

Archived: Monday, August 16, 2021 3:50:49 PM

From: [Deepa Sivarajan](#)

Sent: Monday, August 16, 2021 3:42:07 PM

To: [City Council](#); [Clk](#)

Cc: [Will Hall](#)

Subject: [EXTERNAL] Climate Solutions comments re: Aug. 16 Council Meeting

Sensitivity: Normal

Attachments:

[Climate Solutions - Comments for Aug 16 Shoreline City Council Meeting.pdf](#) 

CAUTION: This email originated from outside of the City of Shoreline. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Honorable Councilmembers and Mayor,

Please find attached and below comments from Climate Solutions regarding the discussion of prohibiting fossil fuels in new construction that is on the agenda for the Shoreline City Council meeting tonight. Climate Solutions is a clean energy nonprofit organization working to accelerate clean energy 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, advocate, and campaign hub.

Climate Solutions strongly supports a policy to require that new buildings in Shoreline be constructed without fossil fuel infrastructure, transitioning to clean, safe, all-electric new buildings.

Climate change already impacts the health and well-being of Shoreline residents through increased heat waves, wildfire smoke, and sea level rise. The City of Shoreline must act urgently to reduce Shoreline's greenhouse gas emissions (GHGs) and help residents adapt to climate change. In Washington, buildings are the second-highest source of GHG emissions after the transportation sector, and emissions from the built environment are growing at a faster rate than any other source of carbon pollution, largely due to the use of fossil gas (also known as natural gas) for heating and cooking ^[1].

Fossil gas also harms the health of Shoreline residents: buildings are currently the top source of pollution-related premature deaths in Washington ^[2]. Outdoor air pollution from burning fossil fuels in buildings led to an estimated 559 early deaths in Washington in 2017 ^[3]. Gas stoves and appliances also cause significant indoor air pollution: children who grow up in a house with gas cooking are 42% more likely to develop asthma symptoms ^[4]. Studies have also found that small increases in exposure to air pollutants lead to a large increase in the COVID-19 death rate ^[5].

Air pollution also disproportionately impacts vulnerable and historically disadvantaged populations. Pollutants emitted by gas cooking appliances impact the respiratory and cardiovascular health of vulnerable populations such children, the elderly, and those with existing health conditions ^[6]. Black, Indigenous, Latinx, and Asian people, as well as people with lower socioeconomic status, have higher risks of death from particle pollution, in part due to the historical impacts of segregation and redlining that have led communities of color to be pushed to places with greater exposure to air pollution ^[7].

The use of fossil gas in buildings also poses safety risks to communities due to the potential for leaks and pipeline explosions. A fossil gas explosion in 2016 in Seattle's Greenwood neighborhood leveled two buildings, impacted 36 businesses, injured rescue workers, and created \$3 million dollars of damage ^[8]. Earthquake risk also makes Shoreline particularly vulnerable because highly pressurized gas pipelines run a high risk of exploding during earthquakes.

All-electric buildings can be the solution to these problems and more. Given our increasingly clean sources of electricity in Washington under 2019's Clean Energy Transformation Act, electrification will be the lowest-cost pathway to meeting our climate goals. Electric heat pump technology is highly energy-efficient and can also provide air conditioning along with heating, which will be crucial to protect our communities from heat waves. Washington also requires electric utilities to provide financial support for low-income customers; there are no such protections for gas customers.

Thank you for your consideration of this issue. We hope that this discussion will lead to passing policies that require clean, safe, all-electric

buildings in Shoreline.

Sincerely,
Deepa Sivarajan

Deepa Sivarajan | WA Policy Manager | she/her

Climate Solutions – Accelerating Clean Energy Solutions to the Climate Crisis

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*We are at an inflection point. [Give today!](#)

- [1] Washington State Department of Ecology, “Washington State Greenhouse Gas Emissions Inventory: 1990-2015, Report to the Legislature,” December 2018, <https://fortress.wa.gov/ecy/publications/documents/1802043.pdf>
- 2 Irene C. Dedoussi, Sebastian D. Eastham, Erwan Monier, and Steven R.H. Barrett, “Premature mortality related to United States cross-air pollution”, *Nature*, 578, 261-265, February 2020, <https://doi.org/10.1038/s41586-020-1983-8>
- 3 Jonathan J. Buonocore, Parichehr Salmifard, Drew R. Michanowicz, and Joseph G. Allen, “A decade of the U.S. energy mix transitioning away from coal: historical reconstruction of the reductions in the public health burden of energy,” *Environmental Research Letters*, Vol. 16, Issue 5, May 5, 2021, <https://iopscience.iop.org/article/10.1088/1748-9326/abe74c>
- 4 Weiwei Lin, Bert Brunekreef, and Ulrike Gehring, “Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children,” *International Journal of Epidemiology*, Vol. 42, Issue 6, December 2013, pages 1724-1737, <https://doi.org/10.1093/ije/dyt150>
- 5 Xiao Wu, Rachel C. Nethery, Benjamin M. Sabath, Danielle Braun, Francesca Dominici, “Exposure to air pollution and COVID-19 mortality in the United States”, medRxiv 2020.04.05.20054502, <https://doi.org/10.1101/2020.04.05.20054502>
- 6 Brady Anne Seals and Andee Krasner, “Health Effects from Gas Stove Pollution,” Rocky Mountain Institute, Physicians for Social Responsibility, Mothers Out Front and Sierra Club, 2020, <https://rmi.org/insight/gas-stoves-pollution-health>
- 7 American Lung Association, “State of the Air”, 2020, <https://www.stateoftheair.org/assets/SOTA-2020.pdf>
- 8 Evan Bush and Christine Clarridge, “Seattle explosion leaves heart of Greenwood a gigantic mess,” *Seattle Times*, March 9, 2016, <https://www.seattletimes.com/seattle-news/greenwood-explosion-destroys-buildings-injures-9-firefighters/>

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[2] Irene C. Dedoussi, Sebastian D. Eastham, Erwan Monier, and Steven R.H. Barrett, “Premature mortality related to United States cross-air pollution”, *Nature*, 578, 261-265, February 2020, <https://doi.org/10.1038/s41586-020-1983-8>

[3] Jonathan J. Buonocore, Parichehr Salmifard, Drew R. Michanowicz, and Joseph G. Allen, “A decade of the U.S. energy mix transitioning away from coal: historical reconstruction of the reductions in the public health burden of energy,” *Environmental Research Letters*, Vol. 16, Issue 5, May 5, 2021, <https://iopscience.iop.org/article/10.1088/1748-9326/abe74c>

[4] Weiwei Lin, Bert Brunekreef, and Ulrike Gehring, “Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children,” *International Journal of Epidemiology*, Vol. 42, Issue 6, December 2013, pages 1724-1737, <https://doi.org/10.1093/ije/dyt150>

[5] Xiao Wu, Rachel C. Nethery, Benjamin M. Sabath, Danielle Braun, Francesca Dominici, “Exposure to air pollution and COVID-19 mortality in the United States”, medRxiv 2020.04.05.20054502, <https://doi.org/10.1101/2020.04.05.20054502>

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August 16, 2021

RE: Climate Solutions comments on Shoreline City Council building decarbonization discussion

Honorable Shoreline City Councilmembers and Mayor,

Climate Solutions thanks you for the opportunity to comment on the Council discussion scheduled for Monday, August 16th around policies to prohibit fossil fuels in new construction. Climate Solutions is a clean energy nonprofit organization working to accelerate clean energy 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, advocate, and campaign hub.

Climate Solutions strongly supports a policy to require that new buildings in Shoreline be constructed without fossil fuel infrastructure, transitioning to clean, safe, all-electric new buildings.

Climate change already impacts the health and well-being of Shoreline residents through increased heat waves, wildfire smoke, and sea level rise. The City of Shoreline must act urgently to reduce Shoreline's greenhouse gas emissions (GHGs) and help residents adapt to climate change. In Washington, buildings are the second-highest source of GHG emissions after the transportation sector, and emissions from the built environment are growing at a faster rate than any other source of carbon pollution, largely due to the use of fossil gas (also known as natural gas) for heating and cooking¹.

Fossil gas also harms the health of Shoreline residents: buildings are currently the top source of pollution-related premature deaths in Washington². Outdoor air pollution from burning fossil fuels in buildings led to an estimated 559 early deaths in Washington in 2017³. Gas stoves and appliances also cause significant indoor air pollution: children who grow up in a house with gas cooking are 42% more likely to develop asthma symptoms⁴. Studies have also found that small increases in exposure to air pollutants lead to a large increase in the COVID-19 death rate⁵.

¹ Washington State Department of Ecology, "Washington State Greenhouse Gas Emissions Inventory: 1990-2015, Report to the Legislature," December 2018, <https://fortress.wa.gov/ecy/publications/documents/1802043.pdf>

² Irene C. Dedoussi, Sebastian D. Eastham, Erwan Monier, and Steven R.H. Barrett, "Premature mortality related to United States cross-air pollution", *Nature*, 578, 261-265, February 2020, <https://doi.org/10.1038/s41586-020-1983-8>

³ Jonathan J. Buonocore, Parichehr Salmifard, Drew R. Michanowicz, and Joseph G. Allen, "A decade of the U.S. energy mix transitioning away from coal: historical reconstruction of the reductions in the public health burden of energy," *Environmental Research Letters*, Vol. 16, Issue 5, May 5, 2021, <https://iopscience.iop.org/article/10.1088/1748-9326/abe74c>

⁴ Weiwei Lin, Bert Brunekreef, and Ulrike Gehring, "Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children," *International Journal of Epidemiology*, Vol. 42, Issue 6, December 2013, pages 1724-1737, <https://doi.org/10.1093/ije/dyt150>

⁵ Xiao Wu, Rachel C. Nethery, Benjamin M. Sabath, Danielle Braun, Francesca Dominici, "Exposure to air pollution and COVID-19 mortality in the United States", medRxiv 2020.04.05.20054502, <https://doi.org/10.1101/2020.04.05.20054502>

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Air pollution also disproportionately impacts vulnerable and historically disadvantaged populations. Pollutants emitted by gas cooking appliances impact the respiratory and cardiovascular health of vulnerable populations such as children, the elderly, and those with existing health conditions⁶. Black, Indigenous, Latinx, and Asian people, as well as people with lower socioeconomic status, have higher risks of death from particle pollution, in part due to the historical impacts of segregation and redlining that have led communities of color to be pushed to places with greater exposure to air pollution⁷.

The use of fossil gas in buildings also poses safety risks to communities due to the potential for leaks and pipeline explosions. A fossil gas explosion in 2016 in Seattle's Greenwood neighborhood leveled two buildings, impacted 36 businesses, injured rescue workers, and created \$3 million dollars of damage⁸. Earthquake risk also makes Shoreline particularly vulnerable because highly pressurized gas pipelines run a high risk of exploding during earthquakes.

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Thank you for your consideration of this issue. We hope that this discussion will lead to passing policies that require clean, safe, all-electric buildings in Shoreline.

Sincerely,

Deepa Sivarajan
Washington Policy Manager
Climate Solutions

⁶ Brady Anne Seals and Andee Krasner, "Health Effects from Gas Stove Pollution," Rocky Mountain Institute, Physicians for Social Responsibility, Mothers Out Front and Sierra Club, 2020, <https://rmi.org/insight/gas-stoves-pollution-health>

⁷ American Lung Association, "State of the Air", 2020, <https://www.stateoftheair.org/assets/SOTA-2020.pdf>

⁸ Evan Bush and Christine Clarridge, "Seattle explosion leaves heart of Greenwood a gigantic mess," *Seattle Times*, March 9, 2016, <https://www.seattletimes.com/seattle-news/greenwood-explosion-destroys-buildings-injures-9-firefighters/>

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