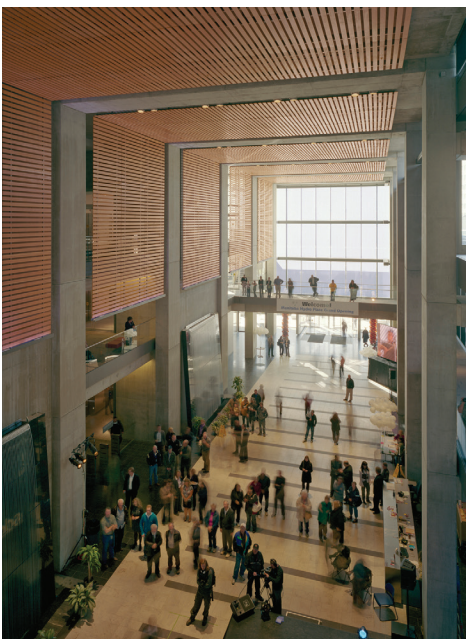


Red River College and Manitoba Hydro: Partnering for a Sustainable Future

Manitoba Hydro and Red River College (the Partners) have recently been awarded NSERC's prestigious Synergy Award for their decade-long collaboration around applied research projects focused on energy performance innovation in cold climates. The innovations and best practices they've developed have led to both local and global implications for sustainable buildings and transportation.



Enhancing the Energy Performance of Commercial Buildings

Manitobans have adapted to the province's harsh climate, but their buildings have failed to keep pace; this has resulted in crumbling facades, poor energy efficiency and major headaches for the building sector. It's these important problems that originally brought the two organizations together.

The Partners' first project was to construct what was to become the most energy-efficient office tower in North America – Manitoba Hydro's new headquarters. At the outset of the project, the College purpose-built its Centre for Applied Research in Sustainable Infrastructure building to allow for testing of many new building technologies, including the innovative current wall that is now featured in Manitoba Hydro Place. The completed office tower has since earned

many awards, including the Best Tall Building Americas Award for 2009 from the Council on Tall Buildings and Urban Habitat.

On the heels of the Manitoba Hydro Place project, the College received over \$2 million in NSERC funding to form the Sustainable Infrastructure Technology Research Group in 2009, which, with Manitoba Hydro's support, has undertaken several more sustainable building related projects.

The Partners' latest collaboration has led to the creation of the \$1.75-million NSERC-funded Building Envelope Technology Access Centre, which further builds on the College's capabilities in conducting applied research, testing and training related to a building's envelope.



Advancing Sustainable Transportation

The electrification of vehicles has presented a critical opportunity to reduce greenhouse gases (GHG), but how will the battery technology that powers these vehicles perform in a cold climate? That is the question the Partners have been answering since 2008, when they undertook one of the largest plug-in hybrid electric vehicle demonstrations that Canada had ever seen.

Building off of that project, in 2011 the College launched their Electric Vehicle Technology & Education Centre, which focuses on conducting applied research, education and training on electric vehicle technology. EVTEC's first major project led the Partners to form an international consortium that has since expanded to include New Flyer Industries,

Mitsubishi Heavy Industries (of Japan), the Province of Manitoba, Sustainable Development Technology Canada, and the Winnipeg Transit Authority; together, they are developing, prototyping, demonstrating and testing the all-electric battery transit bus and high capacity charging system, which is the first of its size in Canada.

Today, a total of six of these buses are in daily service in Winnipeg and Chicago and New Flyer has international pre-orders for many more. Each in-service bus leads to a reduction of 160 tonnes of GHG per year and a minimum fuel savings of \$425,000 over 12 years.

Visit rrc.ca/research to learn more or contact:

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