A BLUEPRINT FOR SEATTLE:

REDUCING EMISSIONS FROM SEATTLE'S LARGEST BUILDINGS

NOVEMBER 2021

Prepared by the NW Energy Coalition

OVERVIEW

Seattle is facing numerous and compounding crises: the COVID-19 pandemic and its resulting economic crisis, a homelessness and affordable housing crisis, and our continued societal reckoning of current and historic racial injustice.

We are also in a climate crisis – and we have been increasingly experiencing these impacts for decades. During the summer of 2021, the Pacific Northwest experienced a catastrophic heat dome while wildfires continued to decimate communities across the West. These events, and many others across the globe, underscore the dangerous and deadly consequences climate change is having on our daily lives. We can expect more climate disasters that will harm our health, our economy, and our communities, particularly Indigenous, Black, and Brown people who bear disproportionate impacts of the climate crisis. **To protect the health and build resilience of our communities, we need to take significant action on climate pollution today.**

Seattle has long been a leader on climate action and has committed to an ambitious goal of using 100 percent clean energy by 2050, with a significant reduction by 2030. To meet this goal, Seattle must address the largest and fastest growing source of climate pollution in the City: Building emissions. Building emissions account for more than one-third of Seattle's greenhouse gas emissions, primarily from burning gas and oil for heat, hot water, and appliances like dryers and stoves. Earlier in 2021, the City adopted a new commercial building energy code that substantially reduces the use of fossil fuels in newly constructed large buildings and in some renovations. However, to reach the Seattle's climate goals – and for the health of our city and residents – we must also address existing buildings and drastically reduce their fossil fuel use over the next decade.

In tandem with reducing emissions, the City must also protect and promote housing, expand our clean energy workforce, and ensure that the transition to cleaner buildings positively benefits frontline communities. These multi-faceted goals are important but also challenging to accomplish absent direct and intentional action.

To take this action, the City of Seattle should develop a comprehensive greenhouse gas emission standard for its largest buildings, in concert with complementary policies that will build the needed workforce, support building owners with the transition, and center frontline communities.

The state of Washington has led the way in addressing building emissions by establishing an energy performance standard that will require large commercial building owners (greater than 50,000 square feet) to reduce energy use, beginning in 2026 (the Washington Clean Buildings Act, or CBA). The City, with its experience and expertise in building energy use programs, has the opportunity to further drive down greenhouse gas emissions from these buildings, as well as from other large buildings not covered by the state standard.

Seattle's policymakers should develop a Seattle Zero Emission Building Performance Standard. This policy should set the high-level direction to city departments and offices, including that the standard:

- Require that all buildings emit zero greenhouse gas emissions by 2040 and that newer buildings (built to the 2027 energy code) reach this target by 2030;
- Develop interim targets depending on a building's baseline emissions;
- Align with the State's BPS energy use targets;
- Apply to all large buildings over 20,000 SF, and develop related policies for smaller builders; and
- Require upfront "Strategic Decarbonization Plans" to incorporate greenhouse gas and energy reduction targets into long-term capital planning and replacement cycles.

The Seattle BPS will not work in a vacuum, and Seattle has the opportunity and responsibility to tie its implementation to other policies that will support housing and small businesses and develop a clean energy and buildings workforce, while also supporting building owners and other stakeholders with its implementation.

The following report lays out in more detail (1) the technical recommendations for how the City of Seattle could develop a policy to reduce greenhouse gas emissions from its largest buildings, and (2) the needed complementary policies to support building owners, tenants, clean energy businesses; those seeking building industry careers; and frontline communities. This report is intended as a blueprint for City decisionmakers and policymakers - laying out the policy framework and identifying deeper outreach and analysis needs for full policy development.

As with any blueprint, further study and outreach and changing circumstances may alter the policy components and priorities. In particular, the changing nature of the COVID-19 pandemic, its economic impacts, and its effects on how people interact with buildings will likely continue to evolve and may affect some of these recommendations and their timelines.

ACKNOWLEDGEMENTS

The NW Energy Coalition acknowledges that we and the City of Seattle are on the traditional land of the Coast Salish people, including the Duwamish People past and present. We honor with gratitude the land itself and the Duwamish Tribe. This acknowledgement does not take the place of authentic relationships with indigenous communities, but serves as a first step in honoring the land we are on.

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LIST OF ACRONYMS

ANSI	American National Standards Institute
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
BIPOC	Black, Indigenous, and People of Color
BPAP	Building Performance Action Plan
BPS	Building performance standard
CAP	Seattle Climate Action Plan
CBA	Washington Clean Buildings Act
City Light	Seattle City Light
CNCA	Carbon Neutral Cities Alliance
C-PACER	Commercial Property Assessed Clean Energy and Resilience financing
EDI	Equitable Development Initiative
EUI	Energy use Intensity
GHG	Greenhouse gas emissions
GHGI	Greenhouse gas intensity
HVAC	Heating, ventilation, and air conditioning
IES	Illuminating Engineering Society of North America
IMT	Institute for Market Transformation
O&M	Operations and maintenance
OSE	Seattle Office of Sustainability and Environment
SBTU	Seattle Building Tune-Ups Program
SEM	Strategic energy management
SF	Square feet
WMBE	Women- and Minority-Owned Business

SECTION 1: Seattle Building Performance Standard – Design Recommendations

Prepared by:

2050 Institute

INTRODUCTION

Building performance standards (BPS) can act as a powerful policy mechanism to reduce energy use and greenhouse gas (GHG) emissions in the building sector. They can also be designed to address other important policy goals such as demand flexibility, water use reduction, and resilience. In its 2018 Seattle Climate Action strategy, the City of Seattle indicated that it plans to develop a BPS as a key strategy for achieving its building sector emissions reduction targets.[1] Subsequently, Seattle's Office of Sustainability and Environment (OSE) conducted a series of detailed technical analyses and developed a target calculation tool for setting energy use intensity (EUI) and greenhouse gas intensity (GHGI) targets. Since the launch of these activities, Washington State passed a statewide BPS and released the first edition (the 2025 BPS) of detailed requirements and EUI targets for commercial buildings greater than 50,000 square feet (SF). The compliance years for the state's 2025 BPS are 2026-2028, depending on building size.

Although the state BPS may be useful as a foundation or starting point for the Seattle BPS, as currently designed it will not deliver on the City's GHG goals, mainly due to lower baseline EUIs for most Seattle property types, the fact that the state BPS lacks a mechanism to directly regulate GHG, and because the state BPS has not laid out a long-term trajectory for EUI targets. For example, according to OSE, the state BPS is estimated to result in an overall 4% emissions reduction across Seattle's building sector, based on the state's 2025 BPS EUI targets.[2]

This policy brief provides an overview of the policy landscape, key considerations, and critical success factors for designing a Seattle BPS for commercial and multifamily buildings. It is informed by relevant aspects of BPS policies in other jurisdictions, including the Washington State BPS as well as the model BPS policy recently published by the Institute for Market Transformation (IMT).[3] Building upon these resources and the City's BPS policy analysis and design efforts to date, the policy brief lays out a set of BPS design recommendations for advancing a well-structured Seattle BPS framework with the capacity to deliver a steady transition to a carbon neutral commercial and multifamily building stock.

POLICY LANDSCAPE

The building sector represents 37% of Seattle emissions.[4] Significantly reducing these emissions is critical to achieve communitywide carbon neutrality by 2050. According to Seattle's 2013 Climate Action Plan (CAP), the building sector must reduce emissions by 39% by 2030 to stay on

[1] City of Seattle. *Seattle Climate Action.* 2018, http://greenspace.seattle.gov/wp-content/uploads/2018/04/SeaClimateAction_April2018.pdf.
[2] City of Seattle. *Building Performance Standards.* 2021, https://www.seattle.gov/environment/climate-change/buildings-and-energy/building-performance-standards
[3] Institute for Market Transformation. *Model Ordinance for a Building Performance Standard.* 2021, https://www.imt.org/resources/imt-model-bps-ordinance-summary/.
[4] City of Seattle. *2018 Community Greenhouse Gas Emissions Inventory.* 2020, https://www.seattle.gov/Documents/Departments/OSE/ClimateDocs/2018_GHG_Inventory_Dec2020.pdf.

track to reduce emissions by 82% by 2050.[5] In addition, the Seattle Green New Deal Resolution signed in 2019 includes an even more stringent intention to "make Seattle free of climate pollutants" by 2030.[6]

The Seattle BPS must be designed to achieve these ambitious building decarbonization goals while leveraging equity and workforce opportunities and effectively integrating with existing building policies such as the state BPS, the Seattle Energy Code, and the Seattle Energy Benchmarking and Building Tune-Up programs.

The Washington State BPS is based on ANSI/ASHRAE/IES Standard 100-2018 with Washington State amendments. The state developed EUI targets during rulemaking in 2020. The state BPS applies to commercial buildings greater than 50,000 SF, excludes multifamily buildings, uses an EUI performance metric, and does not include GHG metrics or targets. The state's 2025 BPS is the first five-year cycle and includes compliance years from 2026-2028 depending on building size.[7] The state BPS targets will be updated every five years thereafter.

In contrast, Seattle's benchmarking program applies to buildings greater than 20,000 SF and includes multifamily properties. Currently, the program includes approximately 3,600 buildings that are 20,000 SF or greater, and about 950 of those buildings are 50,000 SF or greater. According to the 2018 Seattle Climate Action strategy, a city-specific BPS should build upon the benchmarking program and take effect in 2030, pending council and mayoral action. And, as described in more detail in the next section, due to its carbon-neutral electricity, the majority of Seattle's building emissions come from use of onsite fossil-fuel equipment and fossil-fuel fired district energy. Although leveraging the state's BPS as the foundation of the Seattle BPS could reduce redundancy for building owners and City staff, these variations in building types, sizes, compliance timelines, and performance metrics must be effectively addressed in Seattle's BPS policy development.

The new and existing building requirements in the Seattle Energy Code could also play a key complementary role for the Seattle BPS, especially relating to onsite emissions. For example, the 2018 Seattle Energy Code prohibits electric resistance and fossil fuel space heating equipment in new commercial and mid and high-rise multifamily buildings, and for substantial alterations or augmentations and replacements of central HVAC systems.[8] The 2018 Seattle Energy Code includes similar provisions for water heating in hotels and multifamily buildings.

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[5] City of Seattle. *Seattle Climate Action Plan.* 2013, http://www.seattle.gov/Documents/Departments/Environment/ClimateChange/2013_CAP_20130612.pdf.

[6] City of Seattle. *Seattle Green New Deal Resolution 31895*. 2019, http://seattle.legistar.com/LegislationDetail.aspx?ID=4078775&GUID=A91E660A-1F3A-4545-8D24-281916F6EDB4&FullText=1.

[7] For more information on Washington's Clean Building Standards see https://www.commerce.wa.gov/growing-the-economy/energy/buildings/clean-buildings-standards/.

[8] Seattle Department of Construction and Inspections. *2018 Seattle Energy Code*. 2021, http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/energy-code#2018seattleenergycode.

The existing building provisions do not preclude fossil fuel equipment retrofits in all instances, but they could be strengthened in subsequent code editions to mutually reinforce emission reduction targets in the Seattle BPS.

ROLE OF BPS IN DECARBONIZING SEATTLE'S COMMERCIAL AND MULTFAMILY BUILDINGS

In Seattle, commercial buildings alone produce 57% of overall building GHG emissions and 90% of these emissions are from fossil gas used in onsite equipment and district steam systems, which currently use gas-fired boilers to make the steam.[9] The current mix of policies and programs has mitigated emissions growth in commercial buildings but has not reduced them. For example, from 2008 to 2018, while the Seattle population increased by 25.5%, overall commercial building emissions increased by only 0.1%.[10] Over this timeframe, there were some emissions reductions from district steam and electricity, but these were offset by an increase of 11.4% in onsite fossil gas emissions from commercial buildings.[11]

Other than the new state BPS and recent changes to the Seattle Energy Code, there are no clear high-impact policies in place for bending the curve on this emissions trajectory between now and 2030. A performance-based policy like a BPS with a GHGI standard would help drive down emissions and put the Seattle commercial and multifamily building stock on track to meet the City's 2030 goal to reduce commercial building emissions by 39%. However, it must be designed to support the transition to zero emission equipment in buildings and zero emission fuels for district energy systems. An effective Seattle BPS should also ensure steady reductions in overall electric load and peak capacity requirements to offset the impact of electrification of transportation and building sector end uses.

POLICY DESIGN RECOMMENDATIONS

In any jurisdiction, a BPS can act as the keystone policy within an evolving policy ecosystem for decarbonizing the commercial and multifamily building stock. It should be designed as a central mechanism for ensuring the performance of other policies and programs such as the energy code, utility programs, and funding assistance. A BPS is key to a just and managed transition in part because it creates a predictable path and timeline for decarbonizing end uses, which can be planned for strategically at the building, district, utility, city, state, and regional levels. It should set the scale and tempo for policies, programs, and, most importantly, workforce development and the market transition.

This document lays out policy design framework recommendations for a Seattle BPS. This document was influenced by IMT's recently released model BPS and integrates multiple metrics as part of comprehensive approach to decarbonizing buildings. The policy design is structured

[9] City of Seattle. *2018 Community Greenhouse Gas Emissions Inventory.* 2020,https://www.seattle.gov/Documents/Departments/OSE/ClimateDocs/2018_GHG_Inventory_Dec2020.pdf.
[10] *Ibid*.
[11] *Ibid*.

to simultaneously meet Seattle's emissions reduction goals while addressing opportunities for leveraging the state BPS and accounting for differences in covered property types and sizes.

As the keystone policy for commercial and multifamily buildings, the Seattle BPS should be designed to encompass all building types, sizes, and vintages. Although, not all sizes should be required to meet performance metrics, the standard can act as a framework to tie in other policies such as labeling, point-of-sale upgrades, and incentives and financing programs. This approach provides a mechanism for reducing redundancy and streamlining policy and program communications. The table below summarizes the recommended Seattle BPS policy, followed by a more detailed discussion of the key elements.

Table 1. Summary of Seattle BPS Recommendations

Policy Element	Recommendations for Seattle BPS
Property Types	▪ Commercial ▪ Multifamily ▪ Include "economically distressed" buildings, assuming dedicated technical and financial support
Size	▪ ≥20k SF for Seattle BPS ▪ ≥10k to 20k SF for labeling and point-of-sale upgrades ▪ 0 to 10k SF for opt-out incentive programs and technical assistance
Metrics	▪ Combination of metrics for all buildings: ▪ State BPS EUI (provisionally from state, pending more stringent updates in 2030+) ▪ Seattle GHGI (limited to onsite and district energy emissions) ▪ Seattle maximum coincident and local peak electric demand ▪ Future metrics TBD
Targets	▪ Final performance standards by building type and vintage category for each performance metric ▪ Interim targets calculated using individual building baselines
Vintage	▪ Existing buildings (on trajectory to zero carbon by 2040) ▪ Newer construction (on trajectory to zero carbon by 2030)
BPS Cycles	▪ EUI standard, six 5-year cycles from 2025 to 2050 (as part of state BPS unless significant Seattle amendments are required) ▪ GHGI standard, four 5-year cycles from 2025 to 2040 ▪ Coincident and local peak demand standard, five 5-year cycles from 2030 to 2050
Strategic Decarbonization Plans	▪ Require building owners to develop upfront "Strategic Decarbonization Plans" to embed BPS GHGI targets into long-term capital planning and replacement cycles
Adaptive Compliance Management	▪ Binding "Building Performance Action Plans" to allow some degree of flexibility for alignment with capital planning timelines

PROPERTY TYPES AND SIZE

The Seattle BPS should include all commercial and multifamily building types in alignment with the property types used in the state BPS. The state BPS property types and secondary types align with the ENERGY STAR typology, which is already how Seattle benchmarking types are defined. Multifamily buildings are not a covered building type under the current state BPS, but the state BPS does include a multifamily EUI target and multifamily buildings are eligible for early adopter incentives. Since multifamily buildings constitute nearly 25% of Seattle's combined commercial/multifamily emissions,[12] Seattle should also include a GHGI standard for multifamily and advocate to have multifamily included in the state EUI BPS by 2030, contingent with the supportive policies discussed in Section 2.

Whereas the state BPS only applies to buildings greater than 50,000 SF, all Seattle BPS metrics should apply to buildings equal to or greater than 20,000 SF. Seattle's benchmarking program already has a cutoff of 20,000 SF, which includes less than 20% of the commercial and multifamily buildings while representing nearly 80% of the square footage and emissions. However, lowering the size cutoff below 20,000 SF would flood the compliance process with 10,000 - 20,000 additional buildings while only capturing a moderate amount of additional square footage and emissions, thereby limiting the benefit.

While the Seattle BPS targets should focus on the approximately 3,600 buildings ≥20,000 SF currently in the benchmarking program, it could include a complementary set of requirements, incentives, and progress tracking for the smaller buildings. For example, as an alternative to performance-based targets, the City could require 10,000 to 20,000 SF buildings to participate in a labeling policy based on the energy assets of the buildings. This type of asset-based policy could also be strengthened with upgrade requirements for sellers triggered at the point of sale. In addition, smaller buildings could be included in opt-out, targeted utility programs designed by Seattle City Light (City Light) for turnkey, zero-emission equipment retrofits tailored to typical small commercial and multifamily building configurations. However, this type of program may require some regulatory clarity on building electrification, as discussed in Section 2. In combination with zero emission requirements for a number of equipment replacement scenarios in the 2018 Seattle Energy Code along with robust and accessible financing, this approach to buildings less than 20,000 SF could deliver significant emissions reductions without burdening the City's BPS enforcement resources.

The state BPS also applies to commercial properties associated with industrial facilities, but not the facilities themselves (e.g., office buildings, but not processing plants). The Seattle BPS should follow this structure. A BPS is not well-suited for the highly heterogeneous loads of the industrial sector, which are better served by upstream emissions policies such as carbon caps as well as strategic energy management (SEM) utility programs.

[12] Lawrence Berkeley National Lab. *GHG policy impacts for Seattle's buildings: targets, timing, and scope*. 2021, https://journal-buildingscities.org/articles/10.5334/bc.81/.

Due to the potential benefits of reduced emissions, energy use, and life-cycle costs, economically distressed buildings should not be excluded from the Seattle BPS, as they currently are under the state's BPS. However, the City should conduct dedicated technical and cost impact analysis and should develop targeted technical and financial support programs designed to ensure an equitable transition.

METRICS

Considering the low carbon content of Seattle electricity, the potential for electrification-driven load increases, and the fact that the state BPS already includes an EUI metric, this policy brief recommends following the IMT model BPS performance metrics and target setting structure. To address the wider spectrum of transformation required in buildings to meet economywide decarbonization goals, the IMT approach includes an integration of key metrics rather than a single metric. The table below summarizes the proposed performance metrics and details. The metrics are designed to address multiple policy objectives while providing flexibility to policy makers and building owners.

Table 2. Recommendation to Include a Combination of Performance Metrics

Metrics	Details
EUI	▪ The state BPS is based on an EUI performance metric. The 2025 state BPS EUI targets (with phased compliance years from 2026-2028) are 15% less than the average EUI by building type. These targets will have less impact on Seattle buildings but will likely bring high users down to the average, which will be a good new baseline for moving forward with subsequent reductions. However, by the next state BPS (with compliance years from 2031-2033), if the state does not adjust EUI targets to align with reductions required to meet state emissions limits, Seattle will need to develop its own interim and final EUI performance standards.
GHGI for Onsite and District Energy Emissions	▪ The state BPS does not include a GHG target. ▪ Since Seattle electricity is carbon neutral, the GHGI performance metric should apply only to onsite emissions and district energy emissions. A GHGI metric that includes electricity would be redundant to the EUI metric. In addition, building owners do not have direct control over the carbon mix of electricity, which obscures the impact of their efforts to directly lower their emissions.
Maximum Coincident and Local Peak Electric Demand[13]	▪ To ensure demand flexibility and resilience in the face of increasing electric loads. City Light should develop this metric and ensure that the utility and Seattle's commercial and multifamily buildings have the capacity to implement the demand flexibility to meet it.
Other Metrics TBD	▪ Other metrics relating to water usage, equity, resilience, etc. can be added in the future

[13] From IMT model BPS: Coincident peak electric demand is defined as a property's electric demand when total electric demand from all sources on the entire electric utility's system is at its highest. Coincident peak local electric demand is defined as a property's electric demand when total electric demand from all sources on the electric substation serving the property is at its highest. See https://www.imt.org/resources/imt-model-bps-ordinance-summary/.

TARGETS AND VINTAGE

The Seattle BPS policy should include language committing the City to specific endpoint energy and emissions limits for commercial and multifamily buildings, and the BPS targets should be designed to deliver them. The final energy and GHG performance targets themselves can be developed either as part of the policy directive or during rulemaking. However, considering the short timeframe available to develop a GHGI performance standard, at a minimum the City should develop the GHGI targets as part of the policy. Either way, their development should be informed by recommendations from a dedicated committee of technical experts.[14]

As a starting point this policy brief recommends the IMT target setting framework. It includes developing a final performance standard which is the endpoint target for all buildings of a specific type. To function effectively to create market predictability and policy alignment opportunities, it is essential that the BPS telegraph endpoint goals for each metric. Then, instead of the City setting interim targets applicable to all buildings of a specific type, the interim targets would be established at the individual building level using a simple calculation of the incremental percent reductions required per BPS cycle between the building's performance in the baseline year and the year of the final standard that all buildings must achieve. This approach provides building owners with a long-term target they can use for planning purposes while providing them with interim targets more aligned with the path of their specific building. This approach also allows the utilities serving these buildings to plan appropriately.

For the Seattle BPS, the GHGI final standard should be zero onsite and district energy emissions by 2040 for existing buildings. This compliance timeframe will provide a window of more than 15 years for buildings to plan for and make significant reductions in onsite fossil emissions as they replace aging and/or failing equipment. The switch to more efficient, zero-emission equipment will also set buildings on a path to meet steeper energy reductions necessary to meet the EUI final standard by 2050.

The GHGI final standard for new construction should be set at zero onsite fossil emissions by 2030.[15] There is a precedent in the state BPS for including a more stringent target for newer construction to better align the targets with efficiency levels driven by increasingly stringent energy codes. For example, to align with the Washington State Energy Code mandate to reduce energy use in buildings by 70% and meet a broader goal of zero emission buildings by the 2030 code, the state BPS EUI targets for newer construction are approximately 30% lower than the building type average, versus just 15% less for existing buildings. The Seattle energy code is about one cycle ahead of the state code and already significantly limits electric resistance and fossil fuel space heating in new construction. The Seattle BPS for GHGI in new construction should align with the existing trajectory for zero emission new construction in Seattle by the 2027 Seattle Energy Code.

[14] *Ibid*.

[15] New construction defined as built to the 2027 Seattle Energy Code.

A Seattle specific EUI final standard would add an outcome-based backstop to the incremental reductions in existing buildings for each state BPS cycle, and to the prescriptive and model-based compliance for new and existing buildings in the Seattle Energy Code. The City must also ensure that the EUI metric in the state's 2030 BPS edition will serve Seattle's energy reduction goals and electric demand flexibility requirements. Considering the compliance lead time building owners need to prepare for new requirements, the City has a narrow window for action. This tight timeline also applies at the state level and the state should adopt 2030 state BPS targets by the end of 2024. The City should advocate for this with the state and for the state BPS EUI metric to transition to a trajectory approach with clear end point EUIs by property type by a specific year. However, by 2025, if the state is not on track to include a clear final performance standard and a trajectory for energy reductions in alignment with Seattle's goals, the City should release its own EUI metric for the Seattle 2030 BPS edition.

BPS CYCLES

The Seattle BPS compliance cycles should align with the state BPS cycles which are set up as five-year intervals with phased in compliance years by building size. For example, for the 2025 state BPS the measurement year for the largest cohort is 2025; subsequently the measurement year for the 2030 state BPS will be 2030. This structure means that for the first cohort (buildings over 220K SF), most changes to building equipment, materials, and operations must be completed by the end of 2024 and 2029 for the respective BPS years. The EUI standard should include incremental targets across six 5-year cycles from 2025 to 2050 (as part of state BPS unless significant Seattle amendments are required to meet Seattle emissions reduction goals).

The GHGI standard should span four 5-year cycles starting in 2025 and ending with a final zero emission GHGI standard for existing buildings in 2040. These final and interim targets are structured to prompt early and steady progress toward zero emissions. For example, setting the final GHGI standard for 2040 rather than 2050 will signal that once the standard goes into effect, all new and replacement equipment in existing buildings will need to meet the 2040 zero emission final performance standard within the equipment's useful life, and therefore must be zero emissions at the point of installation. Including up to four interim cycles with targets customized to individual building baselines will help keep buildings on track to meet the final standard by 2040 and will signal that operations and maintenance (O&M) and various smaller interim measures must actually deliver measurable emissions reductions for existing fossil fuel equipment that has yet to reach the end of its useful life.

The City should strive to complete the policy and rulemaking for its GHGI standard by the end of 2022, which would give the largest buildings two years to make changes to meet their interim standards by the first measurement year in 2025. In alignment with the state BPS compliance schedule, smaller buildings would have an additional one to two years depending on their size. This approach would allow the City to sync its first GHGI compliance years with the 2025 state BPS compliance years and would add additional motivation for building owners to ensure that new or replacement equipment installed prior to 2025 are high-efficiency electric rather than fossil gas. Leveraging this opportunity for alignment would require the City

to aggressively prioritize development of its GHGI standard policy and rulemaking in 2022. However, if the City waits any longer than the end of 2022, it will miss the opportunity to sync its first GHGI standard with the first state BPS. Alternately, the City could require building owners to submit a decarbonization plan (as described in the next section) by 2025 with commitments for how they intend to meet the GHGI standard by 2030 (or earlier). In this case, buildings would need to meet the 2040 final GHGI standard over three cycles rather than four (i.e., 2030, 2035, and 2040).

The coincident and local peak demand standard interim targets should span five 5-year cycles from 2030 to 2050. This recommendation assumes more time is likely needed to complete additional analysis, align with City Light resource requirements, and build out demand response capabilities across the commercial and multifamily building stock.

STRATEGIC DECARBONIZATION PLANS

Seattle should require building owners to develop an upfront Strategic Decarbonization Plan (SDP) to embed BPS targets into long-term capital planning and replacement cycles. The plan could be a decarbonization-focused overlay to the current energy planning requirements in the state's 2025 BPS. Alternately, it could be a full-scale alternative to the energy management plan but structured to provide a long-term strategy for meeting the final GHGI standard. The San Francisco Department of Environment offers a similar tool for conducting strategic decarbonization assessments as an alternative to its energy audit requirement. The tool helps owners strategically plan for decarbonization by shifting the planning process from a "reactive baseline to proactive decarbonization scenarios" and grounding decisions in foundational real estate management practices.[16] An SDP could also be a key link to whole building performance programs. For example, the SDP could augment or replace SEM plans in SEM programs as a way to directly align targets and processes with the BPS and more effectively approach interconnected decisions for how to best optimize the mix of efficiency, demand flexibility, electrification, and other behind-the-meter solutions. For Seattle and Washington to take this level of energy optimization and decarbonization to scale, it must be operationalized at scale within and across policy and program designs.

ADAPTIVE COMPLIANCE MANAGEMENT

The Seattle BPS GHGI standard should be designed to provide an option to follow a stepped path for buildings to decarbonize in alignment with their equipment replacement cycles. In the case of unusual circumstances, the IMT model BPS includes an alternative compliance approach where building owners can develop Building Performance Action Plans (BPAP), which are legally binding agreements with the jurisdiction allowing the building to follow an adjusted path for GHG reductions. This approach provides necessary flexibility for the owner and helps buildings better align replacement schedules. However, it is not intended to allow indefinite

[16] San Francisco Department of Environment. Strategic Decarbonization Assessment: A long term financial planning tool for building owners managing carbon emissions, energy efficiency, and electrification in San Francisco. https://sfenvironment.org/energy/strategic-decarbonization-assessment.

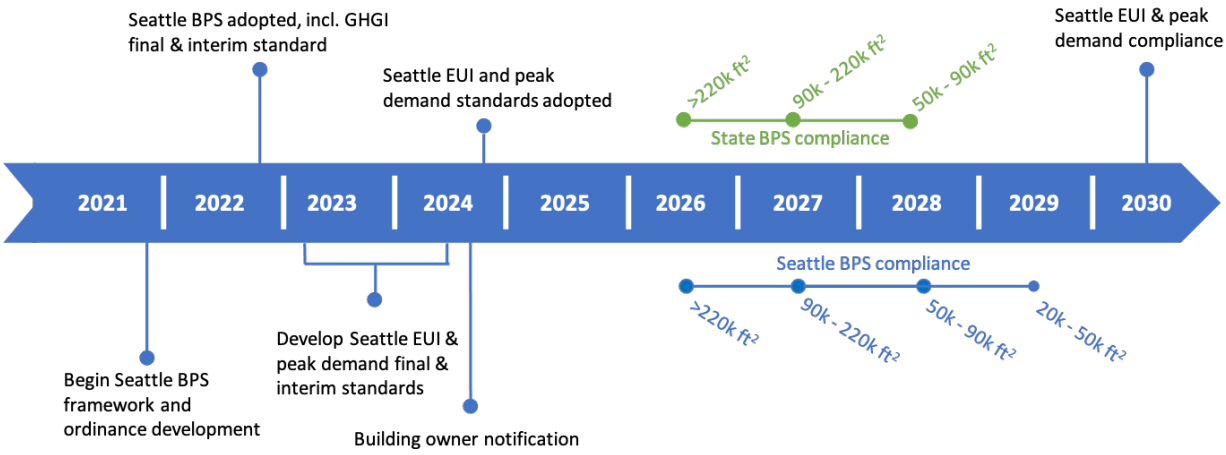
postponement of retrofits and is mainly intended for actions that have a reasonable explanation for delay, not those that could be done at any time. The IMT model BPS recommends that the BPAP be attached to the deed and referenced at time of sale.

RECOMMENDATIONS FOR NEXT STEPS AND FUTURE ANALYSIS

NEXT STEPS

As shown in the timeline below, it is critical for Seattle to formalize its BPS framework, policy directive, and final and interim GHGI performance standards no later than 2022 in order to sync up with the state BPS measurement year in 2025. Taking swift and decisive action will provide building owners with lead time to integrate the standards for various metrics into their capital plans and to make significant energy and emissions reductions by 2030. Prioritizing the development of the GHG standard in the policy, as opposed to during rulemaking, will help ensure that the first Seattle GHGI compliance years can align with the 2025 state BPS EUI targets. Seattle specific EUI targets can be developed as part of a second phase in preparation to potentially augment the state's 2030 EUI BPS.

Figure 1. Timeline for Proposed Seattle BPS Development Steps



The Seattle BPS policy adopted in 2022 should also include a directive and deadline to establish the Seattle-specific EUI and peak demand standards pending the character and development timing of the state's 2030 BPS EUI targets. The final and interim performance standards for these two additional 2030 metrics should be adopted and signaled to building owners by 2025; to accomplish this, the development and stakeholder process should be scheduled to start in early 2023. The EUI and peak demand standard should be developed with significant coordination and leadership from City Light since capacity reductions as well as maximum EUIs will have a direct effect on the utility's overall resource adequacy and reliability profile as the transportation and building sectors decarbonize over the next 30 years. Therefore, the development and detailed analysis of the EUI and peak demand standards should be integrated into and funded as part of City Light's 2024 Integrated Resource Plan Progress Report and 2024 Conservation Potential and Demand Response Assessment. This approach will also provide City

Light with a solid policy context and analytical basis for designing utility programs to directly support and align with Seattle BPS metrics.

FUTURE ANALYSIS

Future analysis should build upon the City's BPS related analysis to date. For example, OSE, through internal work and external analysis, has conducted several in-depth analyses to support the development of a Seattle BPS, including, but not limited to:

- A characterization of the Seattle building stock, including building populations, end-use fuel splits, and aggregate energy use and emissions forecasts by building type through 2050.[17]
- Estimates of building level and aggregate energy and emissions reductions required to meet the Climate Action Plan GHG reduction goals.[18]
- A survey of possible metrics and an assessment of the technical feasibility of deep energy and GHG reductions by property type.[19]
- Development of zero carbon compatible EUI and GHGI targets, structured into two cycles, including one interim target for energy efficiency and a final EUI and emissions target to achieve the City's commercial sector reduction goals.[20]
- Analysis of King County assessor data and aggregate impact analysis of several EUI and GHG reduction scenarios based on projections of how the state BPS EUI targets could have been set between 2025 and 2050, but not the final 2025 EUI targets for existing and newer buildings that were developed and adopted during the WA State 2020 rulemaking process.[21]
- Cost estimates by electrification measure to better understand the up-front costs to building owners.
- Additional work has also been conducted to pilot building specific strategic energy efficiency and electrification plans, develop case studies, and map the owner support options needed for successful implementation.

Much of this analysis has been conducted to better understand the Seattle building stock and assess building decarbonization potential and limits at a technical level. These studies provide crucial insights and data inputs for establishing a Seattle BPS framework. Future analysis should build on this foundation while focusing more specifically on assessing the impacts and key decisions associated with a comprehensive BPS framework designed to address emissions and grid impacts on an established trajectory to 2050. For example, the policy recommendations

[17] Ecotope, Inc. *Building Energy Use Intensity Targets*. 2017, http://www.seattle.gov/Documents/Departments/OSE/BldgEngy_Targets_2017-03-30_FINAL.pdf.
[18] *Ibid*.
[19] Carbon Neutral Cities Alliance. *Performance Standards for Existing Buildings Performance Targets and Metrics Final Report*. 2020, http://carbonneutralcities.org/wp-content/uploads/2020/03/CNCA-Existing-Building-Perf-Standards-Targets-and-Metrics-Memo-Final-March2020.pdf.
[20] *Ibid*.
[21] Lawrence Berkeley National Lab. *GHG policy impacts for Seattle's buildings: targets, timing, and scope*. 2021, https://journal-buildingscities.org/articles/10.5334/bc.81/.

proposed in this policy brief could form the basis of additional technical analysis to be conducted in parallel with the policy development process. This approach would provide the City and stakeholders with targeted analysis relevant to specific policy scenarios to help shape the BPS framework. Recommendations for future analysis for during and after policy development are described below.

Phase 1: Priority questions and analysis to support BPS policy development in 2021 and 2022, including the GHGI final and interim performance standards:

1. What is the aggregate energy and GHG reduction impact of the policy framework proposed in this policy brief? For example, the property type, sizes, metrics, final and interim standards, etc.
2. What are the natural replacement rates for fossil fuel equipment in commercial and multifamily buildings, and assuming these rates, what will emissions reduction be if the City sets a zero-emission final GHGI performance standard by 2040?
3. To what degree will the 2018 Seattle Energy Code restrictions on electric resistance and fossil fuel space and water heating equipment drive decarbonization in existing buildings? In addition, how can the existing buildings code section be revised to drive more space and water heat equipment decarbonization?
4. Can the Seattle BPS allow buildings to decarbonize in accordance with natural replacement rates to meet the City's emission reduction goals? If not, how should the trajectory timeline be revised and what are the cost impacts?
5. How can the Seattle GHGI standard be designed to ensure that building owners do not delay replacement of equipment that has reached the end of its useful life?
6. What are the emissions and cost impacts of delaying the first Seattle GHGI standard from 2025 to 2030, and the final standard from 2040 to 2050? For example, delaying the effective year of the GHGI standard could lead to an increase in like-for-like replacements of fossil fuel equipment that would then need to be replaced before the end of its useful life.

Phase 2: Priority questions and analysis for implementing GHGI standard and developing 2030 EUI and peak demand standards by 2025:

1. What is the impact of the current, adopted state EUI targets on Seattle's >50k SF and >20k SF building stock and how would the state's final EUI standard and framework for interim targets need to be structured for Seattle to meet the energy reduction goals in the Seattle Climate Action Plan? For example, can and should Seattle use the zero-carbon compatible EUIs developed for Seattle as part of the 2020 CNCA study or does additional maximum technology analysis need to be conducted?
2. Assuming a fully decarbonized commercial and multifamily building stock by 2040, what aggregate levels of energy and peak demand reduction does City Light need to maintain resource adequacy and reliability? What do these aggregate levels imply for final and interim EUI and peak demand performance standards at the property type level?

3. Can final EUI performance standards developed for >50k SF buildings be applied to 20-50k SF and <20k SF buildings?
4. How much emissions must be reduced in the <20k SF buildings and what's the highest impact program design for opt-out utility programs to ensure these reductions are realized on a steady and tracked timeline?
5. Detailed recommendations on how City Light can align current and future program offerings with the Seattle BPS metrics and framework.
6. Market analysis to provide market actors with a quantified sense of the number of retrofits, technologies, etc. that will take place and on what timeline.
7. What is the financial impact of a zero GHGI standard by 2040 on economically distressed buildings and how can they be mitigated within the BPS design and/or through financial and technical assistance?
8. What are the technical limitations and impacts by building type (e.g., hospitals, educational campuses) or size (e.g., very large buildings)?
9. Deeper analysis of critical retrofits to reduce carbon emissions, including potential gaps in market readiness of specific technologies for specific property types.

SECTION 2: Seattle Building Performance Standard – Supportive Policy Needs

Prepared by:
NW Energy Coalition

INTRODUCTION

Building emissions are one of the largest and fastest growing sources of climate pollution in Seattle – accounting for more than one-third of Seattle's greenhouse gas emissions.[22] A Seattle building performance standard (BPS) targeting energy use intensity (EUI) and greenhouse gas intensity (GHGI) in commercial and multifamily buildings, as proposed by this report's technical policy recommendations (Section 1), is critical to meeting Seattle's goal of carbon neutrality by 2050.

To successfully implement a Seattle BPS, supportive and complementary policies are needed to minimize displacement, provide technical support to building owners and other stakeholders, establish financing and incentive offerings, ensure equitable distribution of the benefits of decarbonizing buildings, develop a robust and inclusive workforce, and create dynamic community engagement strategies. Additionally, a review of the regulatory landscape is needed to determine what is needed to minimize duplicative compliance activities and to align Seattle's BPS policy with the Washington Clean Buildings Act (CBA).

In tandem with the technical policy recommendations in Section 1, the following set of complementary policy recommendations are intended to support Seattle building owners and other stakeholders in preparing for and complying with a Seattle BPS. These recommendations have been informed by outreach to Seattle/King County-area commercial building owners, affordable housing operators, energy efficiency service companies, sustainability-focused organizations, and other interested stakeholders. The feedback received by the NW Energy Coalition provides a snapshot of opinions and perspectives, but does not negate the need for deep and meaningful community engagement throughout policy development to better understand community needs and concerns of a Seattle BPS. A summary of policy elements to consider and recommended complementary policies is listed in the table on the next page, and an expanded discussion of each follows, beginning on page 18.

[22] Seattle Office of Sustainability and Environment, *Buildings & Energy*. https://www.seattle.gov/environment/climate-change/buildings-and-energy

SUPPORTIVE POLICIES FOR A SEATTLE BPS

The below table and following pages describe needed policies that can support implementation of a Seattle BPS.

Table 3. Summary of Seattle BPS Supportive Policy Recommendations

Policy Element	Supportive Policies
Anti-displacement	▪ Expand JumpStart Seattle "2022 & Beyond" to include BPS compliance assistance for affordable housing buildings and increase allocations to the Equitable Development Initiative ▪ Engage under-resourced, BIPOC, and minority building owners and small businesses to identify displacement risks and support needs ▪ Include anti-displacement provisions in City funding or financing ▪ Consider prioritizing under-resourced, BIPOC, and minority building owners for City incentive offerings and technical support resources
Technical Resources	▪ Develop a resources hub to centralize case studies, education/training materials, webinars, vendor listings, and funding/financing opportunities ▪ Use the Seattle Building Tune-Ups program as a model to develop trainings and provide help desk support services for building owners ▪ Establish a clean buildings accelerator program modeled after the Seattle Building Tune-Ups Accelerator[23] with financial and technical support, including utility incentives ▪ Train City language specialists on BPS elements and compliance requirements to ensure accurate and contextually relevant translation services
Financing Assistance	▪ Establish an energy efficiency and electrification financing program for commercial and multifamily buildings ▪ Collaborate with King County to raise awareness and connect building owners to C-PACER financing
Incentives	▪ Establish an early adopter incentive of great enough value to encourage early compliance ▪ Continue to advocate for a change in State law to allow beneficial electrification incentives, and direct Seattle City Light to develop incentives when the restriction is lifted ▪ Explore distributor-level incentives for electrification equipment and services to further market transformation

[23] The Seattle Building Tune-Ups Accelerator program provided technical support and financial incentives for 102 participating buildings through 2019, with an estimated 12 percent reduction in energy use and GHG emissions. https://www.seattle.gov/environment/climate-change/buildings-and-energy/building-tune-ups/tune-up-accelerator

Policy Element	Supportive Policies
Workforce Development & Economic Inclusion	▪ Establish scoring criteria in City funding or financing for BIPOC and minority building owners or those using minority-owned firms for compliance work ▪ Expand *Seattle Promise* scholarship to include funding for South Seattle College's Bachelor of Applied Science in Sustainable Building Science Technology, and leverage *Seattle Promise* resources to expand enrollment in Seattle Colleges' *Green Buildings Practices* program from economically distressed zip codes ▪ Leverage workforce training opportunities in JumpStart Seattle to increase access to energy service jobs (skilled and professional), with an emphasis on increasing diversity in the technical trades ▪ Engage labor and trade unions, energy service companies, utilities, and other stakeholders on demand planning and workforce development
Stakeholder Outreach	▪ Develop robust stakeholder outreach plans to solicit feedback during policy development with focus on underrepresented communities and equitable distribution of the benefits of building decarbonization ▪ Establish a task force to guide policy development and address technical, anti-displacement, and resource needs in implementation

ANTI-DISPLACEMENT

The inclusion of commercial and multifamily buildings greater than 20,000 ft^2 in a Seattle BPS (as opposed to the CBA threshold of commercial buildings greater than 50,000 ft^2) presents a risk of displacement for under-resourced commercial building owners, small businesses and commercial tenants, BIPOC communities, and low-income residential tenants. These stakeholders may not have access to the upfront capital to make improvements to their properties or may not be able to absorb a rent increase due to these improvements or higher tax value of the buildings. Some building owners may decide to redevelop their building sites, rather than comply with the requirements, which could risk displacement as well as a potential increase in embodied carbon (see box at right).

Embodied Carbon

The term *embodied carbon* refers to the emissions associated with materials and construction processes throughout the whole lifecycle of a building. While most climate and energy policy thus far has addressed the operational aspects of a building's emissions, we are increasingly understanding the impact of embodied carbon. Jurisdictions, including the City of Seattle, are starting to track and understand the embodied carbon of new construction. Similar and complementary policies are needed to ensure that policies affecting existing buildings do not unintentionally increased embodied carbon, such as driving premature redevelopment. There may also be ways to encourage the use of lower embodied carbon materials as buildings retrofit to meet the BPS.

To help mitigate the risk of displacement, the City could expand the scope of JumpStart Seattle's funding proposals for "2022 and Beyond."[24] Specifically, affordable housing allocations could be expanded beyond construction and acquisition to include BPS compliance work for existing affordable

[24] Seattle City Council, *Resolution 31957.* (2020). http://seattle.legistar.com/View.ashx?M=F&ID=8696145&GUID=6246F0C3-B708-42AB-9A60-5FBA47CA7CFC

housing buildings serving the same populations (primarily those with the lowest income). This inclusion could include both officially-designated "affordable housing" and housing that is more at risk and that are serving these same lower income populations (sometimes called "naturally occurring affordable housing").

Allocations to the Equitable Development Initiative (EDI), which promotes equitable access to housing, jobs, education, and other community amenities, could be expanded to include resources for BPS compliance for buildings at greatest risk of tenant displacement.[25] This enhancement could include tenant relocation assistance for buildings requiring deep retrofits or other supportive measures. Evaluation of the EDI scoring matrix will be needed to determine what, if any, changes are necessary to accommodate BPS compliance activities.

Including multifamily residential buildings in a Seattle BPS should be tied to additional funding and financing offerings, as discussed below, and measures should be included that prohibit from recouping compliance costs through rent increases or capitalizing on associated building upgrades (e.g., addition of cooling due to installation of heat pumps). For example, the city of Minneapolis's 4D Affordable Housing Incentive Program provides energy efficiency grants of up to $50,000 for multifamily housing providers who commit to keeping 20 percent of units income-restricted, in addition to a 40 percent property tax rate reduction for qualifying units.[26]

TECHNICAL RESOURCES

Technical assistance and resources were one of the most common needs cited when discussing compliance with the CBA. Compliance with both the CBA and a city BPS will need substantial property owner outreach and education. The Seattle Building Tune-Ups (SBTU) program provides a model to follow for technical support services, including case studies, webinars, training programs, a help desk, and access to a vetted (but not endorsed) list of vendors.[27] These resources could be centralized into a Resource Hub with information on funding and financing offerings – providing a one-stop shop for building owners to learn about the BPS policy and access resources needed to comply.

Throughout the city, and particularly in the International District as identified during outreach activities, there will be building owners and tenants who need language services from the City's Language Access Program through the Office of Immigrant and Refugee Affairs.[28] However, basic translation is insufficient to effectively support non-English speakers in the complexity of BPS compliance. Collaboration between BPS subject matter experts and language specialists is needed to ensure language specialists have the necessary working knowledge of the BPS

[25] Seattle Office of Planning and Community Development, *The Economic Development Initiative*. https://www.seattle.gov/opcd/ongoing-initiatives/equitable-development-initiative#background
[26] City of Minneapolis, *4D Affordable Housing Incentive Program*. https://www2.minneapolismn.gov/government/programs-initiatives/homes-development-assistance/4d-affordable-housing/
[27] The Seattle Building Tune-Ups program helps building owners identify ways to reduce energy and water costs through operational efficiencies and low- and no-cost fixes that average a 10-15 percent energy use reduction. http://www.seattle.gov/environment/climate-change/buildings-and-energy/building-tune-ups
[28] Seattle Office of Immigrant and Refugee Affairs, *Language Access Program.* https://www.seattle.gov/iandraffairs/LA

program, compliance requirements, and related programming, such as Seattle City Light incentives, to provide contextually relevant language services. Additionally, any City-provided list of vendors should include information about language services offered by the company.

FINANCING ASSISTANCE

Financial support was the most cited need for BPS compliance by stakeholders, and for some building owners, enhanced access to low and zero-interest loan financing will be essential to overcome any upfront costs of BPS compliance. Seattle City Light has existing partnerships with Puget Sound Cooperative Credit Union and Craft3 to provide home energy improvement loans billed directly on utility bills through the Home Energy Improvement Loans program.[29] Peer cities like New York and Washington, D.C. have established similar lending partnerships specifically to support BPS compliance through the NYC Energy Efficiency Corporation[30] and the DC Green Bank[31] respectively. Seattle could, in partnership with the Washington State Housing Finance Commission and with financial institutions, expand existing energy improvement loan programs to be inclusive of commercial and multifamily buildings or develop new financing resources for BPS compliance work.

Preserving Affordable Housing

The City of Seattle has seen robust economic growth over the past few decades, but with that growth has been a substantial and increasing need for affordable housing, particularly for those at the lowest incomes. The city has a number of publicly supported affordable housing buildings and many could be impacted by a Seattle BPS. Among other benefits, a BPS can bring lower utility bills and improved air quality in residences, all of which are important to affordable housing stakeholders.

However, without strong financial and technical support from the city in, these properties could struggle to meet a BPS. Affordable housing providers have unique challenges for large capital improvements, including gaining access to units or needing to relocated tenants; access to financing that can be disperse and very competitive; and competition with other housing priorities. Deep outreach will be needed to develop a policy that continues to support our City's housing needs, reduces GHG emissions, and ensures the benefits of a BPS policy flow to all residents.

Additionally, King County is developing a C-PACER (Commercial Property Assessed Clean Energy and Resilience financing) program which will provide long-term financing for energy and resiliency projects, with the financing attached to the property rather than the owner.[32] Although the City is not directly involved in the C-PACER program, there is an opportunity to collaborate on outreach and education initiatives to Seattle building owners. A challenge to overcome with C-PACER financing is how to serve smaller projects (generally under $250,000) that do not attract lenders as easily as larger projects.[33] To overcome this challenge, the City, independently of or in partnership with the County, could explore a government-

[29] Seattle City Light, *Home Energy Improvement Loans*, https://www.seattle.gov/light/ductless/docs/SCL%20Loan%20Flyer%20PSCCU%20Nov%207_final.pdf

[30] New York Energy Efficiency Corporation, https://nyceec.com/

[31] DC Green Bank, https://doee.dc.gov/greenbank

[32] King County, *C-PACER Program*. 2021, https://kingcounty.gov/services/environment/stewardship/sustainable-building/pace.aspx

[33] Clean Energy Finance Forum, *Can Commercial PACE Lending Provide a Piece of the Post-Covid Puzzle?* 2020, https://www.cleanenergyfinanceforum.com/2020/08/04/can-commercial-pace-lending-provide-piece-of-the-post-covid-puzzle

sponsored revolving loan fund[34] program or similar financing enhancements that would provide more flexible terms and rates to support small and/or under-resource building owners make energy efficiency and clean energy upgrades.

INCENTIVES

To reach the City's goal of curbing building emissions, incentives for early adoption and beneficial electrification would provide pathways to early compliance and broader electrification. The CBA provides an early adopter incentive of $0.85 per ft^2 for buildings that qualify,[35] but early feedback suggests that more funding is required to help building owners overcome upfront costs and spur early compliance, as well as go deeper and replace large systems with fossil fuel-free alternatives. Encouraging early adoption with a more robust incentive will support the City's goals for carbon reduction and assist building owners who may not be able to fully self-fund compliance work. Further, special attention needs to be paid to incentive distribution and outreach to ensure equitable access to these limited funds.

Feedback from those in the building industry identified a need for specific incentives for beneficial electrification to prompt building owners to transition from fossil fuel-fired equipment to efficient electric space and water heating equipment, particularly if electric infrastructure also needs to be updated. Currently, these kind of incentives are not allowed by State law. During the 2021 state legislative session, HB 1084 was introduced, and among other measures, it would have allowed publicly owned utilities like Seattle City Light to promote beneficial electrification with customer incentives.[36] While this bill did not advance in 2021, continued advocacy in future legislative sessions is needed to allow publicly owned utilities to offer this kind of programming to customers and help overcome this barrier.

WORKFORCE DEVELOPMENT AND ECONOMIC INCLUSION

Due to increased retrofit work, a Seattle BPS will have a positive impact on the labor market and local economy, and it is vital that the benefits of this economic growth are equitably distributed. The City provides scoring criteria for Women- and Minority-Owned Businesses (WMBE) bidding on City-funded projects that can be used as a model for consideration of BIPOC and minority building owners applying for City BPS funding or financing.[37] This framework could also include consideration for building owners contracting City-identified WMBE firms for compliance work. To further expand access to WMBE firms, any vendor list provided by the City could include WMBE status.

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[34] Department of Energy, Office of Energy Efficiency and Renewable Energy, *Revolving Loan Funds*. https://www.energy.gov/eere/slsc/revolving-loan-funds

[35] Washington State Department of Commerce, *Early Adopter Incentive Program.* https://www.commerce.wa.gov/growing-the-economy/energy/buildings/early-adopter-incentive-program/

[36] Washington State Legislature, *HB 1084 House Bill Report.* https://app.leg.wa.gov/billsummary?BillNumber=1084&Initiative=false&Year=2021

[37] Women- and Minority-Owned Businesses (WMBE) are defined by the City of Seattle as firms that are state-certified or self-identified as having at least 51% ownership by women and/or minorities. http://www.seattle.gov/purchasing-and-contracting/social-equity/wmbe

The *Seattle Promise*, a scholarship available to all Seattle high school students for up to two years (90 credits) of education at Seattle Colleges, is a prime opportunity to focus economic inclusion activities on BPS compliance.[38] The existing counseling and student-readiness resources can be leveraged to expand enrollment in the *Green Buildings Practices* program, particularly from economically distressed zip codes.[39] Further, the City can increase scholarship funding for the Bachelor of Applied Sciences in Sustainable Building Science Technology at South Seattle College to include four years (180 credits) for students from economically distressed zip codes or those demonstrating financial need.[40] The City could also further partner with the Smart Buildings Center, which implements Building Operator Certification (BOC) training; for example, in some other jurisdictions, the BOC program has partnered with utilities and local Workforce Development Boards and agencies to actively support the training of unemployed and underemployed workers, with the goal of these individuals finding family wage jobs in the O&M field.[41]

JumpStart Seattle's post-COVID economic revitalization goals provide an opportunity for investments in BPS compliance work through training program investments that align with the Seattle Green New Deal.[42] Dedicated funding and resources for education, training, and apprenticeships in the energy service sectors – both professional and skilled labor – would provide historically underrepresented communities the opportunity to partake in the economic benefits of BPS activities. To meet the demand for BPS compliance-related work, the City could engage labor and trade unions, energy service companies, regional utility companies, education institutions, and other interested stakeholders to develop a unified strategy on workforce development, including establishing apprenticeship programs specifically for the clean buildings sector.

[38] Seattle Colleges, *Seattle Promise-About.* https://www.seattlecolleges.edu/promise/about

[39] Seattle Colleges, *Green Building Practices.* http://sustainability.seattlecolleges.edu/academic-programs/green-building-practices/

[40] Seattle Colleges, *Sustainable Building Science Technology.* https://southseattle.edu/programs/sustainable-building-science-technology

[41] BOC Bulletin, "PG&E Sponsor Highlight", page 4. Winter/Spring 2020. https://www.theboc.info/wp-content/uploads/2020/02/BOC-Bulletin-WTR-SPR-2020-Website.pdf

[42] Seattle City Council, *Resolution 31957*. S.1.4.b (2020) provides investments for workers"…(2) entering new jobs industries that are growing or are expected in the future; and (3) who are in jobs that may be displaced to due to implementation of new policies or regulations, such as workers whose jobs currently depend on the fossil fuel industry and whose jobs may be displaced as the City implements GND strategies. This should include programs that assist workers who are transitioning between professions to ensure that such a transition offers comparable or improved pay and benefits."

STAKEHOLDER OUTREACH

A Note on Policy Alignment
During outreach, multiple stakeholders noted the multiple energy related policies and programs that can affect building owners in Seattle. For example, depending on the scope, a building retrofit could connect to the CBA, the Seattle Energy Code, or to City Light incentives. Building owners will have regular reporting requirements for the Seattle benchmarking program, the BTU program, and the State's reporting related to the CBA. As the city develops a Seattle BPS, aligning programs and avoiding duplicating reporting requirements will be important.

Development and implementation of a Seattle BPS will require community engagement, with specific focus on underrepresented communities and under-resourced buildings (e.g., nonprofit-owned buildings, smaller single-site building owners). As elected officials craft the policy goals and direct relevant city offices and departments to develop and implement a BPS, inclusion of community outreach metrics and the establishment of a stakeholder-driven task force are needed. The task force should include building owners, those in the building industry (e.g., engineers, architects), community organizations, environmental interests, and others who are well-suited to make policy recommendations on displacement issues, funding and resource needs, and equitable distribution of the benefits of this policy. A similar task force was convened by Washington D.C. to develop a BPS implementation plan, recommend amendments, and develop complementary policies or programs.[43]

[43] Department of Energy & Environment, Washington, D.C. *Building Energy Performance Standard Task Force January 7, 2020 Meeting Slides.* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/BEPS%20Task%20Force%20Meeting%201-7-2020_FINAL.PDF