Energy Management Plan

Town of South Bruce Peninsula

January 1, 2024 to December 31, 2029

Energy Management Plan

January 1, 2024 to December 31, 2029

Table of Contents

A. Commitment

1. Declaration of Commitment

1.1 The Town of South Bruce Peninsula (the Town) is committed to energy management as a key component of its operations.

1.2 The Town understands the social, environmental and financial implications of energy management and continues to strive to improve its energy footprint in a responsible way.

2. Vision

2.1 The Town strives to continue to reduce energy consumption through the wise and efficient use of finite resources, while still maintaining an efficient and effective level of service for citizens.

2.2 The continued attention to the reduction of energy consumption will be a collaborative staff and Council effort to improve the awareness and understanding of energy management within the Town.

3. Policy

3.1 The Town will continue to work toward incorporating energy efficiency into all areas of the organization and will in particular, pay close attention to procurement practices, financial management, investment decisions, facility operations and facility/equipment maintenance.

4. Goals

4.1 The Town will continuously improve the energy efficiency of our facilities and processes to reduce our operating costs, our energy consumption and the associated greenhouse gas emissions.

4.2 Staff will be provided with the equipment and knowledge required to reduce energy consumption and demand in the facilities they manage.

4.3 The Town will continue to implement energy-saving retrofits in facilities, where it makes sense.

4.4 The Town will ensure that renovation and construction projects embody best practices in energy efficient design.

4.5 Staff will purchase more equipment, vehicles and other items which have energy efficiency ratings.

5. Overall Target

5.1 The Town acknowledges that 5% of the Town's electricity consumption was attributed to renewable sources by 2023.

5.2 The Town believed that a consistent reduction of consumption of fuels and electricity in all municipal operations by an average of 1% per year between 2019 and 2023 from the 2016 levels is achievable through the replacement of vehicles and equipment with more modern and efficient products.

5.3 The Town believes that it is realistic to reduce total energy consumption in municipal facilities by 3% over the next five years.

6. Objectives

6.1.1 To undertake energy audits in municipal facilities over the next five years, where funding permits.

6.1.2 To implement recommendations in energy audits, as funding permits and where practical.

6.2 To meet the requirements of 507/18: *Broader Public Sector: Reporting and Conservation and Demand Management Plans.*

6.3 To improve energy management in Town operations.

6.4 To promote sustainable energy use by exploring the use of renewable energy in the form of solar panels.

B. Organizational Understanding

7. Our Municipal Energy Needs

7.1 The Town needs reliable, low-cost, sustainable energy sources delivering energy in order to sustain efficient facilities.

7.2 It is essential for the Town to do its utmost to reduce energy consumption and consider cleaner sources of energy generation whenever possible to minimize the economic, environmental and social outcomes of this energy use.

8. Stakeholder Needs

8.1 Internal stakeholders (Council, Chief Administrative Officer, staff) need to be able to clearly communicate the Town's commitment to energy efficiency, and to develop the skills and knowledge required to implement energy management practices and measures.

8.2 External stakeholders (the Province, Community Citizens and Groups) need the Town to be accountable for energy performance and to strive to minimize the energy component of the costs of municipal services.

9. Municipal Energy Situation

9.1 The Town recognizes that energy management is essential for the effective and efficient operation of facilities and delivery of services.

9.2.1 The Town currently utilizes electricity, natural gas and propane to power and heat our facilities, operate outdoor lighting and treat and transport wastewater.

9.2.2 Solar power is used for the operation of paid parking machines and to light gateway branding signage.

9.3 Electricity is provided by Hydro One and natural gas is provided by Union Gas.

9.4.1 Most municipally owned buildings have one meter for electricity and one meter for natural gas with the exception of certain facilities that house commercial tenants.

9.4.2 For properties with commercial tenants, there may be multiple meters to track and allocate usage.

9.5 Energy consumption can vary from year-to-year and from building-to-building depending on weather, occupancy and building conditions.

9.6.1 Progress must be measured based upon energy consumed as opposed to energy cost savings, as energy costs are continually changing.

9.6.2 Rising costs of electricity are mitigated by the Town's participation in a hedging (purchasing) agreement with Local Authority Services (LAS).

9.6.3 LAS was formed by the Association of Municipalities of Ontario to investigate bulk purchasing programs for all Ontario municipalities.

9.6.4 The Town has been a member of the LAS hedge program since 2009.

9.7.1 The Town has been a member of the LAS leasing program since 2023.

9.7.2 The lease of energy efficient vehicles through the LAS program mitigates the rising cost of fuel.

9.7.3 The lease of energy efficient vehicles contributes to the continued improvement of the reduction of green house gases through increasingly more efficient vehicle technology.

10. How Staff Manages Energy Today

10.1 The management of energy consumption and the energy performance of our facilities and equipment are the responsibilities of:

10.1.1 Financial Services (cost management and annual reporting);

10.1.2 Public Works (maintenance, purchasing and budgeting);

10.1.3 Parks, Recreation and Culture (maintenance, purchasing and budgeting);

10.1.4 Emergency Services (maintenance, purchasing and budgeting); and

10.1.5 Administration (overall compliance, plan implementation, purchasing and budgeting).

11. Summary of Energy Consumption, Cost and GHGs

11.1 As of the 2016 reporting date, the total annual energy consumption in reportable municipal operations was 2,148,404 kWh, at a cost of $576,000 per year and GHG emission of 107 tonnes/year eCO2.

11.2 As of the 2024 reporting date (reporting for the 2022 year), the total annual energy consumption in reportable municipal operations was 3,691,807 kWh, at a cost of $591,140 per year and GHG emission of 316,085 kg.

12. Trends in Energy Consumption

12.1 The Town, like most Ontario municipalities, is challenged with budgetary pressures due to Council's commitment to keeping taxes as low as possible while operating costs continue to increase.

12.2 Energy pricing trends and how quickly energy costs will increase over the coming years are unknown so the Town will continue to manage volatility through hedge agreements where appropriate.

12.3 The reality is that energy costs are globally driven rather than locally driven.

12.4 With the increasing focus on global warming and climate change, there is a growing demand for technology to produce clean and green energy at a reasonable cost.

13. Summary of Historically Developed Technical Practices and Planning

13.1 Based upon the Town's previous Energy Management Plan, the assessment of operations and maintenance practices, facility and equipment condition, and energy performance indicators had established the following priorities:

13.1.1 The development of standard operating procedures incorporating energy efficiency optimization;

13.1.2 Enhancement of preventative maintenance procedures;

13.1.3 Ongoing retrofit of lighting system in recreation facilities and municipal buildings; and

13.1.4 Investigation of technologies such as passive heating and cooling systems, ground source heat pumps and solar water heating, solar air heating and solar photovoltaic options.

13.2.1 The establishment of formal stand operating procedures is a problematic exercise in that energy management for the most part is dependent upon the financial resources available and the availability of energy efficient options; staff do not require formalized operating procedures for the performance of their duties where energy management is concerned.

13.2.2 Staff are cognizant of procurement of energy efficient products and submit that many suppliers do not have choices other than energy efficient products, thus making procurement more easily achievable and furthermore, there is no need to make formal statements in the purchasing policy.

13.3 Staff continue to perform preventative maintenance, always using energy efficient options when practical and available.

13.4 Retrofitting of facilities, lighting systems and the investigation of alternative technologies are all dependent upon available budget and resources.

C. Current and Future Planning

14. Staffing Requirements and Duties

14.1 The Town continues to use available staff and financial resources to implement the Energy Management Plan.

14.2 The Town is dedicated to meeting the requirements of 507/18: *Broader Public Sector: Reporting and Conservation and Demand Management Plans* and to improving energy performance overall.

14.3 The Town will continue to incorporate energy efficiency into daily operations to the extent that resources are available.

14.4 The Town will continue to assess whether internal resources (reserves, reserve funds and current year budgets) can be utilized for the implementation of energy projects.

14.5 While the ultimate responsibility for energy conservation rests with Council, the overall responsibility for corporate energy management and implementation belongs to the Senior Management Team members, lead by the Chief Administrative Officer.

14.6 Senior managers will ensure that energy conservation and management is applied in each department through the actions of employees.

14.7 Where and when required and as resources are available, training focused on energy use and conservation opportunities will be provided to those staff whose job function would benefit from such training.

15. Consideration of Energy Efficiency for All Projects

15.1 Energy efficiency will continue to be considered by staff during procurement processes and during the design and construction of capital projects.

15.2 The intent continues to be making energy management part of the Town's normal course of business for facility and operational retrofits, capital replacements and asset lifecycle considerations.

15.3 In addition to the conservation of energy, the procurement of energy is equally important and as such, the Town will continue to negotiate energy purchase contracts that appropriately address cost considerations, available energy services, energy quality and reliability, and other performance factors.

15.4 Wherever possible, staff will further the Town's energy goals and objectives through the selection of external consultants and suppliers who prioritize energy management and conservation and provide products and services which meet energy management and conservation standards.

15.5 The Town will continue to investigate and document options for the implementation of energy projects that utilize public-private partnerships, creative financing arrangements including energy performance contracting, and other innovative approaches.

16. Building Standards

16.1 The Town will consider the design and acquisition of new buildings such that energy performance excellence, as appropriate, is incorporated.

16.2 As assets are renewed, replaced or renovated, the Town will continue to implement as many energy saving options as possible and as budget permits.

16.3 The Town will work with its tenants to incorporate energy-saving measures into the tenant's use of Town facilities.

17. Future Considerations

17.1 If continued success in energy management becomes an issue from a corporate perspective, staff may consider the implementation of formal operational policies to provide overall guidance.

D. Evaluation and Review

18. Streetlighting

18.1 The Town has been converting streetlighting to more efficient LED fixtures.

18.2 As reported in 2019, the conversion had resulted in cost savings exceeding $30,000 per year in electricity costs.

19. Energy Consumption

19.1 The Town's reported energy consumption in 2016 was reduced to 3,202,641 kWh from previous levels.

19.2 The Town's reported energy consumption in 2022 was 3,691,807 kWh.

19.3.1 The Town has acquired additional facilities which has resulted in the requirement to consume additional energy.

19.3.2 Additional energy consumption can also be attributed to the increase in service levels such as the offering of additional recreational programming at its facilities.

19.3.3 The additional energy consumption may look as though the Town is not meeting it's conservation goals.

19.3.4 It is expected that targets will be met once all operational facilities and programs have been in place for long enough to develop a baseline consumption and begin to realize ways to conserve energy.

20. Green House Gas Emission

20.1 In 2016 the Town's corresponding greenhouse gas emissions were 185 tonnes from natural gas consumption and 107 tonnes from electricity consumption, representing a reduction over previous levels.

20.2 In 2022 the Town's corresponding greenhouse gas emissions were 316,085 kg.

21. Other Energy Reducing Projects/Programs

21.1 The Town will continue to reduce its energy footprint by evaluating its equipment and fleet requirements and giving due consideration to replacement options which are energy efficient.

21.2 Wherever possible, consideration should be given to the purchase or lease of vehicles equipped with eco-boost technology and/or hybrid or electric options.

21.3 The Town will continue the support of recycling initiatives, reducing the amount of garbage being landfilled.

21.4 The Town will continue to support the retrofit of facilities with energy star products such as refrigerators, microwaves, dishwashers, etc.

21.5 The retrofit of municipal facilities with lower energy lighting options will be continued, as budget permits.

22. Cost

22.1 Based on 2016 reported figures, the Town's energy costs were reduced by $30,000 in absolute terms, in the face of marginal increases in energy prices.

22.2 Based on 2023 reported figures, energy costs increased, which can be explained by the purchase of additional facilities and the increase in service levels.

22.3 While cost is not the determining factor, the Town anticipates that through its energy management practices, the costs of energy overall will be further reduced.