



OAKVILLE

## REPORT

COMMUNITY SERVICES COMMITTEE

MEETING DATE: DECEMBER 11, 2017

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**FROM:** Environmental Policy Department

**DATE:** November 20, 2017

**SUBJECT:** Oakville's Community Energy Plan (CEP)

**LOCATION:** Town wide

**WARD:** Town wide

Page 1

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### RECOMMENDATION:

1. That Council support the initiation of Oakville's Community Energy Plan (CEP);
2. That Council endorse a Memorandum of Understanding (Appendix A) with Sheridan College for the development of Oakville's Community Energy Plan;
3. That Council approve a Confidentiality Agreement (Appendix B) between the Town of Oakville and Oakville Hydro for data collection that will support Oakville's Community Energy Plan;
4. That the Town Solicitor be authorized to make any reasonable minor modifications to the Memorandum of Understanding and Confidentiality Agreement; and
5. That the Memorandum of Understanding and Confidentiality Agreement be executed in accordance with By-law 2013-057, subject to the satisfaction of the Town Solicitor.

### KEY FACTS:

The following are key points for consideration with respect to this report:

- In July 2015, Council endorsed the development of a comprehensive Community Energy Plan (CEP) for Oakville that will integrate efforts of the municipality, local utilities and community stakeholders to improve energy efficiency, reduce greenhouse gas emissions, ensure energy security and increase resiliency to climate change. At that time, Council approved staff to submit an application to fund an initiative through the Ontario Ministry of Energy.
- In 2017 a capital budget allocation of \$45,000, to be matched with other, to be determined, funding partners, was approved by Council in support of the CEP development.
- In October 2017 the Town of Oakville was awarded \$90,000 by the Ministry of Energy through the Municipal Energy Plan program to develop a CEP.

From: Environmental Policy Department  
Date: November 20, 2017  
Subject: Oakville's Community Energy Plan (CEP)

---

Oakville Hydro, Union Gas and Halton Region provided letters of support for the development of Oakville's CEP as part of this funding application.

- In November 2017, the Town of Oakville was awarded \$125,000 by the Federation of Canadian Municipalities' through the Municipalities for Climate Innovation Program to develop a CEP.
- Sheridan College has expressed interest in participating as key stakeholder of the CEP and, with oversight from the town, in leading the first phase of work. They will leverage their Post-Secondary Institutions Strategic Investment Fund grant to provide services to the value of \$220,000 for activities that include stakeholder engagement, development of energy and greenhouse gas emissions baseline, framing goals and energy modelling and projections.
- The Town of Oakville will work with supporting partners Oakville Hydro and Union Gas to acquire address level data, where possible, on the generation, distribution and consumption of energy in residential, business and industrial sectors. This data will be bound by confidentiality agreements and be presented to the public in aggregation, in a manner that does not jeopardize the privacy of utility customers.

#### **BACKGROUND:**

Community energy plans (CEP) are beginning to be a well-recognized tool to guide residents, businesses and industries within a municipality towards greenhouse gas emissions reductions and a low-carbon future.

The concept of community energy planning may refer to greenhouse gas reduction planning, climate change mitigation planning, municipal energy plans, and a community emissions plan. While the scope and approach of these plans may differ across municipalities, the ultimate goal to establish a vision, targets and actions to reduce emissions in the community is consistent.

#### Provincial Context:

Recognizing that municipalities both directly and indirectly influence approximately 60% of GHGe emissions, the province is promoting and incenting the development of CEPs through policy and funding as outlined below:

#### **The Climate Change Mitigation and Low-carbon Economy Act:**

This legislation requires the province to develop a long-term framework to reduce GHGe emissions from 1990 by 15% in 2020, by 37% in 2030 and by 80% in 2050. Cap and trade, launched in Ontario in 2016 is part of the delivery of this legislation, with investment of revenues guided by Ontario's Climate Change Action Plan (CCAP) 2016.

From: Environmental Policy Department  
Date: November 20, 2017  
Subject: Oakville's Community Energy Plan (CEP)

---

CCAP includes a dedicated section of actions for municipalities to develop CEPs, highlighting the essential role of local energy and emissions planning in meeting province wide GHGe reduction targets. Indirectly, the CCAP outlines actions related to transportation, building efficiency, land use planning and social equity that are supported within the scope of CEPs.

**Growth Plan for the Greater Golden Horseshoe:**

The update of the Growth Plan, in force as of July 1, 2017, has included new policy to promote CEPs. Municipalities are required to include policies to identify actions that result in GHGe reductions and address climate change adaptation in Official Plans. Municipalities are encouraged to meet this requirement by establishing a GHGe inventory, emissions targets and a mechanism for regular reporting on progress.

**Guideline to Support the Completion of Municipal Greenhouse Gas Inventories and Community Emissions Reduction Plans:**

The Ministry of Environment and Climate Change (MOECC) is currently preparing a guidance document to support municipal staff in the creation of CEPs. A draft of the Guideline is expected to be released for consultation in fall 2017. Through our network with Quality Urban Energy Systems of Tomorrow (QUEST), the town has already provided comments on an early draft of the Guideline circulated to leading stakeholders.

**Long Term Energy Plan (LTEP) 2017:**

In the recent update to the LTEP, the province again acknowledges that municipal-level CEPs are critical in meeting energy conservation targets and sustaining a reliable and secure supply for Ontario's energy customers. The LTEP positions CEPs as an added and essential layer to the Conservation First framework and the Regional Planning process led by The Independent Electricity Systems Operator (IESO).

The town is situated in two IESO designated regions, Greater Toronto Area West and Burlington to Nanticoke. Through the analysis of short, medium and long-term constraints for the Integrated Regional Resource Plan 30-06-16 for Burlington to Nanticoke, the Bronte sub-region identified a minor near-term energy constraint in Oakville that is currently projected to be mitigated through conservation and a minor system upgrade. In response, the town and IESO continue to collaborate on tracking potential energy constraints and finalizing mitigation strategies for the Bronte sub-region.

**Funding available for CEP development:**

Three significant funding opportunities currently exist to support the development of CEPs and implementation of actions to reduce GHGe emissions.

1. Municipal Energy Plan (MEP) Program: Offered by the Ministry of Energy, the Program provides up to 50% of costs, to a limit of \$90,000, through a two-year program designed to achieve three main milestones: development of an energy and GHGe inventory, stakeholder engagement and delivery of a Council approved CEP.
2. In 2017, the Federation of Canadian Municipalities (FCM) released funding for completing GHGe emissions reduction or community energy plans through the Municipalities for Climate Innovation Program (MCIP). The MCIP requirements for plans align with the MEP program, requiring a GHGe inventory, targets and corresponding actions. The Program covers up to 80% of project costs to a maximum of \$125,000 for community energy plans, as per recent policy changes.
3. In August 2017, the MOECC announced the first round of funding for the Municipal GHG Challenge Fund, a granting program coming out of the Climate Change Action Plan. The Fund uses Cap and Trade revenue to provide up to \$300 million for municipalities, with each applicant eligible for up to \$10 million to deliver GHGe reduction projects. The first round of funding was open to all municipalities with commitments to develop a CEP within the next two years. Future rounds will require a completed CEP for eligibility.

**Town of Oakville CEP Progress-to-Date**

The town has already made significant progress in quantifying community energy and GHGe emissions, developing short-term targets for emissions reductions, and providing strategic direction in a low-emissions path forward.

**Conservation Demand Management Plan 2014-2019:**

The town appreciates the importance of leading by example and striving to be a leader in energy excellence. In 2014, the town completed a nationally recognized Corporate Energy Conservation and Demand Management Plan (CDMP) for 2014-2019 that exceeds Green Energy Act, O. Reg 397/11 requirements. The CDMP sets goals and objectives, roles and responsibilities and monitoring components to achieve an energy reduction target of 15% from the 2012 baseline by 2019 and an aspirational target of 80% reduction by 2050. In its third year of implementation, the CDMP has resulted in measurable energy and cost savings through projects such as one-on-one energy training with operations staff, optimization of building automation systems and LED conversion projects.

From: Environmental Policy Department  
Date: November 20, 2017  
Subject: Oakville's Community Energy Plan (CEP)

---

### **Partners for Climate Protection (PCP) Program:**

In 2014, the town successfully completed FCM's Partners for Climate Protection (PCP) 5 Milestone Framework to reduce corporate GHGe emissions by 20% below 2004 levels, achieving Milestone 5 in 2015.

The town also achieved Milestone 3 of FCM's PCP program for community by publishing an initial Community Energy Plan as part of the 2011 Environmental Strategic Plan Update. The CEP established Oakville's first community GHGe inventory for 2004 and set a target to reduce emissions by 6% in 2014. The development of this CEP ensured that Oakville qualified for the MOECC's Municipal GHG Challenge Fund even prior to the broadening of eligibility criteria.

### **Global Covenant of Mayors for Climate and Energy**

In 2015, the town joined the Global Covenant of Mayors for Climate and Energy and committed to completing the four badge Compact of Mayors Program: 1) Commitment, 2) GHGe Inventory, 3) Plan, 4) Targets. Working with Local Governments for Sustainability (ICLEI), the town updated its GHGe inventory of the year 2014 using internationally recognized standards. This, along with the town's Climate Change Adaptation Strategy, supported the town in becoming **one of six Canadian municipalities to attain three of the four badges of the Compact of Mayors program**. This significant achievement was awarded based on a comprehensive evaluation by Carbonn and Global Covenant of Mayors for Climate and Energy, which occurred from spring to fall of this year.

### **Climate Change Adaptation Strategy**

The town's Climate Change Adaptation Strategy is another example of leadership in environmental sustainability and resiliency. In 2011, the town became one of the first signatories to ICLEI's Building Adaptive and Resilience Communities Five Milestones for Climate Change Adaptation approach, achieving Milestone 5 of this program in 2015 for developing, implementing and reporting on the Strategy. The Strategy supports actions committed to by town departments that improve resiliency and awareness of current and projected future impacts of climate change.

### **Community Energy Plan Update**

As a leader in this area, in July 2015, Council endorsed an update to the high-level Oakville's 2011 Community Energy Plan recognizing the opportunity to keep more energy dollars local, ensure secure and resilient energy systems, improve energy efficiency, attract and create economic development opportunities and more. As part of this commitment, \$45,000 was approved in the 2017 capital budget.

From: Environmental Policy Department  
Date: November 20, 2017  
Subject: Oakville's Community Energy Plan (CEP)

---

### **Energizing Oakville Consultation Report**

In 2016, Karen Farbridge and Associates provided an overview of the state of CEP development reflecting the changing scope to integrate emerging opportunities and broader considerations. Through this process, staff provided input to the Mayor's office, to help develop high level recommendations for a best in class CEP. The report compiled international best practices for low-carbon transformation to create nine recommendations to lead Oakville in becoming the first Canadian municipality to achieve net-zero energy by 2050.

### **COMMENT/OPTIONS:**

In alignment with the town's corporate values to be environmentally sustainable and innovative as outlined in Council's Strategic Plan 2015-2018, the town is taking a groundbreaking approach to community energy planning enabled by the currently strong provincial and federal funding program offerings and significant partnership commitments. Oakville's CEP is proposed to be for the community and by the community – empowering the community to take a leading role in developing and delivering the Plan and its actions.

The CEP will act as a road map for the Oakville community in achieving its draft energy and emissions vision of "... a diverse and secure energy supply supporting economic prosperity and climate change mitigation and adaptation, delivered through community commitment." The scope of the CEP will emphasize GHGe emission reductions and account for the projected impacts of climate change through better coordinated planning of energy generation, distribution and demand management as it pertains to transportation, buildings and business activities.

Oakville's CEP will foster a self-sustaining implementation framework that prioritizes full integration with existing and future programs, including:

- Municipal Energy Plan Program, PCP Milestone Framework and the Global Covenant of Mayors for Climate and Energy. The town's existing progress in these programs strengthens the development of the CEP, providing global and national relevance and standardization.
- Regional and provincial long-term energy planning efforts through increased involvement and alignment with IESO's Regional Planning processes and utilities delivery of conservation programming.
- Relevant municipal plans, programs and strategies in alignment with the Growth Plan.

From: Environmental Policy Department  
Date: November 20, 2017  
Subject: Oakville's Community Energy Plan (CEP)

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### Funding Opportunities

In pursuit of creating a financially sustainable setting for developing a best-in-class CEP, Environmental Policy submitted applications to all three major GHGe planning and implementation funding programs offered this year.

1. With commitment from Halton Region, Oakville Hydro and Union Gas to support the creation of Oakville's CEP, an application was submitted to the MEP program in summer of 2017. In October 2017, the Ministry of Energy confirmed that the town will receive the maximum amount of \$90,000 through the MEP program to develop Oakville's CEP.
2. In September 2017, the town submitted a funding application to the MCIP. In recognition of the innovative approach to CEP development, the town was awarded the maximum amount of \$125,000 for the project. Funding through the MCIP will offset some town staff costs associated with project management, oversight and reporting of the CEP.
3. On November 14, 2017 Environmental Policy and Oakville Transit submitted an application to the Municipal GHG Challenge Fund. The proposed project will significantly reduce community GHGe emissions and demonstrate the town's values of innovation and environmental sustainability by integrating eight battery electric buses into the Oakville Transit Fleet.

### Sheridan College Memorandum of Understanding (MOU)

The town had begun approaching key energy stakeholders to assess community readiness and determine level of interest and support. An initial list of 27 community groups, businesses, nonprofits, educational institutions, and town departments have been identified. One of which, Sheridan College, expressed keen interest in leading the first phase of the CEP. Through a Post-Secondary Institutions Strategic Investment Fund grant, Sheridan's Office of Sustainability is positioned to contribute services in the value of \$220,000 to Phase 1 of the CEP now as well as continue to act as a lead stakeholder through to implementation. Refer to Appendix A, Memorandum of Understand (MOU) between Sheridan College and the town for a detailed description of Sheridan College's proposed contribution.

Sheridan College put together an exemplary group of technical and policy experts to advise and complete the majority of Phase 1 of the CEP. Their team consists of:

1. Sheridan College Office of Sustainability staff;
2. Technical experts: Garforth International LLC, working exclusively with Baumann Consulting and Ingenieurbüro Gerd Fleischhammer; and
3. Policy and stakeholder experts: Karen Farbridge and Rob Kerr.

Sheridan College would also leverage their student resources through their living energy laboratory that is being established in accordance with Sheridan College's

From: Environmental Policy Department  
Date: November 20, 2017  
Subject: Oakville's Community Energy Plan (CEP)

---

Integrated Energy and Climate Master Plan 2016. The living laboratory will be a hub for sustainable energy research and training for the next generation of low-carbon energy professionals.

By working with the Sheridan College team, the town has an opportunity to go well beyond conventional Phase 1 work for CEPs and establish future best practices. The team's expertise and resources will ensure the GHGe inventory and mapping is robust, informative and sets a strong foundation for the following stages of the CEP development. Sheridan College also has well-established graphic arts programs and a talent pool that will support communications of Phase 1 as creative and interactive, to ensure better engagement and uptake from the community.

#### Work Plan

The development of the CEP will take approximately two years from Kick-Off to Council approval and through to implementation.

#### Phase 1 – Energy and GHGe Inventory (6 months)

- Establish stakeholder group comprised of representatives from key energy related associations, community groups, nonprofits and businesses. This group will develop a terms of reference and lead in the development and implementation of the CEP.
- Develop a granular GHGe emissions and energy inventory. Detailed mapping of results will be the basis for setting targets, establishing priority areas and actions and engaging the public.
- Develop framing goals for discussion during public consultation.

#### Phase 2 – Stakeholder Engagement and Community Consultation (6 months)

- Advance energy literacy, understanding of local circumstances and existing and foreseeable energy initiatives among residents and stakeholders.
- Consult on GHGe emissions targets and actions.
- Consolidate and analyze feedback to determine material issues.
- Outline the energy planning process, opportunities for future engagement and participation in programs.
- Identify energy champions for communities, business, industry, etc. that will lead in implementation of the Plan.

#### Phase 3 – Delivery of the Plan (1 year)

- Conduct cost benefit analysis of key actions to achieve targets.
- Finalize and initiate comprehensive communications plan.
- Develop implementation plan and governance framework.
- Complete CEP achieving Council approval.

From: Environmental Policy Department  
Date: November 20, 2017  
Subject: Oakville's Community Energy Plan (CEP)

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### Data Collection

To reinforce that Phase 1 deliverables are comprehensive and robust, the town is working closely with Oakville Hydro and Union Gas to acquire granular community energy consumption and generation data. Attached as Appendix B, for approval, is a confidentiality agreement between the Town of Oakville and Oakville Hydro that will facilitate the transfer of address-level energy data to facilitate the develop of a GHGe and energy inventory. As part of the confidentiality agreement, energy consumption and generation data will not be shared in a way that jeopardizes the privacy of Oakville Hydro's customers.

### Summary

The town is positioned to facilitate the development of a best in class, comprehensive and stakeholder-based update to the 2011 CEP. This update will go above and beyond the initial narrowly scoped expectations for a \$180,000 project set in July 2015 by leveraging a groundbreaking approach that empowers the community to create and deliver the plan with the town. Sheridan College has committed to offer their services to the value of \$220,000. Oakville Hydro and Union Gas have committed to support in providing highly granular energy data that will reinforce this work.

With appreciation of the town's financial constraints and funding garnered through the MEP program, MCIP and Sheridan College the town has raised \$435,000 to add to the approved capital budget of \$45,000 to develop an innovative CEP. Funding is now available to offset some staff costs through external funds and use of the budget allocation of \$45,000. The total project costs tally to \$480,000. By leveraging a stacked funding approach the town can deliver a best-in-class CEP that was not achievable when the initial project was budgeted at a total of \$180,000 to conform to funding programs and partnerships existing at the time of project budgeting.

The town has a strong foundation of plans and programs that address energy and greenhouse gas (GHG) reductions. The CEP is the essential next step to bring these efforts together, creating a platform to identify synergies across the community as well as better understand and address any gaps. Looking forward, the CEP will embed an energy, emissions and climate change lens into future planning and decision-making and ensure that Oakville remains the most livable town in Canada.

### **CONSIDERATIONS:**

#### **(A) PUBLIC**

The Community Energy Plan will be for the community and be created in large part by the community, who will have a voice in how to lower greenhouse gas emissions while better supporting the local economy,

From: Environmental Policy Department  
Date: November 20, 2017  
Subject: Oakville's Community Energy Plan (CEP)

creating green jobs and ensuring long-term energy security, giving households more options to conserve and explore new energy technologies.

**(B) FINANCIAL**

The town has raised \$435,000 to develop the CEP, offsetting some staff costs through external funding and use of the approved capital budget allocation of \$45,000. Total project costs are \$480,000.

**(C) IMPACT ON OTHER DEPARTMENTS & USERS**

The attached MOU (Appendix A) and confidentiality agreement (Appendix B) have been developed in collaboration with Legal Services. Environmental Policy will continue to engage numerous relevant town departments, as needed, to align planning efforts and garner feedback, including Planning Services, Development Engineering, Building Services, Financial Operations, Financial Planning, Economic Development and others.

**(D) CORPORATE AND/OR DEPARTMENT STRATEGIC GOALS**

This report addresses the corporate strategic goal to:

- be financially sustainable
- have environmentally sustainable programs/services
- continuously improve our programs and services
- be innovative in everything we do
- be the most livable town in Canada

**(E) COMMUNITY SUSTAINABILITY**

The development of a community energy plan for Oakville supports the environment, economic, cultural and social pillars of sustainability. A CEP will support energy and GHGe management planning for a more livable, sustainable and resilient community.

**APPENDICES:**

Appendix A – Memorandum of Understanding, Town of Oakville and Sheridan College

Appendix B – Confidentiality Agreement, Town of Oakville and Oakville Hydro

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