



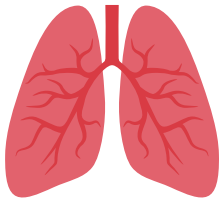
San Francisco Climate Equity Hub Air Pollution and Healthier Electric Homes

Air Pollution Sources

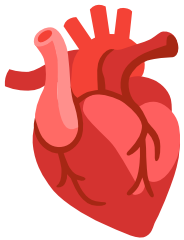
- Cars and trucks
- Air planes and ships
- Industry
- Wildfires
- Buildings

Air pollution from our home gas appliances harms our health.

Gas-burning appliances including stoves, water heaters, furnaces, and clothing driers emit air pollution that harms our health and climate. These pollutants and their health harms include:



- **Nitrogen Dioxide (NO₂):** Lung irritation, increased asthma symptoms, enhanced allergic responses, chronic lung disease, increased risk of stroke and dementia, and heart effects.



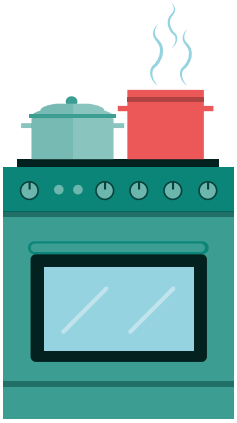
- **Carbon Monoxide (CO):** Chest pain (especially in heart disease patients), fatigue, headaches, reduced mental alertness, and possible death at very high levels.
- **Formaldehyde, Benzene, and other Volatile Organic Compounds (VOCs):** Cancer risk, eye, nose, and throat irritation, nausea, fatigue, dizziness, and liver, kidney, and damage to nerves.
- **Particulate Matter (PM₁₀ and PM_{2.5}):** Harmful to lung and heart health due to their ability to penetrate deep into the lungs, increasing asthma symptoms, lung illnesses, heart disease, increased risk of stroke and dementia, and premature death.



Health harms from other pollution sources in homes such as chemical cleaners, some carpets, furniture, and building materials include:

- **Ozone (O₃):** Chronic lung disease, development of asthma, airway inflammation, and death.
- **VOCs - Formaldehyde and Benzene:** Can cause cancer (leukemia), acetaldehyde (digestive tract, liver, large intestine, and breast cancers).





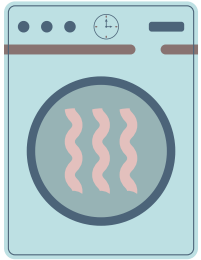
Health Equity

Communities of color often deal with substandard housing conditions, buildings in disrepair, and with old, inefficient appliances. In addition, the impacts of historical housing discrimination (“red-lining”), poor regulation of local polluting industries, and persistent disinvestment in communities, all contribute to poorer air quality and harm health.

For many decades studies have shown that air pollution is an environmental and social factor of health. Vulnerable communities, mostly POC and lower income, are disproportionately affected by air pollution due to this complex web of reasons. According to a recent study in the Bay Area, people of color are exposed to 55% more NO₂ pollution than mostly white neighborhoods.

National air pollution models often underestimate localized pollution levels near roadways in the Bay Area, raising concerns about environmental justice and exposure in dense, marginalized communities.

Children and elders are particularly sensitive to air pollution.



SF Climate Equity Hub Resources and Programs

Climate Equity Hub Heat Pump Water Heater (HPWH) Direct Install Program

Provider: San Francisco Climate Equity Hub

Eligibility: Income-qualified residents in SF EJ communities

Services: No-cost installation of HPWH in single-family and small multi-family homes

Goal: Support minority, women-owned, and disadvantaged, local, small businesses

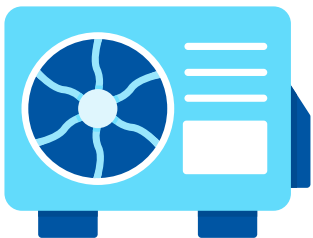


Bay Area Air District Zero-Emission Appliance Rules

When gas water heaters and space heaters burn out, they will need to be replaced with healthier, zero-pollution appliances such as heat pumps.

2027: Phase-out of gas home water heaters

2029: Phase-out of gas home furnaces



SF Climate Equity Hub is a collaboration between the SF Environment Department and 8 SF EJ organizations. We aim to utilize the clean energy transition as an opportunity to address inequities by developing programs that make electrification financially beneficial for EJ communities.

This handout was made through the Community Climate Implementation Fund housed at Climate Mayors – a project of Resources Legacy Fund.

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