BATTERY TESTING

ARGONNE'S ELECTROCHEMICAL ANALYSIS AND DIAGNOSTICS LABORATORY

Argonne NATIONAL LABORATORY

Does Your Battery Measure Up?

Did you know...

Battery testing is used by hybrid and electric car makers to evaluate the potential of these technologies. Batteries tested at Argonne come from all over the world.

OPPORTUNITY

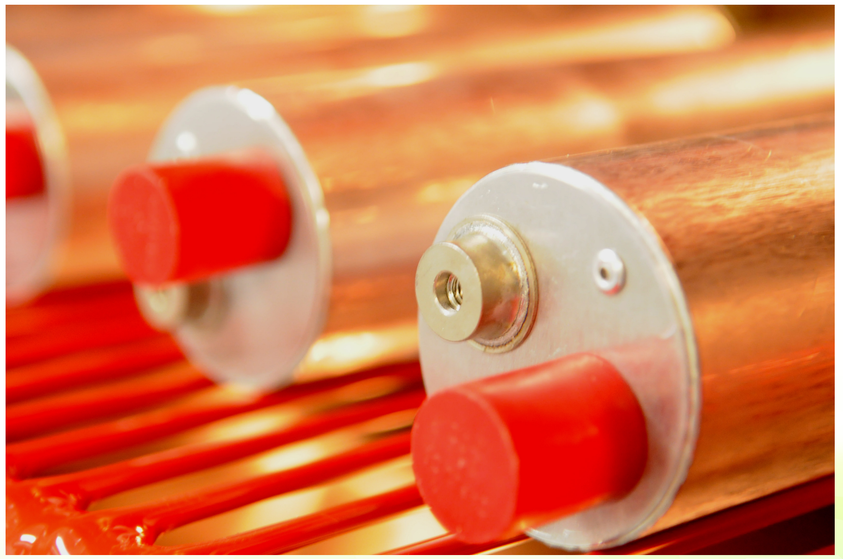
In order to develop advanced technologies, battery and fuel cell developers need reliable, independent, and unbiased performance evaluations of their cells, modules, and battery packs.

ARGONNE'S SOLUTION

In Argonne's Electrochemical Analysis and Diagnostics Laboratory (EADL), the factors that limit the performance and life of advanced battery systems are examined. These evaluations help battery developers and the U.S. Department of Energy (DOE) evaluate technical progress, and aid in research and development decision-making.

ONE-OF-A-KIND FACILITY

An extensive facility, the EADL can test large numbers of batteries and fuel cells designed within and outside of Argonne. It is the only known facility that can conduct hundreds of concurrent advanced battery studies under operating conditions that simulate electric- and electric-hybrid vehicles, utility load-leveling, and standby/uninterruptible power source applications. Each battery is independently defined, controlled and monitored to impose charging regimes and discharge load profiles that simulate the types of dynamic operating conditions found during real-life use.



Lithium-ion battery cells are prepped for testing at the EADL.

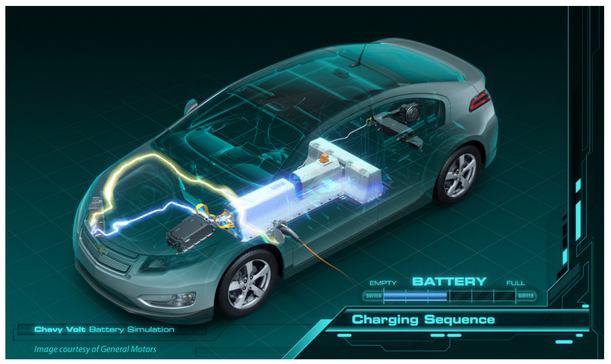


Image courtesy of General Motors

The Chevy Volt's lithium-ion battery is based on technology developed and tested at Argonne.

The EADL is a computer-operated test laboratory where cells, modules, and complete battery systems are subjected to performance and life tests under simulated real-world conditions. Accelerated aging tests are also conducted to provide early predictions of life under normal operating conditions.

The EADL is funded by DOE's Office of Energy Efficiency and Renewable Energy, FreedomCAR and Vehicle Technologies Program and Hydrogen, Fuel Cells and Infrastructure Technologies Program.

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Visit http://www.cse.anl.gov/facilities/eadl.html to learn more!

U.S. DEPARTMENT OF ENERGY

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