## Eaton Works with Dept. of **Energy on New-Gen Battery**

dustrial manufacturer Eaton Corp. has announced it is strengthening its commitment to hybrid vehicle technology by developing a costeffective power control system to reduce the size of the system battery without a loss of battery life or vehicle performance.

The fuel-efficient application is intended to optimize the operation of hybrid electric vehicles, from passenger cars to commercial vehicles.

"This project is a continuation of Eaton's keen focus on hybrid technology development and our confidence in the value of hybrids for the future," said Tom Stover, chief technology officer for Eaton's Vehicle Group.

The \$2.8 million project is funded jointly between Eaton and a grant from the Department of Energy's Advanced Research Projects Agency - Energy (ARPA-E).

The goal is to reduce the size of the battery by 50 percent and improve the total performance of the system and its charge rate while maintaining fuel economy and overall vehicle performance.

"This project is a continuation of Eaton's keen focus on hybrid technology development and our confidence in the value of hybrids for the future," Stover said

"Eaton is continuing to invest in developing the infrastructure that supports the future of the transportation industry, and this project is an example of how we are working to find safe, efficient and sustainable ways to improve hybrid vehicle performance."

The development project will be led by Eaton's Innovation Center team in Southfield, who will work with a team from the National Renewable Energy Laboratory (NREL).

Eaton's engineers and scientists will leverage the company's expertise in intelligent power management systems and hybrid technology with the NREL's expertise

SOUTHFIELD - Diversified in- in battery modeling and prognostics.

In addition to hybrid vehicle applications, Eaton sees opportunities to extend this technology into other areas where hybrid power management requires extended battery life, including community infrastructure, data centers, manufacturing and industrial.

"Only the best projects were chosen for this highly selective grant," said Chris Roche, Eaton's vice president, Innovation Center, Corporate Technology.

'This type of grant is designed to fund highly transformative technologies, and Eaton and ARPA-E believe this technology is a true game-changer in the area of hybrid power management.'

This is the second ARPA-E grant that Eaton has received within the past month. The other project was a \$3.4 million grant to develop affordable home refueling stations for natural gas vehicles.

Eaton also has received Department of Energy grants in the past 12 months for the development of technologies for compressed natural gas, research on waste heat recovery for commercial vehicles, and fuel cell expander research.

Meanwhile, Eaton's Vehicle Group - part of Eaton's Industrial Sector - is supporting customers globally to safely, reliably and efficiently manage vehicle power through the design, manufacture and marketing of a comprehensive line of reliable, high-efficiency powertrain systems and components for use in the commercial vehicle and automotive industries.

With 54 manufacturing, technical and engineering centers throughout the world, Eaton's Vehicle Group is focused on supplying technologies that improve fuel economy, reduce emissions, save energy and enhance the performance of its customers' vehicles.



NO

NO

## Flint, Rochester Teachers Earn **Chevrolet 'GREEN Educator' Awards**

DETROIT – Earth Force and the General Motors Foundation has recognized 10 environmental educators with the Chevrolet **GREEN** Educator Award.

award honors educators who integrate innovative environmental education into their work. To help inspire others, winners highlight their teaching tools and best practices on the GREEN Educator website.

"Our goal is to recognize educators who go above and beyond to make education come alive and 'mean something,'" said Lisa Bardwell, president and CEO of Earth Force. "We want to share their stories and resources to inspire others to encourage young people about learning, the environment, and the kinds of leaders they can be in their community." The educators encourage students to lead their own learning by connecting them to their communities, building local partnerships and serving as a mentor and advocate for the environment.

• Kathryn Lynch, Eugene, Ore. (University of Oregon)

• Loree Harvey, Monte Vista, Colo. (Monte Vista Middle School) • Michele Arquette-Palermo, Now in its second year, the Rochester, Mich. (Clinton River Watershed Council)

• Stephen J. Ritz, South Bronx, N.Y. (Green Bronx Machine)

Timothy H. Anderson, Prince-

ton, N.J. (Princeton High School) • Tracy Hollis, Grand Prairie, Texas (Grand Prairie Independent School District)

"These teachers are at the forefront of hands-on learning both inside and outside of the classroom," said Mike Robinson, GM Foundation board member and GM vice president of Sustainability and Global Regulatory Affairs. "The GM Foundation understands the importance of engaging our next generation of engineers and community leaders, whether it's through our own GM GREEN watershed education program or recognition of outstanding environmental educators," Robinson said. GM is in its 23rd year supporting GM GREEN (Global Rivers Environmental Education Network), a partnership with Earth Force to help youth understand how their actions impact local watersheds. The interactive learning experience continues to gain traction, and this year marks the first time every GM manufacturing site in the United States will mentor students in their local community on water quality. Last year, GM volunteers waded into streams with 9,312 students from nearly 100 schools.

The winners are:

• April Yorks, Flint, Mich. (Kearsley-Armstrong Middle School)

• Dominique Evans-Bye, La Crescenta-Montrose, Calif. (Clark Magnet High School)

 Kate Mini Hilliman, Tonawanda, N.Y. (Buffalo Urban Outdoor Education)

• Kathleen Vrable-Bryan, Youngstown, Ohio (Mahoning Soil and Water Conservation District)



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