RYERSON UNIVERSITY

Trio of universities finalists in Solar Decathlon competition

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This is a design proposal of Team North's solar-powered home North House. Competing together, Ryerson University, University of Waterloo and Simon Fraser University have qualified for the U.S. Department of Energy's 2009 Solar Decathlon.

Students and faculty from Ryerson University are collaborating with two other Canadian universities in an international competition to build a solar-powered house. They are one of just 20 teams from around the world that have been selected to participate in the U.S. Department of Energy's 2009 Solar Decathlon competition in Washington D.C.

Ryerson, along with the University of Waterloo and Simon Fraser University in Burnaby, B.C., are collaborating to design, build and operate an attractive and energy-efficient solar-powered house, to be shown on the National Mall in Washington. Labeling themselves Team North, the scholarly trio's solar-powered construction is expected to be on display at the 2010 Winter Olympics in Vancouver and will then become part of a permanent public display on the Living City Campus at the Kortright Centre for Conservation, north of Toronto.

"The Solar Decathlon is a tremendous opportunity for Ryerson University to participate in a major collaborative project with international exposure. Students at Ryerson will have the opportunity to work in interdisciplinary teams and apply their knowledge of detailed analysis tools such as energy modeling, life cycle assessment and building envelope studies to refine the performance of the proposed building," said Mark Gorgolewski, Associate Professor in the Department of Architectural Science and Program Director of the proposed new graduate program in Building Science at Ryerson.

The Solar Decathlon is a public event designed to increase awareness of solar energy for residential use. It's a two-year design and construction process leading to a two-week exhibition of the houses in September 2009 on the National Mall in Washington, D.C. The prototype homes will be installed in a "Solar Village" where visitors can tour the homes to learn about design and construction techniques. The houses also compete in several categories including architectural quality and amount of energy generated.

"We were very excited when we first found out that our team was selected to be a part of the 2009 Solar Decathlon. There were numerous entries from universities around the world and to know that Ryerson is part of the competition makes me very proud," said Omar

Siddiqui, a Team North member and a first-year master's student in Mechanical Engineering. "This is an incredible opportunity to be at the forefront of current research in the application of solar energy for powering homes. The knowledge that in the future our ideas could be used and widely disseminated for the design and development of solar homes is very thrilling."

The teams must follow some guidelines. The homes must be attractive and easy to live in. They must maintain a comfortable temperature, provide attractive and adequate lighting, power household appliances for cooking and cleaning, power home electronics and provide hot water. The houses will also generate excess electricity which they can sell back to the power grid, to provide energy to nearby users.

"Team North brings three special schools to the challenge of a house for Canada's future. Together, Waterloo, SFU and Ryerson have the expertise needed to inspire imagination by design, to ensure sound engineering and construction and to communicate the ideas of sustainable living to the world," said Dr. Robert Woodbury, Scientific Director of the Canadian Design Research Network. "I am equally sure that the house will be extraordinary and that the schools will learn much from each other. This is collaboration at its best."

Team North is calling their construction North House and the idea is to build a responsive and flexible strategy for solar living in the diverse territory and extreme climates of Canada. The Ryerson chapter of Team North is comprised of undergraduate and graduate students from the Departments of Architectural Science and Mechanical Engineering. Six Master of Business Administration (MBA) students from the Ted Rogers School of Management have also been working on this solar project, devising a marketing plan on how to develop solar-powered houses on a large scale and who to sell them to. They will contribute their work to the steering committee for the North House project. North House is expected to cost about $1 million.