

ACCELERATING TRANSPORTATION ELECTRIFICATION

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EXECUTIVE SUMMARY

The transportation sector is Virginia's largest source of carbon pollution. Adopting the Advanced Clean Car Standards in 2021 was an important step towards reducing these emissions, but a robust defense of that progress - including additional, complementary policies - is needed to ensure its long-term implementation. Rapidly transitioning to electric-powered cars, trucks, trains, and buses will result in numerous public health, economic, and climate benefits. State-level policies, combined with a once-in-a-generation influx of federal funds for transportation reform, can bring these benefits to the Commonwealth and accelerate the arrival of a cleaner, more prosperous mobility future for all Virginians.

CHALLENGE

The transportation sector accounts for 53% 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.² Vehicular particulate matter (PM_{2.5}) 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 750 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, and thoughtful land use incentivized and pursued, in order to reduce vehicle miles traveled (see IMPROVING PUBLIC TRANSIT, page 69 and INCREASING BIKING & WALKING, page 67), and we must simultaneously accelerate transportation electrification to eliminate emissions from the remaining trips.

While electric cars and buses are far cheaper to own in the long run, higher upfront costs keep these savings out of reach for many Virginians.^{6,7,8} In addition, many households lack access to reliable charging infrastructure. Roughly 40% of U.S. households don't park within 20 feet of an electrical outlet, making access to public EV charging essential for widespread adoption.⁹ Bridging these affordability and accessibility gaps is critical to ensuring a successful and equitable transition to electric 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 local economic development. Virginia's growing advanced vehicle sector already supports 5,500 jobs.¹⁰ When powered by Virginia's current electricity mix, EVs produce up to 70% fewer emissions

than internal combustion engine (ICE) vehicles.¹¹ And as Virginia's grid gets cleaner and cleaner, the EVs on its roads will too. The more Virginia electrifies transportation, the more the entire Commonwealth benefits.

The General Assembly has taken important strides towards bringing EVs to Virginia, but these significant wins are not impervious to weakening or repeal. The legislature must defend against attempts to roll back progress towards a cleaner transportation future, while also providing thoughtfully designed financial incentives that make EVs, electric buses, and e-bikes more affordable. These policy solutions accelerate adoption rates and put electric mobility within reach for more Virginians.¹²

Reliable access to charging infrastructure will also accelerate transportation electrification. The federal Infrastructure Investment and Jobs Act (IIJA) has allocated significant funding for states to build out their charging infrastructure along major travel corridors — including \$106 million in formula funding for Virginia and additional competitive grant opportunities.¹³ These funds must be spent in an equitable and efficient manner, and resources exist that can help Virginia map out and implement these infrastructure developments.^{14,15} From reduced emissions and decreased dependency on foreign oil, to better air quality and the creation of new, local jobs, transitioning to EVs is good for Virginia as a whole.

POLICY RECOMMENDATIONS

Protect and advance Virginia's Clean Car Standards, which take effect in 2024.

Allocate \$100 million annually until price parity is achieved for financial incentives to expand access to electrified mobility and help Virginians overcome the higher upfront cost of EVs, electric school and transit buses, and e-bikes.

Improve access to charging infrastructure by utilizing newly available IIJA funding allocations and competitive grants, while ensuring meaningful stakeholder input, especially from historically underserved communities.

Ensure that all efforts to accelerate transportation electrification prioritize under-resourced communities that experience higher levels of air pollution and respiratory illnesses.