

CORPORATION OF THE TOWNSHIP OF ADMASTON/BROMLEY

BY-LAW NO. 2019-31

Being a By-Law to Adopt an Updated Energy Management Plan

WHEREAS the Township of Admaston/Bromley adopted an Energy Management Plan on July 3rd, 2014 under Ontario Regulation 397/11 of the Green Energy Act;

AND WHEREAS Ontario Regulation 507/18, states that all public agencies are required to report annually on energy use and greenhouse gas (GHG) emissions and are also required to prepare and make public updated five-year energy conservation and demand management plans;

NOW THEREFORE BE IT RESOLVED THAT the Council of the Corporation of the Township of Admaston/Bromley hereby enacts as follows:

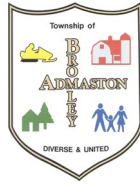
1. That the Energy Management Plan as amended by the Finance and Administration Committee on June 7th, 2019 is hereby adopted;
2. That By-Law 2019-31 will come into force and effect upon the date of passing;
3. That staff will report annually on energy use and greenhouse gas (GHG) emissions;
4. That once every 4 years the plan will undergo a thorough review, following the election of a new council, with the first major review in January 2023.

Read a First and Second Time this 20th day of June 2019

Read a Third Time and finally passed this 20th day of June 2019

Mayor

Clerk-Treasurer



Township of Admaston/Bromley

Energy Management Plan

June 2019

Commitment

- **Declaration of Commitment:** Council Resolution: We will allocate the necessary resources in a fiscally responsible method to develop and implement a strategic energy management plan that will reduce our energy consumption and its related environmental impact.
- **Vision:** The Corporation will continue to reduce energy consumption and mitigate costs through the wise use of energy. This will involve a collaborative effort to increase the education, awareness and understanding of energy management within the Corporation. This vision can be achieved through the integration of energy efficiency facility infrastructure, operational efficiencies and building the foundation for a culture of energy awareness and knowledge within the Corporation.
- **Goals:** To continuously improve the energy efficiency of our facilities and processes in order to reduce our operating costs, our energy consumption and the concomitant greenhouse gas emissions and to increase the comfort and safety of staff and users of Township of Admaston/Bromley facilities.
- **Overall Target:** We will reduce our consumption of fuels and electricity in all municipal operations by an average of 1% per year between now and 2024.
- **Objectives:** 1. Continue to implement the recommendations from the energy audits of facilities compiled in 2010. 2. Implement sound operating and maintenance practices. 3. Employee training and staff awareness on energy practices. 4. Monitoring, tracking and staff awareness of energy costs.

Organizational Understanding

- **Stakeholder Needs:** Internal stakeholders (Council, Local Boards, Committees, Staff) need to be able to clearly communicate the corporate commitment to energy efficiency, and to develop the skills and knowledge required to implement energy management practices and measures. External stakeholders (the Province, County, community citizens and groups) need the municipality to be accountable for energy performance and to minimize the energy component of the costs of municipal services.
- **Summary of Current Energy Consumption, Cost and GHGs:** The current energy usage by building is detailed in the attached spreadsheets. (Appendix A) 2016 energy consumption, cost and GHG emissions.
- **Renewable Energy Utilized or Planned:** The Township of Admaston/Bromley 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. A solar rooftop photovoltaic system was previously investigated for 4 municipal facilities (Municipal Office, Cobden and Stone Road Garages and Osceola Landfill). Future opportunities may be explored.

Strategic Planning

- **Links with other municipal plans:** As an integral component of the management structure, the energy management plan is coordinated with the municipality's budget planning process, preventative maintenance plans, environmental management plan, and the overall asset management plan.

Structure Planning

- **Staffing requirements and duties:** We will incorporate energy efficiency into standard operating procedures and the knowledge requirements for operational jobs.

- **Consideration of energy efficiency for all projects:** We will incorporate life cycle cost analysis into the design procedures for all capital projects.

Resources Planning

- **Energy Leaders:** The Clerk-Treasurer and Public Works Superintendent under the direction of Council will be responsible for Corporate Energy Management

- **Energy Team:** Facility Managers with responsibility for the various facilities will be part of the Energy Team.

- **Key Individuals:** We will identify staff members and personnel from our critical service providers who carry significant responsibility for energy performance or who can make essential input to energy management processes.

- **Internal Resources:** We will develop criteria for determining whether internal resources can be utilized for the implementation of energy projects.

- **External Consultants and Suppliers:** We will establish criteria based on our energy goals and objectives for the selection of external consultants and energy suppliers.

- **Energy Training:** We will develop and deliver energy training for relevant staff. This training will not be limited to operators and maintainers with "hands-on" involvement with energy consuming equipment but will also include others since they also make energy consumption decision in their daily work. Training focused on the energy use and conservation opportunities associated with employee's job functions will be utilized whenever possible.

Procurement Planning

- **Consideration of energy efficiency for all projects:** We will incorporate life cycle cost analysis into the design procedures for all capital projects.

- **Consideration of energy efficiency of acquired equipment:** Our purchasing procedures will be modified as required to incorporate energy efficiency into the criteria for selection of materials and equipment.

Implementation Planning

- **Communication Programs:** We will promote energy awareness and energy efficiency as a corporate priority among all employees, and convey our commitment and progress to our stakeholders.

Projects Execution

- **Municipal Level:** We will carry out the promotion and communication of programs and implement them methodically according to the planned time lines within the resource constraints that apply.

- **Asset Level:** The Energy Leaders will coordinate programs with facility energy team representatives to facilitate the implementation of facility level procedures and communication initiatives, including energy performance reporting.

Review

- **Energy Plan Review:** We will review and evaluate our energy plan, revising and updating it as necessary, once every term of Council on a four year basis beginning in 2023 unless there are significant changes to any Township facilities.

Evaluation Progress

- **Energy Consumption:** Annual reporting of energy consumptions and costs will be reported to Council as well as annual reporting to the Ministry of Energy to meet the requirements for the Green Energy Act.

- **Cost:** Ongoing monthly monitoring and targeting of energy consumption and costs will be implemented and maintained as an integral component of our management information system.

Programs

Description	Facility	Contact	Date	Status
Add energy awareness to staff meetings	Municipal Office/Public Works Facilities	Annette Gilchrist, Clerk-Treasurer Chris Kunopaski, Public Works Superintendent	2014-07-01	Active
Details	Monthly review of energy programs and opportunities for savings at department meeting.			
Posting of Energy Consumptions and Costs	Municipal Office	Annette Gilchrist, Clerk-Treasurer	2014-07-01	Active
Posting of Energy Consumptions and Costs	Public Works Facilities	Chris Kunopaski, Public Works Superintendent	2014-07-01	Active
Details	Post Energy Consumption and Costs in facilities for Staff to review and to create an awareness of cost implications.			
With the assistance of facility managers - Development of Preventative Maintenance programs for facilities	All Facilities	Annette Gilchrist, Clerk-Treasurer Chris Kunopaski, Public Works Superintendent	2014-07-01	Active
Details	Ongoing development and review of cost effective preventative maintenance programs for facilities.			

Processes

Description	Facility	Contact	Start	End	Status	Cost	Save (ekWh/yr)	Save (\$)	ROI
Have staff walk through facility to identify areas of energy waste.	Public Works Facilities/Municipal Office	Annette Gilchrist, Clerk-Treasurer Chris Kunopaski, Public Works Superintendent	2016-05-01	2024-07-01	Active [0%]	0.00	0	0	0
Report Energy Consumptions and Costs to Council and to facility managers	All Facilities	Annette Gilchrist, Clerk-Treasurer	2014-07-01	2024-07-01	Active [0%]	0.00	0	0	0
Electronic Equipment	Municipal Office	Annette Gilchrist, Clerk-Treasurer	2014-07-01	2024-07-01	Active [0%]	0.00	0	0	0
Details	Review procedures with staff for turning off electronic equipment during work and after hours.								

Projects

Description	Facility	Contact	Start	End	Status	Cost	Save (ekWh/yr)	Save (\$)	ROI
Insulation for buildings	Public Works Garages	Chris Kunopaski, Public Works Superintendent	2011-06-01	2024-12-31	Completed [85%]	6159.76	0	0.00	0
Details	Based on recommendations from the 2010 energy audit of the facilities.								
Insulation for building	Fire Hall	Kevin VanWoezik, Fire Chief	2011-06-01	2011-12-31	Completed [100%]	969.57	10411	1550.34	0
Details	Based on recommendations from the 2010 energy audit of the facilities.								
Automatic Garage Door Openers	Public Works Garages	Chris Kunopaski, Public Works Superintendent	2012-06-01	2012-12-31	Completed [100%]	2359.32	25727	4062.77	0
Automatic Garage Doors	Douglas Fire Department	Kevin VanWoezik, Fire Chief	2018-09-01	2018-09-30	Completed [100%]	15187.71	0	0.00	0
Details	Based on recommendations from the 2010 energy audit of the facilities. The Automatic Garage Doors for the Fire Hall were purchased using Provincial Funding.								
Upgrade Lights for facilities	Municipal Office and Garage	Annette Gilchrist, Clerk-Treasurer	2012-01-01	2012-12-31	Completed [100%]	1081.98	1407	140.78	0
Upgrade Lights for facilities	Barr Line Community Centre	Annette Gilchrist, Clerk-Treasurer	2012-01-01	2012-12-31	Completed [100%]	1823.54	3122	312.21	0
Upgrade Lights for facilities	Cobden Garage	Chris Kunopaski, Public Works Superintendent	2012-01-01	2012-12-31	Completed [100%]	352.00	2135	213.59	0
Upgrade Lights for facilities	Douglas Recreation Building	Jesse Welch, Treasurer	2012-01-01	2012-12-31	Completed [100%]	2490.24	3497	349.75	0
Upgrade Lights for facilities	Douglas Fire Hall	Kevin VanWoezik, Fire Chief	2012-01-01	2012-12-31	Completed [100%]	1833.99	3662	366.24	0
Details	Based on recommendations from the 2010 energy audit of the facilities. The total cost for these upgrades was \$7,581.75, less a Hydro One grant in the amount of \$5,573.45. The total municipal portion was \$2,008.30.								
Street Light Conversion to LED fixture	Douglas and Osceola	Chris Kunopaski, Public Works Superintendent	2014-01-01	2014-12-31	Completed (100%)	30,403	7,811	609	0
Details	Based on the recommendation from the 2010 energy audit of the facilities. \$23,060 of this project was funded by the Province.								

Energy Consumption and GHG Emissions
From: 2016-01-01 To: 2016-12-31

Facility Name	Address	Total Area (m2)	Average Hours/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kg CO2e/m2)	Energy Intensity
Facility Primary Type: Office										
Office Barr Line	1766 Barr Line	61	5.7	oil 1&2	3222.00 L	2406.45	34726	8812.67	144.47	569.28 (ekWh/m2)
Facility Type Total						2406.45	34726	8812.67		
Facility Primary Type: Museum										
Osceola Historical Bldg	498 Micksburg Road	81	1	Elect.	47.00 kWh	421.72	47	0.81	0.01	0.58 (ekWh/m2)
Facility Type Total						421.72	47	0.81		
Facility Primary Type: Fire										
Fire Hall	5226 Highway 60	187	7.98	oil 1&2 Elect.	4371.00 L 9520.00 kWh	3792.18 2537.45	47109.66 9520	11955.37 164.68	63.93 0.88	251.92 (ekWh/m2) 50.91 (ekWh/m2)
Facility Type Total						6329.63	56629.66	12120.04		
Facility Primary Type: Community Centre										
Barr Line CC	1766 Barr Line	181	3.99	oil 1&2 Elect.	1549.00 L 7091.00 kWh	1100.02 1974.48	16694.78 7091	4236.76 122.66	23.41 0.68	92.24 (ekWh/m2) 39.18 (ekWh/m2)
Facility Type Total						3074.5	23785.78	4359.42		

Energy Consumption and GHG Emissions												
From: 2016-01-01 To: 2016-12-31												
Facility Name	Address	Total Area (m2)	Average Hours/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kg CO2e/m2)	Energy Intensity		
Facility Primary Type: Recreation Complex												
Douglas Rink Bldg	5366 Highway 60	223	5.13	oil 1&2	2622.00 L	2956.46	28259.33	7171.58	32.16	126.72 (ekWh/m2)		
				Elect.	15325.00 kWh	3680.34	15325	265.09	1.19	68.72 (ekWh/m2)		
Facility Type Total												
						6636.8	43584.33	7436.67				
Facility Primary Type: Public Works												
Cobden Garage	1239 Cobden Road	368	5.7	oil 1&2	2370.00 L	1738.78	25543.33	6482.32	17.61	69.41 (ekWh/m2)		
				Elect.	13769.00 kWh	3527.97	13769	238.18	0.65	37.42 (ekWh/m2)		
Facility Type Total												
						6911.98	98444.22	24982.91	67.89	267.51 (ekWh/m2)		
Stone Road Garage	477 Stone Rd	368	5.7	oil 1&2	9134.00 L	6911.98	98444.22	24982.91	67.89	267.51 (ekWh/m2)		
				Elect.	16840.00 kWh	4223.37	16840	291.3	0.79	45.76 (ekWh/m2)		
Facility Type Total												
						16402.1	154596.55	31994.71				
Facility Primary Type: Town Hall												
Municipal Office	477 Stone Rd	420	5.7	oil 1&2	1647.00 L	1263.58	17751	4504.8	10.73	42.26 (ekWh/m2)		
				Propane	2217.00 L	1145.95	15586.74	3416.36	8.13	37.11 (ekWh/m2)		
				Elect.	15059.00 kWh	4117.86	15059	260.49	0.62	35.85 (ekWh/m2)		
Facility Type Total												
						6527.39	48396.74	8181.65				

Energy Consumption and GHG Emissions												
From: 2016-01-01 To: 2016-12-31												
Facility Name	Address	Total Area (m2)	Average Hours/Day	Fuel Types	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kg CO2e/yr)	GHG Intensity (kg CO2e/m2)	Energy Intensity		
Facility Primary Type: Storage Facility												
Osceola Landfill Bldg	144 Pit Road	93	1.57	Elect.	2574.00 kWh	981.49	2574	44.53	0.48	27.68 (ekWh/m2)		
Facility Type Total						981.49	2574	44.53				
Facility Primary Type: Streetlights (optional)												
Douglas Street Lights	477 Stone Rd	1	8	Elect.	10593.00 kWh	2904.18	10593	183.24	183.24	10593.00 (ekWh/m2)		
Osceola Street Lights	477 Stone Road	1	8	Elect.	3220.00 kWh	904.74	3220	55.7	55.7	3220.00 (ekWh/m2)		
Facility Type Total						3808.92	13813	238.94				
Grand Total						46589	378153.05	73189.44				