



April 25, 2023

Puget Sound Clean Air Agency
1904 Third Avenue, Suite 105
Seattle, WA 98101

Dear Chair Dunn and Board of Directors,

The undersigned individuals and organizations write in support of an equitable transition to clean buildings in the Puget Sound region. Burning fossil fuels in our homes and businesses harms our health and climate, and the Clean Air Agency can and should end this pollution by adopting **zero-emission standards for new space and water heating appliances**.

These zero-emission appliance standards should take effect in 2030 to allow substantial lead time for a planning process centered on impacted communities and focused on facilitating an affordable transition for low-income residents. Given the useful life of fossil fuel appliances, the region **needs to start phasing them out by 2030** in order to meet critical climate targets – and setting an **early market signal** for that phase-out timeline will be key to ensuring that industry develops and scales the products we need for a successful and timely transition. This lead time will also give government and other financing entities the opportunity to craft, fund, and streamline support programs for low-income households so they can reap the health benefits of clean appliances.

The Clean Air Agency has been a strong leader in the climate space since your previous Strategic Plan identified greenhouse gas emissions from transportation as a key issue affecting Snohomish, King, Kitsap, and Pierce Counties. Since then, the agency's work on zero-emission vehicle adoption and transportation mode shifting has been crucial, including advocacy at the legislature that helped get the statewide Clean Fuel Standard across the finish line.

We would love to see this important work extended to greenhouse gas emissions from buildings, given the agency's expertise, experience, and authority working on climate and air pollution issues. As a near-term action, we look forward to the agency conducting the wedge analysis that Board members discussed at your January 2023 meeting.

Burning Fossil Fuels in Buildings Harms Our Health and Climate

About **40% of homes in Washington burn fossil fuels** in building appliances like gas furnaces and water heaters. In addition to other pollutants, these fossil fuel appliances emit over **8,000 tons of nitrogen oxide pollution (NO_x)** into the outdoor environment per year, more than is emitted by all power plants in the state combined.¹

¹ Emissions data from [EPA 2017 National Emissions Inventory](#). Appliance emission estimates include residential & commercial emissions for the gas, oil, & other fuel categories, with commercial emissions adjusted to exclude certain non-appliance sources like pipeline compressor stations.

NO_x harms health directly, and it can also contribute to the formation of deadly **fine particulate matter** (PM_{2.5}) and **ozone**. Even though the region is currently in attainment with federal air quality standards for both pollutants, health impacts at levels below those thresholds [are well established](#). Within the jurisdiction of the Puget Sound Clean Air Agency (PSCAA), fossil fuel building appliances emit over **30 times more NO_x than power plants**. Eliminating these emissions would remove as much NO_x as taking about **half the region's heavy-duty vehicles out of service**.²

Outdoor fossil fuel appliance pollution caused an estimated **53 premature deaths** in Washington in 2017, according to data from Harvard public health researchers.³ Analysis using EPA's Co-Benefits Risk Assessment tool indicates that these emissions are responsible for additional negative health and economic impacts, with appliance pollution from the PSCAA region alone driving more than **380 cases of respiratory symptoms** and **750 work loss days** each year, and total health impacts of appliance pollution in the region valued at almost **\$124 million annually**. And this building pollution disproportionately harms Washingtonians of color.⁴

Burning fossil fuels in our homes and businesses is also a **significant contributor to climate pollution**. In the PSCAA region, building appliances are responsible for approximately 15% of greenhouse gas emissions all by themselves – nearly equivalent to the **emissions from the entire industrial sector**.^{5,6} Statewide, the total monetized health and climate impacts of appliance pollution in 2017 are estimated to be **at least \$1 billion** and would be even higher using EPA's latest proposed value for the social cost of carbon.⁷

PSCAA Should End This Pollution With Zero-Emission Appliance Standards

Clean, efficient appliances like electric heat pumps can eliminate direct building emissions and their harmful impacts, and regional air quality authorities like PSCAA can accelerate this transition by enacting **zero-emission appliance standards**. These standards work by requiring some or all newly sold appliances to be pollution-free. Standards for new appliances take effect when existing equipment is being replaced, which is the most cost-effective time to electrify.

As a stationary source regulator, PSCAA has no regulatory authority over transportation emissions – but it does have **direct jurisdiction over appliance emissions in the region**. PSCAA has **ample authority** reserved to enact zero-emission appliance standards under both the federal [Clean Air Act](#) and the [Washington Clean Air Act](#), and the agency should act where its regulatory [authority](#) and responsibility lies to protect health and the climate.

² Emissions data from [EPA 2017 National Emissions Inventory](#); see note 1.

³ Based on RMI analysis using median estimates from the results of 3 reduced complexity models used in: Jonathan J. Buonocore et al., [A Decade of The U.S. Energy Mix Transitioning Away from Coal: Historical Reconstruction of the Reductions in the Public Health Burden of Energy](#), Environ. Res. Lett. 16 054030 (2021), as well as additional analysis from the study's lead author.

⁴ Christopher W. Tessum et al., [PM_{2.5} Polluters Disproportionately and Systemically Affect People of Color in the United States](#), Sci. Adv. 7:18, supplementary data file S2 (2021).

⁵ 2017 emissions data from U.S. Energy Information Administration, Environment, [Sectoral Specific Emission Tables by State](#).

⁶ Puget Sound Clean Air Agency, [Greenhouse Gas Emissions Inventory](#), June 2018.

⁷ Based on estimates of premature death and emissions cited in this letter, & using EPA [Value of Statistical Life](#) & Interagency Working Group [Social Cost of Carbon](#) (3% discount rate).

PSCAA can model its clean appliance standards on the **examples being set in other states**. The Bay Area's air regulator [adopted](#) zero-NO_x appliance standards this year that take effect in 2027–2031, with [CARB](#) and California's biggest [air district](#) pursuing similar standards. Elsewhere, [New York](#) and [Maryland](#) have recommended statewide zero-emission standards to address pollution from buildings.

To ensure **inclusive and equitable electrification**, appliance standards should have future compliance dates of 2030, which will provide lead time for a planning process centered on impacted communities and focused on facilitating an affordable transition for low-income residents. Designed properly, standards will serve as a **catalyst and market signal** to drive the action and direct investments needed to implement the transition successfully for all residents. And regulators should [commit](#) to a “checkpoint” for equity review before regulations go into effect to ensure communities aren't left behind.

Electrifying buildings is essential to saving lives, reducing illness, and meeting our climate goals. The Clean Air Agency should set zero-emission appliance standards for furnaces and water heaters to ensure clean, healthy homes and buildings for all residents of the region.

Thank you for your service to the region and to the Clean Air Agency's mission.

Respectfully,

(listed alphabetically by organization)

Doug Presley, Policy and Regulatory Affairs Manager, **Dandelion Energy**

Rev. AC Churchill, Executive Director, **Earth Ministry / Washington Interfaith Power & Light**

Brian Stewart, Founder, **Electrify Now**

Sam Ricketts, Co-Founder & Senior Advisor, **Evergreen Action**

Robin Briggs, Member, **43rd District Democrats Environmental Caucus**

Grace Doleshel, PNW Field Organizer, **Our Climate**

Jed Holtzman, Senior Associate, **RMI**

Dylan Plummer, Senior Campaign Representative, **Sierra Club**

Laura Feinstein, Fellow, **Sightline Institute**

Beth Brunton, Organizer, **South Seattle Climate Action Network**

Nathan Taft, Senior Digital Campaigner, **Stand.earth**

Jess Wallach, Campaigns Co-Director, **350 Seattle**

Melinda Hughes, Executive Director, **Thurston Climate Action Team**

Kevin Jones, Board Member, **Vashon Climate Action Group & Indivisible Vashon**

Paula Sardinias, Founder and CEO, **WA Build Back Black Alliance**

Riley Lynch, Climate and Health Program Manager, **Washington Physicians for Social Responsibility**

Pete Marsh, CEO, **Vector Green Power, LLC**