

## Why Electric Vehicles?

The benefits of an all-electric transportation sector are significant; widespread adoption of electric vehicles (EVs) is the best strategy to [loosen foreign oil's control over our transportation sector](#) and [strengthen U.S. national security](#) and [energy resilience](#). EVs also offer economic development opportunities, such as [new jobs](#) in the auto, technology, and innovation industries, and [significant cost savings](#) for consumers and fleet operators.



## U.S. National Security

The transportation sector accounts for two-thirds of U.S. petroleum consumption. Oil's status as a critical source of energy means that significant resources are devoted to securing access; since more than 50% of daily oil supplies travel through seven major chokepoints in often unstable regions, the military spends \$81 billion annually defending our oil markets. The U.S.'s dependence on oil threatens national security and undermines our ability to conduct effective foreign policy.

As a major U.S. energy exporter (the second largest natural gas exporter after Texas, and the second largest coal exporter after West Virginia), Pennsylvania has a vested interest in increasing domestic energy use and protecting its energy prices from foreign influence. Furthermore, as our energy needs shift to respond to market pressures, energy-exporting states need to stay one step ahead of consumer and industry demand to remain competitive.

The global shift to EVs offers our nation the best opportunity to break our addiction to oil and swap this volatile global commodity for stable, domestically produced electricity.



## Cost Savings

EVs offer cost savings not only for consumers but also for private and public fleets. Because EVs are more efficient than internal combustion engine vehicles (ICEVs), and because electricity is less expensive and more stably priced than gasoline, EVs are significantly cheaper to fuel than their ICEV counterparts. EVs also have fewer moving parts and require less maintenance, saving owners and operators money over time.

The Electrification Coalition's DRVE Tool helps fleets identify their cost savings by considering federal incentives and comparable replacement EVs. The DRVE Tool also highlights the lower lifetime maintenance costs that make an electric fleet significantly more affordable for the commonwealth. Recognizing that the total cost of ownership (TCO) for an EV fleet is significantly lower than the TCO for an ICEV fleet could help Pennsylvania save millions of dollars in the long-term.

## Jobs and Economic Development

The past decade has seen significant private investments made into EV, battery, and battery component manufacturing. Over \$120 billion in private investment has been announced, which has created 143,000 new jobs nationwide. Pennsylvania specifically stands to receive \$171.5 million in dedicated NEVI formula funding over the next five years, and PennDOT has already announced the first round of conditional awards for 55 projects in 36 counties.

EV-related economic development and job creation is expected to accelerate in the coming years, thanks in large part to an increase in federal funding for EVs, higher consumer demand, and advancements of the technological components of EV design and capability.

As state fleets electrify, the EC is committed to bolstering Pennsylvania's competitiveness and addressing state-specific concerns such as the maintenance of a resilient grid and the preservation of good-paying jobs. The EC will continue to work with PennDOT and DEP to identify fair and equitable EV fees that still allow for effective road maintenance, and with utilities to develop rural EV programs to bring infrastructure to every corner of the Keystone State.

## Energy Security and Resilience

When equipped with bi-directional charging capabilities, EVs can send power back to the grid in times of need. This can reduce the burden on the grid and allow for continuous operation of disaster shelters, community centers, medical facilities, emergency services, and more. As EV adoption accelerates across all vehicle classes, vehicle-to-grid (V2G) capability can help manage system load and provide power back to the grid when energy demands are high. This is why widespread deployment of EVs, especially electric school buses and other medium- and heavy-duty vehicles, can help prevent blackouts and brownouts.

Although bi-directional technology is not yet widely adopted, the Department of Defense is currently investing in the technology through an initiative that will test between 100 and 500 EVs in bi-directional applications at military bases.

## The Path Forward

Currently, there is unprecedented momentum and investment driving the transition to electric vehicles. Still, it is crucial that state and federal lawmakers pass supportive policies to ensure that we do not fall behind on reaching our transportation electrification goals. To learn more about Pennsylvania policy opportunities, visit [electrificationcoalition.org](https://electrificationcoalition.org) or reach out to our Pennsylvania state lead, Jordan Neerhof, at [jneerhof@electrificationcoalition.org](mailto:jneerhof@electrificationcoalition.org).



## About the Electrification Coalition

The Electrification Coalition is a nonpartisan, nonprofit organization that advances policies and actions to facilitate widespread deployment and adoption of electric vehicles in order to reduce the economic, public health and national security risks caused by America's dependence on oil. For more information, visit [electrificationcoalition.org](https://electrificationcoalition.org).