



Joint Strategic
Energy Management
Plan for
Listowel Wingham
Hospitals Alliance

2014



JOINT STRATEGIC ENERGY MANAGEMENT PLAN FOR LISTOWEL WINGHAM HOSPITALS ALLIANCE FOR 2014

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 Listowel Wingham Hospitals Alliance (LWHA) energy management plan and policies is to promote good stewardship of our environment and community resources. In keeping with our facilities values of Efficiency and Financial Responsibility, LWHA's energy management program will reduce operating costs and enable us to provide compassionate service to a greater number of persons in the community. This energy management plan keeps LWHA compliant with the reporting requirements of the Green Energy Act, 2009 – O. Reg. 397/11

- Utility and energy related costs are a significant part of overall operating costs
 - Utility costs in 2012/13 fiscal year were \$340,410 for Listowel Memorial Hospital (LMH) and \$247,474 for Wingham and District Hospital (WDH).
 - The Hospital's Energy Use Index (EUI) for LMH was 72.3 ekWh/ft² and for WDH was 66.6 ekWh/ft².
 - Facility related operations and maintenance costs are \$902,000 annually for LMH and \$788,000 annually for WDH
 - Facility capital project costs are projected at \$1,500,000 over 5 years for each facility.
- With energy management an integral part of business decisions, LWHA can expect the following:
 - 3% reduction in energy use
 - \$10,212 annually to the bottom line (\$102,120 over 10 years) for LMH and \$7,424 annually to the bottom line (\$72,240 over 10 years) for WDH
- Recent activity associated with managing these costs include the following:
 - A recently completed Energy Audit for both LMH and WDH through Agviro Inc.
 - Interior lighting retrofits such as T8 lighting throughout the hospitals and LED lighting retrofits in the main entrance.
 - Insulating boiler blow down separator and related piping
 - Insulating and sealing exterior walls
 - Replacement of some exterior doors
- 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

Listowel Wingham Hospitals Alliance mission statement is “Best possible care for the people we serve”. Our vision statement is “Leaders in fully integrated rural hospital-based services”.

Because of our mission and vision statements we consider our facilities a primary source of giving care, an integral part of the healing environment. The key to this equation is the ability to use our facilities efficiently and effectively.

LWHA’s energy management vision is: Responsible energy management by eliminating waste wherever possible through policy and process changes, ongoing infrastructure improvements and utilizing best practice and technology.

Guiding Principles for Strategic Energy Management

LWHA's energy management will be guided by these principles:

Taking A Strategic Approach: While LWHA actively manages energy costs by implementing opportunities as they are identified, by acting strategically, both hospitals can significantly improve their 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 Listowel and Wingham Hospitals.

Supporting Mission-Critical Goals: Strategic energy management will directly support LWHA's goals of caring for the environment and the community. It will also help the hospitals optimize 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 LWHA'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 operational 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. Senior management at LWHA will work with the facility manager and other key staff to ensure that adequate organizational support and resources are provided to maximize the benefits of energy management. Energy management will be integrated into the operational planning and capital budgeting processes.

Obtaining Solid Economic Returns: Energy management investments will yield solid economic returns that meet LWHA's expectations for Internal Rate of Return and Return on Investment. LWHA will apply consistent financial analysis methods that consider life-cycle to reduce total cost of facility ownership and operation.

Using Available Resources and Assistance: Listowel Wingham Hospitals Alliance will use national, regional, and local sources of strategic, technical, and financial assistance to help achieve our energy management goals. These include programs offered by local distribution companies, the Ontario Power Authority, ENERGYSTAR, saveONenergy, the Canadian Coalition for Green Health Care, The Canadian Healthcare Engineering Society and EnerCan.

The Business Case for Strategic Energy Management

Below are the central business arguments for LWHA's pursuit of 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 hospital can provide leadership in promoting sustainable communities, efficient business practices, and environmental stewardship. This provides 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. In new facilities more daylight and personal control of comfort contribute to a healing and patient-focused environment, and an improved working environment. 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 LWHA's 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

By optimizing inefficient or poorly designed equipment/systems, wasted energy can be reclaimed for current and expanding operational needs. Freeing up capacity can eliminate the need to add new infrastructure which can lower future spending.

Business Proposition

- If energy management considerations are integral to relevant business practices, policies, procedures, and decision-making processes, LWHA's energy-related costs can be reduced by an additional 3% over a 5-year period.
- Based on 2013 utility rates, this will result in \$17,636 in annual value to the bottom line based, or a total \$88,180 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, LWHA will invest in energy-related capital and operating improvements, meeting an Internal Rate of Return (IRR) of 10% or better.
- Through procurement, project management, communication and training, LWHA will be able to directly support the current strategic energy management plan.

Energy Management Goals

Energy management goals that will be adopted by Listowel Wingham Hospitals Alliance are as follows. They include, but are not limited to:

- 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: SEMP Approval, Resources to Implement

- Executive approval and resources.
- Support from key staff (financial management, purchasing/procurement, construction, building operations, maintenance, 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 “pre-approved” by the hospital board and administration.
 - Train staff on Life Cycle Cost Analysis (LCCA) and financial requirements and decision making process.
- Decisions about energy management investments will be part of LWHA’s high-level, long range process of budgeting for capital and operations.

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.
 - Measure performance and improve over time.
- Specify commissioning as a standard procedure.
 - 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 by an average of 3% over 5 years and continue to improve by 1/2% per year for 5 years thereafter.
 - Reduce the system-wide EUI from 72.3 ekWh/ft² to 70 ekWh/ft² for LMH and 72.9 ekWh/ft² to 71 ekWh/ft² for WDH by 2019. The EUI will be adjusted for variances in patient days and IT intensity.
 - 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.