

To: Mayor and Members of Council

From: Public Works Department

Meeting: 2014-07-08

Subject: Corporate Energy and Environmental Plans Update and 2012 *Green Energy Act, 2009* Reporting

RECOMMENDATIONS

That Report PW-2014-041 regarding Corporate Energy and Environmental Plans Update and 2012 *Green Energy Act, 2009* reporting, be received;

That Council endorse the updated Corporate Energy Management Plan and Environmental Progress Action Plan actions to further the Town's green objectives;

That Council direct staff to provide the Ministry of Energy with the Town's updated Corporate Energy Management Plan, and make this document, along with the Town's 2012 Energy and Greenhouse Gas Emissions Reporting Template available on the internet, intranet and in printed form in compliance with the *Green Energy Act 2009*, Ontario Regulation 397/11.

EXECUTIVE SUMMARY

Energy and environment staff has been updating the Town's Environmental Progress Action Plan and the Corporate Energy Management Plan. This process entailed extensive staff consultation, a well-attended community stakeholder session, and participation in an online consultation program. The resulting recommended actions will help the Town challenge itself against other municipal best practices, and will maintain its green leadership record while complying with the *Green Energy Act, 2009* Ontario Regulation 397/11.

Since this Council Report was deferred from the June 24 Council Meeting, the 2012 Energy Consumption and Greenhouse Gas Emissions Report was submitted to the Ministry of Energy in order to meet the July 1, 2014 deadline. The updated Corporate Energy Management Plan Actions (Schedule C) will be submitted to the Ministry upon Council approval.

Upon Council approval, staff will:

- a. Submit the refreshed Corporate Energy Management Plan actions to the Ministry of Energy.
- b. Begin the process of implementing both Plans and their associated recommendations.

DISCUSSION

Purpose (background)

On April 22 2014, Council received PW-2014-016 report which explained the collaborative process involved in updating both the Corporate Energy Management Plan (CEMP) and the Environmental Progress Action Plan (EPAP).

The 2005 Environmental Progress Action Plan challenged the Town to ‘green’ its internal processes, staff behaviours, and incorporate energy efficiency initiatives into capital projects, to maintain the Town of Caledon’s identity as the “Greenest Town in Ontario”.

The Corporate Energy Management Plan, established in 2011, focused on formalizing energy management throughout the Town by establishing an energy reduction target, and by developing specific actions to conserve energy and improve energy literacy throughout the Town.

Refreshed actions for both plans were required to once again challenge the Town against other municipal best practices, and to maintain the Town’s green leadership record. Additionally, Town staff were obligated to update the Corporate Energy Management Plan to comply with the *Green Energy Act, 2009* Ontario Regulation 397/11 requirement of creating a five year Conservation and Demand Management Plan (CDM). This regulation also requires the Town to report on its 2012 energy consumption and greenhouse gas emissions.

Corporate Energy Management Plan

The 2011 CEMP has been updated with thirty-seven new actions to be achieved over the next five years. The CEMP actions are organized into three categories and five focus areas as follows:

Categories:

- Programs: Voluntary in nature and tend to have an educational focus.
- Processes: Procedures and standards that are embedded into staff routines.
- Projects: Tied to energy efficient initiatives and capital projects and related training.

Focus Areas:

- Buildings and Equipment Efficiency: Optimize operation schedules and investigate new technologies and systems to reduce energy consumption while improving Town service delivery.
- Organizational Integration: Integration of energy management policies and procedures throughout the Corporation that requires staff to incorporate energy into decision-making.

PW-2014-041

- Communication and Engagement: Improve staff and client energy literacy and influence behaviours through Town wide energy challenges and awareness campaigns.
- Monitoring and Tracking: Analyze and communicate energy data information to allow for improved understanding of Town energy use and to measure and verify results of energy projects and campaigns.
- Energy Supply Management: Responsible energy procurement practices of the Town’s energy portfolio to continue to pursue optimal rates while achieving cost certainty.

Green Energy Act, 2009 Ontario Regulation 397/11

The CEMP was updated in part to ensure the Town’s compliance with the *Green Energy Act, 2009 Ontario Regulation 397/11*. The table below outlines the Town’s compliance:

Ontario Regulation 397/11 Requirement	Town Submission														
Town Energy Consumption Data	<p>See Schedule A 2012 <i>Energy Consumption and Greenhouse Gas Emissions Report</i> and Schedule B 2012 <i>Energy Consumption by Building Type</i>.</p> <p>Since this report was deferred from the June 24 meeting, this Report (Schedule A) was submitted to the Ministry of Energy for July 1 2014.</p> <div data-bbox="618 1060 1328 1577" style="text-align: center;"> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Facility Energy Consumption Breakdown</caption> <thead> <tr> <th>Facility Type</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Recreation</td> <td>68%</td> </tr> <tr> <td>Administration</td> <td>11%</td> </tr> <tr> <td>Libraries and Community Centres</td> <td>9%</td> </tr> <tr> <td>Fire Halls</td> <td>6%</td> </tr> <tr> <td>Works Yards</td> <td>4%</td> </tr> <tr> <td>OPP</td> <td>2%</td> </tr> </tbody> </table> </div> <p>Town recreation buildings account for 68% of facility energy consumption. This is typical for recreation facilities due to pools and ice pads. These recreation facilities, and Town Hall are part of the Town’s ‘big 7’ energy consumers, and continue to be a focus of the CEMP.</p>	Facility Type	Percentage	Recreation	68%	Administration	11%	Libraries and Community Centres	9%	Fire Halls	6%	Works Yards	4%	OPP	2%
Facility Type	Percentage														
Recreation	68%														
Administration	11%														
Libraries and Community Centres	9%														
Fire Halls	6%														
Works Yards	4%														
OPP	2%														

<p>Goals and Objectives for reducing and managing energy</p>	<p>Staff have established the following objectives:</p> <ol style="list-style-type: none"> 1. Maximize fiscal resources through direct and indirect energy savings 2. Reduce the environmental impact of the Town's operations 3. Increase the comfort and safety of staff and patrons of Caledon's facilities 4. Improve the reliability of Town equipment and reduce maintenance 5. Provide the guidance and leadership necessary for the adoption of a culture of sustainability
	<p>Town staff worked with IB Storey, an energy consulting firm, to determine estimated energy savings and capital costs of implementing the CEMP. Staff went beyond the requirements of the regulation and established the following target:</p> <ul style="list-style-type: none"> • Reduce energy consumption 9% by 2019, based on Caledon's building and energy profile in 2012.
<p>Proposed energy measures and timeframe</p>	<p>See Schedule C <i>Corporate Energy Management Plan Action Table</i>.</p>
<p>Description of renewables/alternative energy generation</p>	<ul style="list-style-type: none"> • The Town has three solar projects located at Caledon Village Fire Hall, Victoria Parks Community Centre and Inglewood Community Centre. In 2013, together these projects produced 44, 232 kWh. • The new OPP station in Caledon East has 17 ground source heat pumps. The system did not perform at its optimal capacity during its first year of operation and has since undergone changes (early 2013) to optimize efficiency. Due to these changes, the Town is unable to provide estimations on consumption for a full year, since this data is not yet available. • The Town currently purchases 238MWh of renewable energy certificates for the LEED Gold Caledon East OPP facility.
<p>Approval by Senior Management</p>	<p>Assuming Council approval, staff will provide the Council resolution.</p>
<p>Plan made publically available</p>	<p>This report along with the CEMP updated actions will be made publically available immediately after Council approval.</p>

Environmental Progress Action Plan

In 2005, Council endorsed the Town's first corporate environmental strategy - the Environmental Progress Action Plan which prioritizes and identifies "green" actions. The Plan is comprised of eight priority areas:

1. Air Quality,
2. Climate Change,
3. Energy,
4. Green Economy,
5. Environmental Awareness,
6. Sustainable Planning,
7. Community Capacity; and
8. Greening Town Hall, (added in 2009).

Staff reported on the Plan's implementation to Council in 2007, 2009 and 2011.

To align with the Corporate Energy Management Plan update, staff has also initiated a revamping of the Environmental Plan. This has resulted in more than thirty separate actions (see Schedule D) and a new sustainable food and agriculture priority area.

Financial Implications

Energy and Environment staff will identify areas where budgets can be lowered as the Town works to meet its target of 9% reduction to energy consumption by 2019.

Applicable Legislation and Requirements

Green Energy Act, 2009.

COMMUNITY BASED STRATEGIC PLAN

Strategic Objective Goal 1: Partner with land owners and community to preserve, protect and enhance our environment and agricultural resources and natural capital.

NEXT STEPS

- Inform the Ministry of Energy that the Corporate Energy Management Plan was Council Endorsed.
- Make both the Corporate Energy Management Plan actions (Schedule C) and the 2012 Energy Consumption and Greenhouse Gas Reporting Template (Schedule A) available on the internet, intranet and publically available in printed form.

- Implement actions in both the EPAP and CEMP

ATTACHMENTS

Schedule A: 2012 Energy Consumption and Greenhouse Gas Emissions Report

Schedule B: 2012 Energy Consumption by Building Type

Schedule C: Corporate Energy Management Plan Action Table

Schedule D: Environmental Progress Action Plan Action Table

Prepared by: Katelyn McFadyen

Approver (L1): Sara Peckford

Approver (L2): David Loveridge

Approver (L3): Carey deGorter

Approver (L4): Douglas Barnes

Approver (L5):

Schedule A: 2012 Energy Consumption and Greenhouse Gas Emissions Report

UP or DOWN ARROW in column A to read		Energy Consumption and Greenhouse Gas Emissions									
Confirm consecutive 12-mth period (mth-yr to mth-yr)											
Sector											
Agency Sub-sector	Town										
Organization Name	Town of Caledon										
Operation Name	Operation Type	Total Floor Area	Unit	Energy Type and Amount Purchased and Consumed in Natural Units						Total (calculated in webform)	
				Electricity		Natural Gas		Fuel Oil 1 & 2		GHG Emissions (Kg)	Energy Intensity (ekWh/sqft)
				Quantity	Unit	Quantity	Unit	Quantity	Unit		
Administration Building	Administrative offices and related facilities, including municipal council chambers	55360.2	Square feet	971347	kWh	80912	Cubic Meter	0	Litre	246262.5777	33.08
Albion Bolton Community Centre	Public libraries	38574	Square feet	658899	kWh	39125	Cubic Meter	0	Litre	137251.4413	27.86
Alton Community Centre	Public libraries	5089.48	Square feet	29740	kWh	5077	Cubic Meter	0	Litre	12454.94288	16.45
Alton Town Hall	Cultural facilities	3895	Square feet	1496	kWh	0	Cubic Meter	3625	Litre	10030.52259	10.41
Alton Fire Station	Fire stations and associated offices and facilities	2915	Square feet	9870	kWh	4674	Cubic Meter	0	Litre	9784.705398	20.43
Belfountain Community Centre	Community centres	2991.28	Square feet	3304	kWh	0	Cubic Meter	2152	Litre	6186.693872	8.86
Bolton Fire Station	Fire stations and associated offices and facilities	9996.04	Square feet	111855	kWh	14936	Cubic Meter	0	Litre	38980.95907	27.07
Bolton O.P.P.	Police stations and associated offices and facilities	5250	Square feet	112074	kWh	8414	Cubic Meter	0	Litre	26671.32254	38.38
Caledon Animal Shelter	Administrative offices and related facilities, including municipal council chambers	3195.72	Square feet	79662	kWh	13737	Cubic Meter	0	Litre	33622.28158	70.61
Caledon Central Pool	Indoor swimming pools	6466.76	Square feet	179915	kWh	69192	Cubic Meter	0	Litre	148095.3	141.53
Caledon Centre For Recreation	Gyms and indoor courts for playing tennis, basketball or other sports	85649.6	Square feet	1774747	kWh	275522	Cubic Meter	0	Litre	691356.0342	54.91
Caledon Community Complex	Community centres	16118	Square feet	130057	kWh	31247.26	Cubic Meter	0	Litre	71567.58771	28.67
Caledon East Fire Station	Fire stations and associated offices and facilities	9996.04	Square feet	43738	kWh	12011	Cubic Meter	0	Litre	26908.91842	17.15
Caledon East Portable	Administrative offices and related facilities, including municipal council chambers	3540.04	Square feet	72682	kWh	0	Cubic Meter	0	Litre	6980.37928	20.53
Caledon Village Fire Station	Fire stations and associated offices and facilities	7209.2	Square feet	58056	kWh	13137	Cubic Meter	0	Litre	30412.86514	27.42
Caledon Village O.P.P.	Police stations and associated offices and facilities	4476.16	Square feet	64699	kWh	3990	Cubic Meter	0	Litre	13757.29369	23.93
Caledon Village Place	Public libraries	6391.44	Square feet	76977	kWh	6016	Cubic Meter	0	Litre	18766.88311	22.05
Cheltenham Fire Station	Fire stations and associated offices and facilities	4756	Square feet	42779	kWh	3886	Cubic Meter	0	Litre	11455.47168	17.68
Inglewood Community Centre	Public libraries	4476.16	Square feet	19495	kWh	6409	Cubic Meter	0	Litre	13989.32824	19.57

Inglewood Fire Station	Fire stations and associated offices and facilities	6391.44 Square feet	17479 kWh	5899 Cubic Meter	0 Litre	12831.49183	12.54
Lloyd Wislon Centennial Arena	Indoor ice rinks	24995.48 Square feet	398630 kWh	21897 Cubic Meter	0 Litre	79683.48462	25.26
Schedule A: 2012 Energy Consumption and Greenhouse Gas Emissions Report							
Margaret Dunn Valleywood Branch	Public libraries	5035.68 Square feet	50110 kWh	4079 Cubic Meter	0 Litre	12524.43193	18.56
Mayfield Recreation Complex	Indoor recreational facilities	62644.72 Square feet	1267651 kWh	106691 Cubic Meter	0 Litre	323458.0873	38.34
Mono Mills Fire Station	Fire stations and associated offices and facilities	2959 Square feet	11390 kWh	5484 Cubic Meter	0 Litre	11462.09407	23.55
Palgrave Community Complex	Community centres	5304.68 Square feet	17034 kWh	6665 Cubic Meter	0 Litre	14236.97431	16.56
Palgrave Fire Station	Fire stations and associated offices and facilities	3002.04 Square feet	9274 kWh	7516 Cubic Meter	0 Litre	15100.62749	29.70
Rotary Club	Community centres	6004.08 Square feet	71803 kWh	9649 Cubic Meter	0 Litre	25138.62004	29.04
Snelgrove Fire Station	Fire stations and associated offices and facilities	5250.88 Square feet	31803 kWh	9541 Cubic Meter	0 Litre	21092.83233	25.37
Victoria Parks Community Centre	Community centres	2829.88 Square feet	9174 kWh	4255 Cubic Meter	0 Litre	8925.688845	19.22
Work Yard 1	Storage facilities where equipment or vehicles are maintained, repaired or stored	8894 Square feet	67706 kWh	15171 Cubic Meter	0 Litre	35185.18646	25.74
Work Yard 2	Storage facilities where equipment or vehicles are maintained, repaired or stored	15353.55 Square feet	196448 kWh	24736 Cubic Meter	0 Litre	65633.41539	29.92
Work Yard 3	Storage facilities where equipment or vehicles are maintained, repaired or stored	5156 Square feet	46159 kWh	8059 Cubic Meter	0 Litre	19669.67335	25.56
Cheltenham Community Hall	Community centres	1791 Square feet	3960 kWh	1295 Cubic Meter	0 Litre	2828.680365	9.90
Caledon East Arena	Indoor ice rinks	75458.83 Square feet	2076181 kWh	146289 Cubic Meter	0 Litre	475974.3564	48.12
Don Sheardown Arena	Indoor ice rinks	29618 Square feet	505917 kWh	30041 Cubic Meter	0 Litre	105384.5944	27.86
Caledon OPP Detachment	Police stations and associated offices and facilities	23650 Square feet	40047 kWh	1488 Cubic Meter	0 Litre	6659.366856	2.36
Clara Street OPP	Police stations and associated offices and facilities	1311.3 Square feet	9176 kWh	2821 Cubic Meter	0 Litre	6214.721807	29.86

Schedule B: 2012 Energy Consumption by Building Type

Town of Caledon Facilities

Electricity	
Total kWh	9,271,333
Total \$	\$1,079,883.00
Total GHG (t)	890.42

Natural Gas	
Total m3	999,862
Total ekWh	10,626,310.37
Total \$	\$232,732.00
Total GHG (t)	1,890.37

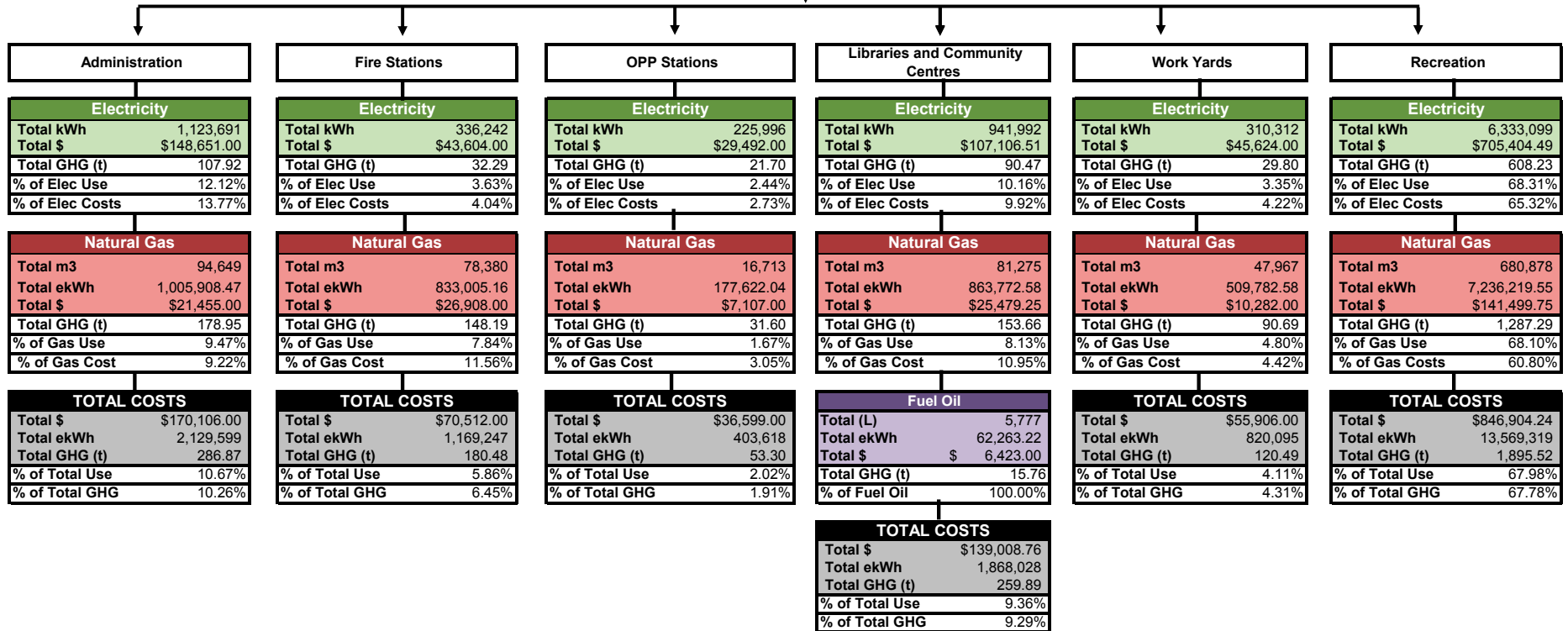
Fuel Oil	
Total (L)	5,777
Total ekWh	62,263.22
Total \$	\$ 6,423.00
Total GHG (t)	15.76

TOTAL*	
Total kWh	19,959,907
Total \$	\$1,319,038
Total GHG	2,796.54

	GHG Coefficient	
	kggh	tghg
Electricity kWh	0.09604	0.00009604
Natural Gas m ³	1.890627	0.001890627
Fuel Oil	2.727406	0.002727406

**Convert Fuel Oil (L) to ekWh:
1 L= 10.777777

**Convert natural gas (m3) to ekWh:
1 m3 = 10.627777



Schedule C: Corporate Energy Management Plan Action Table

Actions for the Corporate Energy Management Plan (CEMP)

Processes

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results	
Organizational integration								
1.	Internal Corporate Energy Team (CET) to play a role in implementing the CEMP	Formalize the roles and responsibilities of the CET and set up quarterly meetings.	All Departments	High priority (July 2014 – July 2015)	Capacity Building	Caledon labour cost only	<ul style="list-style-type: none"> Roles and responsibilities formalized (y/n) Number of meetings 	<ul style="list-style-type: none"> Improved communication, coordination, and management of energy within the Town Energy integrated into decision-making process across all departments
2.	Policy and procedure database	Add current and new energy policies and procedures to the existing corporate database.	E & E, Clerks	High priority (July 2014 – July 2015)	Capacity Building	Caledon labour cost only	<ul style="list-style-type: none"> Policies and procedures added to data based (y/n) Policies and procedures database communicated to staff (y/n) 	<ul style="list-style-type: none"> Improved communication and awareness of energy policies and procedures Increased use and reference of energy policies and procedures
3.	Energy management as part of goal setting and performance review system	Work with appropriate departments to determine requirements to embed energy management as part of staff annual goal setting.	E & E, HR, CAO	High priority (July 2014 – July 2015)	Capacity Building	Caledon labour cost only	<ul style="list-style-type: none"> Number of staff with energy as a goal Number of positive performance reviews related to energy 	<ul style="list-style-type: none"> Behaviour change Improved energy knowledge and awareness among staff Integration of energy responsibility

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
4. Corporate Energy Reserve Fund	Develop a staff application process for funding energy efficient related projects through the Corporate Energy Reserve Fund. Formalize criteria and metrics for prioritizing projects (see City of Markham as an example).	E & E, Finance, CET	High priority (July 2014 – July 2015)	N/A	Caledon labour cost only	<ul style="list-style-type: none"> Number of applications received Number of projects approved Criteria and metrics formalized (y/n) Energy savings (kWh) Cost savings (\$) 	<ul style="list-style-type: none"> Increased number of energy projects Increased participation in energy initiatives Increased awareness and promotion of energy as a shared responsibility
5. Foster a healthy working relationship with Hydro One and Enbridge Gas	Seek and obtain an account manager with Hydro One. Initiate and maintain semi-annual meetings with the Town's energy utilities' account managers (Enbridge Gas and Hydro One). Determine potential to have monthly meter readings for all facilities.	E & E, Finance, Facility Managers	In progress	Capacity building	Caledon labour cost only	<ul style="list-style-type: none"> Account manager obtained (y/n) Number of meetings Number of estimated and replacement bills decreased 	<ul style="list-style-type: none"> Improved communication with utility companies Better energy management and identification of energy saving opportunities Improved data quality and reduced number of estimated and replaced bills Utility meter upgrades (where appropriate)
6. Micro Energy Management Plans for Caledon's 'Big 7'	Work with facility Managers and Operators to develop facility micro energy	E & E, Facility Managers and Operators	High Priority (July 2014- July 2015)	Plan outcomes will have savings	Caledon labour cost only	<ul style="list-style-type: none"> Micro energy management plans established (y/n) Number of projects 	<ul style="list-style-type: none"> Ownership of energy consumption and expenditures spread throughout the Township

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results	
	management plans that are shorter term.					<ul style="list-style-type: none"> implemented Energy Reduction (ekWh) 	<ul style="list-style-type: none"> Increased number of projects implemented Energy management is embedded throughout the corporation 	
Buildings and equipment								
7.	Energy efficiency equipment replacement policy	Develop an energy efficiency equipment replacement policy and align with the 10-year capital replacement plan, incorporating life-cycling costing, etc.	E & E, Asset Management, Finance, Facility Managers,	Medium Priority (July 2015 – July 2017)	Will be savings due to equipment efficiency-ratation	\$15, 000	<ul style="list-style-type: none"> Energy efficiency replacement policy developed (y/n) Policy adopted (y/n) Policy aligned with 10-year capital replacement plan (y/n) Number of equipment replaced under policy Percentage of energy consumption savings 	<ul style="list-style-type: none"> Coordinated approach to replacing equipment Energy consumption and cost savings Inclusion of lifecycle costing into equipment purchases instead of first-cost value Standards to be followed by all future equipment replacement
Monitoring and Verification								
8.	Formal evaluation, verification and monitoring (EM&V) process	Formalize an EM&V process to take place after the completion of every project. Include a debriefing session with all	E & E, CET, Finance, Facility Managers, Project Managers	High priority (July 2014 – July 2015)	Capacity building	\$20, 000	<ul style="list-style-type: none"> Evaluation process developed (y/n) Percentage of energy savings diverted to Corporate Energy Reserve Fund Process for diverting 	<ul style="list-style-type: none"> % of energy savings to the Corporate Energy Reserve Fund Energy engrained in decision making Increased

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
	staff involved. Consider diverting a percentage of energy savings into the Corporate Energy Reserve Fund.					savings into Corporate Energy Reserve Fund developed (y/n)	<ul style="list-style-type: none"> accountability of the outcome of projects Specifies if energy projects meet intended objectives and highlights changes to be made to improve future projects Platform for successful projects to be rolled out
9. Energy management system (EMS) usage	Conduct a needs assessment and develop an improved process for utilizing data in the Energy Management System.	E & E, Facility Managers, Administration, Finance	High priority (July 2014 – July 2015)	Capacity Building	Caledon labour cost only	<ul style="list-style-type: none"> Process developed for utilizing data (y/n) Number of staff using EMS software 	<ul style="list-style-type: none"> More effective and efficient management of energy within facilities Better understanding of facility energy use Improved correspondence with staff and utility companies Improved tracking of annual energy utility budgets
10. Facility energy reporting and feedback	Assess the viability of developing quarterly facility energy report cards, which benchmark current and past building energy performance and include energy conservation goals for each facility.	E & E, Facility Managers	Medium priority (July 2015 – July 2017)	Capacity Building	Caledon labour cost only	<ul style="list-style-type: none"> Number of facility report cards developed Facility benchmarks established (y/n) Conservation goals developed (y/n) Conservation goals met (y/n) 	<ul style="list-style-type: none"> Better understanding of facility energy use Energy included as part of staff responsibilities

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
11. Biennial reporting	Develop a biennial CEMP update report to track the status of the actions.	All	Medium priority (July 2015 – July 2017)	Capacity building	Caledon labour cost only	<ul style="list-style-type: none"> Number of update reports developed 	<ul style="list-style-type: none"> Monitoring and tracking of CEMP progress Education for staff and the public on the Town's energy progress
12. Incentive tracking	Develop an incentive-tracking database that can be referenced during the development of budget and project implementation, and overall energy reporting.	E & E	High priority (July 2014 – July 2015)	Cost savings dependent upon new program starting 01/15	Caledon labour cost only	<ul style="list-style-type: none"> Incentive-tracking database developed (y/n) Dollar value of incentives in database Number of incentives in the database 	<ul style="list-style-type: none"> Central database of incentives available to staff for easy access Increased likelihood of applying for and utilizing available incentives Increased number of energy efficiency projects implemented Increased staff awareness of available incentives
Energy supply management							
13. Renewable electricity procurement	Re-assess objectives and develop criteria for purchasing renewable electricity certificates.	E & E, Purchasing Manager, Finance	Medium priority (July 2015 – July 2017)	Capacity building	Caledon labour cost only	<ul style="list-style-type: none"> Objectives re-assessed (y/n) Criteria developed (y/n) Amount (kWh/m³) of renewable energy purchased 	<ul style="list-style-type: none"> Demonstrating leadership in energy purchase Increased points for LEED built facilities
14. Energy procurement	Continue to build on internal energy supply knowledge through energy market research	E & E, Finance	High priority (July 2014 – July 2015)	Capacity Building	Caledon labour cost only	<ul style="list-style-type: none"> Energy purchasing practices reviewed (y/n) Energy procurement strategy developed 	<ul style="list-style-type: none"> Improved internal expertise and understanding of energy markets Improved risk

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
	and awareness. This will improve energy purchase practices, especially in an increasingly volatile market due to external influences.					(y/n)	management

Programs

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
Buildings and equipment							
15. Remove excess lighting	Build upon the successes of de-lamping at Town Hall, and continue to remove excess lighting at Town facilities while maintaining safe and secure lighting levels (e.g. York Region green sticker campaign).	E & E, Facility Managers	Medium priority (July 2015 –July 2017)	296, 300 kWh \$44, 570	\$62, 000	<ul style="list-style-type: none"> • Cost savings (\$) • Energy savings (kWh) • Number and types of lights removed 	<ul style="list-style-type: none"> • Staff and clients are comfortable with new lighting levels • Energy savings (kWh) • Energy cost savings
16. Program to automatically turn off all computers at night	Develop a program that will automatically shut computers off at night. Undergo an extensive awareness campaign to make staff aware of this (See Oakville example).	E & E, IT, Communications	Medium Priority (July 2015 –July 2017)	38, 064 kWh \$4187	Caledon labour cost only	<ul style="list-style-type: none"> • Program written (y/n) • Program implemented (y/n) • Awareness campaign implemented (y/n) • Energy savings (kWh) • Cost savings (\$) 	<ul style="list-style-type: none"> • Energy savings (kWh) • Energy cost savings • Staff awareness of phantom load • Changes in staff behaviour

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
Communication and engagement							
17. Annual facility-wide energy reduction competition	Develop and initiate an annual energy reduction competition for staff to foster behavior change, more efficient use of equipment, and improved operations (e.g. Burlington Ice Rink competition).	E & E, Facility Managers, Communications	Medium priority (July 2015 –July 2017)	153, 566 kWh \$16, 892	\$15, 000	<ul style="list-style-type: none"> • Cost savings (\$) • Energy savings (kWh) • Competition developed (y/n) • Changes in attitudes and behaviours 	<ul style="list-style-type: none"> • Changes in attitudes and behaviours among staff and users of facilities • Improved staff awareness and engagement of energy management • Reduction in energy consumption and cost
18. Formal employee and engagement program	Develop and implement an annual energy themed employee and engagement program for all staff (i.e. phantom power awareness, incentive training).	E & E	Ongoing	Linked with energy reduction competition, capacity building	Caledon labour cost only	<ul style="list-style-type: none"> • Number of ideas • Number of participants involved 	<ul style="list-style-type: none"> • Changes in attitudes and behaviours • Improved staff awareness of energy management • Reduction in energy consumption and cost
19. Energy-focused training for staff responsible for operation, maintenance, and development of facilities	Investigate opportunities to partner with an educational institution to implement energy-focused training for staff specific to their roles. (See Town of Oakville training program with Seneca College and North Bay training program with LAS).	E & E, Facility Managers, HR	Medium priority (July 2015 –July 2017)	Capacity building, and savings from better building operation/maintenance	To be determined	<ul style="list-style-type: none"> • Number of staff trained • Training program investigated (y/n) • Training program implemented (y/n) 	<ul style="list-style-type: none"> • Better O&M understanding of energy management, buildings, and equipment • Improved O&M technical knowledge • Reduction in energy consumption and cost

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
20. Energy policy training for new staff	Include Town energy policies and practices in the training and orientation process for new employees.	E & E, HR	High priority (July 2014 – July 2015)	Capacity Building	Caledon labour cost only	<ul style="list-style-type: none"> Number of participants in HR 'On Board' training sessions Presentation created for HR Downloads program (y/n) 	<ul style="list-style-type: none"> Improved awareness, performance and understanding of energy management Better understanding of Town's policies and practices as they relate to energy management
Monitoring and Verification							
21. Energy dashboard	Develop / purchase an energy dashboard at Town Hall, and feature on the Town intranet to allow all staff to view energy trends and use.	E & E, Manager Civic Properties	Ongoing	Capacity Building	\$2000	<ul style="list-style-type: none"> Number of times dashboard is updated with tips Energy dashboard developed/purchased 	<ul style="list-style-type: none"> Improved awareness and understanding of energy use at Town Hall Data integrated into awareness campaigns Changes in staff behaviour
22. Touch screens displaying energy information at recreation centres	Purchase touch screens for each recreation centre to display information related to facility specific and Town wide energy initiatives.	E & E, Facility Managers, Purchasing	Medium priority (July 2015 – July 2017)	Capacity Building	Linked with Energy dashboard	<ul style="list-style-type: none"> Number of times dashboard is updated with tips and events Number of users Number of touch screens installed 	<ul style="list-style-type: none"> Improved awareness and understanding of energy use Public education and engagement of Town's energy commitments

Schedule C: Corporate Energy Management Plan Action Table
Projects

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
Buildings and equipment							
23. Engineering design study on Town Hall HVAC System to replace RTU's and undertake an air balancing analysis.	Based on the engineering study, replace RTU and improve HVAC system at Town Hall. Once this is complete, prohibit staff use of portable heaters.	Manager Civic Properties, Purchasing	High priority (July 2014 – July 2015)	181, 860 kWh \$20, 005	\$425, 500	<ul style="list-style-type: none"> • Cost savings (\$) • Energy Savings (kWh) • Engineering design complete (y/n) • Town HVAC system upgraded (y/n) 	<ul style="list-style-type: none"> • Improved patron comfort • Reduction in energy consumption and cost) • Improved building operations
24. Evening ice temperatures	Assess opportunities to increase evening/off hour temperatures for all Caledon ice pads to -4°C.	Facility Managers, E & E	Medium priority (July 2015 –July 2017)	45, 825 kWh \$5041	Caledon labour cost only for manual setbacks	<ul style="list-style-type: none"> • Cost savings (\$) • Energy savings (kWh) • Ice temperatures changed (y/n) 	<ul style="list-style-type: none"> • Better alignment of operational hours with ice pad temperatures • Reduction in energy consumption and cost
25. Infrared sensor temperature controls for ice pads	Pilot infrared sensor temperature controls at Caledon Community Complex and Mayfield Recreation Complex. Based on the results consider expanding to additional Town ice pads.	Facility Operations Manager at CCC, E & E, Purchasing	High priority (July 2014 – July 2015)	117, 100 kWh \$12, 881	\$65, 000	<ul style="list-style-type: none"> • Program expanded to additional ice pads (y/n) • Infrared sensors installed (y/n) • Cost savings (\$) • Energy savings (kWh) 	<ul style="list-style-type: none"> • Reduction in energy consumption and cost • Better control of ice pad temperatures • Improved patron experience on ice pads • Reduced equipment run times
26. Daylight sensor	Assess opportunities to	Facility Managers, E	High priority (July 2014 – July	3, 508 kWh	\$4, 000	<ul style="list-style-type: none"> • Pilot program 	<ul style="list-style-type: none"> • Reduction in energy

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
controls	conserve energy through the use of natural light. Pilot daylight sensor controls at Town Hall and/or Caledon Centre for Recreation and Wellness.	& E	2015)	\$386		implemented (y/n) <ul style="list-style-type: none"> • Energy savings (kWh) • Cost savings (\$) 	consumption and cost <ul style="list-style-type: none"> • Reduced number of lights in naturally lit areas
27. Recreation facility lighting retrofit	Remove all metal halide fixtures and replace with efficient lighting at Caledon Centre for Recreation and Wellness pool and Fieldhouse fitness areas.	Facility Managers, E & E, Purchasing,	High priority (July 2014 – July 2015)	218, 597 kWh \$24, 046	\$54, 000	<ul style="list-style-type: none"> • Number of light fixtures replaced • Energy savings (kWh) • Cost savings (\$) 	<ul style="list-style-type: none"> • Reduction in energy consumption and cost • Improved lighting for patrons • Elimination of inefficient light technologies
28. Variable frequency drives (VFD)	Assess the cost and savings of installing VFDs on pool filter pumps at Mayfield Recreation Complex and Caledon Centre for Recreation and Wellness.	Facility Managers, E & E	Low priority (July 2017 – July 2019)	63, 000 kWh \$6, 930	\$15, 600	<ul style="list-style-type: none"> • Number of VFDs installed • Cost savings (\$) • Energy savings (kWh) 	<ul style="list-style-type: none"> • Reduction in energy consumption and cost • Extended equipment lifespan
29. LED streetlight retrofit	Establish a streetlight baseline inventory, and retrofit and replace existing Cobra style streetlight luminaires with LEDs.	E & E, Public Works, Purchasing, Finance	High priority (July 2014 – July 2015)	N/A pending 2014 streetlight inventory	N/A pending 2014 Streetlight inventory	<ul style="list-style-type: none"> • Business case on LED retrofit (y/n) • Streetlight inventory developed (y/n) • Annual cost savings (maintenance) • Number of lights retrofitted 	<ul style="list-style-type: none"> • Better understanding of streetlights • Energy cost savings due to reduced energy consumption and maintenance

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
30. Centralized equipment inventory	Build upon the existing centralized list of major equipment and motors to establish a detailed inventory. Include major motors, drives, hours of operation, age, and existing controls. Align this with the pending energy efficiency replacement policy (see City of Pickering as an example).	E & E, Facility Managers, Asset Management	Medium priority (July 2015 –July 2017)	Capacity Building	Caledon labour cost only	<ul style="list-style-type: none"> Centralized list developed (y/n) List aligned with energy efficiency replacement policy (y/n) Load profiles developed based on this list (y/n) 	<ul style="list-style-type: none"> More organized and coordinated approach to identifying and prioritizing the replacement of Town equipment Improved understanding of energy load profiles.
31. Building Automation Systems (BAS) in Caledon's 'Big 7' energy consuming facilities	Install BAS in Caledon's highest consuming facilities, specifically Caledon East OPP and Mayfield Recreation Complex and Caledon Community Complex. Align this with software training for Operations Managers and regular maintenance plans to ensure controls are working and communicating properly (see City of Burlington and City of Pickering as examples).	Facility Managers, E & E	Medium priority (July 2015 –July 2017)	464, 829 ekWh \$16, 649	\$281, 000	<ul style="list-style-type: none"> Number of BAS installed Number of operators trained Cost savings (\$) Energy savings (kWh) 	<ul style="list-style-type: none"> Better control of facility systems Improved staff knowledge of BAS Improved facility comfort Reduction in energy consumption and cost

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
32. Building wall pack LED lighting retrofit	Replace all existing inefficient wall pack technology with LED lights over the next 5 years.	Facility Managers, E & E	Ongoing	35,350kWh \$4,550	\$49,000	<ul style="list-style-type: none"> Number of LED lights installed Cost savings (maintenance) Cost savings (energy) Energy savings (kWh) 	<ul style="list-style-type: none"> Reduction in energy consumption and cost Maintenance cost savings Demonstrating leadership in energy management Improved exterior lighting quality
33. De-mineralized floodwater treatment	Evaluate the feasibility of installing a de-mineralized floodwater treatment system at Caledon Community Complex.	Facility Managers	Medium priority (July 2015 – July 2017)	115,299 ekWh \$9,161	\$46,000	<ul style="list-style-type: none"> Business case developed (y/n) Demineralized floodwater treatment installed (y/n) Energy savings (kWh) Cost savings (\$) 	<ul style="list-style-type: none"> Removal of water impurities Decreased temperature of flood water Reduced energy required to freeze the ice surface Reduction in energy consumption and cost
34. Install occupancy sensors	Install motion activated sensors such as passive infrared sensors, for lighting in all occasionally used rooms at Town Hall (e.g. washrooms, meeting rooms, storage rooms, etc.).	Facility Managers	High priority (July 2014 – July 2015)	6,500 kWh \$973	\$10,500	<ul style="list-style-type: none"> Number of motion activated sensors installed Energy savings (kWh) Cost savings (\$) 	<ul style="list-style-type: none"> Reduction in energy consumption and cost

Schedule C: Corporate Energy Management Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Estimated Savings	Estimated Cost	KPI	Benefit / anticipated results
35. Programmable thermostats in libraries and community centres	Install wireless programmable thermostats in the libraries and community centres to help improve control of room temperatures and energy use in line with programs and schedules.	Facility Managers	Low priority (July 2017 – July 2019)	26, 969 ekWh \$919	\$5, 200	<ul style="list-style-type: none"> Number of wireless programmable thermostats installed 	<ul style="list-style-type: none"> Improved ability to control temperatures Better client comfort Reduction in energy consumption and cost
Monitoring and tracking							
36. Additional metering	Install additional energy metering, where applicable, to major equipment at facilities to better understand consumption trends and to ensure that equipment is operating at optimal efficiency. Also, purchase portable wireless meters to use amongst facilities.	E & E, Facility Managers	High priority (July 2014 – July 2015)	Capacity Building	To be determined	<ul style="list-style-type: none"> Number of meters installed Energy savings (kWh) Cost savings (\$) 	<ul style="list-style-type: none"> Reduction in energy consumption and cost Improved monitoring of energy use Efficient use of equipment
Energy supply management							
37. Renewable energy opportunities	Investigate additional renewable energy project opportunities at Town facilities (such as solar or ground source heat pumps).	E & E, Facility Managers	Low priority (July 2017 – July 2019)	N/A	Caledon labour cost only	<ul style="list-style-type: none"> Number of renewable energy opportunities identified 	<ul style="list-style-type: none"> Reduction in energy consumption and cost Demonstrating leadership in energy management

Schedule C: Corporate Energy Management Plan Action Table

Acronyms

BAS – Building automation system

CEMP – Corporate energy management plan

CET – Corporate Energy Team

E & E – Energy and Environment section

EM&V – Evaluation, monitoring and verification

EMS – Energy management system

HR – Human resources

IT – Information technology

KPI – Key performance indicator

LAS – Local Authority Services

LED – Light emitting diode

Schedule D: Environmental Progress Action Plan Action Table

Actions for the Environmental Progress Action Plan (EPAP)

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
Air quality: measures related to activities that impact the quality of air				
1. Fleet vehicle purchasing policy	Develop a “green fleet” policy for replacing / purchasing new fleet vehicles and for the consideration of hybrid, electric, or “alterative” fuelled vehicles.	Energy & Environment (E & E), Purchasing Public Works (Fleet)	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Reduced emissions and improved air quality • Improved carbon footprint • Demonstrated leadership in reducing GHG emissions
2. Green fleet driver training	As part of the current green fleet initiatives, implement a driver-training program for all staff that drive Town vehicles (e.g. York Regions fleet fuel challenge, Shuttle Challenge).	E & E, Fleet Supervisor, Staff	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Reduced emissions • Fuel and cost savings • Employee education and engagement
3. Air quality	Support the Region of Peel’s air modelling and monitoring program.	E & E, Region of Peel	Ongoing	<ul style="list-style-type: none"> • More accurate understanding of local air quality • Baseline understanding of air quality in the Region of Peel
4. Tree planting strategy	Work with applicable agencies (e.g. Region of Peel and Credit Valley Conservation) to increase the tree canopy in Caledon.	Region of Peel, Parks and Recreation, Planning	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Improved Town aesthetics • Better air quality • Increased tree canopy and variety of trees

Schedule D: Environmental Progress Action Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
Climate change: measures related to reducing greenhouse gas emissions				
5. Milestones for the Federation of Canadian Municipalities Partners for Climate Protection (PCP) program	Address and complete remaining PCP milestone commitments for both the Community and Corporate sectors.	E & E	Ongoing	<ul style="list-style-type: none"> • Demonstrated leadership in climate change protection • Public commitment to reducing GHG emissions • Utilizing a recognized method to measure success
6. Caledon Community Climate Change Action Plan	Ensure actions from the Climate Change Plan are implemented and progress is tracked in line with the PCP program and Peel Climate Change Strategy.	E & E	Ongoing	<ul style="list-style-type: none"> • Accountability • Alignment of Town goals and actions • Reduction in GHG emissions • Engagement of all sectors within Caledon
7. Peel Climate Change Strategy	Town staff to work with Region of Peel and partners on implementation of the Peel Climate Change Strategy. Consider development of a Town climate change adaptation plan or an infrastructure vulnerability assessment.	E & E, Region of Peel, Fire, Planning	Ongoing	<ul style="list-style-type: none"> • Demonstrated leadership in climate change • Reduction in GHG emissions • Improved carbon footprint

Schedule D: Environmental Progress Action Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
Energy: measures related to energy management within the community				
8. Community energy plan (CEP)	Investigate funding and grant options for the development of an integrated CEP (e.g. the Municipal Energy Plan funding) (see City of Guelph and Town of Halton Hills as examples). Based on this, develop a CEP.	E & E, Planning, Region of Peel, Economic Development	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Increased energy reliability • Improved energy security and cost control • Leadership in community energy management • Understanding of community energy footprint • Tool for improved community development and planning
9. Corporate energy management plan (CEMP)	Ensure actions from the CEMP are implemented and progress is tracked annually.	E & E	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Accountability • Reduced energy consumption • Alignment of Town goals and actions
10. LED streetlight retrofit	Establish a streetlight baseline inventory, and retrofit and replace existing Cobra style streetlights with LEDs.	E & E, Finance, Transportation Supervisor	Ongoing	<ul style="list-style-type: none"> • Better understanding of streetlights and cost savings • Energy savings (kWh) • Cost savings (energy and maintenance)
A green economy: measures that encourage environmental action within the business sector and support local economic development				
11. Eco-business principles	Implement Caledon Eco-Business Zone Development Guidelines.	E & E, Economic Development, Planning	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Business attraction • Fostering an innovative business community • Demonstrating support for a green local economy

Schedule D: Environmental Progress Action Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
Environmental awareness: measures related to environmental education and encouraging behavioural modifications				
12. Brand E & E	Develop a single brand that can be used when communicating about environmental, sustainability, and energy-related initiatives (see Town of Halton Hills as an example).	E & E, Communications	Low priority (July 2017 – July 2019)	<ul style="list-style-type: none"> • Common and consistent message to staff and public • Improved communication
13. Champion of energy and the environment	Encourage a Municipal (e.g. Mayor or CAO) champion for energy and environmental, plans, policies, and initiatives (see Town of Halton Hills as an example).	E & E, Mayor / CAO, Council	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Demonstrated leadership by the Town for energy and environmental action • Improved buy-in
14. Green corner on the Town Intranet	Create a “green corner” on the home page of the Town Intranet as a communications tool (e.g. fun facts, staff polls, information tips, updates, etc.).	E & E, Communications	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Improved staff engagement and education • Improved communication • Information sharing
Sustainable planning: measures that encourage an environmental focus in the planning and development process				
15. Community design standards	Implement the sustainable residential planning policies that were created for Mayfield West Phase 2.	Planning, E & E	Low priority (July 2017 – July 2019)	<ul style="list-style-type: none"> • Greener communities • Demonstrated leadership in sustainable community development

Schedule D: Environmental Progress Action Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
16. Sustainability checklist for reviewing planning applications	Finalize and implement a sustainability checklist for reviewing planning applications. Consider City of Brampton, Town of Richmond Hill, and City of Vaughn collaborative work on sustainability performance metrics.	E & E	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Improved land use and community planning • Greener developments • Improved accountability of developers
17. District energy	Investigate opportunities for district energy in new community developments.	E & E, Planning	Low priority (July 2017 – July 2019)	<ul style="list-style-type: none"> • Reduced energy consumption • Integrated design • Demonstrated leadership in alternative energy sources
18. Low impact development	Develop guidelines that require low-impact development features for all existing and new Town projects to manage stormwater as close to its source as possible (see City of Mississauga and Toronto and Region Conservation and Credit Valley Conservation low impact development guidelines).	E & E, Planning, Public Works	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Improved water quality • Improved groundwater recharge • Restored aquatic habitat • Reduced number of flood events • Reduced inflow and infiltration into sanitary sewers
19. Septic inspection program	Develop a septic system re-inspection program to ensure watershed and groundwater protection.	E & E, Bylaw, Building Inspection	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Improved watershed and groundwater quality • Reduced run-off and contamination

Schedule D: Environmental Progress Action Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
Community capacity: measures related to community interaction and engagement				
20. Biannual reporting	Develop a biannual report on the Town of Caledon's Energy and Environment progress (see City of Guelph's annual report as an example).	E & E, Communication Specialist, All departments	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Information sharing • Education of staff and public • Improved communication about energy and the environment
21. Community Green Fund	Incorporate annual "green" themes into the Community Green Fund to align with Town work plans and goals.	E & E, Environmental Committee	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Aligned community and Town goals • Community engagement • Increased number of green initiatives within the community
22. Community environmental stewardship committee	Develop a community environmental stewardship committee that plays a role in assisting in developing work plans and projects (refer to the Town of Halton Hills and City of Pickering committees as examples).	E & E, community	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Aligned community and Town goals • Community engagement • Fostering partnerships between the Town and the community
23. Sustainable neighbourhood competition	Develop a sustainable neighbourhood competition (i.e. City of Pickering, or a Sustainable Neighbourhood Action Plan with Toronto Region Conservation Authority)	E & E, community	Low priority (July 2017 – July 2019)	<ul style="list-style-type: none"> • Community engagement • Increased number of green initiatives within the community • Community awareness and behaviour change

Schedule D: Environmental Progress Action Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
Greening Town Hall: measures that demonstrate the Town's commitment to environmental leadership				
24. Environmental stewardship part of goal setting and performance review system	Embed environmental stewardship as part of the goal setting and performance review system. Work with Human Resources to determine requirements.	E & E, HR, CAO	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Behaviour change • Improved staff environmental awareness • Accountability
25. Waste reduction program	Further waste diversion programs at Town Hall to other facilities. Initiate a pilot at a large recreation facility (see Town of Oakville Zero Waste program as an example).	Region of Peel, Recreation, E & E	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Reduced waste generation • Demonstrated leadership in waste reduction • Staff and community awareness and engagement
26. Bottle water ban	Ban bottled water in all Town facilities (see Town of Oakville Zero Waste program as an example).	E & E, Recreation	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Reduced waste generation • Demonstrated leadership in waste reduction • Staff awareness and engagement
27. Greening Town events checklist	Develop a “green” checklist for Town staff to complete when organizing an event within Town facilities (see Town of Oakville as an example).	E & E	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Demonstrated leadership in environmental stewardship • Corporate responsibility • Staff and community awareness
28. Green implications section on Council Reports	Include a “green implications” section on Council Reports (see Town of Halton Hills as an example).	E & E, Clerks, all staff	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Demonstrated leadership in environmental stewardship • More informed decision making • Greater understanding and awareness of environmental implications among Council

Schedule D: Environmental Progress Action Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
29. Town Hall staff garden	Establish a working group of interested staff to build a staff garden at Town Hall.	E & E, Manager of Civic Properties, Parks	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Staff engagement • Staff appreciation • Improved work environment
30. Paperless forms and pay-stubs	Transition forms to electronic formats (e.g. pay-stubs, agendas, procurement forms, records, etc.).	E & E, Finance, IT	High priority (July 2014 – July 2015)	<ul style="list-style-type: none"> • Reduced paper waste • Reduced cost • Increased efficiency in staff time to process forms
Sustainable transportation: measures that encourage alternative modes of transportation				
31. Offsite work arrangement	Implement the off-site work arrangement pilot program currently ongoing with Smart Commute Brampton Caledon. Make HR policy recommendation based on pilot.	E & E, HR	Ongoing	<ul style="list-style-type: none"> • Increased staff productivity • Reduction in GHG emissions
32. Electric vehicle plug-ins	Investigate further opportunities for electric vehicle plug-in stations based on station in downtown Bolton.	E & E, Public Works	Low priority (July 2017 – July 2019)	<ul style="list-style-type: none"> • Reduction in GHG emissions • Demonstrated leadership in green fleet technologies
33. Residential Transportation Demand Management Strategy	Build on Smart Commute Brampton Caledon internal efforts and explore residential transportation demand management strategies.	E & E, Communications	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Increased travel options • Reduction in GHG emissions • Reduction in individual car trips

Schedule D: Environmental Progress Action Plan Action Table

Activity	Task	Groups involved	Priority / timeframe	Benefit / anticipated results
Sustainable food and agriculture- New Priority Area: measures related to environmental conscious local food and agriculture practices				
34. Local food and farming production and distribution	Ensure actions from the “Agriculture” and “Local Food and Farming Production and Distribution” from the Caledon Community Climate Change Plan are implemented and progress is tracked.	E & E, Economic Development and collaboration with external groups such as Region of Peel (i.e. Poverty in Peel) and Headwaters Food and Farming Alliance	Low priority (July 2017 – July 2019)	<ul style="list-style-type: none"> • Accountability • Alignment of Town goals and actions
35. Community Gardens	Support the development of community gardens where appropriate and explore a community garden policy	E & E, Parks and Recreation, Development Approvals and Planning Policy	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Reduction in GHG emissions • Reduction in car trips • Food security • Local economic development
36. Local Food Charter	Consider the development of a local food charter- a guiding document to assist in the development of local food related policies and programs and to ensure food security and a sustainable food system.	E & E, Economic Development and external groups such as Region of Peel	Medium priority (July 2015 – July 2017)	<ul style="list-style-type: none"> • Reduction in GHG emissions • Reduction in car trips • Food security • Local economic development