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February 13, 2023

Oregon State Legislature
House Committee on Energy and Environment
900 Court St. NE
Salem Oregon 97301

RE: House Bill 2215 on Nuclear Energy

Dear Chair Marsh and Members of the House Committee on Climate, Energy, and Environment,

On behalf of the Oregon Chapter Sierra Club's 74,000 members and supporters, we appreciate the opportunity to provide feedback on House Bill 2215 which we strongly urge a vote against.

Nuclear energy may appear to be having a resurgence, however when looking beyond the "advanced" nuclear energy hype, there are three main reasons to reject HB 2215: nuclear energy is not cost effective, it is not a climate solution, and the waste from nuclear energy remains a colossal environmental, health and safety issue.

Not Cost Effective

An effective approach to climate change requires timely and inexpensive choices for reducing carbon emissions. Nuclear power—the slowest and most expensive—takes time and resources away from more rapidly available solutions, namely energy efficiency, geothermal, solar, and wind power. This assessment is echoed in a Report by Dr. Mark Cooper, senior research fellow for economic analysis at the Institute for Energy and the Environment, Vermont Law School.[1] He explains: "The high cost, centralization, and capital intensity of nuclear energy means it cannot contribute to macroeconomic growth or the dispersion of growth to local areas. Nuclear power has made almost no contribution to the reduction of carbon emissions of the U.S. economy in the past quarter century and there is little chance it will do so in the next decade."[2]

A case in point is NuScale, an Oregon company with a small modular nuclear reactor (SMNR) project in Idaho. They continue to encounter delays (the project is now about 10 years behind), and cost escalations have been frequent. NuScale gave an earlier estimate for the cost of power for the last several years of $58 per megawatt-hour. It now appears that the cost could be as high as $100 per megawatt-hour.[3]

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[1] Building A Least-Cost, Low-Carbon Electricity System With Efficiency, Wind, Solar, & Intelligent Grid Management: Why Nuclear Subsidies Are An Unnecessary Threat To The Transformation https://www.vermontlaw.edu/sites/default/files/2021-07/Building_a_21st_Century_Electricity_System.pdf

[2] https://www.nirs.org/report-50-billion-nuclear-bailout-would-undermine-biden-climate-and-infrastrucure%E2%80%AFgoals/

[3] Utah Taxpayers Association: https://utahtaxpayers.org/uamps-small-modular-nuclear-reactor-program-backed-by-municipal-power-companies-continues-to-falter/

Not a Climate Solution
Studies reinforce the argument that new modular reactors are definitely *not* a climate solution: "Too late, too expensive, too risky and too uncertain" is how a new report by the Institute for Energy Economics and Financial Analysis described NuScale's proposed small modular reactor project.[4]

Nuclear energy as a solution is "too late" because humanity needs a drastic global reduction in carbon emissions no later than 2030–as the Intergovernmental Panel on Climate Change continually warns. With almost no SMNRs under construction in the world, their contribution to a relatively quick CO2 reduction will be close to zero. NuScale is projecting it will have a plant by 2029, but given consistent delays and nuclear energy's past performances, even with an optimistic timeline, it will be too late to make a difference. SMNRs face even greater time barriers due to the lack of infrastructure (factories, fuel) as well as hands-on experience.

SMNRs prevent us from dealing with climate change *now*, and we do not have the luxury to be able to wait 10 or more years hoping they prove to be worthwhile. There is much we can and that must be done now through investments in energy efficiency and clean renewables. Carbon reduction benefits can be realized now using technology that has already been proven and is inherently safe.

Spent Nuclear Waste is Still a Colossal Problem
Oregon's Nuscale's reactor design produces the same kind of high-level radioactive nuclear waste currently stored at nuclear plant sites across the country. This waste was never intended to be stored indefinitely. All commercial high level nuclear waste, produced since 1957, awaits transport to a federally licensed waste repository which, after all these years, still does not exist.

Without a solution on how to safely and effectively keep radioactive poisons out of the living environment for future millenia — we must stop creating them. While the hype of "clean, carbon-free, safe, cheap nuclear reactors" helps us temporarily forget the horrendous radioactive waste problems already accumulated, it does not prove to be the solution we need. "Nuclear power is the ONLY technology that actually creates hundreds of new toxic elements, most of which were never found in nature prior to 1939. Those elements, once created, cannot be destroyed or rendered harmless."[5]

For these reasons, we urge you to reject HB 2215.

Respectfully submitted,

Elizabeth Dix
Chair, Legislative Committee
Oregon Chapter Sierra Club

[4] Report claims 'serious problems' with proposed NuScale SMR
https://www.power-eng.com/nuclear/report-claims-serious-problems-with-proposed-nuscale-smr/#gref
[5]SMRs are actually DDDs (Dirty Dangerous Distractions)
https://concernedcitizens.net/2020/10/22/smrs-are-actually-ddds-dirty-dangerous-distractions/