

100% Clean Buildings

Performance Standards for Existing Large Nonresidential and Multifamily Buildings

Draft Policy | October 4, 2022
Seattle Renter's Commission



Seattle
Office of Sustainability
& Environment

**“A. Make Seattle free of
climate pollutants . . . by
2030;**

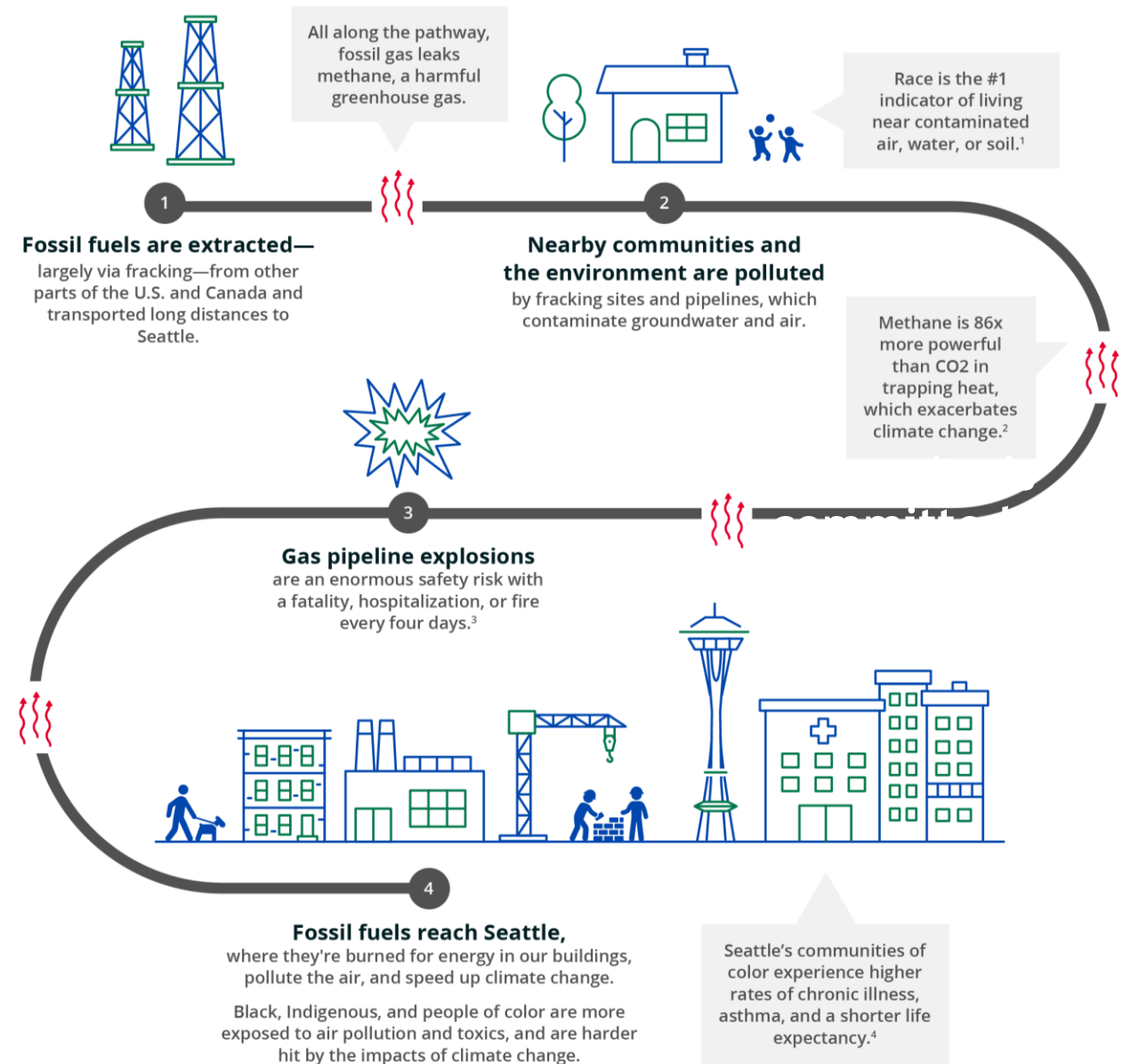
**B. Prioritize investment
in communities
historically most harmed
by economic, racial, and
environmental
injustice;”**

Council Resolution 31895, 2019



Continuing to power our buildings with fossil fuels is an issue of climate justice.

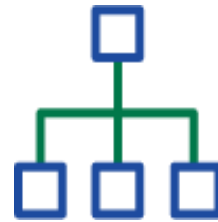
Fossil fuels cause harm along every step of the pathway to our buildings and homes, and disproportionately impact communities of color.



The most effective near-term action is building emissions performance standards for larger buildings.



Sets carbon-emissions-reduction targets that buildings must meet over time.



Provides a framework for owners to improve energy efficiency and transition to cleaner energy sources.

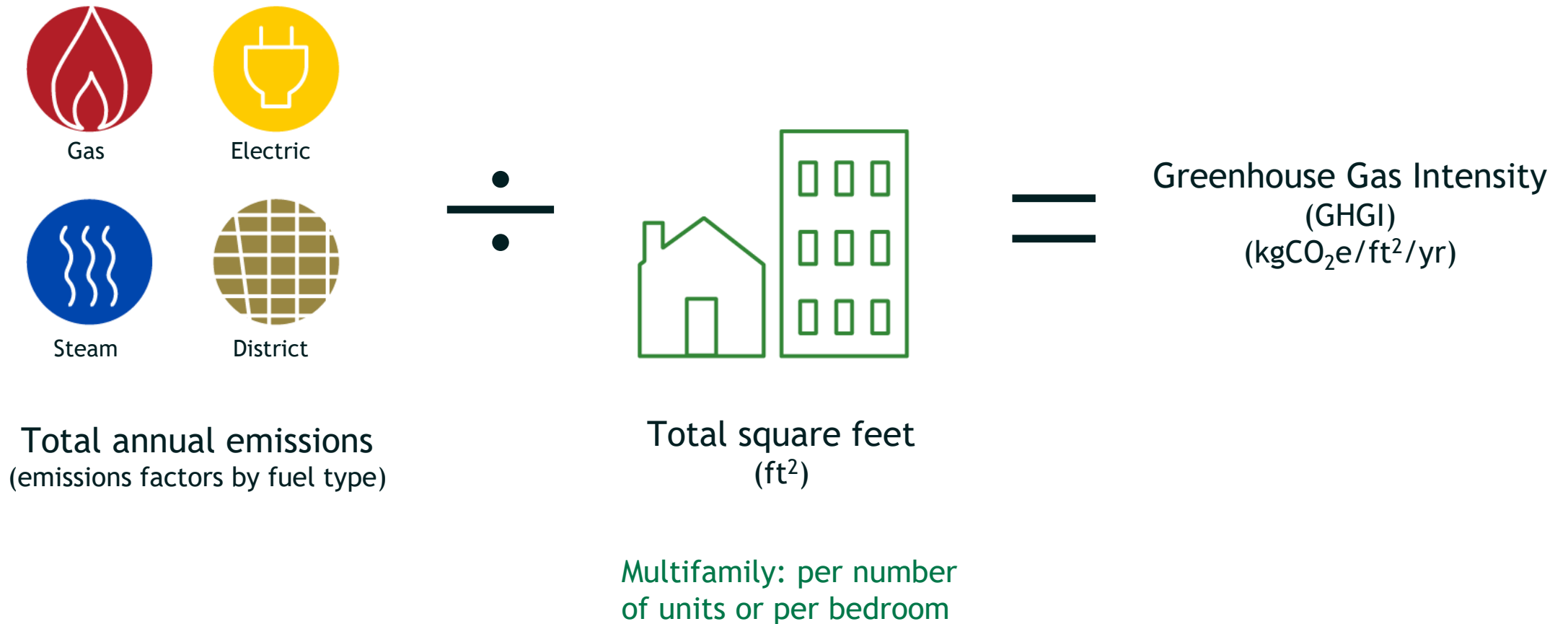


Offers flexibility to choose the technologies and operational strategies that work best for owners.



Identifies long-term expectations so owners can plan for upgrades.

What is Greenhouse Gas Intensity (GHGI)?



Building owners have options for getting to carbon neutral.

Energy Efficiency



LED Lighting



Modern Controls



Insulation

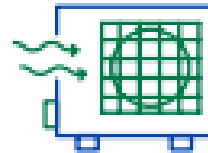


Windows

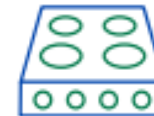
Efficient Electric Equipment



**Heat Pump
Water Heaters**



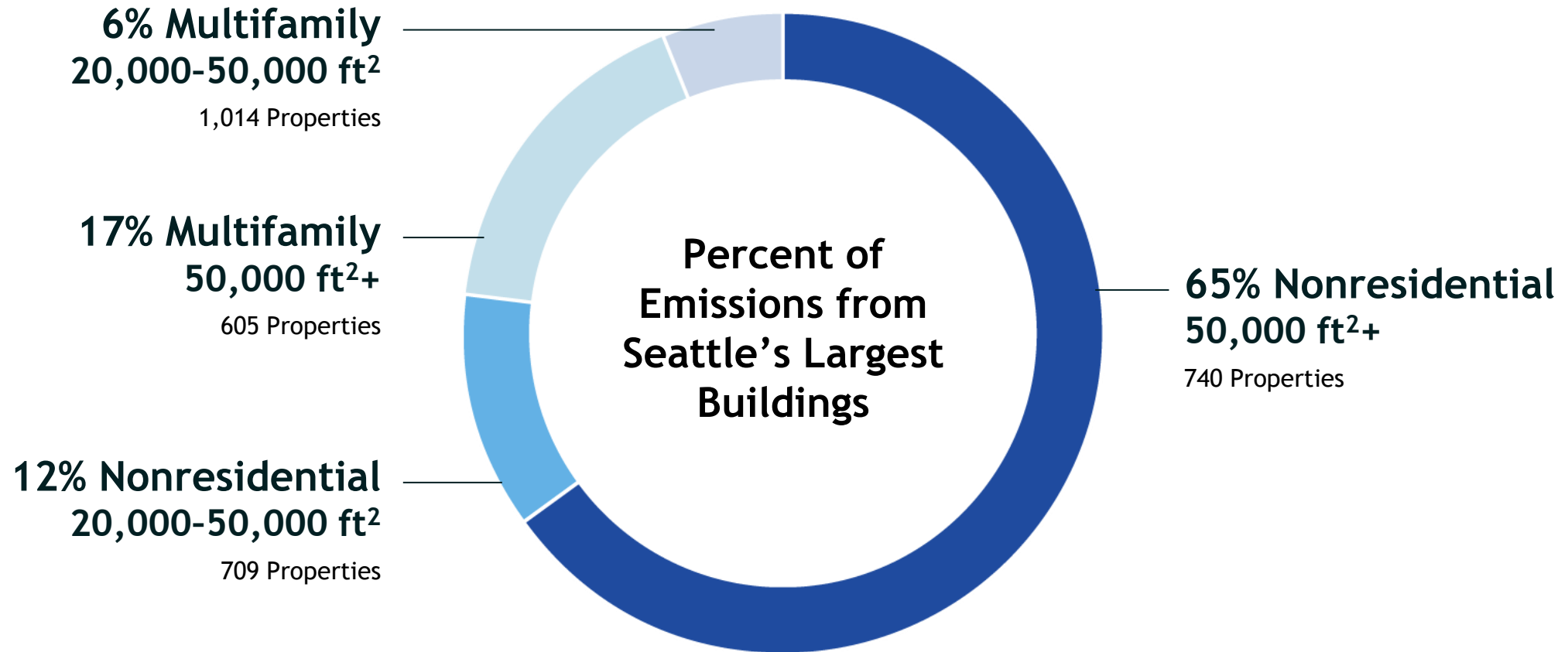
**Heat Pump
Heating & Air Cooling**



**Induction
Cooking**

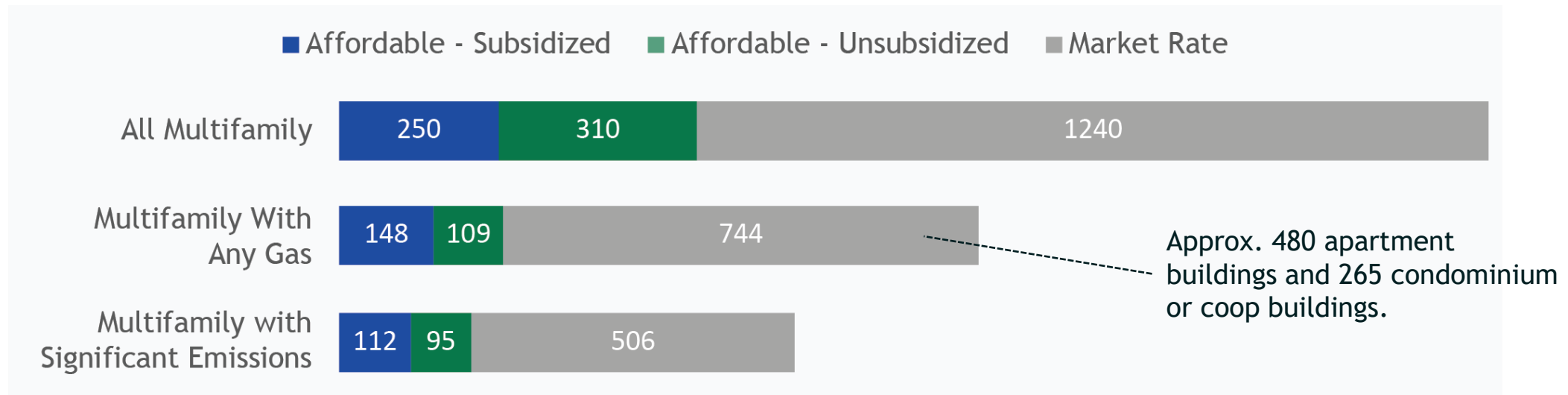
Emissions reduction targets with flexibility to choose cleaner energy sources that work for different buildings.

Seattle performance standards will focus on larger nonresidential and multifamily buildings.



Multifamily Energy Mix Reported ($\geq 20,000$ ft²)

- About 1,800 apartment or condominium buildings
- 55% use some fossil fuels (may be from a secondary use, like a restaurant)
- 45% use electric only



Source: Buildings that reported energy benchmarking data in 2019 and CoStar data to estimate unsubsidized housing number.

Stewart Manor Affordable Housing

An energy efficiency and electrification path to carbon neutral



Credit: UW Integrated Design Lab

About

Address: 6339 34th Ave. SW, Seattle, WA 98126.

Size: 49,510 sf, six-story, 74 one-bedroom units for people with low incomes.

Original Construction: 1968.

Projected Energy Savings: 13% – 35%.

Projected Total Emissions Reductions: 27.5 MT CO₂e annually.

Projected Utility Cost Savings: \$18,500 annually.

Estimated Total Plan Costs: \$8.15/sf.

Owner: Seattle Housing Authority.

Consultants: University of Washington Integrated Design Lab and Solarc Energy Group, with special thanks to Seattle Office of Housing for their technical feedback.

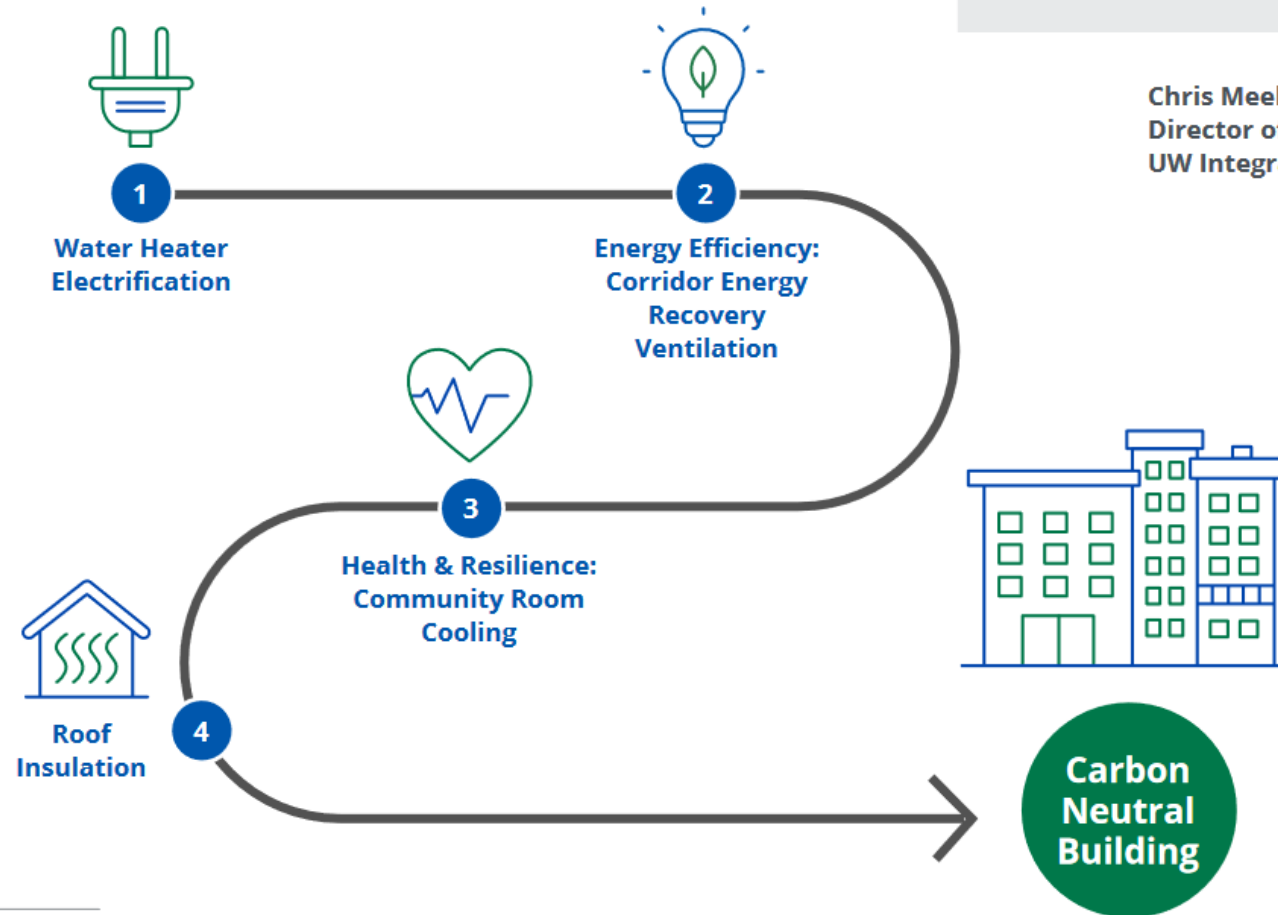
www.seattle.gov/building-performance-standards

Steps to a carbon neutral building:

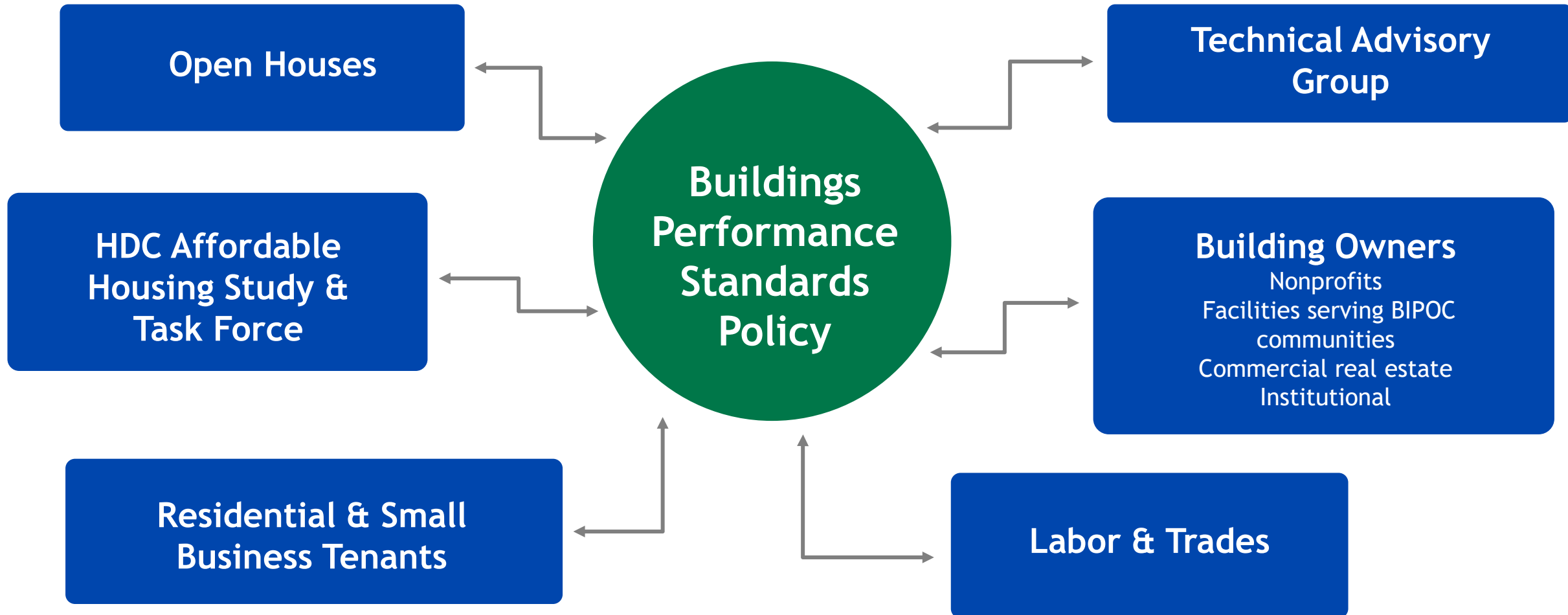
Through an energy audit and modeling, the UW Integrated Design Lab and Solarc Energy Group identified a four-step path for the Stewart Manor apartments to **reduce energy use by 35 percent and emissions by 79 percent** to achieve an all-electric carbon neutral building, while adding on-site cooling in the community room.² For this building, total cost for the plan is estimated at \$8.15 per square foot. Estimated utility cost savings are \$18,500 annually using 2021 rates.³

Learning from the Seattle Housing Authority and Seattle Office of Housing experiences was a highlight of this project. Collaborations like these are critical to meeting the intersecting crises of affordability, human health, and climate change.

Chris Meek,
Director of
UW Integrated Design Lab



Many voices are helping shape this policy.



What we've heard



Timing - Communicate targets now to provide long lead times for owners to plan and for the labor workforce to grow, diversify, and transition.



Support - Provide financial incentives, lower interest financing, and robust technical help for all types of buildings and owners, especially for those under resourced.



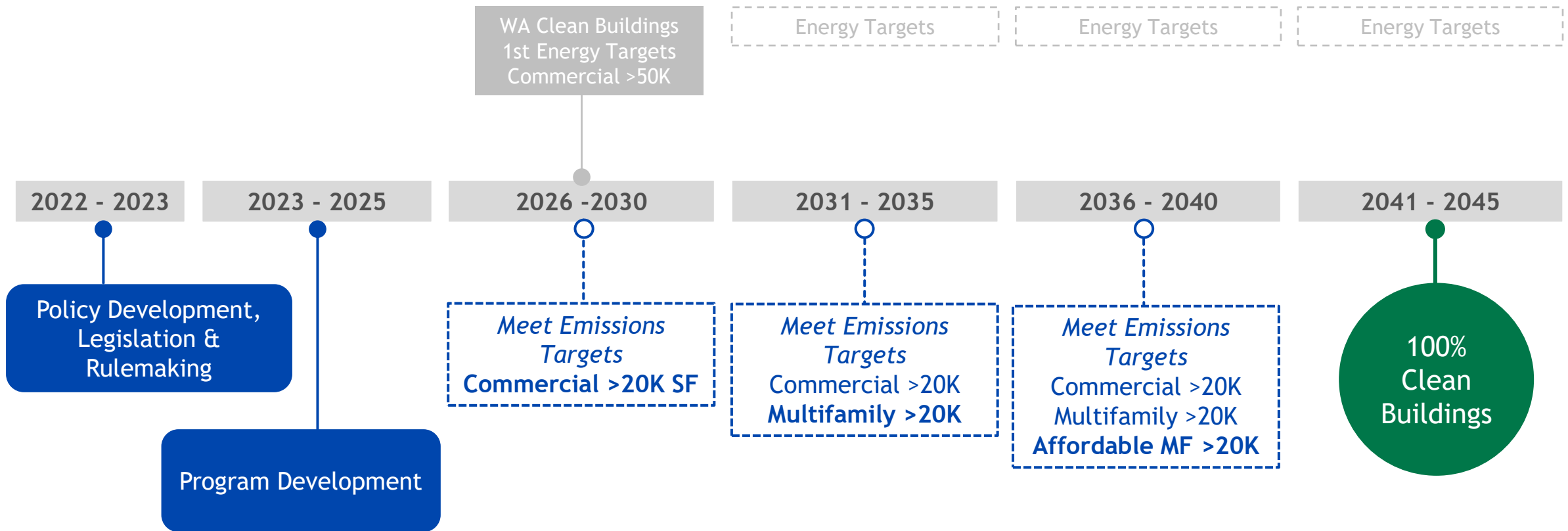
Flexibility - Create a streamlined policy that allows for flexible options for compliance.



Workforce Development - Support a just transition by investing in pre-apprenticeships and outreach to youth and BIPOC, workforce re-skilling, and partner with labor to develop refrigerant management best practices.

A Long Runway

Seattle Building Emissions Performance Legislation
signals the market and allows for a gradual transition to truly 100% clean buildings



Proposed Alternative Compliance (Details TBD in Rulemaking)

- **Building Portfolio / Campus Compliance**
 - **Portfolio:** Multiple buildings with the same long-term owner (e.g. public entity or nonprofit).
 - **Campus:** Multiple buildings on district system or jointly metered.
- **Prescriptive Options, e.g.**
 - Multifamily: Replace central gas domestic hot water system with electric heat pump system.



Liberty Bank Building, Africatown Community Land Trust (Photo: Andrew Engelson)

Proposed Alternative Compliance (Details TBD in Rulemaking)

All-Electric Buildings

Buildings where the only source of energy being used is electricity are granted an exemption from meeting the emissions reduction or Greenhouse Gas Intensity target compliance obligations.

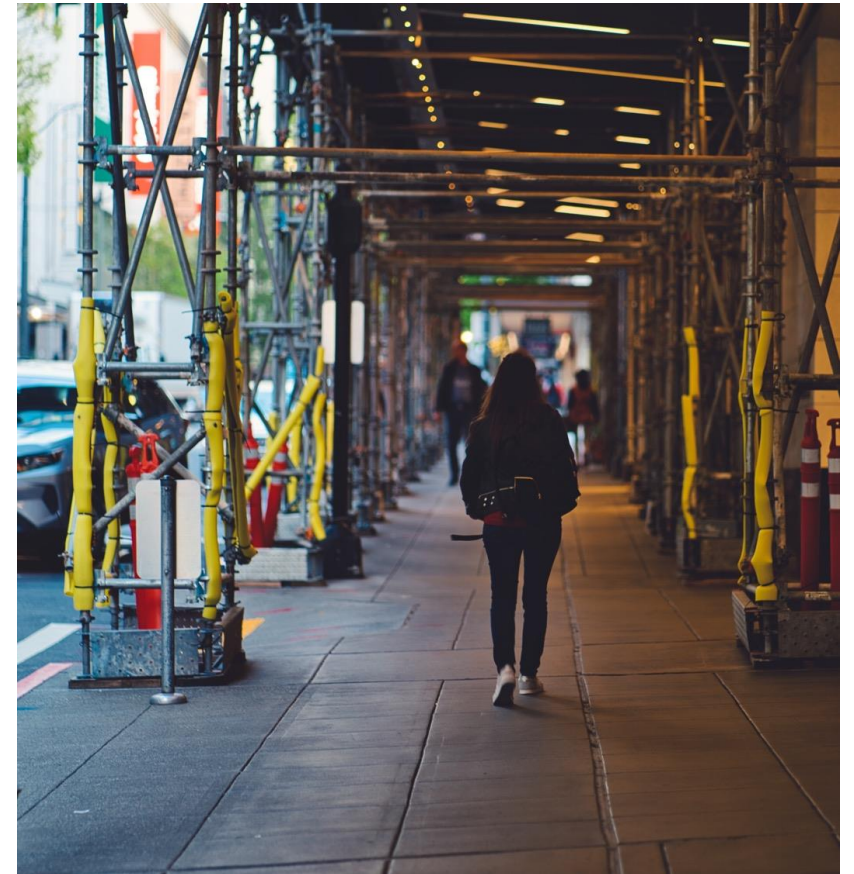


Potential Alternative Compliance (Details TBD in Rulemaking)

Alternative Compliance Payment

- Payment based on an annual per MTCO₂e basis, for emissions beyond compliance target.
- The cost of each MTCO₂e/year to be based on the Social Cost of Greenhouse Gas Emissions.

Funds to be used for technical and financial assistance, prioritize towards under-resourced buildings.



Extensions, Exemptions & Accommodations (Details TBD in Rulemaking)

For certain buildings such as:

- financial hardship
- historic properties
- buildings with unreinforced masonry (URM)
- scheduled to be demolished

For certain uses or equipment such as:

- emergency power back-up generation
- commercial cooking equipment
- high-intensity process equipment used in healthcare and laboratories



1999 Nisqually earthquake damage. USGS photo.

We need to provide support as buildings are improved.

Seattle Clean Buildings Accelerator

OSE launched a \$220K/year support hub for building owners and managers, specifically prioritizing those who are under-resourced, especially non-profits and those serving BIPOC communities. Program will help participants with:

- Meeting WA State Clean Buildings mandate
- Emissions reduction planning
- Identifying incentives and financing

Staff Resources

- *Office of Housing/Office of Sustainability: Affordable Housing Decarbonization position, beginning Q1 2023*
- *Mayor Green New Deal 2023 budget recommendation: OSE position to manage and grow Accelerator program to serve more priority building owners and tenants and provide more services.*

Engineering & Capital Investments

- \$520K AARA loan funds reallocated for affordable housing
- Awarded \$1.8M Dept. of Energy grant for decarbonizing affordable housing
- Green New Deal 2022 Opportunity Fund: \$2M for multi-family affordable housing electrification
- Mayor Green New Deal 2023 budget recommendation: \$4.5M / year for non-profits and affordable housing
- Preparing to pursue federal infrastructure funds, inflation reduction act funds, and other opportunities

Seattle emissions performance standards will create jobs.

150 - 270 clean energy jobs/year

- Expand career paths for women and BIPOC
- Expand opportunities for WMBE's
- Reduced demand over time for gas-oriented jobs

- *\$1.8M awarded, June 2022, for workforce development, investing in clean energy jobs and construction training.*
- *Office of Economic Development Green Economy Advisor*
- *Establishing cross-departmental Clean Energy Workforce Committee*
- *Mayor Green New Deal 2023 budget recommendation: \$1M / year for clean energy workforce development.*



Stay Engaged

City of Seattle Office of Sustainability & Environment

seattle.gov/building-performance-standards

cleanbuildings@seattle.gov



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