



First Nations Health Care Staff Graduate Building Operator Certification Training Improving Technical Skills in James Bay Communities

A collaborative building operator and energy management training effort between the Canadian Coalition for Green Health Care (the Coalition) and the Weeneebayko Area Health Authority (WAHA) on James Bay has resulted in significant ongoing energy savings, improved health care facility infrastructure, reduced greenhouse gas emissions and greatly increased local energy management capacity in the remote northern First Nations communities of Attawapiskat, Kashechewan, Fort Albany, Moose Factory and Moosonee.

With funding support from Ontario's Independent Electricity System Operator (IESO), the Coalition, through its HealthCare Energy Leaders Ontario (HELO) initiative, was able to deliver Canada's first ever Building Operator Certification (BOC) training in a remote northern First Nations Community.

Energy behaviour change through education and capacity building is a relatively new concept that embeds technical knowledge within an organisation so that it continues to benefit for many years to come. It also ensures that maximum return is realized through energy retrofit and management projects and that savings will continue, rather than drift, over time. By training facility staff to be 'energy champions' it also serves to influence others within the organisation to follow suit and become involved in improving the environmental stewardship and climate change resiliency of their health care infrastructure.

According to JJ Knott, HELO Lead and BOC instructor, *"The BOC training has led to a new sense of pride and ownership among WAHA's First Nations facility staff who are now confident to tackle a much broader spectrum of building maintenance and retrofit tasks. Their previous reliance upon expensive fly-in technical support has been replaced by enthusiasm, competence and a newfound determination to make their building more energy efficient and climate change*



Newly minted graduates of Canada's first remote northern First Nation's Building Operator Certification Training program (l to r) include Mervin Weistche, Marcel Brazeau, Jean Arsenault, Sterling Trapper, Paul Corston, Wade Rickard and instructor JJ Knott from the Canadian Coalition for Green Health Care's HealthCare Energy Leaders Ontario (HELO) program.

ready, while ensuring the best possible treatment facilities for the First Nation's communities they serve."

The competency-based BOC training offered facilities personnel the opportunity to improve their technical expertise and job skills in a number of core areas including Energy Efficiency Operation of Building HVAC Systems, Measuring and Benchmarking Energy Performance, Efficient Lighting and HVAC Controls Fundamentals, Indoor Environmental Quality, Common Opportunities for Low-cost Operational Improvements, Facility Electrical Systems, and Operation and Maintenance Practices for Sustainable Buildings.

“We were excited when the Coalition requested our help in developing and deploying the BOC course in a remote northern First Nations community” said Mathieu Côte, Executive Director of the Canadian Institute for Energy Training (CIET <https://cietcanada.com>), the organisation responsible for BOC training in Canada. *“It was a first for us and we are very pleased with the results of having knowledgeable and empowered building operators now in the James Bay communities. We look forward to again working with the Coalition and their HealthCare Energy Leaders Canada team to continue bringing high quality energy management education and training to First Nations and remote northern communities, to help build internal capacity and to reinforce existing energy management knowledge and skills among First Nation’s community members.”*

WAHA leadership has been very important to this project’s success which has resulted in front line staff feeling more comfortable in taking on project design and application. This also led to a sense of pride and ownership in the projects that have been completed to date, and an enthusiasm to replicate these projects in all of the WAHA facilities. Significant energy savings have already begun to accrue.

A new summer boiler was installed at the Weeneebayko Hospital has reduced fuel consumption by 5% overall and steam trap audits were completed and corrections were made to systems accordingly. As well, condensate return lines from community housing steam distribution systems were re-designed, re-constructed, steam traced and re-insulated, contributing to a 40% gain in condensate return to the boiler systems.

Lighting retrofits have resulted in a reduction in electrical consumption of 600,000 kWh annually and a concomitant annual savings of \$90,000, while a window and door replacement project at the Weeneebayko Hospital resulted in a reduction of 76,000 litres of fuel oil and 41,000 kWh of electricity consumption providing an annual savings of \$121,000.

A new energy and expense tracking system has also been installed to assist in variance highlighting and expense monitoring and purchasing processes have been updated to emphasize energy efficiency criteria for equipment purchases and design with emphasis on ENERGY STAR® as well as adding consideration for re-use and recycling.

“The BOC training has helped make me more aware of possible [energy] savings to be had and helped develop better maintenance strategies” claimed one First Nations

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participant. Another submitted that the course *“provided knowledge of HVAC system, how to properly maintain and upkeep buildings and showed me other options to use to solve issues.”* Training also provided *“more knowledge about operations and maintenance of a building”* and helped better understand the *“planning and coordination of annual maintenance of building systems.”*

The Coalition is interested in replicating the success of this project in other First Nations communities across Canada and encourages those interested in energy efficiency and increasing local technical capacity to contact Kent Waddington at kent@greenhealthcare.ca

See also the Coalition’s Energy Management Best Practice Case Study #1 - *Assessment of Window Replacement Project at the Weeneebayko General Hospital* available at: <http://greenhealthcare.ca/northernenergy/>

Credits

We would like to thank the senior leadership team and the facility management staff at the Weeneebayko Area Health Authority for assisting us in the development of this Case Study and for their dedication to the ongoing education and capacity building of WAHA staff.

The Canadian Coalition for Green Health Care is Canada’s premier green health care resource network and is leading the evolution of green in Canada’s health sector as a national voice and catalyst for environmental change. Collaboratively we strive to reduce health care’s ecological impact from compassionate care delivery while providing a nurturing platform upon which to discuss and promote best practices, innovation, environmental responsibility and climate change resiliency. www.greenhealthcare.ca



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