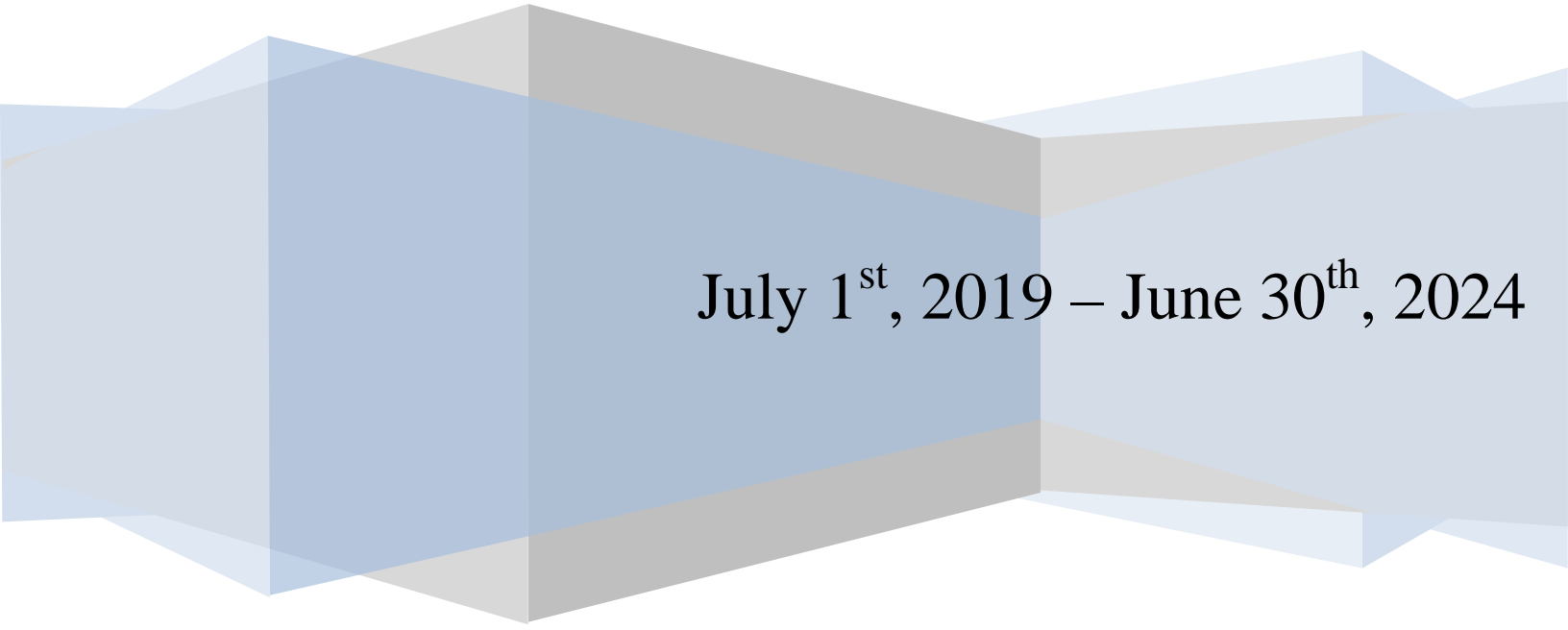


Perth and Smiths Falls District Hospital

**Energy Conservation and Demand Management Plan
Steve Trevena**



July 1st, 2019 – June 30th, 2024

Introduction:

The purpose of Perth and Smiths Falls District Hospital's (PSFDH) 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, PSFDH's 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. PSFDH will remain compliant with the new Electricity Act, O-Reg 507/18, same as we had in previous years under the Green Energy Act 2009, O-Reg 397/11

Goals and Objectives:

The Perth and Smiths Falls District Hospital (PSFDH) is committed to improving the efficiency of its energy consumption and to reducing Greenhouse Gas emissions (GHG). The Hospital has been proactive in the past and will continue its efforts to reduce GHG in the future with responsible stewardship of Hospital Infrastructure Renewal Fund (HIRF) and will continue to seek out other funding to further conserve resources.

Conservation Measures – Past and Planned:***GWM Site:***

In 2011 PSFDH entered into partnership with Honeywell Energy Solutions to reduce energy consumption and related costs at the GWM Perth Site. This Energy and Facility Renewal Project, which started in November 2011, was to reduce CO2 emissions by 296 metric tons per year, which is equivalent to removing 49 medium size cars from local roads.

The GWM Site Energy and Facility Renewal Project included such measures as:

- Power factor and power quality improvement
- Installation of high efficiency motors on select fans
- Expanding existing building automation systems c/w energy efficient control strategies
- Upgrading existing Building Automation Systems
- Improve the operations of air systems via zone dampers, variable frequency drives (VFD) and reduced run times
- Install VFD on heating/cooling pumps
- Replace existing cooling tower
- Install VFD on cooling tower
- Install low flow water fixtures & faucet flow moderators
- Weather strip doors and windows

Through business cases submitted to the LHIN during HIRF and HEEP funding cycles PSFDH was moderately successful with their submissions and were able to accomplish additional energy saving projects;

- Replacing Medical Air and Vacuum systems
- LED lighting in all patient care areas
- Replacement of roofs with increased insulation

The original projects were targeted to save **\$117,857** in annual utility costs upon completion of the individual measures.

As per Honeywell's Energy and Operational Savings Report dated May 30, 2018, total savings for the year 5 of the Guarantee Period (April 2017 to March 2018) of the Energy Performance Contract was **\$160,883** which was 131% of the guaranteed savings. The cumulative savings over the 5 year period was **\$871,681** and this represents 157% of the guaranteed energy and operational savings for the corresponding period of **\$554,470**.

Smiths Falls Site:

The Smiths Falls Site has just seen the completion of a redevelopment project in 2012 that saw the demolition of a building built in 1904, the construction of a new 58,000 sf. patient care wing and the renovation of the remaining 70,000 sf. buildings built in the 1950's and 1960's. As part of this redevelopment project, state of the art, energy efficient building service equipment has been installed in the Smiths Falls site.

Although the redevelopment of the Smiths Falls Site is almost a decade old, PSFDH continues working to identify further opportunities to reduce energy consumption and related costs at the Smiths Falls Site. PSFDH entered into an Energy and Operational Savings program with Honeywell in 2015 and it went live after the construction period was over in 2017. The measures implemented through this project were;

- LED lighting upgrade in commonly occupied spaces
- Variable Frequency Drive (VFD) installations on Air Handling Units (AHU)
- AHU time schedules for less energy use during unoccupied times
- Water conservation strategies with flow restrictors
- Building envelope sealing with weather strip

According to Honeywell's Energy and Operational Savings Report dated December 2018, the total guaranteed savings were **\$96,014** and the total achieved annual cost savings were **\$120,540**. This translates into 126% of the expected savings.

Summary:

The Perth and Smiths Falls District Hospital (PSFDH) has a track record of seeking opportunities to lower Operating Costs and will continue to work towards reducing them further. In turn, our carbon footprint will grow smaller as we reduce GHG emissions.

We will continue to work with our Energy Partners, the LHIN and The Ministry to find the funding we need to continue seeking out new technologies and strategies for further energy conservation while providing the exceptional patient care our communities have come to expect.

Attached please find;

- PSFDH annual energy use and GHG emissions for 2017
- Honeywell's Energy and Operational Savings Report dated May 30, 2018 (Perth site)
- Honeywell's Energy and Operational Savings Report dated December 2018 (Smiths Falls site)