2017 INNOVATION AGENDA

An innovative transportation sector is the engine of economic growth, energy security and global competitiveness. Federal policy can catalyze this innovation through advanced transportation supply chains and spur public and private investment in next-generation electric drive vehicles and infrastructure that are the foundation of 21st century mobility.

1. Invest in Energy and Economic Security with a Consistent Policy Environment for Electric Drive Vehicles and Infrastructure

Promote investment in advanced transportation throughout the supply chain with consistent, performance-based incentives for plug-in and fuel cell vehicles.

Provide incentives for increasing the residential and commercial scale alternative fuel vehicle infrastructure that will power the next-generation transportation sector.

Expand the fuel diversity of the commercial fleet with restored incentives for alternative fuel trucks and buses, including medium- and heavy-duty hybrid, plug-in and fuel cell vehicles.

Build domestic manufacturing by including medium- and heavy-duty vehicle and component manufacturing in the Advanced Technology Vehicles Manufacturing (ATVM) program.

2. Endow the Future – Fund the Infrastructure of Next Generation Transportation

Leverage national resources to grow diverse vehicle and infrastructure investments. Establish a national infrastructure bank, public-private partnerships or federal mechanism to support expansion of hydrogen fueling and electric vehicle charging networks in diverse areas, including those that support seaports, inland ports and freight movement.

Support state and local efforts to build out infrastructure to serve an increasingly electrified (via battery and fuel cell), automated, and connected transportation sector, including the Department of Energy’s Clean Cities program, the Department of Transportation’s Alternative Fuel Corridors and the Congestion Mitigation and Air Quality Improvement (CMAQ) programs.
Pave the innovation path by increasing federal agency research on electrification (via battery and fuel cell), automation, and connectivity technologies and deployment strategies; increase collaboration between stakeholders, including electric utilities, hydrogen producers and distributors, vehicle manufacturers, charging infrastructure providers, and communities, to expand charging and hydrogen infrastructure at the local level.

Reduce congestion and grow innovation markets. Update HOV access authority to recognize technology advances in cars; ensure that efficiency is recognized as a goal of transportation policy in highway programs; ensure Public Private Partnerships allow for HOT/HOV treatment for advanced technology vehicles.

Measure success. In regulatory and program applications, use the most accurate metrics, including “annual electric miles,” to measure electric drive use.

Lead the world in advanced transportation. Reduce oil use and operating expenses in federal fleets with electric drive light-, medium-, and heavy-duty vehicles while growing American competitiveness in the global energy technology race; facilitate the adoption of electric drive in state, local, utility, and private fleets; and charging infrastructure to support those fleets. Support innovative uses of electric transit and vehicle sharing.

Work with private standard setting organizations, such as the Society of Automotive Engineers and the Institute of Electrical and Electronics Engineers and National Electrical Manufacturers Association (NEMA), to facilitate increased standardization while preserving rights of innovation and competition in infrastructure development.

Build the essential connection between the 21st century electricity and transportation sectors. Drive grid enhancement, including security, demand response, and energy storage capabilities, through Vehicle Grid Integration, Vehicle-to-Grid, secondary-use batteries and hydrogen storage demonstrations.

Reduce regulatory and policy obstacles to building the connection: Advance policies to accelerate investment in electric drive and hydrogen infrastructure to support light-, medium- and heavy-duty vehicles. Promote a robust market for vehicle manufacturers, utilities, equipment service providers and support industries that ensure a consistent user experience, customer choice, and innovation.

3. Speed Innovation throughout the Supply Chain

Fund robust Department of Energy, Department of Defense and other agency research & development of battery, fuel cell, and hybrid technologies, including multi-level demonstration and deployment efforts of light-, medium- and heavy-duty and non-road vehicles, and secondary-use batteries.

Expand ARPA-E and other public/private partnerships to develop pre-commercial breakthroughs and grow the U.S. lead in the global advanced transportation technology race.
Electric Drive Market Snapshot

Monthly Sales - February 2017

- Hybrids: 28,355
- Plug-In Hybrids: 6,247
- Battery EVs: 5,846
- Total Electric Drive Portfolio: 40,448

Market Growth

Plug-In Electric Vehicles: 8,333 February 2016, 12,093 February 2017 (45% over same month last year)

Plug-In Electric Vehicles: 114,002 2015 CY, 157,112 2016 CY (38% year over year increase)

On the Road

580,569 Total Plug-In Vehicles Sold in US Since 2010 Market Introduction

Infrastructure

18,117 Public Charging Stations, with 46,850 Outlets

Jobs

In Motor Vehicles and Component parts alone: Currently more than 259,000 employees work with alternative fuels vehicles, including hybrids, plug-in hybrids, all electric, fuel cell and natural gas vehicles - an increase of 69,000 jobs in 2016.

Source: US Department of Energy

February 2017
WEY ELECTRIC DRIVE?

EXPANDING CONSUMER CHOICE

Consumers now have more choices than ever to drive electric, with offerings of diverse sizes, price points and capabilities – including battery electric vehicles (BEVs), plug-in hybrids (PHEVs) and fuel cell electric vehicles (FCEVs).

33 plug-in and fuel cell cars are now available to American drivers, offerings are expected to grow to more than four dozen in the next two years, and consumer choices will continue to expand throughout the decade. Nearly every major automaker in the U.S. now has a plug-in vehicle planned for launch by 2020.

PHEVs are similar to conventional hybrid vehicles but these vehicles have larger batteries that are charged by plugging into the grid. BEVs are powered solely by a battery, charged by plugging into the grid. FCEVs convert the chemical energy from a fuel, such as hydrogen, into electricity.

AMERICAN COMPETITIVENESS

According to the US Department of Energy, in the "Motor Vehicles and Component Parts" segment alone, more than 259,000 employees currently work with alternative fuel vehicles, including hybrids, plug-in hybrids, all electric fuel and natural gas vehicles. This is an increase of 69,000 jobs in 2016.

There is a global technology race underway to lead the development of electric drive technologies, including advanced batteries and electric vehicle supply equipment. Asian and European nations are investing heavily, driven by the immediate demand to improve air quality for their citizens.

Navitographic Research projects that the global market for lithium ion batteries in the light duty fleet will grow from $3.2 billion in 2013 to $24.1 billion in 2023.

Global revenue from the EVSE segment has been estimated by Navigant to be $567 million in 2013, and that number is projected to grow to $5.8 billion in annual revenue by 2022.

ELECTRIC FUEL IS AFFORDABLE

Domestically produced grid electricity, on average, can power plug-in cars at the equivalent of $1 a gallon of gasoline. This price is stable, insulated from the global volatility that impacts gasoline.

GROWING INFRASTRUCTURE

Electricity infrastructure is already ubiquitous. With the average American driving less than 40 miles a day, studies show that most drivers are plugging in at home to meet most, or all, of their driving needs.

Opportunities for public charging are steadily expanding, with the DoE reporting over 18,000 public electric charging stations now installed across the nation, comprising nearly 46,000 outlets. Private/public partnerships are helping to grow charging networks, teaming to apply the best solutions that are optimized for driving habits in individual regions.

More employers are offering workplace charging for employees, and resident access to charging at multiple unit dwellings such as apartments and condominiums is on the rise. Likewise, retailers and restaurant groups are starting to take advantage of the additional business gained by offering charging for patrons.

ENERGY SECURITY OVER OIL DEPENDENCE

Reliance on a single, globally traded monopoly fuel threatens our economic growth and national security, while electric drive offers a choice on how to power the nation’s transportation sector.

The implications for national security compound the economic costs of a dependence on globally traded petroleum by keeping the U.S. in business with often hostile regimes. The U.S. will continue to import roughly 35 percent of our oil through 2040 – with 72% of the world’s oil reserves are controlled by Organization of the Petroleum Exporting Countries (OPEC) members.

CLEAN AIR

The Union of Concerned Scientists studied the total emissions reductions of electric drive in every region of the country. They concluded that no matter where in the U.S. an EV is charged and operated, electric drive vehicles have fewer total well-to-wheel emissions than the average gasoline-powered vehicle sold today.

These benefits expand as the grid becomes cleaner. Natural gas net generation rose by 21 percent from 2011 to 2012; more than half the states in the U.S. have renewable energy standards and greater efficiency and intelligence are being added to the production and transmission of electricity.
ABOUT EDTA

The Electric Drive Transportation Association (EDTA) is the trade association promoting battery, hybrid, plug-in hybrid and fuel cell electric drive technologies and infrastructure. EDTA conducts public policy advocacy, provides education and awareness, and enables industry networking and collaboration. Our membership includes vehicle and equipment manufacturers, energy companies, technology developers, component suppliers, government agencies and others.

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