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Rob Koslowsky Comment re 2022 Energy Code Pre-Rulemaking

To Whom It May Concern:

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Please do not include residential battery backup systems for the proposed 2022 Building Code. Choice for homeowners to use batteries, or not, is their right. The attached PDF submission reflects some of the reasons to forestall adding required back-up battery systems – Geothermal is Better than Battery Storage Solutions _ RKK _ March 2021.

Please repeal the all-electric mandate as well as not adding any reach code option mandating the use of batteries for the 2022 Building Code.

Thank you for your consideration, ….Rob

Rob Koslowsky, Cloverdale, California Author of The Tubbs Fire. Also author of The Upstart Startup & Breach of Trust.

Additional submitted attachment is included below.

Geothermal Provides a Better Energy Baseline than Battery Storage Solutions - Especially for Sonoma County Residents

"There's fracking for oil and gas, the energy revolution we are already living on, and now there's fracking for heat, the geothermal revolution."

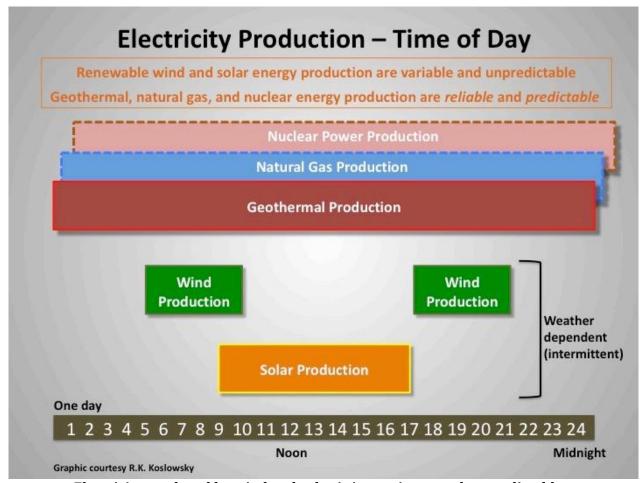
- David Wojick, Ph.D., Founder Climate Change Debate, December 2020

"There is enormous untapped potential for enhanced geothermal systems (EGS) to provide clean and reliable electricity to power tens of millions of homes across the country."

- Kathleen Hogan, Acting Under Secretary for Science and Energy, February 24, 2021

Interesting times lie ahead for "the greens." They tout carbon-free power, yet decry nuclear power as a solution. Greens despise fracking for fossil fuels, yet support hydraulic fracturing for geothermal energy, deemed renewable. How can political leaders ban fracking for oil and gas, but not for tapping the Earth's inner heat? Where is the consistency for supporting public policy to maintain our state and country's energy independence?

On top of that, unlike wind and solar, geothermal electricity is continuously available and does not consume large swaths of land.



Electricity produced by wind and solar is intermittent and unpredictable

David Wojick touts fracking because "we can make these geothermal reservoirs where we want them, the size we want them, and where the heat is the temperature we want, especially very hot." Producing clean electricity around the clock, independent of weather conditions or time of day, heat power provides a constant source of electricity and acts as a complement to other sources of energy production.

Recognizing the importance of utility-scale geothermal, the U.S. Department of Energy (DOE), in February 2021, awarded \$46 million for seventeen geothermal projects to unlock carbon-free sources [1].

The DOE points out, "Enhanced Geothermal Systems (EGS) are different from conventional geothermal resources that occur naturally in the U.S. and are geographically limited due to the need for underground heat and fluids." By using fracking technology, however, these developed geothermal reservoirs "can be engineered in most parts of the country, potentially expanding geothermal energy production" and replacing mandates for rooftop solar and muting environmentalists complaints over the use of large wind farms.

Traditional large fossil fuel companies are getting on board too. "Chevron's investments in geothermal power reflect our ongoing focus on helping to advance the world's transition to a lower-carbon future," said Chevron's Vice President, Innovation and President of Technology Ventures, Barbara Burger, on March 1, 2021 [2]. "We look forward to working with Baseload Capital and Eavor to expand geothermal resources in the U.S. and internationally."

Three years ago, Baseload signed an agreement with Wendel Energy Operations in California to structure a debt facility in order for Wendel to finance the re-powering of their existing geothermal plant. "The Wendel site has been active for more than 30 years, with a stable level of water flow and temperature," reports Baseload. "However, its existing technologies do not offer a strong enough business case using the site's low-temperature heat. This project will involve replacing the existing technology with a heat power plant consisting of four Climeon Heat Power modules. The newly generated electricity will then be sold into the transmission network."

For more utility-scale energy, Wojick sums it up best: Geothermal is "the perfect renewable, because its power can be available whenever the intermittent generators cannot provide the power we need. The more power we want from renewables, the more geothermal capacity we will need. It is that simple. We could be talking about many hundreds of thousands of [megawatts]. If the technology works costwise it might actually be better than unreliable, land grabbing renewables [such as solar and wind]."

"Our country has significant hydrothermal and geothermal energy resources, and if harnessed correctly, these resources have the capability to provide secure baseload power and energy storage for Americans across the country."

- Congressman Frank Lucas, Ranking Member of the House Science, Space and Technology Committee, February 24, 2021 "New transmission costs, minus increase in consumer demand, is almost exclusively tied to development of wind and solar power. Both involve exorbitant costs in new transmission.

Why? Because like their land use imprint, they have a huge transmission imprint.

Connecting Diablo Canyon to California's electricity backbone at Midland substation involved adding #12 500-MW AC cables, from a substation near the plant, in 1985. That's all. Adding an equivalent quantity of solar or wind generation requires literally thousands of additional cables and transmission towers – never mind the costs of acquiring property rights and maintenance."

- Bob Meinetz, Industry observer, January 16, 2021

"I agree that the constant 24/7, 365 availability of geothermal energy gives it much greater value than solar and wind per unit of energy. I also believe that this makes it complementary to solar and wind and increases their value and usefulness. I also agree with you that geothermal energy is much more appealing than batteries."

- Solar industry/energy expert, responding to this report, March 22, 2021

- [1] https://www.energy.gov/eere/geothermal/enhanced-geothermal-systems-0
- [2] Chevron press release, 03/01/21: Chevron Invests in Geothermal Development Company.