

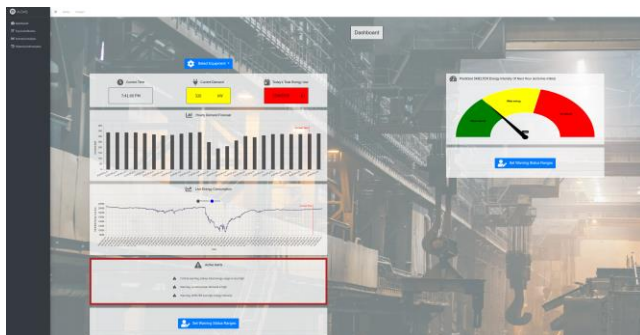
Artificial Intelligence – enabled Industrial Energy Management Information System

Grid Innovation Fund Project Details

Lead Proponent: Thorn Associates

Partners: XPS – Glencore Company, Baumen Mining Consulting Inc., Albatel Inc., Laure Bujouves, Dr. Amina Chebira

Strategic Area(s):	Enabling Non-Wires Alternatives
Project Total Cost:	\$436,250.00
Year Contracted:	2020
Status:	Active
Location:	Sudbury, Ontario
Economic Development:	5 jobs



AI Energy Management Information System (EMIS) dashboard

Project Objectives

The project aims to develop and deploy artificial intelligence to enable an Energy Management Information System (EMIS) in order to reduce energy consumption and peak demand at an Ontario mining facility. This will enable identification of previously unknown factors in electricity consumption and peak demand, including the weighting of these factors, as well as predicting the impact of changing parameters on electricity consumption and demand. The primary objective of the project is to validate the performance of the AI EMIS in real world conditions at a demonstration site and to demonstrate the business case for this technology.

Expected Outcomes

If successful, this project will examine the opportunity for the use of AI-driven EMIS at industrial facilities by proving energy consumption savings and peak demand reduction at the demonstration site of 10%, and bill savings of 10% that will improve over time. The quantification of electricity savings will be based on the International Performance Measurement and Verification Protocol (IPMVP) recommended procedures and it will also project the potential industrial province-wide savings using this technology.

The project's key outputs will include:

- Software report
- Energy baseline report
- Algorithm performance report
- Communications plan and implementation/scaling plan
- Training feedback report
- M&V report
- Final lessons learned report