



## **STRATEGIC ENERGY MANAGEMENT PLAN**

***MICs Group of Health Services***

***2014 to 2019***

***Anson General Hospital  
Bingham Memorial Hospital  
Lady Minto Hospital***

## *MICs Group of Health Services*

# **STRATEGIC ENERGY MANAGEMENT PLAN (SEMP) FOR 2014 TO 2019**

### **TABLE OF CONTENTS**

- Introduction
- Energy Management Vision
- Guiding Principles for Energy Management
- Business Case for Strategic Energy Management
- Business Proposition
- Energy Management Goals and Objectives
  - Goal: Obtain Organizational Approval of SEMP and Commitment of Resources
  - Goal: Implement Financial Practices and Decision Making Processes; Establish Funding Resources
  - Goal: Implement Strategic Energy Management Practices
    - Purchasing/Procurement Procedures and Specifications
    - Enhanced Design & Construction Practices
    - Enhanced Facility Operating Practices
    - Cost-Effective Facility Upgrades
    - Active Commodity Management
  - Goal: Monitoring, Track, & Improve Performance
- Timeline and Responsibilities for Plan Adoption and Implementation

## Introduction

The purpose of The MICs Group of Health Services energy management plan and policies is to promote good stewardship of our environment and community resources. In keeping with our core values of Efficiency and Financial Responsibility, The MICs Group of Health Services energy management program will reduce operating costs and enable us to fulfill our vision to “provide quality, safe integrated health services for the MICs communities by facilitating the right care, at the right place and the right time”.

- Utility and energy related costs are a significant part of overall operating costs
  - Reducing energy costs will provide more dollars towards direct patient/resident care
  - MICs capital project costs are projected at \$2.5 million over 5 years
- With energy management an integral part of business decisions, The MICs Group of Health Services can expect the following:
  - reduction in energy use while maintaining our services and patient satisfaction
  - savings annually to the bottom line
  - Energy investments will get a Board and Senior Management approved internal rate of return (IRR)
- Recent activity associated with managing these costs include the following
  - Conversion of T12 fluorescent lamps and magnetic ballasts to T8 fluorescent lamps and electronic ballasts
  - Conversion of Mercury Vapour and Metal Halide parking lot lighting to LED
  - ‘saveONenergy’ applications for new lighting incentives
  - upgrade of Building Automation systems
  - Conversion of incandescent lamps to compact fluorescent and LED
  - Steam trap surveys and repairs associated with the survey
  - Energy Audits
  - Replacement of motors with high efficiency motors
  - Installation of variable speed drives
- To further strengthen and obtain full value from energy management activities, a strategic approach will be taken: the organization will fully integrate energy management into its business decision-making, policies, and operating procedures.
- Active management of energy related costs and risks in this manner will provide a significant economic return to the organization and will support other key organizational objectives.

## **Energy Management Vision**

The MICs Group of Health Services mission statement is ‘to meet health care needs locally and/or facilitate access to appropriate services by working with our partners to strengthen the care continuum in North East Ontario’.

We consider our facilities as a primary source of giving care and an important part in the healing process. A key component is the ability to maintain and operate our facilities efficiently and effectively. By reducing our energy costs we will be able to direct more resources to the direct client care. In lowering these costs we are also reducing our environmental footprint to create a healthier environment.

Our energy management mission is to eliminate energy waste by policy, procedures or infrastructure improvements wherever possible and embracing best practice and technology changes.

## Guiding Principles for Strategic Energy Management

The MICs Group of Health Services energy management will be guided by these principles:

**Taking A Strategic Approach:** While The MICs Group of Health Services actively manages energy costs by implementing opportunities as they are identified, by acting strategically, The MICs Group of Health Services 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 The MICs Group of Health Services.

**Supporting Mission-Critical Goals:** Strategic energy management will directly support the MICs Group of Health Services 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 The MICs Group of Health Services 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.

**Fostering Organizational Commitment and Involvement:** Executive and organizational commitment and involvement is critical to successful strategic energy management. Top management at The MICs Group of Health Services will work with facility managers and other key staff to ensure that adequate organizational support and resources are provided to maximize the benefits of energy management to The MICs Group of Health Services. energy management will be integrated into the strategic planning and capital budgeting processes.

**Obtaining Solid Economic Returns:** Energy management investments will yield solid economic returns that meet The MICs Group of Health Services standard Internal Rate of Return and Return on Investment requirements applied through the hospital's capital budgeting process. The MICs Group of Health Services will apply consistent financial analysis methods that consider life-cycle to reduce total cost of facility ownership and operation.

**Using Available Resources and Assistance:** Use national, regional, and local sources of strategic, technical, and financial assistance to help achieve our energy management goals. These include local utilities, government programs, Canadian Healthcare Engineering Society, Ontario Power Authority and EnerCan.

## **The Business Case for Strategic Energy Management**

Below are the central business arguments for The MICs Group of Health Services pursuit of strategic energy management. Section VI then presents the business proposition – the results of analysis of the energy efficiency opportunities and their associated costs and internal rate of return.

### ***Strengthened Community Leadership and Environmental Stewardship***

Energy management is a visible, public commitment to the community and environment. Through aggressive energy management, the MICs Group of Health Services can provide leadership in promoting sustainable communities, efficient business practices, and environmental stewardship. This is an excellent opportunity to provide leadership and reduce costs at the same time.

### ***Enhanced Healing and Working Environment***

In existing facilities, efficient operating practices improve patient as well as employee comfort with more stable air temperature, and better indoor air quality and lighting. Recent research has found that daylight eases surgical pain and contributes to substantial savings in pharmacy costs.

### ***Improved Financial Health and Operating Cost Reduction***

Strategic energy management presents a highly leveraged opportunity to reduce operating costs and positively impact The MICs Group of Health Services bottom line. Dollars of operating cost savings directly improve the operating margin. Further, investments in energy projects typically have a lower risk of performance over time relative to other investments and savings from energy projects are easier to forecast reliably than savings or revenue increases expected from more variable investments.

### ***Optimization of Capacity to Meet Current and Expanding Operational Needs***

Energy efficiency optimizes inefficient or poorly designed and operated equipment/systems so wasted energy system capacity can be reclaimed for current and expanding operational needs. This “free capacity” can eliminate the need to add major new energy capacity and be much less expensive.

## **Business Proposition**

- If energy management considerations are integral to relevant business practices, policies, procedures, and decision-making processes, The MICs Group of Health Services energy-related costs can be reduced over a 5-year period.
- Integration of energy management into organizational decision making and business practices will continue to produce value annually for a much longer period of time.
- To support the achievement of these financial benefits, The MICs Group of Health Services will invest in energy-related capital and operating improvements, meeting an Internal Rate of Return (IRR) that is acceptable to the Board of Directors and Senior Management.

## • Energy Management Goals

- Establish baseline Energy Performances for all MICs Group of Health Care Facilities; utilize these baselines to establish achievable targets and goals each year.
- Develop an Employee Engagement Program to educate Team Members to consider Energy Management in their daily routines, i.e. turning off lights, computers, etc
- SEMP Approval, Resources to Implement
- Implement Financial Practices and Decision Making Processes; Establish Funding Resources
- Implement Strategic Energy Management Practices
  - Purchasing/Procurement Procedures and Specifications
  - Enhanced Design & Construction Practices
  - Enhanced Facility Operating Practices
  - Cost-Effective Facility Upgrades
  - Active Commodity Management
- Monitoring, Track, & Improve Performance

### **Goal: Establish Utility Baselines for each of our facilities**

- Review annual utility usage and establish the baseline for each facility
- Use these baselines to establish achievable targets

### **Goal: Educate Team Members**

- Provide education to Team Members on the use of our utilities and how to make savings a common practice in the day to day operations

### **Goal: SEMP Approval, Resources to Implement**

- Executive approval and resources to support initiatives
- Support from key staff (financial management, purchasing/procurement, construction, building operations, etc.).
- Creation of mechanisms/processes to make resources available.
- Clarification and communication of staff roles and responsibilities, performance goals, and energy management reporting.

### **Goal: Implement Financial Practices and Decision Making Processes**

- Money spent to achieve energy efficiency is viewed as an investment, not a cost.
- Financial decision makers consistently use life cycle cost analysis (LCCA) on all new construction, major renovations, and equipment replacements over lowest cost.
  - Internal rate of return (IRR) as approved by the board
  - Train staff on life cycle cost analysis and financial requirements and decision making process.
- Decisions about energy management investments will be part of The MICs Group of Health Service 5 year capital budget planning process

### **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 guidelines that apply LCCA for custom equipment purchases (e.g. chillers).



- Establish efficiency standards for design and construction, and for building operations and maintenance services.

**Goal: Implement Enhanced Design & Construction (D&C) Practices**

- Implement improved new construction practices in all projects that specify early team collaboration and “integrated design” (ID).
  - Integrated design required for funding.
  - RFPs, contract terms & conditions, & fee structures will support ID.
  - Apply LCCA and financial hurdle rates described above to design decisions.
  - Apply established purchasing procedures and specifications.
  - Include incentives and tax credits wherever available.
  - Educate all owner’s project managers or construction managers and contractors on integrated design and their respective roles in master planning pre-design, design, construction, testing, commissioning, and monitoring.
- Set and meet clear energy performance targets for new buildings; measure and improve over time.
  - Establish baseline for measuring performance goals (e.g. code, or national reference standards like ASHRAE 90.1).
  - Set targets for
  - Measure performance and improve over time.
- Specify commissioning as a standard procedure.
  - Retain the services of an independent third-party commissioning agent.
  - 100 percent of fundamental building systems and elements will be designed, installed, and calibrated to operate as designed.
  - Design team, commissioning agent, and building operators will work closely throughout the design process and occupancy to ensure good transition.

**Goal: Improve Building Operating Performance**

- Equipment tune-up and improved operations and maintenance (O&M) will achieve the following results while supporting patient care, and facility comfort and safety.
  - Achieve reductions in operating costs for existing facilities in the next 5 years and continue to improve each year thereafter years thereafter.
  - Reduce the system-wide Energy Use Index (EUI). The EUI will be adjusted for variances in patient days and IT intensity.
  - Reduce energy consumption.
  - Improve ENERGYSTAR rating

**Goal: Implement Cost-Effective Facility Upgrades**

- Implement equipment and system upgrades where justified by life-cycle cost analysis.
- Expand use of qualified service providers as needed. Develop standard RFP documents, contract terms, and reporting standards.

**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 regulatory process.

**Goal: Monitor, Track, and Reward Progress**

- Track progress on SEMP
- Track energy reductions annually.
- Reward staff for successes.