

--	--

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 19, 2013
FROM:	JAY STANFORD DIRECTOR, ENVIRONMENT, FLEET, & SOLID WASTE
SUBJECT:	COMMENTS ON ENVIRONMENTAL BILL OF RIGHTS REGISTRY - CONSERVATION FIRST: A RENEWED VISION FOR ENERGY CONSERVATION IN ONTARIO

RECOMMENDATION

That, on the recommendation of the Director of Environment, Fleet and Solid Waste, the following comments and discussion **BE ENDORSED** and submitted to the Ministry of the Environment's Environmental Bill of Rights Registry posting (EBR 011-9614) titled *Conservation First: A Renewed Vision for Energy Conservation in Ontario*. The due date for comments is September 9, 2013.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
--

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

- Report to the July 22nd 2013 Civic Works Committee (CWC) Meeting, Update – Key Energy Stakeholder Engagement – Community Energy Action Plan (Agenda Item #16)

BACKGROUND

PURPOSE:

The purpose of this report is to provide Committee and Council with:

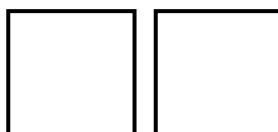
- A summary of the Ontario Ministry of Energy's consultation document, *Conservation First: A Renewed Vision for Energy Conservation in Ontario* (<http://www.energy.gov.on.ca/docs/en/conservation-first-en.pdf>), and
- The City of London's feedback on the consultation document for approval and forwarding to the Environmental Bill of Rights (EBR) Registry.

CONTEXT:

The Ontario Ministry of Energy and its agencies – the Ontario Power Authority (OPA) and the Independent Electricity System Operator (IESO) – are seeking input on its Conservation First initiative. This initiative considers all aspects of conservation and demand management for Ontario's electricity system, assessing the lessons learned from recent and current conservation programs, and lays out a province-wide vision for improving conservation programs in Ontario. This CWC report addresses the Ministry of Energy request for comments to be submitted via EBR Registry for EBR Posting #011-9614.

The timing of this consultation is beneficial to the City of London, given that the City of London is currently seeking input from key energy stakeholders for the development of London's Community Energy Action Plan. Programs and initiatives undertaken by the provincial government and its energy-related agencies will play a significant role in London's Community Energy Action Plan.

In addition to Conservation First initiative, the Ontario Ministry of Energy is also seeking input in on its three-year review of the Long-Term Energy Plan Conservation under a separate EBR posting which will be discussed in a separate report to the Civic Works Committee.

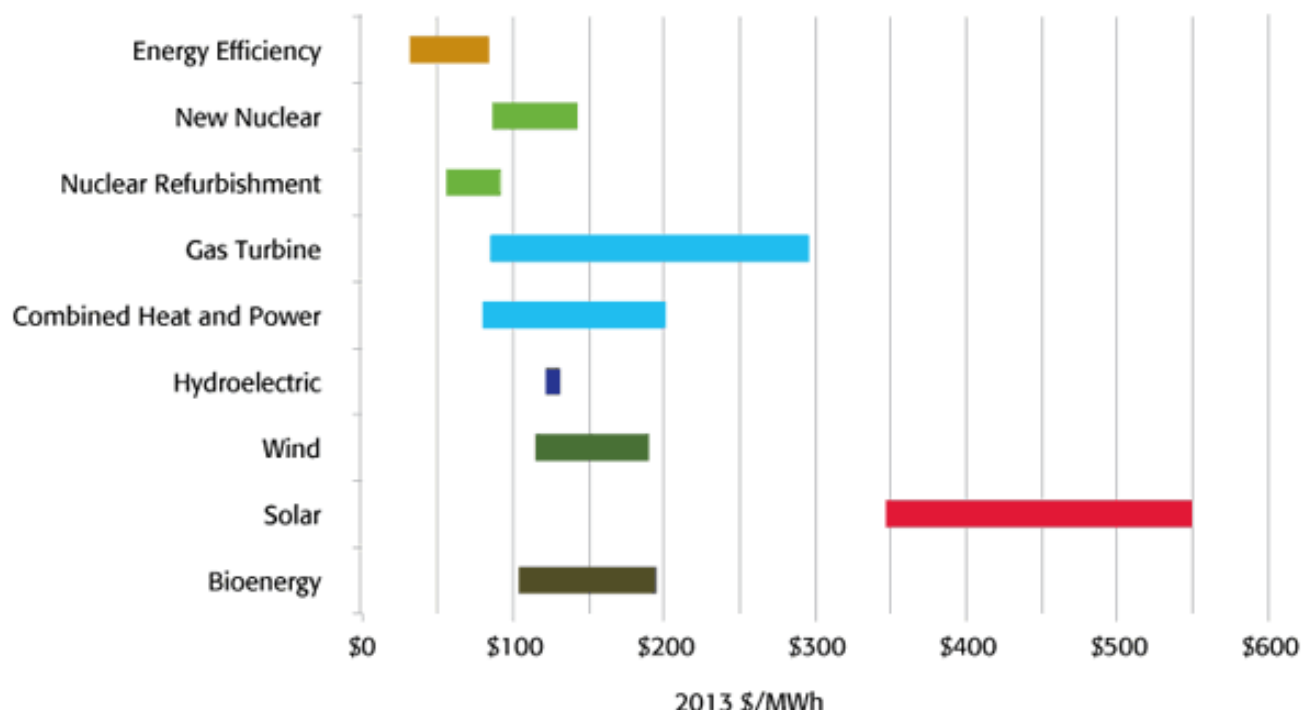


The City of London is one of a number of Ontario communities that have been actively engaged in initiatives tied to community energy planning (e.g., Integrated Energy Mapping for Ontario Communities, Quality Urban Energy Systems of Tomorrow, Collaboration on Home Energy Efficiency Retrofits in Ontario, etc.). In addition, the City of London was one of a number of Ontario communities who participated in the pilot testing of the Ministry of Energy corporate energy reporting system required under the Green Energy Act, 2009.

DISCUSSION:

Part A – Overview of *Conservation First: A Renewed Vision for Energy Conservation in Ontario*

The *Conservation First: A Renewed Vision for Energy Conservation in Ontario* document focuses primarily on electricity conservation, and makes notes of the fact that electrical energy efficiency measures are the most cost-effective actions that can be taken to address the needs of Ontario’s electricity system. The graph below illustrates the cost (\$/MWh) range comparison across various actions and activities.



Source - *Conservation First: A Renewed Vision for Energy Conservation in Ontario*

The document outlines a renewed vision for conservation in Ontario, which includes considerations for the following:

- allocating the cost of conservation initiatives across the life span of the action
- expanding and improving demand response programs to handle peak periods
- voluntary dynamic pricing approaches to handle extremely high peak periods
- rating systems and benchmarking for buildings
- Green Button Initiatives that provide easy-to-use “apps” to manage energy bills
- social benchmarking that compares your energy use against your neighbours
- financing alternatives such as on-bill financing for energy retrofits
- revolving funds to help finance energy retrofits
- expanding the role of local distribution companies to better support local needs
- expanding the use of net-metering, eventually replacing the microFIT program
- electricity storage to manage peak demand and integrate renewable power generation
- energy management systems for homes
- improving the energy efficiency of products and buildings
- encouraging broader public sector action by requiring reduction targets and tying provincial funding requests to the organization’s conservation plans

--	--

The document also outlines the challenges that have been faced with previous electricity conservation and demand management (CDM) programs, and outlines plans for improving these programs.

To help seed discussions with stakeholders and the general public, the document poses a number of consultation questions, such as:

- *How can the economic value of conservation be embedded in Ontario's electricity system?*
- *What new tools and initiatives will help engage customers in conservation?*
- *What opportunities should Ontario explore to help consumers finance energy-efficiency improvements?*
- *Through what means (regulatory and/or voluntary) can electricity and natural gas conservation activities be better coordinated?*
- *What innovative programs could help capture conservation potential across key sectors (e.g. residential, commercial and industrial)?*
- *Which technology and smart grid innovations do you believe could offer the greatest benefit to you, your community and the system as a whole?*
- *What are the top needs of residential, commercial and industrial customers?*
- *Should government introduce targets for municipalities, hospitals, post-secondary institutions and schools?*
- *Should Ontario pursue mandatory energy labelling for commercial/institutional buildings upon sale?*
- *What can government do to further encourage the sector and the market to deliver on conservation objectives?*
- *What should be the roles and responsibilities of LDCs, natural gas distributors, government agencies and the private sector in meeting Ontario's conservation goals?*
- *What conservation measures can be implemented to support regional energy needs?*

Part B – How *Conservation First: A Renewed Vision for Energy Conservation in Ontario* Affects London

This discussion will cover how *Conservation First: A Renewed Vision for Energy Conservation in Ontario* impacts the following:

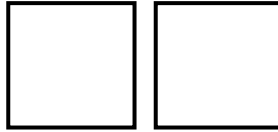
- Corporation of the City of London
- London
- London in a Regional Context

It also must be noted that this response is from City staff and not staff from London Hydro. Staff from London Hydro will have additional knowledge and insight on these matters including a much stronger technical basis with respect to electricity. It is our understanding that London Hydro is preparing its own response to the EBR and/or providing comments in another manner.

Corporation of the City of London

Overall, the proposed direction stated in the document is positive for the Corporation of the City of London.

In terms of improving electricity CDM programs, the City of London has taken advantage of the Ontario Power Authority's existing electricity CDM programs for a number of corporate energy projects as well as financing for expanded corporate energy management staff resources.



However, the current OPA application process has proven to be excessively bureaucratic. Fortunately, London Hydro staff have been assisting City staff with the application process. Any actions taken to streamline and simplify access of CDM programs are welcome.

One example of this would be to review the responsibility of the program participants to potentially “certify, obtain, qualify and register with the relevant authorities” the Environmental Attributes (greenhouse gas emissions offsets) that are automatically surrendered to the OPA in the acceptance of a CDM program incentive. Certifying and registering greenhouse gas emissions offsets is a significant undertaking both in terms of time and cost, and is generally only undertaken for those projects with major greenhouse gas emission reduction potential (i.e., over ten thousand tonnes per year of greenhouse gas emissions offsets). It would be unlikely that any one CDM project would produce benefits at that scale.

In terms of potential net-metered power generation, City staff are exploring options at a number of City facilities. Examples include:

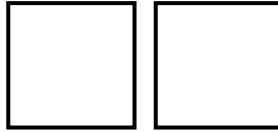
- combined heat and power units at Canada Games Aquatic Centre to heat pool water,
- using a medium-scale wind turbine to provide power for the Materials Recovery Facility, and
- innovative Rankine-cycle technology to generate power from waste heat at the Greenway Pollution Control Plant.

Current net-metering rules limit the size of “behind-the-meter” power projects to 500 kilowatts, which puts a constraint on options for large power-using facilities like the Greenway Pollution Control Plant and the Materials Recovery Facility. In addition, the provincial Technical Standards and Safety Authority (TSSA) has been slow to evaluate new and innovative Rankine-cycle power generation technology, and currently places an unnecessary requirement for additional stationary engineers to operate this small unit at all times. These challenges would need to be addressed in order to allow for greater utilization of net-metered power generation.

In terms of potential requirements for municipalities to set reduction targets, the Ministry of Energy would need to take in consideration the fact that the City of London and other Ontario municipalities have already been engaged in corporate energy management activities. This does not mean that the City of London should not set future reduction targets. However, the potential reduction measures that could be undertaken in the future will vary significantly across Ontario municipalities. Therefore, the Ministry of Energy should avoid setting “one-size-fits-all” targets for all Ontario municipalities and recognize those who have taken early action.

Also, in terms of using the “strength” of a public sector organization’s conservation plan as the basis for evaluating capital and/or operating funding requests to the province, the Ministry should avoid using a conservation plan’s targets as the means for determining the strength of these plans. This may discourage public sector organizations from participating or result in public sector organizations to inflate unachievable targets in their CDM plans to receive priority funding.

There is also an opportunity for the Ministry of Energy to improve upon existing reporting requirements for public sector organizations. Current reporting requirements under the Green Energy Act, 2009, require all broader public sector organizations to report annual energy consumptions. The Corporation of the City of London has fulfilled the requirement to submit the 2011 energy consumption report. However, the Ministry of Energy only requires reporting on a select list of operations, excluding significant non-building energy costs such as street lighting, parks, and sports field lighting which are included in corporate energy staff reports to Council. As a result, City staff have to report two different sets of numbers for corporate energy use – one for the Ministry of Energy, and another more-comprehensive report (including non-building energy use) for Municipal Council. Reporting two different sets of numbers for corporate energy use in the public domain can create confusion. Therefore, the Ministry of Energy should revise the current reporting requirements to include all corporate energy use as part of the municipal annual energy consumption report.



London

Overall, the proposed direction stated in the *Conservation First* document is positive for London.

Within the upcoming Community Energy Action Plan, City staff propose to promote and pilot the use of many of the awareness and engagement measures outlined within *Conservation First*, including rating systems and benchmarking for buildings, Green Button Initiatives, and social benchmarking. The City of London would welcome opportunities to act as a test market for these initiatives.

In the upcoming Community Energy Action Plan, City staff propose to focus on cost-effective actions that provide both an emissions reduction benefit and a net financial savings over the lifetime of the action. This aligns with the *Conservation First* vision. The best opportunities offered in London are energy-saving retrofits for existing commercial buildings, local industry, and older housing stock, as well as encouraging new commercial buildings to be high-efficiency buildings. However, current conservation programs delivered by London Hydro and Union Gas tend to focus on measures only associated with the commodity they supply, as opposed to assessing the energy needs of the overall building as a system. As a result, measures that improve the overall efficiency and environmental impact of buildings but involve “fuel switching” from natural gas to electricity or vice versa are discouraged.

In terms of demand management, the province has been focussing primarily on electricity. However, there are less-expensive renewable thermal energy technologies, such as solar air heating, solar water heating, and geexchange heat pumps, with potential demand management benefits for both natural gas and electricity.

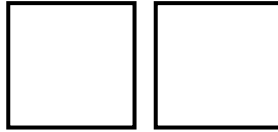
In terms of innovative financing, the *Conservation First* document identifies the potential use on-bill financing for building energy retrofits. However, the document fails to mention that In October 2012, the Ministry of Municipal Affairs and Housing amended Ontario’s LIC mechanism under Ontario Regulation 586/06 (Local Improvement Charges — Priority Lien Status) of the Municipal Act, 2001. The amendments allow for new uses for the LICs to fund energy efficiency, renewable energy, and water conservation capital works on individual, private properties. The City of London participated in a multi-municipality and intergovernmental pilot project - Collaboration on Home Energy Efficiency Retrofits in Ontario (CHEERIO) - to evaluate the potential use of LICs across Ontario. Currently, Ontario municipalities are struggling to determine how to implement this new use for LICs, and are observing the pilot program currently underway in the City of Toronto. For some municipalities, funding energy retrofits through on-bill financing administered by utility companies may be a preferred option over the use of LICs. Therefore, Ontario municipalities need to know sooner rather than later whether the Ministry of Energy is proceeding with this measure. There will be a future report to Committee and Council on the potential role, advantages and disadvantages of LICs in the fall.

In terms of potential net-metered power generation, within the upcoming Community Energy Action Plan, City staff propose to encourage the expanded use of combined heat and power (CHP) and waste heat utilization wherever there is high concentration of building and process heating demand, including “behind-the-meter” applications. London has already made progress, with CHP systems in place at London District Energy, Casco, London Health Sciences Centre, and Labatt. Given that natural gas is already being burned to provide this heat, in simple terms, CHP and waste heat utilization provides emissions-free electricity generation. As mentioned earlier, current net-metering rules limit the size of “behind-the-meter” power projects to 500 kilowatts, which puts a constraint on options available for large power-using facilities in London.

London in a Regional Context

In general, the City of London supports the Ministry of Energy’s proposal for expanding the role of local distribution companies to better support local needs, and encourages the Ministry of Energy to extend this thinking to encompass natural gas utilities and petroleum product distribution and retail companies.

With the Ministry of Energy’s desire for amalgamations amongst Ontario’s electricity local distribution companies, it is important that these newly-amalgamated local distribution companies servicing multiple municipalities remain responsive and accountable to the municipalities they serve.

**Part C - Comments to be Submitted to the EBR Registry (#011-9614)**

City of London staff recommend that the following comments be submitted to the EBR posting:

1. The City of London supports the overall direction outlined in *Conservation First: A Renewed Vision for Energy Conservation in Ontario*.
2. The City of London encourages the Province of Ontario to simplify and streamline the application process for conservation programs. One example of this would be to review the responsibility of the program participants to potentially “certify, obtain, qualify and register with the relevant authorities” the Environmental Attributes of a CDM program incentive. Certifying and registering greenhouse gas emissions offsets is a significant undertaking in terms of time and resources, and is usually used for those projects with major greenhouse gas emission reductions. It would be rare for one CDM project to produce benefits at that scale.
3. The City of London encourages the Province of Ontario to take a holistic approach to energy conservation to address all of Ontario’s energy needs – heating, cooling, transportation, and electricity generation.
4. The City of London encourages the Province of Ontario to involve other provincial ministries and agencies in the review and development of Ontario’s conservation programs, given that energy resource supply, distribution, and utilization do not fit neatly within any one Ministerial mandate. The ministries of energy, natural resources, infrastructure, municipal affairs and housing, economic development, environment, and transportation all have a shared mandate and responsibility for managing Ontario’s energy needs.
5. The City of London encourages the Province of Ontario to take a holistic approach to the design and development of new conservation programs that takes in to account the interrelationship between power, heating, cooling, and water needs associated with buildings, facilities, and industrial processes. Conservation programs needs to be delivered with a “building as a system” approach, rather than the narrow, single-commodity focus usually associated with utility-delivered conservation programs in Ontario.
6. The City of London encourages the Province of Ontario to promote and pilot the use of new awareness and engagement measures, such as rating systems and benchmarking for buildings, Green Button Initiatives, and social benchmarking, and the City of London would welcome opportunities to act as a test market for these initiatives.
7. The City of London encourages the Province of Ontario to provide clear direction regarding the potential use of utility bill based on-bill financing versus property tax based Local Improvement Charges as financing alternatives for building energy retrofits.
8. The City of London encourages the Province of Ontario to place a greater emphasis on combined heat and power and waste heat utilization within new conservation programs for net-metering applications, and to expand or eliminate the current 500 kilowatt limitation placed on net-metered power generation projects.
9. The City of London encourages the Province of Ontario to place a greater emphasis on lower-cost renewable thermal energy technology within new conservation programs, such as solar hot water heaters and geexchange heat pumps.
10. The City of London encourages the Province of Ontario to streamline the provincial Technical Standards and Safety Authority (TSSA) process for evaluating innovative energy technologies.
11. The City of London encourages the Province of Ontario to take in consideration the fact that the City of London and other Ontario municipalities have already been engaged in corporate energy management activities, avoid setting “one-size-fits-all” targets for all Ontario municipalities, and recognize those who have taken early action.
12. The City of London encourages the Province of Ontario to avoid using the strength of an organizations conservation plan targets as a considering factor for capital or operating funding requests to the province.
13. The City of London encourages the Province of Ontario to review and revise the current reporting requirements under the Green Energy Act, 2009 to include all corporate energy

--	--

usage (e.g., street lighting, parks, sports fields) as part of the municipal annual energy consumption report.

ACKNOWLEDGEMENTS:

This report was prepared with assistance from Steve MacDonald, Corporate Energy Management Engineer (Facilities – Finance).

PREPARED BY:	PREPARED BY:
JAMIE SKIMMING P. ENG. MANAGER – AIR QUALITY ENVIRONMENTAL PROGRAMS	DARYL DIEGEL CORPORATE ENERGY MANAGEMENT COORDINATOR ENVIRONMENTAL PROGRAMS
PREPARED & RECOMMENDED BY:	REVIEWED & CONCURRED BY:
JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE	JOHN BRAAM, P. ENG. MANAGING DIRECTOR - ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER

- c Vinay Sharma, Chief Executive Officer, London Hydro
Grant Hopcroft, Director, Intergovernmental and Community Liaison, City of London