SPEAK UP & ACT NOW: SHORT GUIDES TO ADDRESS CLIMATE CHANGE[i]

TRANSPORTATION

QUESTION: Does our transportation (which includes cars, buses, freight trucks, trains, ships, and airplanes) contribute to climate change?

ANSWER: Yes! A big source of carbon dioxide (CO_2) in the atmosphere is gas-powered transportation. Gasoline is produced by refining oil, a fossil fuel. When gasoline is burned in an internal combustion engine it emits CO_2, a greenhouse gas. Greenhouse gases absorb the sun's heat, acting as a heat-trapping blanket on the Earth. Human-caused greenhouse gas emissions from burning fossil fuels are the primary driver of the rapid and unprecedented global warming that is occurring.

The U.S. contributes by far the most transportation-related CO_2 emissions globally—over one-fifth! In Virginia, transportation is responsible for over half of all CO_2 emissions in the state and Virginia is in the top ten states in terms of transportation-related emissions (U.S. Energy Information Administration, 2024)

ACTIONS – WHAT CAN WE DO?

1. **TAKE FEWER AND SHORTER TRIPS.** The less you travel in gas-powered vehicles, the less CO_2 you will emit. And, according to Dr. Kimberly Nicholas, "[t]he higher our income, the more likely the majority of our emissions come from flying and driving. This makes reducing flying and driving consistently high-impact personal climate actions" (Get Your Climate Priorities Straight, *We Can Fix It*, Oct. 27, 2023). Telecommuting, attending meetings virtually, combining errands into one trip, and flying less often are all helpful actions.
2. **OPT FOR ZERO-CARBON TRANSPORTATION LIKE WALKING AND BIKING.** If zero-carbon transportation isn't feasible, try to choose a lower-carbon alternative like public transportation, including buses or trains, or carpooling.
3. **SWITCH TO AN ALL-ELECTRIC VEHICLE, WHILE ADVOCATING TO DECARBONIZE ("GREEN") THE ELECTRIC GRID.** Passenger vehicles make up over half of all transportation-related carbon dioxide emissions in the U.S. Though more carbon dioxide is emitted during the manufacture of electric vehicles (EVs), the production of electricity needed for driving EVs emits far less carbon per mile than burning gasoline even without a fully decarbonized grid. Taking both factors into account, an EV's lifetime emissions are in the range of one half of those from a gas-powered car, and as more renewable energy is

added to the electric grid, EV emissions will drop even further (U.S. EPA, Electric Vehicles Myths, Jan. 23, 2025).

4. **MAKE YOUR MONEY COUNT.** Invest in zero-carbon transportation sector stocks/exchange-traded funds (ETFs), including those developing the components and infrastructure like charging stations to support EVs.
5. **SPEAK UP.** Donate to and vote for candidates that support decarbonization and electrification of the transportation sector. (Decarbonization is the process of reducing or eliminating carbon dioxide and other greenhouse gas emissions caused by human activities. It is a key part of the global effort to achieve net zero emissions as outlined in the Paris Agreement.) Support legislation for clean car standards. Support actions to increase renewable energy and decarbonize the electrical grid (e.g., push for Virginia's return to the Regional Greenhouse Gas Initiative [RGGI]). Let business owners know you support bold changes like zero-emission vehicles.

RESOURCES – WHERE CAN I LEARN MORE?

- Reducing Your Transportation Footprint, Center for Climate and Energy Solutions, previously the Pew Center on Global Climate Change
- What You Can Do to Reduce Pollution from Vehicles and Engines, U.S. Environmental Protection Agency (U.S. EPA)
- Electric Vehicle Myths, U.S. EPA
- Virginia General Assembly EV-Related Bills, Virginia Public Access Project (VPAP)

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[i] Prepared by members of the University of Richmond Osher Special Interest Group on addressing the climate crisis (2024-25)