

ENERGY AND CONSERVATION DEMAND MANAGEMENT PLAN

West Parry Sound Health Centre

2014-2019

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INTRODUCTION

The purpose of West Parry Sound Health Centre's (WPSHC) energy management plan is to promote good stewardship of our environment and community resources. In keeping with our core values of compassion, accountability, rights and responsibilities and excellence, West Parry Sound Health Centre's energy management program will reduce operating costs.

GOALS AND OBJECTIVES

West Parry Sound Health Centre's energy management will be guided by these principles:

Taking A Strategic Approach: While WPSHC actively manages energy costs by implementing opportunities as they are identified, by acting strategically, West Parry Sound Health Centre can significantly improve its energy-related performance. Internalizing energy management into our organization's every-day decision-making, policies, and operating procedures will help assure substantial and long-lasting reductions in energy use throughout West Parry Sound Health Centre.

Supporting Mission-Critical Goals: Strategic energy management will directly support West Parry Sound Health Centre's mission-critical goals of caring for the environment and the community; optimizing the healing and working environment; improving the hospital's financial bottom line by reducing unnecessary energy costs; optimizing the capacity of existing energy systems to meet current and expanding operational needs. The impacts of West Parry Sound Health Centre's energy management efforts on those goals will be tracked and reported wherever possible.

Pursuing Long-Term Change to Core Business Practices: The core of a strategic approach is the consistent incorporation of energy management into our organization's core practices and decision making such as the strategic planning and budgeting processes. Change in energy-related business practice will cover all applications of energy management – new construction and major renovations, existing facility operations and upgrades, and the economic analysis and procurement practices underlying these practices.

Using Available Resources and Assistance: Use national, regional, and local sources of strategic, technical, and financial assistance to help achieve our energy management goals.

ANNUAL ENERGY CONSUMPTION

As reported to the Ministry of Energy, our consumption for recent years is noted below.

YEAR	NATURAL GAS (cubic meters)	Electricity (KWH)	GHG Emissions (Kg)	ENERGY INTENSITY
2011	1,441,461	8,169,328	3,378,811.326	3.20502 GJ/m ²
2012	1,172,883	8,388,282	75,072.319	73.428 ekWh/sqft

COMPLETED PROJECTS

Since occupation of the current location of the West Parry Sound Health Centre in 2005, numerous projects have been undertaken that have realized energy and cost savings. These include

- Plant Boilers – 2009 - new program to control hot water boilers for staging operation for seasonal savings; annual savings of \$8,000
 - Plant Boilers - 2012 – automation programming extended leading to increased boiler efficiency; estimated annual savings of \$60,000
 - Plant Chillers – 2010 – bypass installed; estimated annual savings of \$15,000
 - Hot Water - 2010 – automation introduced; 2013 – lead lag program introduced
 - CO and CO2 Detectors – 2011 – installed; estimated annual savings of \$15,000 (less heat required)
 - Filters – 2011 – energy efficiency filters (Varicel M-Pak) installed on air handling units
 - Temperature Control – 2013 – reduced heat and air conditioning settings by approximately 1%
 - L.E.D. Lighting – 2014 – installation of L.E.D. (replacing fluorescent 400 Watt to 85 Watt L.E.D., 100 Watt to 19 Watt L.E.D. or 126 Watt to 14.5 Watt L.E.D.)
 - Main Lobby (WPSHC); annual savings of \$685
 - Main Lobby (Lakeland Long Term Care); annual savings of \$685
 - Canopy (WPSHC); annual savings of \$592
 - Canopy (Lakeland Long Term Care); annual savings of \$592
 - 110 resident rooms (Lakeland Long Term Care); annual savings of \$4,500
- TOTAL ANNUAL SAVINGS – realized by 2014 L.E.D. PROJECTS: \$7,000

PROPOSED MEASURES

PROJECTS / MEASURES

Goal: Establish Purchasing Specifications for Energy Efficient Equipment and Services

- Establish and consistently use purchasing specifications that minimize life-cycle costs for energy efficient equipment and services.
 - Establish efficiency specifications for standard equipment routinely replaced (e.g. lights, motors, and unitary HVAC equipment).
 - Establish efficiency standards for design and construction, and for building operations and maintenance services.

Goal: Actively Manage Energy Commodity

- Minimize utility costs and exposure to market risks. Utility costs include natural gas, electricity, water, and sewer.

- Participate in the energy/utility price management contracts.

Goal: Implement Cost-Effective Facility Upgrades

- Implement equipment and system upgrades where justified.
- Price bi-fuel system for internal generator (40%) to lower diesel consumption and increase supply time when using natural gas mixed with diesel; projected time frame: 2017-18; estimated cost: \$72,500; estimated savings: 10-15% fuel savings.
- Review re-commissioning air handling units and balancing air flows; projected time frame: 2016-17; estimated cost: \$48,800; estimated annual savings: \$15,000.
- Install additional variable drive on second chiller (or a bypass to use chiller towers for free air cooling); projected time frame: 2014-16; estimated cost: \$85,000; estimated savings: \$12,000 - \$15,000/yr.
- Upgrade building automation to schedule temperature night set-backs; projected time frame: 2017-18; estimated cost: \$25,000; potential savings to be measured and monitored.
- Review water consumption and tower water charges to sewer (charged from sewer when 1.4 million gallons are evaporated and not sent down sewer drains); local municipal approval required; projected time frame: pending approval; estimated cost: minimal; estimated savings: \$15,000.

Goal: Implement Lighting Upgrade Program

- Roll out replacement lighting (to L.E.D.) across the facility
- Timeframe: 2014-2018 (note completed locations documented above)
- Locations: (1) Parking Lots; annual savings of \$2,500
(2) Fourth Floor (flood lights); annual savings of \$7,720
(3) Corridor Lighting - \$1.00/bulb rebate + energy savings
(4) Patient Areas / Patient Rooms - \$1.00/bulb rebate + energy savings
(5) Outside Wall Scones – as replacement requires
(6) L.E.D. Signage – replace as required; 40% - 50% savings

PLAN AVAILABILITY

The WPSHC Energy and Conservation Demand Management Plan is available at www.wps hc.com. Follow the link under “About Us / Policy & Agreements”. Paper copies are available upon request from Administration or Environmental and Support Services.

PLAN APPROVAL

The C.E.O. of the West Parry Sound Health Centre reviewed and approved this plan on

JUN 24 2014

Donald Sanderson, CEO, West Parry Sound Health Centre