STATEMENT OF

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INTRODUCTION

Chairman Bingaman, Ranking Member Murkowski, and other Members of the Committee, thank you for the opportunity to appear before you today to discuss electric drive vehicles.

The Department of Energy shares the Committee's goals for accelerating electric drive vehicle deployment as a way to address two critical challenges facing our nation – reducing our dependence on petroleum and mitigating greenhouse gas emissions.

Nowhere are these priorities more challenging than in the transportation sector, which accounts for two-thirds of our petroleum consumption and about a third of our greenhouse gas emissions.[1] Electric drive will play a key role in meeting these challenges. Simply put, drivetrain electrification can dramatically reduce both petroleum use and greenhouse gas emissions – whether we're talking about hybrids or plug-ins that use biofuel and renewable electricity, full electric vehicles recharged with renewable electricity, or fuel cell vehicles that use renewable hydrogen.

The American Recovery and Reinvestment Act (P.L. 111-5) supported an unprecedented investment in our nation's manufacturing capacity and infrastructure for electric drive vehicles. With Recovery Act funds, U.S. manufacturers are building the capacity to produce 50,000 Plug-in Hybrid Electric Vehicle (PHEV) batteries annually by the end of 2011 and 500,000 PHEV batteries annually by December 2014. As you know – with more than 95 percent of today's lithium-ion batteries for consumer electronics made in Asia – this commitment to building U.S. manufacturing capacity is significant and provides us an opportunity to lead the world in advanced lithium-ion battery technology.

Recovery Act funds are also supporting the largest-ever coordinated deployment of nearly 7,000 electric vehicles and more than 16,000 electric charging points. The detailed operational data we collect through this deployment will provide important insights about vehicle usage, charging patterns, and potential impacts on our nation's electrical grid necessary for accelerating broader, long-term deployment of vehicles and infrastructure. I will also add Recovery Act funds are supporting a number of programs to educate code officials, first responders, technicians, and engineers who are critical components of the human infrastructure needed for the successful transition to electrified transportation, both in terms of consumer acceptance and public safety. All together, this $2.4 billion investment through the Recovery Act supports 48 competitively-selected and cost-shared electric drive vehicle projects in more than 20 states that will directly result in the creation of tens of thousands of jobs in the U.S. battery and auto industries.

With that as a foundation, I am pleased to offer the Department's perspective on the Promoting Electric Vehicles Act of 2010 (S.3495).

[1] Transportation Energy Data Book: Edition 28, calculated from data in Table 1.13 and Table 1.16

COMMENTS ON THE PROMOTING ELECTRIC VEHICLES ACT OF 2010

The Promoting Electric Vehicles Act of 2010 includes several important provisions to promote near-term deployment of plug-in electric drive vehicles, which complement and supplement the Department's ongoing activities, funded both through the Recovery Act and annual appropriations.

The Department recognizes the potential benefits of activities such as those proposed by the National Plug-in Electric Drive Vehicle Deployment Program, including technical assistance, workforce training, and a targeted communities program to facilitate the rapid deployment of plug-in vehicles. We believe that such an effort will create models, and facilitate the local leadership necessary for faster EV adoption across the country, and would be a natural extension of the activities being undertaken through our Office of Energy Efficiency and Renewable Energy, Vehicle Technologies Program's Outreach, Deployment & Analysis (VT/ODA) activities, such as Clean Cities. The 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 appreciates 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, will be crucial for estimating the environmental impacts of expanded adoption of plug-in electric drive vehicles.

We also agree with the Committee's decision to limit the number of targeted deployment communities to no more than 15, initially. Starting with a smaller number would allow us to focus resources and build a team of experts that can support a more widespread rollout through communication of best practices and lessons learned to other cities nationwide. We are 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. Through Clean Cities, we are planning a workshop, now scheduled for July 22, to engage key stakeholders in a discussion of critical issues such as codes, standards, and permitting of electric charging infrastructure and electric vehicle deployment best practices. 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. In addition, we appreciate the thoroughness and detail of the deployment community selection criteria as outlined in the legislation, which would help to ensure the selected communities stand up as models for deployment across the country.

Regarding the specified 120 days for applicants to submit proposals, we are concerned about asking communities to complete a significant amount of groundwork and coordination with multiple stakeholders prior to submitting their applications – much more than they're used to accomplishing. We believe 120 days may not provide enough time to complete that important work effectively. We ask that the Committee consider providing DOE the flexibility to establish the proposal deadline following some research to better understand community needs in this regard as long as we work within the specified 360-day timeframe for announcement of community selections.

The Department thanks the Committee for recognizing the importance of workforce training to the successful deployment and market penetration of electric drive vehicles, and including a specific provision in the proposed national plug-in program. The grant program for training first responders, code inspection officials, dealers and mechanics, and electricians responsible for charging point installation will complement and supplement Recovery Act projects and ongoing VT/ODA activities focused on these critical needs. Our recently-initiated Recovery Act efforts will provide valuable lessons learned and build a body of expertise to support implementation of the workforce training provision in this bill.

We also believe that the technical assistance component of the proposed national deployment program is vital to the successful rollout of 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.

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.

- As for prizes, we support the concept of the "Advanced Batteries for Tomorrow Prize." We also appreciate the Committee's inclusion of criteria to address battery size and cost as well as range. Understanding that the prize seeks to push the envelope for state-of-the-art plug-in hybrid battery technology, we would like to note that today's vehicles do not require a 500-mile range and that based on input from our industry partners, we expect a 300- to 400-mile range to meet consumers' vehicle performance demands.

- 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. We would like to suggest to the Committee that any new review functions be coordinated with other ongoing and planned review activities.

To conclude, the Department of Energy thanks the Committee for the opportunity to comment on this legislation and our ongoing related Recovery Act activities. We look forward to working with Congress to continue to implement these programs. They will accelerate the deployment of electric drive vehicles and infrastructure and help us achieve our national objectives for reducing petroleum use and greenhouse gas pollution.