

Laurentian University 2013 Report for Ontario Regulation 397/11 – Energy Conservation and Demand Management Plans

Overview

This document provides a brief background and summary of data reported under Ontario Regulation 397/11 – Energy Conservation and Demand Management Plans for Laurentian University. Results are presented using the Ministry of Energy's 2013 Energy Consumptions and GHG Emissions template (for the period of 2011), along with corresponding information for all pertinent facilities operated by Laurentian University.

Background

On January 1st, 2012, the Energy Conservation and Demand Management Plans Regulation (O. Reg. 397/11) came into effect under the *Green Energy Act 2009*. Under this regulation, all broader public sector (BPS) organizations, including Universities, are required to:

By July 1, 2013 submit:

- Energy consumption and greenhouse gas (GHG) emissions for 2011
- Corresponding facility information

By July 1, 2014 submit:

- Updated energy consumption and greenhouse gas (GHG) emissions for 2012
- Updated corresponding facility information
- A five-year Energy Conservation and Demand Management (ECDM) Plan
- Detailed costs and estimated savings for all proposed Energy Conservation Measures
- Identification of benchmark facilities
- Previous energy conservation initiatives (optional)

Results

Discussions involving other Ontario Universities and the Ministry of Energy, through the Ontario Association of Physical Plant Administrators (OAPPA) Energy Committee, identified that most institutions are unable to track consumption for separate buildings. This is the case at Laurentian University as sub-metering is not installed at each facility. As a result, electricity and natural gas consumption were reported for the University campus as a whole. Table 1 below summarizes the facilities at Laurentian University along with the total indoor floor area. Future sub-metering at all facilities will not only help to track consumption, but also provide the ability to analyze energy efficiency at each building. This will be discussed in the upcoming Laurentian University ECDM.

Table 1: Summary of Laurentian University Facilities

| Confirm consecutive 12-month period | 01-2011 to 12-2011 | | | | |
|---|--|---------|-------------|--|--|
| Type of Public Agency (Sector): | Post-Secondary Educational Institution | | | | |
| Agency Sub-Sector | University | | | | |
| Organization Name | Laurentian University | | | | |
| Operation Name | Address | City | Postal Code | Total Floor Area of the Indoor (m ²) | |
| RD Parker | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 13,022 | |
| Dining Assembly | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 6,159 | |
| Classroom Building | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 3,739 | |
| JN Desmarais Library | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 11,831 | |
| Science I | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 8,235 | |
| Science II | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 18,867 | |
| Animal Care Facility | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 512 | |
| Arboretum | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 193 | |
| Arts Building | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 5,391 | |
| Alphonse Raymond | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 9,726 | |
| Daycare | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 890 | |
| Education Building | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 6,697 | |
| Ben Avery (including Active Living Ctr) | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 15,823 | |
| NMR Lab | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 96 | |
| Stadium | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 821 | |
| Health Sciences Building | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 2,868 | |
| School of Medicine (NOSM) | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 6,313 | |
| Maintenance Building | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 2,036 | |
| Portables (8 - Parker, Sci 2, Ben Avery, Midwifery) | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 569 | |
| Living with Lakes | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 2,125 | |
| Watershed Center | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 518 | |
| University College Residence | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 5,402 | |
| Single Student Residence | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 11,364 | |
| Married Student Residence | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 8,464 | |
| West Court Residence | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 9,229 | |
| Thomeloe | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 3,098 | |
| University of Sudbury | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 10,024 | |
| Huntington | 935 Ramsey Lake Rd | Sudbury | P3E 2C6 | 5,238 | |
| Laurentian University Main Campus Total | | | | 169,250 | |

Below, Table 2 contains a summary of Laurentian University's energy consumption and GHG emissions for January 2011 through December 2011. The table outlines the total electricity and natural gas consumption for the organization, in addition to presenting the corresponding GHG emissions and average energy intensity across all sites. This energy intensity data is critical for benchmarking and identifying opportunities for future energy efficiency and conservation initiatives.

Table2: Laurentian University 2011 Energy Consumption Summary

| | | | | | |
|--|--|-------------------------|---------------------------|--|-------------------------------------|
| Confirm consecutive 12-month period | 01-2011 to 12-2011 | | | | |
| Type of Public Agency (Sector): | Post-Secondary Educational Institution | | | | |
| Agency Sub-Sector | University | | | | |
| Organization Name | Laurentian University | | | | |
| Operation Name | Energy Type and Amount Purchased and Consumed | | GHG Emissions (Kg) | Energy Intensity (GJ/m²) | Energy Intensity (ekWh/sqft) |
| | Electricity (kWh) | Natural Gas (GJ) | | | |
| Laurentian University | 18,274,089 | 124,211 | 7,599,839 | 1.12 | 28.97 |

*note that values reported in pilot submission, as well as in original and updated submissions, are different from the values reported here, as errors were identified.

Summary

The data contained in this report not only ensures Laurentian University is in compliance with O. Reg. 397/11 but also positions the organization for successful reporting and planning to complete 2014 requirements. The future ECDM and annual reporting under this regulation are fundamental in Laurentian University's continuous improvement strategies for energy management.