nbi new buildings institute

CELEBRATING 25 YEARS



**Oregon Senate Committee on Energy and the Environment**

March 15, 2023

My name is Jim Edelson, Senior Climate Advisor at New Buildings Institute (NBI), and I live in Portland, Oregon. NBI is a non-profit headquartered in Portland. NBI is dedicated to advancing building decarbonization through research, development of design guidance, and innovative codes and policies. I serve on the ASHRAE 189.1 committee, which maintains the Standard for Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings. I have been a past member of the Oregon Energy Code Board, and have served on several other State of Oregon Advisory Committees over the past two decades.

NBI supports SB 870 for establishing Building Performance Standards (BPS) as a critical policy tool to achieve Oregon's Greenhouse Gas Reduction Goals (GHG) in the building sector. As is recognized by the REB Task Force and the Oregon Global Warming Commission, existing building GHG reductions will be essential in meeting Oregon climate goals.

SB 870 includes a strong structure for standing up a BPS in Oregon. By establishing time-certain dates for two tiers of building to collect data, to be eligible for incentives, and to meet compliance thresholds, SB870 is on a path to successful implementation by providing certain timing to all regulated buildings.

However, the bill should correct the definition of "net energy use." Energy exported from onsite generation is not related to the performance of the building. It is related to the performance of the generation equipment, but exported energy is not affecting anything about the energy use balance in the building.

The U.S. EPA conducted a year-long public process to provide guidance on metrics for BPS. It found "….during the workshop stakeholders reached consensus that -- above all else -- metrics used in BPS should be simple, send clear signals to building owners, and drive energy efficiency. As a result, EPA developed its metric and normalization recommendations to align with these priorities and principles." Including 'exported energy' in an Oregon BPS accomplishes none of these objectives.

The EPA whitepaper[1] resulting from this process concluded (emphasis added):

1) net zero was complex,
2) did not send a clear signal about the amount of energy a building used, and
3) counts exported energy against energy consumption. **EPA strongly disagrees that exported energy should be used for this purpose**. It

is not allowed in Energy Star and would be difficult to implement if so wanted.

4) **strongly recommend site EUI.**

NBI, in line with EPA, strongly recommends the use of site energy as the simplest and most accurate metric for a BPS in Oregon. NBI further recommends the following changes to SB 870-1 which will avoid the unintended side effect that rapidly increasing installation of building on-site renewable energy will be inversely proportional to the ability of Oregon's BPS to deliver energy use reductions in building.

"(6) 'Energy use intensity' means a measurement that weather normalizes a building's site energy use relative to the building's size, calculated by dividing the total ~~Net~~ site energy the building consumes in one year by the building's gross floor area, excluding any parking garage, and that is reported"

(10) '~~Net~~ Site energy use' means the sum of metered and bulk fuel energy that enters a building~~, minus the sum of metered energy that leaves the building~~.

Sincerely,

**Jim Edelson**
Senior Climate Advisor
New Buildings Institute
c: 503.209.4625
jim@newbuildings.org

[1] U.S. Environmental Protection Agency; Understanding and Choosing Metrics for Building Performance Standards; July, 2022.