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April 20, 2012

Ontario Energy Board  
P.O. Box 2319  
2300 Yonge Street, 27<sup>th</sup> Floor  
Toronto, ON M4P 1E4

Attention: Ms. Kirsten Walli, Board Secretary

Dear Ms. Walli:

**Re: Written Comments on Behalf of the Ontario Sustainable Energy Association  
(OSEA)  
Renewed Regulatory Framework for Electricity Consultation  
File Numbers: EB-2010-0377, EB-2010-0378, EB-2010-0379, EB-2011-0043  
and EB-2011-0004**

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In response to the Ontario Energy Board's letter dated April 5, 2012, please find enclosed the written comments filed on behalf of the Ontario Sustainable Energy Association (OSEA) in the above-noted proceeding.

OSEA's submission includes comments directly on each of the five Board Staff Discussion Papers. Copies of each of the Board Staff Papers, embedded with comments, are attached to the submission, so that the comments can be understood in context.

Yours truly,

  
Joanna Vince

cc: Mr. Kristopher Stevens, Executive Director, OSEA  
intervenors

Document #: 512178

# Submission by the Ontario Sustainable Energy Association to the Ontario Energy Board's Consultation on a Renewed Regulatory Framework for Electricity

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## Background

On December 17, 2010, the Ontario Energy Board (the "Board") initiated a consultation process for a renewed regulatory framework for electricity ("RRFE"). The RRFE will encourage efficiency through performance-based outcomes and a long-term approach to network investment planning. The RRFE aims to ensure the reliable and cost-effective delivery of electricity to Ontario consumers.

The Ontario Sustainable Energy Association (OSEA) is pleased to submit its comments on RRFE. OSEA is a province-wide, member-based, non-profit organization representing approximately 200 organizations and individuals including private citizens, cooperatives, farmers, First Nations, businesses, institutions and municipalities. OSEA members are engaged in or support sustainable approaches to energy generation and use, including Community Power projects, renewable energy and conservation. OSEA inspires and enables the people of Ontario to improve the environment, the economy and their health through conservation and the production of clean, sustainable energy in their homes, businesses and communities. OSEA is not a trade or industry association representing any specific product suppliers, generators or specific generation technologies.

OSEA brings a unique perspective to the RRFE consultation. OSEA advances a vision of small scale and local community based power generation among other sustainable energy practices. Energy conservation is equally important to OSEA membership. OSEA promotes the combination of conservation and generation with the goal to create a sustainable energy future for Ontario. For OSEA and its membership, a sustainable energy future is a public interest of all Ontarians.

Our community - staff, interns, volunteers, members, friends and supporters - are actionists looking for sustainable energy solutions. We work pro-actively to build bridges between stakeholders and seek ways to improve Ontario's energy system collaboratively recognizing that community, industry and government should all play a role in shaping our energy future. OSEA participated in the working group with respect to the Smart Grid and the RRFE, attending the Regional Planning Meeting, meetings with Board Staff and the full two and one half days of the stakeholder conference. OSEA also delivered a presentation as part of its contributions to this process.

## Introduction

At the general level, OSEA supports the direction embodied in the "straw man" model. In particular OSEA supports the following concepts:

- Integration of planning to optimize investment and achieve cost savings

- Severing regulatory treatment of O&M and capital
- Longer time horizons for capital and planning
- Multi-year approvals for capital
- Focus on outcomes
- Regional planning
- Asset Management

## Board Issues for Comment

### What is your vision for a sustainable and long-term regulatory regime?

If the Board is interested in a sustainable regulatory regime, the Board must:

- change or broaden its objectives, including applying all objectives under the *Ontario Energy Board Act*
- consider how to better align the Board's objectives with other energy bodies
- adopt a management model to maintain the alignment
- create indicators that can be used to ensure sustainability is being promoted through performance based indicators.

There are examples of models adopted by other jurisdictions that can serve as useful models for the Board.

OSEA is aware that the Board and Board staff have looked at other regulatory regimes around the world. We recommend that the Board consider the UK's Ofgem approach to sustainability as a valuable approach to a new vision for regulation in Ontario. The Ofgem model sets out desired outcomes and indicators to measure progress towards those outcomes. Ofgem's sustainability vision includes the following items:<sup>1</sup>

#### Managing the transition to a low carbon economy

- Indicator 1: Electricity and gas sector greenhouse gas emissions
- Indicator 2: Impact of carbon price on costs of generation
- Indicator 3: Renewable electricity generation
- Indicator 4: Electricity capacity for combined heat and power
- Indicator 5: Green tariffs

#### Eradicating fuel poverty and protecting vulnerable customers

- Indicator 6: Total number of households in fuel poverty
- Indicator 7: Competition and vulnerable customers
- Indicator 8: Disconnection for debt

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<sup>1</sup> <http://www.ofgem.gov.uk/Sustainability/Pages/Sustain.aspx>.

### **Promote energy saving**

Indicator 9: Energy consumption and intensity

Indicator 10: Carbon dioxide savings from the CERT

Indicator 11: Gas and electricity losses

### **Ensuring a secure and reliable gas and electricity supply**

Indicator 12: Reliability of supply - network performance

Indicator 13: Security and diversity of supply - market response

Indicator 14: Future supply capacity mix

Indicator 15: Product innovation

### **Supporting improvement in all aspects of the environment**

Indicator 16: Impacts of electricity generation

Indicator 17: Impacts of electricity and gas networks

The above indicators form the basis of a management system that can align the Board's mandate with that of the organizations that it regulates as well as government policy.

Any new regulatory framework should encourage energy network companies to play a full role in facilitating delivery of a sustainable energy sector while delivering value for money for network services over the long term. It is in consumers' interests that companies find ways to reduce and restrain the costs that they face over the long term. The current short term emphasis focused on rates must be replaced. To this end, network companies will need to be allowed to:

- Give sufficient attention to the long-term implications of their decisions (e.g. when planning network reinforcements or developing skills in the workforce).
- Anticipate future customer needs.
- Understand potential future scenarios that may affect energy networks and the outputs needed in the future.
- Innovate and experiment with new delivery approaches.
- Manage risk and uncertainty effectively.

Some stakeholders expressed that social, economic and environment policy should not play a role in the regulation of energy networks. The Ontario Energy Board must accept the broader policy direction of the government, including the promotion of green energy. The UK's *Revised Social and Environmental Guidance to the Gas and Electricity Markets Authority* issued by the

Secretary of State under section 4AB(1) of the Gas Act 1986 and section 3B(1) of the Electricity Act 1989 on January 18, 2010 provides a model for the Board.<sup>2</sup>

*The UK government considers that the Authority (Ofgem) has an important role, consistent with its principal objective, general duties and functions, in bringing about an energy system that encourages substantial carbon emission reductions in a timescale consistent with the above targets. This role will include but not be limited to the Authority making an appropriate contribution to:*

- *enabling timely delivery of an effective offshore transmission regime;*
- *enabling timely investment in necessary capacity for the electricity transmission and distribution networks (the ‘electricity networks’);*
- *ensuring connection to the electricity networks for new generation, including renewable, nuclear and other low carbon generation, in a timeframe consistent with their development programme whilst maintaining security of supply;*
- *eliminating unnecessary regulatory and market barriers to the economic deployment of distributed energy;*
- *further progress towards the Government’s statutory target of eliminating fuel poverty as far as reasonably practicable by the dates noted above, and as set out in the Government’s Fuel Poverty Strategy; and*
- *ensuring that infrastructure and networks are sufficiently resilient to future climate impacts to maintain security of supply*

Any new regulatory framework for electricity transmitters and distributors must deliver on the policy objectives of the Ontario government. The list below includes the objectives provided to the Ontario Energy Board with respect to the smart grid. They have been modified below to demonstrate how they can apply to all network activities.

<i>Subject</i>	<i>Description</i>
<b>Co-ordination</b>	Coordination of applicable network activities amongst appropriate groupings of distributors/transmitters, requiring network companies to share information and results of pilot projects, and engaging in common procurements to achieve economies of scale and scope.
<b>Customer Value</b>	Benefits to electricity customers including total bill mitigation using all tools applicable including but not limited to CDM, reduction of energy poverty

<sup>2</sup> United Kingdom’s Department of Energy & Climate Change: *Revised Social and Environmental Guidance to the Gas and Electricity Markets Authority* issued by the Secretary of State under section 4AB(1) of the Gas Act 1986 and section 3B(1) of the Electricity Act 1989.  
[http://www.decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/energy%20markets/regulation/1\\_20100121\\_172046\\_e\\_@@\\_guidancegaselecmarkets.pdf](http://www.decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/energy%20markets/regulation/1_20100121_172046_e_@@_guidancegaselecmarkets.pdf)

	and local resource acquisition.
<b>Economic Development</b>	Encourage economic growth and job creation within the province of Ontario. Actively encourage the development and adoption of network related products, services, and innovative solutions from Ontario sources.
<b>Efficiency</b>	Improve efficiency of grid operation, taking into account the cost-effectiveness of the electricity system.
<b>Environmental Benefits</b>	Promote the integration of clean technologies, conservation, and more efficient use of existing technologies. OSEA suggests a sustainability framework similar to Ofgem's above could be developed to provide guidance for transmitters and distributors.
<b>Interoperability</b>	Adopt recognized industry standards that support the exchange of meaningful and actionable information between and among network and enable common protocols for operation. Where no standards exist, support the development of new recognized standards through coordinated means.
<b>Privacy</b>	Respect and protect the privacy of customers. Integrate privacy requirements into network planning and design from an early stage, including the completion of privacy impact assessments.
<b>Reliability</b>	Maintain reliability of the electricity grid and improve it wherever practical, including reducing the impact, frequency and duration of outages.
<b>Safety</b>	Maintain, and in no way compromise, health and safety protections and improve electrical safety wherever practical including address matters related to stray voltage.
<b>Security</b>	Cyber security and physical security should be provided to protect data, access points, and networks from unauthorized access and malicious attacks.

### **What changes would be needed to evolve planning, mitigation, and performance policies towards your vision?**

OSEA understands this question to refer to changes from the status quo.

The time horizon for both capital and operational planning must be lengthened. Networks must have sufficient certainty to plan, enable a meaningful approach to contracting out, staff development and long term borrowing for capital projects. Such an approach must also provide predictability for customers – a point that was made by all customer groups represented at the Stakeholder Conference.

The “just in time” approach to regulation must be set aside. When approvals come after the start of a fiscal year, it only serves to dilute management direction and efforts of staff to live up to an on time and on budget imperative. When rate approvals come late in the year, customers are saddled with catch up schemes that throw their budgeting and accountability frameworks off.

The Board should continue to regulate the largest 10 or 12 local distribution utilities as well all transmitters. Rather than require every LDC to make an application for rate approvals, the

Board can simplify this process by deeming rate requirements (for example, through an adjustment index) and allow for LDCs to apply for additional funds above the adjustment index where systems are close to end of life.

The benefit of this approach is that it allows LDCs to focus time and energy on areas such as growth, innovation, development and streamlining, rather than on upholding the status quo.

**As a means of representing the Board's vision for the regulatory framework, Board staff prepared a straw man that summarized the key elements of the regulatory framework. In providing their comments on the issues the Board would be assisted if stakeholders also provided comments in relation to this vision.**

Based on the information provided about this model so far, OSEA generally supports the straw man model.

Below are some additional comments on the straw man model for the Board's consideration.

### *1. Customers versus Consumers*

The RRFE documents appear to focus on consumers; yet it is only customers who pay bills. Further, millions of Ontarians do not pay utility bills. Rather, their energy bills are embedded in rents or condominium fees. This is true for residential consumers as well as commercial and public sector consumers. A significant amount of capital investment in some LDCs is financed by capital contributions by developers and therefore included in mortgages and rents. The proportion of such contributions varies among LDCs resulting in real difference in distribution rates with little or no difference in services. Any renewed regulatory framework must also drive toward increasing the number of customers transforming them from consumers to enable them to make better decisions about energy choices.

### *2. Bills versus Rates*

While the straw man model implies that "bill impact analysis" is a major criterion driving regulatory requirements and guidance for network investments, the documents primarily talk about price impacts or rate impacts. Total bill impacts must replace the less informative concept of price (or rate) impacts. While rate impact analysis may be one factor, particularly with respect to pacing of network capital investments, Ontario's regulatory environment must focus more on customers' bills. Any new commodity supply will be more expensive than the average price of existing generation; and while smart metering and smart grid investment can improve the manageability of transmission, distribution, consumption and management of electricity, transmission and distribution expansions and improvements will also add costs and increase rates. Only a focus on bills will provide sufficient focus on customers and their needs. The RRFE must clarify that total bill impact is the driving criteria for regulation of both gas and electricity. In fact, a renewed regulatory framework for **energy** should be based on total energy bills, in a manner which provides the correct signals to customers with respect to energy choices.

### 3. *Too Many Plans*

Transmitters and distributors have been required to file smart metering plans, smart grid plans, time of use implementation plans, green energy plans and CDM plans; each of these may have capital components and operating components. The only thing clear about this plethora of plans is that none of them separately or together bear any resemblance to how transmitters and distributors plan, organize or control their work, resources or staff. The recent Cost of Service proceeding and decision to turn down the inclusion of costs associated with the Zigbee communication chip for Guelph Hydro's smart metering plan is a case in point.

Guelph Hydro demonstrated innovation in its approach to community energy planning, even in advance of the *Green Energy and Green Economy Act*.<sup>3</sup> The current regulatory framework, siloed as it is, seems to stymie Guelph Hydro (and other LDCs who take an advanced approach to their business) at every turn. It is not clear that Board staff's suggestion of having one capital plan with the some of the other aforementioned plans as components therein will make it any easier.

### 4. *What Kind of Planning?*

The straw man model and the stakeholder consultation meetings used a number of terms such as Regional Integrated Planning and Optimized Planning without any clarification or definition. There is a definition in the Board Staff paper, but it did not surface in the Conference.

In most jurisdictions, planning with respect to electricity infrastructure is most likely deemed to be integrated resource planning which the *US Energy Policy Act 1992* defined as : "the planning and selection process for new energy resources that evaluates full range of alternatives to provide adequate and reliable service at the lowest system cost<sup>4</sup> including new generating capacity power purchases; energy conservation and efficiency; cogeneration and district heating and cooling, renewable energy resources, taking into account necessary features for system operation, e.g. diversity, reliability, dispatchability, risk and treating demand and supply on a consistent and integrated basis."

By definition, the powers under the *Electricity Act*<sup>5</sup> apply to both the Ontario Power Authority and the Ontario Energy Board, and are supported by the more specific objectives provided to both agencies. The purposes of the 2004 Amendments to the *Electricity Act* which created the OPA and change the OEB's objectives were broad, compelling and consistent with an IRP approach. The purposes of the Act were:

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<sup>3</sup> Green Energy and Green Economy Act, 2009, S.O. 2009 C.12

<sup>4</sup> In Ontario's case, the estimated \$4.4 billion in health and environmental costs should be been included in such an analysis until coal was phased out.

<sup>5</sup> Electricity Act, 1998. S.O. 1998, CHAPTER 15. Schedule A



- a) to ensure the adequacy, safety, sustainability and reliability of electricity supply in Ontario through responsible planning and management of electricity resources, supply and demand;
- b) to encourage electricity conservation and the efficient use of electricity in a manner consistent with the policies of the Government of Ontario;
- c) to facilitate load management in a manner consistent with the policies of the Government of Ontario;
- d) to promote the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources, in a manner consistent with the policies of the Government of Ontario;
- e) to provide generators, retailers and consumers with non-discriminatory access to transmission and distribution systems in Ontario;
- f) to protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service;
- g) to promote economic efficiency and sustainability in the generation, transmission, distribution and sale of electricity;
- h) to ensure that Ontario Hydro's debt is repaid in a prudent manner and that the burden of debt repayment is fairly distributed;
- i) to facilitate the maintenance of a financially viable electricity industry; and
- j) to protect corridor land so that it remains available for uses that benefit the public, while recognizing the primacy of transmission uses.<sup>6</sup>

Despite the clarity of these purposes and its name, the Ontario Power Authority's first draft Integrated Power System Plan (IPSP 2007) was not an integrated resource plan. It was not based on "an evaluation of the full range of alternatives to provide adequate and reliable service at the lowest system cost", but an optimized plan to deliver the components of the Minister's Supply Mix Directive which called for minimum amounts of conservation and renewable energy and a maximum amount of reliance on nuclear generation. The draft IPSP focussed on minimizing impact on rates rather than lowest system costs and turned the renewable and conservation targets into maximums and treated the nuclear target as a set aside. Consultation on the 2<sup>nd</sup> IPSP indicates that the absence of IRP concepts has continued.

OSEA suggests that the Board must reflect the purposes in the *Electricity Act*, 2004 as well as its own revised objectives in any RRFE.

### **5. Narrow Approach to Bill Mitigation**

Bill mitigation appears to be more broadly defined in the Model than in previous regulatory regimes, but it is difficult to see how this will be put into operation under the Model given it does not include conservation and demand management (CDM) or address energy poverty.

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<sup>6</sup> 2004, c. 23, Schedule A, s.1

The Canadian Manufacturers and Exporters (CME) raised the issue of “affordability” repeatedly during the consultations. In other proceedings before the Board, the CME has correctly submitted compelling evidence on the opportunities for conservation and demand management among its members.

OSEA has submitted evidence that Canada’s Green Building Council estimates that buildings across Canada can reduce their energy costs by 50%. Shaving off a couple of points on transmission and distribution costs will never have such a huge impact.

Similarly, the Board’s proceedings of low income energy assistance have primarily focused on emergency support which is no more than a transfer of funds from the government to utilities to pay reconnection costs for low income customers, when Jack Robertson of Elster Inc. shared with the Stakeholder Conference the scenario of smart meters being a basis for a much lower cost approach to reconnections; so far these opportunities are not reflected in Board guidance to LDCs.

## 6. *Integrated Resource Planning*

Transmission Plans, Distribution Plans and Regional Transmission/Distribution Plans all need to be based on the fundamental of principles of Integrated Resource Planning. The Board is charged with the facilitation of integrated power system plans and “in exercising its powers and performing its duties under this or any other Act in relation to electricity: The Board shall facilitate the implementation of all integrated power system plans approved under the *Electricity Act, 1998*.<sup>7</sup>

## 7. *Local and Regional Consultation in Planning*

The planning framework for infrastructure can no longer proceed in a number of small, independent initiatives without a view to the regional and provincial system. The transmission and distribution infrastructure across the province should be reviewed and planned with a view to the needs of aging infrastructure, system reliability and the connection of renewable energy generation. This includes considering the role that CDM programs can play in reducing consumption and strain on the existing system.

Any regional planning framework **must** include a role for Aboriginal communities. This includes not only fulfilling the “Duty to Consult” as required by section 35 of the *Constitution Act*, but also assessing the role that Aboriginal communities can play in this process through consultation. The framework must include room for Aboriginal communities to provide input on the planning process, to make their own plans, and to become real and meaningful players in the electricity industry for all of Ontario. First Nations have an interest in forming businesses and joint ventures to own and operate electricity infrastructure and transmission and distribution systems. With time, this may result in 100% First Nation owned transmission and

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<sup>7</sup> 2004, c. 23, Schedule B, s. 1

distribution systems in Ontario, including in remote areas currently not connected to the IESO grid. With First Nation owned projects under the FIT or microFIT program combined with ownership of transmission and distribution systems, First Nations could create micro-grids in northern areas of Ontario currently unconnected to any grid and reliant on diesel generators. The move to these local, First Nation owned and operated systems would be a great step forward in electricity systems and sustainability.

OSEA understands how important local and regional consulting should be with respect to new electricity facilities of any kind. Below is a list of some of the documents that OSEA publishes with respect to consultations, with a strong focus on community action, local engagement and local employment.

- *Community Engagement and Partnership Best Practices*: A concept paper designed to be the starting point for the more in-depth development of a strategy and action plan to realize the benefits of Community Engagement and Partnership Best Practices and their application to Ontario's renewable energy sector.
- *Community Engagement and Partnership Best Practices*: Summary of action research workshop. A summary of the initiative's action research session on March 28th, 2011
- *Building Capacity*: SearchFx Workshop White Paper Report. This report will be used by the Ontario Sustainable Energy Association and the leadership group for the initiative as a first step in a process to develop a shared vision of the future of the workplace in the green economy and to lay the foundation for strategic actions moving forward.
- *Renewable Energy Financing in Ontario: Advancing the Opportunities* : A concept paper designed to be the starting point for the more in-depth development of a strategy and action plan to realize the benefits of 'Renewable Energy Financing in Ontario' and its application to Ontario's renewable energy sector.
- *Building Capacity Through a Multi-Skilling Model: A partnership initiative led by the Ontario Sustainable Energy Association (OSEA)* A concept paper designed as a beginning point for the more in-depth development of a strategy and action plan to realize the benefits of a Multi-Skilling Model and its application to the electrical and renewable energy sector.
- *Building Capacity through a Multi-Skilling Model*: Background Documents and Reference: Brief summaries of six documents relating to Building Capacity through a Multi-Skilling Model in Ontario, each focusing on specifics of the industry.
- *Energy Storage in Ontario: Enabling the Rapid Deployment of Sustainable Generation: An initiative of Summerhill Impact, OSEA, and Centennial Energy Institute* A concept paper designed to be the starting point for the more in-depth development of a strategy and action plan to realize the benefits of electricity storage in Ontario and the necessary policy, regulations and programs needed to encourage widespread adoption in Ontario.

## 8. Local Resource Acquisition

Local resource acquisition includes conservation and demand management, fuel switching and distribution connected generation such as combined heat and power, district energy and micro grids. The RRFE should address all facets of these matters.

The largest and most successful approach to using local resources acquisition to offset or delay capital improvements is in New York City<sup>8</sup>. In 2003, with several electric distribution networks within its service territory approaching capacity, Con Edison was facing large capital expenditures to reinforce its distribution system. With much of this network underground, building new infrastructure represented a difficult and expensive endeavor.

*Instead, Con Edison embarked on a large-scale Targeted Demand Side Management Program, developing a pilot effort to achieve 47 MW of load reduction over a four-year period, primarily from commercial and industrial customers in several affected daytime peaking networks. To ensure the load reductions were achieved and precisely determine the actual savings, Con Edison instituted substantial liquidated damages for shortfalls and contracted with ICF International to perform stringent measurement and verification, requiring 100% inspection of every site before and after installation of the load reduction measures. The program was subsequently expanded to 149 MW and extended to cover a much larger portion of the company's service territory, including residential customers in certain nighttime peaking networks. To date, over 47,000 customers have participated, generating 89 MW of load reduction (through May 2010). Including demand side management in the 10-year forecast reduced projected capital expenditures by more than \$1 billion<sup>9</sup>.*

To enable this approach in Ontario, targeted CDM programs should be explicitly required in the Board's CDM Code and recognized as distinct from and not duplicative of province wide programs developed by the OPA.

### **9. Action on the Board's Non Rate Objectives**

Regulation must also take into account the broader objectives given to the Board in the *Green Energy and Green Economy Act*.<sup>10</sup>

*The Board, in carrying out its responsibilities under this or any other Act in relation to electricity, shall be guided by the following objectives:*

- 1. To protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service.*
- 2. To promote economic efficiency and cost effectiveness in the generation, transmission, distribution, sale and demand management of electricity and to facilitate the maintenance of a financially viable electricity industry.*

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<sup>8</sup> Con Edison's Targeted Demand Side Management Program: Replacing Distribution Infrastructure with Load Reduction Chris Gazze, Steven Mysholowsky, and Rebecca Craft, Consolidated Edison Company of New York Bruce Appelbaum, ICF International

<sup>9</sup> Planning for Efficiency: Forecasting the Geographic Distribution of Demand Reductions; Madlen Massarlian Copyright © 2011 Consolidated Edison Company of New York, Inc

<sup>10</sup> 2004, c. 23, Sched. B, s. 1; 2009, c. 12, Sched. D, s. 1 amending the Ontario Energy Board Act, 1998, s. 1.

3. *To promote electricity conservation and demand management in a manner consistent with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances.*
4. *To facilitate the implementation of a smart grid in Ontario.*
5. *To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities.*

The government has not established a priority among these objectives. No one objective is more important than the others. Despite this, the emphasis in the RRFE is solely on objective #1. Although smart grid has been included in RRFE and there were meaningful contributions on the topic by a Smart Meter expert, the topic was given little attention at the Stakeholder Conference. All of the Board's objectives must be considered and integrated into the RRFE.

### **10. Sustainability**

As noted above, Ofgem's approach to sustainability could serve as a valuable approach to a new vision for regulation in Ontario. The Ontario government has demonstrated an even greater importance for sustainability than the UK government by virtue of Ontario's decision to phase out coal fired generation. Ontario's regulatory environment must play its role to encourage the network systems to include sustainability as a key element of their operations and investment.

Sustainability encompasses **both** the generation of green, renewable energy at the community level **and** the reduction in energy use through **conservation**. Already some network companies are reflecting their commitment to sustainability in annual reports. Ontario's regulatory practices should make it easier rather than more difficult for transmitters and distributors to play a key leadership role on this front in their communities.

In 2011, Guelph Hydro Inc. is presented its first annual sustainability report<sup>11</sup> which:

- Summarized the company's performance in 2010
- Detailed how the company is creating value and facilitating economic growth in Guelph and Rockwood, Ontario
- Outlined company efforts to balance environmental stewardship, social responsibility and economic success to benefit all stakeholders.
- Showcased Guelph Hydro Inc.'s evolving strategy to integrate sustainable business practices into our day-to-day operations as well as our plans for developing community-based sustainable energy projects that support *Ontario's Green Energy and Economy Act* and Guelph's Community Energy Initiative.

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<sup>11</sup> Guelph Hydro Inc: 2010 Sustainability Report

With the publication of this report, Guelph Hydro Inc. becomes one of only a few utilities around the world to measure performance against the Global Reporting Initiative (GRI), the most widely used standardized framework in the world for reporting an organization's environmental, social and economic performance.

## Planning (EB-2010-0377)

### **How do we optimize planning across the sector to ensure that investment decisions achieve the level of reliability and quality of supply that consumers demand and are paying for?**

OSEA is concerned that this question appears to imply that section 1(1)(1) of the *Ontario Energy Board Act* is most important objective when it comes to planning.

OSEA suggests that the Board objectives, in totality, represent better criteria for planning than singling out one objective. It is also not clear why the Board has opted here for the concept of optimizing planning, rather than integrating planning – the former meaning making as useful as possible and the latter being bringing parts together to make a complete whole.

OSEA suggests that it will not be sufficient for planning to be optimized; any least cost approach requires integration. The Board's objectives, when considered as a whole, will move planning towards a sustainable system that takes account of CDM, smart grid and renewable power, while considering economic efficiency and the interests of consumers. The Board should recognize that programs, such as CDM and smart grid can result in large cost savings to consumers over time. In addition, community-owned renewable energy projects can provide funds to the local community and be used to offset electricity costs.

### **How might coordinated regional planning between utilities and third parties (e.g., municipalities) promote the efficient and cost-effective development of infrastructure and enhanced regulatory predictability, while maintaining reliability and system integrity? What are the implications, if any, for distribution network investment planning?**

In jurisdictions where a formal community energy plan is in place which has the strength of endorsement of the local municipality(ies), community groups, local industry and the engagement of local distribution utilities (gas and electric), such a document should serve as a guide for the efficient and cost effective development of infrastructure.

When such a document and processes exist, the regulator should accept the priorities and elements of the plan as reflecting the needs and the requirements of the local jurisdiction and not subject the distributor to ways of planning which conflict with or ignore local priorities.

### **How might the Board facilitate regional planning and the effective execution of the resultant plans as appropriate?**

Where LDCs and transmitters have come together with or without the Ontario Power Authority to complete regional plans, the Board could best facilitate planning and execution of plans by accepting those plans as the legitimate rationale for capital investment in infrastructure provided that appropriate local consultation has been part of the planning process including consultation with First Nations.



Where LDCs and transmitters have to come together to complete regional plans the Board should create an incentive, such as cost sharing in capital investments to promote regional planning.

**If we revise cost responsibility under section the Transmission System Code in respect of transmission line connection facilities to pool the costs, should the pooling be on a province-wide basis, a regional basis, or some combination? Should the cost responsibility rules for industrial customers and distributor customers be the same? Why or why not?**

Provincial wide pooling of transmission costs was a fundamental concept of Ontario's power system. OSEA suggests that pooling of transmission costs should once again be a fundamental concept.

The Board need to ensure that the appropriate regulatory driver is used to enables the right investments at the right time. Pooled costs should be contained within Hydro One's capital plan and be included in the cost of transmission across the province.

**How can the Board satisfy itself that multi-year investment plans are appropriate?**

Utilities should be expected to plan and report on outcomes expected from the multi-year investment plan. These organizations need the flexibility to plan and pace investments based on their needs. Where multi-year investment plans are based on a local community energy plan or a regional plan where local distribution utilities and transmitters have joined forces, the Board could review the plans against the criteria embedded in the government smart grid policies for the electrical system, reproduced below for completeness.

<b>Co-ordination</b>	Coordination of applicable network activities amongst appropriate groupings of distributors/transmitters, requiring network companies to share information and results of pilot projects, and engaging in common procurements to achieve economies of scale and scope.
<b>Customer Value</b>	Benefits to electricity customers including total bill mitigation using all tools applicable including but not limited to CDM, reduction of energy poverty and local resource acquisition.
<b>Economic Development</b>	Encourage economic growth and job creation within the province of Ontario. Actively encourage the development and adoption of network related products, services, and innovative solutions from Ontario sources.
<b>Efficiency</b>	Improve efficiency of grid operation, taking into account the cost-effectiveness of the electricity system.
<b>Environmental Benefits</b>	Promote the integration of clean technologies, conservation, and more efficient use of existing technologies. OSEA suggests a sustainability framework similar to Ofgem's above could be developed to provide guidance for transmitters and distributors.
<b>Interoperability</b>	Adopt recognized industry standards that support the exchange of meaningful and actionable information between and among network and



	enable common protocols for operation. Where no standards exist, support the development of new recognized standards through coordinated means.
<b>Privacy</b>	Respect and protect the privacy of customers. Integrate privacy requirements into network planning and design from an early stage, including the completion of privacy impact assessments.
<b>Reliability</b>	Maintain reliability of the electricity grid and improve it wherever practical, including reducing the impact, frequency and duration of outages.
<b>Safety</b>	Maintain, and in no way compromise, health and safety protections and improve electrical safety wherever practical including address matters related to stray voltage.
<b>Security</b>	Cyber security and physical security should be provided to protect data, access points, and networks from unauthorized access and malicious attacks.

### How should smart grid investments be treated (i.e., as part of rate base, or based on type of activity/asset)?

The Board needs to recognize that smart grid applications should replace “business as usual” and be added to the rate base. LDCs would then only have to justify related capital investments which replace “like for like”. This will ensure that consumers and customers in Ontario will reap the benefits of the investment in smart meters as well as the additional benefits of adding smart meters to the distribution system.

The following is from the US Department of Energy’s website and illustrated the multitude of benefits that will result from adding communications, automation and control to distribution systems.<sup>12</sup>

*“Smart grid” generally refers to a class of technology people are using to bring utility electricity delivery systems into the 21st century, using computer-based remote control and automation. These systems are made possible by two-way communication technology and computer processing that has been used for decades in other industries. They are beginning to be used on electricity networks, from the power plants and wind farms all the way to the consumers of electricity in homes and businesses. They offer many benefits to utilities and consumers -- mostly seen in big improvements in energy efficiency on the electricity grid and in the energy users’ homes and offices.*

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*Each device on the network can be given sensors to gather data (power meters, voltage sensors, fault detectors, etc.), plus two-way digital communication between the device in the field and the utility’s network operations center. A key feature of the smart grid is*

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<sup>12</sup> <http://energy.gov/oe/technology-development/smart-grid>

*automation technology that lets the utility adjust and control each individual device or millions of devices from a central location.*

*The number of applications that can be used on the smart grid once the data communications technology is deployed is growing as fast as inventive companies can create and produce them. Benefits include enhanced cyber-security, handling sources of electricity like wind and solar power and even integrating electric vehicles onto the grid.*

The more important task for the Board with respect to smart grid and smart metering is to review its codes and guidelines to determine what needs to be changed to better harmonize regulation with modernization. For example, in the presentation by Jack Robertson of Elster Inc., there was a discussion of disconnects and reconnects<sup>13</sup>.

**Now, policy [sic Distribution System Code] has to change.** Many utilities aren't allowed to cut customers off in the winter, for example, which makes sense, and therefore you may just cycle them... But we have never seen a utility that hasn't been able to find a process to put in place to enable remote disconnect and remote reconnect. And the savings are -- it is not just a cost issue, it is a customer service issue...So there is always a way. But the benefits are also not only economic, but safety, too.

Again the US Department of Energy has worked to de-mystify smart grids<sup>14</sup>.

*Metering is just one of hundreds of possible applications that constitute the Smart Grid; a smart meter is a good example of an enabling technology that makes it possible to extract value from two-way communication in support of distributed technologies and consumer participation. For a smarter grid to benefit society, it must reduce utilities' capital and/or operating expenses today – or reduce costs in the future. It is estimated that Smart Grid enhancements will ease congestion and increase utilization (of full capacity), sending 50% to 300% more electricity through existing energy corridors.*

***The more efficient their systems, the less capital utilities will need to spend.*** Given population growth and the exponential increase in the number of power-hungry digital components in the digital economy, additional infrastructure must be built – Smart or not. The Smart Grid holds the potential to be the most affordable alternative to “building out” by building less, and saving more energy. It will clearly require investments that are not typical for utilities. But the overall benefits of such efforts will outweigh the costs, as some utilities are already discovering.

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<sup>13</sup> Transcript: Renewed Regulatory Framework for Electricity Stakeholder Conference, March 29, 2012, page 144

<sup>14</sup> US Department of Energy: The SMART GRID: An Introduction;  
[http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/DOE\\_SG\\_Book\\_Single\\_Pages%281%29.pdf](http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/DOE_SG_Book_Single_Pages%281%29.pdf)

**What empirical and qualitative tools and methods might be used to inform: (a) utility planning processes; (b) utility applications to the Board; and/or (c) the Board's review of utilities' plans?**

OSEA suggests that the Global Reporting Initiative (GRI), an international initiative whose objective is to develop and distribute guidelines for voluntary reporting on sustainable development could be readily adapted for use to regulate network utilities in Ontario<sup>15</sup>.

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<sup>15</sup> The guidelines are designed for organizations of any size that wish to report on their economic, environmental and social performance from a sustainable development perspective. The GRI's approach has three objectives: comparability of data, transparency of information and accountability to stakeholders. For more information about the GRI, visit: [www.globalreporting.org](http://www.globalreporting.org).

## Performance & Incentives (EB-2010-0379)

**What outcomes for customer service and company cost performance should be established?**

**What standards and metrics for customer service and company cost performance should be established in regard to these outcomes? How do the performance benchmarks that are in place today relate to your proposed metrics?**

**What are the characteristics of a “high-performing regulated entity” (i.e., what specific metrics can be used to evaluate the level of performance of the regulated entity)?**

OSEA has provided a consolidated response to these three questions.

First and foremost there must be alignment of regulation to government policy. OSEA suggests the following construct for doing so. Adapting the GRI indicators to these policies would align the desired performance of network companies without the kind of government and regulatory micromanagement that has taken place in the past decade.

Outcome	Standard	Illustrative Metric
<b>Co-ordination</b>	Coordination of applicable network activities amongst appropriate groupings of distributors/transmitters, requiring network companies to share information and results of pilot projects, and engaging in common procurements to achieve economies of scale and scope.	Adapted from GRI
<b>Customer Value</b>	Benefits to electricity customers including total bill mitigation using all tools applicable including but not limited to CDM, reduction of energy poverty and local resource acquisition.	Adapted from GRI
<b>Economic Development</b>	Encourage economic growth and job creation within the province of Ontario. Actively encourage the development and adoption of network related products, services, and innovative solutions from Ontario sources.	Adapted from GRI
<b>Efficiency</b>	Improve efficiency of grid operation, taking into account the cost-effectiveness of the electricity system.	Adapted from GRI
<b>Environmental Benefits</b>	Promote the integration of clean technologies, conservation, and more efficient use of existing technologies. OSEA suggests a sustainability framework similar to Ofgem’s above could be developed to provide guidance for transmitters and distributors.	Adapted from GRI
<b>Interoperability</b>	Adopt recognized industry standards that support the	Adapted

	exchange of meaningful and actionable information between and among network and enable common protocols for operation. Where no standards exist, support the development of new recognized standards through coordinated means.	from GRI
<b>Privacy</b>	Respect and protect the privacy of customers. Integrate privacy requirements into network planning and design from an early stage, including the completion of privacy impact assessments.	Adapted from GRI
<b>Reliability</b>	Maintain reliability of the electricity grid and improve it wherever practical, including reducing the impact, frequency and duration of outages.	Adapted from GRI
<b>Safety</b>	Maintain, and in no way compromise, health and safety protections and improve electrical safety wherever practical including address matters related to stray voltage.	Adapted from GRI
<b>Security</b>	Cyber security and physical security should be provided to protect data, access points, and networks from unauthorized access and malicious attacks.	Adapted from GRI

**What incentives, if any, are appropriate to reward utilities for cost-effective and efficient performance, including appropriate rewards for exceeding standards for customer service, and company cost performance? What incentives, if any, are appropriate for the purposes of rewarding performance with regard to multi-year capital programs?**

OSEA remains concerned that this question is limited in its scope and should be rephrased to deal with all eight (8) of the policy areas of important to the government. Using that construct, a balanced scorecard based on GRI indicator and not unlike those used by Union Gas and Enbridge Gas Distribution for their DSM performance could be developed.

**How might the Board enhance the alignment of customer and company interests through the use of incentive mechanisms?**

OSEA firmly believes that only through community energy planning can the interests of customers and the company be aligned and result in a sustainable energy system. Within such a framework, given the predominance of municipal or government ownership in the sector, incentives create a virtuous circle benefiting both customers and company.

## **Rate-setting & Mitigation (EB-2010-0378)**

### **How might the Board align rate-setting with multi-year investment plans? Do you have a preferred approach, and what are its benefits and disadvantages?**

Ofgem is increasingly concerned that its five-year price control may lead companies to focus on short-term cost reductions, at the expense of decisions and activities that could help to restrain costs in periods beyond the five-year window. These concerns are particularly relevant in the current context: network companies will be taking investment decisions with substantial long-term consequences against a background of uncertainty — and there is an expectation that innovation is needed to ensure delivery of sustainable energy networks and value for money. It is for this reason that OSEA supports the Straw Man Model element of severing capital from rate setting.

### **Should the Board amend the ICM rules as proposed by some participants to provide for an interim solution? If so, how? What are the implications of such an interim change in the context of the longer-term RRFE approach of incorporating multi-year capital plans in rates?**

OSEA agrees that an interim solution is required particularly for the Transmission System Code provisions on cost allocation on new capital investments. Rather than interfere with changes in the context of the longer term RRFE approach, it would remove a barrier that has held up progress for more than a decade.

### **How might further benchmarking be used to: (a) help determine appropriate cost levels; (b) achieve further efficiencies; and/or (c) assist in managing cost increases?**

As indicated above, OSEA suggests that the Global Reporting Initiative (GRI), an international initiative whose objective is to develop and distribute guidelines for voluntary reporting on sustainable development could be readily adapted for use to regulate network utilities in Ontario and would by its very nature assist in all three areas.

### **How might the Board's approach to the application review process be proportionate to the characteristics of the application (including quality) and the performance of the applicant?**

As stated above OSEA suggests that the Board continue to regulate the largest 10 or 12 local distribution utilities as well all transmitters and then construct an adjustment index based on the capital and O&M results of the large distributors to apply through a purely administrative process to the rest of the distributors.

**To support the cost-effective and efficient implementation of Board-approved network investment plans by transmitters and distributors and to help mitigate the effects of any unavoidable and significant bill impacts, what mechanisms might be appropriate?**

Price shocks arising from keeping capital investment out of rate base until the equipment or system is commissioned should be avoided through a smoothed approach to put capital into rate base on an averaged basis over the period of price control.

## Other

**In light of what you heard at the March 28-30, 2012 Stakeholder Conference, what are your priorities for the Board's development of the RRFE and how might the Board manage the transition to the renewed regulatory framework in a manner consistent with your priorities?**

OSEA supports the following priorities:

1. Make smart grid investments “business as usual” and take advantage of the options for enhanced customer experience , operational savings, and improved reliability identified by Jack Robertson of Elster Inc. To leverage the operational benefits of its smart Meters and networks, Ontario LDCs need to invest in smart grid including people, devices, tools and applications such as: transformer monitoring, meter data management systems and energy managements systems for demand Response including in-home displays and load control for the following purposes including but not limited to:
  - Revenue Protection
  - Asset Management
  - Demand response
  - Loss reduction
  - System management
  - Outage reductions
  - Power quality
  - Meter Reading costs
  - Theft reduction
2. Given that regional planning was first identified in 2005 as a priority by the Ontario Power Authority and grid constraints are a major limitation in connecting renewable energy, the Board should immediately revise the Transmission System Code to enable Hydro One to make the necessary investments. In California, 30 transmission projects were recently approved by the California Independent System Operator Corporation Board of Governors. The approvals came as part of the 2011/2012 Transmission Plan for the independent system operator which operates the state’s wholesale transmission grid. According to a media release from the ISO, the approved transmission plan is the result of a 15-month process in which the ISO and its stakeholders undertook a comprehensive study of California’s grid and generation needs.<sup>16</sup>
3. Allow network companies to consolidate all investment plans into one capital plan that has a ten year planning horizon and a five year approval. Ensure all types of required capital are covered in the plan:

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<sup>16</sup> <http://www.caiso.com/Documents/CaliforniaISOBoardGreenLightsGridUpgrades.pdf>



- customer attachment and system expansion capital,
- system integrity, reinforcement, and enhancement capital
- infrastructure renewal capital, i.e., is replacement of capital equipment that is at the end of its life
- general plant, i.e., shorter-term capital with high depreciation rates
- productivity improving capital

**Are there other key issues that should be considered in the development of the RRFE?**

The Conservation and Demand Management Code requires revisions to be integrated with the final RRFE outcomes.

OSEA has provided some additional comments directly on the Staff Discussion Papers attached to this submission, to allow the comments to be reviewed in the context of the Staff Paper.

***Distribution Network Investment Planning (EB-2010-0377);***

Additional OSEA comments are embedded in a revised PDF of the Staff Discussion Paper.

***Regulatory Framework for Regional Planning for Electricity Infrastructure (EB-2011-0043);***

Additional OSEA comments are embedded in a revised PDF of the Staff Discussion Paper.

***Establishment, Implementation and Promotion of a Smart Grid in Ontario (EB-2011-0004);***

Additional OSEA comments are embedded in a revised PDF of the Staff Discussion Paper.

***Approaches to Price Mitigation for Electricity Transmitters and Distributors (EB-2010-0378);***

Additional OSEA comments are embedded in a revised PDF of the Staff Discussion Paper.

***Defining and Measuring the Performance of Electricity Transmitters and Distributors (EB-2010-0379).***

Additional OSEA comments are embedded in a revised PDF of the Staff Discussion Paper.

**5 Attachments**

Document #: 512124