

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018
FROM:	JAY STANFORD, M.A., M.P.A. 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 August 29, 2017 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Status Update (Agenda Item #11)

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 an update on the progress being made implementing London's Community Energy Action Plan (CEAP) 2014-2018.

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.

In the last ten years, with recent increases in electricity and gasoline 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.

The development, implementation and advancement of municipal/community energy plans is strongly supported by the Association of Municipalities of Ontario (AMO) and the Federation of Canadian Municipalities (FCM). Municipal/community energy plans were also a key component of Ontario's former Climate Change Action Plan. City staff are playing a leadership role within Quality Urban Energy Systems of Tomorrow (QUEST) Canada, a leading organization for community energy planning. QUEST estimates that over 200 communities in Canada have community energy plans, and more than 400 communities - which collectively represent more than 50 percent of Canada's population - are working on community energy initiatives.

The City of London is also a participant in the Community Energy Knowledge Action Partnership (CEKAP), a unique Canada-wide partnership of universities and municipalities studying the challenges of implementing community energy plans. Globally, the City of London is a participant in CDP Cities (formerly the Climate Disclosure Project) and the Global Covenant of Mayors for Climate & Energy.

London's Community Energy Action Plan

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 further Background, 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.

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 2017 Community Energy and Greenhouse Gas Inventory, almost \$1.5 billion was spent on energy in 2017, 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. Improvements in energy efficiency compared to 2010 levels of energy efficiency (on a per person basis and applied to activity in 2017) avoided \$150 million in energy costs had there been no improvements (i.e., Londoners and businesses would have spent \$150 million more in 2017 on energy).
- **Environmental benefits** - reducing energy use in London reduces Londoners' contribution to both smog-forming emissions and greenhouse gas emissions. As noted in the 2017 Community Energy and Greenhouse Gas Inventory, London's greenhouse gas emissions in 2017 were 17 percent below 1990 levels, and greenhouse gas emissions per person were 34 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.

What Progress Has Been Made to Date?

Over one-quarter of the CEAP’s strategies have been fully-implemented and an additional 60 percent of strategies are well underway.

Almost two-thirds (26 of 40) of the City-led actions in support of the CEAP’s strategies have also been completed, with an additional one-third (13 actions) nearing completion. The following table provides a snapshot of progress made in the last 12 months.

Overall Progress on CEAP’s 17 Key Strategies – As of July 2018				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 strategies (0%)	1 strategy (6%)	1 strategy (6%)	10 strategies (59%)	5 strategies (29%)

Overall Progress on CEAP’s 40 City-led Actions – As of July 2018				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 actions (0%)	0 actions (0%)	1 action (3%)	13 actions (33%)	26 actions (65%)

Examples of recent City-led actions include:

- Completing the London phase of the Green Municipal Fund to examine barriers to “green development” and how to address the barriers in the context of a multi-use development;
- Hosting two Local Energy Efficiency Partnerships (LEEP) for Renovators workshops for Natural Resources Canada and the London Home Builders’ Association;
- Partnering with the London Environmental Network to support the development of Green Economy London, a target-based sustainability program for business;
- Expanding the annual Go Wild Grow Wild Green Expo (April each year) to include a Green Living Zone focusing on local services needed to live a greener lifestyle at home and at work; and
- Expanding Active & Green Communities through further collaborative projects (e.g., Urban Roots London).

City staff have also been testing out new ideas for promoting the progress Londoners have made. City staff developed the three-minute “[CEAP: It’s All Up in the Air](#)” video in Fall 2017, from which a series of mini-videos (10-20 seconds) was developed for use on social media. The shorter-length format has worked well on Facebook, with almost 7,900 views versus 630 on Youtube. City staff have also rebranded the former “Reduce Impact London” story-sharing website as “CityGreen Stories” for greater clarity.

Alignment with London's CEAP was a key factor in securing funding from Ontario's former Municipal GHG Challenge Fund, specifically:

- \$822,500 to assist with the development of the business case and the first phase of implementation for a bike share program in London; and
- \$691,000 to assist with the installation of compressed natural gas (CNG) fuelling infrastructure for both City vehicles and private-sector vehicles, along with vehicle maintenance infrastructure for future City CNG vehicles.

The Municipal GHG Challenge Fund has been cancelled by the Provincial Government. Further direction for both items is being determined.

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

What are the Major Activities over the Next 18 Months?

Completion of CEAP 2014-2018 will be the focus for the remainder of 2018 and into 2019. Work has started on 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. Further direction from the Province of Ontario and the Federal Government is anticipated later in 2018 which will be key foundational information for CEAP 2019-2022. A report outlining the Community Engagement Program will be submitted to CWC later in 2018.

ACKNOWLEDGEMENTS

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

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

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

Appendix A

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

Background

One of the most critical roles that City staff play is to 'connect the dots' and develop collaborations between 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).

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
- Active Transportation and Transportation Demand Management activities
- The London Plan
- London's Bus Rapid Transit (BRT) System
- London On Bikes Cycling Master Plan
- NeighbourGood London (implementation of London Strengthening Neighbourhoods Strategy)
- WhyWaste - waste reduction and diversion programs including the 60% Waste Diversion Action Plan
- Water conservation and efficiency programs
- Climate change adaptation (e.g., stormwater management)
- Parks and Recreation Master Plan
- Urban Forest Strategy

Key Guiding Principles

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.

Goals of CEAP

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

What Impact will the New Ontario Provincial Government Have?

With the change of government at the provincial level, any activity outlined within Ontario's Climate Change Action Plan for 2016-2020 that relied on revenue from the former Cap & Trade program are either already cancelled or in the process of being cancelled. These include the following:

- Electric Vehicle Charging Incentive Program
- Electric Vehicle Incentive Program
- Green Commercial Vehicles Program
- GreenON Challenge for non-government organizations
- GreenON Commercial programs for small and medium-sized businesses, food manufacturing and greenhouses
- GreenON Industries
- GreenON Residential Rebates for heat pumps, insulation, smart thermostats, solar, and windows
- GreenON Social Housing retrofit incentives
- Municipal GHG Challenge Fund
- Ontario Municipal Commuter Cycling Program

Most of these programs were relatively new, announced in late 2017 and in operation for just over six months. It is important to note that almost all of the progress made since 2014 - by the City, our key energy stakeholder, and Londoners as a whole - has not relied on these programs for their success. However, their cancellation will hinder the ability for Londoners and London businesses to take action on climate change in the near future.

It is not known at this time what the new provincial government plans to do to replace these cancelled climate change action programs. However, new website content for the renamed Ontario Ministry of Environment, Conservation and Parks states that "We also coordinate Ontario's actions on climate change in the name of healthier communities, ecological protection and economic prosperity." This statement is consistent with the goals of London's CEAP.

Implementation of the CEAP is not reliant on provincial programs, but their existence does help accelerate the pace of action taken.

With the cancellation of the Cap & Trade program, the federal government announced in July 5, 2018 its intention to apply its “backstop” federal carbon tax to Ontario, starting at \$20 per tonne in 2019 and climbing to \$50 per tonne by 2022. The federal carbon tax will be applied on a “revenue-neutral” basis, which means that carbon taxes collected from Ontario will be used to reduce other forms of taxes (e.g., income taxes) collected from Ontario by the federal government. The details on how this will be applied are not known at this time.

Current Funding Opportunities for Future CEAP Actions

The long-running Federation of Canadian Municipalities (FCM) Green Municipal Fund program remains in place to help fund municipally-led feasibility studies, plan development, pilot projects, and capital projects on a wide range of environmental initiatives.

In June 2017, the FCM announced its 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 first round of the grants program for the Municipalities for Climate Innovation Program was popular, with the first year’s allotment of funding being fully committed. A second round of funding is expected to open later in 2018.

The Municipalities for Climate Innovation Program also includes the Transition 2050 program, which provides grants for larger non-government organizations to provide training, peer-learning, resources and information-sharing activities on a regional basis to municipalities committed to reducing their GHG emissions. Many of the larger non-government organizations that the City of London works with, such as the Clean Air Partnership and Community Energy Knowledge Action Partnership (CEKAP), have submitted applications to this program.

The Federal Low Carbon Economy Challenge is part of their Low Carbon Economy Fund. The Challenge is broken into two streams:

- Champions stream - The \$450 million Champions stream provided to all eligible applicants (provinces and territories, municipalities, Indigenous communities and organizations, businesses and not-for-profit organizations). The deadline for submitting the first round of project proposals was May 14, 2018. Examples of the types of project covered by the Challenge stream included:
 - residential and commercial retrofits, including fuel switching
 - social housing retrofits, including fuel switching
 - municipal building retrofits, including fuel switching
 - organics diversion
 - heavy-duty vehicle retrofits, including energy efficiency and/or fuel switching
 - renewable natural gas production for own use
 - combined heat and power for own use
 - renewable energy systems (e.g., solar photovoltaic (PV), solar hot water systems, wind, micro-hydro) for own use
- Partnerships stream - The \$50 million Partnerships stream is limited to Indigenous communities and organizations, small and medium-sized businesses, not-for-profit organizations and small municipalities. The Partnerships stream will help ensure a broad range of Canadians are able to participate in the Challenge. The Partnerships stream will be open for applications later in 2018.

Appendix B

Status of City-led Community Energy Action Plan Strategies and Actions

17 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.				→		<p>City staff have provided support for the Clean Air Partnership's Expression of Interest submission to the Green Ontario (GreenON) Fund for a multi-municipality LIC pilot program. The Clean Air Partnership will prepare a more-detailed GreenON proposal in Summer 2018.</p> <p>Completed the London phase of the FCM Green Municipal Fund funded Feasibility Study: Municipal Tools for Catalyzing Net-Zero Energy Development.</p>
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.					✓	<p>Energy maps have been updated up to 2015.</p> <p>Energy maps are a key engagement and planning tool for Active & Green Communities.</p>
3. Work with London Economic Development Corporation to encourage major London employers to report their energy performance to the public.				→		<p>City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.</p>
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.				→		<p>Ontario's proposed mandatory Home Energy Rating and Disclosure (or HER&D) was cancelled in March 2018 due to lobbying efforts from the Ontario Real Estate Association.</p> <p>The OREA's position is a preference for voluntary use of energy performance labelling at the seller's discretion.</p>
5. Continue to work with the LHBA to promote wider use of energy-efficiency technologies and techniques in home construction and renovation.				→		<p>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. Two workshops have been delivered to date - November 2017 and April 2018.</p> <p>The London region is home to two of Canada's certified for the new Net Zero Home Labelling Program – Sifton Properties and Doug Tarry Homes.</p>

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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>City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.</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>
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.				→		<p>City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.</p>
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.				→		<p>City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.</p>

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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				→		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.
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.				→		City has partnered with SustainMobility on the three year CommuteOntario project, funded by the Ontario Trillium Foundation. The project will build on the Business Travel Wise Program by testing new commuter programs and incentives on a broader scale.
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 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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.					✓	Successful application to the Ontario Municipal GHG Challenge Fund financing for expansion and shared use of a new CNG fuelling station at Highbury Avenue and Highway 401. (Note: The current Provincial Government has cancelled the Challenge Fund. The project is still being examined by City and Union Gas staff).

40 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.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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.					✓	City staff provided support for the Clean Air Partnership's (CAC's) Expression of Interest submission to the former Green Ontario (GreenON) Fund for a multi-municipality LIC pilot program to test the delivery of such a program through a third-party organization as well as test measures to minimize potential financial risks to municipalities. The CAC is continuing to explore funding options for this proposal.
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.				→		Completed the London phase of the FCM Green Municipal Fund funded Feasibility Study: Municipal Tools for Catalyzing Net-Zero Energy Development. This is a multi-municipality project with the City of Kingston, City of Kitchener, and City of Waterloo to study "green development" policies. Project is being undertaken by s2e Technologies, the technology consultant for the West 5 development, with the final report expected by Fall 2018.
7. Advocate for increased support from federal and provincial governments for undertaking community energy planning at the municipal level of government.					✓	City of London staff will continue to participate in and support the activities undertaken by Quality Urban Energy Systems for Tomorrow (QUEST).
8. Participate as an observer the Ontario Power Authority's (OPA's) regional electricity planning activities for the London area in 2015.					✓	An Integrated Regional Resource Plan (IRRP) was released for the Greater London sub-region in January 2017.
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.					✓	City staff participated on a Steering Committee that established the London Environmental Network (LEN) which includes a number of groups that focus on energy. City staff are identifying influencers at the community level through Active & Green Communities (see Action 10 below). City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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.					✓	Community-led and city-led activities have been delivered through Active & Green Communities. In 2017, participation was opened to all interested community groups.
11. Test the use of new monetary and non-monetary incentives to encourage Londoners to change established energy-using behaviours or habits.					✓	The Active & Green Home Check-Up pilot project offered free energy saving advice to participating households . The MyCarma London pilot project offered a free ecodriving assessment and new vehicle fuel efficiency comparisons.
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. Ontario mandatory energy benchmark reporting for the Broader Public Sector is now available. Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large commercial buildings in 2018.
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 has provided utility data for 2011 – 2017. Union Gas has provided utility data for 2011 – 2016. Working with Fanshawe College GIS program faculty and students on creating additional map tools.
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 have been reported for every year since 2013 (2017 is the latest year) City staff have been using of easy-to-understand infographics for use in public education print materials. Data has also been communicated through videos on social media – both long (3 minutes) and short (15 seconds) formats. Short formats are getting broader reach.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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 available on the London Hydro website.
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. Two workshops have been delivered to date - November 2017 and April 2018.
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.					✓	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) The Active & Green Calculator and energy maps were incorporated into the Active & Green Home Check-up pilot. Working with Project Neutral to improve and simplify the Active & Green Calculator based on feedback from trials.
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.					✓	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/m ² floor area) maps. (see Action 13).

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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 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.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities.
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.				→		<p>Working with Fanshawe College GIS program faculty and students on creating additional map tools, including multi-unit residential buildings. (see Action 13)</p> <p>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.</p>
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.					✓	<p>Natural Resources Canada has provided the City of London with Portfolio Manager participant data as of December 31, 2016.</p> <p>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.</p>
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.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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.				→		<p>Commercial building energy workshop was held in November 2014.</p> <p>City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. (see Action 29 below). Participants included commercial office & retail property managers as well as institutional sector (Fanshawe, Western).</p> <p>City staff have participated in two Fanshawe-led Low Carbon Learning Communities events, an initiative targeting London's institutional sector (the school boards, LHSC, Western)</p> <p>As of June 2018, there were 24 BOMABEST certified buildings in London, up from four in 2013 and 22 in 2017.</p>
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.					✓	<p>Natural Resources Canada has provided the City of London with Portfolio Manager participant data as of May 2018. In London, 300 buildings, with a total floor area of 2,750,000 m², have been assessed as of that date. This represents 31 percent of total commercial and institutional floor area in London.</p>
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>Working with Fanshawe College GIS program faculty and students on creating additional map tools, including multi-unit residential buildings. (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

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
29. Work with the stakeholders to promote and share existing energy management best practices within London's industrial, commercial, and institutional sector.				→		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.
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.
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.				→		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. Small businesses will be one of the target markets for this program. (see Action 29).
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					✓	An Integrated Regional Resource Plan (IRRP) was released by the IESO for the Greater London sub-region in January 2017. The IESO notes that anticipated future power needs (small in scale, spread out over many customers, and driven more by intensification than by significant new greenfield developments) are well suited to community driven solutions, including local distributed energy resource projects (such as small scale CHP, solar and/or storage technologies).

40 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.				→		Starting to work on developing the business case for a bike share program in London. Secure downtown bike parking will be implemented in 2018-19 using Federal Public Transit Infrastructure Fund and City funding.
36. Carry out the Short-Term Implementation Strategy for active transportation and Transportation Demand Management.				→		City has partnered with SustainMobility on the three year CommuteOntario project, funded by the Ontario Trillium Foundation. The project will build on the Business Travel Wise Program by testing new commuter programs and incentives on a broader scale.
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, 2016 and 2017 from IHS Markit.
38. Work with Union Gas to encourage major local fleet operators to adopt the use of compressed natural gas (CNG) vehicles.					✓	Working with Union Gas on the shared use of a new CNG fuelling station at Highbury Avenue and Highway 401.
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 submitted a proposed to Union Gas for producing renewable natural gas (RNG) from landfill gas, but Union Gas has delayed this procurement due to the cancellation of Cap & Trade. City staff have also submitted an expression of interest to FortisBC (the gas utility in British Columbia) for supplying RNG. Further information on this program is expected in August.
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.