

# Climate Impact Actions

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**NOVEMBER 2, 2021**

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**City of Seattle  
Office of Sustainability & Environment**



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# Acknowledgements

The Office of Sustainability and Environment (OSE) is grateful to organizations like Puget Sound Sage and Got Green for documenting and sharing community priorities<sup>1</sup>, as well as to the many community-based organizations and individuals who contribute to and advise the City in policymaking.

We would also like to thank the Seattle Department of Transportation, Office of Economic Development, Office of Planning and Community Development, Seattle Department of Construction and Inspections, Seattle City Light, Office of Housing, and the Office of the Mayor for assisting OSE in the creation and packaging of these actions.

## Letter from OSE Director

November 2, 2021

Climate change is not a future problem – the impacts are already being felt across our region. Rising seas and sweltering summer heats, droughts and flooding, wildfire smoke and dangerous air quality, the list goes on. With the release of the latest Report of the Intergovernmental Panel on Climate Change, it is very clear: humanity has heated the climate to at least a 100,000 year high. This warming is caused by human influence, and we must rapidly reduce emissions to net zero by 2050 to stabilize our climate.

Seattle's most recent greenhouse gas (GHG) inventory shows that to meet our climate goals, we need to drastically reduce carbon emissions from our two largest sources, the transportation and buildings sectors. As our city recovers from the COVID-19 pandemic, we must center our Black, Indigenous, People of Color (BIPOC) communities who continue to disproportionately experience these climate impacts along with decreased economic opportunity and job access caused by current and historical institutional and systemic racism.

Over the past few years, the City has taken significant steps to make progress towards our goals:

- **Energy efficiency and decarbonization in buildings.** Seattle's latest Commercial Building Energy Code is among the strongest on climate in the nation and the updated Green Building Standard requires fossil-fuel free space and water heating equipment and appliances in order for developments to receive additional development capacity. Seattle passed the Heating Oil Tax to help fund household conversions from oil heat to electric heat pumps. The City also banned fossil fuels in new municipal buildings and called for a strategy to decarbonize all existing municipal buildings.
- **Transportation electrification and reducing drive alone trips.** The City released Seattle's Transportation Electrification Blueprint and Seattle City Light's transportation electrification strategic investment plan to leverage clean electricity to power the transportation sector. Seattle's EV Readiness Ordinance requires EV-ready electrical service in new off-street parking stalls. City Light's EV Fast Charging pilot is expected to have 25 fast chargers operational by the end of 2021. Investments in the Orca Opportunity for Youth program, bus-only lanes, and 52

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<sup>1</sup> Reports include Puget Sound Sage's [Powering the Transition](#) and their collaborative effort with Got Green, [Our People, Our Planet, Our Power](#).

miles of new bike facilities (bike lanes, greenways, etc.) in the last five years have provided alternatives to using personal vehicles. SCL is supporting Metro with necessary infrastructure to deploy 250 all-electric buses across our region.

- **A just transition to clean energy and resilience.** Seattle’s Green New Deal brings together communities most impacted by racial, economic, and environmental injustice to advise on investments to eliminate fossil fuels in Seattle by 2030. Seattle was able to triple the Environmental Justice Fund and the recent Solar Microgrid on Miller Community Center serves as a community resilience hub and emergency shelter. Seattle Public Utilities is an adaptation and resilience leader, planting more than 14,000 trees in Seattle’s Tolt River Watershed to grow a forest more resilient to heat, drought, pest, disease, and wildfire.

We need to use the momentum that has been building around these efforts to craft what will invariably be a complex and layered solution to equitably transition our City completely away from fossil fuels. We intend this report to be a starting place for the Green New Deal Oversight Board in their work to explore and recommend how best to move toward a just clean energy future that creates jobs and advances an equitable clean energy transition. Each of the actions in this report comes with ideas for next steps and collaboration for the Oversight Board to consider.

We look forward to future partnership with the Green New Deal Oversight Board as we work to invest in policies and programs that fight climate change and prioritize investments in communities historically most harmed by economic, racial, and environmental injustices.

-Michelle



Michelle Caulfield, Interim Director  
Office of Sustainability and Environment

# About the Green New Deal in Seattle

In 2019, the City of Seattle expanded on its history of progressive climate action by enacting the Green New Deal (GND) Resolution (Res 31895)<sup>2</sup>, which calls for the City to create and implement policies and programs to eliminate climate pollution by 2030, address historical and current injustices, and create quality careers. To achieve this vision, the Green New Deal Resolution commits to the following goals:

- Make Seattle free of climate pollutants, including carbon dioxide, black carbon, methane, nitrogen oxides, and fluorinated gases, by 2030;
- Prioritize investment in communities historically most harmed by economic, racial, and environmental injustice;
- Advance an equitable transition from an economy based on extraction and exploitation to one based on regeneration and cooperation, ensuring that those with the least amount of power and wealth are positioned to lead during this transition and are not left behind; and
- Create stable, well-paying jobs that prioritize local hire and are protected by Project Labor Agreements and Labor Harmony Agreements to ensure high-quality work and fair treatment of workers.

The [Green New Deal Resolution](#) was unanimously passed by City Council with many people testifying in favor of the city acting quickly to address the climate crisis. Additionally, Mayor Jenny Durkan issued the [Green New Deal Executive Order](#) (EO-2020-01)<sup>3</sup> directing all City departments to work together with the [Green New Deal Oversight Board \(Oversight Board\)](#) to advance the goals set forth by the Green New Deal Resolution and [Ordinance](#).

The 19 members of the Oversight Board will work together with the Environmental Justice Committee – which is comprised of community leaders whose goal is to deepen the influence of BIPOC communities in Seattle’s environmental policies and work – as well as other key stakeholders to advance our shared goals.

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<sup>2</sup> <http://seattle.legistar.com/LegislationDetail.aspx?ID=4078775&GUID=A91E660A-1F3A-4545-8D24-281916F6EDB4&FullText=1>

<sup>3</sup> <https://durkan.seattle.gov/wp-content/uploads/sites/9/2020/01/Final-Executive-Order-2020-01-Advancing-a-Green-New-Deal-for-Seattle.pdf>

# Report Purpose and Background

The Green New Deal Executive Order calls for OSE to convene a Green New Deal City Team, comprised of relevant City departments, such as Seattle Department of Transportation, Seattle City Light, Seattle Department of Construction and Inspections, the Office of Economic Development, and Office of Planning and Community Development, that would engage and collaborate with community-based organizations and residents to develop a brief report identifying the top 10 actions the City could take in order to achieve expeditious reductions in GHG emissions.

While OSE had hoped to extensively engage more City department staff and external stakeholders on collaborative efforts to develop these recommendations in 2020, we were unable to due to the outbreak of the COVID-19 pandemic and shifts in capacity to support residents in accessing basic food, health, and income needs. The intent of this report, therefore, is to serve as a starting point for discussions with the Oversight Board. Additionally, in recognition of the progress Seattle has made so far, this report also includes a list of City’s climate accomplishment highlights over the past few years as an addendum ([Appendix A](#)).

**“The Team shall issue a brief report identifying the top 10 actions the City could take in order to achieve marked and expeditious reductions in greenhouse gas emissions.”**

*-Green New Deal Executive Order*

## Aligning Climate Actions with Community Priorities

Seattle’s communities of color are vibrant, creative, and resourceful and must be centered in problem solving. They are disproportionately burdened by the negative impacts of climate change and facing public health and economic crises at unprecedented scale. To create equitable policies, we must recognize that those closest to the problems are often best positioned to offer solutions that respond to a particular community’s unique needs, concerns, and experiences.

In an effort to align these Green New Deal actions with community priorities, OSE relied on public reports like Puget Sound Sage’s [Powering the Transition](#) and their collaborative effort with Got Green, [Our People, Our Planet, Our Power](#). We additionally grounded these actions in the goals and strategies outlined in our [Equity & Environment Agenda](#).

We recognize that these community priorities – like improving the transportation experience, having safe and maintained greenspaces and community centers that can incorporate art and music, having easy access to culturally relevant and affordable food, and providing support to community-based organizations that help community members work together with the city – could not be possible without the deep partnership with communities that we value. We are grateful for the partnership of the [Environmental Justice Committee](#) for centering community ownership in decision-making for our departmental priorities.

## Reducing Climate Pollution

According to Seattle's most recent GHG Inventory, the City's overall core<sup>4</sup> GHG emissions have increased 1.1% from 2016 - 2018. While these emissions have reduced by 4.1% since 2008, that reduction is not nearly enough to meet our original climate goal of a 58% reduction in core climate emissions by 2030 and net-carbon neutral by 2050, let alone the Green New Deal goal of a Seattle free of climate pollutants by 2030. Seattle needs to reduce climate emissions 17 times faster over the next ten years than we have from 2008 – 2018 just to reach a 58% reduction by 2030. We will need to do even better if we are to eliminate climate emissions altogether by 2030.

Transportation is Seattle's largest source of climate pollution, responsible for nearly two-thirds of Seattle's GHG emissions. Much of that comes from passenger cars and trucks. Transportation emissions declined 2.4% between 2016 and 2018, but the emissions reductions in this sector will need to be much greater going forward. GHG emissions from the building sector increased 8.3% since our last report, largely as a result of growing fossil gas use. Gas used for cooking and space and water heating in buildings is a fossil fuel and its extraction, storage, and combustion releases methane, a potent greenhouse gas. **Fossil gas is responsible for 86% of all residential and commercial building emissions.** We must take every opportunity to rapidly decarbonize our buildings and transportation sectors to meet the Green New Deal Resolution goal of a fossil fuel-free Seattle by 2030.

## Creating Employment Opportunities

In some South Seattle neighborhoods, where 70% of residents are people of color, there are higher Covid-19 infection and mortality rates, greater unemployment, and a disproportionate number of Black-owned businesses closing. A truly green economy must serve all members of the community and close these equity gaps, supported by an inclusive and diverse workforce.

The transition to clean energy will create many jobs and opportunities that directly benefit workers and the Seattle area.<sup>5</sup> Skilled trades, design professionals, equipment maintenance workers, and renewable energy specialists will all see a growth in demand. The City has an opportunity to create a green

## Leveraging Seattle City Light's Carbon-Neutral Electricity Grid

About 90% of the electricity that Seattle City Light (SCL) provides to consumers in Seattle comes from low-carbon hydroelectric dams. SCL purchases carbon offsets equal to the greenhouse gas emissions resulting from all other aspects of their operations.

City Light is building the energy grid of the future by leveraging carbon-free hydroelectricity generation; exploring emerging technologies such as energy storage, distributed energy resources, microgrids, transportation electrification; and investing in renewable energy to lay the groundwork for a future energy system that is both resilient and carbon-free.

Visit SCL's [Future of Energy](#) page for more information.

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<sup>4</sup> Core emissions sources are those the city can most directly and significantly impact and most of the City's climate policies and programs are aimed at reducing our core emissions. For more information, check out [Seattle's 2018 GHG Inventory Report](#) or visit our [GHG inventory dashboard](#).

<sup>5</sup> Based on information from Seattle's [Fossil Fuel Workforce Transition Study](#), and also discussed in further detail under the first action.

workforce not only in construction and energy trades, but also green job opportunities for artists, teachers, health workers, gardeners, bus and delivery drivers, and more.

## Addressing Racial Inequity

BIPOC and low-income communities have been and continue to be the most negatively impacted by climate change and environmental degradation. Climate change poses direct risks to public health, infrastructure, safety, and the environment, as it exacerbates air pollution, increases flood risk, and increases the frequency, intensity, and duration of extreme heat events. The livelihood of tribal sovereignties and native communities in the region are further at risk as their access to first foods such as salmon, shellfish, berries, and other traditional plants are negatively impacted by warming water and the shift of growing seasons.

Here in Seattle, children in the Duwamish Valley are three times more likely to suffer from asthma than those in the predominantly white neighborhoods of North Seattle. And people living in South Park and Georgetown have an expected lifespan that's eight years shorter than the average Seattle resident and 13 years shorter than the well-off neighborhood of Laurelhurst.

The City's policies and actions must center race by giving intentional examination of potential project impacts, defining specific outcomes to maximize benefit and minimize burden for communities most impacted, and designing policies and implementing projects in partnership with communities to achieve racial equity goals.

## Investing Directly in BIPOC Communities

The transition to a clean energy future offers an opportunity to generate equitable community prosperity. The City must make deep investments in Black, Indigenous, and communities of color who are disproportionately burdened by the negative impacts of climate change and already have many of the creative solutions we need. We can eliminate climate pollution and enhance resilience through apprenticeship investments, workforce training, and exploring strategies to keep communities and businesses in place.

Seattle's policies and actions must ensure that the cost of transitioning to a clean energy future is assumed by those who have contributed the most to climate change and that benefits of the transition is reinvested back into BIPOC communities.

# Climate Actions

As required by the Green New Deal executive order, OSE has prepared this brief report identifying the top 10 actions to advance a Green New Deal framework. We intend this report to provide information for the Oversight Board and the Seattle community to examine opportunities for partnership on actions that achieve the goals of the Green New Deal.

## Build a framework to center community needs in all actions

Achieving the objectives of the Green New Deal demands a level of collaboration and breadth in scope that is well beyond typical solutions. Conventional solutions to address climate change, while impactful,

are not the transformative change required for a just transition. Climate change is a racial justice issue, and our approach to developing sound climate policy and programming cannot happen without holistic support for the outcomes that bring justice to our community.

**These first three actions in this report are essential to elevate our other actions from impactful to transformative.** Different approaches might be required to tackle a broad spectrum of emissions, but what stays common among them is the need for a workforce that is representative of the communities we serve; funding and assistance that is tailored to BIPOC communities; and policies that support these communities to stay in the neighborhoods they call home.

## 1. Support a just workforce transition to living-wage careers.

The [Fossil Fuel Workforce Transition Study](#) shows that there are an estimated 1.6 times more clean energy jobs (12,400) than fossil fuel jobs (7,600) in King County and that a greater number and a greater proportion of jobs in clean energy industries are in job categories providing median wages greater than the area's median wage of \$69,000. In both the clean energy and fossil fuel sectors, however, job categories that provide median wages above the area's median have a higher proportion of workers that are male or white than the County's average population. Several new [Seattle Jobs Initiative reports on the clean energy workforce](#) underscore similar needs in advancing educational and training pipelines to prepare workers for the growing sectors of green construction, building operations, and electricity production.

At the same time, emerging technologies like artificial intelligence, machine learning, and advanced robotics (automation) will disproportionately impact workers of color as they are more highly represented within jobs most at risk of automation.<sup>6</sup> Two of the most at-risk occupations are Freight Laborers and Construction Laborers, which have a large percentage of workers of color, particularly Latino workers.

**While the transition to a clean energy economy has tremendous economic potential for our city, we must ensure our policies are deliberately designed to address the racial and gender inequities in the workforce if we are to build the just community envisioned by the Green New Deal.** The Fossil Fuel Workforce Transition Study provided three multifaceted approaches that should be considered:

- Center communities most impacted to co-create policies that grow good jobs and minimize job loss. Strategies include engaging stakeholders on specific career roadmaps for the most impacted jobs, increasing paid internships and pre-apprenticeship opportunities in clean energy, and creating a displaced fossil fuel worker transition assistance fund for displaced workers.
- Provide business expansion support targeting clean energy training strategies amenable to BIPOC workers and jobseekers. Such targeted training interventions could include upskilling of workers with the credentials most needed for Seattle's clean energy transition, and public-private partnerships to create opportunities for BIPOC workers.
- Prioritize clean energy jobs that are in demand and support living-wage employment. Training support by itself will not be effective if we cannot concurrently prioritize the availability of jobs for a newly trained workforce. Noted strategies include targeted investments for underserved

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<sup>6</sup> <https://www.seattlejobsinitiative.com/wp-content/uploads/Network-Economy-COVID19.pdf>

areas to ensure prevailing wage and hiring standards that improve job quality and access for underserved workers.

## **CONSIDERATIONS FOR THE OVERSIGHT BOARD:**

These recommendations will require additional assessment of potential impact(s), approximate costs for implementation, and the development of implementation roadmaps. For example, further engagement would be required with Local 32 to understand retirement projections and costs of its member plumbers and pipefitters during the transition to clean energy.

Additionally, further exploration is needed on strategies to effectively support small fossil fuel businesses as they transition into new business development(s) and training opportunities. For example, the city's business license data reveals that approximately 72% of Seattle's fossil fuel businesses (371 in total) are in general auto repair, which may lack the capacity and resources to pivot and/or upskill their staff.

The City's strategies delineated in the Employment Pathways IDT can provide a framework for equitable workforce development practices for both the City and employer partners. The City further continues to prioritize departmental funding for related initiatives such as sponsoring scholarships for BIPOC and women workers to participate in clean energy pre-apprenticeship programs and conducting a gap analysis on City workforce development programs and policies.

## **2. Develop a robust support system of technical assistance, funding, and companion policies for all actions.**

Equitably decarbonizing and transitioning our city to clean energy is the most pressing challenge of the present. Major changes must be made by 2030—in just over eight years—for the future of our region and to do its part to avoid a climate catastrophe and its devastating human and economic impacts.<sup>78</sup> While a just transition to clean energy has overwhelming health and economic benefits, the investments are expensive and often do not align well with current funding and financing structures. These structures, both in the public and private sectors, will need to be transformed or many communities of color will be left behind in the clean energy transition.

For example, while existing Seattle City Light (SCL) incentives for energy efficiency in buildings are important, SCL currently cannot financially support a building converting from fossil fuels to clean electricity, yet that transition will be required for commercial and residential buildings to meet our climate goals. However, the utility can support transportation electrification through rebates and educational outreach to help residents access electric vehicles. Barriers to investing in climate and energy transition can be found across the public and private sectors.

<sup>7</sup> <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>

<sup>8</sup> <https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report>

**We must acknowledge that most of the subsequent actions described within this report will be less successful unless they are paired with technical assistance, funding, and companion policies.** While tailoring such policies to meet the needs to community will need significant community co-creation, we suggest several areas that should be addressed:

- **“Technical assistance”** broadly means supporting communities most impacted by these actions. This includes residents, business owners, employees, tenants, labor unions, and service providers within the broader built environment to support them in engaging in and, ultimately, benefitting from the clean energy transition, as opposed to being burdened or displaced by it.
- **“Funding”** is, of course, part and parcel to offering technical assistance, but also includes capacity building within the City, especially where significant legal, funding, technical or other barriers to equitable decarbonization exist, as well as funding for City to continue transition its own buildings and infrastructure. And most importantly, funding speaks to a critical need to support owners of buildings, especially BIPOC owners or those serving communities of color, nonprofits, schools, and other that will face the greatest burden meeting the electrification challenge.
- This funding and capacity building at the City level should enable the development of **“companion policies”** to support our more climate-focused actions. For example, we will need to strengthen tenant protections and create anti-displacement policies so that our residents and businesses can temporarily move away from and come back to healthier spaces in their neighborhoods. Policies like these will be critical to ensuring that our Green New Deal does not come at the expense of a just transition for BIPOC communities.

## **CONSIDERATIONS FOR THE OVERSIGHT BOARD:**

The City will continue to expand on and leverage existing programs like the Environmental Justice Grant Fund, providing critical and accessible support for BIPOC communities to implement environmental justice solutions. We look forward to engaging with the Oversight Board to discuss how to continue prioritizing funding for environmental work in BIPOC communities through mechanisms such as the JumpStart proposal and ensuring that BIPOC and low-income building owners get support to access already allocated monies and programs – such as the \$75 million in incentives available for building owners to comply early with the WA State’s Energy Performance Standards<sup>9</sup> and the forthcoming King County [C-PACER](#) program, which will enable financing for energy efficiency, renewable energy, water conservation, and resiliency improvements to be tied to the building rather than the building owner.

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<sup>9</sup> <https://www.commerce.wa.gov/growing-the-economy/energy/buildings/>

### 3. Manage growth to foster equitable, healthy, and sustainable communities.

The COVID-19 pandemic has made worse many existing inequities across our communities. As we work to build Seattle back better, we have an opportunity to build a more just, healthy, and beautiful city. Land use policies and zoning that dictate what uses are allowed have a direct impact on greenhouse gas emissions in Seattle. For example, higher density areas with a mix of housing types, commercial uses, and essential services allow residents to easily access their daily needs within a short walk or bike ride. Low-density areas comprised of single-family homes tend to be farther away from work, school, and shopping centers, essentially forcing residents to drive to access daily needs, congesting roads, and polluting our air and water. Low-density zoning constrains the amount of new housing that can be built, which has been a predominate factor in increased housing costs. As housing costs continue to rise, many of our neighbors, and disproportionately our BIPOC and lower-income neighbors, are being priced out of the city, forcing them into longer commutes that have negative economic, health, and quality of life implications, in addition to the negative impacts caused by increasing hazardous air emissions, runoff that pollutes our water, and suburban development that destroys our natural spaces.

As we plan for the future, we need to ensure residents have access to daily needs within a short walk, bike ride, or other zero-emission transportation choice; opportunities for economic prosperity; increased housing choice and affordability for all incomes, household sizes, and phases of life in neighborhoods across the city; and greater access to green and public space that can mitigate the harsh impacts of climate change.

Implementing smart-growth policies – including taking actions to address displacement – is vital to our plans to reduce climate emissions. While many factors were involved, the benefits of increased residential density resulting from a 25.5% increase in population between 2008 and 2018, contributed to Seattle’s 24% reduction in per-capita emissions over the same decade. It is imperative that we continue to address the climate challenge through land use and smart growth policies, centered around:

- **Building BIPOC community wealth** through inclusive, ground-up approaches to stabilize and grow neighborhood assets and capture value for BIPOC communities. Strategies include increasing BIPOC homeownership, supporting and funding community-ownership models, building community capacity and agency over cultural and commercial spaces (Cultural Space Agency PDA), and exploring regulations to exact value for direct BIPOC investment.
- **Increasing affordable housing and jobs near existing or planned transit** to encourage more trips by foot, bike, and transit that and reduce the use of personal vehicles (and thereby the congestion, pollution, and space requirements of moving and storing cars) by leveraging existing public and

#### Comprehensive Plan Update

The Comprehensive Plan is a 20-year vision and roadmap for Seattle’s future that plan guides City decisions on where to build new jobs and houses, how to improve our transportation system, and where to make capital investments such as utilities, sidewalks, and libraries. OPCD is kicking off the major Comprehensive Plan update in late 2021 with final adoption by June 2024. A primary focus of this update will be extensive engagement and partnership with communities impacted by racial, environmental, and economic injustice.

planned transportation investments. This could include building on policies like the Mandatory Housing Affordability (MHA), reducing parking minimums, and through Station Area Planning and related investments near future transit stations that enhances existing assets while adding housing and commercial opportunities and supporting community-led development and anti-displacement efforts. Future Comprehensive Plan updates could explore growth strategies that allow more housing and businesses around corridors with frequent transit; and the Maritime and Industrial Strategy will explore how to grow more living-wage jobs in industrial areas near future light rail stations.<sup>10</sup>

- **Growing walkable neighborhoods & healthy communities in lower-density areas across Seattle** through long-term land use policies and growth strategies that foster affordable, walkable, and equitable mixed-use neighborhoods. Strategies can include Comprehensive plan updates to Seattle’s urban village growth strategy, considering the role of streets and other publicly owned spaces in enhancing livability and public health, growing new and existing neighborhood commercial nodes, allowing more infill and housing types (such as accessory dwelling units (ADUs), duplexes, and small apartments) in more neighborhoods across the city, and identifying opportunities for repurposing or expanding uses on city-owned or city-acquired land.
- **Building resilient neighborhoods that strengthen BIPOC communities in place** by centering the voices of BIPOC and low-income residents and stakeholders in developing strategies, partnerships, and actions to combat displacement; mitigate impacts from climate change, redlining, and environmental racism; and ensure growth benefits existing communities in place. This could include exploring strategies and investments to stabilize existing businesses and create more affordable commercial spaces throughout the city; supporting residents who have business ideas; partnering with community to identify and utilize publicly owned land to support community needs and leverage investment dollars and provide/expand essential services; supporting residents that want to invest in climate resilient solutions for their homes to create new housing while continuing to live on their property; land use code revisions to support more equitable zoning; process and strategies that provide more flexible land use regulations to support community-driven development projects; explore strategies such as highway removal, tree planting, and other nature-based resilience infrastructure; and affordable housing, acquiring land or funding to support community-driven efforts and ideas to provide essential services and daily needs.

## **CONSIDERATIONS FOR THE OVERSIGHT BOARD:**

OPCD is working on strategies for building BIPOC community wealth and would like to identify roles and engagement level of Oversight Board with the Planning Commission to help with developing the Comprehensive Plan update.

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<sup>10</sup> <https://www.seattle.gov/opcd/ongoing-initiatives/industrial-and-maritime-strategy>

## Reduce Emissions from the Transportation Sector

Whether it's going to work, taking kids to school, running errands, or going to the doctor, our transportation system connects our communities to where they need to be. But as our city grows, there is more competition for our already strained streets and pollution is increasing at time when we need to move away from fossil fuels. In Seattle, transportation accounts for sixty percent of our core greenhouse gas emissions. **We must reduce our transportation emissions by 77% to meet our 2030 climate goals and eliminate them entirely to achieve “a city free of climate pollutants,” as called for in the 2019 Green New Deal Resolution.**

Past transportation investments and policies have resulted in some communities receiving disproportionate benefits (e.g., quality, frequency, affordability, and reliability of transit service and transportation options to serve the full range of travel needs) and other communities receiving disproportionate burdens (e.g., air pollution and exclusion from decision-making processes).

In this section we will cover three strategies to reduce emissions from transportation: mode-shift policies (improvements that incentivize a switch from personal vehicles to more sustainable modes like transit, biking and walking), transportation electrification (using clean electricity to power everything that moves people, goods, and services); and equitable road-pricing policies that influence driver behavior and raise progressive revenue to address climate and transportation challenges.

### 4. Achieve more zero- or low-emissions trips such as walking, biking, transit, and ride share.

We must fundamentally change the way people, goods, and services move throughout the city to meet our climate goals. The National Household Travel Survey (2017) found that nearly half of all personal vehicle trips are within three miles. Many of these shorter vehicle trips could shift to walking or biking modes, and many longer vehicle trips could shift to transit service. Policies and investments that support the change in transportation methods, referred to as mode shift, also safety priorities like [Vision Zero](#)—Seattle's plan to end traffic deaths and serious injuries on city streets by 2030—also help reduce barriers to economic success and the inequitable health impacts of transportation emissions on environmental justice communities in Seattle.

In Seattle's newly released [Transportation Electrification Blueprint](#), the City has a goal for 90% of all personal trips to be zero emissions by 2030. Recent analyses estimate that 30% of trips are currently zero- or low-emission trips. To achieve the additional 60% reduction in zero emissions trips needed by 2030, approximately 30% more vehicle trips need to be zero emissions (e.g., electric vehicles) and 30% more trips need to shift from vehicles to other zero-emissions modes (e.g., walking, biking, transit).

Mode shift strategies should be designed to provide equitable access to environmental justice communities. These efforts should be tied to other equitable development strategies (e.g., provision of affordable housing and job access) to avoid exacerbating gentrification and displacement risk. Reducing vehicle ownership and accelerating a shift to other modes requires the availability of equitable, safe, and affordable zero- or low-emission transportation services.

## CONSIDERATIONS FOR THE OVERSIGHT BOARD:

Accelerating trips away from driving alone requires the availability of the more affordable options and safe and convenient access to use them (e.g., sidewalks, protected bike lanes, and frequent transit service). Additional analysis is needed to understand how to prioritize investments that effectively improve these options for our BIPOC constituents.

### 5. Electrify Seattle's transportation system (cars, buses, trucks, vans, etc.)

Emissions from cars, vans, and trucks account for the majority of transportation pollution in Seattle. While some fossil fuel use can be eliminated through mode shift-measures like expanded transit, increased walking/biking, increased housing density, and equitable road pricing, the transportation emissions that remain must be eliminated through decarbonization (i.e., removing the carbon from transportation energy). Due to Seattle City Light's clean electricity, any current fossil fuel use that is electrified in Seattle is a 100 percent reduction in harmful tailpipe pollution, including greenhouse gases. Diesel pollution is of specific concern to human health and electrification of diesel engines, particularly in and around environmental justice communities, is a key priority for Seattle's Transportation Electrification program. The explosive growth of e-commerce and transportation network companies (i.e. Uber/Lyft) over the past five years has increased congestion and pollution significantly, so electrifying high mileage fleets that deliver goods, services, and mobility options, while avoiding undue financial burden on small and minority owned businesses, are top priorities as well.

**Based on Seattle's 2018 GHG inventory, when on-road transportation is fully electrified, Seattle's GHG emissions will be reduced by 60%.** The benefits of transportation electrification should accrue first in communities who have been harmed the most by environmental pollution. Manufacturing, installing, and maintaining electric engines and electric fueling infrastructure will offer significant workforce development opportunities in the new green economy.

Seattle's [Transportation Electrification Blueprint](#) outlines how the City will move toward an electrified and equitable transportation system. The Blueprint includes six ambitious goals to accelerate market transformation and make it possible for Seattle to achieve a clean energy future. The outcomes include reduced climate and air pollution, more electric mobility options, a reliable and resilient energy grid, pathways for equitable green job creation, and more workforce diversity. These 2030 goals include:

- 100% Shared Mobility is Zero Emission
- 90% Personal Trips are Zero Emissions
- 30% of Goods Delivery is Zero Emission
- 100% City Fleet is Fossil-Fuel Free
- One or More "Green & Healthy Streets" (Zero Emission Areas and Delivery Zones)
- Electrical Infrastructure to meet the demand for TE is installed and operational

## CONSIDERATIONS FOR THE OVERSIGHT BOARD:

Based on a variety of factors, research shows that a goal of 100% light duty electrification in Seattle by 2030 is not feasible. The Office of Sustainability & Environment (OSE) would like to work closely with the Oversight Board to examine those factors and explore strategies – such as a pilot equity-focused electric vehicle rebate program for income qualified drivers, prioritizing rideshare/taxi drivers, CBOs and small WMBE businesses to rapidly transition away from dirty fossil fuels.

Even though the number of diesel trucks is small relative to passenger vehicles, these trucks have an outsized impact on GHG emissions and air pollution. OSE is working to better understand localized diesel impacts and to address data gaps to offer more insight into this key segment of transportation and identify near term opportunities to improve air quality and health outcomes in communities with the highest rates of health disparities.

## 6. Explore how new road-pricing strategies can improve mobility, reduce emissions, and advance equity.

The building blocks that make up our transportation system in Washington, in the region, and in the City are based on regressive taxes that unfairly burden the poor and favor car drivers. BIPOC residents in Seattle, and across the country, have greater transportation burdens (a higher percentage of their income goes to transportation expenses), while more affluent white individuals have low transportation burden and many transportation options. The current transportation system prioritizes access via private vehicles and contributes to both health and economic inequities in our city. With transportation-related spending the second highest household expenditure, developing a more equitable transportation system is fundamental to building a more just community.

By exploring equitable road pricing policies in Seattle, we have an opportunity to reduce emissions and improve mobility while generating stable and progressive revenue (*meaning that the fees are paid by those people most able to pay*) to invest in climate and transportation-related programs and projects that most directly benefit communities of color. **Examples of road pricing policies include:**

- **Parking policy innovations:** By changing the policies of how we regulate parking, Seattle can meter more of our valuable curb space, producing more revenue for transit and other transportation investments, less traffic, cleaner air, and address the need to decrease GHG emissions.
- **Managing and pricing the curb:** Curbsides have become some of the highest-demand real estate in cities, with drivers, buses, Uber or Lyft drivers, scooters, bikes, pedestrians all vying for access to curbside parking, delivery, and rideshare.
- **Fleet pricing:** Charge specific vehicle types entering a zone, such as ride-hailing or commercial vehicles
- **Urban delivery taxes** and fees on Transportation Network Companies (TNCs)
- **Tolling city roads or bridges\***
- **Congestion and area pricing models\***

*\*these actions may require a public vote*

Pricing policies have the potential to exacerbate existing burdens on BIPOC communities. **The City's Road Pricing leadership team has established five core racially equitable outcomes to mitigate these impacts:**

- Policy must be designed through safe, inclusive, and equitable process;
- Revenues re-invested to benefit BIPOC people and people with low-incomes or disabilities;
- Policy does not exacerbate existing burdens;
- Policy ensures privacy protections; and
- Policy creation intentionally engages most impacted populations.

Incentives and programs should be targeted to yield racial equity outcomes. Training and workforce development efforts should increase racial and gender diversity in upskill and backfill positions including pre-apprenticeship and apprenticeship programs. Stipends should be paid to those who are going through training programs to help ease financial burden on those who can't afford to go unpaid for extended periods of time. Road pricing policies could serve as a progressive revenue source to address these concerns and needs.

### **CONSIDERATIONS FOR THE OVERSIGHT BOARD:**

Road pricing policies have a wide range of climate impacts, depending on which trips are priced, how they are priced, who pays and who is exempt, and the subsidies or incentives considered. The City's Road Pricing Leadership team is currently engaging with several City advisory groups to explore if and how road pricing policies could be equitably implemented in Seattle to reduce climate emissions and fund robust public transportation. These groups include the Equitable Development Initiative, Environmental Justice Committee, and Transportation Equity Workgroup. The leadership team would like to engage with the Green New Deal Oversight Board in this process to develop recommendations for new City policies on pricing the road equitably.

## Reduce Emissions from Buildings

Buildings, where we live, work, and go to school, are one of the largest and fastest growing sources of climate pollution, responsible for more than a third of our city's greenhouse gas emissions. 86% of these emissions result from burning fossil gas for heat, hot water, and appliances. Between 2016 and 2018, building-related emissions rose more than eight percent. **To meet Seattle's climate goals, we must dramatically reduce fossil fuel use in buildings 17 times faster over the next decade than we have to date and by 2050 we must power virtually all of our homes and buildings with clean, sustainable energy.**

This section covers actions that work toward all Seattle's new and existing buildings becoming fossil fuel-free and powered by clean electricity.

### 7. Ensure all new buildings are carbon-neutral by 2030.

The increase in GHG emissions in Seattle's building sector is due primarily to constructing new buildings that use fossil fuels for uses like space and water heating and cooking. The lifespan of new heating and cooling equipment can span upwards of three decades and gas cooking ranges may last even longer. This means that every new building constructed with fossil fuel systems is likely to be required to undergo costly and disruptive decarbonization retrofits to achieve our climate goals. **Through code updates and programs that promote above code performance, Seattle can halt the expansion of fossil gas infrastructure and systems and build for the future where all new buildings are fossil fuel free from the outset.**

The latest Seattle Energy Code (SEC) update improves building efficiency and limits fossil gas and electric resistance for space heating for new and substantially renovated commercial buildings and for space and water heating in hotels and larger multifamily (over 3 stories). These updates to Seattle's 2018 Commercial Energy Code are expected to reduce operational buildings emissions by an estimated 10% over business as usual by 2050.

Because buildings are vested to earlier code cycles well before they are completed, it is important that a net zero carbon code is adopted in advance of 2030. That can be done by extending the Seattle Energy Code (SEC) to limit almost all fossil fuel uses in new commercial and larger multifamily buildings and limiting fossil fuel uses in new residential and smaller multifamily buildings through the WA State code process.

Future SEC cycles can and should continue to improve energy efficiency to make the best use of clean energy supplies, and should:

### Emissions from waste, water, and wastewater treatment

Emissions from waste processing and wastewater treatment might only account for around 1% of Seattle's total emissions but have still seen some of the largest reductions – around 27% – over the past decade. Much of this is thanks to SPU's highly successful solid waste, recycling, and diversion programs. Opportunities still exist to explore further emissions reductions at water and wastewater treatment plants. SPU and OSE are additionally building awareness around the importance of addressing consumption-based emissions, which refer to the emissions occurring *outside* Seattle for the production, transportation, use and disposal of goods, and services consumed *within* the City.

- Implement further limitations on fossil fuel for mechanical systems and appliances for the 2021 SEC (effective 2024)
- Fully limit fossil fuels for all equipment, except in limited situations, for the 2025 SEC (effective 2027) to achieve Net Zero Carbon Seattle Commercial Energy Code by 2027

### **CONSIDERATIONS FOR THE OVERSIGHT BOARD:**

Currently local jurisdictions must adhere to the WA Energy Code for residential buildings (single family, townhomes and multifamily 3 stories or less). Net zero new residential construction could be achieved by the State either by allowing local jurisdictions to amend the State Residential Energy Code with their own limitations on fossil fuel powered equipment, or by creating its own State Net Zero code. Either option would require amending state law. OSE seeks to work with the Oversight Board to build widespread support for these changes.

## **8. Transition existing commercial and large multi-family buildings to clean energy.**

While the previous action covers new construction, we must also transition all fossil-fuel uses to clean energy in *existing* commercial and larger multi-family buildings. Voluntary incentive-based programs will not provide the participation and emissions reductions at the scale necessary to meet our emissions reduction goals, so the City must explore a regulatory approach. Analyses show that we could reduce overall building sector emissions by around 27% by completely electrifying our larger commercial and multifamily buildings (20,000 sq. ft. and larger), while a further 14% is possible if smaller buildings are transitioned as well. Fully electrifying commercial and multifamily buildings, along with efficiency improvements, would additionally provide 200 to 400 jobs annually in the energy and construction sectors.

OSE is working to implement a phased Seattle carbon-based performance standard on owners of commercial and multifamily buildings 20,000 sq. ft. or larger (buildings already required to report annual energy benchmarks) to build on the existing Building Tune-Up program, and to provide an emissions-focused complement to the WA State Energy Performance Standards. This would address larger buildings first, while exploring the development of a prescriptive equipment replacement standards for buildings smaller than 20,000 sq. ft.

Regulation alone could create undue burdens on under-resourced building owners and tenants, therefore a robust support and funding program is key to ensuring that those most in need are prioritized. In particular, by focusing first on facilitating the transition in affordable housing, we can ensure that housing providers and tenants are the first to receive the benefits. **OSE is completing a Racial Equity Toolkit for this work, and has identified the following equity outcomes:**

- Prioritized support and funding toward BIPOC building owners/tenants and affordable housing.
- Tenant protection strategies mitigate the displacement of residents and businesses.
- Workforce development strategies ensure that BIPOC workers and WMBE businesses are well-represented.
- Phased-in compliance to address disparities between better-resourced building owners and smaller, community-oriented real estate.

## **CONSIDERATIONS FOR THE OVERSIGHT BOARD:**

In order to lead a just and equitable transition to clean energy, it is critical that we prioritize investments to upgrade affordable housing, ensuring that our residents with lower incomes are the first to receive the benefits and minimizing the cost burden that future regulations might create. As the City looks to develop its carbon-based performance standards, OSE welcomes the partnership of the Oversight Board in crafting a policy grounded in racially equitable outcomes.

These standards would also need to be combined with a support program for all building types – providing coaching, technical assistance, incentives and access to financing – for buildings owned by or serving BIPOC and lower-income communities to not be burdened by these changes. The program would also assist with compliance with the WA State Energy Performance Standards, as well as with the 2018 SEC requirements for existing buildings, which has several conditions limiting the use of fossil-fuel heating and hot water at equipment replacement. OSE is additionally seeking partnership with the Oversight Board in structuring any potential program, as well as for strategies to best reach BIPOC building owners/tenants. The City concurrently aims to roll out an electrification strategy for municipal buildings in June 2022.

## **9. Transition existing residential buildings (single family, townhomes and small multifamily) to clean energy.**

Small residential buildings account for almost 44% of total buildings sector emissions in the City. Seattle’s [Clean Heat program](#) is currently fully funding low-income households to transition from oil heat, which has higher emissions per unit of energy than fossil gas, to electric heat pumps, as well as providing market rate rebates, to accelerate a phase out of oil use in the City.

While the Clean Heat program focuses on oil, fossil gas is ever-present in Seattle homes for space heating, water heating, and cooking, and makes up the overwhelming majority of emissions in existing residential buildings. Expanding the Clean Heat program to address all fossil fuels in all equipment and residential types will ensure that our residential buildings reduce their sizeable emissions impact. Preliminary analysis indicates that improving efficiency and electrifying single family, townhomes and small multifamily (<20,000 sq. ft.) equates to between 500 to 700 jobs annually in the energy and construction sectors.

With a warming climate, switching from gas to electric mechanical equipment such as heat pumps provides the added health and resilience benefit of air conditioning, which would otherwise be a

separate expense. Higher efficiency equipment combined with other energy efficiency and weatherization measures would lead to additional savings. In addition, low-income households who participate in the Utility Discount Program and transition to electricity for heating receive 60% discount on the increase in electricity consumption.

### **CONSIDERATIONS FOR THE OVERSIGHT BOARD:**

Rebates and financing for moderate income households is critical to creating market transformation, and dedicated funding and support for low-income households will ensure these families are prioritized for the economic and health benefits of energy efficiency and clean energy.

OSE would like to coordinate with the GND Oversight Board on implementation strategies to expand the Clean Heat program to cover all fossil fuels and to continue to fully fund low-income households to transition all fossil gas end uses (such as space heating, water heating, and cooking) to electric.

## **10. Implement carbon-neutral district heating.**

District heating facilities across the city generate thermal energy (typically through the burning of fossil fuels like gas and oil) to create hot water or steam, which is then circulated to buildings for heating. Decarbonizing energy at the generation site can be an optimal means to transition multiple buildings to carbon-neutral energy and eliminates the need for each individual building to otherwise switch to an on-site system. This strategy is particularly useful to consider for the City's various hospital campuses and healthcare buildings. **Eliminating fossil fuel use at CenTrio (formerly Enwave) and UW's steam facilities would result in a reduction of almost 13% of buildings sector emissions,**<sup>11</sup> with further reductions possible if other district facilities convert. Encouraging these thermal energy plants to decarbonize their energy supply and electrify their thermal generation equipment to rely on Seattle's electricity grid will ensure that residents and businesses heating with thermal energy will do so in a carbon-neutral manner.

### **CONSIDERATIONS FOR THE OVERSIGHT BOARD:**

The City is developing an electrification strategy – to be completed by December 2022 – which will leverage the programs, incentives, and expertise at Seattle City Light to electrify infrastructure across municipal buildings like the district heating and cooling system at the Seattle Center. Council could pass an ordinance that requires a district heating facility to be carbon neutral, but it is unclear as to whether it could apply to the existing CenTrio franchise agreement or if it could only be applied to new district heating companies. CenTrio has indicated an interest in electrifying existing boilers that currently use fossil gas and oil and they are currently working with Seattle City Light to identify electrical service needs. OSE looks forward to collaborating with the Oversight Board around this action idea.

<sup>11</sup> Source: Seattle's [2018 GHG inventory](#).