APPENDIX "A"

ONTARIO POWER AUTHORITY ISSUES LIST

Issues List Based on OEB Direction to Follow Legal Approval Requirements for IPSP and Procurement Process

The Notice of Application in this Proceeding states that the Ontario Energy Board has "instructed the OPA to develop a proposed issues list for the review of the IPSP and the proposed procurement processes, structured by reference to the findings that the Board has to make, according to the legislation and Ministerial directions."

The following separates the Issues List into two main parts: Part I -- The IPSP; and Part II -- The Procurement Processes.

Part I -- The IPSP

Section 25.30 of the *Electricity Act* addresses the Board's review of the IPSP as follows:

> **25.30** (1) Once during each period prescribed by the regulations, or more frequently if required by the Minister or the Board, the OPA shall develop and submit to the Board an integrated power system plan,
>
> (a) that is designed to assist, through effective management of electricity supply, transmission, capacity and demand, the achievement by the Government of Ontario of,
>
> (i) its goals relating to the adequacy and reliability of electricity supply, including electricity supply from alternative energy sources and renewable energy sources, and
>
> (ii) its goals relating to demand management; and
>
> (b) that encompasses such other related matters as may be prescribed by the regulations.
>
> ...
>
> (4) The Board shall review each integrated power system plan submitted by the OPA to ensure it complies with any directions issued by the Minister and is economically prudent and cost effective.

The legislation therefore requires the Board to review the IPSP for two purposes: (1) compliance with directions issued by the Minister; and (2) economic prudence and cost effectiveness. The OPA detailed analysis on these requirements is set out at Exhibit A-2-2 of the Application. The specific issues list in respect of these requirements is set out below.

Issue (1): Compliance with Directions Issued by the Minister of Energy: Supply Mix Directive, June 13, 2006

1. Does the IPSP define programs and actions which aim to reduce projected peak demand by 1,350 MW by 2010, and by an additional 3,600 MW by 2025?
2. Does the IPSP assist the government in meeting its target for 2010 of increasing the installed capacity of new renewable energy sources by 2,700 from the 2003 base, and increase the total capacity of renewable energy sources used in Ontario to 15,700 MW by 2025?
3. Does the IPSP plan for nuclear capacity to meet base-load requirements and limit the installed in-service capacity of nuclear power over the life of the plan to 14,000 MW?
4. Does the IPSP maintain the ability to use natural gas capacity at peak times and pursue applications that allow high efficiency and high value use of the fuel?
5. Does the IPSP plan for coal-fired generation in Ontario to be replaced by cleaner sources in the earliest practical time frame that ensures adequate generating capacity and electricity system reliability in Ontario?
6. Does the IPSP plan to strengthen the transmission system to:

    - Enable the achievement of the supply mix goals set out in this directive?
    - Facilitate the development and use of renewable energy resources such as wind power, hydroelectric power and biomass in parts of the province where the most significant development opportunities exist?
    - Promote system efficiency and congestion reduction and facilitate the integration of new supply, all in a manner consistent with the need to cost effectively maintain system reliability?

7. Does the IPSP comply with Ontario Regulation 424/04; specifically, in developing the integrated power system plan, has the OPA done the following:

    - Consulted with consumers, distributors, generators, transmitters and other persons who have an interest in the electricity industry in order to ensure that their priorities and views are considered in the development of the plan?
    - Identified and developed innovative strategies to accelerate the implementation of conservation, energy efficiency and demand management measures?
    - Identified opportunities to use natural gas in high efficiency and high value applications in electricity generation?
    - Identified and developed innovative strategies to encourage and facilitate competitive market-based responses and options for meeting overall system needs?

- Identified measures that will reduce reliance on procurement under section 25.32(1) of the Act?
- Identified factors that it must consider in determining that it is advisable to enter into procurement contracts under subsection 25.32 of the Act?
- Ensured that safety, environmental protection and environmental sustainability are considered in developing the plan?
- Ensured that for each electricity project recommended in the plan that meets the criteria set out in subsection 8(2) of Regulation 424/04, the plan contains a sound rationale including:
    - **i.** an analysis of the impact on the environment of the electricity project; and
    - **ii.** an analysis of the impact on the environment of a reasonable range of alternatives to the electricity project?

Issue (2): Economic Prudence and Cost Effectiveness

As is discussed in Exhibits B-1-1 and B-3-1 of the IPSP Application, the OPA's plan to achieve the Supply Mix Directive's goals was developed by identifying the areas of discretion left open by the Supply Mix Directive and applying the OPA's Planning Criteria to make decisions in those areas. This resulted in an IPSP that prioritizes how Conservation and supply resources should be acquired through (i) meeting the requirements of the Supply Mix Directive in light of the OPA's planning criteria (the "Directive Priority"); and (ii) meeting the requirements of the Supply Mix Directive in light of lead times and necessary transmission enhancements (the "Implementation Priority"). The Directive Priority proposes the priority order in which Conservation and supply resources should be treated. The Implementation Priority is the relative chronological ordering of proposed resource additions.

The IPSP is the combination of the Directive Priority and the Implementation Priority.

Table 1 summarizes the decisions made in the IPSP by applying the Directive Priority and the Implementation Priority.

The issue is whether the decisions identified in Table 1 are economically prudent and cost effective.

Table 1					
Subject of Directive	**Directive Goals**	**Directive Priority**	**Implementation Priority**	**Current Mix of Projects/ Facilities/ Programs (Evidence Reference)**	**Procurement Authorization (for resources to be acquired by end of 2010)**
Conservation	2010: 1,350 MW 2025: an additional 3,600 MW	Maximize feasible cost effective contribution from Conservation before supply resources.	2010 goals to be met through resource acquisition; experience with programs to provide information on how to economically meet and exceed 2025 goal using combination of resource acquisition, capability building and market transformation programs.	2010: Exhibit D-4-1, Table 21 2025: Exhibit D-4-1, Table 22	Government Directives
Renewable Supply	10,402 MW by 2010 15,700 MW by 2025	Maximize feasible cost effective contribution from renewable sources before other supply resources in the following order of economic priority: hydro, bioenergy, and wind.	2010: All feasible renewable resources that can be installed prior to 2010 should be acquired; 2025 goal to be met by first applying all feasible hydro resources (2,921 MW); all feasible bioenergy (450 MW); and all small, standard offer wind projects (1,148 MW). The remainder of the goal (1,891 MW) to be made up of large wind projects. The order of implementation will be coordinated with necessary transmission enhancements.	2010: Exhibit D-5-1, Table 1 2025: Exhibit D-5-1, Tables 2, 19, 31, and 33.	Government Directives
Nuclear for Baseload	Up to 14,000 MW	Make up remaining baseload requirements remaining after Conservation and renewable supply with nuclear supply. Refurbished nuclear facilities have planning	10,249 MW of nuclear capability required, either from refurbishments or new build. Depending on refurbishments, new nuclear capacity of 1,400 MW to 3,400 MW, starting in 2018.	Exhibit D-6-1 Table 14	No Procurements Planned

Table 1					
Subject of Directive	**Directive Goals**	**Directive Priority**	**Implementation Priority**	**Current Mix of Projects/ Facilities/ Programs (Evidence Reference)**	**Procurement Authorization (for resources to be acquired by end of 2010)**
		advantages and are generally preferred to new nuclear facilities. However, each case is fact dependent.			
Replacement for Coal Fired Generation	Replace coal-fired generation in earliest practical timeframe.	Replacing coal-fired generation requires replacing its three types of contributions to Ontario's electricity needs: capacity (6,434 MW), energy production (24.7 TWh) and reliability (flexibility, dispatch ability, and ability to respond to unforeseen supply availability).	15,000 MW of resources are planned by 2015, partly to replace coal, partly to meet growth, and partly to catch up with deficiencies that existed in the beginning of the planning horizon. Gas-fired generation will be installed in the areas of York Region, Kitchener Waterloo and Southwest GTA. This will allow for the energy and capacity production contributions to be replaced by 2012. The reliability contribution will be replaced by these and other facilities by 2014.	Exhibit D-7-1, Table 5	Conservation and Renewable Resources: Government Directives GFG: OEB Approved Procurement Process
Natural Gas	Confine gas to peaking, high value and high efficiency uses.	Gas fired generation will be used to meet peak and intermediate requirements and to provide flexibility. When gas-fired resources are used, they should be restricted as much as possible to either simple cycle gas generation (to meet peaking requirements) or combined cycle	In addition to meeting the local area supply requirements in York Region, Kitchener-Waterloo and Southwest GTA, current facilities that operate as baseload may be converted to meet intermediate and peaking needs and energy will be procured from Lennox GS to replace the Reliability Must Run Contract with the IESO. An additional 400-650 MW of "proxy gas" may be required around	Exhibit D-8-1, Table 9	OEB Approved Procurement Process

Table 1					
Subject of Directive	**Directive Goals**	**Directive Priority**	**Implementation Priority**	**Current Mix of Projects/ Facilities/ Programs (Evidence Reference)**	**Procurement Authorization (for resources to be acquired by end of 2010)**
		gas generation (to meet intermediate requirements). Any new contracts and facilities should reflect these requirements as much as possible.	2017.		

Part II -- The Procurement Process

Section 25.31 of the *Electricity Act* addresses the Board's review of the Procurement Processes as follows:

> **25.31** (1) The OPA shall develop appropriate procurement processes for managing electricity supply, capacity and demand in accordance with its approved integrated power system plans.
>
> ...
>
> (4) The Board shall review the OPA's proposed procurement processes and any proposed amendments and may approve the procurement processes or refer all or part of them back with comments to the OPA for further consideration and resubmission to the Board.

Issues

Are the OPA's proposed procurement processes appropriate to manage electricity supply, capacity and demand in accordance with the IPSP?