

STATEMENT OF

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Chairman Bingaman, Ranking Member Murkowski and Members of the Committee, thank you for the opportunity to discuss the Department's advanced vehicles technology programs. The Administration is still reviewing S. 734 the Advanced Vehicles Technology Act and S. 948 Promoting Electric Vehicles Act of 2011 and does not have a position on either bill at this time and so this statement will provide only general DOE comments.

The transportation sector accounts for approximately two-thirds of the United States' oil consumption and contributes to one-third of the Nation's greenhouse gas (GHG) emissions.¹ After housing, transportation is the second biggest monthly expense for most American families.² As the President said in his recent energy speech, "In an economy that relies so heavily on oil, rising prices at the pump affect everybody." Emphasizing that "there are no quick fixes," the President outlined a portfolio of actions which, taken together, could cut U.S. oil imports by a third by 2025. These include programs that would put one million electric vehicles on the road by 2015.

The Office of Energy Efficiency and Renewable Energy's (EERE's) Vehicle Technologies Program (VTP) develops and promotes energy-efficient, environmentally-friendly transportation technologies that will reduce petroleum consumption and lower GHG emissions while meeting drivers' expectations of vehicle performance. VTP's activities promote energy security, environmental, and economic benefits in both the near- and long-term.

Few technologies hold greater promise for reducing our dependence on oil than electric vehicles. In his 2011 State of the Union address, the President spoke of his goal to have the United States become the first country with a million electric vehicles on the road by 2015. Meeting this goal will help the United States become a leader in the clean energy economy, while capitalizing on the ingenuity of American industry. Manufacturing products needed for the clean energy economy will generate long term economic strength in the U.S., creating jobs across the country while reducing air pollution and greenhouse gas emissions.

EERE investments past, present, and future are critical to achieving this goal. In 2009, the U.S. had only two, relatively small, factories manufacturing advanced vehicle batteries, and produced less than two percent of the world's hybrid vehicle batteries.³ But over the next few years, thanks to investments from the American Recovery and Reinvestment Act of 2009 (Recovery Act) in battery and electric drive component manufacturing, and electric drive demonstration and infrastructure, the U.S. will be able to produce enough batteries and components to support 500,000 plug-in and electric vehicles per year. High volume manufacturing, coupled with battery technology advances, design optimization, and material cost reductions, could lead to a drop in battery costs of 50 percent by 2013 compared to 2009, which will lower the cost of electric vehicles, making them accessible to more consumers.

Further policies and research are needed to build on the work under the Recovery Act. That is why the President's FY 2012 Budget proposes a new effort to support electric vehicle manufacturing and adoption in the United States through new consumer rebates, investments in

¹ http://www1.eere.energy.gov/vehiclesandfuels/pdfs/vehicles_fs.pdf

² <http://www.bls.gov/news.release/cesan.nr0.htm>

³ http://www.whitehouse.gov/sites/default/files/blueprint_secure_energy_future.pdf

R&D, and competitive programs to encourage communities that invest in electric vehicle infrastructure and regulatory streamlining. Specifically, the Budget proposes to: transform the existing \$7500 tax credit for electric vehicles into a rebate that will be available to all consumers immediately at the point of sale; advance innovative technologies through new R&D investments, building on Recovery Act investments, by investing \$588 million for vehicle technologies at DOE; and reward communities that invest in electric vehicle infrastructure through a \$200 million program which provides an incentive for communities to invest in electric vehicle infrastructure and remove regulatory barriers.

GENERAL COMMENTS ON S. 948, THE PROMOTING ELECTRIC VEHICLES ACT OF 2011

The investments that we have made through the Recovery Act as well as those in the Budget align with many of the priorities that are reflected in the Promoting Electric Vehicles Act of 2011—though we do not take a position on the bill itself. Below, I will discuss some of the priorities included in this bill:

One of the main elements of the Promoting Electric Vehicles Act is a deployment program in which communities would be chosen on a competitive basis to receive grants that would be used to support integration of electric vehicles through means such as installing charging infrastructure, updating building codes. The Administration is supportive of this concept, which is why the President's Budget includes \$200 million to reward communities for leadership in reducing regulatory barriers and developing comprehensive electric vehicle-friendly infrastructure.

Specifically, this funding will support a competitive program within the Department of Energy to help communities across the country become early adopters of electric vehicles through regulatory streamlining, infrastructure investments, vehicle fleet conversions, deployment of EV incentives (e.g., parking, HOV access) partnerships with major employers/retailers, and workforce training. The FY 2012 Budget includes a proposal that would allow up to 30 communities across the country to receive grants of up to \$10 million each on the basis of their ability to demonstrate concrete reforms and to use the funds to help catalyze electric vehicle deployment. This approach builds on bi-partisan proposals and ideas including some developed by the sponsors of this bill.

The Promoting Electric Vehicles Act of 2011 includes provisions to promote near-term deployment of plug-in electric drive vehicles, many of which may complement and supplement the Department's ongoing activities, funded both through the Recovery Act and annual appropriations. However, as stated previously, the Administration is continuing to review this extensive bill and does not have a position on it at this time.

S.948 includes provisions which would support technical assistance, workforce training, and a targeted communities program to facilitate the rapid deployment of plug-in vehicles. The bill's targeted deployment program would offer communities of different sizes in various parts of the country an opportunity to execute various deployment approaches and develop best practices

that can be shared nationwide to address critical questions about planning and managing vehicle and charging infrastructure deployment.

The Department notes that the community selection criteria includes an emphasis on diversity of climate and type of electric utility. Such diversity in pilot programs, particularly across electricity-generation sources, would be crucial for estimating the environmental impacts of expanded adoption of plug-in electric drive vehicles.

DOE is already examining ways to work more closely with communities on vehicle electrification and infrastructure deployment, particularly in connection with our Clean Cities Program. The coalitions that comprise the Clean Cities network bring together state and local governments, early adopter fleets, local utilities, infrastructure developers, and other key stakeholders in a community to advance the deployment of alternative fuel vehicles. These public private partnerships are proven and effective resources for sharing information at the local level and are primed to support the rollout of electric drive vehicles and infrastructure. Our goal is to better understand how the Department can support local community efforts to deploy EVs and infrastructure.

To maximize the effectiveness of the targeted communities program, the Department would seek to coordinate this effort with related ongoing projects to deploy electric drive vehicles and infrastructure. Our Recovery Act projects for transportation electrification are building critical expertise through large-scale vehicle and infrastructure deployment, collecting data on vehicle-grid interaction and producing valuable lessons learned that can support and help to accelerate future deployments in other communities. We note that the deployment community selection criteria as outlined in the legislation, is crafted to help ensure that the selected communities stand up as models for deployment across the country.

We also believe that technical assistance is vital to the successful rollout of any proposed national deployment program for electric drive vehicles. The Department is well positioned to disseminate information and provide training and technical assistance to communities seeking to accelerate EV deployment. As an example, and as noted earlier, the Clean Cities network is primed to share best practices and lessons learned about permitting and inspection processes, as well as other local ordinances and opportunities for code official and first responder training. I would like to note, however, that the Department plays a supporting role in the development of model codes and standards. In regard to this provision, we can bring value to the process because of our extensive experience working with code development organizations (CDOs) and standards development organizations (SDOs) to facilitate consensus around the development and adoption of vehicle- and infrastructure- related codes and standards. We are also working to enable the harmonization of codes and standards at an international level collaborating with the National Institute of Standards and Technology (NIST) and the Department of Transportation, as well as with the private sector. Standards and codes for electric vehicles must be consistent with the broader Smart Grid Interoperability Panel (SGIP) effort led by NIST.

The Promoting Electric Vehicles Act includes several other significant provisions in addition to the National Plug-in Electric Drive Deployment Program; I will briefly comment on several of them here.

- The bill authorizes a R&D program focused on advanced batteries, electric drive components, and other technologies supporting the manufacture and deployment of electric drive vehicles and charging infrastructure. These priorities are aligned closely with ongoing activities in the Vehicle Technologies Program – specifically, our Batteries and Electric Drive Technology subprogram, which includes advanced battery R&D and advanced power electronics and electric machines, as well as our Vehicle and Systems Simulation and Testing subprogram, which includes work to examine vehicle and infrastructure interface issues through testing and evaluation. Notably, the President’s FY 2012 Budget request will significantly broaden R&D investments in technologies like batteries and electric drives- including an over 30 per cent increase in support for vehicle technology R&D and a new Energy Innovation Hub devoted to improving batteries and energy storage for vehicles and beyond.
- The bill focuses on Federal electric vehicle upgrades. I note that the Administration shares your commitment to upgrading the federal fleet and is finalizing the procurement of 100 electric vehicles.
- The bill also discusses partnership with the private sector surrounding vehicle upgrades, an area where Administration policies are strong. Specifically, we recently announced the Clean Fleets partnership. This program is focused on working with private sector partnerships to help them become leaders in deploying advance vehicles – including electric vehicles – and technical assistance is a critical component of the program. In fact, DOE has developed a wide range of technical tools to help partner companies to navigate the world of alternative fuels and advanced vehicles. A diverse collection of cost calculators, interactive maps, customizable database searches, and mobile applications puts vital information and analysis at fleets’ finger tips. This is just one example of our activities in this area – and shows how important we think it is to offer technical assistance.
- We also understand and appreciate the Committee’s interest in a technical advisory committee focused on plug-in hybrid vehicles. We place great value in independent reviews and external input to our program. You may be aware that the National Academy of Sciences National Research Council conducts independent biennial reviews of both our light-duty and heavy-duty vehicle research programs.
- With respect to the new loan guarantee authorities included in the bill, we are continuing to evaluate these proposals. At a minimum, we would want any credit assistance to be the most efficient and effective means of achieving policy goals, and therefore any new authorities should comply with Federal credit policies to mitigate cost and risk to the taxpayer.

COMMENTS ON S 734 THE ADVANCED VEHICLE TECHNOLOGY ACT OF 2011

While the Administration is still reviewing S 734 and has no position on the bill at this time, it appears that the program authorized by the bill could complement several of the Department’s current activities focused on increasing vehicle energy efficiency. The Vehicle Technologies Program is meeting the transportation challenge with an integrated portfolio of

advanced vehicle and fuel research, development, demonstration, and deployment activities. We are accomplishing this work in collaboration with industry leaders, national laboratories, universities, state and local governments, and other stakeholders. S. 734 could further support the widespread commercialization of advanced vehicle and fuel technologies to reduce U.S. oil consumption, strengthen our economy, and reduce air pollution and greenhouse gas emissions. That being said, we suggest that the Director of the program be appointed by the Secretary within the Office of Vehicle Technologies itself to facilitate better coordination across activities with similar goals and work.

Further, it also appears that Section 102 “Sensing and Communications Technologies,” would unnecessarily duplicate the existing research, development, and demonstration efforts of the Department of Transportation's National Intelligent Transportation Systems Program. We recommend against such duplicative Federal programs.

In sum, the Department’s transportation portfolio will save consumers money, reduce our dependence on oil, lower our environmental impact, and keep America on the cutting edge of clean energy technologies, enabling us to build a 21st century clean energy economy. Thank you again for the opportunity to discuss these issues, and I welcome any questions you may have.