



## News United States

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# GM, ABB Demonstrate Chevrolet Volt Battery Reuse Unit

World's first use of electric vehicle batteries for energy storage nears grid testing

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**SAN FRANCISCO** – General Motors and ABB today showed the next stage in battery reuse, the repackaging of five used Chevrolet Volt batteries into a modular unit capable of providing two hours of electricity needed by three to five average American homes.

The uninterruptable power supply and grid power balancing system was demonstrated during GM's Electrification Experience. The prototype unit provided 25 kW of power and 50 kWh of energy to power all the support lighting and audiovisual equipment in an "off-grid" structure used for the event.

"GM's battery development extends throughout the entire life of the battery, including secondary use," said Pablo Valencia, GM senior manager of battery lifecycle management. "In many cases, when an EV battery has reached the end of its life in an automotive application, only 30 percent or less of its life has been used. This leaves a tremendous amount of life that can be applied to other applications like powering a structure before the battery is recycled."

GM and ABB last year demonstrated how a Chevrolet Volt battery pack could be used to collect energy and feed it back to the grid and deliver supplemental power to homes or businesses.

During today's demonstration, the energy storage system was run in a "remote power back-up" mode where 100 percent of the power for the facility came from Volt batteries through ABB's Energy Storage Inverter system. A similar application could one day be used to power a group of homes or small commercial buildings during a power outage, allow for storage of power during inexpensive periods for use during expensive peak demand, or help make up for gaps in solar, wind or other renewable power generation.

These functions, along with frequency regulation on electric distribution systems, could someday be used by utilities to reduce cost to customers and improve the quality of power delivery. These applications are referred to as community energy storage to distinguish them from substation-size energy storage projects.

"We showed today how fast this research concept is turning into reality," said Allen Burchett, ABB's senior vice president for Business Development in North America. "The ABB-GM Volt battery system is the world's first use of car batteries as possible back-up power for homes and other commercial uses. We will be installing it on the grid soon to complete the technical evaluation, and this will tell us all what smart grid applications are

possible, like back-up power, reducing energy cost, strengthening utilities' distribution systems and storing surplus renewable energy.”

ABB's research center in Raleigh, N.C., conducted the research and development, and ABB's Medium Voltage business unit in Lake Mary, Fla., is managing the proof-of-concept testing, market research and product development. As the world's largest EV fast-charging company and leader in smart grid and energy storage, ABB works with other auto companies, battery manufacturers and utilities to help make electric power and industrial operations more productive and efficient.

GM is focused on assuring battery systems used in future Chevrolet, Buick, GMC and Cadillac vehicles provide environmental and societal benefits beyond their use in the vehicle. Long before a battery is recycled, secondary use provides the opportunity to fully utilize the battery resource.

GM is dedicated to waste reduction throughout its operations, and its worldwide manufacturing facilities combined recycle 90 percent of the waste they generate. Ensuring that batteries are part of reducing the environmental impact of its vehicles and operations is part of the company's roadmap to sustainability.

#### **About General Motors**

General Motors Co. (NYSE:GM, TSX: GMM) and its partners produce vehicles in 30 countries, and the company has leadership positions in the world's largest and fastest-growing automotive markets. GM's brands include Chevrolet and Cadillac, as well as Baojun, Buick, GMC, Holden, Isuzu, Jiefang, Opel, Vauxhall and Wuling. More information on the company and its subsidiaries, including OnStar, a global leader in vehicle safety, security and information services, can be found at <http://www.gm.com/>.

#### **About ABB**

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 145,000 people.

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