

Climate Justice

Overview

People who have the smallest carbon footprint tend to be more impacted by the effects of climate change. For centuries, goods have been extracted from the resource-rich parts of the world to serve others. In the process, pollution, human rights violations, and climate change have occurred. The unequal distribution of climate change now most impacts those least responsible for it.

In Our Daily Lives

Energy Justice

- Energy Burdens: ~28% of homes locally have unsustainable energy bills, and it's correlated with race
- Energy Use: Single-family homes use 150% more energy than multi-family homes
- Natural Gas Exposure: Natural gas leaks are disproportionately high in communities of color

Transportation Justice

- Highways have historically been used to segregate U.S. cities and still have modern-day impacts
- Car pollution, which is linked to dementia, is 2.7x higher in communities of color
- Increasing access to biking and walking can improve climate, health, & economic opportunities



Addressing the Root

Climate justice is racial justice. We need to prioritize communities that have been historically left out of power when we create climate solutions.

- Weller, Z.D., et al. Environmental Injustices of Leaks from Urban Natural ... - ACS Publications. <https://pubs.acs.org/doi/10.1021/acs.est.2c00097>
- Lebel, E.D., et al. 2022. Methane and NOx Emissions from Natural Gas Stoves, ... Environ. Sci. and Technol. <https://pubs.acs.org/doi/10.1021/acs.est.1c04707>
- Kashtan, Y. et al. 2023. Gas and Propane Combustion from Stoves Emits Benzene ... Environ. Sci. Technol. <https://pubs.acs.org/doi/10.1021/acs.est.2c09289>
- Andrews, C. J. 2008. Greenhouse Gas Emissions ... - Journal of Enviro Planning and Management. <https://www.tandfonline.com/doi/abs/10.1080/09640560802423780>

Connect with us to share your ideas!

Climate Change and Health

Overview

Climate change is linked to health problems in both the **direct health impacts of climate change** and also the **shared underlying factors** (such as the "social determinants of health") that exacerbate both the climate crisis and poor health outcomes. The Community Climate Collaborative's (C3) work on climate justice intersects with public health by addressing these shared root causes.

Climate Impacts on Health

Outdoor air pollution:

- ~39% of greenhouse gas (GHG) emissions in VA are from transport
- Cars exhaust releases PM2.5, which contributes to asthma and causes **about 3,000 premature deaths every year in Virginia**.
- NOx pollution, from cars, is 2.7x higher in communities of color.

Indoor air pollution:

- **Gas stoves** are a major source of indoor air pollution and **have been linked to asthma**, cancers, and other negative health effects.
- Leaked natural gas from stoves in the U.S. emit the same amount of carbon as 500,000 cars.



Solving Both

Climate solutions are health solutions.

We need to: (1) reduce natural gas usage, (2) promote zero-emissions vehicle adoption, & (3) design places that are accessible, walkable, and transit-friendly. We need all voices to build solutions.

- Virginia Dept. of Environmental Quality (2019). "Greenhouse Gasses Inventory". Available at: <https://www.deq.virginia.gov/air/greenhouse-gases>
- C3 (2020). "Local Effects of Climate Change". Available at: <https://theclimatcollaborative.org/c3-reports>
- C3 (2021). "Lessons in Rural Electrification". Available at: <https://theclimatcollaborative.org/lessons-in-residential-electrification>
- C3 (2021). "Transit Equity And Climate: Moving to a Cleaner Future". Available at: <https://theclimatcollaborative.org/transit-equity-and-climate>

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Transportation Justice

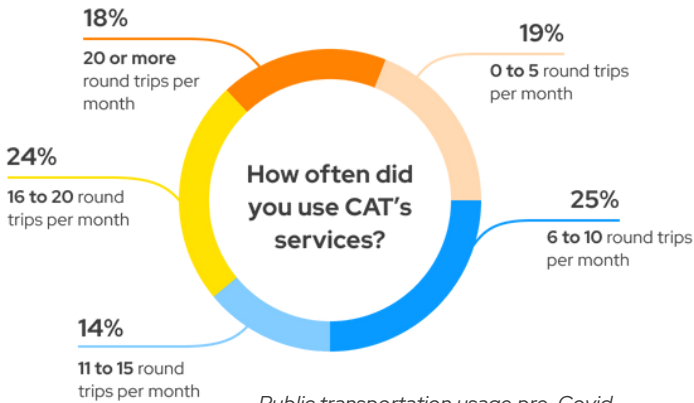
Overview

Community: Transportation is a central part of everyday life. It connects us to essential services, economic opportunity, recreation, and each other.

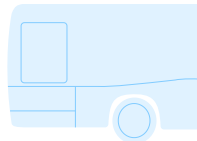
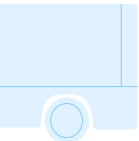
Justice: Car pollution disproportionately impacts people of color, and highways have been used as a weapon to segregate cities for decades. To build an equitable future, we need to **reduce vehicle pollution** and **increase connectivity** throughout our communities.

Climate: Emissions from vehicles are the leading source of carbon emissions, both in our community and in Virginia as a whole. Robust, efficient, and equitable transit systems can **slow climate change** and build a more just community.

Local Transportation



Public transportation usage pre-Covid. Results from 2021 C3 report.



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Energy Justice

Overview

Rising temperatures increase energy needs, which reduces housing affordability and contributes to displacement and sprawl. To promote energy justice, we must enhance energy efficiency and generate renewable energy in our communities. C3's campaign combines efficiency and fuel switching to reduce community-wide energy use.

The climate crisis demands a rapid and equitable transition to clean energy. Our scorecard gives the public a tool to assess solar projects through a climate justice lens in order to determine strong projects and expedite change.

Local Energy Burden



Thousands of homes in our area pay too much of their income on energy because of inefficiencies.



Energy Justice Benefits

- Clean air and healthier communities.
- Reduced greenhouse gas emissions.
- Lower energy bills.

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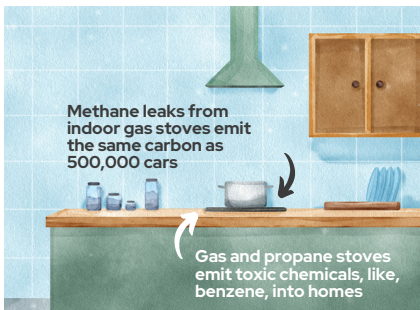
Natural Gas and Climate Justice

About Natural Gas

- Natural gas is a fossil fuel commonly used in household appliances such as gas stoves, gas furnaces, and gas water heaters
- The primary component in **natural gas is methane**, which is a greenhouse gas that contributes to climate change 20 times more than carbon dioxide
- Richmond and Charlottesville are **two of only three** municipalities in Virginia to own and operate their own natural gas utilities

Climate Justice

- People who have the smallest carbon footprint tend to be more impacted by the effects of climate change because of structural forces like racism and capitalism
- Communities of color and lower-income communities have more natural gas leaks, but don't use more energy



Fossil Fuels in the Home

- Weller, Z.D., et al. Environmental Injustices of Leaks from Urban Natural ... - ACS Publications.
<https://pubs.acs.org/doi/10.1021/acs.est.2c00097>
- Lebel, E.D., et al. 2022. Methane and NOx Emissions from Natural Gas Stoves, ... Environ. Sci. and Technol.
<https://pubs.acs.org/doi/10.1021/acs.est.1c04707>
- Kashtan, Y. et al. 2023. Gas and Propane Combustion from Stoves Emits Benzene ... Environ. Sci. Technol.
<https://pubs.acs.org/doi/10.1021/acs.est.2c09289>

Helpful Tips

Use electric appliances:

- Heat water in microwave
- Use a plug-in induction stove
- Switch to electric heat and cooking

Conserve energy:

- Seal windows
- Use efficient appliances

Advocate to end fossil fuels:

- Decarbonize municipal gas
- Incentivize going electric
- "Branch-prune" to turn off gas equitably

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