

ACCELERATING TRANSPORTATION ELECTRIFICATION

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EXECUTIVE SUMMARY

About half of Virginia's carbon dioxide emissions – and numerous other air pollutants – come from the transportation sector, causing immediate health problems on top of exacerbating climate change which disproportionately impacts low-income and communities of color. While Virginia has taken steps to address this by phasing electric cars into the new vehicle stock, funding should be set aside to offset upfront costs and increase access to charging infrastructure in order to bridge any accessibility and affordability gaps. Taken together, these policies can improve the health and wellness of Virginians while eliminating the bulk of Virginia's carbon emissions.

CHALLENGE

The transportation sector accounts for 51% of Virginia's carbon dioxide emissions, and is a major source of other air pollutants, leading to negative climate, public health, and economic impacts.¹ These emissions disproportionately affect low-income populations and communities of color who breathe 66% more vehicular air pollution than white residents on average. Vehicular particulate matter (PM2.5) alone accounts for 92 deaths, 2,600 cases of exacerbated asthma, and 10,000 lost workdays in Virginia each year.³ When considering transportation emissions in their entirety, these emissions led to 1300 premature deaths in Virginia in 2016, and the deaths associated with this pollution are 61% higher in low-income and older communities, along with communities of color.^{4,5}

To comprehensively address vehicle pollution, cleaner transportation alternatives such as transit and rail need to be expanded. Virginia must also reduce vehicle miles traveled by incentivizing and pursuing thoughtful land use planning (see MODERNIZING PUBLIC TRANSIT, SAVING PEDESTRIAN LIVES, and INCREASING ACCESS TO BIKING). Simultaneously, we must accelerate transportation electrification to eliminate emissions from the remaining trips.

While electric cars and buses are far cheaper to own and maintain in the long run, higher upfront costs keep these savings out of reach for many Virginians.^{6,7,8} Furthermore, many households lack access to reliable charging infrastructure. Roughly 50% of US households don't park within 20 feet of an electrical outlet, making access to public EV charging and multifamily-housing EV charging essential for widespread adoption.⁹ Bridging these affordability and accessibility gaps is critical to ensuring a successful and equitable transition to electrified mobility.

SOLUTION

Every electric vehicle (EV) that replaces a gas-powered model helps clean Virginia's air, supports the Commonwealth's climate goals, and drives statewide economic development. When powered by Virginia's current electricity mix, EVs produce 83% fewer emissions

than gas-powered vehicles,¹⁰ resulting in positive health outcomes. Real-world test cases have linked EV adoption to reductions in asthma rates and air pollution.¹¹

Virginia's growing clean vehicle sector already supports 6,800 jobs, and the Inflation Reduction Act is providing once-in-a-generation investment in the domestic EV supply chain through tax credits for EV and battery manufacturing facilities.¹² American jobs in the hybrid and EV manufacturing supply chain sector grew an astonishing 25% from 2021 to 2022.¹³

By adopting Advanced Clean Cars standards, the General Assembly ensured the best selection of in-demand EVs will be available to Virginia consumers and sent market signals that encourage charging companies to invest in Virginia.

Virginia has already created an equitable on-the-hood EV rebate structure. Funded adequately, that rebate would complement federal tax credits – lowering the purchase price for new and used EVs and putting electric mobility within reach for more Virginians.¹⁴

With more than 100 EV models available by 2025,¹⁵ the shift to electric vehicles is coming fast. The federal government has allocated significant funding to build out charging infrastructure along major travel corridors – including \$106 million in formula funding for Virginia along with additional competitive grant opportunities.¹⁶ Now Virginia must lead at the state level by making necessary investments in charging infrastructure and on-the-hood incentives to ensure Virginians who live in multifamily buildings and rural communities won't be left behind.

POLICY RECOMMENDATIONS

Maintain and advance Virginia's Clean Car Standards, which go into effect in 2024.

Allocate \$40M each year for the existing but unfunded EV Rebate Program to bring down the up-front cost of EVs at the point of sale.

Create a dedicated source of funding for charging infrastructure in rural and low-income localities to support ongoing tourism to scenic and rural areas.

Establish a fund of 200K each year to cover the cost of low-to-moderate-income electricians to take the Electric Vehicle Infrastructure Training Program.