Canadian University to develop fuel cell vehicle for North American Challenge competition

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TORONTO, May 11, 2004 (Canada NewsWire via COMTEX) -- General Motors of Canada Limited, Hydrogenics Corporation, and Natural Resources Canada announced today their combined support for a team of engineering students from the University of Waterloo in Challenge X. The Waterloo team is the only Canadian school to qualify to enter the North American competition to develop practical and economic clean energy technology for the automotive sector.

Challenge X teams will follow GM's Global Vehicle Development Process to create alternative solutions that will further improve the fuel economy and emissions of the Canadian designed and built 2005 Chevrolet Equinox, a compact SUV that already provides impressive fuel economy. The Waterloo team will be developing their vehicle using hydrogen fuel cell technology.

"GM is committed to Challenge X and working with colleges and universities across the country to foster innovative thinking and practical engineering solutions," said Maryann Combs, general director, engineering and product planning, General Motors of Canada Limited. "Challenge X teams will gain valuable experience in real-world engineering practices by using GM's Global Vehicle Development Process."

"We are thrilled to be the only Canadian university team chosen to participate in Challenge X," said David Johnston, president, University of Waterloo. "This competition will give students hands-on engineering experience that will make them highly valuable to the automotive and technology communities. But more than that, it broadens their perspective by providing all the dimensions of a commercial project including finance, modeling, design, manufacturing prototype and competition."

"Challenge X is an excellent opportunity for the engineers of tomorrow to gain valuable experience with hydrogen fuel cells, a cleaner technology that will help shape the future of transportation in North America," said Tony Ianno, MP, Trinity-Spadina, on behalf of the Honourable R. John Efford, Minister of Natural Resources Canada. "With the expected remarkable growth in the hydrogen-related technologies, we're pleased to be part of a partnership that will help develop technologies the world needs to respond to climate change and create new economic opportunities."

"We are pleased that the University of Waterloo Challenge X Team chose hydrogen fuel cell technology for its entry, and that they chose Hydrogenics as their fuel cell partner," said Pierre Rivard, president and CEO, Hydrogenics. "Fuel cells are being introduced to several industries, including the automotive sector, to meet today's clean energy priorities. Competitions like Challenge X will help to demonstrate how this kind of clean energy technology can be all about having more, instead of making do with less."

The University of Waterloo is one of 17 teams chosen to be a part of this program. Challenge X will launch in the 2004-2005 academic year in the U.S. and Canada as a three-year program. Participants in this program will closely adhere to current real-world automotive design and engineering practices.

Manufactured at CAMI Automotive, the Chevrolet Equinox will be delivered to the university teams at the end of the first year of the project, to build upon the models and simulation efforts to bring the designs to life. The powertrains in the first year will be installed into vehicles in the second year, giving the teams a head start on the vehicle integration process. During the second and third years of Challenge X, the

educational emphasis will be placed on validating the modeling and simulation tools in order to refine and improve these vehicles.

The U.S. Department of Energy and General Motors are the headline sponsors of Challenge X, providing major funding, mentoring and product donations. Argonne National Laboratory, a Department of Energy Research and Development facility, will provide competition management, team evaluation and technical and logistical support.

The Canadian Regional Engineering Centre was the lead corporate engineering facility for the development of the Chevrolet Equinox. Headquartered in Oshawa, Ontario, General Motors of Canada employs 22,000 people nationwide. GM of Canada manufactures a variety of vehicles, engines, transmissions and other components, and markets the full range of General Motors' vehicles and related services through over 795 dealerships and retailers across Canada. Vehicles sold through this network include Chevrolet, Oldsmobile, Pontiac, Buick, GMC, Cadillac, Hummer, Saturn and Saab. More information about GM of Canada can be found at http://media.gmcanada.com/. Equinox photos are available at http://media.gmcanada.com/division/canada/english/index.html (click on photography).

UW is an innovative institution that responds to the needs of society. With more than 23,000 undergraduate and graduate students, it was the first university in Canada to offer the co-operative system of study through its Faculty of Engineering, balancing theoretical learning with practical experience in the workplace. Waterloo's Faculty of Arts has the largest co-op program in the humanities and social sciences in the world. UW was also the first university in the world to establish a Faculty of Mathematics and the first university in North America to make computers widely available to undergraduates. Today, UW is a research-intensive university, committed to discovering new knowledge and finding ways to use that knowledge for the benefit of society. For more information about UW, go to http://www.uwaterloo.ca/

Natural Resources Canada (NRCan) plays a pivotal role in helping shape the important contributions of the natural resources sector to the Canadian economy, society and environment. The department conducts innovative science to generate ideas and transfer technologies, and represents Canada's international interests to meet our global commitments related to natural resources. Activities cover alternative transportation fuels, energy efficiency, renewable energy as well as fossil fuels.

For over twenty years, NRCan has worked in partnership with the public and private sectors in promoting the development of these and other energy technologies. NRCan provides energy policy, regulation, information, financial assistance and science and technology (S&T) facilities and programs to implement its goals. On the S&T side, NRCan's CANMET Energy Technology Centre has programs to develop and demonstrate alternative transportation technologies and fuels including hydrogen and fuel cells, natural gas, ethanol and biofuels.

Hydrogenics Corporation (http://www.hydrogenics.com/) is a clean power generation company, engaged in the commercialization of hydrogen and fuel cell technology, and test stations for fuel cells. The Company is building a sustainable business with this potentially "game changing technology." With an unrivalled experience in fuel cell test systems and relationships with key industry partners, the Company is creating innovative, clean energy solutions for transportation, stationary and portable power applications. Hydrogenics, based in Mississauga, Ontario, Canada, has operations in British Columbia, Canada, Japan, the United States, and Germany.

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