Audit Report

FACILITY NAME: TOWNSHIP HALL & COMMUNITY CENTRE

MUNICIPAL NAME: UNITED TOWNSHIPS OF HEAD, CLARA, & MARIA

DATE: 12 DEC 2012

Confidential & Proprietary

Prepared by: Ian Scott

E-mail: iscott@amo.on.ca
Phone:613-888-7858

LAS.on.ca

Contents

200 University Avenue, Suite 801, Toronto, ON., M5H 3C6
www.las.on.ca | 416.971.9856

Facility Overview

Municipality Name: United Townships of Head, Clara, & Maria

Facility Name: Township Hall & Community Centre

Item	Information
Facility Type	Office / community center
Year Built	n/a
Hours of Use	Office: 8:30-4 M-F
Area	4000 Square feet
Address	15 Township Hall Road, Stonecliffe, ON, K0J 2K0
Site Contact	Melinda Reith, CAO/Clerk
Phone Number	(613) 586-2526

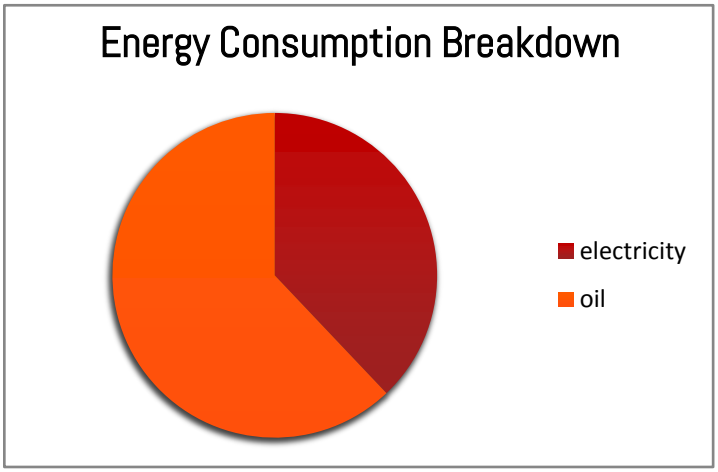
Current State Energy Performance

Energy Consumption

The following Summary of Energy Consumption is based on data from the period January 1 to 31 December 2011.

Energy Use Summary

Electricity	18513 kWh
Oil	30304 ekWh



Current Operating Practices

The building is used as the municipal offices, council chambers, library, and community hall. There are plans to expand the community hall and improve its energy efficiency. It is operated all year long, with the office portion seeing the most use during normal working hours. The library and hall are used on a reduced and more sporadic basis.

The operating set points for Heating, Ventilating and Air Conditioning (HVAC) systems are typically as follows:

- General space temperature: 22^{0}C Summer (office and library)
- General space temperature: 20^{0}C Winter (office, library, and hall)
- Setbacks are used however these are completed by manually setting the thermostats to the desired temperature during unoccupied times.

Recommended Energy Efficiency Measures

This section presents a high-level identification of potential energy saving measures that warrant investigation based on the site visit, discussions with building personnel and available incentives.

Opportunity	Description	Expected Savings[1]	Estimated Cost Range[2]	Incentive Available	Typical Payback (years)
Lighting	Replace remaining T12s with High Performance T8 lamps	Minimal	$1000-1500	$272	n/a
	Replace remaining incandescent bulbs with CFL	$30	$60	n/a	2 yrs
Controls	Install programmable thermostats	unknown	$300-$500	$50	unknown
HVAC	Propane conversion	$250-500	$12,000	n/a	24-48 yrs
	Air-source heat pump	$1000-$1300	$12,000	TBD	9-12 yrs
Building Envelope	Sealing & insulating fan opening in hall (west wall)	Unknown	Minimal	n/a	< 1 yr
	Seal & insulate both sides of library A/C unit during winter	Unknown	Minimal	n/a	< 1 yr

Notes

- [1] Noted savings and cost estimates are for reference only and are not guaranteed. Factors such as location of the municipality and scale of the opportunity may impact these figures.
- [2] Some savings are interrelated. Each savings value presented in this table represents the savings for each individual opportunity. Interrelation refers to combining opportunities, which may have a positive or negative financial impact on each respective opportunity. This impact must be evaluated separately prior to implementation to ensure accurate financial projections

Brief description

Lighting. The remaining T12's and incandescent lighting are not heavily used thus the savings from switching to T8 and CFL technology would be minimal. The T12 and incandescent lighting are however being phased out and switching these remaining lighting fixtures/bulbs will be required in the near future. Since the cost of replacing the incandescents with CFL is not very high the payback of this retrofit should occur within two years.

Controls. As the building occupants currently setback the temperature manually on the non-programmable thermostats, it is difficult to estimate the savings and resultant payback period for this retrofit. Installing programmable thermostats should however improve the chances that temperatures will be setback during unoccupied times and subsequently maximizing the savings from this measure.

HVAC. The propane conversion retrofit is recommended only when replacement of the current oil-fired equipment becomes necessary. At that time, an analysis of the current oil & propane prices should again be made to ensure that switching to propane still makes economic sense.

The air-source heat pump retrofit is recommended to implement during the upcoming expansion of the hall portion of the building. This retrofit would both provide cooling for the hall & library during the summer and the bulk of the heating during the winter months. Consideration should also be given to replacing the office air conditioner with this retrofit allowing for the office area to benefit from the lowered heating costs associated with an air source heat pump. Selection of the proper air-source heat pump for the building location and sizing is of utmost importance. Please see the NRCan webpage regarding air-source heat pumps for more information (http://oee.nrcan.gc.ca/equipment/heating/3678).

Building Envelope. A blower door test would be required in order to estimate the savings from completing both of the air sealing/insulating retrofits. The payback period however would be less than one year due to the minimal cost to implement this measure (which could easily be completed by municipality staff). In order to maximize the cost effectiveness of a blower door test, contracting for such a test should only be considered in conjunction with finding and sealing other leaks that may be present in the building envelope.

Next Steps

Once you have had a chance to review this document, please contact LAS to discuss which measures you wish to pursue and how we can help.

Ian Scott
Energy Efficiency Service Provider
Tel 613-888-7858
iscott@amo.on.ca