

November 28, 2023

MEMORANDUM

To: Select Committee on Climate Action
From: Yolanda Ho, Supervising Analyst
Subject: CB 120718 – Building Emissions Performance Standard

On November 29, the Select Committee on Climate Action (Committee) will receive an initial briefing from the Office of Sustainability and Environment (OSE) on [Council Bill \(CB\) 120718](#) that would establish a new Building Emission Performance Standard (BEPS) to reduce greenhouse gas (GHG) emissions from existing buildings larger than 20,000 square feet.

This memorandum: (1) summarizes the City’s efforts to date to reduce GHG emissions from buildings; (2) describes CB 120718; (3); and provides next steps.

Background

GHG emissions trap heat in the atmosphere, causing a rise in global temperatures that, in turn, produces climate change and its associated hazards (e.g., increased risk of wildfires, extreme rain events, hotter summers, and flooding due to sea level rise). Since the Council adopted [Resolution 28546](#) in June 1992, recognizing the crisis of global warming, the City has taken steps to reduce GHG emissions from its buildings. These include establishing the nation’s first municipal building green building policy in 2000, and requiring that all new City-funded projects and renovations over 5,000 square feet of occupied space achieve a Leadership in Energy and Environmental Design (LEED) Silver certification.¹

In 2011, the Council adopted [Resolution 31312](#), establishing a goal for Seattle to reach net zero GHG emissions by 2050, setting intermediate reductions targets, and committing to prepare for the likely impacts of climate change. To achieve these targets and the ultimate goal, the Council adopted the [2013 Seattle Climate Action Plan \(CAP\)](#) through [Resolution 31447](#) in 2012. This plan recommended implementation of a variety of short- and long-term coordinated strategies to reduce GHG emissions and foster climate resiliency, with strategies focused on Seattle’s core emissions, which are primarily generated by transportation and buildings.

In response to community concern that the City was taking insufficient action to rapidly and equitably reduce GHG emissions, the Council adopted [Resolution 31895](#) in August 2019 to establish goals, which include eliminating all climate pollutants from Seattle by 2030, and identify actions for Seattle’s Green New Deal. Soon after this, the Council passed [Ordinance 125926](#), which created the Green New Deal Oversight Board to provide guidance on the City’s actions to reduce climate emissions and ensure that the transition to green energy does not disproportionately harm workers or communities that have been most harmed by economic, racial, and environmental injustice.

¹ The Council adopted [Resolution 31326](#) in October 2011, updating this policy to increase the requirement to LEED Gold and establish minimum energy and water efficiency standards that exceed those required by code.

The Mayor issued [Executive Order \(EO\) 2020-01](#) (Advancing a Green New Deal for Seattle) in January 2020 directing City departments to work with external stakeholders to develop a list of top 10 priority climate actions that the City can take to expedite GHG reductions, and establishing a new City team to advance high-impact climate actions, such as building performance standards. OSE released a [report](#) in November 2021 with the recommended actions,² which included establishment of a mandatory building performance standard for buildings 20,000 square feet or larger.

City Efforts to Reduce Building Emissions

Existing buildings account for almost 37 percent of Seattle’s core GHG emissions, according to the City’s [2020 Community GHG Emissions Inventory](#).³ While the City has not previously required that buildings reduce their GHG emissions, it has implemented requirements for building owners to track and decrease building energy use:

- Owners of buildings 20,000 square feet and larger have been required to track and report energy performance through the [Energy Benchmarking](#) program since 2012 ([Ordinance 123226](#), passed in 2010); and
- Owners of buildings 50,000 square feet and larger have been required to invest in upgrades and maintenance to reduce energy and water consumptions in such buildings through the [Building Tune-Ups](#) program since 2019 ([Ordinance 125002](#), passed in 2016).

These measures are a necessary but insufficient strategy to eliminate GHG emissions from existing buildings. The City is actively working on decarbonizing its own buildings (about 650 buildings). The City stopped using fossil fuels in new construction and major renovations in 2020, and EO 2020-01 directed City departments to develop a strategy to decarbonize all municipal buildings by 2035.

The most recent update to the [Seattle Energy Code](#), adopted by the Council in February 2021, prohibits the use of fossil gas for space and water heating in commercial and multifamily buildings.⁴ While these restrictions ensure that new commercial and multifamily buildings will have low or no GHG emissions, the Seattle Energy Code does not apply to existing buildings unless they are undergoing substantial alterations or replacing building components.

² Due to the COVID-19 pandemic, OSE did not engage extensively with other City departments or external stakeholders to create the list of actions, but instead oriented the document to serve as a starting point for conversations with the Green New Deal Oversight Board and others.

³ Typically, buildings represent around a third of Seattle’s core GHG emissions, but due to the pandemic and the associated increase in remote work, transportation emissions dropped around 5 percent. This resulted in the share of building emissions rising proportionally, but does not indicate that building emissions themselves increased.

⁴ State law does not allow the City to amend provisions of the Energy Code that apply to residential development under four stories, which currently has no restrictions on the use of natural gas. The 2021 Washington State Energy Code would encourage the installation of electric heat pumps for space and water heating in all buildings, including residential. The City is anticipated to adopt this code update in 2024.

Other Related Policies

In 2019, the Washington State Legislature passed, and the Governor signed into law, [House Bill 1257](#) to create a new [Clean Buildings Performance Standard \(CBPS\)](#). This requires that owners of buildings larger than 50,000 square feet meet an Energy Use Intensity Target (EUIT) based on building type and uses beginning in 2026. Buildings greater than 20,000 square feet will be required to meet energy performance targets after 2030. This program focuses on increasing energy efficiency, which will help decrease GHG emissions, but will not result in net zero GHG emissions from buildings subject to the regulations.

CB 120718

CB 120718 would add a new Chapter 22.925 to the Seattle Municipal Code (SMC) to establish a requirement that owners of buildings greater than 20,000 square feet (excluding parking) take steps to incrementally reduce GHG emissions from such buildings. The ultimate goal of this policy is to achieve net zero emissions for these buildings by 2050, thereby reducing the City's core GHG emissions from buildings by 27 percent, representing a reduction of about 10 percent of Seattle's total core emissions. Once buildings have achieved net zero emissions, they are required to maintain this in perpetuity.

Like the statewide CBPS, the proposed BEPS is performance-based, meaning that building owners can choose what investments to make so long as they achieve the required target for their building type and uses within the designated timeframe. Buildings that would be covered by the proposal are generally divided into five cohorts, based on gross floor area, and would require that the largest buildings begin meeting requirements first (as they are the largest sources of GHG emissions). Compliance timelines are staggered by five years and based on meeting GHG Intensity Targets (GHGITs) that vary by building activity type.

The proposed legislation would also amend the SMC as follows:

- Chapter 22.920 related to the Energy Benchmarking program to add GHG emissions performance to the annual reporting requirement, change the annual report due date from April 1 to June 1, and streamline and simplify penalties; and
- Chapter 22.930 related to the Building Tune-Ups program to sunset the program on December 31, 2028, following the completion of the second cycle of mandated tune-ups. The requirements of BEPS would replace and exceed those of Building Tune-Ups.

As required by the State Environmental Policy Act (SEPA), the City conducted environmental review and issued a Determination of Non-significance (DNS) for the proposal on June 8, 2023; the DNS received no appeals. Attachment 1 includes a synopsis of changes OSE has made to the proposal since the release of the SEPA draft.

The following highlights key aspects of the proposal. For more information about BEPS, including the stakeholder outreach process, policy development, and technical details, see the [OSE Director's Report](#).

Covered Buildings

OSE estimates that approximately 4,135 buildings on 3,580 properties would be impacted by BEPS: 1,650 nonresidential buildings, 1,885 multifamily buildings, and 600 buildings on campuses (e.g., government, universities, and hospitals). These buildings account for only about three percent of all buildings in Seattle, but they emit over one-third of total building emissions. Buildings used for industrial and manufacturing purposes are exempt.

Based on the City's Energy Benchmarking data, of the buildings that would be covered by BEPS, nearly 25 percent of nonresidential buildings and 45 percent of multifamily buildings are currently all-electric and therefore would not need to take measures to reduce GHG emissions. Most nonresidential buildings are owned privately (65 percent), with the remainder owned by nonprofit organizations, public entities, universities, schools, and hospitals. The vast majority of multifamily buildings are owned privately (86 percent), and the remainder is regulated low-income housing.

A subset of buildings would be regulated as a group of two or more that meet certain criteria. These include buildings that are (1) owned by the same entity; (2) served via a campus district system (e.g., heating, cooling, power, water reuse); and/or (3) physically connected or share mechanical or metering equipment (e.g., energy meters, building controls). Such groups of buildings are referred to as building portfolios, district campuses, and/or connected buildings in the legislation.

GHG Intensity Targets (GHGITs)

Consistent with the statewide CBPS EUITs, BEPS would establish GHGITs for covered buildings based on building activity type, recognizing that different uses produce varying amounts of GHG emissions (e.g., a self-storage facility has low water and space heating demand and thus produces far fewer GHG emissions than a restaurant per square foot). If a building has more than one activity type, its GHGIT would be calculated using the percentage of gross floor area of each activity type's GHGIT. To determine if a building meets its GHGIT, a building owner would first need to calculate the building's GHG intensity (GHGI). This calculation takes into account the total consumption of energy source (electric, natural gas, district thermal), an emissions factor assigned to each energy source,⁵ and the gross floor area of the building.

CB 120718 establishes GHGITs for building activity types for the first compliance period only (2031-2035) and provides provisional GHGITs for subsequent compliance periods, which may be revised by future Director's Rules. OSE intends to take into account building performance data, technological changes, new regulations, and other relevant factors as it determines

⁵ The emissions factors for fossil fuels are based on those calculated and adopted by the United States Environmental Protection Agency (EPA). Emissions factors for electricity and district thermal energy are based on those reported to the Washington Department of Ecology or Climate Registry. Emissions factors for renewable energy (e.g., biodiesel and renewable natural gas) depend on the specific supply sources and would be approved by the Director based on the renewable energy attestation. OSE may adjust the emissions factors by rule in advance of compliance intervals to take into account changes in utility energy mix, regulatory requirements, or EPA's published emissions factors.

appropriate GHGIs for the various building activity types. If OSE opts to change the GHGIs, the rules would be published at least five years in advance of the first year of the applicable compliance interval so that building owners can adjust their plans accordingly to meet the revised targets.

For buildings with unique characteristics or extremely high emissions as well as for district campuses, connected buildings, or public/nonprofit building portfolios, OSE may approve alternate GHGIs using the baseline GHGI of the building(s). The alternate GHGI would be a set percentage of the baseline GHGI. For example, for the 2031-2035 compliance interval, a nonresidential building’s alternate GHGI would be 66 percent of its baseline GHGI, meaning that the building would need to decrease its GHGI by 34 percent to meet its target.

Compliance Timeline and Phasing by Building Type

The proposed legislation would stagger the compliance schedule based on building gross floor area as presented in Table 1. This approach is consistent with the statewide CBPS, both in regard to the five-year compliance intervals and building size cohorts. The first compliance interval is limited to only benchmarking verification and reporting obligations to establish accurate energy and emissions performance data that will be used for assessing compliance, and for building owners to plan for meeting GHGIs. Beginning with the second compliance interval, the City would require that building owners meet GHGIs in addition to the benchmarking verification and reporting obligations.

Most buildings covered by the proposal would be subject to the compliance schedule for individual buildings based on gross floor area. The compliance timeline for building portfolio, district campuses, and connected buildings is listed as a separate row in Table 1. To align with CBPS, all benchmarking and reporting must be conducted by a person with (1) at least three years of professional experience in building energy analysis and (2) certain licenses or certifications, such as an architecture/engineering licensed from Washington State or Association of Energy Engineers’ Certified Energy Auditor or Manager.

Table 1. Proposed compliance schedule (compliance date is October 1 of the year listed)

	Benchmarking & Reporting	GHGI, Benchmarking & Reporting			
Building gross floor area (square feet)	Compliance Interval 1	Compliance Interval 2	Compliance Interval 3	Compliance Interval 4	Compliance Interval 5
220,001 or greater	2027	2031	2036	2041	2046
90,001 – 220,000	2027	2032	2037	2042	2047
50,001 – 90,000	2028	2033	2038	2043	2048
30,001 – 50,000	2029	2034	2039	2044	2049
20,001 – 30,000	2030	2035	2040	2045	2050
Building portfolios, district campuses & connected buildings	2028	2033	2038	2043	2048

In addition to establishing different GHGITs for building activity types based on their varying energy demands and other factors, BEPS would phase in requirements for different buildings types as follows:

- 2027-2030: all buildings verify emissions and benchmarking and begin planning for or investing in building upgrades to meet GHGITs.
- 2031-2035: nonresidential and market rate multifamily buildings meet GHGITs; low-income and low-rent (i.e., naturally affordable) housing buildings and buildings with human service uses receive an extension from meeting GHGITs.
- 2036-2040: nonresidential and market rate multifamily buildings meet second GHGITs; low-income and low-rent housing buildings and buildings with human service uses meet GHGITs for this compliance interval.
- 2041-2045: nonresidential buildings achieve net zero emissions; multifamily buildings meet GHGIT.
- 2046-2050: multifamily buildings achieve net zero emissions.

Alternative Compliance Methods and Flexibility

Most buildings subject to the proposed BEPS would be expected to achieve compliance by meeting their GHGITs for the compliance interval. However, given the variability in ownership, building uses, potential financial impacts to owners and tenants, and other considerations, the proposal offers different pathways to achieve compliance. Instead of reducing emissions to meet GHGITs in a given compliance interval, building owners could opt to do the following:

- For the 2031-2035 compliance interval only, make an alternative compliance payment (ACP). The ACP is calculated based on the difference between the annual amount (in metric tons) of carbon dioxide equivalent produced by the building versus what it would have produced if it had met its GHGIT over the five-year interval. This is multiplied by \$190 (as proposed by the Environmental Protection Agency that may be increased by rule, if needed). Minimum ACP for buildings at or smaller than 50,000 square feet is \$1,250 and for buildings greater than 50,000 square feet is \$2,500. ACP amounts cannot exceed the penalty amount for the same compliance interval.
- For multifamily buildings, implement a specific building upgrade option for the 2031-2035, 2036-2040, or 2041-2045 compliance intervals. Options include replacing gas water or space heaters with electric heat pump systems.
- Follow an approved decarbonization compliance plan to either achieve net zero GHG emissions by 2041-2050 or achieve a low emissions GHGIT by 2041-2050 for buildings that meet certain criteria. These include (1) planned building improvements, such as substantial alterations and seismic upgrades, that are also necessary for the building to meet its GHGIT, (2) significant electrical infrastructure upgrades are needed so that a building can meet its GHGIT, or (3) when there are no practicable low or zero GHG emissions alternatives available for a necessary function.

In addition to providing extensions for low-income and low-rent housing and human service uses, the proposed legislation would offer extensions in certain cases, such as newly constructed buildings, buildings under financial distress, or buildings with high vacancy rates. All-electric buildings would be exempt from meeting and reporting on GHGIT requirements. Buildings planned for demolition within three years of a compliance deadline would be exempt from all BEPS requirements.

Support for Building Owners

OSE's goal is to maximize compliance with BEPS to avoid penalizing building owners, particularly those who have fewer resources. To this end, OSE launched the [Clean Buildings Accelerator](#) program in 2022 with \$220,000 JumpStart Fund to provide no-cost technical support and training for nonprofits and under-resourced building owners to help them comply with both CBPS and BEPS. The 2024 Adopted Budget includes \$4.5 million JumpStart Fund to provide ongoing support for in-depth engineering design and capital investments for nonprofit and affordable housing buildings that serve priority populations, such as low-income individuals and Black, Indigenous, and people of color (BIPOC).

In addition to JumpStart funding, other sources of City revenue to support building owners and tenants would be ACPs and fines and fees from BEPS, Energy Benchmarking, and Building Tune-Ups. These funds would be used for programs and activities that reduce GHG emissions from buildings, prioritizing those that serve people with low or no incomes and communities historically most harmed by economic, racial, and environmental injustice. The City will also continue to seek federal and state funding opportunities to create an early adopter incentive to encourage building owners to meet net zero emissions earlier than required, and provide more support for under-resourced building owners and tenants.

Administration

In the 2023 Adopted and 2024 Endorsed Budgets, the Council appropriated \$2.8 million JumpStart Fund and \$7.8 million JumpStart Fund, respectively, to support implementation of BEPS (including technology platform development) and expand the Clean Buildings Accelerator program. OSE's 2023 Adopted Budget included 2.0 FTE for BEPS and 1.0 FTE for the Clean Buildings Accelerator. The 2024 Adopted Budget added an additional 3.0 FTE to OSE for BEPS, for a total of 6.0 FTE. For a more detailed breakdown of implementation costs, see the [Summary and Fiscal Note](#).

Reporting Requirement

To provide transparency about how building owners are meeting the requirements of BEPS, the proposed legislation would require that OSE begin reporting on available BEPS data in 2026. Beginning in 2031, and every five years thereafter, OSE would provide a report to the Mayor and City Council on BEPS implementation (e.g., compliance rates, total emissions reductions, and building upgrade actions and associated costs).

Next Steps

The Committee will continue discussion and possibly vote on CB 120718 on December 7, 2023. Please submit any proposed amendments to me by noon on December 1.

Attachment:

1. Synopsis of BEPS legislative revisions since June SEPA release

cc: Esther Handy, Director
Aly Pennucci, Deputy Director

Synopsis of BEPS legislative revisions since June SEPA release

OSE: 11/10/23

- **Allow for penalties to be pro-rated if significant progress towards meeting targets has been made.**

22.925.180 Penalties

4. When an owner has achieved a GHGI that is no more than 120 percent of the GHGIT, the Director may adjust the fine amount imposed through the appeal process on the building owner in consideration of the proportional impact on the building's compliance GHGI.

- **Allow greater flexibility for Director to establish grace periods.**

22.925.180 Penalties

C. The Director ~~by rule~~ may establish grace periods for imposing fines for any class of structure upon a finding that such grace period will facilitate the submission of reports, accurate reporting, compliance with greenhouse gas emissions reduction requirements, or otherwise further the purposes of this Chapter 22.925.

- **Increase penalties to better match those of other cities and to better reflect building decarbonization costs. Maintain fines for low-income housing and low-rent housing @ previous level of \$2.50/SF**

22.925.180 Penalties

3. Fines for the failure of a building owner to demonstrate that they have met the GHGITs . . . A fine of \$10 per square foot for nonresidential buildings, \$7.50 per square foot for multifamily buildings, and \$2.50 per square foot for low-income housing or low-rent housing shall be based on the gross floor area

- **Ensure tenants who may be impeding owner's ability to meet targets have penalties that match those of the owner. (Owner is not fined if failure to comply is result of tenant)**

22.925.180 Penalties

B. If the Director determines that a tenant has failed to allow access to mechanical systems or provide utility information to a building owner as required under Section 22.925.130, the Director may, . . . For tenant spaces with a gross floor area:

1. Greater than 20,000 square feet, a fine of \$2.50 per square foot for low-income housing or low-rent housing, \$7.50 per square foot for a multifamily building activity type, and \$10 per square foot for all other building activity types, shall be imposed;

2. Greater than or equal to 5,000 square feet but not more than 20,000 square feet, a fine of \$2,500 shall be imposed.

3. Less than 5,000 square feet, a fine of \$500 shall be imposed.

- **Set a minimum amount of revenue (40% consistent w/ President Biden's Justice 40 initiative) to be prioritized toward frontline communities. Previous version directed all funds to be prioritized toward buildings serving frontline communities.**

22.925.140 Revenue expenditures

A. Revenue . . . shall be spent on programs and activities to reduce greenhouse gas emissions from nonresidential, multifamily, and single family buildings, including technical and financial assistance to building owners and tenants with at least 40 percent of the revenue collected prioritized towards buildings serving people with low or no incomes and communities historically most harmed by economic, racial, and environmental injustice.

➤ **Expand OSE reporting obligations for greater transparency**

22.925.130 General provisions

C. OSE shall annually publish data on compliance status, and energy and emissions performance.

D. Beginning in 2026, available data related to the implementation and impact of the Building Emissions Performance Standard, as well as overall building performance, shall be incorporated into OSE climate reporting and performance monitoring, such as the biennial GHG Inventory and the Climate Portal.

E. By December 31, 2031, and every five years thereafter, OSE shall provide a report to the Mayor and City Council on implementation of the Building Emissions Performance Standard established under this Chapter 22.925, including compliance rates, total emissions reductions, the impact of the policy on achieving Seattle's climate goals, building upgrade actions and costs, an overview of technical and financial support provided for covered buildings, as well as other information relevant to implementation of this Standard such as evolving technology, climate science and impacts, and/or market conditions. By December 31, 2033, OSE shall conduct a preliminary assessment of emissions reductions and compliance rates, including percentages complying early and/or utilizing alternative compliance options.