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## UW students hope for big win with solar house

By Terry Pender, Record staff

**KITCHENER** — A solar house designed in part by University of Waterloo students is now finished and ready for an international competition in Washington D.C. next month.

For many months a team of students from the schools of architecture and engineering at the University of Waterloo worked with their counterparts from Ryerson University in Toronto and Simon Fraser in Vancouver to produce an 800-square-foot house straight out of the pages of a science fiction novel.

Many team members gathered in Toronto on Sunday to celebrate the completion of the glass house, which is surrounded by a 3,500-square-foot cedar deck, before it is dismantled and packed into seven tractor trailers for shipment to Washington D.C.

It will be reassembled on the Washington Mall among other solar houses designed by university students from around the world that are competing in a prestigious event called The Solar Decathlon.

Maun Demchenko, a University of Waterloo student working on her Master's Degree in architecture, attended the Toronto event on Sunday that was held at MCM 2001 Inc., the Toronto based custom fabricator that did so much to bring the ambitious project to fruition.

"They have been totally amazing," Demchenko said of MCM 2001.

The Sustainable Forestry Initiative and other wood suppliers helped out in a big way as well. Gaggenau donated all the appliances. Massey Transport is hauling the house in seven trucks to Washington.

Demchenko and the team raised \$1 million in goods, services and cash. The team needs another \$500,000 in funding, but in a remarkable show of confidence the University of Waterloo has covered that, believing the money will be raised later when the house wins international acclaim.

"They know how important it is," Demchenko said. "They had faith in us."

The team's house has a flat roof supported by walls made of glass and solar panels. A computer called ALIS—automated living interface system—monitors the temperatures inside and automatically adjusts high-tech venetian blinds to regulate the house's temperature.

"It is a beautiful, highly creative, interactive project," Demchenko said.

The house produces more energy than it uses when the sun shines. That electrical surplus is produced at a cost of 15 cents a kilowatt hour. It is sold to the grid for 80 cents per kilowatt hour. During cloudy days it draws power from the electrical grid like a regular house.

"I really thing we are going to win," Demchenko said. "We have worked so hard."

Students and faculty from the University of Waterloo's school of architecture worked closely with their peers from across the spectrum of engineering—civil, mechanical and software.

"There are 10,000 people a day coming to the event, The Solar Decathlon," Demchenko said.

Leaders in government and industry tour the houses on display for several days.

The winners of the event will be announced on Oct. 16 in Washington.

After The Solar Decathlon the team plans to ship the house to Vancouver for the 2010 Olympics where it will be showcased to the world.

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North House Pictures

A digital rendering of the interior of the solar house designed in part by University of Waterloo students.



North House Pictures

A digital rendering of the novel solar house designed in part by University of Waterloo students.

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