Services de santé de Chapleau Health Services

STRATEGIC ENERGY MANAGEMENT PLAN

2019-2024

Table of Contents

Introduction

The purpose of Services de santé de Chapleau Health Services' (**SSCHS**) energy conservation and demand management (CDM) plan and policies is to promote good stewardship of our environment and community resources. In keeping with our core values of efficiency, concern for the environment, and financial responsibility, SSCHS' energy conservation and demand management program will reduce overall energy consumption, operating costs, and greenhouse gas emissions. It will also enable us to provide compassionate service to a greater number of persons in the community.

In 2011, the Ontario government published a regulation made under the Green Energy Act, 2009. This regulation, which came into force on January 1, 2012, is titled Energy Conservation and Demand Management Plans (Ontario Regulation 397/11). It requires all broader public sector organizations to:
• Report on annual energy use and greenhouse gas emissions in designated buildings and facilities beginning in July 1, 2013 (for the prior year); and
• Develop and implement a five-year Energy Conservation and Demand Management Plan by July 1, 2014.

The Chapleau General Hospital division of Services de santé de Chapleau Health Services is subject to this regulation.

Energy consumption data is submitted annually to the Ontario Ministry of Energy through an internet reporting portal: https://extra.sse.gov.on.ca/sites/ENERGY-ECE/. It is also available publicly in printed form, upon request, and on SSCHS's website: http://www.sschs.ca.

This Energy Conservation and Demand Management Plan is publicly available on the corporation's website and is available in printed form as well, upon request. The Ontario Ministry of Energy has been advised that this plan has been completed, and has been given a link to the corporation's website, in order to refer to the plan.

Through past conservation and demand initiatives, SSCHS has achieved the following results from 2013 to 2018:

- 8.09% reduction in fuel oil use
- 9.43% reduction in electricity consumption

Results of Previous Measures from CDM Plan Posted July 2014

In July 2014, SSCHS developed goals and devised green initiatives in an effort to decrease the facilities annual energy consumption and resulting greenhouse gas emissions. The following activities, completed between 2014 and 2019, are associated with managing overall energy consumption, lowering annual operating costs, and reducing greenhouse gas emissions.

2014: Nursing Station Air Conditioning Upgrade

As the LTC nursing station was poorly serviced by the main HVAC system, a small AC unit was installed to allow better local control and less stress on the main AC unit. This project cost ca. $14,000.

2015: LED Light Retrofit

In the main hospital building all fluorescent and incandescent lights were replaced with LED, using grants and rebates for a total cost of $104,000.

2016: New Long Term Care (LTC) Air Conditioner and Air Handling Unit Upgrades

Prior to 2016 the air conditioning unit that services the LTC wing required constant maintenance and used obsolete coolant. Using ca. $49,000 in HIRF funding, SSCHS had a new two-stage air conditioner installed that is more effective and efficient. In 2018 an vibration dampening base was installed for the comfort of residents whose rooms are located below.

2016/17: Installed New Roof with Help from HIRF/ECP Funding

Prior to 2016/17, SSCHS' roof at 6 Broomhead Road was below the standard insulation value and experiencing multiple leaks, resulting in a large amount of the building's heat to be lost. With help from the Hospital Infrastructure Renewal Program (HIRP), SSCHS invested a total of $1.2 million to install a Sarnafil membrane roof with an up to date insulation rating of R34.
The construction began in October 2016 and was completed in March 2017.
Results of the upgrade include an increase in biosecurity as the new roof prevents leaks, decreasing risk of contamination in the hospital.

2017: New Long Term Care Windows

Continuing previous initiatives, SSCHS replaced older LTC windows with low-e argon, heat-reflective window using ca. $44,000 of HIRF funding.

2018/19: New Steam Boiler and Honeywell Control Panels

Using HIRF/ECP funding totaling $144,000, the 15 year old 1.5 million BTU steam boiler has been replaced with a smaller, more efficient unit. Using Foundation loans of $85,000, SSCHS will also be replacing the obsolete building automation system control panels and upgrading AHU controls to allow for more efficient and effective use of the HVAC system.

Energy Management Vision

SSCHS's Strategic Energy Management Plan has been set in the context of the organization's Strategic Plan. The Strategic Plan documents the corporation's current state and future vision, and sets out the strategic directions that will drive it toward achievement of the vision. The selection of these strategic directions has been made, in part, based on the organization's values.

The **Mission Statement** states the organization's current purpose: SSCHS is a rural integrated health care model providing a full spectrum of services.

The **Vision Statement** identifies what the organization desires to be: SSCHS intends to be a sustainable rural health care hub focused on safe, quality, effective, patient centred care.

The organization relies on its core **Values** to help when making choices. SSCHS values:

- *Engagement* - We engage our clients, patients, staff, partners and stakeholders in our decision making process.
- *Inclusiveness* - We respect the promotion of the social inclusion, individual choice, independence, dignity and individual rights.
- *Integrity* - We say what we mean and we mean what we say.
- *Compassion* - We show concern and care for others in all that we do.

Guiding Principles for Strategic Energy Management

In order to progress toward its Vision, SSCHS has selected four Strategic Directions to guide its actions from 2019 to 2024.

- *Patient-Centred Care and Patient* Safety - Our patients' care experiences and safety will drive our actions, decisions and priorities.
- *Sustainability* - We will have the necessary financial, capital and human resources to ensure the ongoing sustainability of the organization and the programs we offer.
- *Partnerships, Relationships and Communication* - We will have partnerships that are mutually beneficial and patient centred. We will provide rewarding opportunities in philanthropy and volunteerism. We will engage our patients, families, staff, partners and stakeholders.
- *Effective Governance* - We will ensure our board has the necessary skills and education to provide high quality leadership and governance to the organization.

The Strategic Energy Management Plan has been developed to support SSCHS in achieving its Vision. Its purpose is to contribute specifically to the achievement of the strategic directions concerning patient-centred care and safety, and sustainability by maintaining a clear focus on identifying and eliminating energy waste, wherever possible. Becoming more energy efficient will result in ongoing financial savings, which can be redirected to patient care or used in other ways to sustain the organization. It will also result in a smaller environmental footprint.

The process of becoming more energy efficient will rely on several different approaches, which will embed the commitment solidly within the organization:

- Reviewing and revising policies and procedures
- Improving infrastructure
- Benchmarking performance and seeking best practices and leading technologies

A secondary objective of the Strategic Energy Plan is to ensure the cost-effectiveness of the energy sources used.

Historical Energy Consumption and Cost

Chapleau General Hospital derives energy from three sources: electricity, oil and diesel fuel.

- Diesel fuel is used only to supply the emergency power generator.
- Oil is used for heat and domestic hot water.
- Electricity is used for all other purposes, including air conditioning and lighting.

Today, utility and energy related costs are a significant part of overall operating costs. SSCHS' annual energy consumption and related costs for **2018** were:

- Fuel Oil costs were $195,362 annually for 178,642 litres consumed.
- Electricity costs were $159,892 annually for 1,071,156 kw hours consumed.

The 2018 aggregate energy cost of the hospital, at $355,254, represents ca. 15% of operating expenditures that are not salaries, wages, benefits, remuneration and amortization. Of total budget expenditures, energy costs are ca. 3.5%.

Over each year of this four year review period:

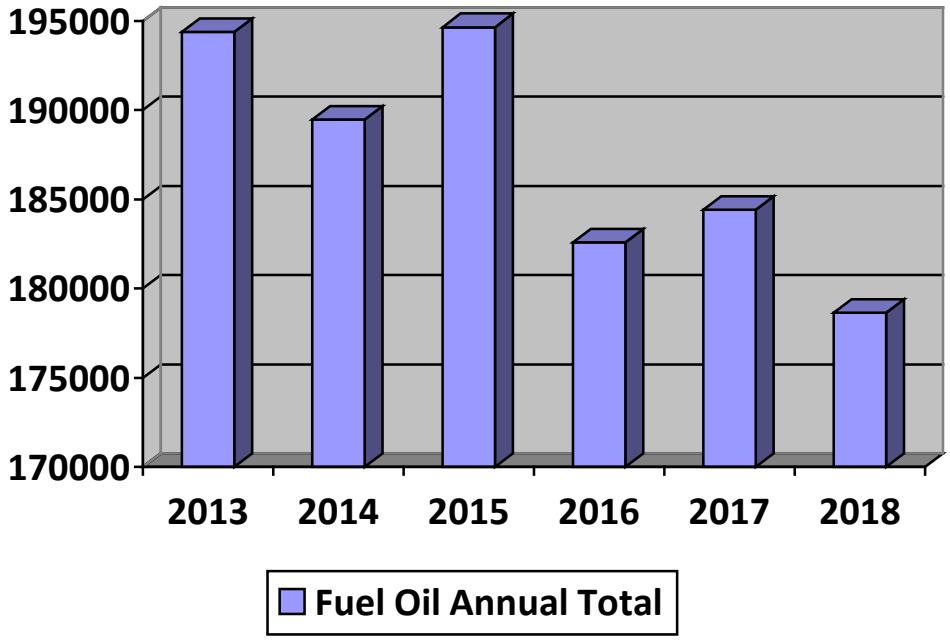
- Diesel fuel generally accounted for less than 1% of annual energy costs.
- Fuel oil accounted for 50 to 54% of annual energy costs.
- Electricity accounted for 45 to 49% of annual energy costs.

Increases in fuel and electricity prices have meant that reductions in usage have not always meant reduction in costs. However, without the energy saving initiatives that we have undertaken, our total costs would have grown much faster than they have.

In aggregate, hospital energy costs have ranged declined from $373,295 in 2014 to $355,255 in 2018, a 5% decrease in costs over time. Fluctuations in fuel prices, increases in electricity costs, and annual variations in weather are also determinants of energy costs.

Total Hospital Energy Consumption was as follows:

Annual fuel oil use has declined over the period of the previous CDM plan, as has the monthly average use.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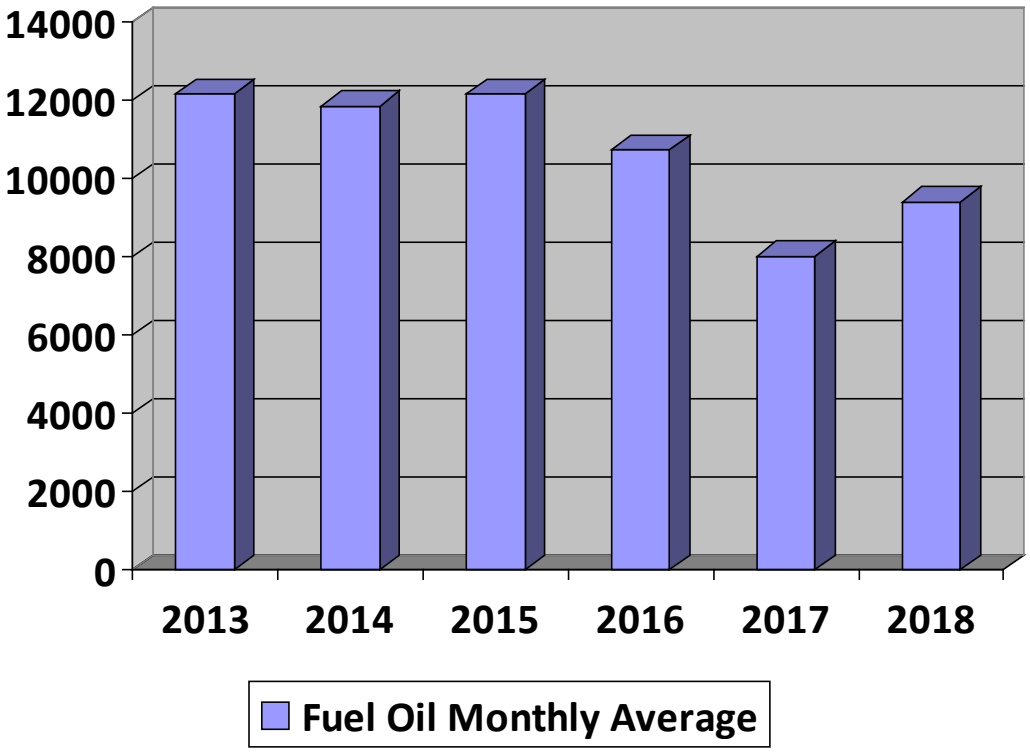
Fuel Oil Annual Total


14000
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2013
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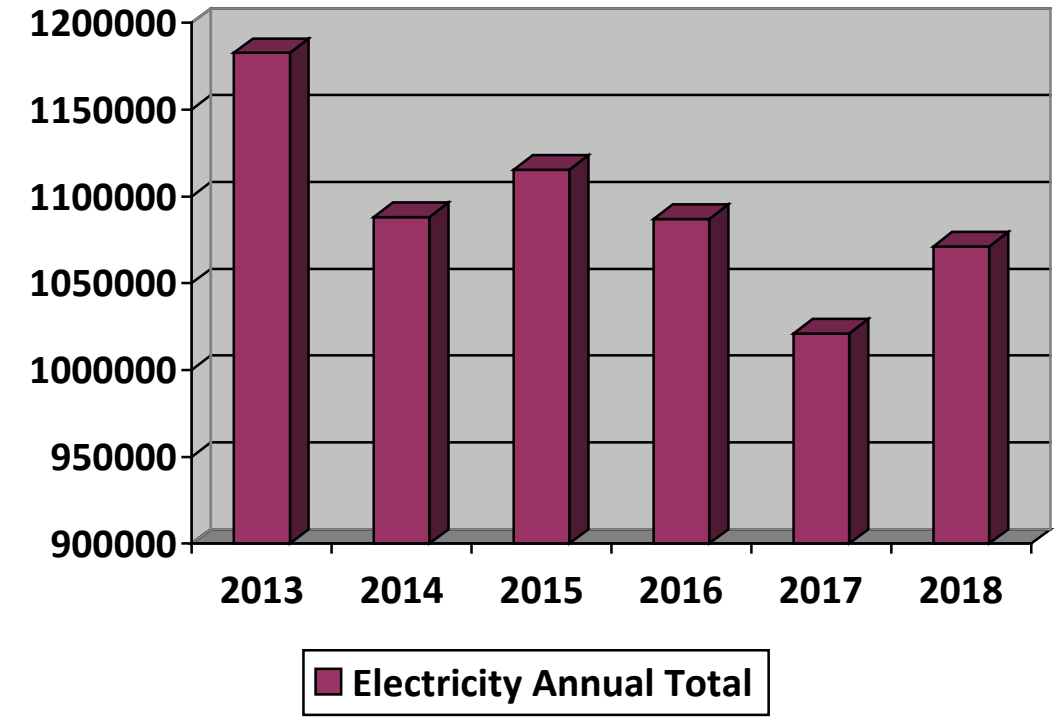
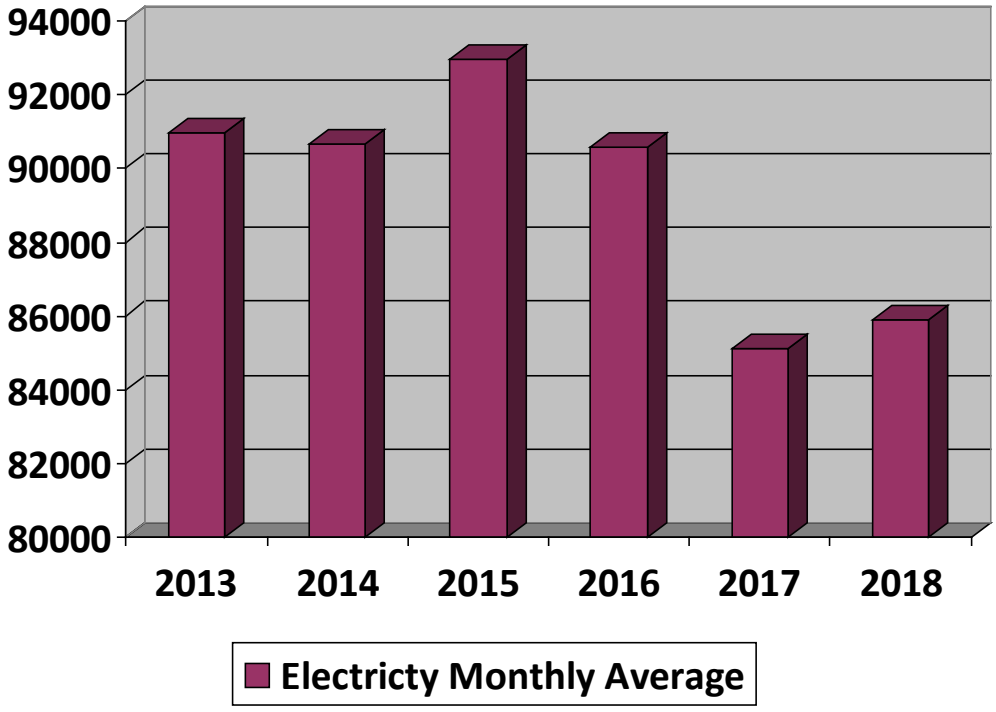
Fuel Oil Monthly Average

Total annual and monthly average electricity use has also declined from 2013 to 2018.





Energy Management Goals

Many of the goals identified in the 2014 SSCHS Strategic Energy Management Plan have been achieved, as can be seen from the general reduction in energy use over the past five years. The majority of the effort has gone into identifying and implementing energy saving infrastructure projects.

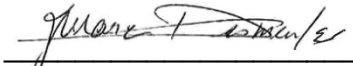
As we move forward, our goal will be to maintain and build on the progress that has already been made.

New goals for the next five years are:

- Reduce Idle Equipment Time. This may include physical controls such as timers on outlets and employee engagement.
- Develop a business plan for occupancy lighting sensors.
- Improve vehicle fleet management and coordination to reduce total mileage.
- Develop a business plan for a hybrid or all-electric vehicle for local deliveries and visits.
- Develop partnerships in the community to explore joint energy projects. This may include district heating, joint back-up generator capacity, solar installations, and joint micro power generation. Possible partners include the Algoma District School Board, Le Conseil scolaire de district catholique du Nouvel-Ontario, and the municipal government of Chapleau township.
- Develop an Energy Management policy that identifies key responsibilities for conservation stewardship. This could be combined with other environmental issues such as recycling, plastics use, water use and waste management. This policy should include exploring price management contracts with fuel vendors, possibly with the assistance of a Supply Chain Management firm.

Approval by Senior Management

This Strategic Energy Management Plan has been reviewed and approved by the Chief Executive Officer for Services de santé de Chapleau Health Services.



Jean-Marc Desmeules, Chief Executive Officer