

Submitter: John Perona
On Behalf Of:
Committee: House Committee On Climate, Energy, and Environment
Measure, Appointment or Topic: HB2038

Thank you for the opportunity to submit testimony for HB 2038. I write in SUPPORT of the bill.

I am Professor (emeritus) of Chemistry at Portland State University and author of the climate change science/policy text for laypersons titled From Knowledge to Power, which has been widely circulated in Oregon.

We should be grateful that carbon-free nuclear fission has made significant contributions to powering the electricity grid in the United States and worldwide. Were it not for nuclear fission technology, the impacts of climate change, already bad, would be even worse.

This bill takes only a very small step toward fixing the mistake made 45 years ago, when a ballot measure effectively banned development of nuclear fission power in Oregon. Still, perhaps the new study will be helpful in convincing legislators and executive branch agencies that the technology can play an important role in meeting Oregon's climate targets.

To this end, I suggest modifying the text of the bill to explicitly require DOE to integrate this study of nuclear power into its State Energy Strategy, perhaps as an additional Alternative Scenario. The modeling calculations should be presented so as to clearly demonstrate the extent to which substituting nuclear power for large hydroelectric power plants will save on CO₂(e) emissions. It is not well appreciated that large hydroelectric facilities are not carbon-free, but are sources of potent methane emissions from upstream reservoirs that enter into anaerobic conditions.

There are many reasons to support nuclear power. A robust nuclear power sector in Oregon would reduce the need for wind and solar power, which is ecologically beneficial because these latter technologies require large tracts of land, negatively impacting biodiversity. Similarly, nuclear power would eventually make it possible to retire some hydroelectric facilities, which have broadly negative impacts on fishing, recreation, ecosystem services, municipal water supplies and indigenous peoples' rights. And because of the very high capacity factors, nuclear fission plants will provide crucial baseload power, creating less need for electrical energy storage both on the larger grid and behind the meter.

It is difficult to see good reasons for why simply getting more information about

nuclear power should be opposed by anyone. Are opponents of this bill afraid that when the benefits of nuclear power are clearly delineated, they may lose the larger argument? It seems to me that voting against this bill takes a stand against the use of rigorous science to inform policy making.

Of course, nuclear fission is not all cotton candy and roses. It is neither clean nor renewable. There is a legitimate debate. But the benefits described above should be more than sufficient for anyone to recognize the value of a rigorous scientific study, to inform that debate.

Thank you very much for the opportunity to submit testimony in SUPPORT of HB 2038.