Electrification Coalition

Charging Up Nevada's Trucks and Buses

The Problem

The United States is the world's largest consumer of petroleum, accounting for one-fifth of global daily supply. Oil accounts for over 90% of energy use in the U.S. transportation sector. This overwhelming dependence on oil threatens public health, energy security, our economy, and our climate.

The Solution

Widespread deployment and adoption of electric vehicles (EVs) is the best solution to these challenges, and electrification of trucks and buses is a critical part of the transformation, both in Nevada and across the nation.

Multiple vehicle manufacturers have committed to full electrification of their product lines, and the federal government has renewed its focus on electrifying transportation. State policy action is needed to leverage this momentum for Nevada. We have a finite window of opportunity to preserve U.S. economic leadership, meaningfully reduce emissions, and protect American manufacturing jobs.

EVs Support Economic Growth

For the State of Nevada, transportation electrification will generate renewed investments, job growth, and competitiveness in the global automotive market.

Robust public investment and regulatory reform along the EV supply chain has the potential to create more than 500,000 jobs across the United States over a five-year period, according to a report by the Electrification Coalition and Securing America's Future Energy.[1] Nearly 154,000 of those jobs would stem from incentives that make it less expensive to buy medium- and heavy-duty EVs like trucks and buses. And the United States stands to gain 29,000 jobs through measures to expand charging infrastructure and energy storage. These are jobs that can be part of Nevada's future.

Auto manufacturers are already reimagining their vehicle portfolios, releasing new electric models, and investing in electric vehicle manufacturing in the United States, including in Nevada.

- The Tesla Gigafactory, located outside Sparks, Nev., became the highest-volume battery factory in the world in 2018. At peak production, the Gigafactory will employ 6,500 people and eventually as many as 10,000 employees.
- Volvo North America is producing its VNR Electric Class 8 truck at its plant in Dublin, Va., and the company aims for its product range to be "fossil-free" by 2040.

Photo courtesy of The Lion Electric Co.

- Ford has committed to invest $22 billion in EVs through 2025, invested $700 million in its Rouge Center to build the electric F-150, and committed to becoming carbon neutral by 2050.
- GM has committed $27 billion to electrification, with a goal of ending production of vehicles with internal combustion engines by 2035. The company is investing $3 billion to produce all-electric trucks, SUVs, and electric self-driving vehicles at its Hamtramck, Mich., plant. When the plant is fully operational, GM projects it will create 2,200 manufacturing jobs.
- Arrival, a global EV manufacturer, is establishing its North American headquarters in North Carolina and will build its second American "microfactory" there.
- Ford supported EV manufacturer Rivian with a $500 million investment to build an electric pickup truck. And Amazon has ordered 100,000 electric delivery trucks – worth $700 million – from Rivian.

EVs Promote Energy Security

Because the fate of the U.S. economy is so closely tied to petroleum, the United States is forced to expend tremendous resources to secure the word's oil supply. The U.S. military spends $81 billion per year to protect oil infrastructure and oil transit routes.[2] In addition to the financial drain, this puts the lives of our servicemembers at risk to protect the flow of oil.

Electricity, on the other hand, is ubiquitous and domestically produced from a diversity of energy sources. Electricity is also cheaper than gasoline and diesel fuel, and its pricing is far less volatile. According to the U.S. Energy Information Administration, even though domestic oil production has increased substantially in recent years, the global oil market is still heavily influenced by OPEC, a

cartel of 13 petroleum-exporting countries in the Middle East, Africa, and South America.

EVs Advance Public Health and Equity

Vehicles are a leading source of air pollutants that affect human health. Vehicle emissions contribute to the formation of ground-level ozone (smog), which can trigger health problems such as aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses, including pneumonia and bronchitis. Motor vehicles, particularly those used for freight, are also a major source of fine particulate matter.

Particulate matter is linked to significant health problems, including asthma, chronic bronchitis, and heart attacks. Long-term exposure is likely to cause lung cancer. Low-income and minority communities are more likely to be located near highways and other transportation facilities that lead to negative health effects.[3]

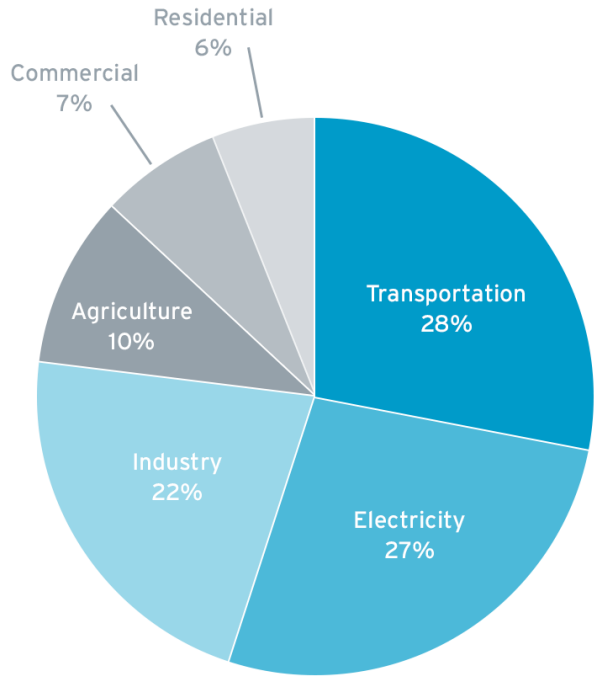
According to the American Lung Association, widespread adoption of electric vehicles by 2050 would result in an estimated savings of $72 billion per year in health costs nationally.[4] In Nevada alone, the annual benefits would include $746 million in avoided health-impact costs, 65 premature deaths avoided, 767 asthma attacks avoided, and 3,724 lost work days avoided.

EVs Reduce GHG Emissions

Transportation is the single largest source of GHG emissions in the United States. Life cycle GHG emissions of an EV are typically far lower than those of a comparable conventional vehicle. Medium- and heavy-duty (MHD) vehicles, including delivery trucks, delivery vans, tractor-trailers, transit buses, and school buses, represent approximately 11% of the vehicles on the road, but they produce about 29% of the greenhouse gas emissions that come from vehicles. That's why the electrification of these vehicles is so critical to addressing climate change.

Electrification of MHD vehicles will be essential to Nevada's ability to meet its climate goals. In November 2019, Governor Sisolak directed his administration through Executive Order 2019-22 to develop a coordinated plan to address climate change and meet Senate Bill 254's goal of reducing statewide greenhouse gas (GHG) emissions to 28% below 2005 levels by 2025 and 45 percent below 2005 levels by 2030.

Total U.S. Greenhouse Gas Emissions by Economic Sector in 2018



Source: U.S. Environmental Protection Agency, 2021

Policies to Advance Electrification of Trucks and Buses

Nevada should join the Multi-State MHD Zero Emission Vehicle Memorandum of Understanding, pledging that at least 30% of all new trucks and buses sold in the state will be zero-emission vehicles by 2030, and 100% by 2050. To meet these commitments, the state should take the following policy actions:

- Support incentives, utility investments, and state targets that will accelerate the electrification of trucks that travel along our highways and through our neighborhoods to deliver goods to our homes and businesses.
- Electrify public transit and school buses to provide clean, healthy ways for Nevada's residents to travel to and from school, work, and home.
- Invest in the development of MHD charging infrastructure to ensure that Nevada does not miss out on the economic opportunities afforded by the electrification of transportation.

Let Governor Sisolak know that you support the effort to electrify Nevada's trucks and buses. Contact Neda Deylami at ndeylami@electrificationcoalition.org to get involved.

1. Wescott, Robert, Keybridge Public Policy Economics. March 2021: The Commanding Heights of Global Transportation: Quantifying the Employment Effects.
2. Securing America's Future Energy, September 2018. The Military Cost of Defending the Global Oil Supply.
3. U.S. Department of Transportation, www.transportation.gov/mission/health/equity.
4. American Lung Association, September 2020. The Road to Clean Air: Benefits of a Nationwide Transition to Electric Vehicles.