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REVIEW OF DOE VEHICLE TECHNOLOGIES PROGRAM MANAGEMENT AND ACTIVITIES: ASSURING APPROPRIATE AND EFFECTIVE USE OF TAXPAYER FUNDING

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND ENVIRONMENT

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

THURSDAY, JULY 26, 2012

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REVIEW OF DOE VEHICLE TECHNOLOGIES PROGRAM MANAGEMENT AND ACTIVITIES: ASSURING APPROPRIATE AND EFFECTIVE USE OF TAXPAYER FUNDING

THURSDAY, JULY 26, 2012

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT,
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, D.C.

The Subcommittee met, pursuant to call, at 9:36 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Andy Harris [Chairman of the Subcommittee] presiding.

RALPH M. HALL, TEXAS
CHAIRMAN

EDDIE BERNICE JOHNSON, TEXAS
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U.S. HOUSE OF REPRESENTATIVES

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Subcommittee on Energy & Environment

Review of DOE Vehicle Technologies Program Management and Activities: Assuring Appropriate and Effective Use of Taxpayer Funding

Thursday, July 26, 2012
9:30 a.m. - 11:30 a.m.
2318 Rayburn House Office Building

Witnesses

Dr. Kathleen Hogan, Deputy Assistant Secretary for Energy Efficiency, U.S. Department of Energy

Mr. Rickey Hass, Deputy Inspector General, U.S. Department of Energy

Mr. Brian Wynne, President, Electric Drive Transportation Association

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY & ENVIRONMENT

HEARING CHARTER

Review of DOE Vehicle Technologies Program Management and Activities: Assuring Appropriate and Effective Use of Taxpayer Funding

Thursday, July 26, 2012
9:30 a.m. - 11:30 a.m.
2318 Rayburn House Office Building

PURPOSE

On Thursday, July 26, 2012, at 9:30 a.m. in Room 2318 of the Rayburn House Office Building, the Subcommittee on Energy and the Environment of the Committee on Science, Space, and Technology will hold a hearing titled "*Review of DOE Vehicle Technologies Program Management and Activities: Assuring Appropriate and Effective Use of Taxpayer Funding.*" The purpose of the hearing is to examine the Department of Energy's (DOE) Vehicle Technologies Program (VTP), and specifically management and oversight of DOE's alternative vehicle research, development, demonstration, and commercialization activities. The hearing will also consider the prioritization of VTP activities, management of DOE's Transportation Electrification Initiative and implementation of President Obama's "EV Everywhere Challenge."

WITNESS LIST

- **Dr. Kathleen Hogan,** Deputy Assistant Secretary for Energy Efficiency, U.S. Department of Energy
- **Mr. Rickey Hass,** Deputy Inspector General for Audits and Inspections, U.S. Department of Energy
- **Mr. Brian Wynne,** President, Electric Drive Transportation Association

BACKGROUND

The Federal government supports a wide array of incentives to support the development and deployment of alternative technology vehicles. According to the Congressional Research Service:

> "These incentives include tax deductions and credits for vehicle purchases and the installation of refueling systems, federal grants for conversion of older vehicles to new technologies, mandates for the use of biofuels, and incentives for manufacturers to produce alternative fuel vehicles. The current array of incentives for alternative fuels and related technologies do not reflect a single, comprehensive strategy, but rather an aggregative approach to a range of discreet public policy issues, including goals of reducing petroleum consumption and

> import dependence, improving environmental quality, expanding domestic manufacturing, and promoting agriculture and rural development."[1]

The Federal efforts in support of these incentives are administered by five different agencies, including the DOE, Department of Treasury, Department of Transportation, Environmental Protection Agency, and Department of Agriculture.[2]

Obama Administration's Advanced Vehicle Technology Initiatives

The development and deployment of "green" energy technologies—of which electric vehicles are a central component—has long been a centerpiece of President Obama's domestic policy agenda. In his 2011 State of the Union address,[3] President Obama announced his commitment to put one million EVs on the road by 2015 and subsequently proposed a number of steps to achieve this goal, including expanding consumer tax credits, programs to assist municipalities for EV deployment, and increasing funding for research, development, demonstration, and deployment projects.[4]

To date, the Administration has proposed and implemented a wide variety of programs to develop, produce, and deploy alternative vehicles. This includes:

- Over $4.4 billion[5] in the Office of Energy Efficiency and Renewable Energy Vehicle Technologies Program on research, demonstration, and deployment activities, including $2 billion in funding provided by the American Recovery and Reinvestment Act (ARRA) to manufacture batteries for electric vehicles (EV) and $400 million for transportation electrification demonstration and deployment;[6]
- $8.4 billion in direct loans to five automakers through the Advanced Technology Vehicles Manufacturing (ATVM) program to develop and produce electric vehicles, upgrade factories, and increase vehicle fuel efficiencies;[7]
- Over $36 million on EV batteries[8] and $44.5 million on biofuels[9] by the Advanced Research Projects Agency – Energy, and an additional requested $184 million in FY13 for alternative fuels, batteries, and systems for EVs;[10] and

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[1]Congressional Research Service, "Alternative Fuel and Advanced Vehicle Technology Incentives: A Summary of Federal Programs," R42566, June 12, 2012.
[2]*Ibid.*
[3]The White House, "Remarks by the President in State of Union Address," January 25, 2011. Accessible at: http://www.whitehouse.gov/the-press-office/2011/01/25/remarks-president-state-union-address.
[4]Assistant Secretary for Energy Efficiency and Renewable Energy David Danielson to Science, Space, and Technology Subcommittee on Energy and Environment Chairman Andy Harris, May 1, 2012.
[5]Cumulative budget figures for the Department of Energy's Office of Energy Efficiency and Renewable Energy Vehicle Technologies Program FY09-FY12 and the FY13 request. Budget Justifications are accessible at: http://www.cfo.doe.gov/crorg/cf30.htm#Justifications.
[6]Department of Energy, EERE News, "President Obama Announces $2.4 Billion for Electric Vehicles," March 19, 2009. Accessible at: http://apps1.eere.energy.gov/news/daily.cfm/hp_news_id=159
[7]Department of Energy, Loan Programs Office, "Our Projects." Accessible at: https://lpo.energy.gov/?page_id=45.
[8]Advances Research Projects Agency – Energy, "BEEST: Electric Vehicle Batteries," Updated February 16, 2012. Accessible at: http://arpa-e.energy.gov/LinkClick.aspx?fileticket=6aCiNDV8jwg%3d&tabid=175.
[9]Advanced Research Projects Agency – Energy, "Electrofuels: Versatile Transportation Energy Solutions," Updated February 16, 2012. Accessible at: http://arpa-e.energy.gov/LinkClick.aspx?fileticket=yZ0rVV3Yz34%3d&tabid=180.
[10]Department of Energy, Detailed Budget Request Volume 4, p. 417.

- Approximately $40 million per year in Office of Science funding to support 14 Energy Frontier Research Centers (EFRCs) researching electric energy storage,[11] $20 million for a new Batteries and Energy Storage Energy Innovation Hub, and a $24 million Energy Innovation Hub to develop new transportation fuels.[12]

The Department of Energy's Vehicle Technologies Program

The Department of Energy manages a wide portfolio of activities related to the development and deployment of advanced vehicle technologies through a number of programs, including the Loan Guarantee Office's Advanced Technology Vehicle Manufacturing Loan Program and the Office of Energy Efficiency and Renewable Energy (EERE) Vehicle Technology Program (VTP), Biomass and Biorefinery Systems Program, and Hydrogen and Fuel Cell Technologies Program.[13] VTP is the primary funder of advanced vehicle technology research, development, demonstration and commercialization activities.

The mission of DOE's Vehicle Technology Program is to "develop more energy efficient and environmentally friendly highway transportation technologies that enable America to use less petroleum."[14] To fulfill its mission, VTP's goal is to "develop technologies that enable cars and trucks to become highly efficient, through improved power technologies and cleaner domestic fuels, and to be cost and performance competitive."[15] VTP's activities primarily focus on passenger and commercial highway vehicles, through funding projects to support battery and electric drive component manufacturing, vehicle electrification deployment and infrastructure development, increasing internal combustion engine efficiency, advances in material technology, and deployment of alternative fuel vehicles.[16]

Clean Cities

A central component of VTP's efforts to facilitate the deployment of alternative fuel vehicles is its Clean Cities program. The Clean Cities program was established by the Energy Policy Act of 1992 to help promote the deployment of new vehicle technologies.[17]

Clean Cities activities are primarily carried out in partnership with 85 active "Clean Cities Coalitions."[18] The coalitions consist of businesses, fuel providers, vehicle fleets, state and local government agencies, and community organizations.[19] Coalitions then coordinate with their local member organizations to provide technical and informational assistance, as well as funding to

[11]Department of Energy, Office of Science, "Energy Frontier Research Centers: Basic Research Needs." Accessible at: http://science.energy.gov/bes/efrc/research/basic-research-needs/.
[12]P.L. 112-74
[13]Congressional Research Service, "Alternative Fuel and Advanced Vehicle Technology Incentives: A Summary of Federal Programs," R42566, June 12, 2012.
[14]Department of Energy, Vehicle Technologies Program, "Mission, Vision, and Goals," Updated February 16, 2011. Accessible at: http://www1.eere.energy.gov/vehiclesandfuels/about/fcvt_mission.html.
[15]*Ibid.*
[16]DOE EERE FY13 Detailed Budget Justification, Volume 4 p. 179.
[17]P.L. 102-486.
[18]Department of Energy, Clean Cities, "Coalitions in Order of Designation," Updated June 25, 2012. Accessible at: http://www.afdc.energy.gov/cleancities/coalitions/coalition_designation.php.
[19]Department of Energy, Clean Cities, "Coalitions," Updated April 9, 2012. Accessible at: http://www1.eere.energy.gov/cleancities/coalitions.html.

upgrade vehicle fleets and make available various types of alternative vehicle fueling stations, such as compressed natural gas, E85 or electric vehicle (EV) charging stations. Additionally, Clean Cities maintains an online "Alternative Fuels Data Center" to serve as an information source for vehicle fleet managers and alternative vehicle consumers.[20]

The Clean Cities program also administers the National Clean Fleets Partnership.[21] The Clean Fleets program establishes strategic alliances between DOE and corporate entities in which DOE provides fleets with "top-level support, technical assistance, robust tools and resources, and public acknowledgement to help meet and celebrate fleets' petroleum-use reduction goals."[22] Currently 18 corporations are engaged in the Clean Fleets program. The current (FY12) budget for Clean Cities is $27.9 million.

VTP National Laboratory Partnerships

The Vehicle Technologies Program partners with several of DOE's national laboratories to support many of its alternative vehicle technology activities.[23] National lab research activities are primarily conducted through:

- **Idaho National Laboratory's (INL)** Advanced Vehicle Testing Activity (AVTA) which provides "benchmark data for technology modeling, and research and development programs, but benchmarking and validating the performance of light, medium, and heavy-duty vehicles that feature one or more advanced technologies;[24]
- **National Renewable Energy Laboratory's (NREL)** Center for Transportation Technologies and Systems (CTTS) which "develops, evaluates, and demonstrates innovative vehicle and fuel technologies that reduce the nation's dependence on imported oil and improve air quality;[25]
- **Sandia National Laboratory's (SNL)** Combustion Research Facility which uses laser diagnostics and high-performance computing to explore combustion processes;[26]
- **Oak Ridge National Laboratory's (ORNL)** Sustainable Transportation Program which conducts research relating to "fuels, engines, and emissions; energy storage; advanced structural and propulsion system materials; power electronics and electric motors; and policy analysis;"[27] and,

[20]Department of Energy, "Alternative Fuels Data Center," Updated July 13, 2012. Accessible at: http://www.afdc.energy.gov/.
[21]Department of Energy "National Clean Fleets Partnership," Updated July 11, 2012. Accessible at: http://www1.eere.energy.gov/cleancities/national_partnership.html.
[22]Department of Energy, Vehicle Technologies Program, "National Clean Fleets Partnership Fact Sheet," March2012. Accessible at: http://www1.eere.energy.gov/cleancities/pdfs/51262.pdf.
[23]Department of Energy, Vehicle Technologies Program, "National Laboratories," Updated February 15, 2011. Accessible at: http://www1.eere.energy.gov/vehiclesandfuels/about/fcvt_laboratories.html.
[24]Idaho National Laboratory, "Advanced Vehicle Testing Activity," Updated June 24, 20101. Accessible at: http://avt.inel.gov/.
[25]National Renewable Energy Laboratory, "Advanced Vehicles and Fuels Research," Updated April 13, 2012. Accessible at: http://www.nrel.gov/vehiclesandfuels/ctts.html.
[26]Sandia National Laboratories, "Combustion Research Facility," 2011. Accessible at: http://crf.sandia.gov/
[27]Oak Ridge National Laboratory, Sustainable Transportation Program, "Our Role." Accessible at: http://www.ornl.gov/sci/ees/transportation/role.shtml.

- **Argonne National Laboratory's (ANL)** Transportation Technology R&D Center which performs research on hybrid powertrains, advanced batteries, applied materials, and alternative vehicles.[28]

VTP Recovery Act Funding

The American Recovery and Reinvestment Act (ARRA) provided significant funding for DOE's advanced vehicle programs. In addition to the aforementioned $2 billion to manufacture batteries for EVs and $400 million for transportation electrification projects, DOE also provided $298.5 million for the Clean Cities program and $106 million for heavy-duty track and passenger vehicle efficiency activities.[29] (See Appendix A for additional details.)

The $400 million in funding for transportation electrification was distributed to 18 different awardees and was focused on purchasing plug-in hybrid and all-electric vehicles for test demonstration and installing associated charging infrastructure. The largest award among these 18—a $99.8 million grant (later expanded to $114.8 million) to the Electric Transportation and Engineering Corporation (known as Ecotality) to deploy more than 13,000 electric vehicle charging stations in select cities around the country—has been of particular interest to the Subcommittee.

EV Everywhere

On March 7, 2012, President Obama announced the "EV Everywhere" initiative, a new effort aimed at further facilitating progress toward the one million EV deployment goal. The centerpiece of the announcement was the creation of a new $1 billion mandatory spending[30] program known as the "National Community Deployment Challenge" (NCDC) to "spur deployment of clean, advanced vehicles in communities around the country."[31] The NCDC would provide funding through a competitive grant program to communities to achieve the program's goal.[32]

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[28]Argonne National Laboratory, Transportation Technology R&D Center, "About us," September 2011. Accessible at: http://www.transportation.anl.gov/about.html.

[29]Department of Energy, Energy Efficiency and Renewable Energy, "American Recovery and Reinvestment Act," Updated July 2, 2012. Accessible at: http://www1.eere.energy.gov/recovery/index.html.

[30]Department of Energy Budget control tables. Accessible at http://www.cfo.doe.gov/budget/13budget/Content/Orgcontro.pdf p.2

[31]The White House, Office of the Press Secretary, "Fact Sheet: All-of-the-Above Approach to American Energy," March 7, 2012. Accessible at: http://www.whitehouse.gov/the-press-office/2012/03/07/fact-sheet-all-above-approach-american-energy.

[32]Assistant Secretary for Energy Efficiency and Renewable Energy David Danielson to Energy & Environment Subcommittee Chairman Harris, May 1, 2012.

Table 1. DOE Vehicle Technology Program (VTP) Budget (dollars in millions)

Program	FY09 Actual	FY09 ARRA	FY10 Actual	FY 2011 Actual	FY 2012 Enacted	FY 2013 Request	FY13 Request vs. FY12 Enacted $	FY13 Request vs. FY12 Enacted %	FY 2013 House E&W Approp. Mark	FY 2013 Senate E&W Approp. Mark
VTP Discretionary Funding	*267.1*	*2,800*	*304.2*	*$293.2*	*$328.8*	*$420.0*	91.2	27.7	*$335.0*	*$330.0*
VTP Mandatory Funding	--	--	--	--	--	*$1,000.0*	n/a	n/a	*$0.0*	*$0.0*

Department of Energy Inspector General Reports

In 2012, the DOE Inspector General (IG) has published multiple reports relating to performance, accounting, and management of VTP activities, including:

- A report titled, *"The Department of Energy's Transportation Electrification Program."*[33] The report notes DOE "has faced challenges with ensuring adequate oversight of the financial condition of grant recipients"[34] under DOE's Transportation Electrification Program, which funds vehicle charging stations and infrastructure. Specifically, the DOE IG determined that DOE did not "ensure recipients had completed independent audits as required by Federal regulations" or request or review "cost reports to determine the allowability of costs as required by Federal regulations."[35] DOE officials "acknowledged they were unaware of whether recipients had received independent audits or submitted cost reports."[36]

- An audit report titled, *"The Department of Energy's Clean Cities Alternative Fuel Vehicle Grant Program Funded under the American Recovery and Reinvestment Act."*[37] The audit found DOE inappropriately reimbursed unsubstantiated recipient costs, which "increases the risk that the Department will pay more than its agreed upon share of projects costs;"[38] approved cost-share contributions despite the lack of supporting documentation; and "allowed recipients to award almost $20 million without documenting their decisions to award contracts and/or identifying potential conflicts of

[33]Department of Energy Inspector General, *"The Department of Energy's Transportation Electrification Program, OAS-RA-12-11,"* May 10, 2012 Accessible at: http://energy.gov/sites/prod/files/OAS-RA-12-11.pdf.
[34]*Ibid.*
[35]*Ibid.*
[36]*Ibid.*
[37]Department of Energy Inspector General, *"Audit Report: The Department of Energy's Clean Cities Alternative Fuel Vehicle Grant Program Funded under the American Recovery and Reinvestment Act,"* May 22, 2012. Accessible at: http://energy.gov/sites/prod/files/OAS-RA-12-12.pdf.
[38]*Ibid.*

interest as required by Federal procurement regulations."[39] The report notes that DOE management disagreed with many of the IG's findings and recommendations in this audit.

- An audit report titled, *"Follow-up on the Department of Energy's Implementation of the Advanced Batteries and Hybrid Components Program Funded under the American Recovery and Reinvestment Act."*[40] The audit stated DOE could "better define regulations governing the retention of documentation supporting procurement decisions," "ensure recipients adequately safeguard equipment purchased with Federal funds," and "obtain and review required audit reports to ensure the sufficiency of internal controls and compliance with laws and regulations."[41] The report noted the IG was unable to locate 20 of the 37 sampled equipment items purchased with Federal funds, totaling about $500,000.[42]

[39]DOE IG "Clean Cities" Audit.
[40]Department of Energy Inspector General, "Audit Report: Follow-up on the Department of Energy's Implementation of the Advanced Batteries and Hybrid Components Program Funded under the American Recovery and Reinvestment Act," July 2012. Accessible at: http://energy.gov/sites/prod/files/OAS-RA-L-12-05.pdf.
[41]*Ibid.*
[42]*Ibid.*

Appendix A – DOE Vehicle Technology Program Stimulus Awards

Heavy-Duty Truck and Passenger Vehicle Efficiency[43]	
Awardee	**Amount**
Cummins Inc.	$38,831,115
Daimler Trucks North America, LLC	$39,559,868
Navistar, Inc.	$37,328,933
Chrysler Group LLC	$14,458,572
Cummins Inc.	$15,000,000
Delphi Automotive Systems LLC	$7,480,572
Ford Motor Company	$15,000,000
General Motors Co	$7,705,862
Robert Bosch	$11,953,786

Alternative Fueled Vehicles Pilot Grant Program (Clean Cities)[44]	
Awardee	**Amount**
North Central Texas Council of Governments	$13,181,171
South Coast Air Quality Management District	$5,591,611
South Coast Air Quality Management District	$9,408,389
San Bernardino Associated Government	$9,950,708
Maryland Energy Administration	$5,924,190
New York State Energy Research and Development Authority	$13,299,101
Clean Fuels Ohio's Ohio Advanced Transportation Partnership	$11,041,500
Utah Clean Cities Coalition	$14,908,648
Clean Energy Coalition	$14,970,144
Railroad Commission of Texas	$12,633,080
City of Chicago, Department of Environment	$14,999,658
Puget Sound Clean Air Agency	$14,999,927
Texas State Technical College	$12,299,828
New Jersey Clean Cities Coalition	$14,997,240
Greater Long Island Clean Cities Coalition	$14,994,183
DeKalb County	$14,983,167
Virginia Department of Mines, Minerals and Energy	$8,605,100
State of Wisconsin	$15,000,000
Southern CA Assoc. of Governments Clean Cities Coalition	$6,917,200
The Treasure Valley Clean Cities Coalition	$5,519,862

[43] http://www1.eere.energy.gov/recovery/news_detail.html?news_id=15723.

[44] http://www1.eere.energy.gov/recovery/news_detail.html?news_id=15494.

Metropolitan Energy Information Center	$14,999,905
Greater New Haven Clean Cities Coalition, Inc.	$13,195,000
State of Indiana	$10,125,000
Kentucky Clean Fuels Coalition	$10,125,000
Triangle J Council of Governments	$12,975,388

Advanced Battery and Electric Drive Component Manufacturing Grants[45]	
Awardee	**Amount**
Cell, Battery, and Materials Manufacturing Facilities	
Johnson Controls, Inc.	$299,200,000
A123 Systems, Inc.	$249,100,000
KD ABG MI, LLC (Dow Kokam)	$161,000,000
Compact Power, Inc. (on behalf of LG Chem, Ltd.)	$151,400,000
EnerDel, Inc.	$118,500,000
General Motors Corporation	$105,90,0000
Saft America, Inc.	$95,500,000
Exide Technologies with Axion Power International	$34,300,000
East Penn Manufacturing Co.	$32,500,000
Advanced Battery Supplier Manufacturing Facilities	
Celgard, LLC, a subsidiary of Polypore	$49,200,000
Toda America, Inc.	$35,000,000
Chemetall Foote Corp.	$28,400,000
Honeywell International Inc.	$27,300,000
BASF Catalysts, LLC	$24,600,000
EnerG2, Inc.	$21,000,000
Novolyte Technologies, Inc.	$20,600,000
FutureFuel Chemical Company	$12,60,0000
Pyrotek, Inc.	$11,300,000
H&T Waterbury DBA Bouffard Metal Goods	$5,000,000
Advanced Lithium-Ion Battery Recycling Facilities	
TOXCO Incorporated	$9,500,000
Electric Drive Component Manufacturing Facilities	
General Motors Corporation	$105,000,000
Delphi Automotive Systems, LLC	$89,300,000
Allison Transmission, Inc.	$62,800,000
Ford Motor Company	$62,700,000

[45] http://www1.eere.energy.gov/recovery/news_detail.html?news_id=12697.

Remy, Inc.	$60,200,000
UQM Technologies, Inc.	$45,100,000
Magna E-Car Systems of America, Inc.	$40,000,000
Electric Drive Subcomponent Manufacturing Facilities	
KEMET Corporation	$15,100,000
SBE, Inc.	$9,100,000
Powerex, Inc.	$8,100,000

Transportation Electrification Projects[46]	
Awardee	**Amount**
Advanced Vehicle Electrification	
Electric Transportation Engineering Corp. (ETEC) (known as Ecotality North America)	$114,800,000
Chrysler, LLC	$48,000,000
Coulomb Technologies	$15,000,000
South Coast Air Quality Management District (SCAQMD)	$45,400,000
Navistar, Inc. (Truck)	$39,200,000
Transportation Sector Electrification	
Cascade Sierra Solutions	$22,200,000
Advanced Vehicle Electrification + Transportation Sector Electrification	
General Motors	$30,500,000
Smith Electric Vehicles	$32,000,000
Advanced Electric Drive Vehicle Education Program	
West Virginia University (NAFTC)	$6,900,000
Purdue University	$6,100,000
Colorado State University	$5,000,000
Missouri University of Science and Technology	$5,000,000
Wayne State University	$5,000,000
National Fire Protection Association	$4,400,000
Michigan Technological University	$2,980,000
University of Michigan	$2,500,000
J. Sargeant Reynolds Community College	$72,000
City College of San Francisco	$50,000

[46] http://www1.eere.energy.gov/recovery/news_detail.html?news_id=12697.

Chairman HARRIS. Good morning. The Subcommittee on Energy and Environment will come to order.

Welcome to today's hearing entitled "Review of DOE Vehicle Technologies Program Management and Activities: Assuring Appropriate and Effective Use of Taxpayer Funding." In front of you are packets containing the written testimony, biographies and Truth in Testimony disclosures for today's witness panels. And right up front I will say that the hearing probably won't be that long because we are going to be voting from probably a little after 10:30 until after 1 o'clock, so hopefully we can get the information we need before we have to go to vote.

Well, good morning, and I recognize myself for five minutes for an opening statement. Good morning, and welcome to today's hearing.

Since President Obama took office in January 2009, aggressive spending on green energy programs has been a centerpiece of his domestic policy agenda. His stimulus legislation spent $33 billion at the Department of Energy, mostly devoted to green energy, and his budget requests to Congress have repeatedly called for massive increases in these same areas. For example, the President's current budget calls for over $1.5 billion in new spending at the Office of Energy Efficiency and Renewable Energy—an 84 percent year-over-year increase. The bulk of this proposed increase-about $1.1 billion-is for vehicle technology development and deployment activities that we will focus on today.

I would like to state at the outset that I am strongly supportive of advanced vehicle technologies if the government role is carefully limited, and the market matures through free enterprise and American innovation, not through the vast spending, mandates and special tax treatment that we have today.

These role-of-government concerns are magnified further by the Department of Energy's poor track record in administering such programs. As we will hear from the Inspector General's office today, DOE's Vehicle Technologies Program has been the subject of numerous concerns identified by the IG. These include approving cost-share contributions without supporting documentation; failing to identify conflicts of interest in the Clean Cities program; failing to obtain and review recipient audit reports to ensure appropriate accounting of taxpayer funds; and, in one instance, agency inspectors were unable to locate $500,000 worth of equipment purchased by one grant recipient. These are all serious matters that must be addressed, and I look forward to hearing more about them today.

We also hope to gain insight into DOE's management of this program through an examination of DOE's oversight of a $115 million award to an electric vehicle-charging company called Ecotality. The questions surrounding DOE judgment and decision-making associated with this award are numerous and complex. Over the course of the last 4 months, I have been working to gather more information on the details of this award and its execution. Although first requested on March 26, last Friday DOE finally began to provide the Subcommittee basic documentation associated with this award, such as the original application and assistance agreement with DOE. And I might add, this is not something that should have been hard to find over at the Department of Energy.

While much more is needed, and I would note DOE provided additional documents yesterday afternoon that we are still reviewing, the limited information we have on DOE grants to this company is troubling and raises a number of areas of concern. These issues have been summarized in a memo, which was provided to DOE and the minority Tuesday evening, and to the company yesterday for feedback. At this point, we won't make any conclusions or comment on the status and potential future of EV-related technologies and markets. However, the examples we have heard from the IG and have found in our research raise numerous questions and concerns regarding the effectiveness of the oversight of federal efforts to deploy EVs, as well as DOE's management and decision-making in administering these taxpayer-funded deployment initiatives.

Nonetheless, the high-level concerns associated with this project exemplify my concerns about the overall program including substantial project underperformance and schedule delays; troubling audit findings; unusual cost-sharing arrangements in which required recipient matching funds are met by questionable in-kind data valuations from consumers that have purchased EVs for their personal use; and placing other companies at a significant competitive disadvantage through the subsidization of charging stations purchases and installation as well as new product development.

On top of these concerns, the company's financial and political activities add another layer of concern to the issue. The company was totally bankrupt, was almost bankrupt before the stimulus grant money was awarded by DOE. However, the company did disclose in SEC filings that it was bailed out by Chinese investors that entered into a joint venture with the company to set up a manufacturing subsidiary in China. The same Chinese investors agreed to pay Ecotality executives $1 million in "performance bonuses" if they secured certain amounts of stimulus funding. That is worrisome.

The company hired lobbyists to engage the White House on DOE projects, went on to be awarded over $100 million in stimulus funding, and the Chinese-funded performance bonuses were awarded. Within a few months of the award, the company's President was an honored guest of the First Lady at the 2010 State of the Union. About 9 months after that, the SEC initiated an investigation into potential insider trading by company executives associated with the award. During the time period of this investigation, DOE continued to expand the scope of Ecotality's award and even awarded a new $26 million grant to the company in July of 2011.

Now, I hope today that DOE can provide its response to Vehicle Technologies Program related management concerns. I don't expect we will resolve these questions today, and after we hear from DOE and receive additional outstanding documents and materials including more communication with the company, we will likely have to revisit this issue later this year.

Last, I want to emphasize that this hearing is not just a matter of oversight of current spending. Its importance and timeliness is magnified significantly by the fact that the President has proposed a new $1 billion mandatory program called the National Community Deployment Challenge that would dramatically increase spending in the very areas of concern that we are examining today.

[The prepared statement of Mr. Harris follows:]

PREPARED STATEMENT OF SUBCOMMITTEE CHAIRMAN ANDY HARRIS

Good morning and welcome to today's hearing entitled "Review of DOE Vehicle Technologies Program Management and Activities: Assuring Appropriate and Effective Use of Taxpayer Funding."

Since President Obama took office in January 2009, aggressive spending on green energy programs has been a centerpiece of his domestic policy agenda.

His Stimulus legislation spent $33 billion at the Department of Energy mostly devoted to green energy, and his budget requests to Congress have repeatedly called for massive increases in these same areas. For example, the President's current budget calls for over $1.5 billion in new spending [1] at the Office of Energy Efficiency and Renewable Energy—an 84 percent year-over-year increase. The bulk of this proposed increase—about $1.1 billion—is for vehicle technology development and deployment activities that we will focus on today.

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These are all serious matters that must be addressed, and I look forward to hearing more about them today. We also hope to gain insight into DOE's management of this program through an examination of DOE's oversight of a $115 million award to an electric vehicle charging company called Ecotality.

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Nonetheless, the high level concerns associated with this project exemplify my concerns about the overall program including: (1) substantial project underperformance and schedule delays; (2) troubling audit findings; (3) unusual cost-sharing arrangements in which required recipient matching funds are met by questionable in-kind data valuations from consumers that have purchased EVs for their personal use; and (4) placing other companies at a significant competitive disadvantage through the subsidization of charging stations purchases and installation as well as new product development.

On top of these problems, the company's financial and political activities add another layer of concern to this issue. Ecotality was nearly bankrupt before the stimulus grant money was awarded by DOE. However, the company disclosed in SEC filings that it was bailed out by Chinese investors that entered into a joint venture with the company to set up a manufacturing subsidiary in China. The same Chinese

[1] FY13 EERE budget includes $527 million increase in discretionary request and $1 billion in new mandatory spending

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The company hired lobbyists to engage the White House on DOE projects, went on to be awarded $100 million in Stimulus funding, and the Chinese-funded performance bonuses were awarded. Within a few months of the award, the company's President was an honored guest of the First Lady at the 2010 State of the Union. About nine months after that, the SEC initiated an investigation into potential insider trading by company executives associated with the award. During the time period of this investigation, DOE continued to expand the scope of Ecotality's award and even awarded a new $26 million grant to the company in July 2011.}

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I now yield to Ranking Member Miller for an opening statement.

Chairman HARRIS. I now yield to Ranking Member Miller for an opening statement.

Mr. MILLER. Thank you, Mr. Chairman.

I am grateful that this hearing does appear to be, as the title and the charter suggest, focused on gathering information about electric vehicles program. Obviously that is an important topic, one that is more than worthy of Congressional oversight.

We face an enormous challenge to reduce our dependence on oil, reduce our vulnerability to price shocks, market speculation, and we obviously are not going to reduce our dependence any time soon on the car. Americans show no particular inclination to give up their cars and depend entirely upon mass transit, and there are certainly some parts of this country including large parts of my district where mass transit is not going to work very well. It is not going to be possible to get from your house in Roxboro to a factory in Reevesville to go to work. It simply is going to be something that applies in perhaps inurban areas and many Americans are not going to want to do it.

So electric vehicles are the promise of transforming our transportation system. There is certainly no guarantee of success. We do have a lot of technology that still needs to be developed. We have been investing for 20 years. A lot more needs to be done to make electric vehicles a practical reality. We have to, for instance, establish fueling stations around the country. I visited one in Raleigh that the city installed but it's one. Obviously that is not going to make a big dent in the number of cars on the road that use the legacy technologies.

I do want to say today what I will support in my remaining time on this Committee, and I think others should support whether they are in the majority or in the minority. I do support the important role of Congressional oversight, that is, it is an important check in our system of checks and balances on the Executive Branch of government. I will support our requests, our Committee's requests for documents from the Department of Energy. I did—actually, I voted against referring criminal charges under 1857 statute for Contempt of Congress a couple weeks ago but I voted for the resolution to authorize a civil action for a declaratory judgment on what documents Congress was entitled to. I think that we should not just act as

partisans in our oversight. We should act as the eyes and ears of the American people. A great political scientist, Woodrow Wilson, described that as the purpose of Congressional oversight. I will support that.

What I don't support and will not support, and I think others should not support, is using Congressional oversight for scandal mongering. Obviously some will be embarrassed, justly embarrassed, and worse, by Congressional oversight. But we should never hide behind, Congress should never hide behind the speech and debate clause of the Constitution to say things that no one—that other Americans—would put other Americans at risk of being sued for defamation. We can't just become a conduit for turning scandals into the public domain by having made ill-informed insinuations in Congress that can then be picked up by the various organs of the media and have it be reported as something said in Congress and completely obliviate or evade people's rights not to be defamed in that way.

I hope that that is the purpose of this hearing, and if it is genuine oversight, I support it. It if becomes scandal mongering without doing the research to show a basis for it, I will not support it, and now I yield back.

[The prepared statement of Mr. Miller follows:]

PREPARED STATEMENT OF SUBCOMMITTEE RANKING MEMBER BRAD MILLER

Thank you, Mr. Chairman.

I am grateful that this hearing does appear to be, as the title and the charter suggest, focused on gathering information about electric vehicles program. Obviously that is an important topic, one that is more than worthy of Congressional oversight.

We face an enormous challenge to reduce our dependence on oil, reduce our vulnerability to price shocks, market speculation, and we obviously are not going to reduce our dependence any time soon on the car. Americans show no particular inclination to give up their cars and depend entirely upon mass transit, and there are certainly some parts of this country including large parts of my district where mass transit is not going to work very well. It is not going to be possible to get from your house in Roxboro to a factory in Reevesville to go to work. It simply is going to be something that applies in perhaps inurban areas and many Americans are not going to want to do it.

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conduit for turning scandals into the public domain by having made ill-informed insinuations in Congress that can then be picked up by the various organs of the media and have it be reported as something said in Congress and completely obliviate or evade people's rights not to be defamed in that way.

I hope that that is the purpose of this hearing, and if it is genuine oversight, I support it. It if becomes scandal mongering without doing the research to show a basis for it, I will not support it, and now I yield back.

Chairman HARRIS. Thank you very much. I hope that that is the sentiment of everyone who sits in Congress, to be honest with you, that we don't use Congress for scandal mongering.

Anyway, if there are Members who wish to submit additional opening statements, your statements will be added to the record at this point.

I would like to introduce the witnesses this morning. The first witness is Dr. Kathleen Hogan, Deputy Assistant Secretary for Energy Efficiency at the U.S. Department of Energy. Dr. Hogan oversees a more than $900 million annual energy policy program and research portfolio including industrial buildings and vehicle technology along with federal energy management. As part of EERE's senior leadership, Dr. Hogan helps to oversee $16.8 billion in stimulus funding.

Our next witness is Mr. Rickey Hass, Deputy Inspector General for Audits and Inspections at the U.S. Department of Energy. Prior to this, he was Deputy Inspector General for Audit Services. In his current position, he directs a federal workforce of professional auditors and inspectors serving at 13 major DOE sites across the country. He is responsible for all audits, inspections and related reviews of the Department's programs and activities.

Our third and final witness today is Mr. Brian Wynne, President of the Electric Drive Transportation Association. Appointed in 2004, he acts as Chief Staff Executive of this member-based international organization, which promotes battery hybrid, plug-in hybrid and fuel cell electric vehicles and infrastructure. He previously served as the Senior Vice President for Business and Trade at the Intelligent Transportation Society of America.

As each of our witnesses should know, spoken testimony is limited to five minutes after which the Members of the Committee will have five minutes each to ask questions.

I now recognize Dr. Hogan to present her testimony.

STATEMENT OF DR. KATHLEEN HOGAN, DEPUTY ASSISTANT SECRETARY FOR ENERGY EFFICIENCY, DEPARTMENT OF ENERGY

Dr. HOGAN. Thank you, Chairman Harris, Ranking Member Miller and Members of the Subcommittee. Thank you for the opportunity to discuss the Department of Energy's Vehicle Technologies Program.

As part of the President's all-of-the-above approach to American energy, the Department is advancing transportation innovations that will reduce our dependence on oil and reduce the hundreds of billions of dollars out of the country for oil every year as well as to help our vehicle manufacturing industry compete in this global industry as well as provide consumers with more transportation choices and cost savings, as transportation is the second biggest annual household expense.

The DOE Vehicle Technologies Program supports a broad portfolio of efforts spanning light, medium and heavy-duty vehicles and including advanced combustion engines, advanced fuels and lubricants, lightweight materials and propulsion materials, advanced batteries, power electronics and electric motors, vehicle systems and enabling technologies as well as to systems to communities across the country in their adoption of alternative fuel vehicles.

As part of this vehicles portfolio, electric vehicles, or EVs, are an important focus. Electricity is cheaper than gasoline at about $1 per gallon equivalence. It can offer competitive performance, less pollution and is almost oil-free. Other countries are certainly recognizing these benefits and making their own investments. We have a critical opportunity here to grow U.S. leadership, building upon many past successes and the Administration is proposing multiple steps to accelerate America's leadership in EV development and deployment, and DOE is playing an important role.

Today, DOE-developed battery technology is in nearly every hybrid vehicle on the road, offering savings at the pump. We have achieved a 35 percent cost reduction in a next generation of batteries and expect an additional 50 percent reduction by 2014, a key step in making these vehicles cost-competitive with current technologies. We are on track to reach a goal of having U.S. manufacturing capacity for half a million EV batteries per year through Recovery Act investments, and our DOE Clean Cities program has helped communities save billions since 1993.

We are also on track to meet milestones in the Transportation Electrification Initiative, or TEI, to deploy 13,000 grid-connected vehicles and over 20,000 charging points and to meet really the primary purpose, one of the primary purposes, to collect the data necessary to help state and local governments and others better plan their EV investment infrastructure for the future.

It is through TEI that Ecotality, a clean electric transportation energy storage company, did compete and win a DOE award to deploy a network of charging stations and to instrument EVs in major cities nationwide. As of mid-July, they had completed 55 percent of their planned charging station installations and instrumented 65 percent of their planned vehicles, and they have been reimbursed 57 percent of the award amount.

Building upon this work, we have—DOE has announced the EV Everywhere Clean Energy Grant Challenge to help U.S. companies lead the world in producing plug-in EVs that are as affordable and convenient as gasoline-powered vehicles and to further spur the United States to additional cost reductions, to extend vehicle range and improve performance and convenience.

Across this entire portfolio, we do work very hard to protect taxpayers' investments and serve as careful stewards of taxpayer dollars. We have a comprehensive system in place to do this. This includes competitive, merit-based awards, onsite audits, ongoing monitoring. The Inspector General's efforts are an important part of the Department's oversight and we welcome the IG's work and will continue to continuously improve our programs.

In conclusion, DOE's Vehicle Technologies Program has and will continue to benefit consumers, improve national security by advancing the technologies necessary to reduce our dependence on oil,

and help America lead in what is a globally competitive transportation manufacturing effort.

So I thank you for the opportunity to be here, and will be happy to address your questions.

[The prepared statement of Dr. Hogan follows:]

WRITTEN STATEMENT OF

DR. KATHLEEN HOGAN

DEPUTY ASSISTANT SECRETARY FOR
ENERGY EFFICIENCY

OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY
U.S. DEPARTMENT OF ENERGY

BEFORE THE
SUBCOMMITTEE ON ENERGY & THE ENVIRONMENT
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
UNITED STATES HOUSE OF REPRESENTATIVES

JULY 26, 2012

Chairman Harris, Ranking Member Miller, and Members of the Subcommittee, thank you for the opportunity to discuss the Department of Energy's (DOE's) transportation portfolio—specifically the Vehicle Technologies Program (VTP). As part of the President's sustained, all-of-the-above approach to American energy, the Department is working to develop advanced vehicle technologies that can secure our energy future.

As Deputy Assistant Secretary for Energy Efficiency in the Office of Energy Efficiency and Renewable Energy (EERE), I am responsible for overseeing DOE's portfolio of energy efficiency research, development, demonstration, and deployment (RDD&D) activities, including those related to advanced vehicles technologies.

Today, with the help of the Department's vehicles programs, the automotive industry is reinventing itself—expanding the number of new, more fuel-efficient and environmentally sustainable vehicles and helping to create jobs throughout the vehicle supply chain. By supporting companies building everything from advanced combustion engines and turbochargers, to cutting-edge batteries and more efficient tires, the Department is strengthening the global competitiveness of America's vehicle-related manufacturers.

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] Net expenditures for imports of crude and petroleum products have been hundreds of billions of dollars every year. After housing, transportation is the second biggest annual expense for most American families.[2] Improving fuel efficiency of vehicles and developing alternative fuels represents one of the best opportunities we have to reduce our dependence on oil and lower our transportation costs. The economic, national security and environmental costs of our existing vehicles and transportation infrastructure make developing advanced, more fuel-efficient vehicles and alternative fuels an imperative for the Nation.

The Department is investing in a broad portfolio of near- and long-term vehicle-related technologies that includes electric drive, advanced combustion, advanced fuels and lubricants, biofuels, and hydrogen fuel cells, as well as technologies such as advanced lightweight materials that benefit vehicles regardless of size or propulsion technology. We have set aggressive goals and targets and have mapped out the strategies to achieve them. We are making significant progress by demonstrating the real promise of all of these technologies and justifying our investment.

Today I will address the work and progress of the Vehicles Technologies Program (VTP) in EERE, including:

1. An overview of VTP's budget and activities,
2. VTP's electric drive activities, including the Transportation Electrification Initiative and the EV Everywhere Challenge, and
3. The May 2012 DOE Inspector General reports on the Transportation Electrification Initiative and Clean Cities

[1] U.S. Energy Information Administration, Primary Energy Consumption by Source and Secretion (2010) (accessible at: http://www.eia.gov/totalenergy/data/annual/pecss_diagram.cfm).

[2] Bureau of Labor Statistic, Consumer Expenditures (2010) (accessible at: http://www.bls.gov/news.release/cesan.nr0.htm).

Overview of VTP's budget and activities

EERE's Vehicle Technologies Program (VTP) accelerates the development of advanced, energy-efficient, environmentally-friendly transportation technologies that reduce petroleum consumption and lower GHG emissions without sacrificing vehicle performance. The VTP portfolio reflects a mix of near- and long-term technologies including advanced combustion engines, advanced fuels and lubricants, lightweight materials and propulsion materials, advanced batteries, power electronics and electric motors, and vehicle systems and enabling technologies.

Program activities cover technologies applicable to a broad range of vehicles from light-duty passenger cars to heavy-duty trucks. In tandem with the Administration's historic new fuel economy and fuel efficiency standards, DOE's work in all of these areas will help enable the continued improvement of vehicle fuel economy and efficiency, provide consumers with a variety of choices to save money at the pump (or avoid the pump altogether), and strengthen our national energy and economic security by reducing our dependence on oil.

VTP received $329 million in fiscal year 2012 (FY12) for program activities. Table 1 shows a breakdown of the VTP budget by program area as shown in the FY13 budget submission.

Table 1: An overview of VTP's budget, from the FY13 budget submission.

(Dollars in Thousands)

	FY 2011 Current[3]	FY 2012 Enacted	FY 2013 Request
Vehicle Technologies			
Batteries and Electric Drive Technology	103,163	117,740	203,594
Vehicle and Systems Simulation & Testing	42,647	47,198	56,218
Advanced Combustion Engine R&D	55,987	58,027	55,261
Materials Technology	47,748	40,830	48,475
Fuels Technology	10,692	17,904	11,634
Outreach, Deployment and Analysis	32,914	39,266	33,945
SBIR/STTR	0	7,842	10,873
Total, Vehicle Technologies	293,151	328,807	420,000

Improving the efficiency of internal combustion engines is one promising and cost-effective approach in the VTP portfolio to increasing the fuel economy of highway transportation vehicles. The Department

[3] SBIR/STTR funding transferred in FY 2011was $6,849,000.

has demonstrated a unique combustion strategy with the potential to increase the fuel economy of passenger automobiles by more than 50 percent with very low emissions.
DOE is focusing on overall efficiency improvements to commercial vehicles through our SuperTruck initiative. The goal of SuperTruck is to increase the overall freight efficiency of long-haul tractor-trailers by 50 percent by 2015: with 20 percent coming from engine improvements alone, the rest from improvements such as aerodynamics, low rolling resistance tires, and lightweight materials. These trucks consume well above half of commercial vehicle fuel use, and represent a huge opportunity for introducing new fuel-saving technology because of their rapid turnover rate and high rate of miles travelled. We are approximately halfway through the project and on schedule. We have achieved a 26 percent overall freight efficiency improvement thus far.

VTP's Electric Drive Initiatives

As part of the DOE portfolio approach, the Department places an increased emphasis on vehicle electrification. Electric vehicles (EVs) – both plug-in hybrid electric vehicles (PHEVs) and all-electric vehicles – make sense for a number of reasons:

- Electricity is cheaper than gasoline for powering a vehicle (at about $1 per gallon equivalent gasoline price);
- EVs will reduce America's dependence on petroleum, protecting consumers from price spikes and keeping the money Americans spend on energy here at home; and
- EVs could potentially offer the same or better driving performance compared to today's gasoline powered vehicles.

We face tough competition in the global race for a clean energy economy, but President Obama has put in place a foundation for American leadership in the development, deployment, and manufacturing of advanced vehicles and batteries. While the President's vision for American leadership is ambitious, progress toward this end goal will put the U.S. on a path to lead in the clean energy economy. It will support real consumer choice in the technologies that power our vehicles, helping to end our dependence on oil and reduce greenhouse gas emissions from the transportation sector.

Plug-in electric vehicle sales continue to increase, with sales growth outpacing that of gasoline hybrid electric vehicles when they were first introduced. We expect to see this trend continue, as several new vehicle models were introduced earlier this year, providing additional choices for consumers considering electric drive vehicles.

In the Administration's FY13 Budget, the President proposed steps to accelerate America's leadership in electric vehicle development and deployment, including improvements to existing consumer tax credits, establishment of a commercial tax credit for heavy-duty trucks, creation of a community deployment program to support local investments and policies to spur deployment at scale, and increased investments in research and development in vehicle electrification. DOE's primary activities focus on the research and development of electric drive as well as a variety of other advanced and fuel efficient technologies.

To date, the Department of Energy has worked to develop a domestic capability to manufacture advanced batteries and electric drive components. Together with industry partners who match federal funds dollar-for-dollar, we have created a total production capacity of more than 140,000 EV batteries

per year, and we are on track to reach our goal of having the capacity to support 500,000 EV batteries per year by 2015. While the plug-in vehicle market continues to develop, these facilities are producing advanced batteries for other applications including defense applications, utilities, and power tools. Similarly, facilities that manufacture motors and other electric-drive components are expanding and now filling orders for domestically produced all-electric vehicles. Through these efforts, the United States has developed a domestic battery manufacturing capability that did not exist only several years ago.

To move electric-drive technology beyond initial early adopters, we must continue to reduce the cost and improve the performance of key component technologies such as advanced batteries. Technology developed with DOE support is in nearly every hybrid vehicle on the road today. Now we are building on that success with research and development (R&D) of next-generation technologies. Since 2008, DOE has demonstrated a 35 percent reduction in the production cost of lithium ion batteries.[4] And we are on track to demonstrate an additional 50 percent cost reduction by the end of 2014, bringing the modeled cost to $300/kWh, which will make these vehicles cost-competitive in the market..

Transportation Electrification Initiative

Before 2009, there were fewer than 500 electric vehicle charging stations in America. But in part because of the investments made by the Obama Administration, there are now over 4,000 publically available chargers deployed today. Under the Transportation Electrification Initiative, companies are developing, deploying and analyzing EVs and EV infrastructure, and educating the public to help accelerate the market adoption of advanced electric-drive vehicles. The projects under the Transportation Electrification Initiative represent the world's largest electric vehicle demonstration project and are projected to deploy over 20,000 charging points in residential, commercial, and public locations supporting more than 13,000 plug-in vehicles nationwide. Through these cost-shared projects, DOE will collect information about how consumers use and charge electric vehicles, which will be critical to informing the broader rollout of electric vehicles and chargers nationwide.

As of July 13, 2012, over 11,000 EV charging stations have been deployed in residential, commercial, and public locations with DOE financial support. The majority of these charging stations were the result of cost-shared funding under the Transportation Electrification Initiative. In addition, a smaller number of charging stations have been deployed as part of programs undertaken by the Energy Efficiency and Conservation Block Grants and public-private partnerships such as locally-based Clean Cities coalitions.

As part of the Transportation Electrification Initiative, DOE administered an open, transparent, and competitive solicitation process and awarded funding for Ecotality's EV Project—an effort to develop and deploy a network of charging stations in residential, commercial, and public locations in 18 cities nationwide. Through partnerships with DOE's Oak Ridge and Idaho National Laboratories, the EV Project also created a prototype solar-powered recharging system and robust data collection effort.

The EV Project began on October 1, 2009, and is expected to continue into 2013. Installation activities have been extended past the original expected end date of September 2011 to match the vehicle sales and availability. Strict monitoring and control mechanisms are in place so that Ecotality North America and its project partners are reimbursed only as progress is made and project milestones, such as charging

[4] Cost estimates are based on high volume manufacturing cost projections, using a peer reviewed cost model.

installations and vehicle placements with data collection, are met. As of July 13, 2012, Ecotality had completed 55 percent of the planned charging station installations and 65 percent of the planned vehicles, and it had been reimbursed $57 million, or 57 percent of the total award amount.

EV Everywhere

EV Everywhere, one of the Department's Clean Energy Grand Challenges, is aimed at addressing one of the most pressing energy challenges of our time. EV Everywhere will bring together America's best and brightest scientists, engineers, and businesses to work collaboratively to make electric vehicles as affordable and convenient to own and drive as today's gasoline-powered vehicles within the next 10 years. Success in meeting this goal will help put the U.S. in the lead to manufacture and export the next generation of advanced electric vehicles and electric vehicle components, creating manufacturing jobs and stimulating the American economy.

Automotive manufacturers and suppliers are currently pioneering the way forward in getting the first wave of EVs into the hands of a significant number of U.S. drivers. But today, the prices of these cars are still out of reach for the majority of American families. This Department-wide initiative, which will bring together DOE's Office of Energy Efficiency & Renewable Energy's Vehicle Technologies Program, the Office of Science, and ARPA-E, will aim to make electric vehicles affordable to the average American family by specifically targeting dramatic technological and cost improvements in batteries, electric motors, power electronics, light-weight structures, and fast charging technology.

The aggressive goal of this initiative is, by the year 2022, to enable companies in the United States to be the first in the world to produce a 5-passenger affordable American electric vehicle with a payback time of less than 5 years and sufficient range and fast-charging ability to enable average Americans everywhere to meet their daily transportation needs more conveniently and at lower cost.

The May 2012 DOE Inspector General reports on the Transportation Electrification Initiative and Clean Cities

The Department takes very seriously its responsibility for the effective and efficient use of taxpayer dollar at all times. As such, we welcome input from DOE's Inspector General (IG) and other partners and will work to continuously improve the Vehicle Technology Program.

In May 2012, the IG released a special report entitled *The Department of Energy's Transportation Electrification Program* that discussed the management of the program but made no formal recommendations since DOE took action during the IG's review to ensure program recipients had completed independent audits. These actions included DOE issuance in February 2011 of final guidance on for-profit recipient audits requiring that entities expending more than $500,000 in Federal funds per year obtain an audit for that year by an independent auditor. DOE has now received independent audit reports from five of the six companies participating in the Transportation Electrification program; the sixth recipient will submit a combined 2010 and 2011 audit report by September 30, 2012. For the Transportation Electrification program, there were no costs determined to be unallowable costs as a result of the audits.

In May 2012, the IG also released an audit report entitled *The Department of Energy's Clean Cities Alternative Fuel Vehicle Grant Program Funded under the American Recovery and Reinvestment Act* that discussed management of the program. DOE concurred in part and disagreed in part with some of the IG's findings and recommendations. As the IG report notes, the Department followed established procedures for solicitation, merit review, and selection of Clean Cities projects. With respect to conflicts of interests, DOE agrees that heightened awareness of the potential conflicts of interests by recipients is necessary at all times.

In the case of Clean Cities, DOE carefully reviewed the IG report's findings. By statute, all recipients must undergo an audit, subject to the requirements of the Single Audit Act and revised OMB Circular A-133, which include a review of potential financial conflicts of interest. In addition, recipients must also take steps to identify and mitigate real or apparent conflicts of interest. In the event allegations of potential conflicts of interest are provided to DOE, or the required audits reveal any conflicts of interest during DOE review, the Department would immediately investigate. In the event the allegations or audit results are substantiated, DOE would take appropriate actions to resolve the issue.

DOE also concurred with the IG's recommendation that DOE review recipient reimbursements for the allowability of costs incurred and cost share amounts contributed. As a result of the IG's audit, DOE identified $640,000 in unallowable costs that were subsequently disallowed.

For the remaining costs questioned by the IG, the IG found that DOE lacked adequate documentation of these costs because a recipient may not have sufficiently competed its subcontracts to coalition members, and DOE disagreed with this finding. Throughout the process of awarding Clean Cities grants, the Department evaluated each application according to published criteria based on the work proposed, coalition members described in the application, and the proposed overall cost—a process that aligns with how agencies award financial assistance throughout the Federal government. In this case, recipients held competitions to select coalition members prior to submitting applications for funding to DOE. Holding a new competition to select coalition members subsequent to a recipient's selection for an award would jeopardize the composition of coalitions, thereby significantly altering the basis on which the recipient was selected. As program activities proceed, the Department will continue to work with the IG, Congress, and other stakeholders to improve the Vehicle Technology Program and ensure DOE's strong stewardship of taxpayer dollars.

Conclusion

With efforts like DOE's Vehicle Technologies Program, the Department believes the U.S. can position itself as a leader in the global clean energy sector. Working with industry and state and local partners from across the country, DOE's transportation portfolio will benefit consumers, improve national security through reducing our dependence on oil, and help America lead in transportation manufacturing. Thank you again for the opportunity to discuss these issues, and I welcome any questions.

Chairman HARRIS. Thank you very much, Doctor, for your testimony.

I now recognize Mr. Hass for five minutes to present his testimony.

STATEMENT OF MR. RICKEY HASS,
DEPUTY INSPECTOR GENERAL FOR AUDITS
AND INSPECTIONS, U.S. DEPARTMENT OF ENERGY

Mr. HASS. Chairman Harris, Ranking Member Miller and Members of the Subcommittee, I appreciate the opportunity to testify on the work of the Office of Inspector General concerning the Department of Energy's Vehicle Technologies Program. As requested by the Subcommittee, my testimony today will focus on our May 2012 reports on the Clean Cities and Transportation Electrification grants.

With the enactment of the Recovery Act, the Department awarded about $300 million in grants to Clean Cities organizations. Using about $400 million additional Recovery Act funds, the Department also established the Transportation Electrification program. The Department required fund recipients under both programs to comply with federal regulations governing financial assistance awards. As such, they were required to provide up to 50 percent of a project's funding—cost share—and use competitive procurement practices to the maximum extent practical. As of July 2012, Clean Cities grant recipients had expended about $202 million, and Transportation Electrification program grantees that spent about $204 million.

Because of the significance, we examined various aspects of the Department's management of these programs. For Clean Cities, we evaluated whether the initiative had been effectively managed. For Transportation Electrification, we sought to determine whether the Department obtained and reviewed required audits and cost-incurred reports. We identified needed improvements in financial management for both of these programs.

With regard to Clean Cities, we found the Department had authorized reimbursements and cost-share contributions that either did not relate to the grant's purpose or were not properly supported. We also identified potential conflicts of interest and questionable procurement practices.

As a result, we questioned about $5 million in direct payments and nearly $2 million in cost share. We found these problems occurred in part because the Department had not reviewed grants for potential conflict of interest and had not thoroughly reviewed reimbursement requests. Officials also focused on technical issues when visiting grantees and did not review compliance with procurement requirements.

Department officials told us that grant recipients were primarily responsible for ensuring compliance with federal procurement and conflict-of-interest rules. They also indicated that the Department relied on a recipient's vigilance to ensure that funds were efficiently managed. As demonstrated by the results of our work, however, over-reliance on grantees can endanger both the integrity and credibility of the program.

We also found the Department had not obtained and reviewed the required financial and compliance audits for the Transportation Electrification for-profit recipients that we reviewed. Audits and cost reports provide a window into the financial condition of the recipients and aid the Department in determining the reasonableness of costs.

Program officials acknowledge that they were unaware of whether recipients had received their required audits or submitted cost reports. They also told us they had not established a process to track and resolve audit issues. Officials explained that in the past, the guidance on our requirements for for-profit recipients had been unclear.

Now, the Department took certain action to address issues identified in our report. Specifically, it moved quickly to resolve about $2.5 million of the questionable costs we identified. Additionally, officials acted to obtain required audit and financial reports. The Department has also updated its guidance on audits and for-profit recipients and sub-recipients. However, the Department disagreed with many of our findings and recommendations with regard to the Clean Cities program.

Generally, management did not agree with our conclusion that grantees were required to compete procurements. Officials also did not believe that certain activities we identified represented conflicts of interest. As such, the Department concluded that many of the costs we identified were allowable.

We remain concerned, however, because coalitions are comprised of geographically based networks of individuals and organization with mutual business interests. In such situations, and without $100 million left to be spent in the Clean Cities area, heightened departmental awareness of the potential for conflicts of interest, we believe, is essential.

In addition to the two reports just discussed, we also recently issued a report on advanced battery and hybrid components under the Vehicle Technologies Program. I would be happy to provide information on that report as well.

Mr. Chairman, that concludes my statement and I would be pleased to answer any questions the Subcommittee may have.

[The prepared statement of Mr. Hass follows:]

Statement of

Rickey R. Hass

Deputy Inspector General for Audits and Inspections

Office of Inspector General

U.S. Department of Energy

Before the

Subcommittee on Energy and the Environment

Committee on Science, Space, and Technology

U.S. House of Representatives

FOR RELEASE ON DELIVERY
9:30 AM
July 26, 2012

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to testify on the work of the Office of Inspector General concerning the Department of Energy's Vehicle Technologies Program (Program). As requested by the Subcommittee, my testimony today will focus on our May 2012 reports on Clean Cities (OAS-RA-12-12) and Transportation Electrification (OAS-RA-12-11) grants made under the Program.

The Clean Cities Program, in place since 1993, was designed to help volunteer coalitions partner with public and private entities to promote alternative and renewable fuels, fuel economy measures and new technologies. With the enactment of the American Recovery and Reinvestment Act of 2009 (Recovery Act), the Department awarded grants to Clean Cities coalitions, and other entities that partnered with coalitions, to construct or upgrade alternative-fuel stations and to purchase alternative-fuel commercial vehicles. In addition to managing projects directly, Clean Cities grant recipients awarded contracts for actual construction/equipment purchases. Additionally, the Department established the Transportation Electrification Program to demonstrate and evaluate the deployment of plug-in hybrid vehicles and associated infrastructure needs. Awards under this program were made to both for-profit and non-profit entities.

Through the Recovery Act, the Department awarded grants of nearly $300 million for Clean Cities projects and about $400 million for Transportation Electrification efforts. The Department required fund recipients under both Programs to comply with Federal regulations governing financial assistance awards. As such, they were required, among other things, to provide a

significant percentage (up to 50 percent) of a project's funding (cost-share), use competitive procurement practices to the maximum extent practical, adequately document expenditures, and ensure that periodic audits were completed. As of July 2012, Clean Cities grant recipients had expended about $202 million, and Transportation Electrification Program grantees had spent about $204 million.

Office of Inspector General Oversight

Because of their significance, we examined various aspects of the Department's management of these programs. In the case of Clean Cities, we evaluated whether the Department had effectively managed the initiative. For Transportation Electrification grants, we sought to determine whether the Department obtained and reviewed financial and compliance audits and cost incurred reports of for-profit recipients. We identified needed improvements in financial management for both programs.

Clean Cities

While the Department had followed established procedures for the solicitation, merit review and selection of the Clean Cities projects, we found that it had not always effectively managed the use of Recovery Act funding and other post-award aspects of those grants. Specifically, the Department had authorized reimbursements and cost-share contributions that either did not relate to the purpose of the grant or were not properly supported. We also identified concerns with potential conflicts of interest and questionable procurement practices. As a result, we questioned

approximately $5 million in direct payments to recipients and nearly $2 million in claimed cost-share. Inadequate policies and procedures and ineffective oversight by the Department contributed to the issues we identified.

Questionable Clean Cities Reimbursements and Cost-Share Contributions

The Department approved questionable reimbursement claims and cost-share contributions for three of the seven entities we reviewed. In one case, the Department reimbursed a coalition member's company for about $1.5 million in unsubstantiated costs and also approved $615,000 in unsubstantiated cost-share contributions. In this particular case, we discovered that the Department approved these charges even though they included equipment costs and lease payments not related or allocable to the grant. The coalition member's involvement in this particular project also represented an apparent conflict of interest in that the individual leased the fueling stations from a family member's company. The coalition member also served as the vice-president of the family member's company — a relationship that we discovered by reviewing documentation that had previously been collected by the Department. Because of these issues, we questioned the direct costs and cost-share claimed.

Department officials informed us they were pursuing questionable payments to, and cost-share contributions from, the recipient in question at the time of our audit. Subsequently, the contracting officer disallowed the entire cost-share and reduced total project costs by about $2 million while requiring that the project adhere to the original scope.

Separately, our review of reimbursements and cost-share claimed by two other Clean Cities grant recipients disclosed approximately $400,000 in costs that had either been incurred prior to the grant award date or were unsupported.

Clean Cities Coalition Recipient Procurements

Of the seven grant recipients reviewed, we found three had procured goods and services totaling nearly $20 million without documenting the results of award decisions and/or taking steps necessary to identify potential conflicts of interest. One recipient awarded contracts for the construction of 10 alternative-fuel stations and the purchase of alternative-fuel vehicles without documenting the results of its award decisions, including its cost/price analyses, despite Federal regulations and the Department's detailed instructions. Coalition officials informed us that they "did not issue any bid requests" or "solicit bids" for any of the contracts awarded. Instead, they relied on proposals prepared by interested parties that had been made aware of funding through word-of-mouth and an email sent to a network of associates. In our view, the lack of a public solicitation for bids and the failure to complete required cost/price analyses raises questions about the reasonableness of costs. We noted that these very steps had been taken by other recipients of funds.

Our review revealed that two other recipients had awarded contracts even though potential conflicts of interest existed. In one case, a recipient awarded nearly $6.5 million to companies either owned by or employing coalition board members. While the recipient had solicited bids, the entities associated with coalition board members received over 40 percent of available

funding. These awards were of particular concern because the selecting officials were coalition board members and awarded a number of contracts to companies affiliated with fellow board members.

Department officials told us that under the terms of the Clean Cities grants, awardees were solely responsible for contracts and were not required to compete awards. They also asserted that they did not believe conflicts of interest existed. Management's position was, in our opinion, inconsistent with Federal regulations governing competitive procurements by financial assistance award recipients. As such, we remain concerned because coalitions are comprised of geographically-based networks of individuals and organizations with mutual interests. This very structure makes it important that concerns regarding conflicts of interest, and free and open competition, be treated as a priority in an effort to promote the Recovery Act's accountability and transparency goals.

Clean Cities Grant Administration

Our review of award files found no evidence that the Department had reviewed the grants we tested for potential conflicts of interest. In fact, prior to our audit, Department officials were unaware of the previously cited example in which a coalition board member's company had been awarded a contract and was claiming lease payments to a family-owned company. This despite information being in the award files that, in our view, should have led the Department to question the relationship.

The Department also had not thoroughly reviewed recipient requests to ensure all costs were reasonable and well documented. As previously mentioned, we found that the Department had approved reimbursement requests and cost-share claims that were unrelated to the purpose of the grant, and in some instances, lacked sufficient documentation. Finally, we found that the Department's monitoring of recipients focused on technical aspects of the projects and did not include reviews of compliance with Federal procurement requirements.

Management officials told us that grant recipients were primarily responsible for ensuring compliance with Federal procurement and conflict of interest rules. Further, management indicated that the Department relied on the recipients' vigilance to ensure that Federal funds are efficiently managed. Ensuring integrity and credibility of the program, in our view however, required government oversight to ensure the reasonableness of costs and to mitigate actual and potential conflicts of interest.

Transportation Electrification

We found that the Department could improve its financial management of the Transportation Electrification Program. Our review disclosed that the Department had not obtained and reviewed required financial and compliance audits and cost reports for the Program's six for-profit recipients. Audits and cost reports determine the financial condition of the recipients; the reasonableness of costs expended under the awards; the adequacy of internal controls; and, compliance with laws and regulations.

Department officials acknowledged that they were unaware of whether recipients had received required independent audits or submitted cost reports. They also told us that they had not established a process to track, collect, review and follow-up on the receipt of required audits. Officials explained that, in the past, the guidance on audit requirements related to for-profit recipients was not clear. The findings in our prior report, *Solar Technology Pathway Partnerships Cooperative Agreements* (OAS-M-11-02, March 2011), were consistent with the explanation provided by the officials in that we found that there was a lack of guidance on reporting requirements related to for-profit recipients and recommended that the Department revise its guidance. The Department issued its final version of the updated guidance on audits of for-profit recipients and subrecipients in February 2011, requiring that entities expending more than $500,000 per year obtain an audit for that year by an independent auditor.

Department of Energy Actions

The Department took action to address issues identified in our reports. Specifically, the Department has resolved approximately $2.5 million of the costs questioned in our Clean Cities report. Additionally, the officials acted to obtain required audit and financial reports from the for-profit recipients of Transportation Electrification grants. However, management disagreed with many of our findings and recommendations with regard to the Clean Cities Program. Generally, the Department did not agree with our conclusion that grantees were required to compete procurements. Officials also did not believe that certain activities we identified represented conflicts of interest. Consistent with its position on these matters, the Department

concluded that the costs we identified that involved potential conflicts of interest, non-competitive procurements and unsupported costs were allowable.

Mr. Chairman, this concludes my statement and I would be pleased to answer any questions that the Subcommittee may have.

Chairman HARRIS. Thank you very much, Mr. Hass.

I now recognize our final witness, Mr. Wynne, to present his testimony.

STATEMENT OF MR. BRIAN WYNNE, PRESIDENT, ELECTRIC DRIVE TRANSPORTATION ASSOCIATION

Mr. WYNNE. Chairman Harris, Ranking Member Miller, Members of the Subcommittee, good morning. I am Brian Wynne, President of the Electric Drive Transportation Association. I thank you for the opportunity to make a statement here today.

EDTA is the cross-industry trade association promoting the advancement of electric drive technology and electrified transportation. Our members represent the entire value chain of electrified transportation including vehicle manufacturers, battery and other component manufacturers, utility and energy companies, smart grid and charging infrastructure developers. Collectively, we are working to realize the economic, national security and environmental benefits of displacing oil with hybrid, plug-in hybrid, battery and fuel cell electric vehicles.

While I am sure this Committee is well aware of the facts surrounding imported oil dependence, it bears repeating that there is a strategic and economic imperative to move toward domestically generated electricity as an alternative for transportation. The Congressional Research Service estimates that the United States will pay $451 billion for imported oil in 2012. Electricity is ample, affordable and available from diverse domestic resources.

Building an electric drive industry also has competitive benefits for the United States. There is a global energy technology race, and the United States has the ability to be the clear leader in developing and manufacturing the transportation solutions and jobs of the future.

There are more than 40 models of hybrid vehicles currently sold in the United States. Plug-in models, which include battery electric and plug-in hybrids, are also expanding. Manufacturers are planning to increase available offerings of plug-in vehicles to more than 20 at multiple price points in the next two years.

Last year, more than a quarter of a million plug-in electric and hybrid vehicles were sold in the United States. In the first two months of this year alone, Americans bought another 62,000. That is more than a thousand vehicles per day, a 30 percent increase over the same sales time period in 2011. Year-to-date sales for plug-ins through June are 17,350, bringing total sales to more than 35,000. Fuel cell vehicles, which are also zero-emission vehicles, are being proven on roads today and will enter the commercial market in 2015. Deutsche Bank has estimated that by 2015, one in ten vehicles sold in the United States will be an electric drive vehicle.

The electric car charging market is also growing. The U.S. Department of Energy has documented more than 4,000 public charging stations, and there are more private charging stations to add to that.

In the United States, there is a growing foothold for electric drive components and vehicle manufacturing with attendant growth up the supply chain in materials and equipment and employment. A

few examples include the expanding production of electric drive motors in Maryland, advanced batteries and vehicles in Michigan, California, Tennessee, Missouri and North Carolina.

We are making great strides in standing up the electric drive supply chain and opening new markets for vehicles that use electricity to displace oil. However, transforming the fleet won't happen overnight. Our efforts are enhanced by federal, state and local entities who are working with the industry to speed technology advances and put more vehicles and infrastructure to work. For instance, the Vehicle Technologies Program has been an effective partner in the industry's effort to increase the performance while decreasing the cost of batteries. The cost of lithium ion batteries, for example, has dropped by a third since 2008. DOE is also working with industry in other critical areas including expanding electric drive in trucks and the development of fuel cell vehicles.

Beyond technology advances, federal, state and local cooperative development initiatives are helping to establish new markets at the end of a new supply chain by making it easier for consumers and communities to acquire vehicles and infrastructure. At the federal level, programs like Clean Cities, which work with more than 100 regional coalitions to help deploy alternative fuel vehicles and infrastructure beyond electric drive, are effective in addressing initial market hurdles.

To effectively pursue other options for transportation, the public and private sectors need to work together to accelerate large-scale advances. The return on the public investment is a nation that is less dependent on foreign oil, spends its energy dollars domestically and competes effectively in the global market for advanced technologies.

I thank you for your attention and I look forward to your questions.

[The prepared statement of Mr. Wynne follows:]

STATEMENT OF BRIAN P. WYNNE
PRESIDENT, ELECTRIC DRIVE TRANSPORTATION ASSOCIATION
BEFORE THE
SUBCOMMITTEE ON ENERGY AND ENVIRONMENT
OF THE SCIENCE, SPACE AND TECHNOLOGY COMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES
WASHINGTON, D.C.
JULY 26, 2012

The Electric Drive Transportation Association (EDTA) is the cross-industry trade association promoting the advancement of electric drive technology and electrified transportation. Our members represent the entire value chain of electric drive, including vehicle manufacturers, battery and component manufacturers, utilities and energy companies, and smart grid and charging infrastructure developers. Collectively, we are committed to realizing the economic, national security, and environmental benefits of displacing oil with hybrid, plug-in hybrid, battery, and fuel cell electric vehicles.

Since the U.S. imports about 45% of the oil used in the transportation sector, there is a strategic and economic imperative to move toward domestically-generated electricity as an alternative to oil. Based on data from the beginning of the year, CRS estimates that the U.S. will pay $451 billion for imported oil in 2012, $30 billion more than 2011.

The need is already clear to the families and businesses who can't predict what they will have to pay for their essential transportation needs from week to week. For the average family that drives less than 40 miles a day – which is most families – driving electric can save $1,400 a year. Put another way, travelling on electricity costs an average 2 to 3 cents per mile – compared to 15-16 cents for gasoline.

EIA projects barrel prices over $100 through 2013 but geopolitical factors could bring that number even higher. Oil prices have consequences across the economy; every $10 per barrel increase costs the economy approximately $75 billion. There are also additional direct costs associated with oil dependence. For instance, a recent Brookings Institute reports the U.S. spends $50 billion a year protecting oil shipments in Middle East shipping lanes.

Electricity is ample, affordable and available from diverse *domestic* sources. With electric drive technologies, hybrids, plug-in vehicles and fuel cells, electricity displaces oil - and reduces its stranglehold on our national security and our economy.

Building an electric drive industry also has competitive benefits for the United States. There is a global energy technology race and the United States has the ability to be the clear leader in developing and manufacturing the transportation solutions and jobs of the future.

We can achieve all of these benefits without sacrificing public health or the environment. Multiple studies have documented that in all U.S. regions, electric vehicles charged on the power grid have lower global warming emissions than the average gasoline-powered vehicle sold today. Even when

charging from a regional grid using only coal-based generation, a plug-in vehicle would still produce fewer emissions than the average new compact gasoline-powered vehicle.

MARKET OUTLOOK

There are more than 40 hybrid vehicles, which have internal combustion engines as well as batteries that displace oil with on-board electricity, currently being sold in the U.S. Manufacturers are planning to increase available offerings of plug-in vehicles from seven this year to more than 20 – at multiple price points – in the next two years.

"Plug-in vehicles" include pure battery electric vehicles, which are propelled solely by electricity from the grid, and plug-in hybrids, which run on electricity (the distance varies by vehicle and battery size) and then are propelled by a conventional engine when the battery is depleted.

Last year, more than a quarter of a million plug-in electric and hybrid vehicles were sold in the United States. In the first two months of this year alone, Americans bought another 62,000. That's more than 1,000 vehicles per day, a 30 percent increase over the sales rate from the same period in 2011.

Fuel cell vehicles, which are also zero emission electric vehicles, are being proven on the roads today and will enter the commercial market in 2015. Deutsche Bank has estimated that by 2015, one in ten vehicles sold in the United States will be an electric drive vehicle.

Internationally, steady growth is also projected. Industry analysis shows hybrids, battery electric and plug-in hybrid vehicles comprising 35% of automotive sales by 2025.

Electric drive is an area of fierce global competition and many countries are investing tremendous public resources to gain dominance. Countries such as Japan and South Korea have been building capacity to serve this market for some time. France and other European countries are making multi-year investments in technology and market development. China has also made a reported $15 billion commitment to developing electric drive technologies.

The electric car charging market is also growing. The U.S. Department of Energy has documented more than 4,000 public charging stations. According to Pike Research, the worldwide electric charging station market in 2010 was nearly $70 million and is expected to grow to more than $1 billion by 2013. Pike predicts that, by 2017, there will be more than 1.5 million locations to charge electric vehicles in the U.S.

Another significant part of the electric drive supply chain is advanced batteries. Lithium ion battery performance is being enhanced and costs are coming down. It is estimated that the global market for lithium-ion batteries used in the transportation sector will grow more than 700 percent to annual revenue of $14.6 billion by 2017.

It is also important to appreciate that electricity as a transportation fuel is not limited to cars. Electric drive vehicles are being introduced into the market place in numerous configurations, including commercial trucks and buses, tractors, as well as ground support and other mobile equipment.

In the United States, there is growing foothold for electric drive components and vehicle manufacturing, with attendant growth up the supply chain in materials and equipment and employment. A few examples include the expanding production of electric drive motors in Maryland, and of batteries and vehicles in Michigan and California , Tennessee, Missouri and North Carolina.

CHALLENGES AND INNOVATION

We are making great strides in standing up the electric drive supply chain and opening new markets for vehicles that use electricity to displace oil. However, transforming the fleet won't happen overnight. There are growing pains for every new industry and we will not be an exception. Those should not overshadow the real story, which is our success in launching a new market and supply chain- in just a few short years – and the enormous potential of the technology and the market that we are just beginning to realize.

As an industry, of course we would like to see it grow faster. Across the diverse materials, components, electricity and vehicle manufacturing businesses that comprise the "electric drive industry," we are working to accelerate the adoption of electric drive by investing in research, development and deployment strategies for electric drive.

Our efforts are enhanced by partnering with federal, state and local entities to help advance technology and promote deployment of vehicles and infrastructure.

For instance, the higher initial cost of electric drive, in large part attributable to the advanced battery systems, is a market challenge that we are working to mitigate. The Department of Energy, through its Vehicle Technologies program has been an effective partner in the industry's effort. The cost of lithium ion batteries has dropped by a third since 2008 and we are investing in research and development to achieve even greater cost reductions while expanding the range potential of advanced energy storage systems. The program also includes activities that are advancing next generation charging, systems integration, and codes and standards for vehicle to grid communication.

The Vehicle Technologies program also conducts critical research and development activities to advance electrification of medium and heavy duty fleet vehicles, including hybrid, plug-in hybrid, battery, and fuel cell electric trucks and buses, which have great potential for fuel savings and emissions reductions from commercial fleets.

The Department is also partnering with industry in advancing fuel cell vehicles, which are critical assets in the advanced vehicle portfolio through the Hydrogen and Fuel Cell program. Fuel cell cars, trucks and non-road vehicles will provide "zero harmful emission/zero petroleum" options that are integral to meeting national goals for energy security and reduced pollution.

The fuel cell industry is meeting aggressive cost, performance and deployment milestones as it pushes toward commercialization in 2015. The ongoing partnership with the Department of Energy has already yielded substantial component cost reductions including reducing the cost of automotive fuel cells by more than 30% while doubling their durability.

Beyond technology advances, cooperative deployment initiatives are helping to establish new markets at the end of a new supply chain by making it easier for consumers and communities to acquire vehicles and infrastructure.

There are numerous state and local efforts involving utilities, manufacturers, local business and city planners who are helping to coordinate planning and promote investment, including initiatives in cities such as Houston, Atlanta, Raleigh and Charlotte, Chicago, San Diego and Sacramento. There are also state and regional efforts in Oregon, Washington, New York, California and the Northeast Electric Vehicle Network, which includes 10 Northeast states and the District of Columbia. Across the country, states and localities like these are putting policies in place to encourage advanced transportation options, such as access to High Occupancy Vehicle (HOV) lanes, streamlined permitting for recharging infrastructure and preferential parking incentives.

At the federal level, programs like Clean Cities, which works with more than 100 regional coalitions to help deploy alternative fuel vehicles and infrastructure, are effective in addressing initial market hurdles while displacing oil consumption. Since its inception in 1994, Clean Cities has saved more than 3 billion gallons of petroleum. By helping consumers and communities expand access to oil-alternatives, these programs encourage expanded infrastructure investments and reinforce markets by increasing consumers familiarity with new technologies and their benefits.

CONCLUSION

This is not a complete survey of federal policies that can advance our national energy goals, but it does highlight where critical efforts are making inroads into the one of the largest and most intractable problems we face as a nation.

We need to see past the daily *price* of gas and calculate the true *cost* of oil dependence. The dollars spent on imported oil, the economic and security challenges created by a transportation sector almost entirely dependent on a single fuel, as well as the environmental impacts are all costs that we, as a nation, have been paying for too long. To effectively pursue other options for transportation, the public and private sectors will need to work together to accelerate large scale advances.

The American Energy Innovation Council, a group of U.S. industry leaders working to "foster strong economic growth, create jobs in new industries and re-establish America's energy leadership" concluded in their 2011 report that federal participation in energy innovation was imperative because "ready access to reliable affordable forms of energy is not only vital for the functioning of the larger economy, it is vital to people's everyday lives and significantly impacts the country's national security and environmental well-being."

Electric drive is integral to our national effort to reduce our dependence on imported oil while also boosting the American economy. Our members are investing in the hybrid, plug-in and fuel cell technology advances and market development that are needed to move new technology into

the mainstream. Federal, state and local partners leverage these investments and accelerate the development and availability of real transportation options.

The return on the public investment is a nation that is less dependent on foreign oil, spends its energy dollars domestically and competes effectively in the global market for advanced technologies.

I thank you for the opportunity to appear before you today and I look forward to your questions.

Chairman HARRIS. Thank you very, very much, and thank the witnesses for their testimony and being available, reminding Committee Members that rules limit questioning to five minutes. I will open the round of questions, and I recognize myself for five minutes.

You know, I want to thank you, Dr. Hogan for being here. You know, part of the reason that we are here today is that we are spending taxpayer money. We should always remember that. And to be honest with you, there are a lot of folks who think that the stimulus money wasn't spent very well, may have been some crony capitalism involved. You know, the President recently identified outsourcing and foreign investments as a major issue we should be considering.

So with that, I am going to open the questioning by asking you, and I understand that you may not have been in the program at the time this award was made on August 5, 2009, but at the time the award was made, was DOE aware that a joint venture had been signed with the Chinese that committed $2.5 million including a million-bonus to be paid if the DOE award was greater than $30 million? I just wonder, was DOE aware? Because this is public record. I mean, SEC filings have been made. On August 5th, was DOE aware that Ecotality had signed a joint venture agreement with a company that would require Ecotality to buy everything manufactured by the Chinese, and that intellectual property would be transferred, the license would be transferred free to the Chinese company. That is a simple question. Was DOE aware?

Dr. HOGAN. We use a competitive-based process to make our award, so——

Chairman HARRIS. Dr. Hogan, was DOE aware at the time on August 5th when the President announced the award, were they aware of this joint venture agreement?

Dr. HOGAN. As you said——

Chairman HARRIS. Dr. Hogan, I only have five minutes. It is a yes or no. Were they aware or not?

Dr. HOGAN. As you said, I was not at the agency at that period of time so I cannot——

Chairman HARRIS. Let me tell you something, Dr. Hogan. I am upset because I asked this question, we asked this question starting back in March and they should have sent us someone here who knows.

Can I have the first slide, please? Since you brag about the competitive nature, this is a slide that shows, and I will tell you, it is highly redacted. I have dozens of pages of where the entire page is redacted as part of the document dump we had from DOE this week. If you see, this is the list of the top six companies who technically could fulfill this award, and appearing in the fourth slot is the one who won the award, not the first slot, not the one that had the highest grade, but the fourth slot, and tied for third, to be fair to them.

I could tell you, you know, in the NIH, the way the awards are given, they start with the one that gets the highest grade and they give that one, then they go down the list and then they give these awards. DOE had said they were going to award two to ten out of this. That is what the proposal said, we are going to award two to

ten, our intent. They awarded one. It was for $100 million above the $30 million threshold for its executives to get a million-dollar Chinese-funded bonus, and it was given to the company that didn't get the highest ranking.

Dr. Hogan, we asked for an explanation of how they were chosen. This is what we get back. Could you enlighten me as to why the highest-ranked submission didn't get any funding?

Dr. HOGAN. First, we awarded more than one grant under this award. We awarded a number. I would actually have to go back and look at what the actual firms are that are——

Chairman HARRIS. Excuse me, Doctor. Just to make clear, we are talking about area of interest one, and we believe there was just one award to area of interest one, because if there were more awards, actually this shouldn't be redacted because of course if an award was given, there is no reason to redact an award. Is that correct, Dr. Hogan? Were you responsible for submission of any of this information and redaction?

Dr. HOGAN. We had a team of people working to provide the information.

Chairman HARRIS. Were you part of the team, Dr. Hogan?

Dr. HOGAN. I was not part of the team doing the redaction.

Chairman HARRIS. Okay. So I guess you didn't even know what is underneath the redacted areas. Okay. What is the reason why the number one-scored recipient wasn't, I mean, did they just not spend as much, because we know we have lobbying documents. We know that Ecotality spent money on lobbying the DOE to get an award. You know, their CEO bragged on a conference call that at some point we are going to have to play the political card. Why wasn't the number one-scored company awarded a grant?

Dr. HOGAN. They were a top score——

Chairman HARRIS. They were the top score. Why——

Dr. HOGAN. They were a top-scoring, you know, award proposer and they——

Chairman HARRIS. Okay. You have no answer. I understand that. I understand. I wish the DOE could be more forthcoming in their answer.

Let me just ask about the cost sharing. The idea is under this program, a company gets the money not as a fiscal bailout and this company as you may or may not have been aware in their SEC filings had alerted their shareholders that they were about to have major fiscal problems if they didn't get an award. The cost sharing is supposed to be 50 percent from the government, 50 percent from the company, and most people think cost sharing is actually you put something of hard value down, could be money, could be something of easily determined value. And we can't figure out from the documents that the DOE has provided exactly what, but the IG has identified cost sharing as a potential issue.

Is it true that the cost sharing for the personal owners of the Volt—in other words, when they go and install an electric station at no cost to a personal owner, a personal purchaser of a Volt, that the cost share is a number made up somewhere, we can't figure out where because, you know, we are still looking through the documents, assigning some value to the data that will be gathered from the charging history of that car and that is the company's "cost

share." That is their skin in the game. Is that a correct assessment of what was going on and is this what they think is a real cost share? Is this what they expect taxpayers understand is a real 50 percent cost share is the federal government taxpayer puts up a dollar and the company says yeah, there is this data that we think is worth a dollar. Is that pretty much more or less what the cost-share arrangement was for those personally installed chargers?

Dr. HOGAN. The cost-share arrangement with Ecotality had a number of components to it. One of the components was something that you can liken to sort of leasing arrangement for the data that we were getting from the vehicle owners, and the arrangements that were—that aspect of it is consistent with the cost-share principles that are in the federal acquisition regulations. So, you know, for-profit organizations.

Chairman HARRIS. Well, I do hope DOE eventually provides us with those details, and I now recognize Mr. Miller for his questions.

Mr. MILLER. Thank you. Well, it appears that this hearing is not about electric vehicles after all. It does appear that this hearing is about scandal mongering, and not a week goes by that we don't hear another scandal involving American business and not technical violations of the law but knowing violations of the law that suggest a failure of a moral compass.

But I don't know anything about Ecotality. I had not heard of them before yesterday in preparing for this hearing. I do not know their executives. I do not know anything about them. But I know that lightly substantiated charges like what we have heard now in this public setting can do real damage to an innocent company. There can be real collateral damage in companies upon which innocent depend for their livelihoods and in which investors have put some of their life savings, and before we make such thinly—before we make allegations like what we have heard today, there should be real substance to them. They should be well resourced; and if this hearing is about Ecotality, they should be there. They should have the chance to know what is being alleged about them and they should have a chance to respond, to tell their side of the story. Fundamental fairness requires that. Common decency requires that. The failure to do it is an abuse of power.

Now, there have been suggestions about Ecotality's political influence. They hired a lobbyist. Small towns in my district hire lobbyists to get grants to expand their water and sewer system. Hiring a lobbyist is not an unusual practice by anyone trying to get a grant.

Dr. Hogan, what do you know of the politics or political connections in Ecotality's or any other companies getting an award under this DOE program?

Dr. HOGAN. The Department of Energy uses a rigorous, competitive, merit-based process for each and every award.

Mr. MILLER. Did any—was there any political influence by Ecotality in getting the award?

Dr. HOGAN. There is not political influence in any organization getting an award through any of these programs.

Mr. MILLER. And I don't know anything about the SEC inquiry. It has been reported that there is a pending inquiry. There was a subpoena issued at one point. When your office—I assume your of-

fice did learn of the SEC inquiry, and what did you do when you learned there was an SEC inquiry?

Dr. HOGAN. So the timing of the SEC inquiry was well after this award was in place and underway. So it is important for us to have that information but there is no proper action for us to be taking based on an SEC inquiry.

Mr. MILLER. Alright. Actually, Mr. Hass, I think I should have directed that question at you. When you learned that there was an SEC inquiry, what did you do?

Mr. HASS. Well, sir, I must preface my question by saying that we have done some limited testing with regard to this company and this particular grant. However, we haven't done an in-depth audit of it. It is—we have something scheduled in the coming fiscal year. However, we haven't done in-depth testing.

Mr. MILLER. To any of the witnesses, did any inquiry into your own investigation into the SEC's inquiry into insider trading suggest that it was related to any DOE issues, any DOE grant issues?

Dr. HOGAN. All we know is that there is an SEC inquiry, and again, what we understand is that there is any number of SEC inquiries across any number of companies, and at the point we are at with an SEC inquiry there is no action that DOE should be taking.

Mr. MILLER. And in fact, there were 735 enforcement actions in 2011 alone, and no telling how many subpoenas were issued as part of those actions.

Do you think a company should be disqualified from applying for a contract with the government, a grant from the government because they have received a subpoena?

Dr. HOGAN. We believe it is actually improper for the Department of Energy to take the presence of an SEC subpoena into account at the point of running a competitive award process.

Mr. MILLER. Mr. Chairman, my time has expired.

Chairman HARRIS. Thank you very much.

I now recognize the gentlelady from Illinois, Ms. Biggert, for five minutes.

Mrs. BIGGERT. Thank you, Mr. Chairman, and thank you for holding this hearing.

I wanted to ask about prioritization within DOE's vehicle technologies portfolio. The Administration focus seems to be on deployment of electric vehicles. That was the case in the stimulus funding as well as the President's recent request to create a new $1 billion EV deployment challenge.

So my question would be to Dr. Hogan and Mr. Wynne and Mr. Hass if he has anything. Are these the right priorities? That is obviously a lot of money, and I wonder if the market viability of electric vehicles would be better served if this funding was spent on research and development to make EVs more competitive with gas-powered vehicles instead of focusing on buying and installing charging stations. So what are you thoughts on this? Let us start with you, Mr. Wynne.

Mr. WYNNE. Well, thank you very much for the question, ma'am. I think the way I look at this is that to electrify transportation, there are many, many different elements to it, and frankly, there is an important—one of the important elements is understanding

how people will charge cars that plug into the grid. We will understand that better and better as we get more vehicles on the road. But that was indeed the primary justification for this program was to understand, let us put some charging out there, let us see how people use them. That is the data-gathering element of the program, and that data has yet to be parsed.

But what we do know is that we are learning that some people charge their cars based on how much range the vehicle has. For example, I drive a Chevrolet Volt, which has give or take a 40-mile range. I can drive in. My commute one direction is 23 miles. I have the opportunity to charge at work and at home. I could do either one of those with plugging into that outlet right there because it sits in my driveway all night long at home and it sits in the garage all day. If I am driving a pure battery electric vehicle, and some people are, they might need the opportunity to charge somewhere when they are shopping, and that might give them enough range to do a couple more chores and so forth. We are learning how this is going to work, and I think this is a good use of the public purse in conjunction with the research and development in conjunction with other R&D elements including manufacturing of batteries and so forth.

Mrs. BIGGERT. If I might ask you then, it just seems from what I have heard in that first question that, you know, I think we believe in competition and there was competition for this grant but it sounds like the one company got to do the five areas, six areas across the country, and it would seem to me, and I had a green car several months ago and there was several that came in with their charging stations, not only for people that drive the electric cars but they could also see how the charging works, and it is very important. But it troubles me that there is not any competition. What about these companies that have been developing the charging stations and they can't compete with a company that has now been given a grant and they can provide free charging to so many people that are driving the electric cars? Do you think that really takes away that competition we should have?

Mr. WYNNE. I don't think so, and I am basing my answer on the fact that we have so many companies in the charging business, not just providing chargers and selling them directly in the marketplace through companies such as Best Buy, for example, but also companies like NRG through their EV Go program, which is offering subscription-based opportunities for consumers where they can charge—get something installed at their home but also use a network that is being provided. Those are being built out city by city. I would be more than happy to provide a list of all the different players from small startups to large companies like Siemens, General Electric and Eaton Corporation for the record just so——

Mrs. BIGGERT. I would appreciate that.

Dr. Hogan, I don't have too much time, if you just have a comment.

Dr. HOGAN. As you know, we think electric vehicles are just so important because of providing consumers additional choice as we bring down the costs of these vehicles, really having the opportunity for a dollar-per-gallon equivalent fuel is, you know, in the

coming years is just such an important opportunity for consumers as well as meeting our national security objectives.

Mrs. BIGGERT. Yield back.

Chairman HARRIS. Thank you very much.

I now recognize the gentleman from California, Mr. McNerney, for five minutes.

Mr. MCNERNEY. Thank you, Mr. Chairman.

Mr. Wynne, do you believe that the grant program that ended up awarding Ecotality was rigged or ended up picking winners and losers, thereby producing market competitiveness?

Mr. WYNNE. No, sir, I don't but that would be based on my personal view of the DOE systems. I would really be much more comfortable deferring that question to our DOE colleagues.

Mr. MCNERNEY. Okay. Do you think that the DOD grant—the DOE grant program is beneficial to the industry?

Mr. WYNNE. Extremely so, yes, sir. It has been very, very beneficial in leveraging a much larger investment from private industry for many sectors of private industry.

Mr. MCNERNEY. So that effect of getting private companies from around to participate under a banner company is a beneficial aspect of this program?

Mr. WYNNE. Well, I think the program has many, many different elements, and the ARRA programs ended up in RDD&D, they ended up in research and development. Those are—some of those programs are ongoing. The charging elements are extremely important as we understand as more vehicles enter the market.

So all of these fit into a broader understanding of how to create a transportation system that frankly is different than the one we built so far, which was built on cheap gas.

Mr. MCNERNEY. It is going to take a huge investment in infrastructure from the private sector to get there.

Mr. WYNNE. And that has been ongoing.

Mr. MCNERNEY. Thank you.

Mr. Hass, as you know, there is an SEC inquiry regarding insider trading at Ecotality. When your office learned of the inquiry, what did your office do?

Mr. HASS. Proactively, our investigative staff contacted the SEC, and we did initiate an investigation into that matter, the results of which I would be glad to share in private session. But the investigation was closed. We did not establish any wrongdoing.

Mr. MCNERNEY. So the investigation has been closed at this point?

Mr. HASS. Yes, sir.

Mr. MCNERNEY. Thank you.

Dr. Hogan, you said that the—and I am going into some of the positive aspects of your presentation, that there is one-dollar-gallon equivalent for electricity. Could you explain what that means a little bit, please?

Dr. HOGAN. Sure. Clearly, we are spending, you know, $3, $4 per gallon on gasoline. If you actually look at the cost of the electricity that you need to get the same type of performance activity out of an electric car, you can—the equivalent price in electricity maps out to be about a dollar-per-gallon equivalent based on electricity.

Mr. MCNERNEY. So you also expect a 50 percent cost reduction in EV batteries within the next few years. How does the U.S. industry stack up to other countries regarding EV battery potential for our manufacturing sector?

Dr. HOGAN. We think we are in a great place right now as we look at the growing capacity in the United States for electric vehicles. I think we are very excited about some of the new entrants into the electric vehicle space by a variety of manufacturers as well as our growing manufacturing capacity for electric vehicle batteries. As I said, we are on pace to have manufacturing capacity by 2015 for about a half a million vehicles a year through the Recovery Act investments. So I think right now the United States is very well positioned for what is a very quickly growing marketplace.

Mr. MCNERNEY. So you see EV battery manufacturers in this country taking off. What size of market—do you care to speculate on how big that market might be in terms of billions of dollars or——

Dr. HOGAN. Well, I think some of the recent market research reports that are out there are putting the battery market in the $15 billion or so space in four, five, six years.

Mr. MCNERNEY. That is pretty significant.

Do you share that assessment, Mr. Wynne?

Mr. WYNNE. I do, and to add to that, large-format lithium ion batteries, it is energy storage like any other energy storage. It can also be utilized in stationary storage for the grid and for cell towers and for all manner of things that we need backup for. So most of my companies in the battery business have two lines of business: they have a transportation line of business and a stationary storage line of business. So we are seeing growth across that spectrum.

Mr. MCNERNEY. Thank you. I yield back, Mr. Chairman.

Chairman HARRIS. Thank you very much.

I now recognize the doctor from Georgia, Dr. Broun, for five minutes.

Mr. BROUN. Mr. Chairman, before my time starts, I understand you have a question or two, and I would be glad to yield a little time.

Chairman HARRIS. If you can yield me a little time, I would appreciate it.

Mr. BROUN. I will be glad to.

Chairman HARRIS. Sure, and it is a single question and it should be pretty simple.

Dr. Hogan, you said that, you know, DOE objectively awards these funds under area of interest one under this program, but on June 17, 2010, the DOE awarded $15 million to Coulomb Technologies for charging, and you were there then, for charging installation, right? I know you weren't there in 2009, but June 17, 2010, so did you sign off on the award to Coulomb, $15 million for charging infrastructure installation?

Dr. HOGAN. I am aware of that award.

Chairman HARRIS. Okay. And where was the objective? Were there proposals submitted and did they undergo this kind of scrutiny? Because we requested those documents and we don't have

them. This is the only document we have about area one interest awards.

Dr. HOGAN. So the Transportation Electrification Initiative had, as you have indicated, a number of areas to it, and those were evaluated through a merit-based approach, a robust technical review. What we did was select a number of potential awardees across this entire initiative and then as can happen, when we went to do the awards, one of the selected grantees decided to withdraw. What that did was give us the opportunity to go back and look at the list of those——

Chairman HARRIS. This list?

Dr. HOGAN. That list.

Chairman HARRIS. But Coulomb is not on this list.

Dr. HOGAN. Coulomb was an applicant to the Transportation Electrification Initiative area.

Chairman HARRIS. But I don't see its name on this list. Now, that could be because everything is redacted on this list. Is that true, Dr. Hogan? Did Coulomb undergo an objective——

Dr. HOGAN. Yes, Coulomb did.

Chairman HARRIS. Were they the highest-rated in their field?

Dr. HOGAN. Coulomb was the next ranked award based on the merit review process that we did for all the applicants.

Chairman HARRIS. Could I tell that from this sheet?

Dr. HOGAN. We can certainly help you find that information and walk you through it.

Chairman HARRIS. But we already asked for the information. Do we have to ask be walked through every single piece of information or is the Department going to be forthcoming at some point?

Dr. HOGAN. We——

Chairman HARRIS. That was a rhetorical question.

I yield back to Dr. Broun.

Mr. BROUN. Thank you, Mr. Chairman.

These electric vehicles have very poor performance in the marketplace today. They are extremely expensive, and without government mandates and government subsidies, I think very few people would even want to buy these cars. Today only very rich people can afford to buy these cars, and it seems to me that the only marketplace that is out there is due to government mandates on the automobile industry as well as government subsidies, taxpayers' money that has been put into subsidizing the purchase of the car, subsidizing the charging stations.

Mr. Wynne, I would like to ask you, if we did not have all these government subsidies and mandates, how many of your companies do you think would still be in business and how many people do you think would actually buy these very expensive automobiles that very few people want without subsidies?

Mr. WYNNE. Congressman, thank you very much for the question. I disagree that the vehicles are too expensive. What we are after here basically is the opportunity for consumers to have more choice, and as I indicated, we will have 20 vehicles in the marketplace over the next two years.

Mr. BRAUN. Yeah, that is because—Mr. Wynne, that is because of the government mandates.

Mr. WYNNE. I disagree with that.

Mr. BROUN. And the marketplace has already shown that these electric vehicles are just not things that most people can afford and most people want, and this government, particularly this Administration, and even somewhat the previous Administration, has put in place mandates and subsidies that are—how much is it per vehicle, the subsidy now per vehicle for your Chevy Volt? How much subsidy did you get when you purchased that vehicle?

Mr. WYNNE. The Chevy Volt is a $7,500 tax credit. That is based on a sliding scale. That is the largest battery size on that sliding scale. The credits start actually at $2,500.

Mr. BROUN. Okay. And it is my understanding that this Administration is actually considering going up to $10,000 tax credit. Is that correct? Is that your understanding?

Mr. WYNNE. That is a proposal, yes.

Mr. BROUN. That is correct, because nobody wants to buy these things.

Mr. WYNNE. I disagree, sir.

Mr. BROUN. Well, very few people do. That is not nobody. That is an absolute. Very few people want to buy these cars.

How much was your Chevy Volt when you purchased it?

Mr. WYNNE. About $40,000.

Mr. BROUN. And how much would an equivalent car that is run by gasoline cost?

Mr. WYNNE. I wouldn't buy an equivalent car. It wouldn't be fair to compare those two.

Mr. BROUN. Well, you are in the business. How about somebody else that wanted to buy an equivalent automobile? How much would it cost?

Mr. WYNNE. Well, that is just what I am saying. This is a fundamentally different car. I think the only thing you really can fundamentally——

Mr. BROUN. Well, a car drives from one place to another, and you yourself said you cannot drive to work and drive home without recharging it, and that electricity has to come from somewhere.

Mr. WYNNE. No, sir, I didn't—let me clarify that. I could easily drive from home to the office and back without recharging.

Mr. BROUN. Well, you said that it is a 40-mile range on your vehicle and it is 23 miles to work. I assume it is another 23 miles back home, correct? You have got a deficit of 6 miles there. You are going to run out of juice before you get home if you don't charge it.

Mr. WYNNE. I could run out of electricity. The Chevrolet Volt is actually configured in such a way—and this is the beauty of electric drive, sir, is, you can configure it for different driving needs. It can actually—it has what we call a range extender engine, which uses gasoline.

Mr. BROUN. Well, but we were talking about electricity, not gasoline.

Mr. WYNNE. It can get me to New York City.

Mr. BROUN. But you are running on gas at that point, correct?

Mr. WYNNE. That is correct.

Mr. BROUN. Okay. So your whole object is not to run on gas, correct?

Mr. WYNNE. It is to displace petroleum.

Mr. BRAUN. Well, the point is, without government subsidies, without government mandates, these electric vehicles would not—would fail in the marketplace and I think that the marketplace should be dictating what we are doing here.

I will yield back.

Chairman HARRIS. Thank you very much, and the Chair recognizes the gentleman from California, Mr. Rohrabacher, for five minutes.

Mr. ROHRABACHER. Thank you very much, Mr. Chairman.

And let me just note, I drive a hybrid car, and I certainly agree with the witness that perhaps this is a good thing for America to be heading towards using electricity for our transportation needs where it is possible. But I also agree with my colleague, Dr. Broun, that this should be a market-driven decision and not something where the high and mighty who can take money out of the pockets of some people and put it in the pockets of others will decide what their transportation decisions will be.

One question on this. Does this actually save us oil in terms of our foreign market situation where we are buying oil from overseas? Are you taking into consideration what produces the electricity?

Mr. WYNNE. That is the best part of the story, Congressman, and thank you for the question. All of our electricity generation in this country is domestically produced but for a tiny fraction of oil, some of which may come from overseas.

Mr. ROHRABACHER. Right.

Mr. WYNNE. That being places like Hawaii and——

Mr. ROHRABACHER. And it is mainly coal, isn't it? Isn't that actually more polluting than the oil that we are talking about?

Mr. WYNNE. Well, I beg to differ. We have multiple studies which indicate that plugging your car in, even using coal for the energy distribution—I beg your pardon—for the electricity generation is cleaner than using gasoline. We have an environmental benefit.

Mr. ROHRABACHER. Let me ask you, does the study that you are talking about and the studies that you are talking about include the costs and the pollution levels that are accumulated by disposal of the batteries?

Mr. WYNNE. The disposal of the batteries is——

Mr. ROHRABACHER. Is that included in the analysis that you just mentioned?

Mr. WYNNE. But the batteries will be recycled because they are extremely valuable batteries, and when we are done with them in a car and we are not even actually looking at baking this into the price yet, but once we have, we will have a secondary market for those batteries and we will be able to amortize the cost of those batteries over a longer lifecycle. They will be recycled. They will be reused.

Mr. ROHRABACHER. That is "will" but aren't.

Mr. WYNNE. Well, we have just begun the process.

Mr. ROHRABACHER. And it is a process that is developing and that is why perhaps at times it is best to leave it to the market because things mature as the technology matures rather than jumping out ahead of something that then causes serious problems including the problem of taking money out of somebody's pocket

who doesn't want to buy your product and giving it to somebody else in order to get them to buy your product.

Let me go back to Dr. Hogan. You know, I have been here 24 years. I have been in an administration and outside. Were you asked for this information beforehand by the Committee and you have come here and not been able to explain these things that the chairman was quizzing you on as to why a company had a lower rating but ended up with the grant? It doesn't sound like you were prepared to answer the question. Were you alerted that these questions would be asked?

Dr. HOGAN. I was asked to explain how we, I think, you know, do our work at the Department of Energy relative to these grants, and I can tell you we run a robust, competitive, merit-based process and make the top awards to meet the objectives of the proposals. So I can certainly explain that.

Mr. ROHRABACHER. Well, I was sitting here listening and frankly, when the chairman asked you about why a company with a lower rating ended up with the grant rather than the company with the higher rating and that company then ended up with so many problems, you didn't seem to have an answer for him. Maybe you would like to answer now.

Dr. HOGAN. We can certainly work and certainly—you know, we are trying very hard to get you the information that you are interested in. There are, as you may understand, a number of requests to the Department for pretty voluminous pieces of information. We have a dedicated team put together to——

Mr. ROHRABACHER. I only have a couple more seconds. Let me just note, Mr. Chairman, this is a pattern. I am sorry, it is a pattern for this Administration, and I have been around for a while and this is a pattern of this Administration, and another pattern is, a series of grants given in the field of energy to companies that go bankrupt, and that is another pattern that we see. This is a very disturbing pattern both in the private sector part of it for people who are getting grants, not being able to fulfill the obligation that they set and also a disturbing pattern that you are not catching it, that this Administration isn't catching this beforehand, and that is what the Inspector General I think has pointed out is, you are not doing your job.

Thank you very much, Mr. Chairman.

Chairman HARRIS. Thank you very much.

And I would like to welcome the gentlelady from Oregon to the Subcommittee, and we did not forget you over there. We alternate from majority to minority until all the Subcommittee Members have had a chance, so now we will offer you a chance and recognize Ms. Bonamici for five minutes for her questioning.

Ms. BONAMICI. Thank you very much, Mr. Chairman Harris and Ranking Member Miller. I did understand that.

I want to thank you all for being here today to speak about this topic. It is important not only to the district I represent and to the state I am from but also to our country, and in my home State of Oregon, we have seen a tremendous growth in electric-vehicle infrastructure and use. As part of the EV project we now have more than 350 charging stations in our state, more than 200 additional charging stations forecasted. Cities like the city of Beaverton in my

district, city of Hillsboro have taken the lead and have charging stations at their city halls and other public places. Commercial partners like Walmart, Kohl's, Fred Meyer are home to electric charging stations as well. Portland State University has Electric Avenue, which is a multi-vehicle block with many charging stations right in the heart of downtown Portland, and in fact, our professional basketball team, the Portland Trailblazers, gives free parking to the first electric vehicle to arrive at a game.

Many partners participated in this work, and Ecotality had a part, but so did Eaton and General Electric and Conamatsu and North Right OpConnect, Shore Power and SPX. Many partners have come together to build this infrastructure, and the advancements in deployment of charging station technology, it is not just restricted to the Portland metropolitan area, and here is an example. Senator Merkley really put this to the test. He drove the 300 miles from the northern border of our state to the southern border of our state recently in a Nissan Leaf. Importantly, investments that have been made by the Department of Energy's Vehicle Technologies Program have resulted in significant progress in developing electric-vehicle infrastructure but that also helps to attract diverse industries and jobs to our region.

So in considering those accomplishments that Oregon has made in this area, I would like to ask the witnesses, would you please discuss why the initiative has worked so well in Oregon and how might we replicate these successes across the country?

Dr. HOGAN. Certainly, it is great to hear those great results in Oregon. I think you are pointing out exactly the reason we are doing many of these projects is that you need to build, you know, some awareness. You know, what we are trying to do is spur the greater adoption of these vehicles but you can only do that in combination with people being aware of them and working to buy them and continuing to speed that adoption. So we are—it is important, you know, to work with the market trends that are there and to keep sort of pushing forward with the information and continue that growth, and that is exactly what efforts like Ecotality are doing but it doesn't happen as quickly everywhere so you have to sort of just keep sort of the key elements of the project together and keep building that, and I think what we are seeing right now with Ecotality, even though they are not quite where we had thought they might be at this point in time, they are moving steadily ahead month by month by month, faster in some places than others, but we are moving ahead on pace and are ready and expecting to meet the major milestones of the project. So a lot of good news there.

Ms. BONAMICI. Mr. Wynne, your thoughts?

Mr. WYNNE. Well, first, to begin, congratulations. Oregon truly is, I think, a model that others are looking to and not surprising, we recognized your former Governor with our E–Visionary Award not too long ago for that reason. I think it is a perfect example of the federal, state and local partnerships that we were talking about with industry, which will be needed, and I agree with the sentiment that this cannot go on forever as a federal program. We cannot—Mr. Rohrabacher, if he was here and he could tell us what year he had gotten his hybrid, it was very likely that he got a tax

credit for that hybrid. Those tax credits have expired, much as these tax credits for the existing vehicles will expire. We expect this program to have been successful in providing us with some insights that private industry can then utilize to anticipate where people's needs are going to be in changing and build business models around them.

So I think this is a perfect example of the collaboration between industry and government that is going to help us to move to the next level of transportation, and I don't think it is lost on anyone in the room that we need to be evolving our transportation, providing our consumers and our fleet operators with new options.

Ms. BONAMICI. Thank you very much.

My time is about to expire, but it is my understanding there is still a pretty significant wait list in Oregon to get a Leaf.

So thank you for your testimony and I yield back.

Chairman HARRIS. Thank you very much.

We have a couple minutes before we have to go. Mr. Miller, if you have any closing statements or any comments?

Mr. MILLER. Mr. Chairman, I take from that you intend to make some closing statements or comments.

I would encourage the Department of Energy to provide documents. Also to understand if the Members of the majority think the Bush Administration cheerfully provided all information requested by Congress, their information—their recollection is incorrect. I was the chairman of the Oversight Subcommittee for four years, and I have got to say, there was not a big improvement when the Obama Administration came in, largely because the same people were doing it. It wasn't the political appointees, it was the permanent staff. And there is a tendency to treat requests from Congress like FOIA requests. They are not FOIA requests.

I would also urge the majority to consider in requesting documents if you want a needle, don't ask for a haystack, and I urge the Administration if they have asked for a needle, don't provide a haystack. If there is a valid reason to redact documents, if there is proprietary information, information that could be commercially damaging, tell us that, and I urge the majority to try to make arrangements to review the documents to satisfy yourself that there is some valid reason for not providing the information requested for public distribution to see if there is in fact an invalid reason for decisions that are the proper subject of Congressional oversight.

Chairman HARRIS. Thank you very much, Mr. Miller, and I couldn't agree with you more. You know, we will try to be as specific as possible, but again, you know, the hearing was to see about management. You know, we got a letter back from May 1st. We wrote the letter March 26th, got a letter back May 1st talking about the open and transparent process through which Ecotality was granted this award and then we get back subsequently two months later, let me see, May to June to July, 2–1/2 months later. We get this back, which is redacted for everything except the name of the company, which is not the top—and just to remind you, Doctor, the score is 823 for the top company, was 748 for Ecotality, and 505 is kind of the cutoff for acceptable grants. I got to tell you, this is not open and transparent. I am astounded that, you know, we can't get a simple answer to the question like gee, why wasn't the

top rated given the award, especially since just one award was given under area of interest one, just one, but we will ask a series of questions.

I want to thank the witnesses for their valuable testimony and Members for their questions. The Members of the Committee may have additional questions. We will have additional questions for you, much more specific, and we will ask you to respond to them in writing. That was 4–1/2 months from my initial request to this week when I get this back. I would just ask the Department to be a little more timely and perhaps a little less redaction, you know, in further inquiries.

The record will remain open for two weeks for additional comments from Members. The witnesses are excused. Thank you all for coming. The hearing is now adjourned.

[Whereupon, at 10:48 a.m., the Subcommittee was adjourned.]

Appendix I

Answers to Post-Hearing Questions

ANSWERS TO POST-HEARING QUESTIONS

Responses by Dr. Kathleen Hogan

U.S DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL
Responses to Hearing Questions
Review of DOE Vehicle Technologies Program Management and Activities: Assuring Appropriate and Effective Use of Taxpayer Funding

Questions Submitted by the Honorable Andy Harris

Question 1:

As part of ongoing oversight responsibilities, does the Inspector General audit cost share agreements and provide recommendations to DOE?

Response:

Yes, as part of Inspector General audits of specific programs and grantees, we have tested implementation of cost share agreements on a sample basis and have provided recommendations to the Department. For example, as referenced in the testimony, we reviewed the cost-share commitments for selected Clean Cities recipients. The review included identifying the terms and conditions of the award, interviewing project personnel regarding oversight of cost share submissions, and reviewing supporting documentation for cost share claims. In cases where we identify unresolved issues related to cost sharing, we have made recommendations to the Department. It is important to note that our reviews typically include a risk assessment identifying areas of concern, so that our work is focused on important issues.

Question 1.a:

Will the Inspector General examine the cost sharing agreement associated with the EV Project?

Response:

Yes, the Inspector General plans to audit the EV Project, including the award stipulations and related cost sharing provisions during Fiscal Year 2013.

Question 1.b:

What documentation does DOE typically require to support third party in-kind contributions for a cost share?

Response:

Federal regulations require recipients to retain support for all cost share contributions. For example, 10 CFR§600.311 requires all for-profit entities receiving Federal funds to maintain accurate, current, and complete financial records for cost-share commitments to include receipts, authorizations, expenditures, and asset information. The type of documentation would vary depending on the nature of the in-kind contribution. For example, if the in-kind contribution was labor, then supporting documentation may

include authorized timesheets specific to the project. An asset provided by the recipient for the project as cost-share may be supported by an invoice.

Question 2:

What review processes are in place at DOE to approve certain in-kind cost shares?

Response:

There are various levels of review, dependent on the nature of the agreement with the recipient. In general, the Department reviews cost share proposals at the time it reviews a recipient's application and subsequently during award negotiations. After the agreement is executed, the Department may request documentation at the time a cost share claim is made or may review documentation subsequent to the claim, depending on the terms and conditions of an award.

Question 3:

What policies guide the definitization process for DOE grants? In the absence of a definitization agreement, how does DOE assure all costs incurred prior to such an agreement are allowable?

Response:

According to a Department official, agreements are usually definitized within 90 – 120 days after the execution of the agreement. However, in some cases, the definitization period is longer because of various stipulations in the terms and conditions. For example, if an award had a special condition that stated the recipient must receive an accounting system review, the award may not be finalized until the review is completed, reviewed, and approved. Another example of this would be if the Department placed a condition on the award stating the recipient must submit a revised costing plan. Until the submissions were made by the recipient and approved by the Department, the conditions would remain in effect. Thus, the award would not be considered definitized.

Even though an award may not be definitized, the Department has several mechanisms to control costs. As an example, the Department can limit authorized spending levels, extend definitization periods, and require additional information if the conditions are not met. In addition, the Department can reduce the risk of unallowable costs through reviewing cost information and submissions made by the recipient that may or may not include supporting documentation. We plan to include a review of the Department's controls in the definitization period as part of our EV audit.

U.S DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL
Responses to Hearing Questions
Review of DOE Vehicle Technologies Program Management and Activities: Assuring Appropriate and Effective Use of Taxpayer Funding

Question 3a:

Will the Inspector General examine the definitization process and agreement associated with the EV Project?

Response:

Yes, we plan to include the definitization process and agreement associated with the EV Project as part of our upcoming audit.

Question 4:

Your testimony noted DOE disagreed with the IG's conclusion contained in the DOE Inspector General Audit Report "The Department of Energy's Clean Cities Alternative Fuel Vehicle Grant Program Funded Under the American Recovery and Reinvestment Act," that grantees were required to compete procurements. What is the current status regarding the resolution of this dispute?

Response:

The Department has not determined if or how to implement the audit recommendation. Because Program officials disagreed with our recommendations, the matter is now going through the Department's normal audit resolution process. Specifically, the matter has been elevated to Department officials for a final management decision.

U.S DEPARTMENT OF ENERGY
OFFICE OF INSPECTOR GENERAL
Responses to Hearing Questions
Review of DOE Vehicle Technologies Program Management and Activities: Assuring Appropriate and Effective Use of Taxpayer Funding

Question Submitted by the Honorable Randy Neugebauer

Question:

The Inspector General's report on DOE's Transportation Electrification Program stated DOE "has faced challenges with ensuring adequate oversight of the financial condition of grant recipients" and DOE offices told the IG they "had not established a process to track, collect, review and follow-up on the receipt of required audits." To your knowledge, has DOE established an adequate process to review the required audits?

Response:

Recognizing the need to improve receipt and review of required audits, the Department issued Policy Flashes in February 2011 and April 2012 to provide further guidance on the scope of the required compliance audits and final for-profit audit guidance in April 2012. This area will remain an area of focus in future reviews.

Responses by Mr. Rickey Hass

QUESTION FROM CONGRESSMAN ANDY HARRIS

Q1. Please give a detailed description of DOE's cost-sharing arrangement for both The EV Project and ChargePoint America Project. Include as part of this relevant paperwork or documents that guide cost-sharing decision-making and approval processes.

A1. Cost share is required for most financial assistance awards under 10 CFR 600.30 (Cost Sharing) and EPAct 2005 section 988 (Cost Sharing). The minimum cost share required for the EV Project and ChargePoint America Project is 50 percent and comes in the form of cash from third parties and a variety of in-kind sources as shown in the table below.

In both cases, the awardee is using funds (cash) from grants at the state level. Third-party in-kind cost share comes in the form of hardware to support project activities, labor and expertise, and fixed costs for equipment usage related to data collection. The Department carefully reviews cost share to ensure compliance with cost share principles established in 10 CFR 600.313 (Cost Sharing or Matching) and 10 CFR 600.317 (Allowable Costs). Initial cost share commitment letters for both ETEC/ECOtality will be provided under separate cover.

Cost Share	Source	Type	Amount of Cost Share
ETEC/ECOtality			
Cash	Recipient: ETEC	Recipient funds	$14,306,636
Cash	Third Party: Bay Area AQMD Grant	Grant	$1,050,000
Cash	Third Party: California Energy Commission (CEC) Grant	Grant	$8,000,000
In-kind	Third Party: Qualcomm	Hardware (modems) for charge stations	$103,500
In-kind	Third Party: Underwriter's Laboratories (UL)	Labor and testing	$169,000
In-kind	Third Party: University of California, Davis	Labor (data analysis)	$200,000

In-kind	Third Party: Residence Owner	Installation costs for charge stations paid by host	$968,326
In-kind	Third Party: Vehicle owner	Fixed vehicle usage cost for the deployed vehicles for the course of the project	$67,063,692
In-kind	Third Party: Residence Owner	Internet connection cost (fixed) for residential locations to transmit data	$1,949,130
In-kind	Third Party: Commercial Host	Internet connection cost (fixed) for commercial locations to transmit data	$130,836
In-kind	Third Party: Commercial Host	Cost for parking space per commercial charge station (fixed cost)	$15,408,686
In-kind	Third Party: Commercial Host	Cost for parking space per DC fast charge station (fixed)	$1,153,902
Cash	Third Party: Partners on the Oak Ridge National Laboratory component of the project	Cash	$2,750,000
In-kind	Third Party: Partners on the Oak Ridge National Laboratory component of the project	Labor and hardware	$1,700,000
Coulomb			
Cash	Recipient: Coulomb	Recipient funds	$3,114,934
Cash	Third Party: California Energy Commission (CEC) Grant	Grant	$800,000
In-kind	Third Party: Residence Owner	Installation costs for charge stations paid by host	$6,478,751
In-kind	Third Party: Vehicle owner	Fixed vehicle usage cost for the deployed vehicles during the project	$4,708,700

QUESTION FROM CONGRESSMAN ANDY HARRIS

Q1. Please give a detailed description of DOE's cost-sharing arrangement for both The EV Project and ChargePoint America Project. Include as part of this relevant paperwork or documents that guide cost-sharing decision-making and approval processes. Additionally, please answer the following questions:

a. What is the project's overall non-Federal cost-share, and how much of the cost-share is met through in-kind vs. cash contributions? Please describe the type and source of these contributions.

A1a. As shown in the table provided in the response to question 1, the total non-Federal cost share for The EV Project (ETEC/ECOtality North America, project DE-EE0002194) is $114,803,708; $91,447,072 of the cost share comes from in-kind sources, as allowable.

As shown in the table below, the total non-Federal cost share for the Coulomb Technologies project (DE-EE0003391) is $15,102,385; $11,187,451 of the cost share comes from in-kind sources, as allowable.

Nature/Description of Cost Share	Source	Type	Amount of Cost Share
Cash	Recipient: Coulomb	Recipient funds	$3,114,934
Cash	Third Party: California Energy Commission (CEC) Grant	Grant	$800,000
In-kind	Third Party: Residence Owner	Installation costs for charge stations paid by host	$6,478,751
In-kind	Third Party: Vehicle owner	Fixed vehicle usage cost for the deployed vehicles during the project	$4,708,700

QUESTION FROM CONGRESSMAN ANDY HARRIS

Q1. Please give a detailed description of DOE's cost-sharing arrangement for both The EV Project and ChargePoint America Project. Include as part of this relevant paperwork or documents that guide cost-sharing decision-making and approval processes. Additionally, please answer the following questions:

b. What percentage of the project's cost-share is accounted for by the third-party vehicle purchases by individual consumers? How much revenue is generated by project-deployed commercial chargers, and what percentage of this revenue is included in project cost-sharing contributions?

A1b. The Department does not count vehicle purchase prices as cost-share for either the ETEC/ECOtality or Coulomb projects. All cash and in-kind contributions meet the criteria set forth in 10 CFR 600.313 (Cost Sharing or Matching). These costs are allowable in accordance with 10 CFR 600.317 (Allowable Costs) and the Federal Acquisition Regulation (FAR), 48 CFR part 31 for for-profit organizations.

The majority of installed chargers are residential and do not generate revenue. The amount of revenue to be generated by the use of commercial chargers is unknown at this time. Currently, revenue generated from commercial charge stations is not counted as cost share and is considered ancillary to the project. However, there is a request pending from ECOtality and under Department review to use this revenue as cost share. Revenue generated by project-deployed commercial charge stations is handled according to the Program Income clause in the award terms and conditions, as authorized in 10 CFR 600.314.

QUESTION FROM CONGRESSMAN ANDY HARRIS

Q1. Please give a detailed description of DOE's cost-sharing arrangement for both The EV Project and ChargePoint America Project. Include as part of this relevant paperwork or documents that guide cost-sharing decision-making and approval processes. Additionally, please answer the following questions:

c. The Transportation Electrification FOA stated that "If a third party, (i.e., a party other than the organization submitting the application) proposes to provide all or part of the required cost sharing, the applicant must include a letter from the third party stating that it is committed to providing a specific minimum dollar amount of cost sharing. The letter should also identify the proposed cost sharing along with the justification for proposing less than 50% cost share (e.g., cash, services, and/or property) to be contributed." Please provide a detailed description of all third-party cost sharing in each project, and how DOE has implemented the above FOA requirement with respect to such cost sharing.

A1c. As shown in the table provided in the response to question 1, both projects are using a combination of cash and in-kind contributions from third parties to meet cost-share requirements.

Both ETEC/ECOtality and Coulomb provided the appropriate cost share commitment letters with their applications to the Transportation Electrification funding opportunity, in accordance with the requirements stated in the funding opportunity announcement. Letters will be provided to the Committee under separate cover. In addition, as these projects progress, DOE carefully reviews all invoices, which include cost share, to ensure it is documented properly and meets project cost share requirements.

QUESTION FROM CONGRESSMAN ANDY HARRIS

Q2. According to SEC filings, in January 2012, DOE notified ECOtality that it was "proceeding with the definitization process and advised the Company verbally that a change will be made to disallow reimbursement of certain in-kind costs."[1] The change in policy required ECOtality to adjust its methodology to allocate cost share, and "exclude the in-kind costs no longer allowed for reimbursement." What specific in-kind costs were no longer allowed as part of this change by DOE? Please provide a copy of the notification DOE provided to ECOtality regarding this change.

A2. The Department disallowed in-kind costs for vehicle operating costs per mile and vehicle insurance and licensing costs. The notification provided to ECOtality will be provided to the Committee under separate cover.

[1] SEC ECOtality Form 10-K, April 16-2012.

QUESTION FROM CONGRESSMAN ANDY HARRIS

Q3. A letter contract award for The EV Project was signed on September 30, 2009, which was to be followed by project "definitization," which would detail allowable spending, cost-sharing, and other award implementation details. As of the date of the June 26, 2012 hearing, DOE had still not finalized (i.e. "definitized") The EV Project, even though amendment nine of the project has now authorized spending of up to $70 million on the project, compared to the $500, 000 originally provided to be spent in advance of project definitization.

a. What is the reason for this delay? How common is this problem? How many other current multi-million grants within EERE have proceeded more than two years without definitization? What guides spending decisions in the absence of project definitization?

A3a. The timeline for definitization of this particular award is not typical. Delays in Defense Contract Audit Agency audits, 10 CFR 600.316 Audits, and evolving cost share scenarios affected the timeline for this particular project. In order to proceed with the project, DOE worked with ECOtality to determine incremental tasks for near-term completion that would enable the project to proceed, minimizing the risk to taxpayer dollars while the project was completing definitization. The award to ECOtality completed definitization on August 31, 2012.

QUESTION FROM CONGRESSMAN ANDY HARRIS

Q4. A 2011 SEC filing by ECOtality noted that The EV Project was supporting R&D expenditures to develop EV charging infrastructure hardware and software, stating:

> We devoted a large percentage of our 2011 R&D expenditures to the creation of the Blink Level 2 Chargers, Blink DC Fast Chargers and supporting internal software platforms and network. These expenditures were accomplished primarily in house with some hardware and other features undertaken by supplier companies and *was supported in large part through The EV Project."*[2](Emphasis Added).

In correspondence to the Subcommittee, ECOtality state the "[t]he 2011 filing refers to development work that ECOtality undertook specifically to accommodate the unique data collection requirements of The EV Project objectives." However, the Project's award agreement documents – which include a detailed project scope and description of specific tasks to be performed – do not discusses the creation of new chargers and their supporting platforms as part of the project.

EV project sub-award information available on Recovery.gov provides further detail on Project spending on new product development, with at least 15 sub-awards totaling several million dollars described as going toward product "design," "development," and "engineering." (See Appendix A.)

a. How much EV Project spending has gone toward the development of new charging products? How much of this spending was for chargers and charging systems already commercially available in the marketplace?

A4a. At the time of the award, there was no commercially-available electric vehicle supply equipment that met the project requirements. The Department approved some research and development (R&D) activity as part of the ECOtality project in order to ensure the availability of hardware and software that met project needs. The R&D portion of the total budget is $10.7 million.

[2] SEC, "ECOtality, Inc, Form 10-K," April 16, 2012.

QUESTION FROM CONGRESSMAN ANDY HARRIS

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EV project sub-award information available on Recovery.gov provides further detail on Project spending on new product development, with at least 15 sub-awards totaling several million dollars described as going toward product "design," "development," and "engineering." (See Appendix A.)

b. Why wasn't development of new charging products such as DC fast chargers described in the EV Project Assistance Agreement scope or tasks to be performed?

A4b. Development of a Level 3 charger (i.e. DC Fast Charger) is authorized in the Statement of Project Objectives, Subtask 3.3.3.

[3] SEC, "ECOtality, Inc, Form 10-K," April 16, 2012.

QUESTION FROM CONGRESSMAN ANDY HARRIS

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EV project sub-award information available on Recovery.gov provides further detail on Project spending on new product development, with at least 15 sub-awards totaling several million dollars described as going toward product "design," "development," and "engineering." (See Appendix A.)

c. Was a change in scope regarding new product development proposed and agreed to by DOE's contracting officer, as required in the assistance agreement reporting requirements?

A4c. A change in scope was not required—development of the charger was part of ECOtality's original budget submission as well as the original Statement of Project Objectives that was approved by the Department's contracting officer at the time of award.

[4] SEC, "ECOtality, Inc, Form 10-K," April 16, 2012.

QUESTION FROM CONGRESSMAN ANDY HARRIS

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EV project sub-award information available on Recovery.gov provides further detail on Project spending on new product development, with at least 15 sub-awards totaling several million dollars described as going toward product "design," "development," and "engineering." (See Appendix A.)

d. What is DOE's response to concerns that taxpayer spending on the creation of EV charging systems advantages certain companies over others given the highly competitive nature of the EV charging marketplace?

A4d. It is important to recognize that this project is primarily a demonstration and evaluation activity and is not intended as a comprehensive deployment of charging infrastructure. The primary purpose of the project is a data collection effort to provide an extensive, publicly-available data set with information about electric vehicle (EV) charging. Data gathered from the project is and will continue to be available to communities planning for future infrastructure investments as well as the industry and other entities. Like all applicants for grant funding, the Department selected the project on the merits through an open and competitive process after applying the rigorous review procedures conducted by the Department's professional staff and outside consultants.

[5] SEC, "ECOtality, Inc, Form 10-K," April 16, 2012.

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QUESTION FROM CONGRESSMAN ANDY HARRIS

Q5. Amendment 007 to The EV Project's assistance agreement changed the sponsoring DOE office for the Project from the National Energy Technology Laboratory (NETL) to DOE's Office of Energy Efficiency and Renewable Energy (EERE). Please explain why the sponsoring office changed from NETL to EERE.

A5. The change was performed as part of overall policy guidance from the Department's Office of Energy Efficiency and Renewable Energy (EERE) to the National Energy Technology Laboratory (NETL). The change clarified that NETL is the agreement manager and not the sponsor; EERE has always been the sponsor.

QUESTION FROM CONGRESSMAN NEUGEBAUER

Q1. I would like to better understand the business models for the EV charging companies. Recently, the House Committee on Administration passed legislation directing the Architect of the Captiol to install charging stations in our garage parking lots. The legislation would incur no cost to the taxpayer – the cost of charger installation would be paid for by fees billed to those who use the chargers.

Are any charging companies using this business model anywhere in the country, where they pay for initial installation and then recoup costs through charging fees? Why won't this business model work across the country, and wouldn't it be preferable to massive taxpayer subsidization of these charging stations?

A1. As plug-in vehicles continue to enter the market and the need for charging infrastructure increases, a variety of business models are emerging in the EV charging sector. The goal of the Department of Energy's Transportation Electrification demonstration projects is not intended to deploy electric charging infrastructure but rather to provide a first-of-a-kind comprehensive data set with information about electric vehicle (EV) charging This data set is and will be available to help communities and industry plan for future infrastructure rollouts and inform business model development. Aside from this demonstration activity, there is no Federal subsidy for electric charging infrastructure.

Responses by Mr. Brian Wynne

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
Subcommittee on Energy & Environment
Hearing Questions for the Record
The Honorable Andy Harris

Responses of Brian P. Wynne

1. How does an award of the size and scope impact the competitive position of Electric Drive Transportation Association member companies? How has the market for EV charging stations been affected in the EV Project participating cities?

The Transportation Electrification program, through competitively awarded grants, is helping to leverage private investment in the specific project areas, as well beyond them. Plug-in vehicles and the associated infrastructure are at the forefront of the next era of transportation that will provide consumers and the nation alternatives to oil.

Diverse charging strategies are being explored across the country and the market entrants into the electric vehicle supply equipment (EVSE) segment, from global corporations to small startups, have grown materially in the last few years.

A partial list of companies working in EV Project cities and elsewhere in the US includes:

- Alternative Energy Systems
- Better Place
- Car Charging Group/350 Green
- Charge Bliss
- Clipper Creek
- Coulomb/Chargepoint
- Eaton
- Ecotality
- EV Oasis
- Evercharge
- EVSE Upgrade
- Fujitsu
- GE
- GOe3
- Green Charge Networks
- GRIDbot
- Kanematsu
- Leviton
- NRG/eVgo
- OP Connect
- Pep Stations
- Schneider Electric
- SemaCharge
- SemaConnect
- Shorepower
- Siemens
- Leviton
- SPX

The overall picture is one of rapid growth. Currently, there are 4,364 public electric vehicle charging stations providing more than 10,000 individual public charging points, according to the U.S. Department of Energy. (http://www.afdc.energy.gov/fuels/electricity_locations.html) This does not include home and private workplace charging stations, which provide the majority of plug-in drivers' electricity.

According to Pike Research, the worldwide electric charging station market in 2010 was nearly $70 million and is expected to grow to more than $1 billion by 2013. The company predicts that, by 2017, there will be more than 1.5 million locations to charge electric vehicles in the U.S.

2. How do EDTA member companies compete on a level playing field in markets where the EV Project is subsidizing EV charger purchase and installation?

Competition in the EVSE segment is robust. Beyond the competition for EV Project work, the industry is competing to meet the diverse charging needs of homes, municipal properties and commercial establishments. To get a sense of the competition in participating cities, the Department of Energy's alternative fuel station locator shows the variety of EVSE manufacturers and business models that are being rolled out. (http://www.afdc.energy.gov/locator/stations/)

For example, in Seattle where an EV project is underway, residential and commercial customers are also being served by Leviton, Eaton, Coulomb, SemaConnect, AV, OptConnect, SPX, Clipper Creek, EVSE Upgrade, AeroVironment, GE, Car Charging Group/350Green, Schneider Electric and Siemens as well as Ecotality.

In Texas, NRG eVgo, Coulomb/ChargePoint, GE, Pep Stations, Car Charging Group/350 Green, Schneider Electric, GRIDbot, Clipper Creek, AeroVironment and Siemens, as well as Ecotality, are providing services in the EV Project cities of Dallas/Fort Worth and Houston.

Further, the shared data from the EV Project benefits all of industry. Information on charging patterns and locational strategies helps all of the EVSE companies make decisions about equipment investments (120v, 240v, fast charge), necessary station density, demand patterns and effective pricing approaches.

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
Subcommittee on Energy & Environment
Hearing Questions for the Record
The Honorable Brad Miller

Responses of Brian P. Wynne

1. With more than 40 hybrid vehicle models currently being sold in the U.S., and manufacturers planning to increase available plug-in vehicles from 8 this year to more than 20 at multiple price points in the next two years, it appears that the electric drive industry is successfully growing. However, there is a lot of media focus on sales numbers that are lower than expected. Can you describe the status of electric drive technologies? Are electric cars "ready for prime time"? Can they meet the needs and budgets of average American drivers?

Electric drive vehicles are already meeting the needs of millions of drivers and are poised to meet the needs of millions more. The research organization IDTechEX estimates that HEV, PHEV, and EV sales will represent 35% of global car sales by 2025.

Plug-in vehicles have been rated at the highest levels in consumer satisfaction by Consumer Reports (http://www.consumerreports.org/cro/2012/05/owner-satisfaction/index.htm) and both the Chevy Volt and the Nissan Leaf were awarded the highest safety ratings by the Insurance Institute for Highway Safety (http://www.iihs.org/news/rss/pr042611.html). This year, 249,311 hybrid vehicles and 20,546 plug-in electric vehicles have been sold to date already. Since last year's launch of mass-market plug-in electric vehicles, there are now close to 40,000 of them on the road.

There are 10 models of plug-in vehicles currently on the market. These vehicles provide consumers multiple options in electric-only range, vehicle size and price point. With the dozens more vehicles that automakers have announced they will bring to market in the next two years, these options will only increase.

In assessing consumers' budgets, it is also important to note that running a vehicle on electricity is about one-fifth of the cost of gasoline, costing an average 2 to 3 cents per mile compared to 15 to 16 cents for gasoline. Further, the price of electricity is not volatile – it doesn't spike in response to global unrest or the start of the driving season, as do the prices of oil and gasoline.

2. What is the status of electric drive infrastructure, specifically electric recharging facilities? How much will we need and where will we need it? Is there a growing business segment developing and installing charging infrastructure? What are the hurdles to building out infrastructure?

As of August 28, 2012, DOE reports there are 4,364 operating public charging stations, which support more than 10,000 individual charging points, in the U.S This number does not include the ubiquitous existing electrical outlets that are available in homes and businesses where an estimated 80%, of charging will occur. (DOE alternative fuel station locator)

For opportunistic charging (charging while shopping, traveling, etc.), multiple options are being put in place in commercial and municipal sites.

The hurdles to building out infrastructure include the general uncertainty associated with a new technology as well as the specific uncertainty associated with gauging charging demand and how to synchronize the infrastructure to the vehicle market. Other more technical hurdles include the variations in permitting and installation requirements from city to city and state to state. Streamlined processes that ensure safety but minimize cost and time for installations are important in making the switch to electric fueling as simple as possible for consumers.

Public and private investment will accelerate the deployment of charging stations in U.S. cities to faster achieve the benefits of an electrified transportation sector. In particular, private investments are not only helping to improve EV charging technologies, but also helping to expand charging infrastructure to a projected $10-15 billion industry by 2015.

The Department of Energy's deployment efforts, through the EV Project and through the Clean Cities program, are helping to reduce both of these hurdles by helping to establishing diverse charging options for the initial plug-in cars buyers and providing critical information on charging needs and patterns. They are also helping to develop best practices for permitting and installation that can be adopted by other communities.

3. In your testimony you point out that there is substantial private investment and projections for growth in the electric drive industry. What role does public investment play? Why are federal efforts important in advancing electric transportation?

Federal investments reinforce and attract private capital investments. The government has played a critical role in funding emerging technologies that could not initially attract sufficient private investment to bridge what industry calls "the Valley of Death," i.e., the market space between introduction of an innovation to its commercial viability. For example, similar government investments helped speed o development of the Internet, space exploration, DNA mapping, GPS devices and inexpensive mass data storage.

The U.S. government has a technology-neutral goal of increased energy security. It rightly has adopted a portfolio approach to diversifying our energy supply. Federal research, development

and deployment resources have been directed to transportation technologies that include biofuels, hydrogen, natural gas, electricity, and others.

Federal support through Department of Energy programs is already advancing breakthroughs in battery and electric drive technology as well as manufacturing, while helping to accelerate private sector adoption of electric cars, fleets, trucks and other vehicles on U.S. roads.

U.S. investments in technology innovation to expand the electrification of the U.S. transportation sector offer unique potential to provide economic, energy security and environmental benefits to the country. Since we import almost half of the oil used in the transportation sector – at a cost of more than $1 billion a day – there is a strategic and economic imperative to move toward domestically-generated electricity as an alternative.

The public and private investments made in establishing the electric drive supply chain – batteries and components, cars and trucks, charging hardware and software just to name a few, are creating jobs and ensuring that the US can compete in the global market for energy technologies.

4. What are the benefits of electric compared to gasoline vehicles? Compared to other alternative fuels?

Electric drive vehicles offer increased efficiency -- which means spending less on gas and reduced emissions. Plug-in vehicles allow consumers to opt for electricity, which is ample, affordable and domestically-produced.

The average American family drives less than 40 miles a day. Using electricity rather than gas, the family would save about $1,900 a year. Electricity costs an average of 2 to 3 cents per mile – compared to 15-16 cents for gasoline.

At the national level, the benefit of this efficiency is a reduced dependence on foreign oil. Currently the U.S. imports approximately 45 percent of its oil, and based on data from the beginning of the year, the CRS estimates that the U.S. will pay $451 billion for imported oil in 2012, $30 billion more than 2011.

In addition to the national security cost, there is economic hazard in oil dependence. In a June 27, 2012 article, the Wall Street Journal reported that every $10 increase in the price of a barrel of petroleum costs the U.S. economy about $75 billion. (http://online.wsj.com/article/SB10001424052702304441404577480952719124264.html)

Electric drive technology also has substantial environmental benefits. Multiple studies, including *State of Charge: Electric Vehicles' Global Warming Emissions and Fuel-Cost Savings,* (http://www.ucsusa.org/assets/documents/clean_vehicles/electric-car-global-warming-emissions-report.pdf) conducted by the Union of Concerned Scientists and *Environmental Assessment of*

Plug-In Hybrid Electric Vehicles, conducted by the Electric Power Research Institute with the Natural Resources Defense Council (http://my.epri.com/portal/server.pt?space=CommunityPage&cached=true&parentname=ObjMgr&parentid=2&control=SetCommunity&CommunityID=404&RaiseDocID=000000000001015325&RaiseDocType=Abstract_id), have documented the emissions benefits of plug-in vehicles. Even with a grid dominated by coal-fired generation, plug-in vehicles would reduce greenhouse gas emissions by a third compared to internal combustion engines.

For grid-connected vehicles, these benefits will only increase as the grid becomes cleaner. In fact, the increased use of natural gas and renewables for generation is already changing the emissions profile of the grid.

According to the Energy Information Administration (*EIA, Today in Energy 8.20.2012* http://www.eia.gov/todayinenergy/detail.cfm?id=7610&src=email) during the first half of 2012, 165 new electric power generators were added in 33 states, for a total of 8,098 megawatts (MW) of new capacity. Of the ten states with the highest levels of capacity additions, most of the new capacity uses natural gas or renewable energy sources. Only one coal-fired generator was brought online in the first half of 2012.

To achieve our national goals for energy security, the U.S. will need to develop a portfolio of approaches that utilize alternative fuels. Electric drive is integral to this approach because ample, affordable and domestically-produced electricity can be used in many configurations (cars, trucks, equipment), can be used in combination with conventional and alternative fuels, and already has ubiquitous infrastructure.

5. All 10 of the EPA's most efficient cars for 2012, are electric drive, either hybrids or plug-in vehicles. Can you detail the fuel – and money –saved by driving electric?

The increased efficiency of hybrid vehicles provides substantial fuel savings over comparable internal combustion engine vehicles. For instance, the Department of Energy's comparison calculator (http://www.fueleconomy.gov/feg/hybrids.jsp) shows the increase of combined fuel efficiency from 26.4 to 39 mile per gallon – the difference between a popular vehicle and its hybrid counterpart - will save the consumer $683 per year (at $3.72/gallon and 15,000 miles per year).

For the average American family driving less than 40 miles a day, fuel savings associated with plug-in vehicle would be nearly $1,900 a year. Traveling on electricity costs an average of 2 to 3 cents per mile; gasoline costs 15-16 cents per mile (at $3.50 gallon).

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
Subcommittee on Energy & Environment
Hearing Questions for the Record
The Honorable Randy Neugebauer
Responses of Brian P. Wynne

1. I would like to better understand the business models for the EV charging companies. Recently, the House Committee on Administration passed legislation directing the Architect of the Capitol to install charging stations in our garage parking lots. The legislation would incur no cost to the taxpayer—the cost of charger installation would be paid for by fees billed to those who use the chargers.

Are any charging companies using this business model anywhere in the country, where they pay for initial installation and then recoup costs through charging fees? Why won't this business model work across the country, and wouldn't it be preferable to massive taxpayer subsidization of these charging stations?

There are multiple business models for charging stations and often they are based on the duty cycle of the charger. For instance, for home chargers, the customer pays for the installation of the equipment and the electricity is billed through the utility. However, separate or sub-metering or time-of-use pricing provided by the utility can help home chargers maximize the benefits of their plug-in vehicles and help utilities to manage demand.

In commercial settings, there is variability in business models as well as charging equipment. For instance, there are subscription services that charge a fixed monthly fee and allow unlimited charging at their network. Other sites, such as retail locations where charging that is meant to be opportunistic and may occur at peak, would charge the customer at the time of use, potentially charging more for peak rate or for a fast charge (480v). However, many retailers offer the charging at no cost as a customer benefit.

We expect that the large private investment in EVSE options and business models will lead to a robust and diverse infrastructure. The information being collected from the early installations of EV charging stations will help to identify how chargers are used in the real world and how best to maximize the options for consumers while building sustainable business models.