



**T O W N S H I P**  
**of**  
**D A W N – E U P H E M I A**

**Energy Conservation and  
Demand Management Plan  
2014 – 2020**



# Energy Conservation and Demand Management Plan

## Dawn-Euphemia Township: 2014 to 2020

### Commitment

**Declaration of Commitment:** The Township of Dawn-Euphemia 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 and fulfill our regulatory obligations.

**Vision:** We will strive to reduce our energy consumption through the wise and efficient use of energy and resources, while still maintaining an efficient and effective level of service for our citizens. This will involve a collaborative effort to increase the awareness and understanding of energy management within the municipality. Total energy consumption includes electricity and fossil fuel use associated with the maintenance and operations of our corporate assets.

**Policy:** Municipalities face rising costs to maintain and repair aging infrastructure, to deliver services to their community and to obtain the necessary energy to power their facilities. The generation and use of energy also contributes to climate change through greenhouse gas (GHG) emissions. The implementation and renewal of this energy management program will ensure that energy conservation and efficiency is a key consideration in the township's facility renewal actions. The implementation of conservation measures will reduce corporate GHG emissions and mitigate energy cost increases through decreased energy consumption.

**Goals:** To maintain our current assets and improve the energy efficiency of our facilities and processes where feasible to reduce energy consumption, greenhouse gas emissions, and maintenance costs while improving the reliability of equipment.

**Overall Target:** We will strive to reduce our overall municipal energy consumption (from all facilities and streetlights) by 3% between now and 2019 (based on 2011 baseline data).

**Objectives:** In order to meet the strategic goals of the Energy Conservation and Demand Management Plan, there are a number of goals and objectives that align with its development and implementation:

1. Ensure energy efficiency consistency across municipal facilities.
2. Monitor and report on energy consumption annually. Staff will monitor and verify ROI to enable reinvestment in energy projects and report on energy consumption yearly.
3. Better analyze energy costs and look for savings opportunities. This will include energy procurement options and taking advantage of all available resources and funding for energy projects.
4. Raise staff and Council awareness around energy efficiency. This will include communicating successes to both internal and external stakeholders.

### Organizational Understanding

**Our Municipal Energy Needs:** The Township requires reliable, low-cost, sustainable energy sources delivering energy to the most efficient facilities and energy-consuming technology feasible. It is essential for the Township to do its utmost to reduce energy consumption and consider cleaner sources of generation whenever possible to minimize the economic, environmental, and social outcomes of this energy use.

**Stakeholder Needs:** Internal stakeholders need to be able to clearly communicate our commitment to energy efficiency, and to develop the skills and knowledge required to implement energy management practices and measures. External stakeholders need the municipality to be accountable for energy performance and to minimize the energy component of the costs of municipal services.

**Municipal Energy Situation:** Our assessment of capacity for energy management with respect to energy policy; organizational structure; employee awareness, skills and knowledge; energy information management; communications; and investment practices indicates the following issues:

1. Energy costs continue to increase and are forecast to increase further.
2. Energy is not visible to decision makers such as Council, management, and members of the public. This leads to a lack of understanding of the costs of energy and the opportunities for energy efficiency.
3. Occasional efforts are made to raise general awareness about energy.
4. Additional responsibilities and cost of services have had an important impact on existing facilities and they may not be able to operate in a sustainable manner over the longer term.
5. The requirement for this Energy Conservation and Demand Management Plan provides an opportunity to build upon other initiatives such as the Asset Management Plan, Municipal Services Review, Official Plan and Zoning updates.

**How We Manage Energy Today:** The management of our energy is a combination of energy data management, energy supply management, and energy use management.

**Energy Data Management:** Our energy data is managed through the Treasurer. The data is received via supplier invoices, tracked using an Energy Planning Tool, consumption is analyzed, and reports are generated.

**Energy Supply Management:** Our municipal energy is supplied via a number of providers as outlined below: Electricity is supplied by Hydro One and natural gas by Union Gas on an as needed basis and is priced at the standard rates offered by the provider. Staff will investigate hedging strategies for purchasing electricity and natural gas.

**Energy Use Management:** Day to day management of energy has historically happened in an ad-hoc manner. To aid in our efforts to track and reduce energy use the Township plans to utilize an Energy Planning Tool (EPT) in an ongoing manner and to generate and share reports as required.

**Summary of Current Energy Consumption, Cost and GHGs:** The current annual energy usage by building is detailed in Appendix A. Our energy usage is updated monthly in an Energy Tracking Tool and reported annually to the Ministry of Energy. 2011 is the base year as determined by the Ministry of Energy.

**Summary of Current Technical Practices:** Our assessment of operations and maintenance practices, facility and equipment condition, and energy performance indicators establishes the following priorities:

1. Development of standard operating procedures incorporating energy efficiency optimization.
2. Enhancement of preventative maintenance procedures.
3. Upgrade and retrofit lighting efficiency, HVAC units and appliances with current technology as funding becomes available and life cycle dictates.

**Trends in Energy Consumption:** Our energy intensity continues to decline, after allowing for seasonal severities from year to year. Appendix B details our monthly energy use by building. Our overall energy consumption has declined by 7.3% from 2011 to 2013.

## Strategic Planning

**Links with other municipal plans:** The Township will develop and implement energy policies, organize for energy management, develop the required skills and knowledge, manage energy information, communicate with our stakeholders, and invest in energy management measures. As a component of the management structure, the Energy Conservation and Demand Management Plan is to be coordinated with the municipality's budget planning, strategic plan, purchasing policy, preventative maintenance plans, environmental management plan, asset management plan, and the policy development process.

## Structure Planning

**Consideration of energy efficiency for all projects:** The Township will incorporate life cycle cost analysis into the design procedures for all capital projects as well as procurement decisions for equipment and other municipal assets.

## Resources Planning

**Energy Leader:** The Administrator-Clerk has been designated as our energy leader with overall responsibility for corporate energy management.

**Energy Team:** 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 in our Procurement Policy based on our energy goals and objectives for the selection of external consultants and energy suppliers.

**Energy Training:** The Township will develop and deliver skills training for operators, maintainers and others that have "hands-on" involvement with energy consuming systems and equipment. Training focused on the energy use and conservation opportunities associated with employees' job functions will be utilized whenever possible. All such energy management training opportunities are integrated into ongoing staff training and designed to allow for the internal capacity building necessary to ensure that staff are making informed decision and reducing the need for costly external assistance. The Township will utilize both internal and external resources to provide this training as much as resources allow.

## Procurement Planning

**Energy Purchasing:** The Township will investigate the utilization of purchasing groups and/or cooperatives to procure its energy needs and services. This investigation will include the analysis of cost considerations, available energy services, energy quality, and other performance factors. Our energy procurement goal will continue to be the pursuit of optimal rates while achieving an appropriate level of cost certainty.

**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

**Building Standards:** As required, we will 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. Our new community centre, that opened in 2010, utilized LEED standards in its design.

## Investment Planning

**Internal Funding Sources:** We will develop and/or clarify as necessary the financial indicators that are applied to investment analysis and prioritization of proposed energy projects, taking due consideration of the priority given to energy efficiency projects versus other investment needs (life cycle versus simple payback). Energy and operating costs savings, physical asset renewal, improved employee comfort and service delivery, and enhanced environmental protection are all quantifiable benefits of energy conservation and demand management and will be factored in accordingly.

**Creative Approaches:** Township staff will investigate, document, and communicate funding sources for energy projects, including government and utility grants and incentives.

## Implementation Planning

**Business Procedures:** We will carry out a comprehensive review of all business processes, including third party contracts, and modify them as necessary in order to incorporate energy efficiency considerations

## Projects Execution

**Municipal Level:** The administration of this Plan will be the responsibility of the Administrator-Clerk. Since we all use energy in our daily activities, it will also be the responsibility of all municipal staff to be aware of their energy use and work towards a culture of conservation. Through staff training and energy management tools, staff will be able to see the results of their efforts, and benchmark between corporate facilities and with industry standards.

**Asset Level:** In order to sustain a corporate culture of conservation, staff must be engaged in an effective awareness and education program. Although departmental managers have the lead responsibility in ensuring facilities operate efficiently, all municipal staff should be familiar with and utilize energy efficient measures where possible. In addition, any facilities requiring rehabilitation, renewal and/or replacement will incorporate energy saving strategies where possible. Appendix C details Programs, Processes and Projects that are proposed for implementation during the planning period, as resources permit.

## Review

**Energy Plan Review:** As part of any energy management strategy, continuous monitoring, verification, and reporting is an essential tool to track consumption and dollar savings and/or avoidance as the result of implemented initiatives. Township staff will develop an annual progress report with energy consumption data and initiatives undertaken within the calendar year and will report to Council on progress.

**Discussion of Progress:** Annual energy performance summary reports will be generated to apprise Council of the progress made towards our corporate energy goals and objectives. The general public will be apprised of energy performance of municipal facilities and the impact of implemented energy management measures where appropriate.

## Evaluation Progress

**Energy Consumption:** We will review and evaluate our energy plan, revising and updating it as necessary, on an annual basis based on the Energy Consumption Reports that are submitted to the Ministry of Energy as required under Regulation 397/11.

**Green House Gas Emission:** Municipalities can lower emissions by improving energy efficiency of buildings and using more renewable energy. The Township is committed to both objectives through the development and implementation of this Energy Conservation and Demand Management Plan (CDM). We will continue to track and report on GHGs as part of our regular reporting on energy consumption and will evaluate progress in this area. Our 2011 GHG emissions of 69,312kg CO<sub>2</sub>e declined to 59,202kg CO<sub>2</sub>e in 2013.



**Energy Conservation and  
Demand Management Plan  
2014 – 2020**

**Appendix A  
Consumption Reports**



# Dawn-Euphemia Township

## Appendix 'A' to CDM Plan

### Energy Consumption and GHG Emissions

From: 2011-01-01 to: 2011-12-31

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO <sub>2</sub> e / yr)	GHG Intensity (kgCO <sub>2</sub> e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	27,462 kWh	\$3,763.52	27,462	9.01	2,197	0.72		
				NatGas	3,064 cu m	\$945.39	32,559	10.68	5,783	1.90		
<b>Facility Type Total</b>						<b>\$4,708.91</b>	<b>60,020.81</b>	<b>19.69</b>	<b>7,980</b>	<b>2.62</b>	<b>5.18</b>	<b>31.43%</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	14,704 kWh	\$2,103.49	14,704	3.27	1,176	0.26		
				NatGas	5,199 cu m	\$1,425.81	55,253	12.28	9,815	2.18		
<b>Facility Type Total</b>						<b>\$3,529.30</b>	<b>69,957</b>	<b>15.55</b>	<b>10,991</b>	<b>2.44</b>	<b>4.62</b>	<b>33.46%</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	39,787 kWh	\$6,748.50	39,787	4.68	3,183	0.37		
				NatGas	6,314 cu m	\$1,681.22	67,100	7.89	11,919	1.40		
<b>Facility Type Total</b>						<b>\$8,429.72</b>	<b>106,887</b>	<b>12.57</b>	<b>15,102</b>	<b>1.78</b>	<b>3.30</b>	<b>16.34%</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	13,602 kWh	\$2,287.21	13,602	16.79	1,088	1.34	<b>4.50</b>	<b>25.38%</b>
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	27,740 kWh	\$3,654.03	27,740	5.83	2,219	0.47	<b>7.01</b>	<b>52.96%</b>
				NatGas	9,412 cu m	\$2,429.95	100,032	21.02	17,769	3.73		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	13,036 kWh	\$1,945.37	13,036	2.95	1,043	0.24	<b>5.11</b>	<b>32.36%</b>
				NatGas	6,950 cu m	\$1,815.88	73,861	16.70	13,120	2.97		
<b>Facility Type Total</b>						<b>\$9,845.23</b>	<b>214,669</b>	<b>46.49</b>	<b>34,151</b>	<b>7.40</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	37,296 kWh	\$4,970.04	37,296					
Oakdale Stlts				Hydro	6,588 kWh	\$832.72	6,588					
<b>Facility Type Total</b>						<b>\$5,802.76</b>	<b>43,884</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$34,603.13</b>	<b>509,019</b>	<b>111.09</b>	<b>69,312</b>	<b>22.42</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO<sub>2</sub>e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available

# Dawn-Euphemia Township

## Appendix 'A' to CDM Plan

### Energy Consumption and GHG Emissions

From: 2012-01-01 to: 2012-12-31

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO <sub>2</sub> e / yr)	GHG Intensity (kgCO <sub>2</sub> e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	23,095 kWh	\$3,390.76	23,095	7.58	2,218	0.73		
				NatGas	2,775 cu m	\$813.87	29,490	9.68	5,248	1.72		
<b>Facility Type Total</b>						<b>\$4,204.63</b>	<b>52,585</b>	<b>17.25</b>	<b>7,466</b>	<b>2.45</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	12,637 kWh	\$1,915.75	12,637	2.81	1,214	0.27		
				NatGas	3,824 cu m	\$1,027.41	40,637	9.03	7,232	1.61		
<b>Facility Type Total</b>						<b>\$2,943.16</b>	<b>53,274</b>	<b>11.84</b>	<b>8,446</b>	<b>1.88</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	40,314 kWh	\$5,369.63	40,314	4.74	3,872	0.46		
				NatGas	5,836 cu m	\$1,425.70	62,018	7.30	11,038	1.30		
<b>Facility Type Total</b>						<b>\$6,795.33</b>	<b>102,332</b>	<b>12.04</b>	<b>14,909</b>	<b>1.75</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	13,697 kWh	\$2,077.52	13,697	16.91	1,315	1.62	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	21,437 kWh	\$3,062.64	21,437	4.50	2,059	0.43	<b>n/a</b>	<b>n/a</b>
				NatGas	4,394 cu m	\$1,155.65	46,699	9.81	8,311	1.75		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	12,090 kWh	\$1,896.88	12,090	2.73	1,161	0.26	<b>n/a</b>	<b>n/a</b>
				NatGas	3,937 cu m	\$1,056.92	41,837	9.46	7,446	1.68		
<b>Facility Type Total</b>						<b>\$7,172.09</b>	<b>122,064</b>	<b>26.51</b>	<b>18,977</b>	<b>4.12</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	41,700 kWh	\$5,773.28	41,700					
Oakdale Stlts				Hydro	6,588 kWh	\$864.48	6,588					
<b>Facility Type Total</b>						<b>\$6,637.76</b>	<b>48,288</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$29,830.49</b>	<b>392,240</b>	<b>84.55</b>	<b>51,114</b>	<b>17.91</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO<sub>2</sub>e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available



# Dawn-Euphemia Township

## Energy Consumption and GHG Emissions

## Appendix 'A' to CDM Plan

From: 2013-01-01 to: 2013-12-31

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO2e / yr)	GHG Intensity (kgCO2e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	22,552 kWh	\$3,543.30	22,552	7.40	2,166	0.71		
				NatGas	3,561 cu m	\$955.75	37,847	12.42	6,736	2.21		
<b>Facility Type Total</b>						<b>\$4,499.05</b>	<b>60,399</b>	<b>19.82</b>	<b>8,902</b>	<b>2.92</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	13,079 kWh	\$2,120.77	13,079	2.91	1,256	0.28		
				NatGas	5,577 cu m	\$1,345.71	59,275	13.17	10,549	2.34		
<b>Facility Type Total</b>						<b>\$3,466.48</b>	<b>72,354</b>	<b>16.08</b>	<b>11,805</b>	<b>2.62</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	42,361 kWh	\$5,167.39	42,361	4.98	4,068	0.48		
				NatGas	6,177 cu m	\$1,459.17	65,653	7.72	5,538	0.65		
<b>Facility Type Total</b>						<b>\$6,626.56</b>	<b>108,014</b>	<b>12.71</b>	<b>9,606</b>	<b>1.13</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	14,600 kWh	\$2,433.58	14,600	18.02	1,402	1.73	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	27,048 kWh	\$4,029.12	27,048	5.68	2,598	0.55	<b>n/a</b>	<b>n/a</b>
				NatGas	7,944 cu m	\$1,801.24	84,425	17.74	15,025	3.16		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	10,101 kWh	\$1,864.51	10,101	2.28	970	0.22	<b>n/a</b>	<b>n/a</b>
				NatGas	4,702 cu m	\$1,172.25	49,971	11.30	8,893	2.01		
<b>Facility Type Total</b>						<b>\$8,867.12</b>	<b>171,545</b>	<b>37.00</b>	<b>27,487</b>	<b>5.93</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	39,833 kWh	\$6,533.33	39,833					
Oakdale Stlts				Hydro	6,295 kWh	\$976.80	6,295					
<b>Facility Type Total</b>						<b>\$7,510.13</b>	<b>46,128</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$33,402.92</b>	<b>473,040</b>	<b>103.63</b>	<b>59,202</b>	<b>21.01</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO2e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available

# Dawn-Euphemia Township

## Energy Consumption and GHG Emissions

## Appendix 'A' to CDM Plan

From: 2015-01-01 to: 2015-12-31

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO2e / yr)	GHG Intensity (kgCO2e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	21,589 kWh	\$4,146.52	21,589	7.08	866	0.28		
				Gas	3,557 cu m	\$1,136.01	37,805	12.40	6,728	2.21		
<b>Facility Type Total</b>						<b>\$5,282.53</b>	<b>59,393</b>	<b>19.49</b>	<b>7,594</b>	<b>2.49</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	11,889 kWh	\$2,273.85	11,889	2.64	477	0.11		
				Gas	5,131 cu m	\$1,544.26	54,533	12.12	9,705	2.16		
<b>Facility Type Total</b>						<b>\$3,818.11</b>	<b>66,422</b>	<b>14.76</b>	<b>10,182</b>	<b>2.26</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	36,300 kWh	\$5,500.22	36,300	4.27	1,456	0.17		
				Gas	5,972 cu m	\$1,746.09	63,472	7.47	11,296	1.33		
<b>Facility Type Total</b>						<b>\$7,246.31</b>	<b>99,772</b>	<b>11.74</b>	<b>12,752</b>	<b>1.50</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	12,931 kWh	\$2,456.90	12,931	15.96	519	0.64	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	25,293 kWh	\$4,580.38	25,293	5.31	1,014	0.21	<b>n/a</b>	<b>n/a</b>
				Gas	8,904 cu m	\$2,569.42	94,630	19.88	16,842	3.54		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	11,720 kWh	\$2,312.88	11,720	2.65	470	0.11	<b>n/a</b>	<b>n/a</b>
				Gas	6,269 cu m	\$1,905.62	66,628	15.06	11,858	2.68		
<b>Facility Type Total</b>						<b>\$11,368.30</b>	<b>198,271</b>	<b>42.91</b>	<b>30,184</b>	<b>6.54</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	38,184 kWh	\$7,611.65	38,184					
Oakdale Stlts				Hydro	6,036 kWh	\$1,174.83	6,036					
<b>Facility Type Total</b>						<b>\$8,786.48</b>	<b>44,220</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$38,958.63</b>	<b>481,009</b>	<b>104.86</b>	<b>61,230</b>	<b>19.69</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO2e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available

# Dawn-Euphemia Township

## Energy Consumption and GHG Emissions

## Appendix 'A' to CDM Plan

From: 2016-01-01 to: 2016-12-31

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO <sub>2</sub> e / yr)	GHG Intensity (kgCO <sub>2</sub> e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	25,201 kWh	\$5,846.89	25,201	8.27	2,420	0.79		
				Gas	3,314 cu m	\$891.17	35,224	11.56	6,269	2.06		
<b>Facility Type Total</b>						<b>\$6,738.06</b>	<b>60,425</b>	<b>19.82</b>	<b>8,689</b>	<b>2.85</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	11,952 kWh	\$2,593.97	11,952	2.66	1,148	0.26		
				Gas	5,286 cu m	\$1,254.52	56,184	12.49	9,999	2.22		
<b>Facility Type Total</b>						<b>\$3,848.49</b>	<b>68,136</b>	<b>15.14</b>	<b>11,147</b>	<b>2.48</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	54,360 kWh	\$8,160.98	54,360	6.40	5,221	0.61		
				Gas	7,049 cu m	\$1,626.65	74,914	8.81	5,538	0.65		
<b>Facility Type Total</b>						<b>\$9,787.63</b>	<b>129,274</b>	<b>15.21</b>	<b>10,759</b>	<b>1.27</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	12,611 kWh	\$2,907.97	12,611	15.57	1,211	1.50	n/a	n/a
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	20,642 kWh	\$4,624.08	20,642	4.34	1,982	0.42	n/a	n/a
				Gas	8,791 cu m	\$1,898.72	93,429	19.63	16,628	3.49		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	8,888 kWh	\$2,156.81	8,888	2.01	854	0.19	n/a	n/a
				Gas	4,936 cu m	\$1,178.65	52,462	11.86	9,337	2.11		
<b>Facility Type Total</b>						<b>\$9,858.26</b>	<b>175,420</b>	<b>37.84</b>	<b>28,801</b>	<b>6.21</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	38,184 kWh	\$9,416.20	38,184					
Oakdale Stlts				Hydro	6,036 kWh	\$1,460.03	6,036					
<b>Facility Type Total</b>						<b>\$10,876.23</b>	<b>44,220</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$44,016.64</b>	<b>490,086</b>	<b>103.58</b>	<b>60,607</b>	<b>20.90</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO<sub>2</sub>e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available

# Dawn-Euphemia Township

## Energy Consumption and GHG Emissions

## Appendix 'A' to CDM Plan

From: 2017-01-01 to: 2017-12-31

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO <sub>2</sub> e / yr)	GHG Intensity (kgCO <sub>2</sub> e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	20,708 kWh	\$4,163.23	20,708	6.79	1,989	0.65		
				Gas	3,562 cu m	\$1,186.00	37,858	12.42	6,738	2.21		
<b>Facility Type Total</b>						<b>\$5,349.23</b>	<b>58,566</b>	<b>19.21</b>	<b>8,726</b>	<b>2.86</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	9,802 kWh	\$2,003.83	9,802	2.18	941	0.21		
				Gas	5,560 cu m	\$1,598.10	59,095	13.13	10,517	2.34		
<b>Facility Type Total</b>						<b>\$3,601.93</b>	<b>68,897</b>	<b>15.31</b>	<b>11,459</b>	<b>2.55</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	39,670 kWh	\$6,035.15	39,670	4.67	3,810	0.45		
				Gas	5,415 cu m	\$1,665.60	57,548	6.77	5,538	0.65		
<b>Facility Type Total</b>						<b>\$7,700.75</b>	<b>97,218</b>	<b>11.44</b>	<b>9,348</b>	<b>1.10</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	13,205 kWh	\$2,666.54	13,205	16.30	1,268	1.57	n/a	n/a
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	22,228 kWh	\$4,434.18	22,228	4.67	2,135	0.45	n/a	n/a
				Gas	8,768 cu m	\$2,398.97	93,189	19.58	16,585	3.48		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	10,264 kWh	\$2,168.10	10,264	2.32	986	0.22	n/a	n/a
				Gas	4,755 cu m	\$1,485.62	50,539	11.43	8,995	2.03		
<b>Facility Type Total</b>						<b>\$10,486.87</b>	<b>176,220</b>	<b>37.99</b>	<b>28,700</b>	<b>6.19</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	24,508 kWh	\$5,430.79	24,508					
Oakdale Stlts				Hydro	3,774 kWh	\$840.73	3,774					
<b>Facility Type Total</b>						<b>\$6,271.52</b>	<b>28,282</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$36,076.84</b>	<b>442,388</b>	<b>100.26</b>	<b>59,501</b>	<b>20.77</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO<sub>2</sub>e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available

# Dawn-Euphemia Township

## Energy Consumption and GHG Emissions

## Appendix 'A' to CDM Plan

From: 2018-01-01 to: 2018-12-31

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO <sub>2</sub> e / yr)	GHG Intensity (kgCO <sub>2</sub> e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	23,123 kWh	\$3,996.91	23,123	7.59	2,221	0.73		
				Gas	3,297 cu m	\$1,039.56	35,044	11.50	6,237	2.05		
<b>Facility Type Total</b>						<b>\$5,036.47</b>	<b>58,166</b>	<b>19.08</b>	<b>8,458</b>	<b>2.77</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	11,205 kWh	\$2,000.67	11,205	2.49	1,076	0.24		
				Gas	4,902 cu m	\$1,417.96	52,102	11.58	9,273	2.06		
<b>Facility Type Total</b>						<b>\$3,418.63</b>	<b>63,307</b>	<b>14.07</b>	<b>10,349</b>	<b>2.30</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	34,980 kWh	\$5,817.31	34,980	4.12	3,359	0.40		
				Gas	6,688 cu m	\$1,829.40	71,077	8.36	5,538	0.65		
<b>Facility Type Total</b>						<b>\$7,646.71</b>	<b>106,057</b>	<b>12.48</b>	<b>8,897</b>	<b>1.05</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	13,831 kWh	\$2,448.93	13,831	17.08	1,328	1.64	n/a	n/a
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	21,431 kWh	\$3,703.74	21,431	4.50	2,058	0.43	n/a	n/a
				Gas	8,667 cu m	\$2,299.73	92,109	19.35	16,393	3.44		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	9,760 kWh	\$1,852.29	9,760	2.21	937	0.21	n/a	n/a
				Gas	7,616 cu m	\$2,073.57	80,944	18.30	14,406	3.26		
<b>Facility Type Total</b>						<b>\$9,929.33</b>	<b>204,245</b>	<b>44.36</b>	<b>33,794</b>	<b>7.35</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	10,824 kWh	\$2,099.32	10,824					
Oakdale Stlts				Hydro	1,512 kWh	\$335.62	1,512					
<b>Facility Type Total</b>						<b>\$2,434.94</b>	<b>12,336</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$30,915.01</b>	<b>457,942</b>	<b>107.06</b>	<b>62,827</b>	<b>21.23</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO<sub>2</sub>e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available



# Dawn-Euphemia Township

## Energy Consumption and GHG Emissions

## Appendix 'A' to CDM Plan

From: 2019-01-01 to: 2019-12-31

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO <sub>2</sub> e / yr)	GHG Intensity (kgCO <sub>2</sub> e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	16,520 kWh	\$2,959.45	16,520	5.42	1,587	0.52		
				Gas	2,596 cu m	\$885.32	27,589	9.05	4,910	1.61		
<b>Facility Type Total</b>						<b>\$3,844.77</b>	<b>44,109</b>	<b>14.47</b>	<b>6,497</b>	<b>2.13</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	11,720 kWh	\$2,105.75	11,720	2.60	1,126	0.25		
				Gas	5,377 cu m	\$1,537.59	57,144	12.70	10,170	2.26		
<b>Facility Type Total</b>						<b>\$3,643.34</b>	<b>68,864</b>	<b>15.30</b>	<b>11,296</b>	<b>2.51</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	28,199 kWh	\$4,747.54	28,199	3.32	2,708	0.32		
				Gas	6,944 cu m	\$1,911.27	73,803	8.68	5,538	0.65		
<b>Facility Type Total</b>						<b>\$6,658.81</b>	<b>102,003</b>	<b>12.00</b>	<b>8,246</b>	<b>0.97</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	12,378 kWh	\$2,369.30	12,378	15.28	1,189	1.47	n/a	n/a
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	19,619 kWh	\$3,425.47	19,619	4.12	1,884	0.40	n/a	n/a
				Gas	10,206 cu m	\$2,669.09	108,465	22.79	19,304	4.06		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	9,834 kWh	\$1,875.68	9,834	2.22	944	0.21	n/a	n/a
				Gas	6,605 cu m	\$1,797.50	70,199	15.87	12,494	2.82		
<b>Facility Type Total</b>						<b>\$9,767.74</b>	<b>208,118</b>	<b>45.00</b>	<b>34,626</b>	<b>7.49</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	10,824 kWh	\$2,118.29	10,824					
Oakdale Stlts				Hydro	1,512 kWh	\$331.38	1,512					
<b>Facility Type Total</b>						<b>\$2,449.67</b>	<b>12,336</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$28,733.63</b>	<b>447,807</b>	<b>102.06</b>	<b>61,854</b>	<b>20.18</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO<sub>2</sub>e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available



# Dawn-Euphemia Township

## Energy Consumption and GHG Emissions

## Appendix 'A' to CDM Plan

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

Facility Name	Address	Total Area (ft <sup>2</sup> )	Hours / Wk	Fuel Type	Energy Usage	Energy Cost	Energy (ekWh / yr)	Energy Intensity (ekWh / ft <sup>2</sup> )	GHG Emissions (kg CO <sub>2</sub> e / yr)	GHG Intensity (kgCO <sub>2</sub> e / ft <sup>2</sup> )	ekWh / HDD / ft <sup>2</sup> (Note 1)	Public Sector Rank
<b>Facility Type: Office</b>												
Municipal Office	4591 Lambton Line	3048	35	Hydro	21,488 kWh	\$3,552.36	21,488	7.05	2,064	0.68		
				Gas	2,051 cu m	\$789.97	21,801	7.15	3,880	1.27		
<b>Facility Type Total</b>						<b>\$4,342.33</b>	<b>43,290</b>	<b>14.20</b>	<b>5,944</b>	<b>1.95</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Fire</b>												
Rutherford Firehall	4596 Lambton Line	4500	35	Hydro	9,202 kWh	\$1,682.09	9,202	2.04	884	0.20		
				Gas	3,634 cu m	\$1,164.56	38,626	8.58	6,874	1.53		
<b>Facility Type Total</b>						<b>\$2,846.65</b>	<b>47,828</b>	<b>10.63</b>	<b>7,758</b>	<b>1.72</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Community Centre</b>												
Community Ctr	6215 Mill St, Florence	8500	35	Hydro	21,545 kWh	\$3,507.73	21,545	2.53	2,069	0.24		
				Gas	5,865 cu m	\$1,712.49	62,327	7.33	5,538	0.65		
<b>Facility Type Total</b>						<b>\$5,220.22</b>	<b>83,873</b>	<b>9.87</b>	<b>7,607</b>	<b>0.89</b>	<b>n/a</b>	<b>n/a</b>
<b>Facility Type: Libraries</b>												
Shetland Library	1279 Shetland Road	810	12	Hydro	11,077 kWh	\$1,948.62	11,077	13.68	1,064	1.31	n/a	n/a
<b>Facility Type: Public Works Garage</b>												
Rutherford Garage	4590 Lambton Line	4760	40	Hydro	19,003 kWh	\$3,207.43	19,003	3.99	1,825	0.38	n/a	n/a
				Gas	7,574 cu m	\$2,131.17	80,494	16.91	14,326	3.01		
Cairo Garage	1345 Cairo Road	4423	40	Hydro	8,859 kWh	\$1,558.34	8,859	2.00	851	0.19	n/a	n/a
				Gas	5,990 cu m	\$1,751.13	63,657	14.39	11,329	2.56		
<b>Facility Type Total</b>						<b>\$8,648.07</b>	<b>172,012</b>	<b>37.30</b>	<b>28,331</b>	<b>6.15</b>		
<b>Facility Type: Streetlights</b>												
Florence Stlts				Hydro	10,824 kWh	\$2,054.32	10,824					
Oakdale Stlts				Hydro	1,512 kWh	\$305.95	1,512					
<b>Facility Type Total</b>						<b>\$2,360.27</b>	<b>12,336</b>		<b>0</b>			
<b>Grand Total:</b>						<b>\$25,366.16</b>	<b>370,416</b>	<b>85.67</b>	<b>50,704</b>	<b>16.60</b>		

GHG - greenhouse gas; kWh - kilowatt hour; ekWh - equivalent kWh; CO<sub>2</sub>e - equivalent carbon dioxide; ekWh / HDD - ekWh use per Heating Degree Day

**Note 1** - calculation & rank provided by the Ontario Ministry of Energy; rank indicates the % of reporting facilities that scored better; n/a - not yet available



**Energy Conservation and  
Demand Management Plan  
2014 – 2020**

**Appendix B  
Consumption Trends**

Hydro kWh	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Office	27,462	23,095	22,552	20,060	21,589	25,201	20,708	23,123	16,520	21,488
Firehall	14,704	12,637	13,079	10,806	11,889	11,952	9,802	11,205	11,720	9,202
Community Centre	39,787	40,314	42,361	39,600	36,300	54,360	39,670	34,980	28,199	21,545
Rutherford P/W	27,740	21,437	27,048	24,396	25,293	20,642	22,228	21,431	19,619	19,003
Cairo P/W	13,036	12,090	10,101	10,400	11,720	8,888	10,264	9,760	9,834	8,859
Shetland Lib	13,602	13,697	14,600	13,587	12,931	12,611	13,205	13,831	12,378	11,077
<b>Totals</b>	<b>136,331</b>	<b>123,270</b>	<b>129,741</b>	<b>118,849</b>	<b>119,722</b>	<b>133,654</b>	<b>115,877</b>	<b>114,330</b>	<b>98,270</b>	<b>91,174</b>

	90.42%	105.25%	91.60%	100.73%	111.64%	86.70%	98.66%	85.95%	92.78%
	90.42%	95.17%	87.18%	87.82%	98.04%	85.00%	83.86%	72.08%	66.88%

year over year change  
cumulative change from 2011

Office	\$3,763.52	\$3,390.76	\$3,543.30	\$3,541.87	\$4,146.52	\$5,846.89	\$ 4,163.23	\$3,996.91	\$2,959.45	\$3,552.36
Firehall	\$2,103.49	\$1,915.75	\$2,120.77	\$1,987.89	\$2,273.85	\$2,593.97	\$ 2,003.83	\$2,000.67	\$2,105.75	\$1,682.09
Community Centre	\$6,748.50	\$5,369.63	\$5,167.39	\$5,260.98	\$5,500.22	\$8,160.98	\$ 6,035.15	\$5,817.31	\$4,747.54	\$3,507.73
Rutherford P/W	\$3,654.03	\$3,062.64	\$4,029.12	\$4,155.42	\$4,580.38	\$4,624.08	\$ 4,434.18	\$3,703.74	\$3,425.47	\$3,207.43
Cairo P/W	\$1,945.37	\$1,896.88	\$1,864.51	\$1,943.84	\$2,312.88	\$2,156.81	\$ 2,168.10	\$1,852.29	\$1,875.68	\$1,558.34
Shetland Lib	\$2,287.21	\$2,077.52	\$2,433.58	\$2,439.31	\$2,456.90	\$2,907.97	\$ 2,666.54	\$2,448.93	\$2,369.30	\$1,948.62
<b>Totals</b>	<b>\$20,502.12</b>	<b>\$17,713.18</b>	<b>\$19,158.67</b>	<b>\$19,329.31</b>	<b>\$21,270.75</b>	<b>\$26,290.70</b>	<b>\$21,471.03</b>	<b>\$19,819.85</b>	<b>\$17,483.19</b>	<b>\$15,456.57</b>

	86.40%	108.16%	100.89%	110.04%	123.60%	81.67%	92.31%	88.21%	88.41%
	86.40%	93.45%	94.28%	103.75%	128.23%	104.73%	96.67%	85.28%	75.39%

year over year change  
cumulative change from 2011

Gas cu m	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Township Office	3,064	2,775	3,561	3,886	3,557	3,314	3,562	3,297	2,596	2,051
Firehall	5,199	3,824	5,577	6,329	5,131	5,286	5,560	4,902	5,377	3,634
Community Centre	6,314	5,836	6,177	6,685	5,972	7,048	5,515	6,687	6,944	5,865
Rutherford P/W	9,412	4,394	7,944	11,299	8,904	8,791	8,768	8,666	10,206	7,574
Cairo P/W	6,950	3,937	4,702	8,353	6,269	4,936	4,755	7,616	6,605	5,989
<b>Totals</b>	<b>30,939</b>	<b>20,766</b>	<b>27,961</b>	<b>36,552</b>	<b>29,833</b>	<b>29,375</b>	<b>28,160</b>	<b>31,168</b>	<b>31,728</b>	<b>25,113</b>

	67.12%	134.65%	130.72%	81.62%	98.46%	95.86%	110.68%	101.80%	79.15%
	67.12%	90.37%	118.14%	96.43%	94.94%	91.02%	100.74%	102.55%	81.17%

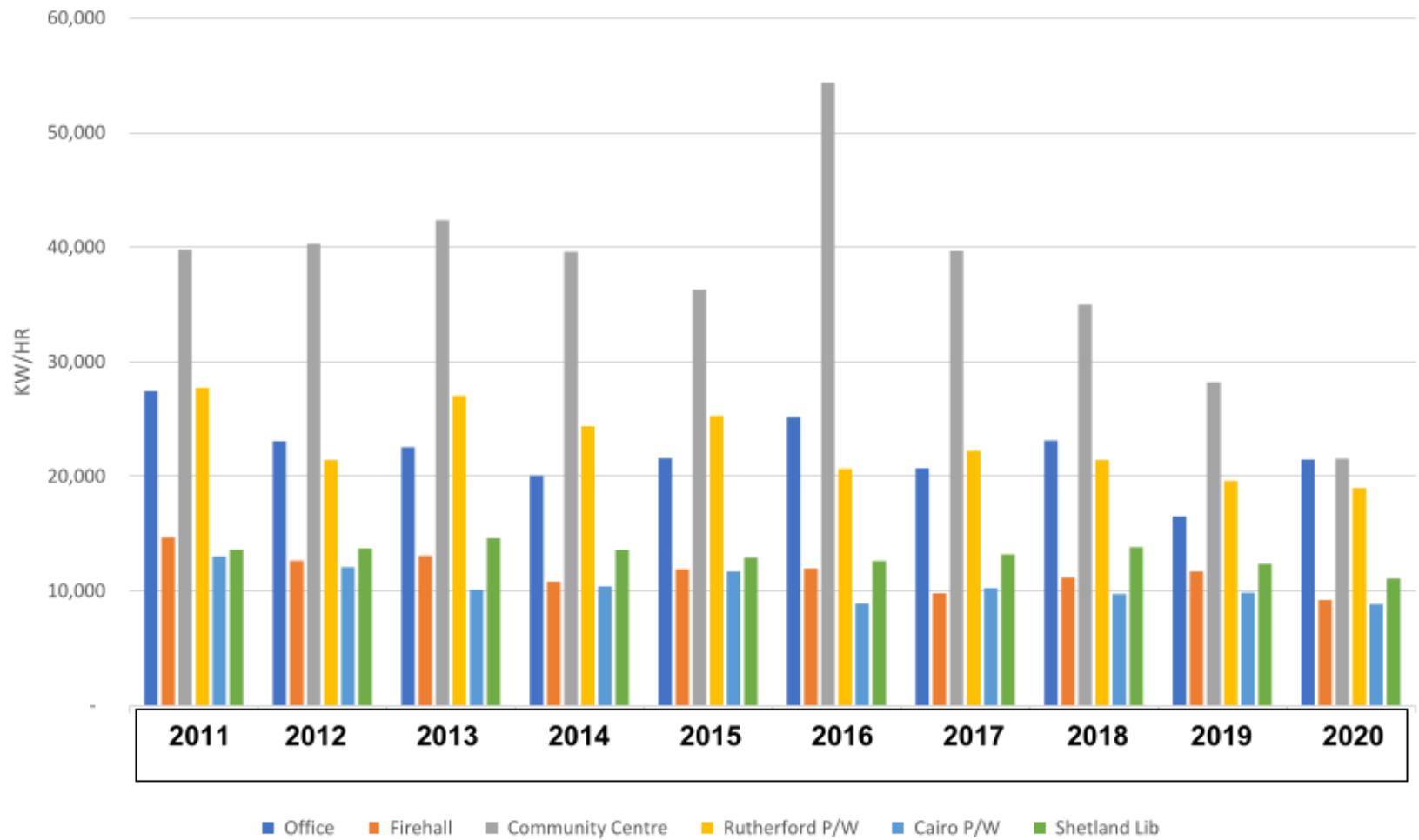
year over year change  
cumulative change from 2011

Township Office	\$945.39	\$813.87	\$955.75	\$1,190.75	\$1,136.01	\$891.17	1,186.00	\$1,039.56	\$885.32	\$789.97
Firehall	\$1,425.81	\$1,027.41	\$1,345.71	\$1,753.92	\$1,544.26	\$1,254.52	1,598.10	\$1,417.96	\$1,537.59	\$1,164.56
Community Centre	\$1,681.22	\$1,425.70	\$1,459.17	\$1,836.56	\$1,746.09	\$1,626.65	1,665.60	\$1,829.40	\$1,911.27	\$1,712.49
Rutherford P/W	\$2,429.95	\$1,155.65	\$1,801.24	\$2,777.93	\$2,569.42	\$1,898.72	2,398.97	\$2,299.73	\$2,669.09	\$2,131.17
Cairo P/W	\$1,815.88	\$1,056.92	\$1,172.25	\$2,139.99	\$1,905.62	\$1,178.65	1,485.62	\$2,073.57	\$1,797.50	\$1,751.13
<b>Totals</b>	<b>\$8,298.25</b>	<b>\$5,479.55</b>	<b>\$6,734.12</b>	<b>\$9,699.15</b>	<b>\$8,901.40</b>	<b>\$6,849.71</b>	<b>\$8,334.29</b>	<b>\$8,660.22</b>	<b>\$8,800.77</b>	<b>\$7,549.32</b>

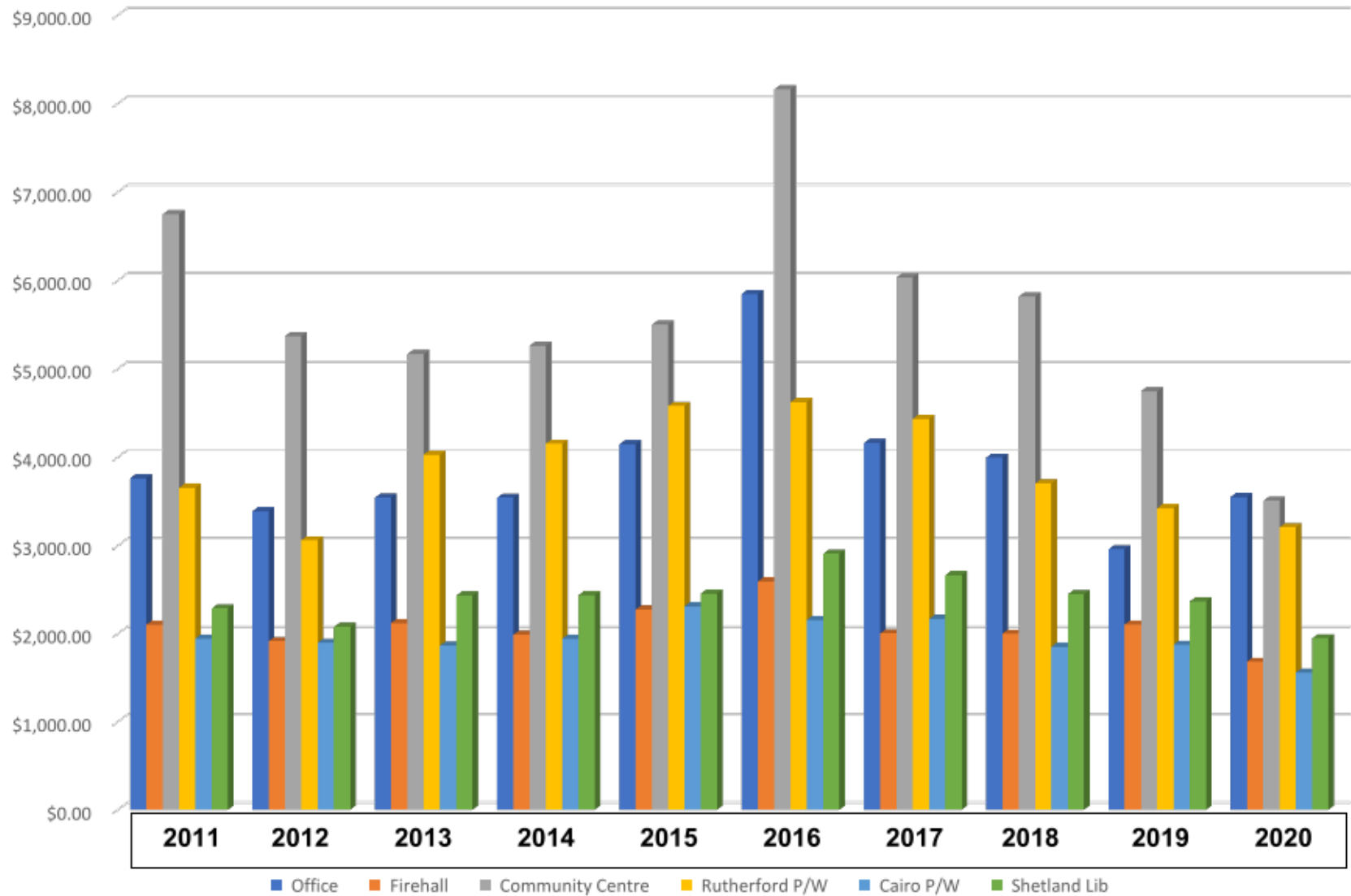
	66.03%	122.90%	144.03%	91.78%	76.95%	121.67%	103.91%	101.62%	85.78%
	66.03%	81.15%	116.88%	107.27%	82.54%	100.43%	104.36%	106.06%	90.97%

year over year change  
cumulative change from 2011

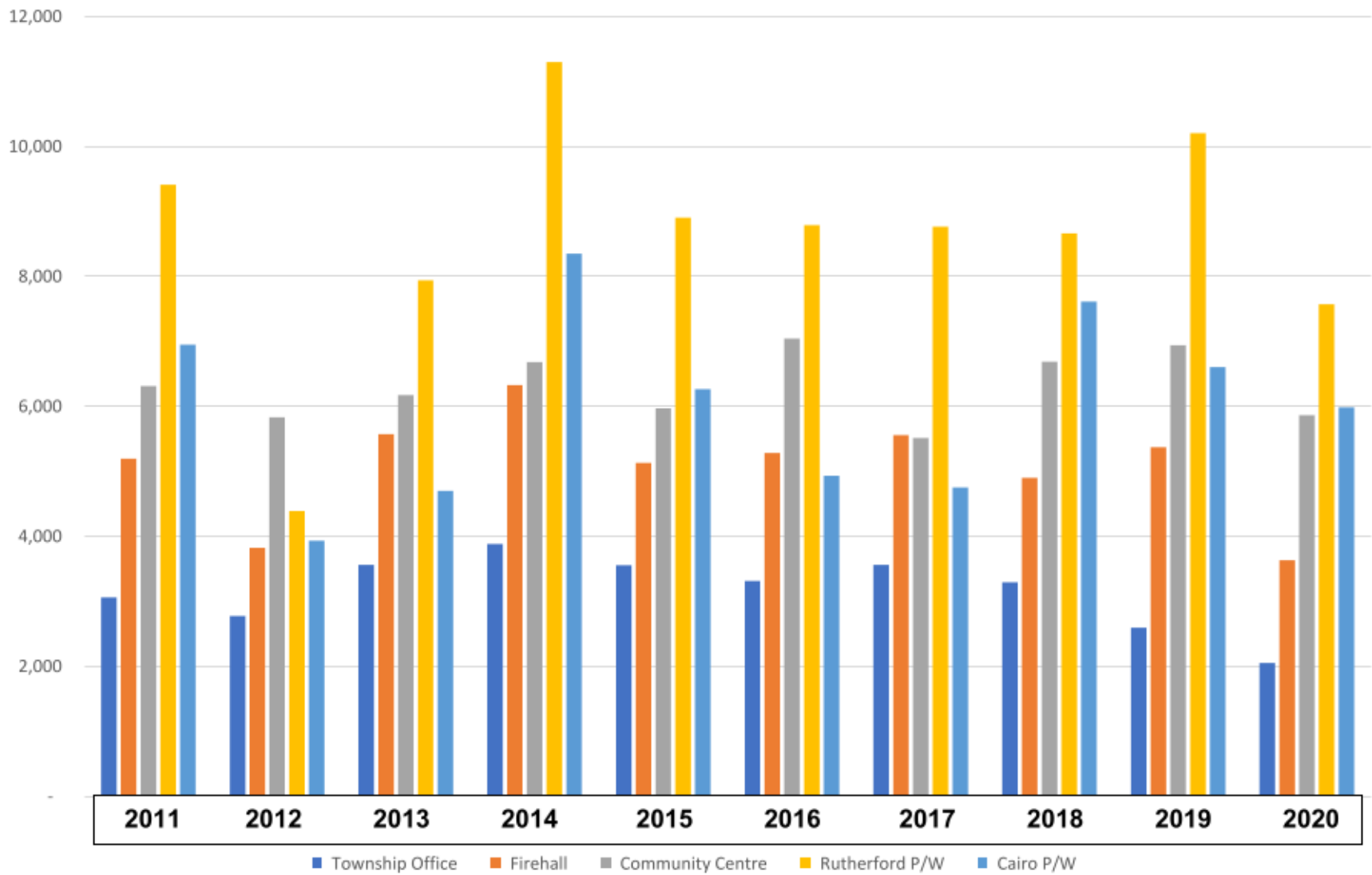
## HYDRO USAGE COMPARISON 2011-2020



## HYDRO COST COMPARISON 2011-2020

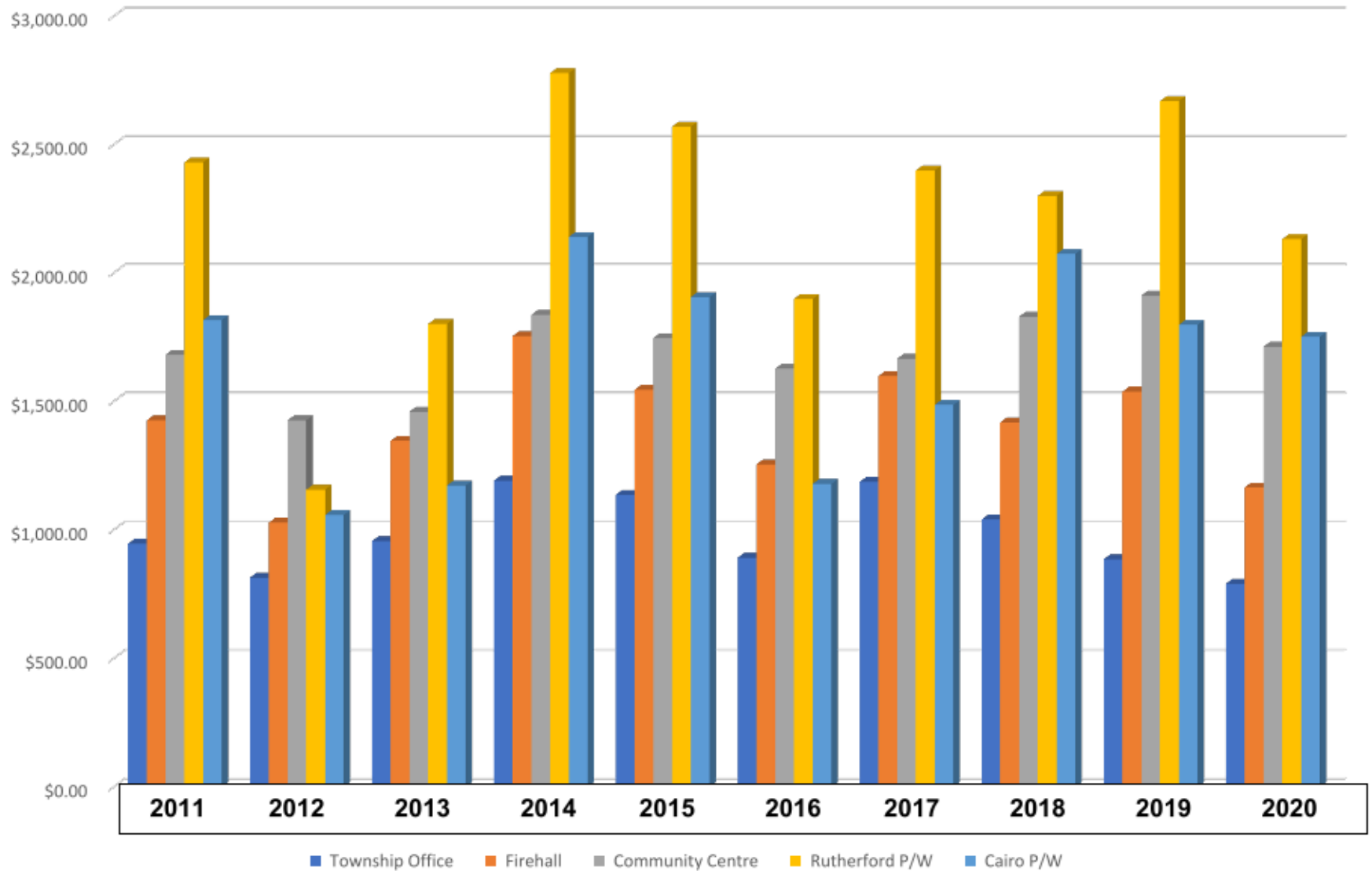


### NATURAL GAS CONSUMPTION COMPARISON 2011 - 2020





### NATURAL GAS COST COMPARISON 2011-2020





**Energy Conservation and  
Demand Management Plan  
2014 – 2020**

**Appendix C  
Programs, Processes and Projects**

## Programs, Processes and Projects

All work completed on the plan to date and the ongoing implementation of the plan will culminate in the development of actions for execution. Generally, the action can be classified as a program, process, or project. All actions are linked to particular objectives developed in the plan.

### Programs

**Energy Awareness** - Add energy awareness to management meetings. This will provide a platform to discuss topics like the current costs of energy consumption, future implications of current usage, areas for improvements and ways to reduce energy use.

**Employee Participation** - Invite employees from all departments of the Municipality to recommend ideas to reduce energy use in their departments.

**Energy Accounting** - Monthly utility usage and costs should be monitored to identify trends and emphasize anomalies to better predict future usage requirements.

**Efficiency Standards** - Standards of performance will be developed to identify and implement temperature regulations for each building for the following:

- Indoor temperature for occupied space
- Indoor temperature for unoccupied space
- Desirable hot water tank temperature Maximum light levels for occupied space

**Energy Efficiency Purchasing** - All potential asset purchases will be subject to energy use evaluations to determine the energy consumption of the potential purchase. In the decision making process, preference will be given to assets that use less kWh or are Energy Star rated.

**After Hours** - Adopt a strategy to ensure that lighting is turned off during periods where facilities are not in use after hours. Staff who use the facilities after hours will be advised to keep only the areas of occupation lit after hours.

### Processes

**Enhance Building Envelopes** – For those Municipal buildings that have been identified as critical in terms of heating and cooling energy consumption will be re caulked, weather stripped, and insulated to reduce air leakage.

**Annual Energy Reports** – Energy reports will be produced annually for management review and reduction analysis.

**Energy Planning** – Energy planning will be added to discussions at Manager Meetings to reduce consumption and increase cost savings.

**Energy Commodity** – Investigate the feasibility of joining a purchasing program such as that offered by A.M.O. through their LAS division for both electricity and natural gas.

**Energy Procurement Policies** – Choosing products with minimal life-cycle impacts can save energy, reduce operating costs and reduce emissions. Procurement policies and practices will be updated to include life-cycle cost analysis that takes into account the energy use and cost.

**Energy Conservation** – Encourage staff and facility users to consciously incorporate conservation in daily routines through the use of signage, checklists, user manuals, etc. Items such as the use of power bars, turning off devices at night / on exit, lights out, etc.

## **Projects**

**Street lighting** – upgrade the streetlights in Florence and Oakdale to L.E.D. technology as budget resources become available – COMPLETED

**Municipal Office** – continue with the upgrade of lighting to L.E.D. and T8 efficiency florescent. Upgrade / replacement of the HVAC systems to high efficiency gas. Replacement of the exterior message sign to a digital remotely programmable unit. All as budget resources allow. COMPLETED

**Rutherford Fire hall** – continue with the upgrade of lighting to L.E.D. and T8 efficiency florescent. Upgrade / replacement of the HVAC systems to high efficiency gas. All as budget resources allow. COMPLETED

**Public Works Garages** – continue with the upgrade of lighting to L.E.D. and T8 efficiency florescent. ONGOING