CHALLENGE X

CROSSOVER TO SUSTAINABLE MOBILITY

coming soon
TO A SCHOOL NEAR YOU SPRING 2004

The freedom that personal mobility provides is a building block of America's culture and strength. Over the last decade, the American automotive customer market has trended toward larger family-sized vehicles. At the same time, there has been an increased need to reduce energy consumption, as well as to decrease vehicle emissions. As a result, the automotive and electronics industries, the U.S. and Canadian governments, and the academic community have been working together, through a series of special competitive programs, to develop and explore advanced vehicle technologies that address important energy and environmental issues.

Since 1987, the U.S. Department of Energy (DOE) has sponsored more than two dozen competitions challenging thousands of engineering students to achieve better fuel economy and lower emissions while maintaining the safety, performance, utility, and consumer appeal of a variety of vehicles. Now, General Motors (GM), DOE, and other government and industry leaders have developed a new competition called Challenge X: Crossover to Sustainable Mobility. This groundbreaking three-year competition will give engineering schools an opportunity to participate in hands-on research and development with leading-edge automotive propulsion, fuels, materials, and emissions-control technologies.

Students are challenged to re-engineer a GM crossover vehicle to minimize energy consumption, emissions, and greenhouse gases while maintaining or exceeding the stock vehicle's utility and performance. Year one will focus on modeling, simulation, and testing of the vehicle powertrain and vehicle subsystems selected by each school. The final two years will require teams to develop and integrate their advanced powertrain and subsystems into a donated GM crossover vehicle. At the conclusion of each competition year, the teams will come together to undergo extensive judging and evaluation.

Participating teams will be provided with a variety of resources to help achieve their objectives, including substantial technical support and mentoring from GM and other sponsors. Each team will also receive $10,000 in seed money and will be eligible to receive additional production parts from GM and considerable software and hardware donations from other sponsors. Teams will also be expected to solicit additional in-kind and direct resources from outside sources as well. Using a development process modeled after GM's Global Vehicle Development Process, teams will gain valuable experience in real-world engineering practices. The students will also develop a strong understanding of advanced vehicle technologies that will prepare them to become highly skilled engineers who will lead the automotive industry into the 21st century and enable North America to remain competitive in the global marketplace.

Universities or colleges interested in participating in Challenge X must submit a proposal by **January 23, 2004**, for consideration. To receive a detailed request for proposal, visit our web site at **www.challengeX.org**

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NATIONAL INSTRUMENTS

CHALLENGE X

CROSSOVER TO SUSTAINABLE MOBILITY

Challenge X is a three-year competition sponsored by the automotive and electronics industries and the U.S. and Canadian governments, beginning in March 2004 and ending in Summer 2007. This groundbreaking competition will give engineering schools an opportunity to participate in hands-on research and development with leading-edge technologies.

Are You UP to the Challenge?

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