

Submitter: John Perona
On Behalf Of:
Committee: House Committee On Climate, Energy, and Environment
Measure, Appointment or Topic: HB3247

Thank you for the opportunity to submit testimony for HB 3247. I write to OPPOSE 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.

I oppose this bill because it works against Oregon's ongoing efforts to transition the electricity grid to reliable and carbon-free power. The scheme envisioned would undermine the ability of grid operators to do their jobs.

First, the simplistic one-for-one formula in the bill, by which retirements of certain power sources must be precisely matched with bringing on-line certain new sources, is clearly at odds with the overall regulatory scheme by which electricity resources are managed to ensure a reliable grid. What matters is the ability of the grid to deliver reliable power at all times and places, and this is a complex function of the available power sources, new generation, retirements, and transmission capabilities. At any particular time and place there might well be a need for retiring a facility even though there is no immediate replacement - and reliability need not be compromised if, for example, there is good demand management, including behind-the-meter resources such as solar panels.

Second, the 80% "performance standard" appears arbitrary and is undefined in the statute. Is it a capacity factor? If so, the bill looks like an obvious attempt to prevent wind and solar power to replace gas-powered generation, as is necessary for Oregon to meet the climate targets now embedded in Oregon law.

The bill's authors are clearly worried about reliability. But they seemingly fail to recognize that there are two major ways in which reliability will be preserved while gas generation is replaced with wind and solar, even though the individual capacity factors of the latter facilities are lower. First, Oregon is in the process of connecting its grid to a regional network that will span many Western states, including introduction of a day-ahead electricity market. These broad resources will include a great deal of new capacity for electric storage. Second, virtual power plants encompassing a wide array of "behind the meter" attributes such as solar panels, home solar batteries, community solar, smart appliances, and bidirectional EV charging will also help create a robust grid.

These two transformations, already in progress, would be undermined if this shortsighted bill is allowed to pass.

I would also note that Oregon has untapped resources for delivering electric power. Both enhanced geothermal systems (EGS) and small modular nuclear reactors would provide very high capacity resources to replace gas-fired generation and decrease our need for environmentally damaging hydropower. There is also a major potential role for shallow geothermal resources in providing heat and cooling to buildings, which would decrease demand on the grid. It would be far better if the proponents of this bill would turn their attention to developing these resources instead of creating roadblocks to the effective regulation of the grid we have now.

Thank you for the opportunity to testify in OPPOSITION to HB 3247.