

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019
FROM:	JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET, & SOLID WASTE
SUBJECT:	2014-2018 COMMUNITY ENERGY ACTION PLAN – FINAL UPDATE

RECOMMENDATION

That, on the recommendation of the Director of Environment, Fleet and Solid Waste, this report on the conclusion of the 2014-2018 Community Energy Action Plan activities **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Relevant reports that can be found at www.london.ca under City Hall (Meetings) include:

- Report to the August 13, 2018 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Status Update (Agenda Item #2.6)
- Report to the August 29, 2017 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Status Update (Agenda Item #11)
- Report to the June 8, 2016 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Update and Status (Agenda Item #10)
- Report to the May 5, 2015 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Update and Status (Agenda Item #13)
- Report to the July 21, 2014 Civic Works Committee (CWC) Meeting, Community Energy Action Plan (Agenda Item #16)

STRATEGIC PLAN 2015-2019

Municipal Council 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), addressed 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 summary of the progress made implementing London's Community Energy Action Plan (CEAP) over the 2014-2018 period. This report, along with previous annual reports, will serve as input into the development of the next CEAP for 2019-2023.

CONTEXT

London's CEAP was approved by Council in July 2014. The CEAP laid 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 focused on actions to be taken over the duration of previous 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 taken in the community and by key energy stakeholders in London.

Appendix A contains further background, the guiding principles and goals of London's CEAP. Reporting annually on the status of actions was a key part of the overall program design.

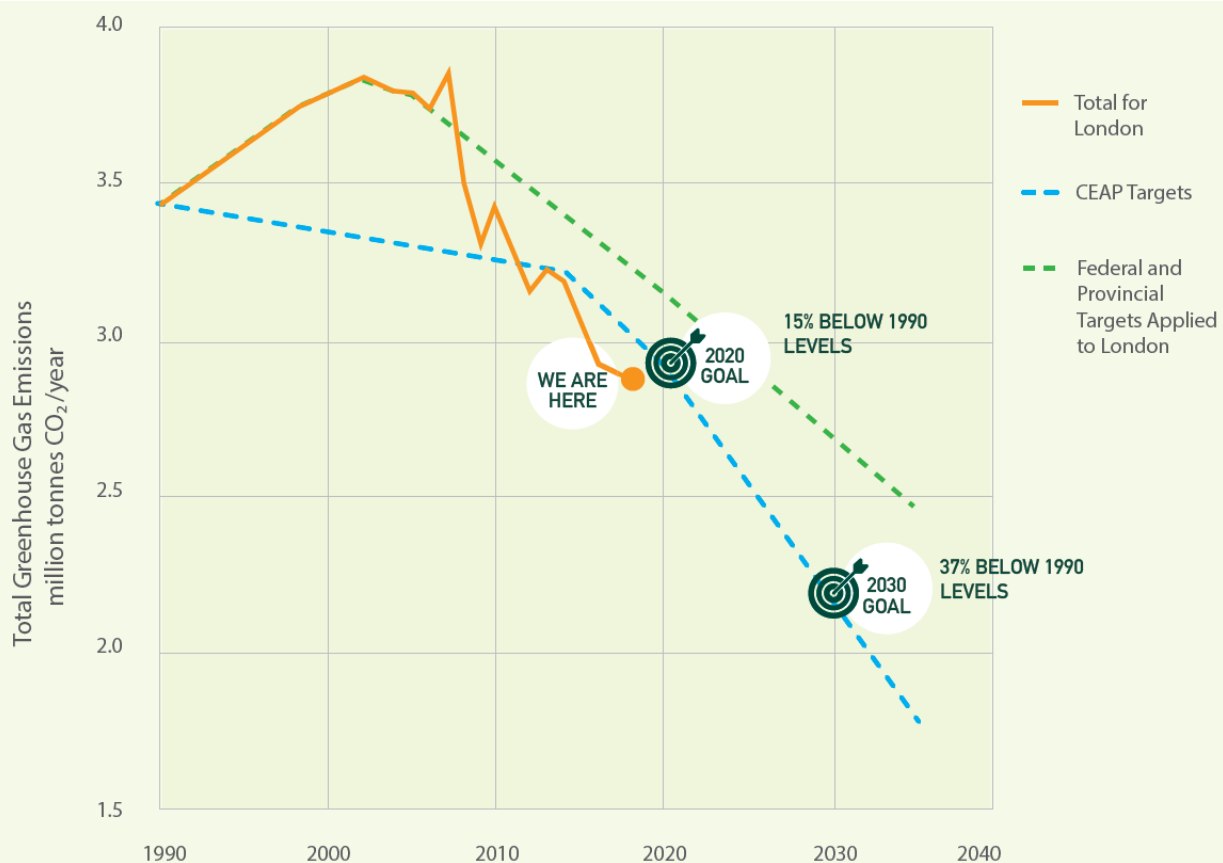
DISCUSSION

Why is the CEAP Important and How Have Londoners & London Businesses Benefitted?

The implementation of the CEAP had many benefits including:

- Environmental benefits - reducing energy use in London reduces Londoners' contribution to both smog-forming emissions and greenhouse gas (GHG) emissions. As noted in the 2017 Community Energy and Greenhouse Gas Inventory, and shown in Figure 1 below, 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. Between 2014 and 2017 alone, total energy use dropped 6 percent and associated GHG emissions dropped 10 percent.

Figure 1: London's GHG Emissions Versus Federal and Provincial Reduction Targets



- 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 and a similar amount in 2018 on energy).
- 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 local initiatives and London’s major community stakeholders provides a strong framework for community and business collaboration.

How was CEAP Being Funded?

The CEAP drew upon existing resources across the Corporation performing work that aligned 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 ranged from \$25,000 to \$50,000 per year over the 2014-2018 period.

What Progress was Made?

All strategies and actions were started during the period 2014 to 2018. Over 80 percent of the strategies and City-led actions set out in 2014 were completed by the end of 2018, with significant progress made on the remaining items.

Final Status on the 2014-2018 CEAP’s 17 Key Strategies				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 strategies (0%)	0 strategies (0%)	1 strategy (6%)	2 strategies (12%)	14 strategies (82%)

Final Status on the 2014-2018 CEAP’s 40 City-led Actions				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 actions (0%)	0 actions (0%)	0 action (0%)	8 actions (20%)	32 actions (80%)

Examples of recent City-led actions include:

- Completing the Green Municipal Fund study to examine barriers to “green development” and how to address the barriers in the context of a multi-use development;
- Completing the 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 launch of Green Economy London, a target-based sustainability program for business that will be launched in May 2019. This included successfully obtaining start-up grants to support the organization in the initial years.

Other indicators of community-led progress for the 2014-2018 CEAP include:

- As of January 2019, there were 23 BOMA BEST Sustainable Buildings in London, up from four in 2013.
- As of April 2018, there was almost 16 megawatts of renewable power generation capacity (solar, biogas, and small hydro) in London, up from 2 megawatts in 2011.
- As of December 2018, there were almost 3,300 hybrid & electric vehicles registered in London, up from almost 1,500 in 2013.

Appendix B provides a complete list of the actions and a summary of the progress that was made.

All the annual update reports for the CEAP will serve as input into the development of the next CEAP, 2019-2023.

ACKNOWLEDGEMENTS

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Appendix A Background, Key Guiding Principles and Goals of London's 2014-2018 Community Energy Action Plan (CEAP)

Appendix B Summary of City-led 2014-2018 CEAP Strategies and Actions

Appendix A

Background, Key Guiding Principles and Goals of London's 2014-2018 Community Energy Action Plan (CEAP)

Background

One of the most critical roles that City staff played was 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 could play in London's 2014-2018 CEAP.

Connection with Other City of London Programs

London's CEAP was 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 proposed Bus Rapid Transit (BRT) System and development of related transportation projects
- 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, Flooding Matters program)
- Parks and Recreation Master Plan
- Urban Forest Strategy

Key Guiding Principles

London's 2014-2018 CEAP set 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 the 2014-2018 CEAP

The CEAP focused on actions to be taken over the duration of the previous Council term (2015-2018). The overall goals were 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 former 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.

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

Summary of City-led 2014-2018 CEAP 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>Completed the FCM Green Municipal Fund funded Feasibility Study: Municipal Tools for Catalyzing Net-Zero Energy Development in February 2019.</p> <p>The Centre for the Advancement of Low Carbon Implementation (CALCI) project, one of the FCM's Transition 2050 projects, launched in January 2019. This project will focus on:</p> <ul style="list-style-type: none"> • Home Energy Efficiency Retrofit Implementation • Green Development Standards Implementation; and • Corporate Implementation Teams
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 provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.</p>
SINGLE-FAMILY HOMES						
4. Work with the London & St. Thomas Real Estate Board and the London Home Builders' Association (LHBA) to promote Natural Resources Canada's new EnerGuide Rating System and other relevant building labelling programs on existing and new houses.			→			<p>Not completed.</p> <p>Ontario's proposed mandatory Home Energy Rating and Disclosure 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 selected London to be the first community to participate in the "LEEP for Renovators" pilot project. Both the City and LHBA provided support for this project.</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.					✓	Ontario introduced Energy and Water Reporting and Benchmarking (EWRB) regulations for large buildings in 2018. By July 1, 2019, this will apply to multi-unit residential buildings 100,000 ft ² and larger - 50% of London's multi-unit residential buildings. By July 1, 2020, this will apply to buildings 50,000 ft ² and larger - 65% of London's multi-unit residential buildings. Workshops promoting new Energy Star for New Multi-Family Buildings program being held in March 2019.
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.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.
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.					✓	Ontario mandatory energy benchmark reporting data for the Broader Public Sector is now available. Ontario's EWRB regulations came into effect in 2018 and, by 2020, will apply to about 50% of London's commercial buildings.
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.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.
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.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.

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 provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.
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 (CHP) 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 Active Transportation and Transportation Demand Management Action Plan in support of the proposed Complete Streets Mobility Plan.				→		Partially completed. City has partnered with SustainMobility on the three year CommuteOntario project, funded by the Ontario Trillium Foundation. The project will test new commuter programs and incentives. Planning for a downtown transportation management association is underway.
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.					✓	Provincial 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.				→		Partially completed. A workshop on commercial compressed natural gas vehicles was held back in 2014. City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.

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 (RNG, purified biogas) as a substitute for diesel fuel for heavy-duty vehicles in London.					✓	City of London will be using Union Gas's new CNG fuelling station at the Flying J Truck Stop for future City CNG waste collection trucks. RNG will be a future consideration at this location.

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 (LICs) 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 Centre for the Advancement of Low Carbon Implementation (CALCI) project, one of the FCM's Transition 2050 projects, launched in January 2019. This project will include a focus on home energy efficiency retrofit implementation. The use of LICs in Ontario for energy efficiency has had limited success.
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 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.
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 being launched in 2019.

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.				→		Partially completed. 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 introduced its Energy and Water Reporting and Benchmarking (EWRB) regulation 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.

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					✓	Natural Resources Canada selected London to be the first community to participate in the “LEEP for Renovators” pilot project. Both the City and LHBA provided support for this project. NRCan, LHBA, and the City are working together to promote deeper energy retrofits to Londoners through the Home Green Home displays at major events starting in 2019.
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.					✓	Worked with Project Neutral to improve and simplify their carbon footprint calculator based on feedback from trials. This new version was released in December 2018. (see Action 10) The Project Neutral calculator and energy maps were incorporated into the Active & Green Home Check-up pilot.
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)				→		Partially completed. The LHBA’s Technical Committee monitors regulations and processes of a technical, green or environmental nature and attends OHBA EnerQuality Technical Committee meetings. 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.
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.				→		Partially Completed. Working with Fanshawe College GIS program faculty and students on creating additional map tools, including multi-unit residential buildings. Results are expected in 2019. (see Action 13) Ontario is introducing its 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. City staff have supported LEN’s efforts to establish Green Economy London, a target-based sustainability program being launched in 2019 that will include members from this sector. (see Action 29 below). As of January 2019, there were 23 BOMABEST certified buildings in London, up from four in 2013 and 22 in 2017.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
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 May 2018. In London, 300 buildings, with a total floor area of 2,750,000 m ² , have been assessed as of that date. This represents 31 percent of total commercial and institutional floor area in London.
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.				→		Partially completed. Working with Fanshawe College GIS program faculty and students on creating additional map tools, including commercial buildings. Expected in 2019. (see Action 13) Ontario mandatory energy benchmark reporting data for the Broader Public Sector buildings is now available. Ontario introduced its EWRB reporting requirement for large buildings in 2018.
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.					✓	In terms of "publicly-stated" commitments to environmental/energy, action based on LEDC's list of London employers and a review of their websites: <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.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.
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 provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019. Small businesses will be one of the target markets for this program. (see Action 29).

40 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.				→		Partially completed. 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.
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.				→		Partially completed. The role of the existing district energy system has been incorporated in to the London Plan and draft Downtown Master Plan (see Action 3).
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 are well suited to community driven solutions, including local distributed energy resource projects (such as small scale CHP, solar and/or storage technologies).
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.				→		Partially completed. Developing the business case for a bike share program in London for presentation in 2019. Downtown bike parking will be further examined and expanded, where possible in 2019 and/or 2020 using Federal Public Transit Infrastructure Fund and City funding. Downtown transportation management association to be developed in 2019.
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, to test 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, 2017, and 2018 from IHS Markit.

40 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.					✓	City of London will be using Union Gas's new CNG fuelling station at the Flying J Truck Stop for future City CNG waste collection trucks. RNG will be a future consideration at this location.
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.					✓	Feasibility study completed. City staff have submitted an expression of interest to FortisBC (the gas utility in British Columbia) for supplying RNG. Further information on this program is expected in 2019.
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.				→		Partially completed. 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 provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.