

Case Study Reference Guide

The following case studies offer best practices for operationalizing the strategies identified in the *Community Energy Implementation Framework*.

Case Study 1: CEP Renewal in the City of Yellowknife, Northwest Territories

The City of Yellowknife adopted a CEP in 2006. With a target year of 2014, Yellowknife aimed to reduce its corporate GHG emissions by 20 per cent and its community GHG emissions 6 per cent, based on 2004 levels. It budgeted \$500,000 annually for energy efficiency, renewable energy conversions and public awareness. By February 2013, the City surpassed its target and the projects implemented now save the City an estimated \$528,000 per year.⁷⁶

One of the last steps initiated during the implementation of the CEP was the adoption of a renewal process for the plan. This renewal process included the development of a strategy for public and community stakeholder engagement to support the creation of a CEP for 2015-2025. Yellowknife has since embarked on a process where a new assessment of the Community's GHG emissions will be completed and new targets will be established.

Case Study 2: Measuring the Widespread Economic Benefits in the City of London, Ontario

The City of London, Ontario has conducted an economic analysis to measure various economic impacts and potential benefits of implementing their Community Energy Action Plan (CEAP).⁷⁷ The analyses, conducted in-house, demonstrate community-wide energy spending, the proportion of energy spending leaving the local economy and the potential to recirculate energy spending based on the implementation of their plan.

The approach undertaken and resources are available here:

- Energy spending analysis: <http://gettingtoimplementation.ca/wp-content/uploads/2016/08/City-of-London-Energy-Data-and-Prices-Analysis-2013.xlsx>
- Video supporting energy spending analysis: *Turning energy data into energy dollars* <https://vimeo.com/120112918>
- Infographic on energy spending: <http://gettingtoimplementation.ca/wp-content/uploads/2016/03/London-Energy-Spending.png>
- The City of London has also produced infographics based on the analyses, available here: <https://www.london.ca/residents/Environment/environmental-initiatives/Pages/Infographics.aspx>

Case Study 3: Measuring Green Jobs in Durham Region, Ontario

The Region of Durham Community Climate Change Local Action Plan highlights the estimated environmental, economic and social impacts of implementation. The plan is available at: Durham Region (2012). From Vision to Action Region of Durham Community Climate Change Local Action Plan. https://www.durham.ca/community/climate_change/2012DurhamLAP.pdf

Case Study 4: Measuring the Impacts of Sustainable Communities on Local Retail Sales New York

City, New York The New York City Department of Transportation created a methodology for measuring the economic impacts of improved streetscapes and active transportation infrastructure on retail sales. The study is available here: New York City Department of Transportation (December 2013). The Economic Benefits of Sustainable Streets. <http://www.nyc.gov/html/dot/downloads/pdf/dot-economic-benefits-of-sustainable-streets.pdf>

Case Study 5: Framing the Value Proposition, Edmonton, Alberta

The City of Edmonton, Alberta (population 812,000) adopted Edmonton's Community Energy Transition Strategy in April 2015 and a corresponding City Policy C585 in August 2015.⁷⁸ The Strategy, which represents a renewal and upgrade of their 2001 plan, was approved unanimously by City Council. Based on extensive citizen consultation, the strategy includes twelve strategic courses of action and an eight-year action plan with more than 150 tactics.

There is a lesson to be learned in how Edmonton's Sustainable Development Department communicated the need for the strategy. First, it was framed as a risk management strategy designed to protect Edmonton's quality-of life from climate and energy risks. Secondly, it provided a compelling economic business case involving ten community-scale programs (for advancing energy conservation, energy efficiency and renewable energy uptake) that would deliver a net public benefit of \$3.3 billion over 20 years.

⁷⁶ City of Yellowknife (2014). CEP Infographic. https://www.yellowknife.ca/en/living-here/resources/Energy/DOCS-384685-v1-CEP_2014_Infographic.PDF

⁷⁷ City of London (2014). Community Energy Action Plan <https://www.london.ca/residents/Environment/Energy/Pages/Community-Energy-Action-Plan.aspx>

⁷⁸ The City of Edmonton Community Energy Transition Strategy and its supporting analyses is available at: City of Edmonton (2015). Edmonton's Community Energy Transition Strategy. http://www.edmonton.ca/city_government/environmental_stewardship/energy-transition.aspx

Case Study 6: Establishing a Committee of Council in Yellowknife, Northwest Territories

The Community Energy Planning Committee was established by City Council on September 10, 2007, following the completion of the Community Energy Plan (CEP).⁷⁹ The Committee is chaired by the Mayor and includes representatives from across the Community. The primary purpose of the Committee is to assist the City of Yellowknife in an advisory capacity to ensure the CEP is implemented and evolves in an effective manner. The scope of the Committee is to report and make recommendations to City Council through the appropriate standing Committee of Council on the progress and direction of the CEP implementation.⁸⁰

Case Study 7: Establishing a Governance Framework for Edmonton's Community Energy Transition Strategy, Edmonton, Alberta

Edmonton City Council formed an Energy Transition Advisory Committee.⁸¹ Committee members serve two year terms and sets out to encourage and promote the strategy, provide advice to Council regarding the implementation of the strategy and assist Council in developing performance measures.

Case Study 8: Stakeholder Engagement in the City of Kelowna, British Columbia

In 2012, the City of Kelowna adopted a Community Climate Action Plan containing 87 actions to be implemented by 2020. Of those actions, 59 were assigned to the local government and 28 were assigned to community stakeholders, including utilities, provincial government and others. In an effort to ensure that community stakeholders understood their roles in the implementation of the plan, the City of Kelowna circulated letters to the organizations responsible for implementing actions in the plan. These letters enabled the City of Kelowna to move forward on implementing actions that are not within its jurisdiction.⁸²

Case Study 9: Stakeholder Engagement in Markham, Ontario

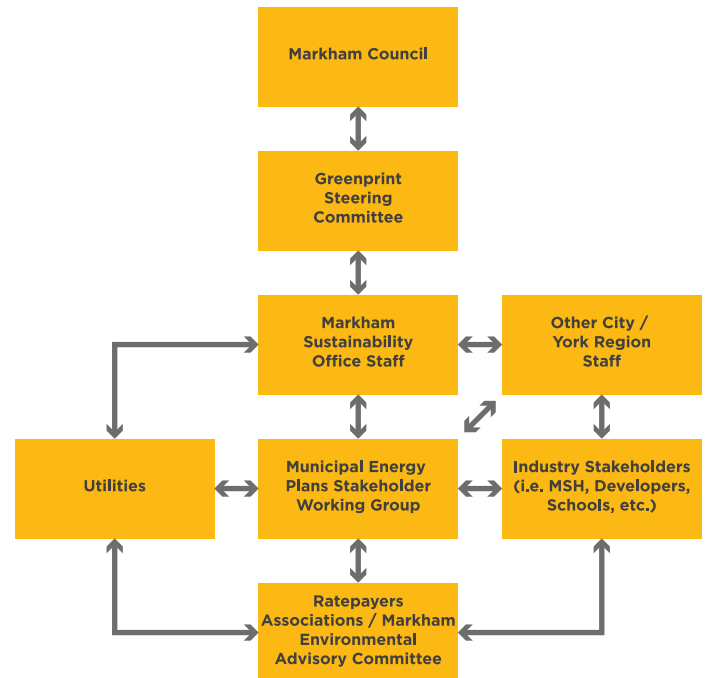
In 2014, the City of Markham began to develop a Municipal Energy Plan (MEP). As part of the MEP, the City created a Stakeholder Working Group.⁸³

The desired outcome of the Stakeholder Working Group is to provide recommendations and feedback on the development of Markham's MEP including:

- Identifying energy opportunities and solutions to increase local energy production and conservation
- Identifying synergies between industry stakeholders to implement MEP recommendations⁸⁴

The following chart illustrates the organizational structure overseeing the MEP.

Municipal Energy Plan Organizational Chart



⁷⁹ City of Yellowknife (2007). Community Energy Planning Committee <https://www.yellowknife.ca/en/city-government/community-energy-planningcommittee.asp>

⁸⁰ Terms of Reference: https://www.yellowknife.ca/en/city-government/resources/Current_Committees_of_Council/Community-Energy-Planning-Committee-Terms-of-Reference.pdf

⁸¹ City of Edmonton (2016). Energy Transition Advisory Committee. http://www.edmonton.ca/city_government/city_organization/energy-transitioncommittee.aspx

⁸² Personal Communication, Michelle Kam, September 2016.

⁸³ The City of Markham City of Markham. (2015). Appendix A: Municipal Energy Plan Stakeholder Working Group Stakeholders. Retrieved from <http://framework.gettingtoimplementation.ca/wp-content/uploads/2016/10/Appendix-A-Markham-Municipal-Energy-Plan-Stakeholder-Working-Group-Stakeholders.pdf>

⁸⁴ City of Markham. (2015). Municipal Energy Plan Stakeholder Working Group Terms of Reference & Work Plan. Retrieved from <http://framework.gettingtoimplementation.ca/wp-content/uploads/2016/10/Appendix-B-Municipal-Energy-Plan-Project-ToR-Work-Plan-101216.pdf>

Case Study 11: Public Engagement on Community Energy in London, Ontario

The City of London, Ontario has documented public engagement efforts in a document entitled *Learning from People: A Background Document for the Community Energy Action Plan*: https://www.london.ca/residents/Environment/Energy/Documents/Learning_from_People.pdf

As part of the development of the *Community Energy Action Plan*, the City of London undertook a campaign called ReThink Energy London. The City of London held a Community Energy Strategy Workshop and the London Roundtable on the Environment and the Economy to inform the development of the *Community Energy Action Plan*. Community Energy Strategy Workshop included an interactive energy mapping exercise that involved 31 participants from electrical, natural gas and thermal utilities, internal departments, environmental and transportation advisory committees and provincial staff, among other stakeholders. The city's energy map was used to help stakeholders identify energy opportunities and risks, and to generate ideas and principles for energy actions in key areas such as buildings, transportation and low carbon energy generation in the City of London. Outcomes from the workshop can be found here: https://www.london.ca/residents/Environment/Climate-Change/Documents/London_FINALSummaryofWorkshop_May11.pdf

Case Study 12: City of Yellowknife Community Energy Plan Communications Plan, Northwest Territories

The City of Yellowknife Community Energy Plan Communications Plan describes a detailed approach for engaging with the public.⁸⁵ At the core of the plan, there is a recognition that in order to reduce GHG emissions across the community, Yellowknife residents and businesses must change current energy use practices. This requires a shift in awareness, attitudes and behaviour with respect to GHG emissions. The overall communication goal of the plan is to inform Yellowknife residents of changes that the City of Yellowknife will make and to implement communication programs that encourage ongoing reductions in Yellowknife GHG emissions.

Case Study 13: Fort Providence, Northwest Territories

In 2007 and 2008 the community of Fort Providence, Northwest Territories (population 735), in partnership with the Arctic Energy Alliance, developed an energy profile.⁸⁶ The objective of this exercise was to provide the community, and key decision makers, with a snapshot of energy use in the community.

The energy profile was developed to communicate a large quantity of energy data, including energy consumption, energy end use, cost of energy, and GHG emissions. Similar to any community that looks at energy use and costs per capita, the energy profile revealed significant opportunities to conserve energy and improve efficiency within the community.

Case Study 14: Halifax Vending Machine Energy Efficiency By-laws, Nova Scotia

In 2010, a series of by-laws and by-law amendments were adopted by Halifax City Council whereby a memorandum of Understanding was signed between the City and Refreshments Canada requiring the vending industry to voluntarily improve the energy efficiency of the vending machine fleet over 3 years. The estimated cost savings of the program were \$500,000 per year and an annual reduction of 5,000 tons of GHG emissions. VendingMisers installed on the vending machines resulted in a 25-50 percent reduction in energy consumption per machine.⁸⁷

Case Study 15: Net Zero Community in London, Ontario

West Five (www.west5.ca) is a 70 acre, mixed-use site located in London, Ontario. The site is being developed by Sifton Properties, in partnership with S2E Technologies. When completed, the neighbourhood will include 2,000 residential units, commercial and retail space, and parkland. The development will include a number of Smart Energy Community Principles,⁸⁸ including energy efficient buildings (e.g. the use of enhanced insulation), the use of renewable energy resources (e.g. solar shingles) and matching land use needs and mobility options (e.g. siting services such as grocery stores at community terminals nodes). The site will include London's first net-zero office building and net zero townhomes.

Case Study 16: Monitoring and Reporting on Implementation Progress in the City of Guelph, Ontario

CEP reporting is coordinated annually by the Community Energy division of the Business Development and Enterprise department, and presented to the Corporate Administration, Finance & Enterprise Committee (this Committee is appointed by Council and made up of Councillors). A dashboard is used to display progress within eight key activity categories, plus a description of the status for each individual activity.

Case Study 17: Monitoring and Reporting on CEP Implementation in the City of London, Ontario

The City of London Community Energy Action Plan (CEAP) was adopted in 2014. Alongside the plan, the City of London developed a background document describing a methodology for monitoring and reporting on community energy use.⁸⁹ The background document describes a methodology for developing annual energy and emissions inventories. The document describes how the City of London will also work with stakeholders to develop new Key Performance Indicators, including economic, transportation, and energy performance indicators. The results from energy and emissions inventories, and other Key Performance Indicators will be included in an annual progress report outlining implementation progress of the CEAP.

⁸⁵ City of Yellowknife (2007). Yellowknife Community Energy Plan Communication Plan. https://www.yellowknife.ca/en/livinghere/resources/Energy/DOCS-375889-v1-2006_CEP_Communication_Plan.PDF

⁸⁶ Arctic Energy Alliance. Fort Providence Energy Profile 2007/08: <http://aea.nt.ca/files/download/205>

Case Study 18: Efficiency One, Nova Scotia

Efficiency One in Nova Scotia, formerly Efficiency Nova Scotia, has provided on-site energy managers for organizations such as Cape Breton University, Capital District Health Authority, Dalhousie University and Nova Scotia Community College. These embedded energy managers help to identify and coordinate projects to achieve substantial energy efficiency savings. For example after first six months of the partnership between Efficiency One and Capital Health in 2012, several projects were initiated totalling savings of \$118,000 per year.⁹⁰

Case Study 19: Community Energy Planning Alternatives for Small Communities – Eco-Ouest

Eco-Ouest, led in partnership with CDEM, SSD, has developed a program designed to help provide expertise to smaller municipalities in Manitoba, Saskatchewan and Alberta that face resource and capacity constraints for CEP development and implementation. Eco-Ouest has partnered with rural municipalities in each of these provinces to create energy and GHG emissions inventories and Climate Change Local Action Plans such as the inventory for the Rural Municipality of St. Clements and plans for the Rural Municipality of Saint-Laurent and Rural Municipality of Taché. CDEM also incorporates a regional perspective by comparing neighbouring communities' energy and emissions performances and sharing successful projects and case studies.⁹¹

Case Study 20: Yukon Energy Solutions Centre

The Yukon Energy Solutions Centre is part of the Energy branch in the Government of Yukon Department of Energy, Mines and Resources.

The Energy Solutions Centre offers energy-related services such as:

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The Energy Solutions Centre offers community-level energy services to such as:

- Providing technical information and financial incentives to encourage the use of energy efficient appliances and heating systems at the local level
- Providing comprehensive energy planning services, including energy baseline assessments and policy reviews
- Providing training courses to build local technical capacity to implement community energy plans and projects
- Participating in outreach and public education on the health, safety, economic and environmental benefits of energy efficiency and renewable energy

To learn more about the Energy Solutions Centre visit <http://www.energy.gov.yk.ca/about-the-energy-branch.html>

Case Study 21: Integrated Financial Planning in the City of Coquitlam, British Columbia

Coquitlam's award-winning integrated financial planning framework is comprised of three separate but complementary planning processes. These processes result in a set of integrated plans that support the overall vision and mission of the City and align activities and resources to achieve the strategic goals and annual business plan priorities set by Council.

- Council's Strategic Plan - aspirational, future-looking plan, updated every four years following the municipal election. It articulates the vision, mission, values and broad strategic goals. Progress of the plan is monitored through an annual review of key performance measures and accomplishments
- Business Plan - translates the high level strategic goals into annual business plan work items and priorities, established by Council. A set of performance measures are reviewed annually to monitor success of the business plan
- Financial Plan - provides the resourcing strategy to support the strategic and business plans. Updated annually, it is a five-year plan that includes both operating and capital components

Evaluation of achievements informs the next cycle of planning. For example, the City's performance is reviewed every four months with a Trimester Report to Council. It includes an update on the progress of the work items under the Business Plan priorities and a review of operating and capital budget variances, labour vacancies, economic indicators including construction and development activities, and major spending during the trimester. The intent of the report is to view the City's activities and progress balanced with the status of the City's financial and human resources.

In this model, it is important that staff responsible for developing and implementing the CEP ensure that its goals and actions are reflected in Council's (strategic) plan and that these goals and actions maintain a high profile throughout the budgeting/financial plan process.

Case Study 22: Parking Incentives in Hamilton, Ontario

The City of Hamilton amended its Zoning By-law to support a transit-oriented multi-residential building, reducing parking space requirements from 1 space per unit in a multi-unit residential dwellings to 0.47 parking spaced per unit due to the building being located in a transit-oriented neighborhood.⁹²

⁸⁷ Regional Municipality of Halifax (2010). Energy Efficiency Initiative: Vending Machines. <https://www.halifax.ca/council/agendasc/documents/100504ca1131.pdf>

⁸⁸ <http://www.questcanada.org/thesolution/principles-smart-energy-communities>

⁸⁹ City of London (December 2013). Reporting on Progress: Background Document for the Community Energy Action Plan. https://www.london.ca/residents/Environment/Energy/Documents/Reporting_on_Progress.pdf

⁹⁰ Capital Health (n.d.) Efficiency Nova Scotia - About Us. <http://www.cdha.nshealth.ca/about-us/efficiency-nova-scotia>

⁹¹ CDEM. (n.d.). Eco-West. Retrieved from CDEM Website: <http://www.cdem.com/en/sectors/green-economy-1/eco-west>

⁹² City of Hamilton (January, 2015). BY-LAW NO. 15-024 To Amend Zoning By-law No. 05-200, Respecting Lands Located at 98 James Street South (Hamilton). <http://www2.hamilton.ca/NR/rdonlyres/73BB2B31-8D18-455B-970A-176CA3CB978C/0/15024.pdf>