

Submitter: Gwen Jaspers

On Behalf Of:

Committee: House Committee On Climate, Energy, and Environment

Measure: HB2215

In the 40 + years since the passage of ballot # 7 in 1980 (by 53 % of Oregon voters) the federal government has not come up with a safe way to store hazardous nuclear wastes from nuclear power plants. We must not be misled by the talk of "smaller modular reactors." From the Proceedings of the National Academy of Sciences, (PNAS) as recently as May 31, 2022 " . . . few studies have assessed the implications of SMRs (small modular reactors) for the back end of the nuclear fuel nous and chemically/physically reactive waste than LWRs (light water reactors), which will impact options for the managcycle. The low-, intermediate-, and high-level waste stream characterization . . . reveals that SMRs will produce more volume and disposal of this waste. . . . the intrinsically higher neutron leakage associated with SMRs suggests that most designs are inferior to LWRs with respect to the generation, management, and final disposal of key radionuclides in nuclear waste."

Also, we must not overlook the serious climate impacts to the nuclear plant industry. From Dr Paul Dorfman, an academic at the UCL Energy Institute, University College London, and also the founder and chair of the Nuclear Consulting Group:

"The unfortunate reality is that nuclear, far from helping with our shared climate problem, will add to it. . . .

"Recent peer-reviewed published scientific data point to much quicker and greater sea-level rise, faster, harder, more destructive storm, storm surge, coastal and inland flooding.

"And because climate change will impact nuclear plant earlier and harder than industry, government or regulatory bodies may expect, efforts to mitigate global heating risk will mean significantly increased expense for any nuclear construction and operation,[9] on-site nuclear waste. The key 'take-way' from all this is that nuclear's lower-carbon electricity USP sits in the context of the much larger picture - that nuclear will be one of the first, and most significant, casualties to ramping climate impact. (Emphasis by testifier.)

"In practice, this means that models of seasonal, decadal, and future climate change impact on nuclear infrastructure must be accounted for, including rapid change extreme events, abrupt interactions and feedbacks.

"The unfortunate fact is that risks to nuclear installations from sea-level rise and

extreme climate events will not be linear.

"There will be thresholds at which existing natural and built barriers are exceeded as storm surge and precipitation intensity increasingly erodes coastal and inland nuclear infrastructure flood defences.

"This means that nuclear industry and regulatory efforts to mitigate climate risk will involve very significantly increased expense for any nuclear construction, operation, waste management, decommissioning – then relocation or abandonment."

I also would like to respectfully refer the committee to this article, which I excerpted below: <https://www.sciencedirect.com/science/article/abs/pii/S0301421510007329>

"Mere absence of greenhouse gas emissions is not sufficient to assess nuclear power as a mitigation for climate change.

"Reports generated by the International Atomic Energy Agency (IAEA), the Autorité de Sûreté Nucléaire (ASN) in France, and the Nuclear Regulatory Commission in the United States (US NRC) provide the information on length of reactor shutdown and safety issues arising from heat waves, flooding, and hurricanes. Utility reports and industry journals provide information concerning: the financial costs of adapting to climate, revenue losses from shutdowns, and changes to operating procedures . . .

Thank you for your very serious consideration of this issue.