



Ricardo's New Battery Center Draws on Growing Pool of Government Incentives

By James M. Amend
WardsAuto.com, Jan 28, 2009 2:14 PM

VAN BUREN TWP., MI – Ricardo Inc. opens a \$2 million battery systems development center outside of Detroit, a facility the engineering firm considers state-of-the-art for the burgeoning research field.

"We think the linchpin to electric vehicles and hybrids is batteries, and that's what this lab is all about," says Ricardo President Dean Harlow.

The 2,650-sq.-ft. (246-sq.-m) center will provide Ricardo customers with the industry's most comprehensive and integrated range of capabilities for developing high-voltage batteries and battery-pack systems for hybrid, plug-in electric hybrid and fully electric vehicles, Harlow says.

The development center also represents one of the many foundational businesses government officials have been calling for through lucrative incentives to push the U.S. to the forefront of advanced-battery research and manufacturing.

A 10-year, \$991,000 tax credit from the state of Michigan, as well as an 8-year tax abatement worth \$74,200 from the local government here, helps make the center possible.

It opens less than two weeks after Michigan Gov. Jennifer Granholm signs legislation providing \$335 million in tax credits over five years to companies locating battery research and manufacturing in the state, part of its goal to become a hotspot for the technology.

Washington lawmakers this week included \$2 billion worth of grant money for advanced battery development in the economic stimulus package now under debate in Congress, which President Obama considers a "down payment" towards his goal of putting 1 million electric cars on U.S. roads by 2015.

Harlow says Ricardo, which in the last year has placed a significant emphasis on winning business related to advanced propulsion and alternative-fuels technologies, will pursue additional money from federal and state sources to strengthen its position in the field.

"We want to tap into the funds that are available to try and accelerate these technologies," he tells *Ward's*.

Ricardo's newly opened battery facility, which drew its state funding prior to Granholm signing her legislation at the recent North American International Auto Show in Detroit, will provide service to cell suppliers, pack integrators, auto makers and Tier 1 suppliers. It can accommodate testing and development for nickel-metal hydride, lithium-ion and ultra-capacitor battery technologies.

Customer industries could include the automotive, agricultural and military and commercial on- and off-road segments. In fact, during a media tour of the facility, employees stand guard in certain areas to protect top-secret military work. The center can accommodate development of stationary, as well as mobile, applications.

Ricardo claims only the facility's level of safety can match the comprehensiveness of its capabilities. Built like high-tech bunkers, the center's three, 12-ft. by 12-ft. (3.7-m x 3.7-m) temperature-controlled Li-ion development chambers are located within the building.

Advanced safety items such as infrared flame detectors, carbon-dioxide deflamer systems, floor-mounted water sensors and rapid-exhaust systems allow Ricardo to use a unified floorplan.

Karina Morley, vice president-controls and electronics at Ricardo, calls the development chambers of other battery centers she's visited "doghouses," because they are not collocated within a single site but set off by themselves to save on safety technology.

A software package manages the safety systems and can shut down a room quickly, if necessary. It's a key competitive advantage, she says. "This is why we can handle uncertified cells and packs."

Morley estimates the fast-growing battery-development industry, backed by billions of dollars in venture capital, includes at least 50 cell developers. "So there are a lot of uncertified cells and packs out there," she says.

Although company officials stress the facility is about developing, rather than just testing, batteries, the star of the show is an AeroVironment Inc. AV900 cyclor. The 3,500-lb. (1,600-kg) heavy-duty tester offers power up to 250 Kw, allowing it to prove a range of hybrid systems from automobiles to buses, trucks and military vehicles.

Ricardo combines the cyclor with a virtual vehicle-development system to simulate vehicle integration in a controlled, repeatable and less costly environment, compared with hardware. The center's virtual vehicle-development system is one of the few available in the battery development field in the U.S., the company says.

A hybrid transmission in the facility's dynamometer cell allows customers to hook up their batteries for testing under more authentic conditions.



Battery Makers Charge Ahead In Michigan

By Richard Read January 28th, 2009

Late last year, Michigan passed some interesting tax incentives for battery manufacturers-- specifically those working on batteries for vehicle powertrains. A couple of weeks ago, we mentioned that one company had already taken advantage of the new laws, and now we're happy to hear that another has joined the ranks: Ricardo, Inc. The company has launched a \$2 million Battery Systems Development Center that takes NiMH, Li-ion, and other cells from third-party manufacturers and packages them into modules using smarter, more efficient technology. No word yet on which companies Ricardo will be making the packs for; even though someone else got the contract on the Chevy Volt, there are plenty of other options out there.

As if that weren't enough good news for one day, Democrats in the U.S. senate have taken a cue from Michigan's early success and are pushing to use \$2 billion of Obama's proposed \$825 billion stimulus bill to fund grants and loans for battery research. (Specifically, \$1 billion would be made available for grants, the other \$1 billion for loans.) Not surprisingly, automakers seem elated by the proposal--after all, it may be the best news D.C. has for them for a while.