

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 29, 2017
FROM:	JAY STANFORD DIRECTOR, ENVIRONMENT, FLEET, & SOLID WASTE
SUBJECT:	COMMUNITY ENERGY ACTION PLAN – STATUS UPDATE

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

- Report to the December 12, 2016 Civic Works Committee (CWC) Meeting, Comments on the Ministry of Energy's Discussion Paper on Ontario's Long-Term Energy Plan for Submission to the Environmental Bill of Rights (EBR) Registry (Agenda Item #7)
- Report to the August 22, 2016 Civic Works Committee (CWC) Meeting, Ontario's Climate Change Action Plan – Initial Impact and Alignment with London's Current Plans, Programs and Projects (Agenda Item #14)
- Report to the June 8, 2016 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Update and Status (Agenda Item #10)
- 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), addresses 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 a mid-term review and update on the progress being made implementing London's Community Energy Action Plan (CEAP).

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.

Since the early 1990s, 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 recent increases in electricity prices and past increases in gasoline and diesel prices, Londoners have become 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.

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 (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 Climate Change Action Plan was released in June 2016, however many of its implementation details (e.g., the proposed "Green Bank") are still pending. When these details are announced, it is expected that they will play a significant role in London's future community energy plans. As noted in Ontario's Climate Change Action Plan:

The government intends to establish a greenhouse gas pollution reduction challenge fund or program. This fund or program will support emissions reduction projects proposed by municipalities that already have municipal/community energy plans or climate change policies with greenhouse gas pollution inventories in place. Green projects will get matching provincial funding, with a focus on demonstrating the best cost-per-tonne reduction.

Ontario intends to fund the development of Community Energy Plans and Climate Action Plans (and their supporting data) with greenhouse gas pollution inventories for municipalities and First Nation and Métis communities that currently do not have these plans. These programs would include training and guidance to help communities access energy use data for their community energy planning and mapping.

The government would support collaborative, community-based and data-driven approaches to carbon reduction. This would include district-wide mapping that integrates gas, electricity, heating and cooling, water, transportation, waste consumption and building data into a single platform to enable district-wide decisions. Applications would include distributed generation opportunities, detailed emissions analysis, targeted conservation spending and improved benchmarking.

In December 2016, the Ontario Ministry of Energy began its consultation on the next iteration of its Long-Term Energy Plan. As noted in the consultation document, [Planning Ontario's Energy Future: A Discussion Guide to Start the Conversation](#), the focus of the consultation included:

- *How will local energy plans integrate with broader planning?*
- *And how do we ensure that we better integrate fuels and electricity planning with broader community planning?*

The fact that these issues are connected with community energy planning was encouraging, as was the inclusion of fossil fuels within the narrative of provincial energy planning. The updated Long-Term Energy Plan is expected to be released in Fall 2017.

London's Community Energy Action Plan

One of the most critical roles that City staff play is to 'connect the dots' and develop collaborations 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 London's Community Energy Action Plan (CEAP).

London's CEAP was approved by Council in July 2014. The CEAP lays out how we collectively move forward on energy conservation, energy efficiency, renewable energy, and other sustainable energy solutions that reduce greenhouse gas emissions. The CEAP focusses on actions to be taken over the duration of this Council term (2015-2018) to help support medium-term and longer-term greenhouse gas emission reduction goals for 2020 and 2030. In total, 17 City-led strategies for the 2014-2018 period were identified and supported by 40 City-led actions to implement these strategies. This does not include the numerous actions that are taking place (or planned) in the community and by key energy stakeholders in London.

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

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:

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

DISCUSSION:

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

The ongoing implementation of the CEAP has many benefits including:

- **Financial benefits** - as noted in the 2016 Community Energy and Greenhouse Gas Inventory, over \$1.4 billion was spent on energy in 2016, and almost 90 percent of this money leaves London. Every one percent reduction in energy use that Londoners and London businesses achieve keeps about \$12 million from leaving our local economy. In 2016, it is estimated that over \$100 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 2016 Community Energy and Greenhouse Gas Inventory, London's greenhouse gas emissions in 2016 were 15 percent below 1990 levels, and greenhouse gas emissions per person were 32 percent lower than 1990 levels.
- **Job creation benefits** - 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.

How is CEAP Being Funded?

The CEAP draws upon existing resources across the Corporation performing work that aligns directly or indirectly with energy conservation and energy efficiency. In addition to City staff time, funding allocated to energy-related, community-led actions, awareness, and education in 2018 will be similar to recent years, in the range of \$25,000 to \$50,000.

Recent CEAP activities were 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 the Active & Green Home Check-ups and MyCarma London pilot projects as well as the Strengthening London's Business Sustainability Network Workshop;
- \$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; and
- \$88,000 from the FCM Green Municipal Fund to fund a unique multi-municipality feasibility study for the purpose of developing municipal policy tools to remove barriers and encourage net-zero energy development in London and other participating municipalities – Kingston, Kitchener, and Waterloo.

How Does London's CEAP Compare to Other Municipal Plans

It is difficult to compare London's CEAP with community energy plans in other municipalities, given that each municipality will have its own unique set of local stakeholders and energy priorities. However, London is one of the leading municipalities in the field of community energy planning in Canada, which has made London's CEAP one of a number of models to follow:

"The City of London Ontario is a national leader among Smart Energy Communities in Canada. Communities across the country are looking to London's Community Energy Action Plan (CEAP) as a best in-class example and are able to draw on London's leading initiatives, such as its robust energy analysis and visualization approaches that communicate the need for and benefit of the CEAP, as well as comprehensive engagement with local utilities (gas, electric and thermal), the development community, academic institutions and the general public. We're

delighted to acknowledge London as one of our go-to examples of a community committed to implementing its community energy solutions and to making Smart Energy Communities a reality!"

*Brent Gilmour, MCIP RPP
Executive Director, QUEST - Quality Urban Energy Systems of Tomorrow*

"The City of London has been showing leadership on community energy planning and climate change for decades since first joining the FCM-ICLEI Partners for Climate Protection program in 1994. Their approach to communicating the tangible cost savings of investing in energy efficiency and green energy illustrates the community benefits that can be achieved when plans become a reality."

*Jenny Gerbasi
Deputy Mayor, City of Winnipeg
FCM President*

"Communities across Canada will learn a lot from London's innovative approach to community energy planning; an approach that integrates data and community values into a 'living document'. London's efforts to refine and redefine the principles of community energy planning are a potential model for others, one of the reasons the Community Energy Knowledge-Action Partnership sought out London as a partner."

*Dr. Kirby Calvert
Assistant Professor, Geography, University of Guelph
Co-director, Community Energy Knowledge and Action Partnership.*

What Progress Has Been Made to Date?

About one-quarter of the CEAP's strategies have been fully-implemented and an additional 65 percent of strategies are well underway.

Overall Progress on CEAP's 17 Key Strategies for 2014/18 – As of June 2017				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 strategies (0%)	2 strategies (12%)	10 strategies (59%)	1 strategy (6%)	4 strategies (24%)

Over half (22 of 40) of the City-led actions in support of the CEAP's strategies have also been completed, with an additional 20 percent (8 actions) nearing completion. 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 2015 and April 2016.

Overall Progress on CEAP's 40 City-led Actions – Between May 2016 and June 2017				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 actions (0%)	1 action (3%)	9 actions (23%)	8 actions (20%)	22 actions (55%)
Previous 12 months For Comparison – Progress Made Between May 2015 and April 2016				
2 actions (5%)	6 actions (15%)	5 actions (13%)	12 actions (30%)	15 actions (38%)

Examples of City-led actions include:

- Incorporating Community Energy Action Plan principles into The London Plan
- Using the Green Municipal Fund to study:
 - barriers to “green development” and how to address them
 - financial feasibility of turning organic waste into renewable fuel for trucks and buses
- Testing new ways to engage Londoners through Active & Green Communities
- Testing new tools to encourage energy-saving behaviour, such as:
 - Active & Green Calculator (cost and carbon footprint calculator)
 - Active & Green Home Check-Up (energy-saving tips for your home)
 - MyCarma London (eco-driving and vehicle fuel efficiency report card)
- Partnering with Labatt and Sustainability CoLab to strengthen employer engagement in environmental stewardship and reporting on progress

Appendix B provides a complete list of the actions and a summary of the progress made to date.

What Actions have the City Taken with Community Stakeholders?

Through Active & Green Communities, City staff have been working with neighbourhood groups and other community organizations to deliver environmental activities in different areas of London, including:

- Byron Community Association
- Kensington Village Association
- Old East Village Community Association
- SoHo Community Association
- Tanglewood Orchard Housing Cooperative
- Willingdon Avenue residents

City staff worked with the Green Energy London Co-operative, a local community group, on two pilot projects:

- to develop and deliver the Active & Green Home Check-Up pilot project to 93 homes; and
- to develop and deliver their Solar Home Evaluation pilot project to 25 homes.

The City of London has also provided on-going support for the London Environmental Network as they expand their capabilities to support environmental activities here in London. This includes the London Environmental Network’s emerging role as the host organization for the continued development of Sustainability CoLab’s employer engagement program activities here in London, building upon efforts taken to date by the City of London and Labatt.

What Actions have Community, Business, and Institutional Stakeholders Taken?

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

As part of the mid-term review of the CEAP, key energy stakeholders were once-again contacted and provided with a CEAP Update Primer that summarized progress to date with the CEAP as well as some key performance indicators for energy use and greenhouse gas emissions. These stakeholders were then asked to provide feedback based on the following three questions:

- What does your organization think about the City's progress to date?
- What are highlights of your organization's actions over the last two years?
- What does your organization plan to work on in 2017 and 2018?

Responses were received from the following stakeholders:

- Fanshawe College
- First Capital Realty
- Libro Credit Union
- London & St. Thomas Association of Realtors
- London City Centre
- London Economic Development Corporation
- London Home Builders' Association
- London Hydro
- London Public Library
- Middlesex-London Health Unit
- TD-Canada Trust
- Trojan Technologies
- Union Gas
- Upper Thames River Conservation Authority
- Western University

A compilation of these responses has been provided in Appendix C.

Note that these responses offer just a small sample of the actions that stakeholders have taken. As discussed later on in this report, the collection of and reporting on actions that have been taken in London will be a major focus of activity over the next 12 months.

New Funding Opportunities for CEAP Actions

In June 2017, the FCM announced its new Municipalities for Climate Innovation Program - a new, five-year, \$75-million program that helps municipalities prepare for, and adapt to, climate change, and to reduce emissions of greenhouse gases (GHGs). The Municipalities for Climate Innovation Program is funded by the Government of Canada, and is available to all municipalities and their partners. The type of initiatives the program supports include funding for:

- Developing plans (including transportation-related plans);
- Feasibility studies and impact studies;
- Municipal staffing to support climate change actions; and
- Climate change mitigation and adaptation capital project and community initiatives.

The federal government has also announced a new Federal Low Carbon Economy Fund, with its launch expected in Fall 2017. Proposed projects using this fund will need to have concrete actions that contribute towards Canada's 2030 emissions reduction target and are as cost effective as possible.

Ontario's Climate Change Action Plan, announced in June 2016, could have a significant impact on future activities. Ontario's Climate Change Action Plan will use revenue from the Cap & Trade system to fund measures. Highlights of the action areas of most interest to London include:

- Some of the provincial actions will be funded and administered through the newly-created Ontario Climate Change Solutions Deployment Corporation, also known as the Green Bank, modelled upon similar entities used in American states such as New York and Vermont, to provide financing starting in 2018 for energy-efficient and low-carbon technologies for homeowners and businesses. The Green Bank and its flexible low-

interest financing for greenhouse gas-reducing energy improvements for homes and commercial buildings fulfils the same need and function as the proposed Property-Assessed Clean Energy (PACE) included within the 2015-2019 – City of London Strategic Plan;

- A number of new electric vehicle incentives, which will help reduce greenhouse gas emissions from personal vehicles, the largest source of greenhouse gas emissions in London;
- The proposed renewable natural gas content requirement for the province's natural gas supply from sources such as landfills and municipal organics management collection provides new opportunities for the utilization of landfill gas from the W12A Landfill and the potential for utilization of biogas from a future organics management program in London;
- Allowing municipalities to establish their own green development standards and mandating climate change mitigation and adaptation within official plans, both of which have already been incorporated into the new London Plan;
- Funding for cycling infrastructure and transportation demand management plans that will support the Smart Moves 2030 Transportation Master Plan, London ON Bikes Cycling Master Plan and the Downtown Parking Strategy (in progress); and
- A Municipal Challenge Fund to help finance GHG reduction projects for municipalities that already have community energy plans, which will help with the implementation of London's CEAP and Corporate Energy Conservation & Demand Management (CDM) Plan.

Details of how these Climate Change Action Plan measures will be implemented are not known at this time, but these are expected in late 2017, and to be available starting in 2018. These measures could provide a significant boost for local action.

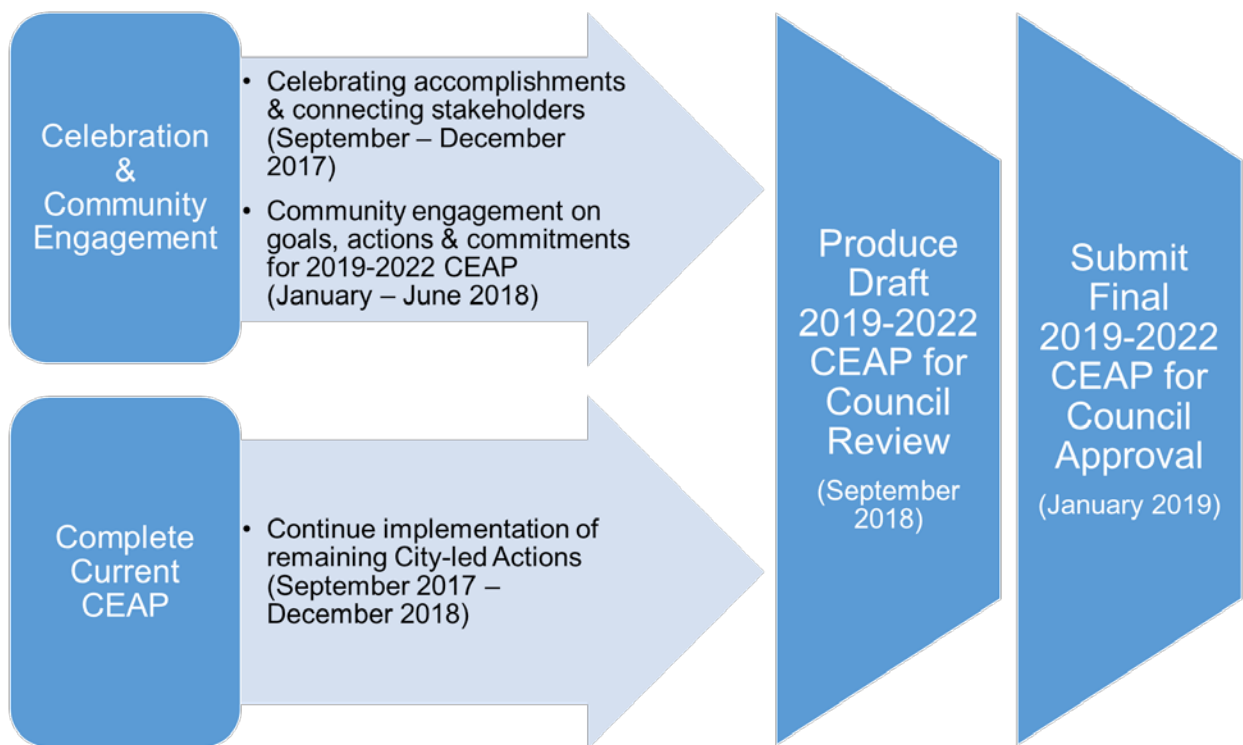
Given the new funding available now through the FCM's Municipalities for Climate Innovation Program and expected in 2018 through Ontario's Climate Change Action Plan, there is an opportunity to accelerate and augment actions outlined in the CEAP, including follow-up program development from recent pilot projects such as the Active & Green Home Check-up and MyCarma London. In addition, there may be an opportunity to introduce new actions that align with federal and provincial priorities, such as additional measures to support electric vehicle use. This funding could also support other City of London programs with climate change mitigation and adaptation benefits (e.g., active transportation and transportation demand management, low-impact development retrofits). City staff will review business plans in 2017 to identify existing and new projects that could be made use of this funding in 2018.

What are the Major Activities over the Next 18 Months?

Many of the actions currently underway will also continue through 2017 and into 2018, specifically Active & Green Communities and support for the emerging business-focussed activities coming out of the Strengthening London's Business Sustainability Network workshop in December 2016 and the 7th Annual London Environmental Forum - Lessons Worth Sharing event in June 2017.

The remaining months of 2017 will also be used to celebrate community accomplishments and to raise awareness on the progress that has been made to date on reducing energy use and greenhouse gas emissions, as well as providing additional opportunities for community stakeholders to share their stories with Londoners.

With the current CEAP period ending in 2018, work will begin in early 2018 to plan the development of the next iteration of the CEAP for 2019-2022. This will involve community engagement on the goals, actions, requirements, and commitments to be incorporated into the 2019-2022 CEAP. This draft 2019-2022 CEAP will be provided to the current Council for their review in late 2018, with a revised draft being submitted to the new Council for their review and approval in early 2019.



ACKNOWLEDGEMENTS:

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

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- Kapil Lakhotia, General Manager, London Economic Development Corporation
- Vinay Sharma, CEO, London Hydro
- Jerry Lacina, National Accounts Manager, Distribution Markets, Union Gas
- All remaining participating key energy stakeholders

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

Appendix B Status of City-led Community Energy Action Plan Actions

Appendix C Some Responses from Key Energy Stakeholders

Appendix A

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

London's CEAP 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 over the duration of the Council term (2015-2018). 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. 15 percent reduction from 1990 levels by 2020,
 - b. 37 percent reduction from 1990 levels by 2030, and
 - c. 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 City-led Community Energy Action Plan Actions

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 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 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 London Plan and the 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 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 Home Energy Loan Program 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>A stakeholder workshop was held on April 21, 2016 with key stakeholders such as the London Home Builders' Association, London Hydro, Union Gas, local mortgage lenders, community groups, and City staff</p> <p>Ontario's proposed "green bank" entity, announced as part of Ontario's Climate Change Action Plan, may negate the need for a "made-in-London" LIC program, depending on how it is implemented</p> <p>Update report to CWC provided on February 21, 2017</p> <p>The 2018 Business Plan will include a placeholder for an energy-related private property LIC pilot project in London. Once further details on funding and incentives of the "green bank" are known (expected September 2017), staff will prepare a business case for the LIC pilot project</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>The joint FCM GMF application with the City of London, City of Kingston, City of Kitchener, and City of Waterloo to study "green development" policies was accepted by the GMF. Sifton's West 5 and the redevelopment of the McCormick property are the two case studies for London.</p> <p>Project is being undertaken by s2e Technologies, the technology consultant for the West 5 development, with cross-departmental support from Planning, Development Services, and EES.</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 Quality Urban Energy Systems for Tomorrow (QUEST), in particular the Municipal Caucus of QUEST Ontario.</p> <p>Community energy planning is now a key component of Ontario's Climate Change Action Plan and Long Term Energy Plan.</p>
<p>8. Participate as an observer the Ontario Power Authority's (OPA's) regional electricity planning activities for the London area in 2015.</p>				→		<p>London Hydro is taking the lead in representing London's interest in regional electricity planning activities.</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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 identifying influencers at the community level through Active & Green Communities (see Action 10 below).</p> <p>City staff worked in partnership Labatt Brewery to cohost the Strengthening London’s Business Sustainability Network workshop December 2016 (see Action 29 below) and the 7th Annual London Environmental Forum - Lessons Worth Sharing event in June 2017.</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>Community-led and city-led activities have been delivered through Active & Green Communities to Byron Community Association, Glen Cairn Community Partners, SoHo, Tanglewood Housing Co-operative, Trinity United Church, Old East Village, and Willingdon Avenue.</p> <p>In 2017, participation was opened to all interested community groups through a simplified enrolment process. In addition, will develop and test a workplace version of Active & Green Communities (i.e., Active & Green Workplaces)</p>
11. Test the use of new monetary and non-monetary incentives to encourage Londoners to change established energy-using behaviours or habits.					✓	<p>The Active & Green Home Check-Up pilot project offered free energy saving advice to participating households .</p> <p>The MyCarma London pilot project offered a free ecodriving assessment and new vehicle fuel efficiency comparisons.</p>
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.				→		<p>The annual Community Energy and Greenhouse Gas Emissions Inventory now includes energy productivity (\$GDP per GJ of energy) as a key indicator.</p> <p>Five of the CEAP’s 13 sector-specific goals now have performance measurements in place.</p> <p>Ontario mandatory energy benchmark reporting for the Broader Public Sector is now available.</p> <p>Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large commercial buildings in 2018.</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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 2015. 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, 2015, and 2016. 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. Water conservation programs are included within Active & Green Communities. (see Action 10).
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.					✓	Updated energy maps have been shared with Union Gas staff. Through Active & Green Communities, energy mapping data is being used in participating to identify parts of that neighbourhood to target promotion of Union Gas programs will promote Union Gas programs. (see Action 10).
17. Work with the London Home Builders’ Association (LHBA) to: 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			→			LHBA participated in the LIC Stakeholder workshop in April 2016. Natural Resources Canada has selected London to be the first community to participate in the “LEEP for Renovators” pilot project. Both the City and LHBA are providing support for this project. The first workshop with local renovators and City Buildings staff planned for November 2017.

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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> <p>Peer benchmarking, using both the Active & Green Calculator as well as energy maps, was also incorporated into the Active & Green Home Check-up pilot project.</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> <p>The London region is home to two of Canada's eleven builders certified for the new Net Zero Home Labelling Program – Sifton Properties and Doug Tarry Homes.</p>
MULTI-UNIT RESIDENTIAL BUILDINGS						
21. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	<p>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).</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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.			→			To date, City staff have been unable to match MPAC property data for multi-unit residential buildings with gas utility data, due to Union Gas client data privacy rules requiring a minimum of 5 accounts at the postal code level. Data provided by Union Gas in June 2017 may allow staff to do so. (see Action 13) Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large buildings in 2018, which will provide an alternative method to measure this.
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.					✓	Natural Resources Canada has provided the City of London with Portfolio Manager participant data as of December 31, 2016. A minimum of 20 multi-unit residential buildings in London need to participate in order to be disclosed. This threshold has not been reached to date.
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.			→			Commercial building energy workshop was held in November 2014. Hosted Strengthening London's Business Sustainability Network Workshop with Sustainability CoLab to explore interest in an employer engagement network in London – 40 participants, with strong support for taking next steps (see Action 29 below). Participants included commercial office & retail property managers as well as institutional sector (Fanshawe, Western, TVDSB). As of June 2017, there were 22 BOMABEST certified buildings in London, up from four in 2013.
26. Determine the share of London's commercial & institutional property owners voluntarily participating in Natural Resources Canada's ENERGY STAR Portfolio Manager and other energy performance labelling and benchmarking programs.					✓	Natural Resources Canada has provided the City of London with Portfolio Manager participant data as of December 31, 2016. In London, 325 buildings, with a total floor area of 3,000,000 m ² , have been assessed as of that date. This represents 36 percent of total commercial and institutional floor area in London.

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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.			→			<p>To date, City staff have been unable to match MPAC property data for commercial buildings with gas utility data, due to Union Gas client data privacy rules. Data provided by Union Gas in June 2017 may allow staff to do so. (see Action 13)</p> <p>Ontario mandatory energy benchmark reporting data for the Broader Public Sector is now available.</p> <p>Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large buildings in 2018.</p>
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.					✓	<p>In terms of "publicly-stated" commitments to environmental/energy, action based on LEDC's list of London employers and a review of their websites:</p> <ul style="list-style-type: none"> Employers with public commitments to environmental/energy management make up more than 50% of London's entire workforce Out of LEDC's Top 100, 53 are employers with public commitments
29. Work with the stakeholders to promote and share existing energy management best practices within London's industrial, commercial, and institutional sector.			→			<p>Hosted Strengthening London's Business Sustainability Network Workshop with Sustainability CoLab to explore interest in an employer engagement network in London – 40 participants, with strong support for taking next steps.</p> <p>Three volunteers from local businesses their time to help guide the process of developing a program here in London.</p>
30. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	<p>This activity is being led by the Water Demand Management program.</p>
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>Hosted Strengthening London's Business Sustainability Network Workshop with Sustainability CoLab to explore interest in an employer engagement network in London – 40 participants, with strong support for taking next steps (see Action 29).</p>

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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.				→		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. London District Energy to develop promotional materials.
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.				→		The role of the existing district energy system has been incorporated in to the London Plan and draft Downtown Master Plan (see Action 3). London District Energy to develop promotional materials. (see Action 32).
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			→			London Hydro is taking the lead in representing London's interest in regional electricity planning activities.
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.			→			The Cycling Master Plan (London ON Bikes) has been developed. Secure bike parking and a bike share program will be studied as part of work around establishing a transportation management association for downtown London Based on above, bike parking will be implemented as part of Federal infrastructure funding and City capital program.
36. Carry out the Short-Term Implementation Strategy for active transportation and Transportation Demand Management.				→		Establishment of a transportation management association for downtown London will be a priority for 2017-2018. Update report on TDM actions to be provided in Q1 2018.
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.					✓	Vehicle ownership statistics have been obtained for 2010-2014 and 2016 from Polk Canada (now IHS Markit)

Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
38. Work with Union Gas to encourage major local fleet operators to adopt the use of compressed natural gas (CNG) vehicles.				→		The follow-up activity from the CNG workshop was incorporated in to the scope of work for the RNG feasibility study. (see Action 39)
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 worked 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.				→		MEP Implementation funding was used to cover a portion of the costs for the MyCarma London fuel efficient vehicle engagement pilot program, which ended in May 2017 the results of which are being reviewed. City staff are in discussions with Fleet Challenge Ontario to explore collaboration on assessing the state of fleet greening practices in London and continued promotion of these practices for local fleet managers.

Overall Progress on CEAP's 17 Key Strategies – As of June 2017				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 strategies (0%)	2 strategies (12%)	10 strategies (59%)	1 strategy (6%)	4 strategies (24%)

Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
POLICY SUPPORT FOR COMMUNITY ENERGY ACTION PLANNING						
1. Develop pilot programs to test these new policy tools and report back on their effectiveness.			→			Once further details on funding and incentives of the Ontario Climate Change Solutions Deployment Corporation (i.e., “green bank”) are known, prepare a business case for an energy-related private property LIC pilot project in London. The GMF funded study of “green development” policies is underway. Sifton’s West 5 and the redevelopment of the McCormick property are the two case studies for London.
REPORTING AND EDUCATION ABOUT THE ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS OF ENERGY USE						
2. Work with community and neighbourhood associations to make use of neighbourhood energy maps and other energy information.					✓	Energy maps have been updated up to 2015. Energy maps are a key engagement and planning tool for Active & Green Communities.
3. Work with London Economic Development Corporation to encourage major London employers to report their energy performance to the public.			→			Hosted Strengthening London’s Business Sustainability Network Workshop with Sustainability CoLab to explore interest in an employer engagement network in London – 40 participants, with strong support for taking next steps
SINGLE-FAMILY HOMES						
4. Work with the London & St. Thomas Real Estate Board and the LHBA to promote NRCan’s new EnerGuide Rating System and other relevant building labelling programs on existing and new houses.			→			Ontario’s proposed Home Energy Rating and Disclosure (or HER&D) program will require Ontario homeowners, as part of the resale process, to get an energy performance rating for their homes and then be required to disclose that rating to prospective buyers. HER&D will make use of NRCan’s new EnerGuide Rating System

Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
5. Continue to work with the LHBA to promote wider use of energy-efficiency technologies and techniques in home construction and renovation.			→			<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> <p>The London region is home to two of Canada's eleven builders certified for the new Net Zero Home Labelling Program – Sifton Properties and Doug Tarry Homes.</p>
MULTI-UNIT RESIDENTIAL BUILDINGS						
6. Work with leading property owners/managers and the London Property Management Association (LPMA) to educate local property owners on the use of energy performance benchmarking and other energy management practices for multi-unit residential buildings, for both the whole building and for marketing of leased space.			→			<p>Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large buildings in 2018.</p> <p>By July 1, 2019, this will apply to multi-unit residential buildings 100,000 square feet and larger. This represents 50% of London's multi-unit residential buildings.</p> <p>By July 1, 2020, this will apply to buildings 50,000 square feet and larger. This represents 65% of London's multi-unit residential buildings.</p>
COMMERCIAL & INSTITUTIONAL BUILDINGS						
7. Encourage the creation of a business-led entity to foster sharing best environmental practices and reporting on progress in London's commercial building sector.			→			<p>Hosted Strengthening London's Business Sustainability Network Workshop with Sustainability CoLab to explore interest in an employer engagement network in London – 40 participants, with strong support for taking next steps</p>
8. Work with stakeholders to pilot the voluntary use of energy performance labelling and benchmarking tools in London, for both the whole building and for the marketing of leased space, to test and demonstrate the potential value of the various energy performance labelling and benchmarking activities available.			→			<p>Ontario mandatory energy benchmark reporting data for the Broader Public Sector is now available.</p> <p>By July 1, 2018, Ontario's EWRB will apply to commercial buildings 250,000 square feet and larger. By 2019 and 2020, this will apply to buildings 100,000+ square feet and 50,000+ square feet respectively. By 2020, EWRB will apply to about 50% of London's commercial buildings.</p>

Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
INDUSTRY AND MANUFACTURING						
9. Work with stakeholder on the ongoing promotion of energy management best practices, such as those provided by the Canadian Industry Program for Energy Conservation (CIPEC) and Natural Resources Canada's Office of Energy Efficiency.			→			Hosted Strengthening London's Business Sustainability Network Workshop with Sustainability CoLab to explore interest in an employer engagement network in London – 40 participants, with strong support for taking next steps
10. Encourage the creation of a business-led entity to foster sharing best environmental practices and reporting on progress in London's industrial and manufacturing sector.			→			Hosted Strengthening London's Business Sustainability Network Workshop with Sustainability CoLab to explore interest in an employer engagement network in London – 40 participants, with strong support for taking next steps
STORES, RESTAURANTS, & OTHER SMALL BUSINESSES						
11. 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			→			Hosted Strengthening London's Business Sustainability Network Workshop with Sustainability CoLab to explore interest in an employer engagement network in London – 40 participants, with strong support for taking next steps
LOCAL ENERGY PRODUCTION AND CO-GENERATION OF HEAT & POWER						
12. Promote and encourage the expanded use of cogeneration of heat & power for both district energy applications as well as net-metered building/facility applications.					✓	The London Plan and the Downtown Master Plan include references to the existing downtown district energy system. London Hydro is a participant in QUEST Ontario's Combined Heat & Power Consortium and is exploring CHP in net-metered building/facility applications.
13. Investigate the feasibility of utilizing source-separated organics as a feedstock for the production of bioenergy products (biogas, biomass, biofuels) as part of London's waste diversion strategy, as outlined in Road Map 2.0 - The Road to Increased Resource Recovery and Zero Waste.					✓	City staff worked 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.
VEHICLES AND THE TRANSPORTATION SYSTEM						
14. Develop and Implement the Comprehensive AT and TDM Action Plan in support of the proposed Complete Streets Mobility Plan.		→				Update report on TDM actions to be provided in Q1 2018.

Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
15. 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.					✓	MEP Implementation funding was used to cover a portion of the costs for the MyCarma London fuel efficient vehicle engagement pilot program, which ended in May 2017 the results of which are being reviewed.
16. 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.		→				City staff are in discussions with Fleet Challenge Ontario to explore collaboration on assessing the state of fleet greening practices in London and continued promotion of these practices for local fleet managers.
17. Work with Union Gas to promote the use of compressed natural gas (CNG) and renewable natural gas (purified biogas) as a substitute for diesel fuel for heavy-duty vehicles in London.				→		The follow-up activity from the CNG workshop was incorporated in to the scope of work for the RNG feasibility study. (see Strategy 13)

Appendix C

Some Responses from Key Energy Stakeholders

The following are highlights from the submissions received by the City of London. Copies of the entire submissions can be found at www.london.ca/CEAP

Fanshawe holds a Sustainability Tracking, Assessment & Rating System™ (STARS) Silver Rating in recognition of its sustainability achievements from the Association for the Advancement of Sustainability in Higher Education (AASHE). This 3 year-long award will expire in October 2017, at which time the College will be submitting their next report with the hope of achieving Gold.

In 2014 Fanshawe College implemented its Energy Conservation & Demand Management (ECDM) Plan (the Plan). This Plan is to reduce College energy-related expenditures by \$3.5 million over the next 10 years! Targets (upon final implementation):

- *Decrease yearly costs by \$445K per year.*
- *Reduce greenhouse gas (GHG) emissions by 652 tonnes CO₂e per year.*
- *Avoid 3,113 MWh in electrical per year.*

Libro Credit Union is adjusting business practices with an eye towards reducing the environmental impact of our operations. Over the last few years our efforts have been focused on finding energy efficient options for updates that were needed in our buildings. Updates to our head office in London included the installation of a cooling tower which offers free cooling in shoulder seasons without use of the chiller, installation of a new roof system which offers better insulation properties over the old roof, and installation of LED lighting on the exterior of the building, and the interior and exterior parking lots.

London City Centre has increased its waste diversion rate from 26% to 83% in four years by implementing a comprehensive recycling program that includes organic, electronic waste, cardboard, batteries, paper shredding, metals, air handling filters and cigarette butts. These environmental measures have led London City Centre being recognized by several organizations. The complex was awarded ISO 14001 certification in 2011 and recertified in 2016. We are the only commercial office tower in Canada awarded in ISO 14001. LCC won the Mayor's Sustainability Energy Council award for its outstanding reduction in electrical consumption as nominated by London Hydro in 2015. And to cap off a successful 2016, LCC achieved BOMA Best Platinum certification. Platinum is awarded to buildings that have met the BEST Practices and have achieved between 90 and 100% on the comprehensive audit. Recognition among our peers is extremely important and we pride ourselves in our accomplishment, our place in the community and how we are perceived as leaders in environmental and sustainable leadership. The management team of LCC is on its way to Nashville Tennessee in June 2017 for the International Competition of Building excellence.

*In 2014, the **London Economic Development Corporation (LEDC)** committed to facilitating industry dialogue through the London Region Manufacturing Council (LRMC) and the Excellence in Manufacturing Consortium (EMC) in support of the Community Energy Action Plan (CEAP). These conversations took place during LEDC / LRMC / EMC functions, including the annual Manufacturing Matters Conference and through monthly EMC meetings. The functions provided opportunities for industrial companies to learn about energy management resources in London. In addition, LEDC Business Development Managers have assisted local*

industrial companies to consider resources and programs available from government sources to help them reduce their energy costs and impact. Typical recommendations were to engage with London Hydro and Union Gas to get knowledgeable assistance and access to funding programs.

In 2018, LEDC, together with our industry partners, the LRMC and EMC, will undertake three new initiatives:

1. Assist in collecting high level data concerning the number of industrial companies in London that currently have a documented energy management plan
2. Engage manufacturers on energy management issues in autumn of 2017. City of London officials will be invited to participate as appropriate
3. Support future energy management related best-practices, issues, forums, and workshops in the London region

Public education is ongoing through all of our (**London Home Builders' Association**) resources - Lifestyle Home Show, weekly LHBA Home Front and President's Bang-on column, Parade of Renovations, the Signature New Homes and Renovation magazine and the LHBA website.

Also this year we participated in producing the LHBA Go Green Reno Guide that appeared as the center removable guide in the Go Green London magazine - It is also posted on our website and we have been promoting this.

One of the energy-efficiency programs that elicits great pride within **London Hydro**, not only for its outstanding results but also for the holistic manner in which it was executed in the London community, is the saveONenergy HOME ASSISTANCE program for low-income customers. London Hydro has expanded the program beyond providing turnkey electrical energy efficiency upgrades to lighting, refrigerated appliances, etc. to include fire safety, electrical safety and water conservation elements. In June 2015, London Hydro was bestowed the Ontario Fire Marshall's "Fire Safety Award" for its joint efforts with the London Fire Department to provide tangible fire safety improvements and education to this vulnerable segment. In March 2017, London Hydro was formally recognized by the IESO for "Conservation Leadership" for its outstanding achievements with this program. The City of London's Water Division has graciously provided budgets to simultaneously repair leaking plumbing and install water conservation measures as opportunities arise.

Throughout 2016, London Hydro processed 678 energy-efficiency projects within the commercial, industrial and institutional sectors and disseminated more than \$5.3 million in incentive payments. Using the rule-of-thumb that incentives represent about 40% of the customer's overall investment, then these incentives spurred some \$13.3 million in local economic activity. We expect that 2017 and future years to be as successful.

London Public Library (LPL) has been a proud partner in the Community Energy Action Plan (2014 – 2018) since its inception in 2010. We welcome the ongoing opportunity to partner with the community and the City of London to undertake innovative energy initiatives. As well, given our core business of providing information, we believe that LPL can contribute to an information, education and referral model to support the continued implement and distribution of the Community Energy Action Plan strategies. LPL has longstanding practice of energy awareness

and actions, including energy sustainability initiatives. In addition, LPL's Strategic Plan Library Space is Community Space 2014-2017 identifies the enactment of LPL's environmental; strategy, fleet management plans and Central Library Revitalization as strategic priorities.

One of the services to **London and St. Thomas Association of REALTORS® (LSTAR)** Members is the operation of the Multiple Listing Service® or MLS®, a co-operative system used to sell almost all resale homes in Canada. MLS® listings have featured a WalkScore to highlight the "walkability" of a home's neighbourhood to prospective home buyers, demonstrating how "eco-friendly" features of resale homes may be shared.

To optimize London's environmental and human health, LSTAR has supported ReForest London by hosting a REALTOR® Tree Planting Day and promoting the organization's events to Members, encouraging the planting of trees with home owners across London.

Trojan Technologies maintains a contemporary environmental mandate. We have taken steps to ensure effective management of direct and indirect of greenhouse gas (GHG) emissions through routine monitoring of electricity, natural gas and water resources. This is being done in part to finalize our ISO 14001:2015 certification which we intend to have by the end of summer 2017. Trojan Technologies is currently certified to the ISO 14001:2004 standard.

Trojan Technologies is also a member of the Excellence in Manufacturing Consortium (EMC) Group that is a London-based consortium which discusses and shares information and experiences in material handling and energy management.

On April 24, 2014, the **Upper Thames River Conservation Authority** received LEED Platinum certification for the Watershed Conservation Centre (WCC) under the Canada Green Building Council category of New Construction and Major Renovations. The certification was the 34th building in Canada to achieve Platinum and the first in the city of London...

Staff monitor the energy use and report to the Board every two years. The mechanical and receptacle load components are performing better than the energy model. Office and emergency lighting requires some tweaking. Changes to emergency lighting system resulted in a 38% reduction in energy consumption in 2015/16. The work plan for 2017/18 is to continue to tweak the WCC building systems to maintain or improve the Energy Star Rating and further reduce the annual energy consumption by 8%...

Since the CEAP was developed in 2014, **Western University** took several actions to enhance energy conservation and improve energy efficiency of our infrastructure and operations. In the past couple of years, Western University undertook 14 different measures (as identified in our Conservation and Demand Management Plan), which have resulted in:

- Avoiding 65,651 tonnes of CO₂e (equivalent to installing 60.8 wind turbines or avoiding 557,318 barrels of oil or planting 6,238,543 tree seedlings grown from 10 years) being released into the atmosphere
- Savings of \$10,939,000
- Improved health and wellness of the Western Community
- 1,359,000 GSF (gross square feet) of sustainably-designed building space