

Seattle's Building Emissions Performance Standard (BEPS)

Laboratories – Focus Group 2

October 15, 2026

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Who are we?

UNROOZ SOLUTIONS

Lattice Energy*

*formerly SBW Consulting

Agenda

- **Welcome** (5min)
- **What We Discussed, What We Heard** (10min)
- **Target Setting Methodology Poll** (10min)
- **Discussion – Part 1** (40min)
  - End-use deductions – Non-dedicated uses
  - End-use deductions – Standardized engineering calculations
- **Report back** (10min)
- **Break** (10min)
- **Discussion – Part 2** (30min)
  - Getting to net-zero (15 min)
  - Cutting edge trends (15 min)
- **Closing remarks** (5min)

What we discussed

- Present the provisional Greenhouse Gas Intensity Targets (GHGITs) and alternative compliance pathways available for laboratories

- Present the new GHGIT calculation methodologies and their potential impacts on BEPS requirements

- **Got your feedback!**

What we heard

- 2031-2035 provisional targets are reasonable
- Laboratories can likely meet the targets through 2040 at a manageable cost

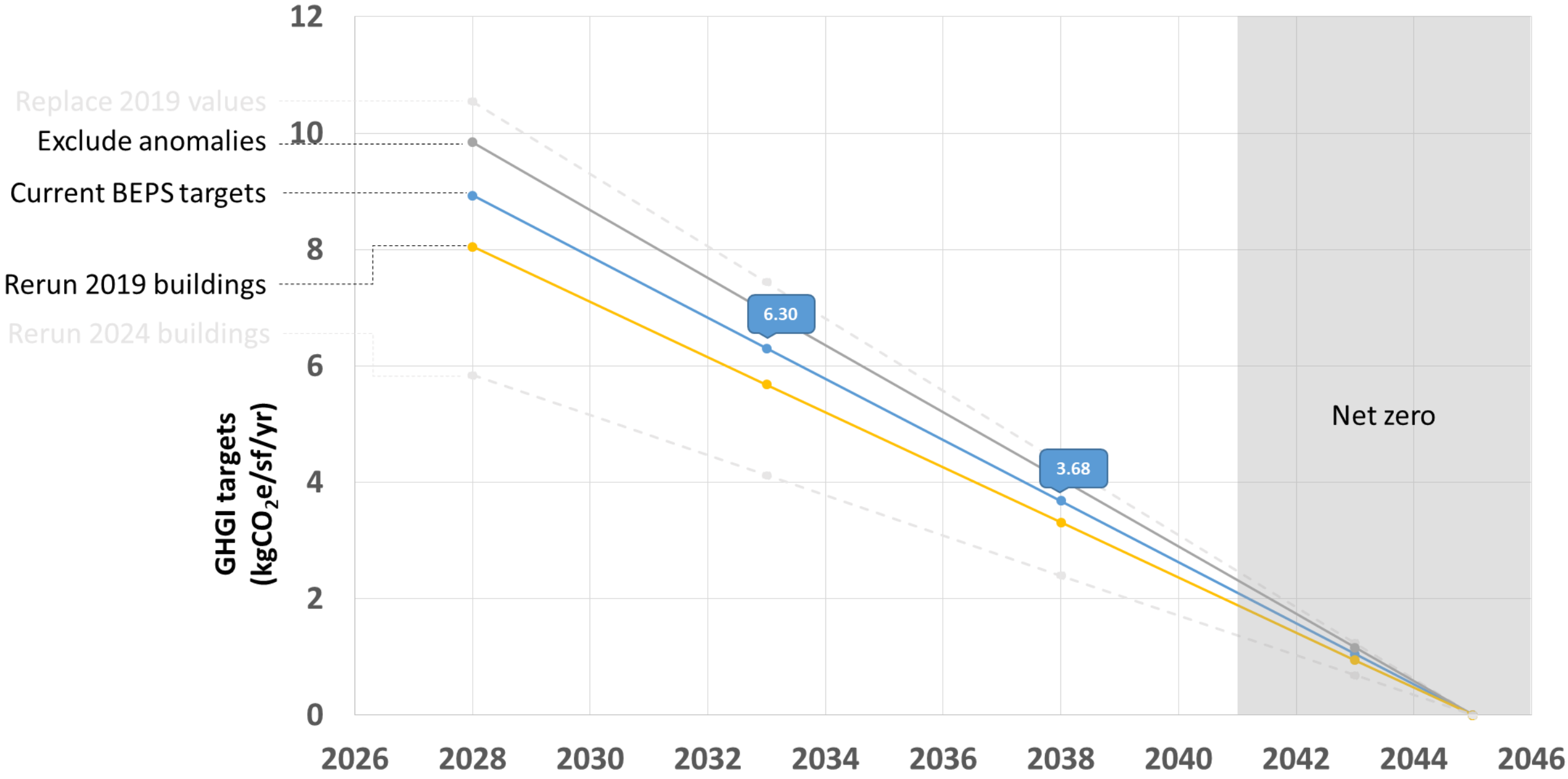
- Target methodology analysis
  - Provisional, exclude anomalies, 2019 building rerun

- Getting to net-zero may be difficult
  - These reductions rely on changes beyond the laboratory
  - For example, changes in utility service infrastructure, structural constraints for installing rooftop units, expanding electrical vaults, changing processes

Anything we forgot to mention?

Target setting methodology

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Quick poll

Which target setting methodology are you most comfortable with?

Approach	GHGI Targets (kg CO2e/sq ft/year)				
	Baseline	2031-2035	2036-2040	2041-2045	2046-2050
Exclude anomalies	9.84	6.94	4.05	0.00	0.00
Provisional targets	8.93	6.30	3.68	0.00	0.00
2019 matched	8.05	5.68	3.31	0.00	0.00

Quick poll

Which target setting methodology are you most comfortable with? **Why?**

Approach	GHGI Targets (kg CO2e/sq ft/year)				
	Baseline	**2031-2035**	**2036-2040**	**2041-2045**	**2046-2050**
Exclude anomalies	9.84	6.94	4.05	0.00	0.00
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Discussion Topics

- **End use deductions** (Breakout rooms)
  - **Non-dedicated uses**
    - How to separate generator power from emergency backup heating
    - Using a boiler to do domestic hot water and process steam generation
  - **Standardized engineering calculations**
    - What information is available, what is being tracked/measured
    - What equipment is typical and well documented
    - Is there data available that could inform simplified compliance approaches
- **If 90% emission reductions isn't feasible**
- **Cutting edge trends**

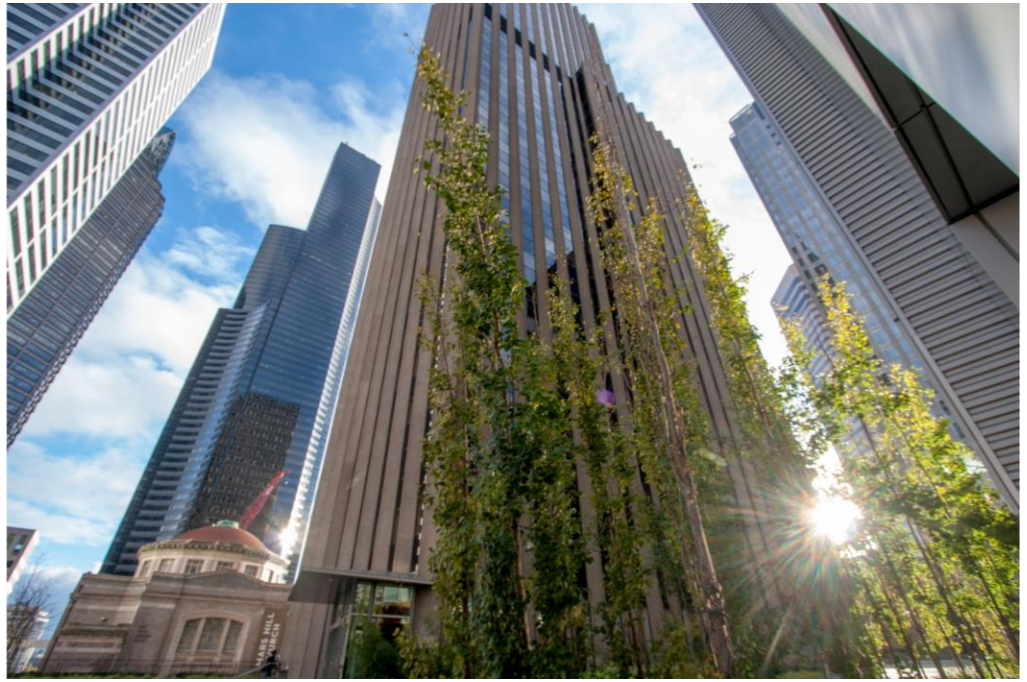
Discussion Topic 1: End use deductions

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What are end use deductions?

What the ordinance says…

(SMC 22.925.120) “Building owners may **deduct the sum of the annual GHG emissions from the following end uses** from their compliance GHGI, for one or more compliance intervals.”



How are end use deductions factored into compliance GHGI?

ENERGY STAR Portfolio Manager Data	2019 Annual WN Energy Use (kBtu/yr)	2019-2025 Emissions Factors (kg CO2e/kBtu)	Annual GHG Emissions (kg CO2e/yr)
Electric	2,350,000	0.0058	13,630.00
Gas	2,200,000	0.053	116,600.00
Steam	0	0.081	0.00
Subtotal	**4,550,000**		**130,230.00**
Less Eligible BEPS End Use Deductions (TBD)	**TBD**	**NA**	**TBD**
Total	**4,550,000**		**130,230.00**
		Total Gross Floor Area (excluding parking)	75,000 SF
		BEPS Compliance GHGI (kg CO2e/sf/yr)	**1.74**

PATH A: End Use Deductions that do not expire

Option	What	Who Can Use
Emergency Fossil Fuel Generators (h)	**Emissions from this equipment, if it is captured in ESPM reporting.**	**Any covered building.**
Emergency Backup Heat (i)	**Emissions used for backup heat in cold conditions from this equipment.**	**Hospital and laboratory building activity types.**
Electric Vehicle Charging Equipment (f)	**Emissions from this equipment.**	**Any covered building with EV charging equipment metered with the building.**
Communications Equipment (g)	**Emissions from this equipment.**	**Any covered building with communications equipment (e.g., antennas, cell towers, etc.) unrelated to the primary building purpose.**
Fossil Fuel Equipment in Residential Condo Units (e)	Emissions from equipment that is in the condo owner's unit (e.g., in-unit gas water heaters, gas stoves).	Multifamily building that is a residential condo or co-op that has individually owned units.

Note: Letters (e.g. (a)) denote where details are listed in Section 12.06 End Use Deductions of the 2025 BEPS Directors Rule.

PATH A: End Use Deductions that do expire

Option	What	Who Can Use	Valid Until
District Energy Contract in Place from Provider (j)	**Emissions from district energy provided steam, hot water and/or chilled water.**	**Any covered building with a contract in place before June 1, 2024. (e.g., CenTrio customer)**	**2035**
Fossil Fuel High-intensity Process Equipment (c)	**Emissions from this equipment. Such as autoclaves, humidification, etc.**	**Hospital and laboratory building activity types.**	**2040**
Fossil Fuel High-intensity Laundry Equipment (d)	Emissions from this equipment. Washer, dryers, etc.	Hospital and hotel building activity types.	2040
Fossil Fuel Cooking Equipment (a)	Emissions from cooking equipment (e.g., gas stoves, grills).	Any covered building.	2040
Fossil Fuel Dishwashers in Food Service (b)	emissions from dishwashing equipment if they are included in the metered energy use	Any covered building.	2040

Note: Letters (e.g. (a)) denote where details are listed in Section 12.06 End Use Deductions of the 2025 BEPS Directors Rule.

Submetering

Poll: Are any of your labs (or labs that you know about) actively using sub-metering?

Poll: Ongoing or spot metering?

Chat/out loud: What types of equipment/processes are you sub-metering?

Chat/out loud: Any interest in engaging in short-term sub-metering to validate future calculators?

Breakout Rooms: End use deductions

Non-dedicated uses first

- Brad Rock
- Geoff Glass
- Melvin Knox
- Julie Scrivner
- Anna Kelly

Facilitated by Kirstin and Sam

Standardized engineering calculations first

- Heather Burpee
- John Kearns
- Melissa Hutton
- Nick Tran/Jay McNally
- Steve Matthes/Travis Wong
- Santiago Rodriguez-Anderson

Facilitated by Lisa, Nicole and Alicia

Would anyone like to switch before we open the breakout rooms?

Breakout!

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Non-dedicated uses

What types of non-dedicated equipment, which qualify for end use deductions, are hard to sub-meter ?

What alternatives are there to sub-metering ?

Standardized emission calculations (non-metered)

How is the industry validating decarbonization projects for utility incentives, ESCOs etc…?

For what types of equipment would you be interested in using emission calculations? Are these types of equipment typical and well documented?

What are potential sources for data to inform the development of calculators or other means to support compliance?

Report back

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Break time

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Discussion Topic 2: The last mile

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Going the last mile

We heard that 90% emission reductions may be difficult

- Why?
- What uses are harder to decarbonize?
- What barriers to net-zero exist?
- How common are these issues?

Discussion Topic 3: The next frontier

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The next frontier

What cutting edge trends towards decarbonization are happening in laboratories ?

What processes are moving away from fossil fuel use ?

Anything else we should know?

Future Engagement

- Spring / Summer 2027 follow-up engagement
  - Meeting for laboratories - Comment on draft rule
  - Public webinar
  - Two-week public comment period on final 2027 rule (addenda)

- Focus groups considering update to existing “financial distress” definition
  - Residential condos / cooperatives
  - Others TBD

End of meeting survey

