climate solutions
accelerating the transition to our clean energy future

May 6, 2024

Re: Climate Solutions comments on One Seattle Plan

Dear Director Quirindongo,

Climate Solutions thanks you for the opportunity to submit comments on the draft One Seattle Plan. Climate Solutions is a clean energy nonprofit organization working to accelerate solutions to the climate crisis. The Northwest has emerged as a hub of climate action, and Climate Solutions is at the center of the movement as a catalyst and advocate.

We appreciate the hard work and thought that has gone into this plan to comprehensively address Seattle's future and align the City's goals and values with action. While the One Seattle Plan makes some important commitments to addressing our climate crisis, **the plan unfortunately does not go far enough.** Seattle should not miss this opportunity to act boldly, urgently, and decisively on the climate crisis, and we provide some recommendations here on how best to improve the plan with these goals in mind.

Climate pollution targets

The One Seattle Plan commits Seattle to reducing citywide greenhouse gas emissions by 58% from 2008 levels by 2030 and to net zero by 2050. **This goal lacks the ambition and urgency needed to address the climate crisis and is not in line with the City's own policies.** Seattle's 2019 Green New Deal Resolution committed the City to cutting all fossil fuel pollution by 2030. Projections from the International Panel on Climate Change predict that we will see catastrophic damage globally if we do not reduce our emissions drastically by 2030.[1] Reducing our emissions to zero by 2030 should be the aim at *least* for municipal emissions, if not for Seattle as a whole.

Housing and buildings

Building clean, safe, decarbonized affordable housing is a key mitigative *and* adaptive strategy to reduce our pollution burden and protect underserved communities who are on the frontlines of the climate crisis. Seattle must address the severe shortage of affordable housing and the homelessness crisis while still ensuring that the housing we construct is weatherized, free of indoor air pollution, and avoids placing undue energy burden on low-income and BIPOC tenants and homeowners.

Key to these goals is increasing density, building missing middle housing, reducing sprawl, and building affordable housing near transit. These outcomes are crucial to climate action. Smaller, more

[1] Seattle Office of Sustainability. "Green New Deal". Accessed April 30, 2024. https://www.seattle.gov/environment/climate-change/climate-justice/green-new-deal.

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densely built homes use less energy per household.[2] [3] Constructing missing middle housing is also associated with lower embodied carbon per bedroom built than single-family housing.[4] Climate Solutions' own research shows that meeting our climate obligations is easier when we combine dense, mixed-used urban areas that have clean transportation options with zero-emissions vehicles of all types.[5]

We support the One Seattle Plan incorporating the policy recommendations of the Complete Communities Coalition, including:

- **Enabling development of more family-sized homes in middle housing:** Increase the Floor Area Ratio (FAR) for fourplexes and sixplexes to make it possible to build more family-sized homes.
- **Allowing more homes near transit:** Allow midrise and mixed-use housing within a ¼ mile of frequent bus stops and ½ mile of light rail.
- **Expanding Neighborhood Centers:** Increase the radius of Neighborhood Centers from 800 feet to ¼ mile and adding in all the Neighborhood Centers studied in the Draft Environmental Impact Statement (DEIS).
- **Promoting equitable development and address displacement:** Ensure density bonuses, development regulations, and other tools, to allow a broad range of developers to build affordable housing for sale and for rent without relying on scarce public funding, and give homeowners interested in redeveloping their property technical assistance and land use incentives.
- **Allowing for tall and green homes in centers:** Increase height limits to 12-18 stories in Regional Centers to allow more people to live in some of Seattle's most vibrant neighborhoods, and allow midrises up to 85 feet in transit corridors and Neighborhood Centers, to maximize the potential of wood-frame construction.

Seattle's buildings must also be decarbonized, weatherized, free of indoor air pollution, and designed to reduce energy burdens. Buildings are Washington's fastest-growing source of carbon emissions, largely due to the use of gas for space and water heating and cooling[6]. As we continue to see peak temperatures rise in the northwest, more and more people will need air conditioning to cope

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[2] Goldstein, Benjamin; Gounaridis, Dimitrios; and Joshua P. Newell. 20 July 2020. "The carbon footprint of household energy use in the United States." *PNAS* 117 (32): 19122-19130. https://doi.org/10.1073/pnas.1922205117.

[3] Andersen, Michael. 7 June 2019. "A Duplex, a Triplex and a Fourplex Can Cut a Block's Carbon Impact 20%." *Sightline Institute*. https://www.sightline.org/2019/06/07/a-duplex-a-triplex-and-a-fourplex-can-cut-a-blocks-carbon-impact-20/.

[4] Rankin, Keagan Hudson; Arceo, Aldrick; Isin, Kaan; and Shoshanna Saxe. 2024. "Embodied GHG of missing middle." *Journal of Industrial Ecology*: 1-14. http://dx.doi.org/10.1111/jiec.13461.

[5] Missik, Leah. 2021. "Transforming Transportation." Climate Solutions. https://www.climatesolutions.org/resources/reports/transforming-our-transportation.

[6] Washington Department of Ecology. December 2018. "Washington State Greenhouse Gas Emissions Inventory: 1990-2015." https://apps.ecology.wa.gov/publications/documents/1802043.pdf.

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with heat-related health impacts – or to adequately cool their homes while they are shut inside due to wildfire smoke. Highly efficient heat pumps provide these cooling benefits along with heating.

To achieve these goals, the One Seattle Plan must include provisions including:

- **Developing creative and diverse strategies to decarbonize Seattle's existing residential buildings:** With the passage of clean codes statewide in 2022 and the Seattle Building Emissions Performance Standard (BEPS) in 2023, the big gap in terms of building emissions comes from existing single-family homes, townhomes, and other small residences that are not covered by the BEPS. The One Seattle Plan includes a provision to expand the implementation of BEPS to include small commercial buildings and all residences, but the BEPS might not be the right strategy for all of Seattle's building types. In addition to exploring an expanded BEPS policy, the City should look at other options, including but not limited to drastically increasing funding for heat pump and clean energy retrofits for low-income and underserved households to complement federal and state funding; implementing pilot projects to explore strategies like neighborhood-scale targeted geographic electrification[7] (which could be done in tandem with SDOT's Low Pollution Neighborhoods pilot projects) and thermal energy networks[8] to decarbonize entire neighborhoods and prune the gas system; and/or expanding and improving the City's Clean Heat Program to include heat pumps for gas-powered homes.
- **Leading by example by decarbonizing all capital facilities by 2030:** The City has had a mandate to ensure all municipal buildings are free of fossil fuels since Mayor Durkan's Executive Order in 2020.[9] A deadline of 2035 for completing this mandate is simply unacceptable. The City must drastically accelerate its efforts to decarbonize municipal buildings and to support its partners in doing the same.
- **Coordinating with Seattle King County Public Health and Puget Sound Clean Air Agency to address indoor air pollution, including from gas cooking appliances:** Residents and workers need protection from air pollution even outside of extreme heat and smoke events, as indoor air pollution from gas cooking appliances has severe health risks. 12.7% of the childhood asthma burden in the United States can be attributed to gas stove use, which is similar to the asthma burden attributed to secondhand cigarette smoke.[10] Gas stoves also release unburned methane through leaks even when they are off; research shows that yearly leaks from all gas

[7] Bagdanov, Kristin George; Rider, Amy; Halbrook, Claire; and Sarina Soor. November 2023. "Neighborhood Scale: The Future of Building Decarbonization." Building Decarbonization Coalition and Gridworks. https://buildingdecarb.org/resource/neighborhoodscale.

[8] Vermont Community Thermal Networks and Energy Action Network. March 2024. "How to Develop a Thermal Energy Network." https://www.vctn.org/toolkit.

[9] Office of the Mayor of Seattle. 8 January 2020. "Executive Order 200-01: Advancing a Green New Deal for Seattle." https://durkan.seattle.gov/wp-content/uploads/sites/9/2020/01/Final-Executive-Order-2020-01-Advancing-a-Green-New-Deal-for-Seattle_.pdf.

[10] Zhu, Yifang; Connolly, Rachel; Lin, Yan; Mathews, Timothy; and Zemin Wang. April 2020. "Effect of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California." UCLA Fielding School of Public Health. https://ucla.app.box.com/s/xyzt8jc1ixnetiv0269qe704wu0ihif7.

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stoves in the U.S. could have as much of a climate impact as emissions from 500,000 passenger vehicles.[11] The City should work with key partners to address indoor gas stove pollution alongside implementing high-quality air filtration systems to address COVID-19 and the spread of other airborne diseases.

Transportation

The One Seattle Plan's goals and strategies to reduce transportation emissions lack the ambition needed to achieve its goals and to implement them effectively and equitably, especially given that the Seattle Transportation Plan has similarly vague provisions, which Climate Solutions also provided comments on.

In particular, the City must set deadlines to achieve high-priority provisions that will lead to meaningful emissions reductions, including:

- **Addressing diesel pollution:** The One Seattle Plan does not highlight the need to urgently and specifically reduce the use of diesel-powered vehicles. Statewide GHG emissions from on-road diesel use have more than doubled since 1990.[12] Given that the use of diesel releases toxic air pollutants, which are disproportionately emitted in historically underserved neighborhoods, the One Seattle Plan must specifically address diesel-powered vehicles and set timelines for electrification. The One Seattle Plan does include a policy to require that 30% of goods delivery by freight vehicles are zero-emission by 2030; this aim should be viewed as a *minimum target* given the rapid uptake of electric vehicles by delivery companies that has occurred since the 2021 release of Seattle's Clean Transportation Electrification Strategy. However, other vehicle types, such as school buses, garbage trucks, transit buses, and others contribute to diesel pollution in Seattle neighborhoods. The One Seattle Plan must commit to transitioning these vehicle types too, and require specific policy and transition timelines for vehicle contracts through the City, such as for waste management.
- **Setting bolder targets for electric vehicle (EV) charging infrastructure:** The State Transportation Electrification Strategy projects that by 2030, there will be more than 420,000 EVs in King County – many of which will be in Seattle – which would require more than 2,000 public level 2 charging ports and more than 80 public DCFC chargers.[13] The One Seattle Plan must go further than the Seattle Transportation Plan in setting ambitious targets for EV infrastructure deployment.

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[11] Lebel, Eric; Finnegan, Colin J.; Ouyang, Zutao; and Robert B. Jackson. 27 January 2022. "Methane and NOx Emissions from Natural Gas Stoves, Cooktops, and Ovens in Residential Homes." *Environmental Science & Technology* 56 (4): 2529-2539. https://doi.org/10.1021/acs.est.1c04707.

[12] Washington State Department of Ecology. January 2021. "Washington State Greenhouse Gas Emissions Inventory: 1990-2018." https://apps.ecology.wa.gov/publications/documents/2002020.pdf.

[13] Washington Electric Vehicle Council. 5 October 2023. "Washington Transportation Electrification Strategy." https://public.tableau.com/app/profile/waevcouncil/viz/WashingtonTransportationElectrificationStrategy/Story_Published.

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- **Committing to more specific, ambitious actions than the Seattle Transportation Plan to achieve the mode shifts needed for transit, pedestrians, and bicycles:** Climate Solutions' transportation decarbonization research shows that we need not only near-100% electrification by 2050 to meet our climate targets, but that this can be achieved more affordably and with improvements to safety and our health if we also reduce vehicle miles traveled (VMT) 47% by 2050, which, if achieved linearly, would require a 17% increase in transit mode use by 2030 and 30% by 2050.[14] This is an incredibly ambitious goal, comparable to New York City and London, both of which have much more comprehensive transit networks than Seattle currently. The City needs to commit to a massive investments in transit, pedestrian, and bicycle infrastructure to achieve this level of mode shift.
- **Working closely with partners to cut maritime emissions and pollution:** Communities near ports suffer from health impacts from port pollution, and the City needs to collaborate with the Port of Seattle, the Puget Sound Clean Air Agency, and other partners to reduce not only GHG emissions by air toxic pollution from the maritime industry.
- **Transportation funding and investments:** Climate Solutions supports the continued conversion to deliver an equitable road user charge (RUC) and believes that it is important that revenue is spent on transportation investments that will reduce pollution, provide comfortable transportation options, and improve our transportation system as a whole. While Seattle should lend its leadership to RUC conversations at the state level, the City should also re-engage on developing its own thoughtful congestion pricing policy with revenue invested in expanding transportation options and reducing transportation cost burden for low-income residents. Congestion pricing has been shown to encourage non-personal vehicle trips and to reduce climate and air pollution.[15] [16]

Utilities and energy

The One Seattle Plan mostly addresses the decarbonization of the City's utility services and ability to influence investor-owned utilities through partnerships, but misses key opportunities to accelerate the transition to clean energy, including:

- **Decarbonizing existing district energy systems:** The One Seattle Plan rightly requires that any new district energy systems must be carbon neutral, but the City should be working with existing district energy providers on strategies to decarbonize in the near-term. While these utilities are covered by the Climate Commitment Act, Seattle has the opportunity to accelerate

[14] Missik 2021.
[15] Organization for Economic Cooperation and Development. "London's congestion charge and its low emission zones." Accessed 20 October 2023. https://www.oecd.org/climate-action/ipac/practices/london-s-congestion-charge-and-its-low-emission-zones-c6cd48e9/.
[16] C40 Cities. October 2015. "Stockholm – Congestion Pricing Finances Metro Expansion." https://www.c40.org/case-studies/cities100-stockholm-congestion-pricing-finances-metro-expansion/.

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the timelines for clean district energy systems, which will both protect our climate and may reduce costs for ratepayers in the long-term.

- **Exploring targeted electrification:** Funding for clean energy needs to come from a diverse range of sources. Seattle City Light should develop a targeted electrification plan to understand how incentivizing replacing fossil fuel appliances with electric ones can provide benefits for the entire rate base, and, if these incentives are determined to benefit Seattle residents as a whole, Seattle City Light should begin offering them.
- **Planning for the use of green electrolytic hydrogen:** Given that the Pacific Northwest has been designated as a clean hydrogen hub by the U.S. Department of Energy, it is surprising that the One Seattle Plan does not mention clean (green electrolytic) hydrogen at all. The One Seattle Plan should include policies on using partnerships with Seattle's hydrogen providers and with the State to explore how clean hydrogen can be used most effectively in hard-to-decarbonize sectors such as high-heat industrial processes. There may be opportunities to do so here in Seattle, and the City should be prepared for action in this space.

Climate Solutions urges the City to incorporate these changes into the One Seattle Plan and Final EIS to ensure that the City is acting on climate with urgency and forethought. Thank you again for the opportunity to comment.

Sincerely,

Deepa Sivarajan
Washington Local Policy Manager
Climate Solutions