

Attachment

The Clean Cars standards will bring both cleaner gas-powered vehicles and a greater number and variety of zero-emission vehicles to the Commonwealth, providing a multitude of benefits:

- **Combat climate change:** Transportation is the largest source of carbon pollution in Virginia—producing over 49% of our CO₂ emissions, and over 53% of that comes from passenger cars and other light-duty vehicles.ⁱ Electricity to power an EV in Virginia emits less than 17% of the CO₂ emitted by an equivalent gas car and the grid will only get cleaner over time.ⁱⁱ The Clean Cars standards are projected to reduce Virginia’s CO₂ emissions by approximately 139.2 MMT from 2026 to 2040, as measured along the entire well-to-wheel lifecycle.ⁱⁱⁱ
- **Improve public health and equity:** Widespread transition to EVs could, by 2050, yield more than \$1.3 billion in avoided annual health costs in Virginia and avoid 115 premature deaths, more than 1,780 asthma attacks, and nearly 8,190 lost workdays each year.^{iv} And transportation pollution disproportionately impacts low-wealth communities and communities of color.^v
- **Expand consumer choice:** Vehicle manufacturers prioritize sending EVs to states that have adopted Clean Cars standards. Even though nearly 70% of Virginia drivers would consider buying an EV in the near future,^{vi} one-third of EVs registered in Virginia were purchased out-of-state.^{vii} The Virginia Automobile Dealers Association supported HB1965 in part to gain better access to EV inventory.
- **Save consumers money:** A number of competitively-priced EVs are already on the market and the price of EVs could soon reach parity with gas cars.^{viii} Owning an EV also saves the typical driver between \$6,000 and \$10,000 over the lifetime of the vehicle compared to a gas powered car due to reduced fuel and maintenance costs.^{ix} In 2021, Virginians spent almost \$11 million on imported gas.^x EV drivers typically spend the equivalent of \$1 per gallon for a full charge and a typical EV can be driven 150 to 400 miles before it needs to be recharged.^{xi}
- **Apply to manufacturers, not dealers:** Vehicle manufacturers, not dealers, must comply with Clean Cars standards. At least 17 major manufacturers have promised to electrify a significant portion of their vehicles by 2030 and others, like Honda and Hyundai, aim to have 100% EV sales by 2040.^{xii} By planning for compliance at the national level, manufacturers choose to first send their EVs to states that have adopted the Clean Cars standards and they can decide to send these vehicles to parts of the state where they are most likely to sell. As of 2021 (the most recent year for which data is available), all vehicle manufacturers have complied with the ZEV portion of the Clean Cars standards.^{xiii}
- **Bring economic growth to Virginia:** Beyond making more EVs available for purchase in the Commonwealth, Clean Cars standards could produce almost 30,000 new jobs in Virginia^{xiv} and result in \$814.5 million in total net benefits.^{xv}
- **Build on Virginia’s commitment to EV infrastructure:** EV charging stations are being rapidly deployed across the state. As of June 2024, there are 1,497 public charging stations in Virginia.^{xvi} DEQ has already allocated funding from the Volkswagen settlement to expand

charging infrastructure that will put 95% of Virginians within 30 miles of a charger once completed.^{xvii} Over \$100 million from the federal infrastructure act will help to further build out charging infrastructure,^{xviii} in addition to other competitive grant opportunities available and the installation of chargers by the private sector.^{xix}

- **Become an EV leader without stressing the grid:** The Clean Cars standards are projected to result in only 3% more electricity demand in 2040 compared to the increase in electricity demand that would occur from EVs if the standards were not in place. Even with Clean Cars standards in place, energy demand from EVs is projected to account for less than 10% of total electricity demand 16 years from now. By comparison, the rapid rise of data centers has led to that industry consuming roughly 20% of the electricity in Virginia today—yet the grid has not crashed.^{xx}
- **Reduce overall electricity rates:** According to the State Corporation Commission, if smart policies such as time-of-use rates are put in place, widespread EV adoption can put downward pressure on electricity rates and lead to savings for all ratepayers, whether they drive an EV or not.^{xxi}

ⁱ Va. DEQ, *Greenhouse Gases: 2016-2019 Inventory* (2019), available at <https://perma.cc/FN37-SJXY>.

ⁱⁱ Office of Energy Efficiency & Renewable Energy, U.S. Department of Energy, *Alternative Fuels Data Center: Emissions from Electric Vehicles*, <https://perma.cc/847Z-ZBZS> (last visited Sept. 1, 2023) (statistics based on 2021 EIA data).

ⁱⁱⁱ International Council on Clean Transportation, *Benefits of Adopting California Advanced Clean Cars II Regulations under Clean Air Act Section 177 2* (May 2023), <https://perma.cc/X3JJ-6DY8>.

^{iv} American Lung Association, *The Road to Clean Air: Benefits of a Nationwide Transition to Electric Vehicles*, <https://perma.cc/T5SK-AGKR>.

^v Mary Angelique G. Demetillo et al., *Space-Based Observational Constraints on NO₂ Air Pollution Inequality from Diesel Traffic in Major US Cities*, 48 GEOPHYSICAL RSCH. LETTERS 1 (2021), <https://repository.library.noaa.gov/view/noaa/40167>; American Lung Association, *Driving to Clean Air: Health Benefits of Zero Emission Cars and Electricity* 3 (June 2023), <https://perma.cc/2LG4-4YJX>.

^{vi} Consumer Reports, *CR Survey: A Majority of Virginia Drivers are Interested in Buying an Electric Vehicle (EV) in the Future* (Jan. 2021), <https://perma.cc/3AKK-AMJL>.

^{vii} Kevin Reilly & David Friedman, *Opinion: Virginia Can Help Ease the Transition to Clean Cars*, Wash. Post (Feb. 11, 2021), <https://perma.cc/EAD5-GSDX>.

^{viii} Jack Ewing, *Electric Vehicles Could Match Gasoline Cars on Price this Year*, N.Y. Times (Feb. 14, 2023), <https://perma.cc/GY74-LFJJ>; Peter Slowik et al., International Council on Clean Transportation, *Assessment of Light-Duty Electric Vehicle Costs & Consumer Benefits in the U.S. in the 2022-2035 Time Frame* (Oct. 2022), <https://perma.cc/5ED3-DB7E>.

^{ix} Chris Harto, Consumer Reports, *Electric Vehicle Ownership Costs: Today's Electric Vehicles Offer Big Savings for Consumers* 3 (Oct. 2020), <https://perma.cc/8Y2L-7GG4>.

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- ^x U.S. Energy Information Administration, *U.S. States: State Profiles & Energy Estimates*, tbl. E20, <https://perma.cc/22QX-KDKN> (based on data from 2021).
- ^{xi} VCU CNS, Virginia Public Media, *Timeline of Virginia's Clean Car Law and What to Expect* (May 19, 2023), <https://perma.cc/N5Z6-SGUU>.
- ^{xii} Jeff S. Bartlett & Ben Preston, Consumer Reports, *Automakers Are Adding Electric Vehicles to Their Lineups. Here's What's Coming* (March 10, 2023), <https://perma.cc/VF4B-PNGS>.
- ^{xiii} Anh Bui, Dale Hall, & Stephanie Earle, International Council on Clean Transportation, *Advanced Clean Cars II: The Next Phase of California's Zero-Emission Vehicle and Low-Emission Vehicle Regulations 7* (Nov. 2022), <https://perma.cc/E93B-MDKQ>.
- ^{xiv} Greenlink Analytics, Georgetown Climate Center, *Pathways to Rapid Reductions in Virginia's Transportation Emissions: Clean Car Standards* (Jan. 22, 2021), <https://perma.cc/BG5A-MUWJ>. Note: these figures may be lower if recently adopted updates to federal standards are fully implemented.
- ^{xv} International Council on Clean Transportation, *Benefits of Adopting California's Advanced Clean Cars II (ACC II) Standards in Virginia 3* (May 2023), <https://perma.cc/3XBR-LAZ6>.
- ^{xvi} U.S. Energy Information Administration, *Alternative Fuels Data Center: Alternative Fueling Station Locator, Virginia*, <https://afdc.energy.gov/stations/#/analyze?region=US-VA&fuel=ELEC> (showing public Level 2 and DC fast charger stations in Virginia).
- ^{xvii} Va. DEQ, *Volkswagen Settlement Agreement*, <https://perma.cc/M67C-62T9> (last visited Sept. 1, 2023).
- ^{xviii} Office of Public Affairs, U.S. Department of Transportation, *The Bipartisan Infrastructure Law Will Deliver for Virginia* (Apr. 11, 2022), <https://perma.cc/BW95-F5HX>.
- ^{xix} See e.g., Federal Highway Administration, *Charging and Fueling Infrastructure Discretionary Grant Program* (May 15, 2023), <https://perma.cc/4KS7-D4KH>.
- ^{xx} Ivy Main, *Why are Ratepayers Footing the Bill for Virginia's Data Center Buildout?*, Virginia Mercury (Aug. 16, 2023), <https://perma.cc/PG4V-2G86>.
- ^{xxi} Va. State Corporation Commission, *Report: Policy Proposals Governing Public Electric Utility Programs to Accelerate Widespread Transportation Electrification in the Commonwealth Pursuant to Chapter 268 of the Virginia Acts of Assembly (Special Session I) (HB 2282) 13-14* (Apr. 29, 2022), <https://perma.cc/4736-GQ4E>.