



Energy Management Plan

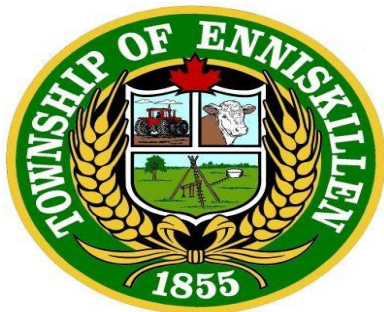
Township of Enniskillen

From: 2020-01-01 to: 2024-12-31

Mayor

Clerk

Dated this 15th day of November 2022



Energy Management Plan

Township of Enniskillen

From: 2020-01-01 to: 2024-12-31

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Commitment

Declaration of Commitment

The Township of Enniskillen will allocate the necessary resources to develop and implement a strategic Energy Management Plan that will reduce our energy consumption and its related environmental impact.



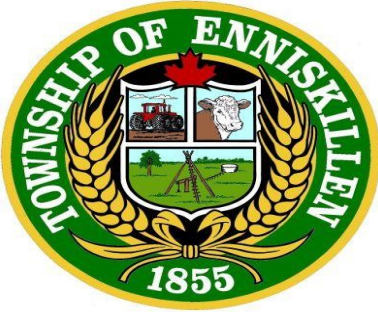
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Vision

The Corporation of the Township of Enniskillen 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. Total energy consumption includes electricity and natural gas used at Township owned facilities. This vision can be achieved through the integration of operational efficiencies and by building the foundation for a culture of energy awareness and knowledge within the corporation. Commitment from Council and Senior Administration will demonstrate the leadership and commitment required to ensure the fulfillment of the Municipal Energy Management Plan.



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Goals

The Township of Enniskillen's Energy Management Plan was completed to help achieve the following goals

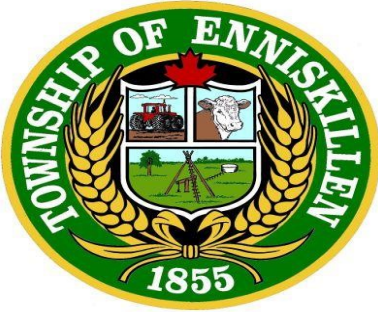
- * To continuously improve the energy efficiency of our facilities and processes
- * To reduce our operating costs
- * To reduce our energy consumption and greenhouse gas emissions
- * To provide the guidance and leadership necessary for the adoption of a culture of sustainability

Overall Target

The Township of Enniskillen will attempt to reduce our consumption of natural gas and electricity in our municipal operations.

Objectives

The primary objective of this plan is to improve the management of the Township of Enniskillen's energy consumption in municipal facilities. It is also the objective of this plan to improve the Township's understanding of energy consumption which is essential to meet the energy management goals.



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Organizational Understanding

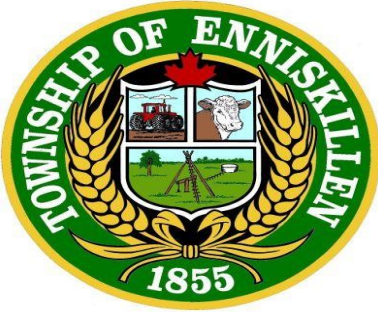
Summary of Current Energy Consumption, Cost and GHGs

**** See Appendix A**

Renewable Energy Utilized or Planned

The Township of Enniskillen entered into a joint agreement in 2016 with the Village of Oil Springs and Bluewater Power Renewable Energy Inc. to install solar panels on the Oil Springs Fire Hall.

The Township of Enniskillen does not have any additional renewable energy projects planned.



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Structure Planning

Staffing requirements and duties

The Township of Enniskillen will incorporate energy efficiency into standard operating procedures and the knowledge requirements for operational positions.

Resources Planning

Energy Leader

The Township of Enniskillen will designate leadership and overall responsibility for corporate energy management. A Municipal Energy Conservation Officer (MECO) will be appointed by Council. The MECO will be the primary point of contact for Council and staff on all energy related operations.

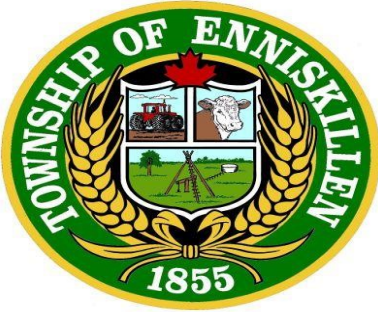
Energy Training

The Township of Enniskillen will develop and deliver energy training for relevant staff and Council members. This training will be offered to employees with involvement with energy consuming equipment and employees who make decisions affecting consumption of energy.

Procurement Planning

Consideration of energy efficiency of acquired equipment

The purchasing procedures will be modified as required to incorporate energy efficiency into the criteria for selection of materials and equipment.



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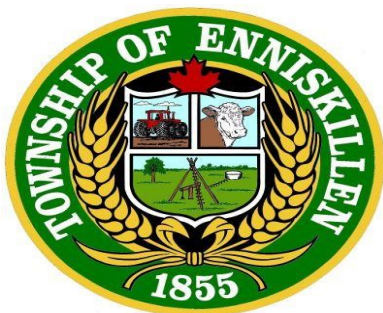
Projects Execution

Municipal Level

The Township of Enniskillen will carry out the required development of business procedures and communication programs and implement them methodically according to the planned time lines within the resources constraints that apply.

Asset Level

In order to sustain a corporate culture of conservation, staff must be engaged in an effective awareness and education program. Although public works staff have the lead responsibility in ensuring municipal facilities operate efficiently, all staff should be familiar with and utilize energy efficient measures where possible.



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Review

Energy Plan Review

The MECO, in collaboration with Council and staff will review and evaluate the Municipal Energy Plan, revising and updating it as necessary.

Evaluation Progress

Energy Consumption

Facility	Date	Energy Reduction Event/Details
Shiloh Community Centre	2013	Demolition
Public Works Garage	2013	Replaced T8 with T12 light bulbs
Water Reservoir and Pumping Station	2015	Upgraded heating to natural gas from electricity
Enniskillen Community Centre	2018	Demolition
Water Reservoir and Pumping Station	2018	Replaced pumps and drives
LaSalle Pump Station	2018	Replaced pumps
Oil City Sewer Pump Station	2018	Replaced pumps
Township Office	2021	Replaced 2 x 2 light fixtures with LED 4K light fixtures in Municipal Office/Council Chambers
Township Office/Public Works Garage	2022	Installed back up generator to provide automatic back up power to the township office and public works

The Township of Enniskillen will recommend processes and projects that will reduce energy consumption. To date, examples of completed projects include the changing of T12 to T8 light bulbs at the Municipal Office, Public Works garage and the Water Reservoir. The disposal/sale of the Shiloh Community Centre and the demolition of the Enniskillen Community Centre are complete. The upgrades of the heating units, pumps and drives at the Water Reservoir were completed in 2018. The replacement of pumps at the LaSalle pump station and the Oil City sewer pump station will see a reduction in electrical usage. Interior lights have been changed to LEDs at the Township office. An auto back-up generator was installed at the Municipal Office/Public Works garage to provide continuity of operations at the facility.

Appendix "A"

2011

Facility Type	Total Area	Avg Hours/ Day	Fuel Type	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kgCO2e/yr)	GHG Intensity (kgC)2e/m2)	Energy Intensity (ekWh/m2)
Recreational Facilities	425	3.5	NG	7643	1766	81228	14450	171	961
			Electricity	7094	1265	7094	695	5	46
			Oil	1483		15983	4056	18	72
Municipal Office	425	6	NG	5521	1429	58676	10438	25	138
			Electricity	28263	3737	28263	2771	7	67
Public Works Facilities	914	78	NG	7318	1747	77774	13836	20	111
			Electricity	127917	35468	127914	12541	49	90504

2012

Facility Type	Total Area	Avg Hours/ Day	Fuel Type	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kgCO2e/yr)	GHG Intensity (kgC)2e/m2)	Energy Intensity (ekWh/m2)
Recreational Facilities	425	3.5	NG	5337	1570	55516	10166	103	578
			Electricity	7399	2220	7399	725	5	47
			Oil	1216	1346	13106	3326	15	59
Municipal Office	425	6	NG	3758	893	39939	7105	17	94
			Electricity	25894	3602	25894	2547	6	61
Public Works Facilities	914	78	NG	4594	1091	48824	8686	12	70
			Electricity	136787	22464	136787	13411	606	105073

2013

Facility Type	Total Area	Avg Hours/ Day	Fuel Type	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kgCO2e/yr)	GHG Intensity (kgC)2e/m2)	Energy Intensity (ekWh/m2)
Recreational Facilities	425	3.5	NG	7183	1997	76339	13580	130	730
			Electricity	7614	2307	7614	746	5	47
			Oil	1897	1269	20445	5189	23	92
Municipal Office	425	6	NG	4030	863	42830	7619	18	101

Facility Type	Total Area	Avg Hours/ Day	Fuel Type	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kgCO2e/yr)	GHG Intensity (kgC)2e/m2)	Energy Intensity (ekWh/m2)
			Electricity	24882	4113	24882	2439	6	59
Public Works Facilities	914	78	NG	4926	1055	52352	9313	13	75
			Electricity	143891	24411	143891	14107	572	113423

2014

Facility Type	Total Area	Avg Hours / Day	Fuel Type	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kgCO2e/yr)	GHG Intensity (kgC)2e/m2	Energy Intensity (ekWh/m2)
Recreational Facilities	202	3.13	NG	8963	2481	95257	16946	177	995
			Electricity	4274	1528	4274	325	3	34
Municipal Office	425	5.7	NG	6273	1423	66668	11859	27.91	157
			Electricity	26078	4499	26078	1982	4.66	61
Public Works Facilities	914	78	NG	7667	1739	81483	14495	20.71	116
			Electricity	155207	26785	155207	11798	538	123379

2015

Facility Type	Total Area	Avg Hours / Day	Fuel Type	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kgCO2e/yr)	GHG Intensity (kgC)2e/m2	Energy Intensity (ekWh/m2)
Recreational Facilities	202	3.13	NG	7890	2524	83853	14917	145	818
			Electricity	4174	1470	4174	317	3	34
Municipal Office	425	5.7	NG	4807	1359	51088	9088	21	120
			Electricity	25266	4762	25266	1920	5	59
Public Works Facilities	914	78	NG	6469	1986	68751	12230	21	6391
			Electricity	170362	32426	170362	12949	543	139585

2016

Facility Type	Total Area	Avg Hours / Day	Fuel Type	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kgCO ₂ e/yr)	GHG Intensity (kgC) ² e/m ²	Energy Intensity (ekWh/m ²)
Recreational Facilities	202	3.13	NG	6359	1675	67582	12023	120	676
			Electricity	3537	1438	3537	143	1	28
Municipal Office	425	5.7	NG	3743	588	39779	7077	17	94
			Electricity	24438	5494	24438	991	2	58
Public Works Facilities	914	78	NG	6585	1337	69984	12450	31	21442
			Electricity	132594	29618	132594	5376	276	102769

2017

Facility Type	Total Area	Avg Hours / Day	Fuel Type	Consumption	Cost (\$)	Energy (ekWh/yr)	GHG Emissions (kgCO ₂ e/yr)	GHG Intensity (kgC) ² e/m ²	Energy Intensity (ekWh/m ²)
Recreational Facilities	202	3.13	NG	6308	2269	67040	11926	120	675
			Electricity	3715	1391	2715	132	1	29
Municipal Office	425	5.7	NG	4009	1147	42606	7579	18	100
			Electricity	22184	3686	22184	789	2	52
Public Works Facilities	914	78	NG	4791	2229	50918	9058	28	23856
			Electricity	106446	19751	106446	3784	177	79370

2018 **Note – The reporting template has changed effective 2018**

Facility Name	Facility Type	Total Energy (ekWh)	Electricity (ekWh)	Natural Gas (ekWh)	ekWh / m2	Cost (\$)	Emissions (GHG - tonnes)
	Municipal Totals	332,044.68	136,196.00	195,848.68	5,314.91	28,714.86	38,864.79
Gorman Park	Recreation	26,321.19	230.00	26,091.19	424.54	1,216.35	4,648.29
LaSalle Pump Station	W/WW	13,786.00	13,786.00	0.00	2,757.20	2,496.51	407.35
Municipal Office	Administrative	87,163.35	24,130.00	63,033.35	205.09	5,604.44	11,926.30
Oil City Sewer Pump Station	Other	6,634.00	6,634.00	0.00	1,326.80	1,345.34	196.02
Public Works	Administrative	106,522.13	29,492.00	77,030.13	152.17	6,849.86	14,574.69
Water Reservoir	W/WW	91,618.01	61,924.00	29,694.01	449.11	11,202.36	7,112.14

2019

Facility Name	Facility Type	Total Energy (ekWh)	Electricity (ekWh)	Natural Gas (ekWh)	ekWh / m2	Cost (\$)	Emissions (GHG - tonnes)
	Municipal Totals	322,109.81	127,664.00	194,445.81	6,248.35	26,023.70	38,481.22
Gorman Park	Recreation	22,305.38	274.00	22,031.38	359.76	1,135.78	3,927.62
LaSalle Pump Station	W/WW	20,911.00	20,911.00	0.00	4,182.20	3,593.94	637.22
Municipal Office	Administrative	84,169.96	21,668.00	62,501.96	198.05	4,551.08	11,779.07
Oil City Sewer Pump Station	Other	4,670.00	4,670.00	0.00	934.00	1,065.13	142.31
Public Works	Administrative	102,865.83	26,484.00	76,381.83	146.95	5,562.44	14,394.98
Water Reservoir	W/WW	87,187.64	53,657.00	33,530.64	427.39	10,115.33	7,600.02

2020

<u>Facility Name</u>	<u>Facility Type</u>	<u>Total Energy (ekWh)</u>	<u>Electricity (ekWh)</u>	<u>Natural Gas (ekWh)</u>	<u>ekWh / m2</u>	<u>Cost (\$)</u>	<u>Emissions (GHG - tonnes)</u>
	<u>Municipal Totals</u>	277,279.42	121,168.00	156,111.42	6,200.71	24,816.84	30,854.91
Gorman Park	Recreation	17,926.88	221.00	17,705.88	289.14	933.14	3,155.41
LaSalle Pump Station	W/WW	20,158.00	20,158.00	0.00	4,031.60	3,325.26	512.98
Municipal Office	Administrative	68,426.01	20,059.00	48,367.01	161.00	4,570.99	9,114.70
Oil City Sewer Pump Station	Other	6,009.00	6,009.00	0.00	1,201.80	1,190.22	152.92
Public Works	Administrative	83,628.70	24,517.00	59,111.70	119.47	5,586.76	11,139.58
Water Reservoir	W/WW	81,130.83	50,204.00	30,926.83	397.70	9,210.47	6,779.32