



Conservation and Demand Management Plan



July 1, 2014

Hôpital de Mattawa Hospital (the Hospital) is a 19-bed facility that provides acute, complex continuing care, outpatient clinics and ambulatory services. Services are delivered from a relatively new facility where occupancy began in the fall of 2008.

Ontario Regulation 397/11 requires all broader public sector (BPS) organizations to report annual energy use and greenhouse gas (GHG) emissions in designated buildings/facilities, and to develop a Conservation and Demand Management (CDM) plan. Organizations of the BPS include hospitals, municipalities, universities, colleges, school boards and municipal service boards responsible for water and sewage treatment and pumping operations. This regulation requires that:

- By July 1, 2013: 2011 energy consumption data must be reported to the Ministry of Energy (Hospital is compliant);
- By July 1, 2014: 2012 energy consumption data must be reported to the Ministry of Energy (Hospital is compliant);
- By July 1, 2014: develop and post a five-year energy conservation and demand management plan (Hospital is compliant).

The Hospital's Energy Consumption and Greenhouse Gas Emissions Reports for 2011 and 2012 are available on our website or hard copies may be picked up from our Registration Office.

Conserving energy saves money, lowers demand on the electric system and helps reduce greenhouse gas emissions that contribute to climate change and global warming. In symmetry, with Ontario's Long-Term Energy Plan, the Hospital strives to put conservation first. The Senior Management Team's (SMT) awareness and support accentuate positive results through the following goals and objectives over a five-year period:

- audit energy usage;
- re-commission various mechanical systems;
- recognize conservation in life-cycle-management (LCM) strategy and capital planning;
- incorporate energy conservation into policies;
- create an Energy Conservation Task Force (ECTF);
- re-evaluate and adjust our approach to suit developing information.

The CDM plan will include evolutionary technical and behavioural strategies using information obtained through a period of assessment and development to guide future conservation measures. The Hospital has recently engaged in a facility condition assessment. Information identified in the survey will contribute to LCM initiatives and capital planning. Our commitment to energy conservation will be reflected in trending and analyzing current energy use, education and information sharing, retrofit planning, technical operations, and future new construction design and techniques. Cost and savings estimates for proposed energy conservation projects will be evaluated with consideration for fiscal responsibility. SMT aligns prioritized commitments with energy-savings opportunities and encourages wide-spread engagement and participation for maximized effect.

Trending and analysis will include metering and benchmarking. Demand management efforts will be most effective when peaks and times of high energy use are determined, quantified and targeted. An energy audit using spot tests with in-house equipment is ongoing.

Energy conservation may become a standing item on committee meeting agendas to help educate and share information. Everyone will be involved as the commitment is continuous and the more hands involved, the greater the impact. A program will be

developed to educate staff and visitors, generate participation, and monitor results. It will include encouragement towards conservation and efficiency measures such as reducing solar gain and heat load through efficient management of window shades and conserving energy by guiding power consumption, habits of lighting, space heaters, appliances, computer devices and engine block heaters.

Retrofit projects may originate from equipment audits and assessment for energy saving potential. Equipment replacements identified in the building condition report and life-cycle analysis will specify premium efficient motors and appliances rated with high energy efficiency. We will hold energy efficiency as a scoring factor when engaged in competitive pricing evaluation. We will review function and application of systems prior to purchasing replacement equipment to ensure the equipment remains matched to the duty. Energy-savings retrofits will be determined from payback analysis and incentive options. We will be working directly with our utility suppliers to realize benefits from available energy efficiency audit and retrofit incentives. Two examples of conservation-type projects to be examined are: retrofitting existing air-handler intakes with solar walls for pre-heat, address facility humidification requirements with instantaneous local production rather than central standing feed.

Technical operations will realize energy consumption reductions and operating efficiency from conducting a re-commissioning of several mechanical systems and control sequences. Areas of opportunity include: BAS end-device calibration, supply air mixing, fresh air intake, central and local exhaust systems, lighting levels, lighting controllers, occupancy sensors, humidification, proportional reset, variable frequency drives, and setback mode. Suitability and effectiveness of the Hospital participating in the Hydro One Demand Response Program will also be evaluated.

Facility Planning and Construction Management policies and procedures will hold consideration for sustainable development and green practices. Policies and construction documents will be reviewed to incorporate: green demolition, use of environment friendly products and renewable materials, energy conservation practices, and VOC and greenhouse gas emission limitation. Future construction planning for the Long Term Care Home redevelopment and completion of the single-site community health hub will seek to identify and leverage new opportunities and technologies that will increase energy efficiency.