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Students Plug Into Volt Project

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By Katie Merx

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Twenty-two-year-old Ann Arbor native Merry Walker expected to be on the fast track out of Michigan after she earned her undergraduate degree from the University of Michigan last year. Then Ann Marie Sastry got to her. Sastry, a smart, feisty and convincing engineering professor, was starting a master's program in energy systems engineering and wanted Walker and other bright young battery engineers to sign on. It wouldn't be just any old master's program, she said -- she was working with General Motors Corp. to provide the best and brightest young graduate students with an opportunity to break down hurdles in the way of launching electric vehicles.

Before she knew it, Walker was in. By the summer, she and nine other students from the new master's battery program were working on GM's Chevrolet Volt electric car. It's the kind of work that Sastry and GM executive director of global vehicle engineering Bob Kruse say could help the state keep its best and brightest students, provide a feeder program for battery engineers GM needs and make Michigan the global leader for battery and other advanced-propulsion work.

"The best and brightest from the University of Michigan didn't historically stay in Michigan," Kruse said.

"But this is an opportunity for our A students to work on society's most pressing problems," Sastry said.

"This is a revolution," Sastry said. "We're just at the beginning of possibly electrifying the vehicle drivetrain. ... The good people want to work on the good problems, the problems that feel uncomfortable and hard. This is a way to keep our best and brightest here in Michigan."

Several Volt engineering interns, including Walker, agreed, saying the work they are doing is cutting-edge and compelling enough to keep them in the state.

Walker is conducting research to test how layers of lithium battery cells interact.

Brighton native Alisyn Malek is studying the efficiency of the charging process from the electric grid through the vehicle. And Peter Verhees, 27, of Belgium is researching improvements to battery testing.

Kruse said their work is making real impacts on Volt development.

Before their glimpses into the Volt program, none of the master's students foresaw their personal futures intersecting with GM or Michigan. But now that they've gotten an inside look at the work GM is doing on the Volt and other advanced-propulsion vehicles, they all said their views have changed.

"This is really exciting," Malek said. "I've been allowed to work on a problem that is totally cutting-edge. It's really exciting to get involved in that problem."