



QUICK FACTS AND BACKGROUND

Challenge X: Crossover to Sustainable Mobility

The U.S. Department of Energy and General Motors have teamed up with other sponsors to challenge the best and brightest engineering students from universities throughout North America in a four-year competition series, **Challenge X: Crossover to Sustainable Mobility**

Seventeen university teams from the United States and Canada are following a hands-on, real-world engineering process, based on GM's Global Vehicle Development Process. By applying proven methods for engineering successful prototype vehicles, the program aims to teach real-world engineering skills to students that will make them highly valuable to the automotive community. In fact, GM has already hired more than 50 students from the first three years of the competition, and other Challenge X sponsors, including Caterpillar, National Instruments, Freescale Semiconductor, Johnson Controls and MotoTron, also have hired students out of the program.

Students are working on a 2005 Chevrolet Equinox – a GM crossover sport utility vehicle platform – integrating cutting-edge advanced automotive technologies and alternative fuels, such as hydrogen, ethanol, and biodiesel, to reduce the environmental impact while retaining its consumer appeal.

Competition Details

The first year of the program, which began in 2004, focused on vehicle simulation and modeling and subsystem development and testing. At the end of year one, each team received an identical stock 2005 Chevrolet Equinox.

In years two and three, the students integrated their advanced powertrains and subsystems into the Chevrolet Equinox. In the fourth year, which kicks off in September 2007, students will focus on customer acceptability and over-the-road reliability and durability of their advanced propulsion systems with real-world evaluation outside of the laboratory and proving ground environment.

The 17 teams participating in Challenge X include:

- Michigan Technological University; *Houghton, Mich.*
- Mississippi State University; *Starkville, Miss.*
- The Ohio State University; *Columbus, Ohio*
- Pennsylvania State University; *University Park, Pa.*
- Rose-Hulman Institute of Technology; *Terre Haute, Ind.*
- San Diego State University; *San Diego, Calif.*
- Texas Tech University; *Lubbock, Texas*
- University of Akron; *Akron, Ohio*
- University of California, Davis
- University of Michigan; *Ann Arbor, Mich.*
- University of Tennessee; *Knoxville, Tenn.*
- University of Texas at Austin
- University of Tulsa; *Tulsa, Okla.*
- University of Waterloo; *Waterloo, Ontario*
- University of Wisconsin-Madison
- Virginia Tech; *Blacksburg, Va.*
- West Virginia University; *Morgantown, W. Va.*