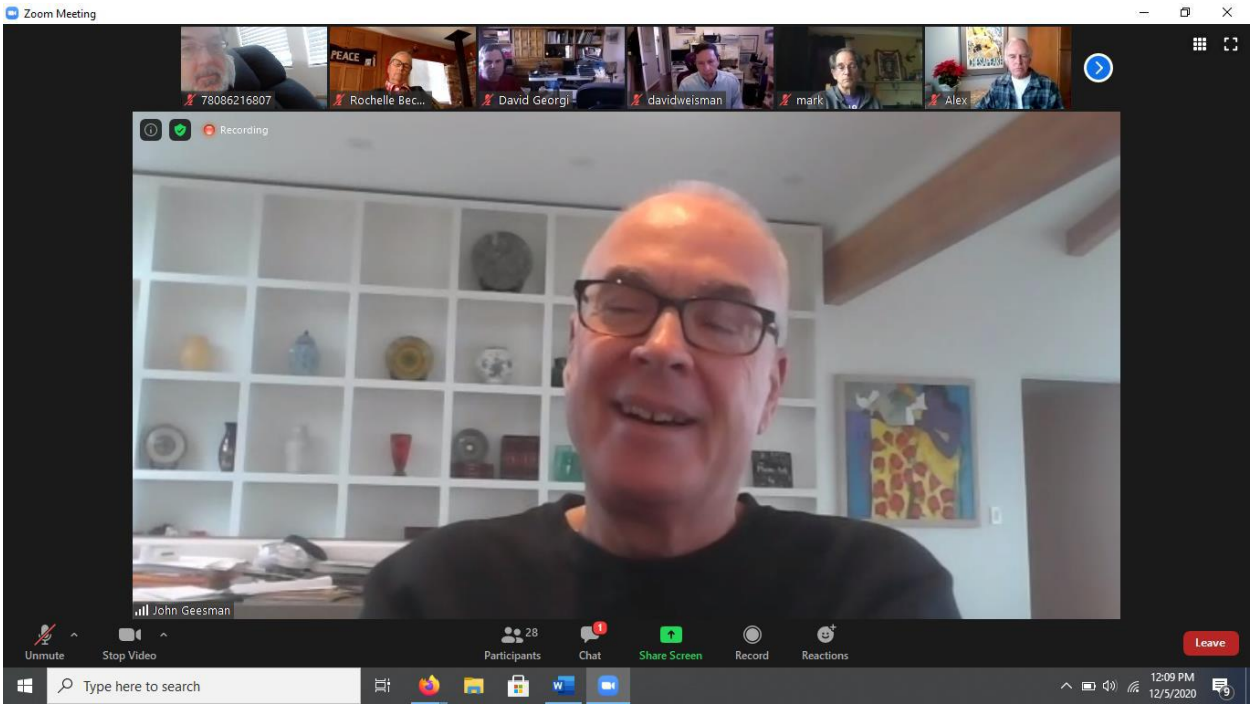
Diablo is in the Details

A reprieve for our last nuke standing wouldn't solve our energy problems



Try early retirement. Addressing supporters of the Alliance for Nuclear Responsibility (A4NR) at its annual Peace Potato Party on Dec. 5, Alliance attorney John Geesman said the repeated failure of Diablo's $100 million stator rebuild looks like the engineering practice of putting a component into "run to failure" mode – meaning when the cost of replacement is too high, run that component until it fails.

Over the past year, Assemblyman Jordan Cunningham has been campaigning to have California reclassify nuclear power as "renewable energy" as a strategy to make the Diablo Canyon Nuclear Power Plant financially viable. Per SLO County's state assemblyman, Diablo is "a perfectly safe and profitable source of emission-free electricity."

Meanwhile, Californians for Green Nuclear Power have been filing lawsuits and relentlessly petitioning the Public Utilities Commission to cancel their approval of the Diablo's pending closure and force it to remain open.

The quixotic campaigns of our state assemblyman and local band of nuclear fans point at heat waves, energy spikes and shutdowns, extoll the imagined benefits of nuclear power (*It's the antidote to power shortages! It's always there when we need it!*) and downplay and denigrate the benefits of actual renewable energy, the better to persuade California, the PUC, and PG&E to

reverse course on Diablo's pending closure and rewrite the state constitution. Californians for Green Nuclear Power says nuclear power is more efficient than renewable sources, such as solar and wind, and contend that electricity costs for PG&E ratepayers will rise significantly if the plant closes.

These efforts have been occurring at some distance from the real world, in which, as the Center for Energy Efficiency and Renewable Technologies reported in their 2016 financial analysis of plant operations and the cost of replacing its energy with zero-carbon alternative energy sources, extending Diablo's license would cost ratepayers at least $17 billion. CEERT found that replacing Diablo's power with any of four different zero-carbon energy portfolios would cost from $12 billion to $15 billion. That report helped start PG&E down the road to plant retirement, because math.

Right now, PG&E is operating a plant that produces electricity at a cost of $1.325 billion dollars more than it would cost on the open market. Their latest rate increase will add an average $13.44 to ratepayers' monthly bill.

In other words, Assemblyman Cunningham: Wrong on all counts.

Then came the Dec. 1 edition of *California Current*, reporting that after being "offline for a month and a half because of a reoccurring problem in an electric generator component, the Diablo Canyon Nuclear Plant's troubled Unit 2 went back online over the Thanksgiving holiday weekend."

This was, ahem, "the second malfunction of a key component of the plant's electric generator, known as the stator. The stator was rebuilt about a year ago at a cost to ratepayers of $100 million."

The saga of failures began last July when the generator's cooling system sprung a hydrogen gas leak.

The $100 million stator rebuild may be Diablo Canyon's Achilles heel. Over the objection of advocates like the Alliance for Nuclear Responsibility, PG&E embarked on this project because of the danger leaking hydrogen could pose, such as a generator explosion. A4NR's cheaper solution was to simply retire Unit 2. In July 2020, after barely seven months of operation, the unit shut down when the rebuilt stator began leaking hydrogen, and was offline for 15 days. In October, the unit failed again and was offline for 46 days.

Per *California Current*, between the unplanned second shutdown of the "troubled" unit 2 and a planned refueling and maintenance shutdown of Unit 1 that began on Oct. 3, "The entire 2,200 MW nuclear plant was offline when the grid operator called for conservation on Oct. 15 because of spiking temperatures."

After PG&E attempted to restart Unit 2 again on the Sunday after Thanksgiving, it was felled by another hydrogen leak the following Wednesday. The next day, the Public Utilities Commission granted PG&E the right to collect all the costs of the broken stator from customers. Was — or wasn't —the Commission aware as they voted that the machine had thrice failed?

As pointed out by David Weisman of A4NR, “For those who fruitlessly think there is still some life left in Diablo to help solve California’s energy woes, the fact that it was not there when it would have been needed most proves that nuclear is no panacea for reliability concerns.”