



## **THE ADVANCED LEAD-ACID BATTERY CONSORTIUM**

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### **ALABC Demonstrates Low Cost, High Performance Solutions to Hybridization at The Battery Show**

*Advanced Lead-Acid Battery Consortium's Retrofitted Honda Civic HEV and LC Super Hybrid Vehicle on Display at Technology Event near Detroit*

NOVI, Mich. (Nov. 13, 2012) – The Advanced Lead Acid Battery Consortium (ALABC) is exhibiting this week at The Battery Show in Novi, Mich., two demonstration vehicles that could offer automakers low-cost options for hybrid electric vehicle systems. It marks the first time in the consortium's 20-year history that it has exhibited two concept vehicles at the same event, both of which demonstrate application of novel lead-carbon battery technology as affordable and high-performance alternatives for existing micro- and mild-hybrid vehicles.

The vehicles on display, the LC Super Hybrid and the UltraBattery retrofitted Honda Civic HEV, represent the fruits of two successful projects under the ALABC's current research and development program to optimize lead-acid and lead-carbon (LC) battery technology for specific energy storage markets – including hybrid electric vehicle systems.

"The use of lead-carbon batteries in micro- and mild-hybrid electric vehicles is already technically possible and more cost-efficient than with other battery chemistries, and it allows for the development of new HEV concepts," said ALABC Program Manager Dr. Boris Monahov. "These concepts can quickly offer consumers vehicles of the size and power they appreciate at a cost similar to that of a smaller vehicle – utilizing a technology that represents the most recycled consumer product on earth."

Both vehicles were introduced by ALABC representatives at a media briefing this afternoon (at **booth #457**) and are currently on display at the Suburban Collection Showplace in Novi where battery industry representatives are gathered for one of the largest power source conferences and exhibits in North America. The ALABC briefing followed a conference session on Micro-Hybrids: Developments and Likely Impact," which was chaired by Mr. Paul Cheeseman of ALABC member Exide Technologies and featured a presentation by Dr. Monahov.

"The ALABC is committed to developing lead-acid and lead-carbon power supply technologies for cost-effective hybrid automotive applications, and these vehicles demonstrate the ability of advanced lead-acid batteries to be an attractive alternative to other advanced battery chemistries in today's and tomorrow's alternative fuel vehicles," says Dr. Monahov. "They represent the fruits of extensive research and development to optimize a new generation of

batteries that provide not only the required performance standards, but also unique environmental benefits of having a 98 percent recyclability rate.”

### **About the LC Super Hybrid**

*(On display at the Exide Technologies booth #850)*

The revolutionary LC Super Hybrid – ALABC’s first demonstration in partnership with direct suppliers to the automotive industry – demonstrates the use of Exide Technologies’ Orbital lead-carbon batteries in a micro/mild hybrid system that not only features off-the-shelf components easily accessible to original equipment manufacturers (OEMs), but also at a very cost-effective rate, critical to promoting wider adoption of hybrid electric vehicles.

Based on a Volkswagen Passat platform, the LC Super Hybrid is the product of a unique partnership between the ALABC, Controlled Power Technologies (CPT), AVL Schrick, Provector, Mubea, Valeo and Exide Technologies. The vehicle’s 12V power system combines the lead-carbon battery with an electric supercharger and an integrated starter generator to achieve lower CO<sub>2</sub> emissions and enhanced fuel economy without sacrificing drivability or affordability.

### **About the UltraBattery Retrofitted Honda Civic HEV**

*(On display at the East Penn Manufacturing booth #671)*

The ALABC’s Honda Civic HEV demonstrator is retrofitted with lead-carbon UltraBattery modules, widely considered one of the most novel battery designs in existence. This vehicle demonstrates the real-world durability of lead-carbon batteries in high-rate partial state-of-charge HEV operation. The vehicle conversion was implemented by Ecotality North America, in cooperation with the ALABC and the U.S. Department of Energy, and currently operates on daily routes in Ecotality’s courier fleet.

To date, the Civic has completed more than 70,000 miles of road-testing during one year of operation with no loss in battery capacity. The vehicle also has achieved comparable MPG performance with that of the same model powered by Nickel Metal Hydride (NiMH) batteries but at a significantly lower cost.

### **About the ALABC**

The Advanced Lead Acid Battery Consortium is an international research cooperative comprised of lead producers, battery manufacturers, equipment suppliers, and research facilities organized to enhance the performance of lead-acid batteries for a variety of markets, including hybrid electric vehicle (HEV) applications. A program of the International Lead Zinc Research Organization (ILZRO), the ALABC pools the resources of its membership in order to perform specific research on advanced lead-acid batteries that otherwise would not be possible by single entities

In 2012, the ALABC is celebrating 20 years of research and development success and is preparing for a new phase of its R&D program. For more information, about the ALABC and its accomplishments, visit [www.alabc.org](http://www.alabc.org).