Statement
of
Genevieve Cullen, Vice President
Electric Drive Transportation Association
Before the Senate Energy and Natural Resources Committee
May 19, 2011

Good morning, Chairman Bingaman, Senator Murkowski, and members of the committee. I am Genevieve Cullen, Vice President of the Electric Drive Transportation Association. I am pleased to be here today to discuss S.948, the Promoting Electric Vehicles Act of 2011 and S. 734, the Advanced Vehicle Technology Act of 2011.

I would also like to express our appreciation for this Committee's early and on-going work on alternative fuels and vehicles and your recognition of the importance of electric drive technologies in reducing dependence on foreign oil in the transportation sector.

The Electric Drive Transportation Association (EDTA), founded in 1989, is the cross-industry trade association promoting the advancement of electric drive technology and electrified transportation. EDTA members include the leading - and emerging - vehicle, battery and component manufacturers, as well as electricity providers, smart grid and infrastructure developers and others.

Collectively, our membership is building the vehicles - hybrids, plug-ins and fuel cells - and infrastructure of an electrified fleet. Because electric drive can be configured in many combinations and applied across vehicle platforms (including cars, trucks, buses and even bulldozers), it is able to meet the multiple, diverse demands of consumers and industry while displacing imported oil with domestically produced electricity.

Industry is investing aggressively and moving forward rapidly in expanding electric drive options to consumers. Plug-in passenger cars and trucks are already on the road today and more than twenty models of battery electric and plug-in hybrid vehicles will be available by 2013.

Across the country, in states including Arizona, Washington, Oregon, California, Michigan, Tennessee and Texas, collaborative efforts between utilities, electricity infrastructure providers, governments and auto makers are underway, preparing communities and consumers to take advantage of grid-connected vehicle options.

In addition to the consumer interest in the arrival of grid-fueled (or "plug-in") cars and trucks, the ability of the grid to displace oil consumption also has significant national security and economic implications. Reliance on oil, and hence the global oil market, is extremely costly to us as a nation. The acute pain currently being felt at the pump, while not inconsequential, is just a recurring symptom of the larger problem of our dependence on foreign oil. We import more than half our oil needs and transportation accounts for 72 percent of that consumption. Electricity, on the other hand, is domestically produced from diverse conventional and renewable sources.

The energy security benefits of electric drive are accompanied by the economy-wide benefits of growing U.S. technology and manufacturing leadership - instead of spending about $380 billion a year to pay our foreign oil bill. At the micro- level, electricity is 1/4 to1/5 the cost of oil – 3 cents versus 12-15 cents per mile.

Further, electricity prices are more stable and do not exhibit the volatility of gas prices. It is estimated that each one dollar increase in the annual average price of a gallon of gasoline reduces average American household discretionary spending by roughly ten percent.

Electrification of the fleet also benefits public health and the environment. According to an EPRI/NRDC study, plug-in vehicles, even charged from a national grid that is dominated by coal, will reduce greenhouse gas emissions by one third compared to conventional vehicles. Pure battery and fuel cells vehicles use no petroleum and have zero tailpipe emissions.

Still, with all of these potential benefits, reaching commercial scale on a national basis is an enormous undertaking. There are 250 million light duty vehicles on the road and it takes an estimated 20 years to turn over the fleet. The industry is working to bring multiple vehicles to market in the next couple of years and we are working to ensure that consumers and communities have the information they need to maximize the benefits of grid-connected vehicles. For national security, economic and environmental reasons, we can – and we should - accelerate these electrification efforts with federal policy.

As set out in the EDTA Policy Action Plan, we support a comprehensive push toward electric drive that includes a robust public and private commitment to advancing technology breakthroughs with research and development. The Action Plan also calls for a national initiative to promote deployment of plug-in electric drive vehicles that includes support for regional deployment efforts.

The bills before the committee today will help to advance electrification in the near term and ensure our technology leadership over the longer term. Deployment support and a consistent research and development policy will reinforce and expand what the market is doing, while creating U.S. jobs, increasing global competitiveness and enhancing our national security.

My statement for the record provides more detailed comments on the bills, but I would like to briefly highlight some particular areas.

S. 948, the Promoting Electric Vehicles Act of 2011, would create a national program that includes deployment planning on a national scale, technical assistance, that would include training on codes and standards for building and safety inspectors, best practices for infrastructure permitting and inspections, as well as workforce training for state and local government who need assistance in designing and implementing their deployment programs. These programs are vitally important to the goal of achieving mass market penetration at a national scale in the nearer term.

Support for community deployment, as part of a national effort, can help move regional markets and can help aggregate information on charging needs and habits, grid integration and successful collaborative models between public and private stakeholders. We support giving the Department flexibility in determining the size and number of communities, with the goal of maximizing the both the distribution and the effectiveness of the effort. We would like to continue to work with the committee to identify the most effective balance between national and community deployment programs.

As vehicle electrification includes a variety of technologies and configurations, we also believe it is appropriate to include recognition of the applicant communities' efforts in deploying fuel cell electric vehicles in the program, as in the House counterpart bill.

The bill includes important provisions to promote adoption of plug in vehicles in private and federal fleets, which can play a significant part in moving markets and achieving economies of scale. However, we would like to see a comprehensive approach that recognizes all of the electric drive technologies, including fuel cells and hybrids. A comprehensive approach will provide flexibility for meeting fleet needs while reducing oil consumption and helping to build markets for advanced vehicles, components and infrastructure.

S. 734, the Advanced Vehicle Technologies Act, provides an important roadmap for federal vehicle technology research and development. The bill recognizes the importance of a portfolio approach, not only in electric drive, but across conventional and alternate vehicle technologies. There are many synergies in vehicle systems improvements; federal research and development policies should maximize the over-lapping values of these developments. Advances in battery and energy storage technology and reductions in costs can benefit hybrid, plug-in and fuel cell vehicles.

The Advanced Vehicle Technologies Act would also ensure that the Department of Energy maintains a portfolio of near, medium and long term technology development activities. We strongly support such an approach. Incremental advances in existing technologies can have great benefits for the current fleet. But, as has also been noted here today, a consistent and forward-looking energy research policy is also needed to identify the transformational technologies whose development cycles may be longer than industry can support alone.

Another key element of S. 734 is its recognition of the extraordinary potential for advancement in the medium and heavy duty segment. Medium and heavy duty vehicles consume more than 52 billion gallons of fuel each year and are responsible for 21 percent of U.S. greenhouse gas emissions from transportation. Efficient hybrid and plug-in hybrids can increase the vehicles' efficiency by 20 to 50 percent. Battery electric medium and heavy duty vehicles eliminate oil use entirely. Increased efficiency also means reduced emissions. For example, putting 10,000 hybrid electric trucks to work would reduce diesel fuel use by 7.2 million gallons per year and reduce carbon dioxide emissions by 83,000 tons.

The U.S. is a leader in medium and heavy duty vehicle electrification but emerging technologies are expensive to develop and deploy. Public/private investment can help speed the performance advances and technology cost reductions in this segment of the market.

Together, these bills can advance us toward our national goals of reduced dependence on foreign oil, a more sustainable transportation sector and increased competitiveness in the global energy technology market.

I thank you for the opportunity to testify here today and look forward to your questions.

Comments on specific provisions

S. 948
TITLE I National Programs
EDTA supports the establishment of a national program to help deploy plug-in electric vehicles and infrastructure. With an overall goal of electrification of the fleet, we recommend that the required planning and petroleum reduction goal-setting include all the electric drive technologies.

For grid connected vehicles, EDTA supports a robust national-scale effort that helps communities to plan and execute transportation electrification.

We support establishing national Technical Assistance and Workforce training programs as part of that effort. These should be of sufficient scale to meet national needs and national scale goals.

Regional Deployment
It is important to establish the right synergy between the national program and the community deployment strategy to ensure that the overall effort moves us toward electrification nationally: The combined program should reinforce the efforts that are underway, help new ones begin and serve as a real time information source for the public and private stakeholders. We agree with the discretion provided to the Department to determine the appropriate number of communities and size of awards.

As vehicle electrification includes a variety of technologies and configurations, we also believe it is appropriate to include recognition of the applicant communities' efforts in deploying fuel cell electric vehicles in the program, as in the House counterpart bill. Alternatively, the criteria for evaluating applications to communities could also recognize communities that are also planning for, and investing in, fuel cell vehicles and infrastructure.

Access to Capital
EDTA supports expansion of loans and loan guarantees for fleet and battery purchases and infrastructure installation. Easing access to capital helps to build industry economies of scale, speed deployment and advance energy storage options for utilities and others power providers while minimizing federal outlay.

Federal Fleets
S. 948 also promotes the adoption of plug-in electric drive vehicles in federal fleets by providing funds for purchasing vehicles as well as transparency and accountability for their use, which EDTA strongly supports. However, EDTA supports increasing the overall electrification of the federal fleet and we would also like to see a comprehensive approach that recognizes all of the electric drive technologies, including fuel cells and hybrids, which will provide flexibility for meeting fleet needs while reducing oil consumption and helping to build markets for advanced vehicles, components and infrastructure.

Private Fleets Program
Accelerating the adoption of electric drive in private fleets will help manufacturers achieve economies of scale while helping businesses reduce their fuel costs. We support the bill's proposed private fleet program but would like to work with you to identify the most effective size for eligible fleets. While it is appropriate that the program leverages large volume purchases by setting a 100 vehicle threshold, it may also be useful to provide a mechanism to allow smaller fleets to access this option. Including a small fleet-set aside or a purchase aggregation option would help smaller businesses with car and truck fleets to avail themselves of more efficient vehicle options.

TITLE II
Research & Development
We support S. 948's expanded commitment to research and development Public and private investments are essential to accelerate technology breakthroughs for vehicles, components, infrastructure and grid integration and will help us reduce dependence on foreign oil and enhance our ability to compete in the global advanced

energy market.

Regarding the Section 204, authorizing a National Academy of Sciences study on collection and preservation of data collected from plug-in vehicles, due to the privacy and potential record-keeping liabilities for multiple information stakeholders, we would suggest that there be an opportunity for stakeholder input in the required recommendation for procedures, technologies and rules relating to the collection, storage and preservation of such data.

TITLE III
Miscellaneous

Utility and Distribution Planning
Title III establishes a utility planning process for plug-in electric drive vehicles under the Public Utility Regulatory Policies Act. As fuel and power providers, utilities need to identify demand and energy management and smart grid integration strategies. Protocols for the interaction of utilities and charging infrastructure entities will also need to be identified. The key is establishing the right balance between national standards for charging technologies and flexibility in business models. Our members are currently reviewing the Section 301 federal regulatory directives to ensure that these are achieved.

Battery disposal
Regarding the bill's provisions prohibiting disposal of advanced batteries used in plug-in electric drive in landfills, we believe that at this time it is more appropriate to conduct a study to identify specific environmental risks and the best options for safe recycling and ultimate disposal before an outright ban is imposed on all advanced battery disposal. In the interim, promoting secondary uses of automotive batteries and advanced materials will ensure that these batteries remain in use beyond their automotive life and that their valuable components are recovered

S. 734
EDTA also strongly supports Senator Stabenow's portfolio approach to vehicle technologies research, development and deployment. The bill authorizes a comprehensive program that recognizes the increasing role of sensing technologies and telematics and the need for advanced manufacturing to accompany advanced technology. Electrification has enormous potential in medium and heavy duty vehicles and will be critical in meeting new fuel economy and emissions standards. Establishment of a program to advance medium and heavy duty commercial and transit vehicles will provide a path for greater industry and government cooperation in speeding the development and adoption of electric drive truck technologies.

Battery recycling research and development is also important in establishing secondary value streams of critical components and helping industry meet the highest environmental standards for recycling.