Benefits of Legislation on Electric Transportation

Carefully crafted legislation can increase and accelerate the benefits of electrifying transportation. High levels of electric vehicle adoption with smart charging can provide benefits to all of society — not just EV owners — and to the grid. Inaction will slow the transition to EVs and lead to problems with poorly timed EV charging, sporadic access and forgone societal benefit. Legislative action on electrification of transportation allows states and citizens to realize the following benefits:

Savings for EV Drivers

Although the purchase price of EVs is still higher, incentives and technology advancements are fast making them economical. Over the lifetime of a vehicle, EV owners save money because EVs are cheaper to operate and maintain than gasoline vehicles.

Improved Public Health

Emissions from the tailpipes of cars and trucks are responsible for 53,000 premature deaths each year in the U.S., more even than power plant emissions. Because EVs do not generate tailpipe emissions, they result in a net reduction in air pollutant emissions, even when charged in electric systems that rely heavily on fossil fuels.

Climate Change Mitigation

Fossil-fueled transportation accounts for 29% of U.S. greenhouse gas emissions. Electric vehicles produce lower greenhouse gas emissions than an average gas-powered car in every grid region in the U.S.

Improved Electricity System Efficiency

Most of the time electric vehicles, like other vehicles, are stationary. But EVs can charge when the grid has excess energy from wind and solar generation, making more efficient use of resources. They also have the potential to function as a big battery to store electricity, which can help avoid the need to build expensive generation plants and transmission lines.

Stronger Energy Security

Electric transportation is mostly powered by a domestic mix of energy sources, including natural gas, coal, nuclear, hydropower, wind and solar, rather than relying on imported fuel.

More Jobs

Using electricity to power transportation leverages changes in the electricity sector to create local jobs. Clean energy jobs are growing in every state and frequently increase at a greater rate than the overall employment rate. Greater EV adoption and charging will only increase these employment prospects.

Action Plan for Electric Transportation

Comprehensive legislation helps states plan, fund and integrate electrified transportation. All-inclusive legislation on transportation electrification falls broadly into the following four categories. Many states have addressed some of these areas but not all, or could use the opportunity to update existing legislation.

Plan Your Destination

Experience shows that government policies can accelerate the transition to electrified transportation. Electrification offers a variety of advantages to states, but barriers to electric vehicles mean that state legislative action plans will help realize the greatest benefits and avoid pitfalls. States can, among other things:

- Establish goals and timelines.
- Create a state EV policy plan.
- Electrify state fleet vehicles.
- Enable regular state assessments to evaluate progress.
- Plan for future transportation funding sources.

Drive Investment With Incentives

Jurisdictions around the world are providing direct financial support to encourage the electrification of transportation. Electric vehicle costs will come down over time, but until then a combination of supporting incentives and policy will accelerate market development.

Remove Roadblocks

If states want to encourage electrification of transportation, the best actions take aim at removing barriers. These include ensuring that:

- Charging infrastructure is available.
- Building codes provide for an electrified future.
- Rural and low-income communities share in electrification benefits.

Empower Regulators

State regulators — primarily public utility commissions but also energy offices, transportation agencies, environmental regulators and others — will need sufficient legislative direction to make best use of EVs. To most effectively plan for the electrification of the transportation system, legislators and utility commissions may want to:

- Clarify the status of EV charging station operators/service suppliers.
- Require utilities to integrate EV load projections and any investment in charging infrastructure into their regularly filed resource plans.
- Implement tariffs that reward the best uses of EVs as a resource to the grid.
- Provide direction on utility involvement in charging infrastructure and cost recovery of utility investment.
- Consider performance incentives for utility EV programs.