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Diablo Canyon extension must be rejected partially due to unreliability and cost

First, and I daresay a third-grader may be able to figure this one out, California is prone to seismic disturbances and, if you think about it, the other "directions" of the Pacific Ocean's Ring of Fire have had substantially more seismic activity than has this northeast Pacific region. Are we due -- as the Northwest is overdue for their giant Cascadia Subduction Zone quake??

Here are 16 important points to keep in mind when evaluating the Diablo Canyon nuclear powerplant in terms of seismic setting, problems with the physical facility, and shady behavior by the corporation:

1. Diablo Canyon's two nuclear reactors are nestled among 13 earthquake faults including the main part of the Hosgri Fault a few miles away, while the Shoreline Fault discovered just 300 meters from the reactors has been determined to be part of the Hosgri Fault system.
2. Even PG&E agrees with the long-recognized scientific fact that the HOSGRI, SAN SIMEON, and SAN GREGORIO FAULTS together comprise essentially one fault system and it is clearly the LARGEST SUBSIDIARY of the SAN ANDREAS FAULT!
3. There was a 7.3 to 7.5 quake in the Hosgri Fault Zone on November 4th, 1927.
4. Diablo Canyon seismic hearings were held by the Nuclear Regulatory Commission's Atomic Safety and Licensing Appeals Board in October 1980 at San Luis Obispo's Vets Memorial Bldg. Those hearings were prompted by the disturbing "seismic focusing effect" noted in the October 15th, 1979, Imperial Valley earthquake which had particularly high vertical ground acceleration.
5. The Diablo Canyon facility was ruled to be "seismically safe" by the 3-man Atomic Safety and Licensing Appeals Board shortly after "Chairman Salzman" of that panel was appointed to a federal judgeship by President Reagan.
6. Diablo Canyon's reactors are about 45 miles from the San Andreas Fault, while the potentially damaging Rinconada Fault is 20 miles inland from Diablo Canyon.
7. In recent years, some seismologists have concluded that rather than the "middle segment" of the San Andreas Fault being less prone to a major earthquake than the "northern" and "southern" segments as previously believed, it is now believed not only that the "middle segment" of the San Andreas Fault can also deliver a major earthquake, but some seismologists now believe that there can be a

single earthquake involving major shaking of all three segments of the San Andreas Fault!!!

8. There was a 7.1 quake in the Ridgecrest area on July 4th, 2019, while some other quakes not quite as large have also struck the region. The KRON news station reported that, "A study from the Bulletin of the Seismological Society of America showed that the Ridgecrest earthquake caused a chain reaction in nearby faults that could increase the chances of an earthquake along the San Andreas Fault, KTLA reported in 2020."

9. The research of some Harvard seismologists indicates that the July 4th and July 6th, 2019, quakes struck the Searles Valley region "approximately 30 km north of the Garlock Fault", and their research indicates that "a complex network of faults was activated by the sequence". Also note how this region is significant in looking at the major east-west seismic structures in the general region. The 2000 km. oceanic Murray Fracture Zone meets the North American continent in Santa Barbara County, and is so impactful that the largest subsidiary of the San Andreas Fault can extend no further to the south. Then if one looks to the east, one notices the major "bend" in the San Andreas Fault. Then peer at a map to see that both the Garlock Fault area and the San Andreas Fault appear to be quite influenced at the latitude where the oceanic Murray Fracture Zone meets the North American continent and results in the "bend" in the San Andreas Fault.

10. So due to the seismic interplay between the Searles Valley / Garlock Fault area and the San Andreas Fault (while clearly influenced by the Murray Fracture Zone), one can easily draw the conclusion that there is ADDITIONAL EVIDENCE of SEISMIC DANGER in CENTRAL CALIFORNIA since the "Diablo deal" was agreed to by some several years ago. Whether one looks at the nearby 13 faults "including various branches of the Hosgri Fault" in the vicinity of Diablo Canyon, or whether one looks at impacts from the July 2019 and other earthquakes in the Ridgecrest / Garlock Fault region, evidence continues to mount that Diablo Canyon's reactors and other equipment are in a more hazardous seismic setting than even realized a few years ago! (That being said, there was plenty known about California Central Coast seismicity by the 1979 to 1981 era for a rational person to make a sane decision about the lack of safety at Diablo Canyon, but PG&E is greedy and stubborn.)

11. During the major Diablo Canyon blockade/encampment which saw 1,901 people arrested for non-violent civil disobedience in a 2-week period in September of 1981, an engineer came forward with reports about switched blueprints for seismic reinforcements in Diablo Canyon's auxiliary cooling system for Diablo's reactors. Since attention was focused on the Diablo issue at the time because PG&E wanted to soon load the fuel rods, it caused enough stir to delay Diablo in order to try to fix the plant components related to the switched blueprints.

12. The switched blueprints in seismic reinforcements in the auxiliary cooling system were certainly not the only thing ailing the Diablo Canyon facility. In 1983 and 1984 as PG&E was approaching the "low-power testing" phase at the reactors, 105

Diablo Canyon workers testified as to about 3,000 problems with the Diablo facility “ in testimony facilitated by the Government Accountability Project organization. However there was so much pressure to get Diablo Canyon operating that those 3000 problems were ignored so a Diablo Canyon reactor started its fission process by the spring of 1984, and got to “œfull power” during 1985. Do you expect the Diablo Canyon operating license extension proceedings to address any or many of these 3,000 problems reported in sworn testimony by Diablo Canyon workers about 39 years ago???

13. The Dept. of Energy formally responded to Governor Newsom’s office’s quest to try to extract “œcivil nuclear credits” from the Bi-Partisan Infrastructure Act even though the Diablo Canyon reactors do not qualify according to the legalese of that bill signed by President Biden last year. DOE certainly showed interest in accommodating Gov. Newsom by bending some rules, yet pointed out things such as utilities would need to be in a “œcompetitive electricity environment” and must be undergoing “œoperating losses” which would be alleviated by a bail-out for the utility “ plunks that DO NOT APPLY in regards to the Newsom (and now Newsom / PG&E) push for operating license extensions for the Diablo Canyon nuclear power facility.

14. Despite repeating the Big Lies about nuclear power being safe, cheap, reliable, and a solution to the climate crisis, it turns out that nuclear power has the highest carbon footprint of any non-fossil fuel energy source. The footprint is spread throughout the process, but the most carbon-intensive part of the nuclear fuel cycle is that (in the case of Oak Ridge, Tennessee) it takes two coal powerplants to power one uranium enrichment facility. That facility is related to the nuclear weapons complex, but there are similar facilities mostly in Kazakhstan and Russia which emit a lot of carbon emissions as they enrich uranium to fuel commercial nuclear power facilities around the world. Unfortunately there is a lot of nuclear industry interest to “œbring home” the nuclear fuel cycle to the USA, however this would set off a spree of new uranium mining, milling, enrichment, toxic transport, etc. which would violate President Biden’s Executive Order on Environmental Justice and have major detrimental impacts on indigenous communities in the Four Corner states, the Northern Plain states, and beyond.

15. PG&E has had “œsweetheart rate deals” relating to Diablo Canyon ever since Attorney General Van de Kamp sold out to PG&E hoping that it would help his unsuccessful run to be governor of California. The wording of the Newsom-advised Diablo Canyon-related legislation would give bonanzas to PG&E, and would majorly rip off ratepayers and taxpayers of the State of CA (as well as federal taxpayers if Diablo Canyon receives “œcivil nuclear credits” from the DOE. PG&E spent \$45 million but narrowly lost on a ballot measure in June 2010 which would have squelched Community Choice Energy in California. But PG&E has become a lot more unpopular since that time given the San Bruno pipeline explosion and the many devastating fires begun by PG&E powerlines including the Camp Fire in Butte County in 2018. While people like Newsom hope that further cozying up to PG&E will prompt associated elites

to support him to become President, please note that PG&E is quite unpopular " and your constituents clearly would not want to bail-out such a disreputable corporation!

16. Of course the rhetoric of nuclear power proponents is that it is safe cheap energy ("cost-effective" is their term), yet if customers of Investor-Owned Utilities looked at their bills, they will notice that it is not cheap " thanks largely to costs associated with Diablo Canyon and the now shuttered San Onofre nuclear powerplants. Realizing that nuclear power is actually not cost-effective, PG&E buddies propose Section 6 Section 454.52 (2)(b) of the Public Utilities Code. If nuclear proponents believed that nuclear power is cheap, they would have had no need to insert within the Newsom-related legislation at the top of page 14 a section which would allow the commission to procure some energy sources that will reduce overall greenhouse gases even if such a "fuel source may not compete favorably in price against other resources over the time period of the integrated resource plan".

I understand that Women's Energy Matters has submitted some helpful info regarding correcting the common misinfo going around Sacramento and around perplexed editorial boards. In fact such info indicates that Diablo Canyon can easily be replaced with rooftop solar and with emerging battery technologies for energy storage.

Also, please do not hoodwinked into using terms like "zero-emission" and "carbon-free". Should a radioactive carbon emission count as a carbon emission? By logic and definition, yes! Radioactive carbon-14 is emitted from Diablo Canyon. Seeing that we live on a roundish planet, we should consider our planet when determining whether a mode of energy is "zero-emission" and thus if the main carbon emissions are spewed in Appalachia, New Mexico, Kazakhstan, or Russia, it is clear that the mode of energy is NOT zero emission. Are we so elite that WE deserve zero emissions, while relegating the poor and working classes of the world and other species to a bunch of carbon and radioactive spewing? Tell the truth even if it means changing some language.

Did any of you CEC staffer-types notice in the state legislation pertaining to bailing out Diablo Canyon nuclear power facility that extending such "reactor operation" would be unnecessary if the state has sufficient amounts of other kinds of electricity-producing energy facilities? YOU can be heroes, oh CEC folks... Please forward evidence of collusion between state agencies such as the CEC and the PUC, PG&E, and the governor of California offices to organizations who may care, or to me for that matter. Become a whistleblower soon! Our genetic future thanks you.

It is time to correct the standard p.r. lines in regards to potential extension of operations of nuclear reactors at Diablo Canyon. First there was the "Diablo deal" to allow Diablo Canyon to continue to be the only facility in the state that is allowed "once-through" cooling / thermal pollution (a discharge also accompanied by plenty of heavy metals and radionuclides) as long as PG&E abides by the agreed-upon shutdown dates. Note that this "Diablo deal" was the pro-PG&E position and "extend operations of the nuke plant" position which many observers saw as shady and manipulative. One group working on the issue as well as several organizations who consider themselves sort of "insider" and

want to be a part of deals supported the extension -- as well as PG&E and some union-types beholden to PG&E. Most working on the issue thought this was "a major sell-out" of our future to PG&E's profit.

So there was the shady Diablo deal which took shape about 5 or 6 years ago which alleged that the shutdown dates for the reactors would be in 2024 and in 2025. So what does one call the Newsom-pressure-machine resulting in state legislative approval of a rushed complex bill with many financial implications deal? There was the "Diablo deal". Now the utility and its allies in the State Capitol want to get rid of it since slick nuclear industry p.r. and utility pressure has resulted in a new way to be friendly to PG&E shareholders -- by supporting the NEW DIABLO DEAL to get rid of the shutdown dates associated with the earlier Diablo deal. Thus essentially the 2022-passed version of the NEW DIABLO DEAL is to WEASEL OUT of the nuclear reactor shutdown dates associated with the shady pro-PG&E Diablo deal of 5 or 6 years ago !!!

But, hey, with the pandemic resulted in sufficient brain damage to get the U.S. Congress to allot \$77 billion to subsidize the nuclear power industry (not including weapons-related expenditures), and to get the Calif. governor to hoodwink nearly all members of the CA Legislature to bypass nearly all standard processes to jam through a complex bill with major financial and future genetic implications for the future of California.

Neither you nor I understand "stranded costs" associated with nuclear power facilities. We are not merely talking single digit billions of dollars -- apparently such bills can run into the hundreds of billions of dollars. Note, PG&E was initially not interested in extending operations for their reactors (partially due to the deferred maintenance due to earlier planned shutdowns) until they saw subsidies dangled and realized they can manipulate things including stranded costs to make huge profits. In fact, a publicly-traded company apparently must consider ways to seek to achieve maximum profit.

I'm sure certain powers-that-be give some CEC members enough info so they conclude they have an idea of issues regarding nuclear power in the 21st century. The following terms should be the terms most discussed in regards to nuclear power in this century. HIGH BURN-UP FUEL (and its complicating factors); Promised THICK CASKS -- Get THIN CANISTERS. If these terms sound unfamiliar, then obviously you are being fed info so that you avoid the dangers involved not only with extending operations at current old embrittled reactors, of experimenting with Small Modular Reactors, and related to the massive increase in toxic products along out railways and roadways which would associate the HALEU program (High Assay Low Enriched Uranium) which apparently is just a couple tweaks away from being weapons-grade.

Also you may have heard about supposed great potential as far as Small Modular Reactors. Bill Gates is related to such, and yet he got gov't subsidy for such! First, about 1/3 of a massive facility is still big, not small. And I understand that there is reduced containment and no emergency planning necessary for these SMR reactors. The only USA-approved SMR admittedly does not work. It is also my understanding that more

nuclear waste is created per watt of energy produced in SMRs than in large commercial nuclear reactors!

Two last little items. The feds are approving so-called "interim" dumps for spent commercial nuclear fuel rod assemblies though almost all observers expect such dumps to become permanent if they become established initially. Also some legislation to move the hot radwaste to less vulnerable areas is a bogus bill looking to relieve huge investor-owned utilities of liability regarding owning spent fuel waste, even though the spent fuel rod assemblies from "high burn-up fuel" is far too dangerous to move even across the highway for probably at least another 30 years. Plus, if San Onofre radwaste was moved across the highway, it would be on a fire-prone military base with lots of multiple operations and hazardous and explosive materials about.

You are the CEC! Work for rooftop solar, battery storage, and other alternatives to PG&E's extremely expensive (even before stranded costs) Diablo Canyon nuclear reactors. Please show that some folks related to state gov't actually care about whether there is a serious nuclear accident in central and/or in southern California -- clearly the governor could care less and the legislature cowers before him for alleged climate leadership as he leads the pawns in pandering to PG&E. Become empowered ! Thanks for your attention.