

Chair Sollman, Vice-chair Smith, and members of the committee,

My name is Genevieve Hall. I am a resident of Fairview, and I organize with Mobilizing Climate Action Together, a volunteer group that advocates for a healthy climate and green economy. I completed a two-year graduate fellowship in sustainability while earning an M.S. in Chemistry and researching novel photovoltaics.

I testify in opposition to SB 634 because hydropower that does not already meet the criteria of the existing Renewable Portfolio Standard (RPS) should not be counted toward that standard. The existing RPS was appropriately written to include two types of hydropower: (1) low-impact hydroelectric facilities and (2) efficiency improvements to existing hydroelectric facilities built after 1995.

As outlined in OAR 330-160-0400, the Low Impact Hydropower Institute (LIHI) evaluates whether hydroelectric facilities meet the requirements of the first category. The LIHI's evaluation criteria consider the effect of a facility on water quality, fish passage, recreational resources, endangered species, cultural and historical resources, and the ecosystem as a whole (<https://lowimpacthydro.org/certification-criteria/>). Nine hydroelectric facilities in Oregon have been certified as meeting these criteria, with a tenth currently in progress (<https://lowimpacthydro.org/certified-facilities/>, <https://lowimpacthydro.org/pending-applications/>). The LIHI criteria represent best practices for hydroelectric facilities by protecting existing assets and preventing detrimental effects that often result from dams built before 1995. Oregon has already seen this issue play out in the expensive removal of the Snake River dams. The nine facilities that have already passed the LIHI regulatory hurdle are providing superior service to the state of Oregon. Passage of SB 634 would unfairly disadvantage those facilities, and could incentivize future development of irresponsibly-designed hydroelectric projects. In the open market, consumers would reward the superior service of these facilities. Since the electricity market does not allow that level of consumer specificity, state law must show preference for those facilities instead.

The purpose of the RPS is to limit greenhouse gas emissions. Unfortunately, hydroelectric dams with large reservoirs release a substantial amount of methane (<https://www.bbc.com/future/article/20240326-how-hydroelectric-dams-are-a-hidden-source-of-carbon-emissions#>). Methane is produced in the upper reservoir through natural processes involving decomposing plants and animals and the activity of bacteria. When the water is stagnant, the methane mostly remains dissolved in the water and is not released into the atmosphere. However, when the water passes through a dam, the agitation releases the methane into the atmosphere, where it warms the planet 80 times more effectively than carbon dioxide. This release of gas after agitation is commonly seen when a can of soda (which contains dissolved carbon dioxide) is shaken, and it explodes.

New research is underway to capture the methane that is released in this way, but these technologies are currently extremely immature and not yet trustworthy (see previous link for a

discussion of startups). In the future, I imagine that such methane-capturing efforts could count as increases in efficiency, thereby qualifying a larger part of otherwise higher-impact facilities as the second type of hydropower included in the existing RPS.

Please oppose this bill so that responsible business practices are rewarded and Oregon has a better chance of reaching its climate and environmental protection goals.

Respectfully,

Genevieve Hall