DOE to Invest Up to $30 Million for Hybrid Electric Vehicle Technology

U.S. Department of Energy (DOE) Under Secretary Bud Albright announced that DOE will invest up to $30 million for cost-shared development and demonstration projects supporting Plug-In Hybrid Vehicles (PHEVs) and that DOE will participate in a cooperative, pre-competitive research and development alliance known as the U.S. Automotive Partnership for Advancing Research & Technologies (or USAutoPARTs). Both announcements support the Administration's long-term efforts to fundamentally change the way cars, homes, and businesses are powered by utilizing cutting-edge technologies. Albright made these announcements while visiting the North American International Auto Show in Detroit.

"Coming on the heels of the President signing new energy legislation..., these projects demonstrate a shared commitment to advance vehicle technologies that will help reduce our reliance on foreign energy while promoting robust economic growth," Albright said. "The Department remains committed to perfecting and deploying a low-cost, highly efficient vehicle battery to further the Administration's strategy of bringing more clean energy technologies online. We are eager for this alliance to take shape so cleaner, more efficient vehicles can successfully move from the laboratory to the showroom."

The $30 million Funding Opportunity Announcement (FOA) seeks projects that will find solutions to improving battery performance so vehicles can deliver up to 40 miles of electric range without recharging and address critical barriers to achieving DOE's goal of making PHEVs cost-competitive by 2014 and ready for commercialization by 2016. A 40-mile electric range without recharging would include most daily roundtrip commutes and satisfies 70% of the average daily travel in the U.S.

Combined with a minimum 50% cost share with industry applicants, research investment will total up to $60 million, of which up to $30 million will come from DOE. Selected projects will place PHEVs in small, geographically diverse fleets in order to collect operational data that will be used to evaluate and demonstrate the operational and economic viability of PHEVs in the marketplace. The batteries expected to be included in the test fleet vehicles will showcase technologies developed with DOE funding. Information gathered under this demonstration project will be used to determine how these advanced hybrid vehicle components will operate in real-world conditions.

Hybrid electric vehicles converted in PHEVs by non-Original Equipment Manufacturer (OEM) companies have demonstrated they are able to significantly increase fuel economy in both laboratory and on-road testing environments. These gains are achieved by relying on additional on-board energy storage such as advanced batteries, which are recharged from an off-board electric utility infrastructure, rather than from the vehicle engine. Accelerating the development of fully integrated OEM-quality vehicles will maximize existing resources and current technological information, and help realize the full potential of PHEVs, according to DOE.

DOE is expected to provide up to $7 million in FY 2008 for this FOA, with the remaining $23 million expected to be available in FY 2009–10, subject to appropriation from Congress.

As part of the Department's ongoing work with states and industry, Albright joined Michigan Governor Jennifer Granholm and CEO of the OESA in signing a Memorandum of Intent (MOI) to participate in supporting USAutoPARTs. This alliance will perform pre-competitive research and engage auto suppliers to advance cost-effective emerging technologies into performance-specified, factory-ready materials, processes, components, and systems.

At the federal level, DOE and its national laboratories, specifically its Oak Ridge National Laboratory, intends to perform advanced research and provide technical assistance valued at up to $9 million, beginning in 2008, to further the efforts of USAutoPARTs. Additionally, the areas on which USAutoPARTs will initially focus are well aligned with the DOE's Vehicles Technologies Program, which aims to develop vehicle technologies and clean, renewable fuels that could decrease emissions of air pollutants and greenhouse gases, and enable the U.S. transportation industry to sustain a strong, competitive position in domestic and world markets. Funding and similar support is also being provided by the U.S. Department of Defense.

USAutoPARTs will initially have three research consortia that are aligned with member supplier businesses and national priorities for energy, environment, and competitiveness. The consortia will focus on lightweight materials, electrical and electronic thermal management, and engine combustion and emission aftertreatment. Suppliers and others may choose to participate in one or more of the current research consortia or those that will be selected in the future. Participants are required to make a financial contribution based on the number of consortia they select, and a portion of that amount may include the value of loaned personnel and in-kind contributions.

USAutoPARTs will be located in Shelby Township, Michigan, in a 56,000-square foot comprehensive vehicle R&D center with established laboratory infrastructure that will support approximately 200 people. Delphi Corporation is vacating the facility under its corporate restructuring program.

Finland and China Collaborate in Nanotechnology

Finland's national nanotech initiative (FinNano), has established a new collaborative effort with China. Finland is a leading partner in the European Union (EU)'s nanotech group NMT and directs the EU's material technology group MATERA. The partners in Finland-China NAMI cooperation aim to create world-class research and put Sino-Finnish nanotech products on the market together by 2010.

The Chinese Minister of Science and Technology (MOST) Dr. Wan Gang and Vice Minister Dr. Shang Yong joined in the celebration of the opening of China International Nanotech Innovation Cluster (CINIC) in Suzhou. Finland has set foot in Suzhou, signing agreements for nanotechnology development and commercialization.

Dr. Markku Lämsä, who leads Finland's nanotech program, signed a cooperation agreement with Suzhou nanotech cluster. Represented by Mr. Jaani Heinonen of Tekes Shanghai office and the Consulate General of Finland, the Finnish Technical Research Centre VTT also signed a cooperation agreement with Suzhou.

"The willingness to team up and the amount of joint projects proposed clearly show the demand for deeper collaboration between China and Finland in the area of nanotechnology. The Sino-Finnish NAMI Nanotech Program can also positively increase the exchange of know-how between the European Union and China," said Lämsä.

Finland-China NAMI cooperation aims at increasing the competitiveness of industrial sectors in the two countries. The industries include information and communication technologies, pulp and paper, chemicals, metals and other materials, diagnostics, and healthcare. The production of energy using new technologies such as solar cell and fuel cells may also be considered.

In Finland, nanotechnology is one of the focus areas of national innovation policy, with extensive public and private investments.