



Policy Priority: **Driving Transportation Electrification**

The United States is poised to witness a transportation revolution. Since 2011, the sale of light-duty electric vehicles (EVs) in the US has grown by 50% year-over-year, with buses and heavy-duty EVs following closely, with good reason. When considering the lifetime costs of ownership, it is already less expensive to own an EV than a fossil-fueled vehicle for many Americans. With battery prices continuing to fall, the sticker price of EVs is approaching parity.

Moving from fossil-fueled transportation to EVs will bring economic and public health benefits to our Commonwealth. Transportation electrification brings EV charging installation jobs and other supply chain activity, which mean we can attract and keep investment dollars here, employing local power and reinvesting in Virginia. Transitioning to EVs will also improve air quality and public health. EVs can provide a variety of benefits to the grid and consumers as a whole, with demonstrable economic gains.

Will the Commonwealth fully realize these benefits? Or will state regulation and policy prove to be an obstacle? That's the question today. Virginia is off to a good start. In addition to a handful of exemptions and incentives for alternative fuel vehicles – a category that includes CNG, propane, and biofuels as well as EVs – Virginia was among the first to issue an RFP using Volkswagen settlement funds for deployment of public charging stations. But much more needs to be done. Although a substantial share of Americans say they're interested in purchasing an EV, according to recent surveys, a significant majority of them cite the lack of charging infrastructure as a significant barrier.

Virginia's leaders must ensure that the Commonwealth has a robust EV charging infrastructure. Encouraging the build-out of a statewide public EV charging network is key. To ensure chargers are deployed effectively, though, we need collaborative public-private partnerships, robust utility engagement and investment, and routine reassessments given the changing technology landscape. Recent Energy Plans have included high-level assessments. Future studies should go deeper, identifying optimal locations for new charging stations, relevant updates to building codes, and ways to streamline permitting. Such assessments should consider not only the needs of light-duty EVs, but also those of medium- and heavy-duty EVs. To further facilitate buildout, Virginia should consider developing tools – such as property tax abatements - to incent commercial properties to set aside parking spaces to support public EV charging.

The State Corporation Commission (SCC) should establish regulations that spur investment in charging infrastructure by utilities, public institutions, and

private actors. SCC should ensure that charging infrastructure is developed with a commitment to open payment and technical standards to ensure Virginia's EV growth is not constrained by access limitations, consumer experience issues, or the potential for stranded assets. As the SCC develops such rules, Commissioners should consider the grid and ratepayer benefits of EVs, encouraging a variety of programs, including networked and smart EV chargers.

Regulators have an important role to play in Virginia's EV future. In addition to setting the rules for charging infrastructure, **regulators also need to explore effective rate designs and how technology can complement rate options.** Excessive demand charges and interconnection rules can decimate the economics of EV charging, impacting individual drivers and fleet managers alike. Virginia's utilities have experimented with EV rate designs, with limited success. Regulators should assess what has and hasn't worked in the past, leverage best practices from other regions, and solicit information from a variety of market participants, to ensure electric rates support rather than discourage EV deployment. In particular, time-varying rates should be available to EV drivers to minimize grid impacts and maximize EV-driver fuel savings. Such voluntary tariffs should be available on an EV-only basis, so as not to require the entire home or business to be on time-varying rates.

To accelerate transportation electrification, **policymakers should simultaneously incentivize EV adoption.** As noted above, Virginia has taken an early lead, deploying VW settlement dollars to develop charging infrastructure. We would encourage the state to use remaining settlement funds to finance electrification of medium- and heavy-duty fleets at Virginia's ports, transit districts, and municipalities. Policymakers should consider financial mechanisms to bring down incremental costs, such as voucher programs, and may want to explore additional revenue sources, such as transit funds and revenue from potential carbon regulations, as settlement dollars are exhausted. Tax rebates or credits, which could decline over time, can likewise help encourage private uptake by reducing upfront costs, and should be coupled with existing exemptions and incentives.

Transportation electrification, from private vehicles to public transit and heavy-duty fleets, will benefit our Commonwealth. We should lower the barriers and incentivize uptake to ensure all Virginians realize the range of economic and environmental benefits electrification can produce.