



Township of McNab/Braeside 2019 – 2023 Energy Management Plan

Commitment

Declaration of Commitment: The Mayor, Council, and Senior Management, will demonstrate both the Leadership and Commitment required, ensuring complete fulfillment of the Energy Plan by all Township Energy Consumers.

Everyone has a role in the wise use of Energy and to showcase the appropriate leadership within Corporation Facilities and Operations.

Vision: The Township of McNab/Braeside is committed to reduce total energy consumption and transition to a Carbon Neutral Future through the wise and efficient use of Energy and Resources, while still maintaining an efficient and effective level of services to both its Customers and the General Public.

Goals:

- 1.To improve the Management of the Township's Energy Consumption.
- 2.To improve overall awareness of Energy Resource use.
- 3.To Manage Corporate Assets to Promote Energy Efficiency.

Overall Target:

2014-2018 Target: *5 in 5.* The Township will reduce energy consumption by 5% over the next 5 years.

Actual Results Achieved: Over the past five years, the Township's energy consumption as per Ontario Regulations has been as follows:

	Energy (ekWh/yr)
2018	831,279
2017	857,135
2016	791,094
2015	833,223
2014	851,123
2013	911,555

Over the past five years, energy consumption has decreased by 80,276 ekWh or 9% over 2013. This reduction includes new energy demand for the newly constructed Public Works Garage in Braeside. It does not include the full consideration of new buildings under construction such as the John A. Gillies Recreation Centre, the Murray Yantha Community Centre or the new Township Office. These buildings have been built with a view to energy efficiency and include energy efficient lighting, heating and cooling systems. This said, given their new condition and overall utility, usage of these buildings is expected to be higher than the older buildings they replaced.

Energy savings realize to date have been achieved through projects including the installation of more energy efficient lighting throughout the Township's buildings and new energy-efficient furnaces installed at Fire Station 2 and 3, and roof repairs on a number of buildings.

Over the past five years, energy conservation and demand management has been embedded in key Township policies including Asset Management and Procurement policies.

2019-2023 Target: A specific energy target cannot be set until the energy consumption requirements of the new Township buildings are known. A specific target is expected to be set by the end of 2022, following a full year of normal operations in the Township's new buildings.

2019-2023 Objectives:

1. To improve the Management of the Township's Energy Consumption.
 - I. Setting conservation targets beginning in 2022 for a 2 year duration.
 - II. Tracking consumption on an annual basis.
 - III. Reporting on consumption and savings on an annual basis.

2. To improve overall awareness of Energy Resource use:
 - I. Publish the Energy Plan on the Township website.

II. Train and familiarize Council and Staff on initiatives and consumption.

III. Report on Energy Planning and Results annually to Council.

IV. Post energy usage reminders in conspicuous locations within each facility as required.

3. To Manage Corporate Assets to Promote Energy Efficiency.

I. Improve facility assets by reducing maintenance backlogs.

III. Embed energy review in all new purchases and acquisitions. (i.e. LEED certified buildings)

IV. Continue to Plan and Implement facility improvements to reduce consumption.

V. Encourage staff participation in promoting energy savings.

VI. Consider Renewable Energy Initiatives in all planning and facility operations including:

- Ground Source Energy Harvested
- Solar Energy Harvested

Organizational Understanding

Summary of Current Energy Consumption, Cost and GHGs: The total annual energy consumption for municipal operations in 2018 is 831,279 eKWh with a GHG emission of 125,669 kg CO₂e per year, down from 159,442 kg CO₂e per year in 2013.

Renewable Energy Utilized or Planned: The Township of McNab/Braeside aspires to show leadership in the promotion and development of renewable energy systems that are compatible with our asset management and land use planning objectives. This is evidenced through the installation of geothermal heating at our new municipal office and central community centre as well as a possible ground-mount solar panel installation on the property.

Upon completion of our 2019 update to our Building Asset Management Plan, we will again investigate the potential to use either ground source or solar energy harvested systems on future municipal buildings as well as any required lifecycle replacements.

Resources Planning

Energy Leader: We will clearly designate leadership and overall responsibility for corporate energy management through the incorporation of energy awareness and planning in the goals and objectives of Township Committees.

Procurement Planning

Consideration of energy efficiency of acquired equipment: As stipulated in our strategic asset management policy and purchasing procedures, energy efficiency will be considered in the criteria for selection of materials and equipment.

Implementation Planning

Building Standards: We will continue to develop criteria for the design and/or acquisition of new buildings that include energy performance factors and that use as appropriate the principles embedded in performance standards such as LEED and the Model National Energy Code for Buildings.

Projects Execution

Municipal Level: We will carry out the required development of business processes and projects according to the planned time lines within the resource constraints that apply.

Specific action items will be finalized following the completion of the 2019 Building Condition Assessments. A preliminary list of possible projects to be undertaken within the 5 year period of this report are noted below. Approximate costs have been provided where available. These costs will require verification prior to implementation.

Budgeted savings have not been provided as it has been assumed that energy cost savings will be offset by future energy price increases.

The return on investment for these items is typically on average, between one to five years.

2019-2023 Projects

Project	Est. Cost	Est. Complete
Review 2019 Building Condition Assessment Reports and prioritize energy efficient replacements recommended	TBD	2019
Installation of new windows and doors at the Glasgow Public Works Garage	\$20,000	2021
Demolition of former Braeside Municipal Office	\$50,000	2019
Potential installation of ground-mount solar panels to support a net-zero project as part of construction of the new municipal office	\$350,000	2020
Demolition of former Township Office	\$50,000	2020
Consider Energy Efficient Alternatives in renovation or replacement of the McNab Centre Park Building	\$275,000	2020

Asset Level: We will use Department Heads to facilitate the implementation of facility level business processes and projects. To support this implementation, the Treasurer will prepare annual energy performance reports to Council.

Review

Energy Plan Review: We will review and evaluate our energy plan, revising and updating it as necessary, on an annual basis as part of our Township budgeting process.

Evaluation of Progress

Energy Consumption: The Township's energy consumption in 2018 was decreased from 911,555 ekWh/yr (2013) to 831,279 ekWh/yr (2018). A new baseline will be set for future reporting of municipal energy savings following one year of normal operations of our new buildings.

In 2014, assuming a stable base of operations with an equivalent level of service over the 5 year period, the Township's goal was to decrease overall energy consumption by

45,578 ekWh/yr by the year 2018. Actual 5 year savings of 80,276 have been realized, however, the Township's base of operations is changing based on the construction of new buildings during this time.