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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 - MAKING CHOICES: REVIEWING ONTARIO'S LONG-TERM ENERGY PLAN

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 011-9490) titled *Making Choices: Reviewing Ontario's Long-Term Energy Plan*. The due date for comments is September 9, 2013.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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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, *Making Choices: Reviewing Ontario's Long-Term Energy Plan* (<http://www.energy.gov.on.ca/docs/en/making-choices-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:

In 2010, the Ontario Ministry of Energy released its first Long-Term Energy Plan, which focussed only on one energy commodity - electricity. This plan considered all aspects of Ontario's electricity system, including conservation, generation, transmission, distribution and emerging technologies such as energy storage. The Ministry of Energy is performing a three-year review of the Long-Term Energy Plan, and the consultation document, *Making Choices: Reviewing Ontario's Long-Term Energy Plan*, provides some information on the current status of Ontario's electricity system. This CWC report addresses the Ministry of Energy request for comments to be submitted via EBR Registry for EBR Posting #011-9490.

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.

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In addition to this three-year review of the Long-Term Energy Plan, the Ontario Ministry of Energy and its agencies – the Ontario Power Authority (OPA) and the Independent Electricity System Operator (IESO) – are also seeking input in on its Conservation First initiative 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.

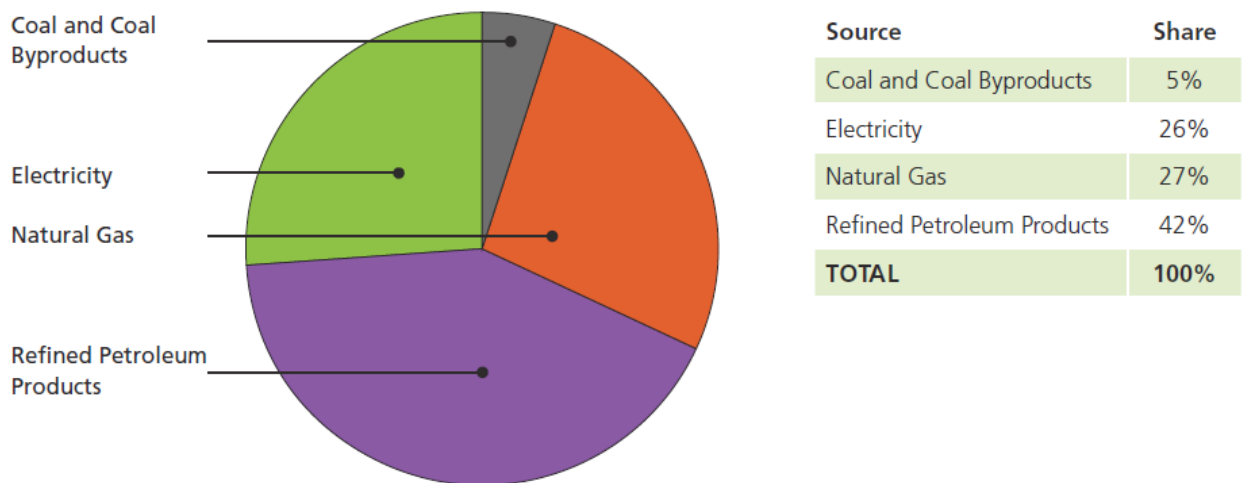
The Ministry of Energy and the Ontario Power Authority have been holding a series of consultation meetings across the province on the new Long-Term Energy Plan, including a session in London on July 23, 2013. City staff were in attendance at this session.

DISCUSSION:

Part A – Overview of *Making Choices: Reviewing Ontario’s Long-Term Energy Plan*

The introduction to the document, *Making Choices: Reviewing Ontario’s Long-Term Energy Plan*, begins with an overview of Ontario’s energy use that shows electricity representing about one-quarter (26%) of Ontario’s annual needs. The document then provides a summary of progress made over the last ten years in Ontario’s electricity system, and provides a projection on future electricity needs out to 2031.

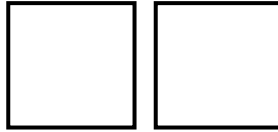
Figure 1: Total 2011 Ontario Energy Use By Fuel Type



Source - *Making Choices: Reviewing Ontario’s Long-Term Energy Plan*

To help seed discussions with stakeholders and the general public, the document poses a number of points for consideration for the electricity supply system, such as:

- *How do you think Ontario should balance ratepayer costs, system reliability and greenhouse gas emissions when it makes supply mix decisions?*
- *Should Ontario adjust and/or broaden its conservation goals, in light of current demand and supply forecasts?*
- *Nuclear power provides over half of Ontario’s generation. What are your views on refurbishing existing nuclear units?*
- *What further role should natural gas play in Ontario’s (electricity-generating) supply mix?*



- *What is the best way to assess combined heat and power (CHP) to ensure generation is developed where it is specifically needed, meets system needs and maximizes value to electricity ratepayers and to heat customers?*
- *Looking beyond 2018, what goal should Ontario set to ensure that non-hydro renewable energy continues to play an important role in meeting Ontario's supply needs?*
- *What kinds of local and electricity system benefits as well as broader economic, environmental and community benefits should be considered when selecting and implementing (electricity generation and transmission) options to meet regional needs?*
- *Which technology and smart grid innovations do you believe could offer the greatest benefit to your community and the system as a whole?*

The document makes some effort to recognize the role that natural gas and petroleum fuels play in meeting Ontario's energy needs for heating and transportation, but offers few points for consideration:

- *Is there a role for government to work with industry on applications of natural gas such as LNG (liquefied natural gas) and CNG (compressed natural gas)?*
- *Should government be working with industry to expand natural gas supply to new communities?*
- *Is the current federal regulatory process sufficient to meet Ontario's needs?*

Part B – How the Long-Term Energy Plan Affects London

This discussion will cover how the discussion points raised in *Making Choices: Reviewing Ontario's Long-Term Energy Plan* 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.

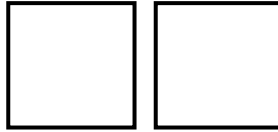
Corporation of the City of London

The discussion paper mentions that the OPA plans to replace the existing Feed-In Tariff (FIT) process with a new competitive procurement process for larger renewable power generation projects over 500 kilowatts (kW). This new process would require project developers to work directly with municipal staff to identify appropriate locations and site requirements. The OPA and IESO will be holding regional consultations this summer on the criteria to be used for engaging municipalities in siting these projects

Based on past experience with previous FIT programs, the types of renewable power projects that City of London staff will be assessing will likely be ground-mounted solar photovoltaic (PV) "farms" and bioenergy projects such as anaerobic digesters for biogas production. Given London's in-land location, it is unlikely that large-scale wind "farm" power projects will be proposed within the city boundary.

The City of London's proposed 2.4 megawatt landfill gas power plant and 800 kilowatt biomass-fired waste heat recovery power plant at the Greenway PCP incinerator will also be subject to these news rules, and the upcoming consultation will provide an opportunity for City staff to propose to the OPA the use of a simplified project approval process for low-impact, municipally-owned landfill gas power plants separate from those used for wind farms and solar farms.

The discussion paper also talks briefly about compressed natural gas (CNG) and liquefied natural gas (LNG) as a transportation fuel replacing diesel. Using natural gas as fuel could



provide both financial and environmental benefits in applications with high-kilometres, heavy-duty vehicles such as garbage collection trucks. However, the City of London would require assistance from the Province in the initial stages to address the lack of CNG/LNG fuelling infrastructure and access to original equipment manufacturer (OEM) heavy-duty vehicles.

London

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. The best opportunities offered 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 not pursued.

In the upcoming Community Energy Action Plan, City staff propose to encourage the expanded use of combined heat and power (CHP) wherever there is a high concentration of building and process heating demand, both for “behind-the-meter” net-metering and for district energy systems contributing to distributed generation (i.e., microgrids). 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 provides emissions-free electricity generation. Also, some CHP systems have the ability to operate as “islanded” microgrids to provide energy security to key areas and facilities in the event of large-scale interruptions to the broader distribution and transmission electricity grid.

For renewable energy, the province has been focussing primarily on electricity generation. However, there are less-expensive renewable thermal energy technologies, such as solar air heating, solar water heating, and geoexchange heat pumps, whose potential benefits for emissions reduction have been missed due to this focus on electricity only.

Using CNG and LNG as a transportation fuel that replaces diesel could provide both financial and environmental benefits for public transit. However, London Transit would require assistance from the Province in the initial stages of such a transition to address the lack of CNG/LNG fuelling infrastructure and access to OEM transit vehicles.

London in a Regional Context

In the upcoming Community Energy Action Plan, City staff propose goals to encourage greater investment in local electricity generation from CHP as well as renewable sources. In theory, over the next 20 year, up to 1000 megawatts of new generation could be installed within London, which could provide over half of London’s future electricity needs by 2030. However, it is not known whether Ontario’s future plans for regional electricity supply and transmission systems in Southwestern Ontario would accommodate local investment at this scale given its desire to maintain investment in large-scale nuclear and hydroelectric generation.

Using LNG as a transportation fuel that replaces diesel could provide both financial and environmental benefits for freight transportation. Given London’s strategic location at the intersection of Highway 401 and Highway 402 between the Greater Toronto Area, Detroit, and Buffalo, London would be an ideal location for LNG refuelling at truck stops.

Part C - Comments to be Submitted to the EBR Registry (#011-9490)

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 *Making Choices: Reviewing Ontario’s Long-Term Energy Plan*.
2. The Province of Ontario is to be commended for the actions taken to reduce the environmental impact of Ontario’s electricity system.

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3. The Province of Ontario is to be commended for the actions taken to increase the role that municipalities play in planning the energy needs of their communities. Municipalities make all kinds of decisions that impact community energy needs, including land use planning, transportation, water supply, stormwater and wastewater management, solid waste management and diversion, and urban forestry.
4. The City of London encourages the Province of Ontario to take a holistic approach to energy planning within Ontario’s Long-Term Energy Plan to address all of Ontario’s energy needs – heating, cooling, transportation, and electricity generation – and the energy commodities (e.g., electricity, natural gas, petroleum fuels) used to meet these needs.
5. The City of London encourages the Province of Ontario to use care when utilizing the term “energy” when describing actions within their plan, particularly when the actions refer solely to Ontario’s electricity system, given that the term “energy” applies to all energy commodities.
6. The City of London encourages the Province of Ontario to involve other provincial ministries in the review and development of Ontario’s Long-Term Energy Plan, given that energy and land-use planning issues 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.
7. The City of London encourages the Province of Ontario to engage municipal staff involved with land use planning, development, and building permits at the beginning of the review to revise the rules associated with siting and approving new energy projects.
8. The City of London encourages the Province of Ontario to place a greater emphasis on cost-effective conservation and efficiency within Ontario’s Long-Term Energy Plan, such as retrofitting older buildings, high-efficiency new construction, and waste heat utilization.
9. 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 into account the interrelationship between power, heating, cooling, and water needs associated with buildings, facilities, and industrial processes. Conservation programs need 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.
10. The City of London encourages the Province of Ontario to place a greater emphasis on combined heat and power within Ontario’s Long-Term Energy Plan for both net-metering applications as well as district energy systems (i.e., microgrids) where there is sufficient thermal energy needs to make CHP a cost-effective solution.
11. The City of London encourages the Province of Ontario to provide municipalities and local electricity distribution companies with information on the maximum potential for local electricity generation that can be accommodated by regional electricity transmission systems, so that this information can be incorporated within a community’s energy plan.
12. The City of London encourages the Province of Ontario to consider a streamlined process for reviewing and approving renewable electricity generation projects located on municipal property, given that these projects provide a public benefit and are reviewed and approved in an open and transparent public process by municipal councils.
13. The City of London encourages the Province of Ontario to place a greater emphasis on lower-cost renewable thermal energy technology within Ontario’s Long-Term Energy Plan, such as solar hot water heaters and geexchange heat pumps.
14. The City of London encourages the Province of Ontario to place a greater emphasis on natural gas as a transportation fuel within Ontario’s Long-Term Energy Plan, such as assisting municipalities to use CNG/LNG vehicles in high mileage applications such as solid waste collection and public transit, as well as assisting in the installation of LNG refueling infrastructure for freight transportation in strategic locations along the Province’s 400-series highways, such as London.

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ACKNOWLEDGEMENTS:

This report was prepared with assistance from Daryl Diegel, Corporate Energy Management Coordinator.

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