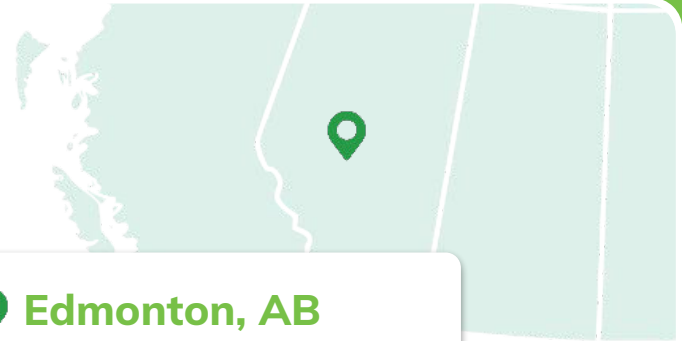


Higher Education Heat Pump



 **Edmonton, AB**

 **Educational services**

Project

The Climate Action Microgrant helped NorQuest College install a new Air-Source Heat Pump.

Benefits



Reduced carbon footprint



Reduced energy costs

Overview

NorQuest College is a comprehensive community college in Edmonton and the largest of its kind in Alberta. By serving students throughout the province with full-time, part-time, online, and face-to-face learning options, NorQuest helps learners with diverse educational backgrounds complete or further their studies through foundational programs. They offer post-secondary diploma and certificate programs, as well as continuing education options.

When one of the college's existing natural gas-fired hot water heaters failed, they realized this was an opportunity to replace their equipment with a greener alternative by installing an air-source heat pump (ASHP) hot water heater. The experience Norquest will gain in using air-source heat pump technology will also be valuable when the time comes to replace the remaining natural gas units on campus.

Higher Education Heat Pump



The Results

A traditional furnace or boiler burns fossil fuels (often natural gas) to generate heat. This not only releases greenhouse gases but it is also not perfectly efficient - consuming more energy than it releases as thermal radiation. A heat pump uses electrical energy to draw thermal energy into or out of a building. As a result, efficient heat pumps can deliver more heat energy than they consume as electrical energy. According to [Natural Resources Canada](#), a typical heat pump might transfer between 2.0 and 5.4 kWh of thermal energy for each 1 kWh of electricity it consumes.

In addition to expected operational cost savings over time, Norquest's new ASHP water heater will allow staff to gain experience with heat pump technology and judge broader suitability for NorQuest going forward.



Are you thinking of
a similar project?

It is important to **ensure appropriate electrical systems are in place** to support the new equipment.



Jason Schuller
Facilities Manager



Green
Economy
Leader



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Green Economy Canada helps local businesses to adapt and thrive in the low-carbon transition. We provide training, resources, and 1:1 support to help our members measure and reduce their carbon footprint while saving money, building their brand, and becoming the supplier and employer of choice. Join us in making business better, together. Contact us at info@greeneconomy.ca or visit our website at greeneconomy.ca to learn more.