

# GM Data Center Earns LEED Certification

You don't have to go around the world to see world-class automotive technology.

GM has developed a flywheel for battery-free backup power and in-row cooling that reduces the need for electricity, contributing to a 70 percent reduction in energy use at its General Motors Enterprise Data Center in Warren.

This new technology has earned Gold certification by the U.S. Green Building Council's LEED - Leadership in Energy and Environmental Design - program, GM announced in a press release.

Fewer than 5 percent of data centers in the U.S. achieve LEED certification, according to the building council, the release stated. GM's data hub on its Technical Center campus in this Detroit suburb is the company's fifth LEED-certified facility and second brownfield project.

"We set out to consolidate our global IT infrastructure from 23 data centers to two, which is helping improve application performance while reducing operating costs and energy use," said Randy Mott, GM senior vice president and CIO.

"We're not only gaining efficiencies from insourcing, but we've incorporated world-class energy-saving technology into the facility itself."

Given that data centers require a large amount of energy, GM toured facilities owned by major high-tech and electrical companies to identify best practices for greater efficiency, Mott said.

He added that one of the building's innovations is a clean backup power system. GM switched from a space-hogging, battery-based uninterruptible power supply to one powered by mechanical fly wheels and a diesel engine. Used in less than 2 percent of data centers globally, it reduces emissions, noise pollution and fuel consumption.

Plus, by avoiding the use of the equivalent of 12,000 car batteries, GM eliminated the heating and cooling systems required to keep the batteries at their optimal temperature, Mott said.

"We have built 5 million square feet of data centers around the world and this is one of the first ones incorporating this flywheel-powered back-up technology," said Bernie Woytek, senior associate with Gensler, a global archi-

ture, design, planning and consulting firm.

"It essentially eliminates a football field-sized room of batteries." Aisles of technology equipment feature in-row cooling to contain heat in a smaller area so less air is moved, reducing electricity consumption, Mott said. GM leverages Michigan's cooler climate by pumping water outside to chill it naturally, allowing the servers' cooling system to power down three-quarters of the year.

GM also is distributing power at higher voltages, eliminating energy-draining transformers that generate heat to convert power to the appropriate voltage. As a result, the facility reduced power loss by 17 percent.

Beyond these design elements, the facility continually measures and analyzes its power use in

real time for optimal efficiency. The data center and a mirror facility under construction in Milford will eventually serve as dual nerve centers integrating all aspects of product development, manufacturing, marketing, sales and other business applications around the world.

Construction followed GM Green Construction practices, resulting in the recycling of more than 99.7 percent of onsite materials, including 8,700 tons of asphalt, cardboard, concrete, metal, plastic and wood.

Additionally, GM reused more than 86,000 cubic yards of soil for nearby landscaping and walking paths. GM uses LEED design and construction practices when constructing or upgrading facilities and all of its North American construction sites adhere to GM Green Construction practices.

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## GM to Repurchase 120M Shares From UAW VEBA

General Motors has reached an agreement to repurchase 120 million shares of its Series A Preferred Stock from the UAW Retiree Medical Benefits Trust (UAW VEBA) for a total cash consideration of approximately \$3.2 billion, or \$27 per share.

The agreement is contingent upon the closing of an offering by GM of senior unsecured notes on or before Sept. 30, 2013, said Tom Henderson, manager - Global Financial News and Purchasing Communications for GM.

Accordingly, GM also announced that it has launched an offering of senior unsecured notes in five-, 10- and 30-year tenors.

The net proceeds of the offering will be used for general corporate purposes, including the repurchase of Series A Preferred Stock from UAW VEBA.

UAW VEBA currently holds 260 million shares of Series A Preferred Stock, with an additional 16 million shares held by Canada Holdings, Henderson said.

The UAW VEBA shares have a liquidation preference of \$25 per share and accrue cumulative dividends at a rate equal to 9 percent annually.

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