

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON JUNE 8, 2016
FROM:	JAY STANFORD DIRECTOR, ENVIRONMENT, FLEET, & SOLID WASTE
SUBJECT:	COMMUNITY ENERGY ACTION PLAN – UPDATE AND STATUS

RECOMMENDATION

That, on the recommendation of the Director of Environment, Fleet and Solid Waste, this update on the status of Community Energy Action Plan activities **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

The relevant reports that can be found at www.london.ca under City Hall (Meetings) is:

- Report to the May 5, 2015 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Update and Status (Agenda Item #13)
- Report to the July 21st 2014 Civic Works Committee (CWC) Meeting, Community Energy Action Program (Agenda Item #16)

STRATEGIC PLAN 2015-2019

Municipal Council has recognized the importance of climate change mitigation, climate change adaptation, related environmental issues and the need for a more sustainable city in its 2015-2019 - Strategic Plan for the City of London ([2015 – 2019 Strategic Plan](#)). Specifically, the Community Energy Action Plan (CEAP) and the London Energy Connections Program, address all four Areas of Focus, at one level or another, as follows:

Strengthening Our Community

- Healthy, safe, and accessible city

Building a Sustainable City

- Convenient and connected mobility choices
- Strong and healthy environment

Growing our Economy

- Local, regional, and global innovation
- Strategic, collaborative partnerships

Leading in Public Service

- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE:

The purpose of this report is to provide Committee and Council with an update on the progress being made implementing London's Community Energy Action Plan (CEAP) as part of the overall London Energy Connections Program.

CONTEXT:

The City of London does not have direct control over how much energy is used in London, but it does have influence. The control over energy use in London rests primarily with our citizens, visitors, employers and employees. Individual and collective

action with respect to sustainable energy use, energy management, and energy conservation is critical for our future.

London is one of Ontario's leading municipalities in the field of community (or municipal) energy planning, and the work done to date in London has helped the development of community energy planning programs and policies at the provincial and federal level.

Ontario Provincial Government and Municipal Associations

The Ontario Ministry of Energy defines a municipal energy plan as follows:

A Municipal Energy Plan (MEP) supports municipalities' efforts to better understand their local energy needs, identify opportunities for energy efficiency and clean energy, and develop plans to meet their goals. A MEP takes an integrated approach to energy planning by aligning energy, infrastructure and land use planning. MEPs will help municipalities:

- *Assess the community's energy use and greenhouse gas (GHG) emissions*
- *Identify opportunities for conserving energy, improving energy efficiency and reducing GHG emissions*
- *Consider impact of future growth and options for local clean energy generation*
- *Support local economic development.*

In addition, the development, implementation and advancement of municipal/community energy plans is strongly supported by the Ministry of the Environment & Climate Change, Association of Municipalities of Ontario (AMO), and the Federation of Canadian Municipalities (FCM). City staff are also playing a leadership role within Quality Urban Energy Systems of Tomorrow (QUEST) Canada, a leading organization for community energy planning.

Ontario's new Climate Change Action Plan, expected in June 2016, is expected to play a significant role in London's future community energy plans.

London's Community Energy Action Plan and London Energy Connections Program

Over the last fifteen years, the City of London has been interested in energy use in London primarily for environmental reasons, namely that Londoners' contribution to both smog-forming emissions and greenhouse gas emissions come primarily from fossil fuel energy use.

With rising energy prices for petroleum fuels and electricity, Londoners are starting to become more and more aware of the financial cost of using energy. Rising energy prices and the percentage of household income spent on energy is causing many Londoners to pay more attention to their energy use and look for opportunities to conserve energy.

One of the most critical roles that City staff plays is to "connect the dots" between our local initiatives and all of London's major community stakeholders, the activities they engage in, and the role that these stakeholders can play in the London Energy Connections Program.

London's CEAP was approved by Council in July 2014. The CEAP is the plan on how we collectively move forward on energy conservation, energy efficiency, renewable energy, and other sustainable energy solutions that reduce greenhouse gas emissions. Additional details on how this plan was to be implemented in the first couple of years (2014 and 2015) was outlined in July 2014. In total, 40 City-led actions were identified over the first two years. This does not include the numerous actions that are taking place (or planned) in the community and by our key energy stakeholders in London.

Appendix A contains the Key Guiding Principles and Goals of London's CEAP and the London Energy Connections Program. Reporting annually on the status of actions is a key part of the overall program design.

DISCUSSION:

Why is the CEAP Important and How Will Londoners & London Businesses Benefit?

The ongoing implementation of CEAP, as part of the London Energy Connections Program, has many benefits including:

- **Financial benefits** - as noted in the 2015 Community Energy and Greenhouse Gas Inventory, also being reported to CWC on June 8 2016, approximately \$1.5 billion was spent on energy in 2015, and almost 90 percent of this money leaves London. Every one percent reduction in energy use that Londoners and London businesses achieve keeps about \$13 million from leaving our local economy. In 2015, it is estimated that almost \$70 million in energy costs were avoided due to improvements in energy efficiency since 2010.
- **Environmental benefits** - reducing energy use in London reduces Londoners' contribution to both smog-forming emissions and greenhouse gas emissions. As noted in the 2015 Community Energy and Greenhouse Gas Inventory, London's greenhouse gas emissions in 2015 were eight percent below 1990 levels, and greenhouse gas emissions per person were 25 percent lower than 1990 levels.
- **Local job creation** - investing in energy saving retrofits, local sustainable energy projects, and local energy production creates local jobs.
- **Local synergies, 'connecting the dots', and capacity building** - between all of our local initiatives and all of London's major community stakeholders provides a strong framework for community and business collaboration.

What is the Connection with Other City of London Programs?

London's CEAP is connected to many City of London programs and initiatives, across several Services Areas including Environmental & Engineering Services; Planning; Neighbourhood, Children & Fire Services; and Development & Compliance, such as:

- 2030 Transportation Master Plan (Smart Moves)
- Shift (London Rapid Transit Environmental Assessment - underway)
- London ON Bikes (Cycling Master Plan - underway)
- Other Active Transportation and Transportation Demand Management activities
- The London Plan (in draft form)
- Active & Green Communities engagement pilot project
- NeighbourGood London: London Strengthening Neighbourhoods Strategy
- Corporate Energy Conservation & Demand Management (CDM) Plan
- Waste reduction and diversion
- Water conservation and efficiency programs
- Stormwater and watershed management programs (e.g., green roofs)
- Urban Forest Strategy

What is the Connection with Other Projects, Programs and People in London?

Vital to the progress on energy conservation and greenhouse gas reduction are the activities from the community, businesses and institutions. During the development of CEAP and the design of the overall program, input was received from many including:

- 3M Canada
- Advisory Committee on the Environment
- Argyle Business Improvement Association
- Building Owners' Management Association (BOMA) Ontario
- Fanshawe College
- First Capital Realty
- Labatt Brewery
- London & St. Thomas Association of Realtors
- London Chamber of Commerce
- London Development Institute
- London Economic Development Corporation
- London Health Sciences Centre
- London Home Builders' Association
- London Hydro
- London Middlesex Housing Corporation

- London Police Service
- London Property Management Association
- London Public Library
- London Transit Commission
- Mayor’s Sustainable Energy Council
- Middlesex-London Health Unit
- Museum London
- Ontario Power Authority
- ReForest London
- TD-Canada Trust
- Union Gas
- Upper Thames River Conservation Authority
- Western University

These stakeholders expressed support for the CEAP in principle, and most stakeholders provided feedback and recommendations on the proposed actions, as well as provided information on their own actions. Continued dialogue, implementation and collaborations are an essential part of the overall London Energy Connections Program.

How is CEAP Being Funded?

No new funds were required for 2016. These actions make use of existing Environmental Programs staff and program funding and will draw upon existing resources across the Corporation performing work that aligns directly or indirectly with energy conservation. In addition to City staff time, funding allocated to energy-related, community-led actions, awareness, and education in 2017 will be similar to recent years, in the range of \$50,000 to \$75,000.

The most significant new addition in 2015 was the development and implementation of the Active & Green Communities engagement pilot project. Funding for this project is included in the 2016 budget as noted above, and has been augmented by external sources of funding, specifically:

- \$25,000 from the Ontario Ministry of Energy’s Municipal Energy Plan Implementation funding program to assist with implementation of Active & Green Communities
- \$12,760 from the Federation of Canadian Municipalities (FCM) Green Municipal Fund to fund a feasibility study for producing renewable natural gas (RNG) from the organics component of municipal solid waste as part of a larger project dealing with compressed natural gas (CNG) vehicles.

Additional applications to FCM are being contemplated to study options for “green development” policies and tools that can support projects such as “West 5”, being Sifton’s net-zero energy community in Riverbend.

What Progress Has Been Made to Date?

Almost 70 percent of the 40 actions outlined for 2014 and 2015 are completed or approaching completion. Appendix B provides a complete list of the actions and a summary of the progress made to date. The following table provides a snapshot of progress made in the last 12 months. Also provided is the same progress report for the 12 month period between May 2014 and April 2015.

Overall Progress on 2014/2015 CEAP – 40 Actions – Between May 2015 and April 2016				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
2 actions (5%)	6 actions (15%)	5 actions (13%)	12 actions (30%)	15 actions (38%)
For Comparison – Progress Between May 2014 and April 2015				
5 actions (13%)	9 actions (22%)	7 actions (18%)	17 actions (42%)	2 actions (5%)

What are the Next Steps?

Many of the actions currently underway will continue on through 2016 and 2017, specifically Active & Green Communities and potentially new, business-focussed activities coming out of the Corporate Leadership for a Greener London workshop on June 15, 2016. Given that almost 70 percent of the 2014/15 actions are at or near completion, a number of actions already identified in the CEAP for the period 2016 to 2018 will be added into the overall work plan for late 2016 and/or early 2017.

To help with this activity in 2016, City staff propose to contact those stakeholders who contributed information about their actions for the CEAP and request an update on the status of their own activities.

Ontario's new Climate Change Action Plan, expected in June 2016, will also have a significant impact on future activities for the London Energy Connections Program. It is expected that this provincial Action Plan will use revenue from the future GHG emissions Cap & Trade system to fund measures such as:

- electric vehicles (EVs), through increased incentives for purchasing EVs and establishing a network of EV charging infrastructure;
- compressed natural gas (CNG) incentives for heavy-duty vehicles such as freight transportation;
- renewable natural gas from municipal waste and other sources for injection into the provincial natural gas distribution system;
- cycling infrastructure;
- energy retrofits of industrial processes;
- energy retrofits for existing buildings, including the replacement of natural gas for space heating with electricity-based measures (e.g. heat pumps);
- financing of these measures through a provincially-established "Green Bank" modelled on similar programs in the United States; and
- a new Building Code that will require new homes to use alternatives to fossil fuels by 2030.

Details of how these measures will be implemented are not known at this time.

ACKNOWLEDGEMENTS:

This report was prepared with assistance from Allison Miller, Transportation Demand Management Coordinator.

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Appendix A Key Guiding Principles and Goals of the Community Energy Action Plan (CEAP) and the London Energy Connections Program

Appendix B Status of 2014/15 Community Energy Action Plan

Appendix A

Key Guiding Principles and Goals of London's Community Energy Action Plan (CEAP) and the London Energy Connections Program

London's CEAP and London Energy Connections Program sets out an action plan and program with the following key principles:

1. This needs to be the Community's plan for London, not the City of London's plan for the community.
2. We can't control the price of energy, but we can control the cost of energy.
3. Start first with conservation.
4. Get the function and size right.
5. Invest in energy efficiency and good design.
6. Make use of free heat and free light.
7. Reduce waste.
8. Make it local.
9. Build on local strengths.
10. Use renewable energy.
11. Measure your progress.
12. Share your stories.

The CEAP focusses on actions to be taken in the immediate future (2014/15) and over the duration of the Council term (2015-2018) as part of the London Energy Connections Program. The overall goals are to:

1. Increase the local economic benefit of sustainable energy use through:
 - a. Cost savings from energy conservation and energy efficiency,
 - b. Revenue from local production of clean & green energy products, and
 - c. Job creation associated with product and service providers engaged in these activities.
2. Reduce the environmental impact associated with energy use, through the use of greenhouse gas emission (GHG) reduction targets consistent with the Province of Ontario's goals, namely:
 - a. 6 percent reduction in total GHG emissions from 1990 levels by 2014,
 - b. 15 percent reduction from 1990 levels by 2020,
 - c. 37 percent reduction from 1990 levels by 2030, and
 - d. 80 percent reduction from 1990 levels by 2050.

In addition, there are specific goals (either measureable or aspirational) established for each energy-using sector in London:

- Single-Family Homes
- Multi-Unit Residential Buildings
- Commercial and Institutional Buildings
- Industry and Manufacturing
- Stores and Restaurants
- Local Energy Production and Cogeneration of Heat and Power
- Vehicles and the Transportation System

The three most common benchmarks being used for reporting on overall progress are:

- 1990 – the baseline year used for the Province of Ontario's GHG reduction targets
- 2007 – the year energy use and greenhouse gas emissions reached their peak in London
- 2010 – the first year for which total energy cost data has been determined

Appendix B

Status of 2014/15 Community Energy Action Plan

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
POLICY SUPPORT FOR COMMUNITY ENERGY ACTION PLANNING						
1. Incorporate the defining principles of London's Community Energy Action Plan and Program into the new London Plan.					✓	The draft London Plan includes a reference to develop a Community Energy Action Plan.
2. Incorporate in to the London Plan means to encourage new homes and buildings to be "future-ready" through low-cost design principles (e.g., provide conduits) that can accommodate the future installation of electric vehicle charging systems (i.e., "EV-ready"), solar energy systems (i.e., "solar-ready") and district thermal energy loops (i.e., "DE-ready").					✓	The draft London Plan includes a number of references to "future ready" principles.
3. Incorporate in to the London Plan means to encourage in-fill development in areas served by existing district energy systems to voluntarily connect to the system.					✓	The draft London Plan and the draft Downtown Master Plan include references to the existing downtown district energy system.
4. Incorporate in to the London Plan requirements for greenfield industrial, commercial, and high-density residential land development to reserve "utility right-of-ways" to accommodate the future use of district energy systems.					✓	The draft London Plan includes a reference to district energy being permitted in Downtown, Transit Node, and Industrial areas.

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
<p>5. Study the implementation of Local Improvement Charges for residential and commercial building energy and water retrofits in other jurisdictions, such as the pilot program implementation of the <i>Home Energy Loan Program</i> launched in the City of Toronto in 2014.</p> <p>(Note: In the United States this is known as Property Assessed Clean Energy – PACE funding).</p>				→		<p>The CWC staff report on January 5 2016 provided an update on the status of this action.</p> <p>A workshop with key stakeholders was held in April 2016 to provide them with background information on LICs and set the stage for collecting their opinions on the use of LICs.</p> <p>A business case for the use of LICs will be prepared once feedback has been obtained from key stakeholders, and Legal and Finance staff complete their review of Toronto’s HELP pilot.</p>
<p>6. Work with the development industry on an integrated community energy solutions pilot project, of sufficient size, to evaluate current practices (municipal and developer); to identify potential barriers in new developments, and to begin the process of overcoming these barriers for the future development in London. Alternatively, carry out a detailed analysis of a comparable project(s) in another Ontario or Canadian jurisdiction.</p>		→				<p>City staff will continue to work with Sifton and their consultant, s2e, to support implementation of the innovative environmental features of this project.</p> <p>s2e is working on a joint FCM GMF application with the City of London and the Region of Waterloo to study “green development” policies and tools needed to support projects such as West 5.</p>
<p>7. Advocate for increased support from federal and provincial governments for undertaking community energy planning at the municipal level of government.</p>					✓	<p>City of London staff will continue to participate in and support the activities undertaken by the organization, Quality Urban Energy Systems for Tomorrow (QUEST), in particular the Municipal Caucus of QUEST Ontario.</p> <p>City staff and Municipal Council will continue to ensure that provincial policy support and funding for the continued evolution of natural gas and electricity conservation programs remains a priority, as these are key components of community energy planning.</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
8. Participate as an observer the Ontario Power Authority's (OPA's) regional electricity planning activities for the London area in 2015.		→				<p>London Hydro is taking the lead in representing London's interest in regional electricity planning activities.</p> <p>The Independent Electricity System Operator held an introductory meeting with the Corporate Approvals Team in March 2016.</p>
REPORTING AND EDUCATION ABOUT THE ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS OF ENERGY USE						
9. Identify "influencers" in the community, such as individuals in businesses, organizations, neighbourhoods, and schools at all levels of education and develop strategies to enlist and engage them.				→		<p>City staff participated on a Steering Committee that established the London Environmental Network (LEN) which includes a number of groups that focus on energy.</p> <p>City staff are new influencers at the community level through Active & Green Communities (see Action 10 below).</p> <p>City staff are working with Labatt Brewery to cohost the Corporate Leadership for a Greener London business engagement event on June 15, 2016 (see Action 29 below).</p>
10. Where possible, implement strategies that engage Londoners at the community or neighbourhood level, or carry out a detailed analysis of a comparable project(s) in another Ontario or Canadian jurisdiction.					✓	<p>Active & Green Communities was formally launched in December 2015 after its soft launch in the fall.</p> <p>To date, there are seven participating communities – Byron Community Association, Glen Cairn Community Partners, SoHo, Tanglewood Housing Co-operative, Trinity United Church, Old East Village, and Willingdon Avenue.</p>
11. Test the use of new monetary and non-monetary incentives to encourage Londoners to change established energy-using behaviours or habits.				→		<p>Active & Green Communities is being used to test monetary and non-monetary incentives on a small scale. (see Action 10).</p> <p>The City is supporting GOODcoins' project with Natural Resources Canada to encourage eco-driving behaviours.</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
12. Work with the Mayor's Sustainable Energy Council (MSEC), London Hydro, Union Gas to develop additional key indicators and performance measures for community energy use, such as the amount of local energy produced, average building energy efficiency (GJ/m ² floor area), and the economy-related energy and GHG emission indicators.		→				The annual Community Energy and Greenhouse Gas Emissions Inventory now includes energy productivity (\$GDP per GJ of energy) as a key indicator. Five of the CEAP's 13 sector-specific goals now have performance measurements in place.
13. Work with London Hydro and Union Gas to update energy maps and detailed energy model with more current data (e.g., 2012 data), and determine appropriate frequency for future updates.					✓	London Hydro and Union Gas have provided utility data for 2011 – 2015. Energy maps have been updated up to 2014. Energy maps are a key engagement and planning tool for Active & Green Communities. (see Action 10).
14. Report key community energy use and associated greenhouse gas emissions indicators on an annual basis, including but not limited to the annual Community Energy and Greenhouse Gas Emissions Inventory.					✓	Annual Community Energy and Greenhouse Gas Emissions Inventory reports were reported for 2013, 2014, and 2015. City staff have been using of easy-to-understand infographics for use in public education print materials and videos, which have been received positively. Community-level household energy use will be reported to participating Active & Green Communities. (see Action 10).
SINGLE-FAMILY HOMES						
15. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities. Peer benchmarking of water consumption is now available on the London Hydro website, and working on integration with London Hydro's Green Button service. Water conservation programs are included within Active & Green Communities. (see Action 10).

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
16. Work with Union Gas to identify priority neighbourhoods (i.e., “red zones” on energy map) for implementation of their new Home Reno Rebate program and Helping Homes Weatherization program, and assist in the promotion of these programs.				→		<p>Updated energy maps have been shared with Union Gas staff.</p> <p>New Union Gas incentive programs are being developed for 2016.</p> <p>Through Active & Green Communities, energy mapping data is being used in SoHo to identify parts of that neighbourhood to target promotion of Union Gas programs will promote Union Gas programs. (see Action 10).</p>
17. Work with the London Home Builders’ Association (LHBA) to: <ul style="list-style-type: none"> • Explore the potential for a "LEEP 3.0" technology evaluation project • Evaluate Toronto's Home Energy Loan Program (LIC pilot) • Develop and deliver a draftproofing & insulation demonstration project 			→			<p>City staff is currently working with LHBA and Union Gas on weatherization demonstration projects for six homes providing social services (Community Living London, Craigwood Youth Services).</p> <p>LHBA participated in the LIC Stakeholder workshop in April 2016.</p> <p>The information obtained from the draftproofing demonstration project will be incorporated into Active & Green Communities. (see Action 10).</p>
18. Work with London Hydro and Union Gas to explore options for providing peer comparison (social benchmarking) information on household energy use to encourage conservation.					✓	<p>The Active & Green Calculator provided by Project Neutral allows participants to compare their energy use against their neighbourhood and London as a whole, and has been designed to import data through London Hydro’s Green Button protocol. (see Action 10).</p>
19. Use energy mapping resources to develop methodology for measuring the average energy efficiency (energy used per square meter floor area) of new single-family homes.					✓	<p>Municipal Property Assessment Corporation (MPAC) property data (which includes data on building type, age, and size) has been matched with utility data to produce residential energy efficiency (GJ/m² floor area) maps. (see Action 13).</p> <p>Neighbourhood-specific residential energy efficiency maps have been provided for Active & Green Communities. (see Action 10).</p>
20. Continue working with LHBA to promote the voluntary use of the next generation of the ENERGY STAR for New Homes initiative, as well as broader “green home” labels (e.g., GreenHouse™ Certified Construction and LEED® Canada for Homes)			→			<p>The LHBA’s Technical Committee monitors regulations and processes of a technical, green or environmental nature – building codes, products, materials, building science, community development green practices or standards- and attends OHBA EnerQuality Technical Committee meetings.</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
MULTI-UNIT RESIDENTIAL BUILDINGS						
21. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities. Water conservation programs are included within Active & Green Communities. (see Action 10).
22. Use energy mapping resources to develop methodology for ongoing measurement of the city-wide average energy efficiency (energy used per square meter floor area – all commodities) of multi-unit residential buildings.			→			Matching the MPAC property data set (which includes data on building type, age, and size) with utility data is underway. (see Action 13). Energy maps are a key engagement and planning tool for Active & Green Communities. (see Action 10).
23. Determine the share of London's multi-unit residential properties participating in Natural Resources Canada's ENERGY STAR Portfolio Manager and other energy performance labelling and benchmarking programs.	→					This activity will be deferred until Q4 2015. Engaging residents of multi-unit residential buildings (apartments and condominiums) is a key component of Active & Green Communities. (see Action 10).
COMMERCIAL & INSTITUTIONAL BUILDINGS						
24. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities.
25. Work with the stakeholders (e.g., London Chapter of the International Facility Management Association, BOMA Toronto) to promote and share existing energy management best practices (e.g., employee awareness & training, monitoring & reporting, etc.) within London's industrial, commercial, and institutional sector.				→		City staff are working with Labatt Brewery to cohost the Corporate Leadership for a Greener London business engagement event on June 15, 2016 (see Action 29) City staff worked with MSEC to host a half-day workshop with local property owners and managers in November 2014 to learn about their existing practices and seek their opinions and ideas on the best way to promote these practices further.
26. Determine the share of London's commercial & institutional property owners voluntarily participating in Natural Resources Canada's				→		MSEC's co-op student carried out a web-based search to identify local commercial & institutional property owners who are voluntarily participating. NRCAN has also provided information on the number of

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
ENERGY STAR Portfolio Manager and other energy performance labelling and benchmarking programs.						London properties (and total floor area) within Portfolio Manager. The Province of Ontario is considering extending the existing mandatory reporting of institutional energy use to large commercial properties.
27. Use energy mapping resources to develop the method for ongoing measuring the average energy efficiency (energy used per square meter floor area) of existing and new commercial & institutional buildings on an annual basis.			→			Matching the MPAC property data set (which includes data on building type, age, and size) with utility data is underway. (see Action 13)
INDUSTRY AND MANUFACTURING						
28. Determine the share of London's industrial and manufacturing employers (by percentage of employment) that have documented energy management plans, programs, or systems in place.		→				City staff are working with Labatt Brewery to cohost the Corporate Leadership for a Greener London business engagement event on June 15, 2016 (see Action 29)
29. Work with the stakeholders to promote and share existing energy management best practices within London's industrial, commercial, and institutional sector.		→				City staff are working with Labatt Brewery to cohost the Corporate Leadership for a Greener London business engagement event on June 15, 2016. Included in this event will be a brief introduction to Sustainability CoLab's "Regional Carbon Initiative" concept currently in operation in Waterloo Region and Niagara Region. MEP Implementation funding will be used to cover the costs of a business engagement workshop in Fall 2016 to explore interest in bringing Sustainability CoLab's "Regional Carbon Initiative" concept to London. Many London businesses, such as Labatt, already report and share environmental best practices through national programs such as <i>Canada's Top 100 Employers</i> , and can be used as a template to follow.
30. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	This activity is being led by the Water Demand Management program.

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
STORES, RESTAURANTS, & OTHER SMALL BUSINESSES						
31. Continue to work with local business associations, leading businesses, the Chamber of Commerce and local utility conservation and demand management staff on energy and environmental initiatives.		→				<p>Active & Green Communities will include working with neighbourhood business associations when applicable. (see Action 10).</p> <p>City staff are working with Labatt Brewery to cohost the Corporate Leadership for a Greener London business engagement event in June 2016 (see Action 29)</p> <p>Preliminary discussions have been held with Project Neutral to adapt the existing Active & Green Calculator for use with small-to-medium sized businesses.</p>
LOCAL ENERGY PRODUCTION AND CO-GENERATION OF HEAT & POWER						
32. Work with London District Energy to prepare an information package that can be used by the City's Development Approvals staff to encourage new development in areas served by London District Energy to connect to the system.				→		<p>Initial meetings have been held with the City's Development Approvals area and London District Energy staff, with agreement in principle to make these materials available.</p> <p>London District Energy to develop promotional materials.</p>
33. Work with London District Energy to prepare an information package for use by local architects and developers involved with projects in areas served by London District Energy.				→		<p>Increasing the use of the existing district energy system has been incorporated in to the draft London Plan and draft Downtown Master Plan (see Action 3).</p> <p>London District Energy to develop promotional materials. (see Action 32).</p>
34. Work with London Hydro and the OPA to determine a realistic estimate of and timeline for reaching the maximum potential for cogeneration and renewable electricity-generating capacity in London	→					<p>The OPA's upcoming Regional Planning activity will provide an opportunity to obtain information on the regional electricity grid's future capacity to support local generation.</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
VEHICLES AND THE TRANSPORTATION SYSTEM						
35. Carry out the 2030 Transportation Master Plan, as approved by London Municipal Council, for improving London's transportation network to increase walking, cycling, carpooling and use of public transit.			→			<p>The Environmental Assessment for the Rapid Transit Corridors (Shift London) is underway, evaluating options and the preferred form of rapid transit, detailing the corridor improvements required to accommodate rapid transit, refining the implementation timing, and determining in greater detail the overall costs associated with the corridors.</p> <p>The update of the Cycling Master Plan (London ON Bikes) is now underway.</p> <p>Active & Green Communities can be used to test new ideas for walking and cycling infrastructure. (see Action 10)</p>
36. Carry out the Short-Term Implementation Strategy for active transportation and Transportation Demand Management.				→		<p>Updates on the activities was provided to Council in September 2014 and April 2015.</p> <p>Major activities underway include expansion of the Regional Rideshare service for the greater London region, development of cycling destinations for London, and promotion of London's rich cycling heritage.</p> <p>Active & Green Communities will include AT & TDM activities. (see Action 10).</p>
37. Obtain statistics on the number of high-efficiency vehicles (e.g., hybrids, plug-in hybrids, electric vehicles, diesel, and compressed natural gas) owned in London.					✓	<p>Vehicle ownership statistics have been obtained for 2010-2014 from Polk Canada through the Clean Air Partnership, with costs shared by Burlington, Hamilton, and Vaughan.</p>
38. Work with Union Gas to encourage major local fleet operators to adopt the use of compressed natural gas (CNG) vehicles.				→		<p>The follow-up activity from the CNG workshop is being incorporated in to the scope of work for the RNG feasibility study. (see Action 39)</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
39. Work with Union Gas and the Biogas Association on a preliminary feasibility study for using “green bin” source-separated organics to produce renewable natural gas (RNG) for use in local CNG vehicles.				→		City staff working with the Biogas Association and Union Gas on a feasibility study for producing renewable natural gas (RNG) from the organics component of municipal solid waste as part of a larger project dealing with compressed natural gas (CNG) vehicles. The Federation of Canadian Municipalities (FCM) Green Municipal Fund is providing \$12,760.
40. Provide tools and resources to help Londoners assess the cost/benefit of replacing older vehicles with more-efficient new vehicles, vehicle downsizing, and eco-driving techniques. Similarly, provide tools and resources to assist local fleet owners/operators in determining the lifecycle cost/benefit of low/no emission vehicles and other fleet greening practices.				→		The City is supporting GOODcoins’ project with Natural Resources Canada to encourage eco-driving behaviours. MEP Implementation funding will be used to cover the costs of a fuel efficient vehicle engagement pilot program in 2016-2017, to be tested within Active & Green Communities and the general public. (see Action 10).