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File 15011

December 11, 2007

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Re: PWU Comments on the Ontario Power Authority's Proposed Issues List, EB-2007-0707

The Power Workers' Union ("PWU") represents a large portion of the employees working in Ontario's electricity industry and has utmost interest that the Ontario Power Authority's ("OPA") Integrated Power System Plan ("IPSP") results in the on going provision of reasonably priced electricity service quality, reliability and safety for customers, and allows for a viable and efficient energy sector (attached please find a list of PWU employers).

To this end we provide the attached comments on the OPA's October 22, 2007 *Issues List Based on OEB Direction to Follow Legal Approval Requirements for IPSP and Procurement Processes.*

Yours very truly,

PALIARE ROLAND ROSENBERG ROTHSTEIN LLP

Richard P. Stephenson

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List of PWU Employers

Atomic Energy of Canada Limited (Chalk River Laboratories)
Barrie Hydro
BPC District Energy Investments Limited Partnership
Brant County Power Incorporated
Brighton Beach Power Limited
Bruce Power Inc.
Corporation of the City of Dryden - Dryden Municipal Telephone
Corporation of the County of Brant
Electrical Safety Authority
EPCOR Calstock Power Plant
EPCOR Kapuskasing Power Plant
EPCOR Nipigon Power Plant
EPCOR Tunis Power Plant
Erie Thames Services Corporation
Goldman Hotels Inc. - Hockley Highlands Inn & Conference Centre
Great Lakes Power Limited
Grimsby Power Incorporated
Halton Hills Hydro Inc.
Hydro One Inc.
Independent Electricity System Operator
Inergi LP
Innisfil Hydro Distribution Systems Limited
Kenora Hydro Electric Corporation Ltd.
Kincardine Cable TV Ltd.
Kinectrics Inc.
Kitchener-Wilmot Hydro Inc.
Lake Superior Power (Brookfield Power)
London Hydro Incorporated
Middlesex Power Distribution Corporation
Milton Hydro Distribution Inc.
Mississagi Power Trust (Brookfield Power)
New Horizon System Solutions
Newmarket Hydro Ltd.
Norfolk Power Distribution Inc.
Nuclear Safety Solutions
Ontario Power Generation Inc.
Orangeville Hydro Limited
PUC Services Inc.
Sioux Lookout Hydro Inc.
Sodexho Canada Ltd.
TransAlta Energy Corporation - O.H.S.C. Ottawa
Vertex Customer Management (Canada) Limited
Whitby Hydro Energy Services Corporation

EB-2007-0707

IN THE MATTER OF the *sections 25.30 and 25.31 of the Electricity Act, 1998;*

AND IN THE MATTER OF an Application by the Ontario Power Authority for review and approval of its integrated power system plan and approval of its proposed procurement processes.

Power Workers' Union Input on

Ontario Power Authority's

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

1 INTRODUCTION

The Ontario Power Authority ("OPA") filed an application with the Ontario Energy Board ("OEB" or "Board") dated August 29, 2007 under the Electricity Act, 1998, S.O. 1998, c. 15, Sched. A ("Act") seeking an order of the Board approving the Integrated Power System Plan ("IPSP") and certain procurement processes. The Board has assigned the application file number EB-2007-0707.

In a Notice of Application dated October 22, 2007 ("Notice"), the Board indicates that it intends to review the OPA's IPSP application in two phases. In phase 1 the Board will develop an issues list for the proceeding and in phase 2 the Board will review evidence filed by the OPA and other parties. The Notice is for phase 1 of the proceeding and invites intervenors to make written submissions on the OPA's document entitled "Issues List Based on OEB Direction to Follow Legal Approval Requirements for IPSP and Procurement Process" ("Proposed Issues List"), attached to the Notice.

The Power Workers' Union ("PWU") provides comment on the Proposed Issues List in the context of its energy policy statement:

> **Reliable, secure, safe, environmentally sustainable and reasonably priced electricity supply and service, supported by a financially viable energy industry and skilled labour force is essential for the continued prosperity and social welfare of the people of Ontario. In minimizing environmental impacts, due consideration must be given to economic impacts and the efficiency and sustainability of all energy sources and existing assets. A stable business environment and predictable and fair regulatory framework will promote investment in technical innovation that results in efficiency gains.**

The PWU's reference to safety is similar to that set out in the September 8, 2006 OEB Staff Discussion Paper on the Review of the OPA's IPSP and Procurement Processes where safety:

> *Refers to the safety of workers and members of the public through compliance with all applicable Ontario and federal laws and regulations pertaining to the construction and operation of facilities identified in the IPSP, including regulations and requirements of the Electricity Safety Authority and of the Canadian Nuclear Safety Commission.*

On December 27, 2006 the Board issued a report entitled *Report of the Board on the Review of, and Filing Guidelines Applicable to, the Ontario Power Authority's Integrated Power System Plan and Procurement Processes* ("Filing Requirements"). In the report the Board indicates that, informed by consultation with interested parties, it was prepared "to provide guidance in relation to the approach to be used by the Board in reviewing the IPSP and the OPA's procurement processes, as well as in relation to the Board's expectations regarding the OPA's filings". Further, the Board indicates that the filing guidelines reflect the Board's current view as to the information that may be required in order for the Board to fulfill its statutory mandate. Given this view of the filing guidelines, it is reasonable that they should form the basis of the issues list for this proceeding.

2 OPA's Proposed Issues List

The Notice, states that the OEB "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 OPA's Proposed Issues List is provided as an attachment to the Notice.

In the Proposed Issues List, the OPA states that:

> *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 sets out two issues that address the two purposes:

> *Issue (1):* *Compliance with Directions Issued by the Minister of Energy: Supply Mix Directive, June 13, 2006;* and
>
> *Issue (2):* *Economic Prudence and Cost Effectiveness*

Under Issue 1 the OPA has six broad questions that are direct quotes of the components of the Minister's Supply Mix Directive e.g. "Does the IPSP define the 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". In addition a seventh question broadly addresses compliance with Ontario Regulation 424/04, that is:

> *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?*

On Issue 2, the OPA notes that the IPSP is the combination of the Directive Priority and 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 chronology of proposed resource additions in light of lead times and necessary transmission enhancements. The issue, according to the OPA is whether the Directive Priorities and Implementation Priorities on conservation, renewable supply, nuclear for baseload, replacement for coal fired generation, and natural gas summarized by the OPA in Table 1 of the Proposed Issues List, are economically prudent and cost effective.

The PWU has two generic concerns with the Proposed Issues List, in addition to its specific, detailed comments. The PWU's first generic concern is that the Proposed Issues List fails to reflect the OEB's statutory objects with respect to electricity. Secondly, the issues as framed by the OPA fail to identify the *factual* issues that must be determined by the Board. As a result both the parties and the Board are deprived of the necessary guidance they require to determine the scope of the evidence and submissions that will be received by the Board in making its decision in the case. This is particularly important in this proceeding given the lack of precedent for the Board's first review of an IPSP proposal.

a. The Board's Statutory Objects

The Board's objects are set out in s. 1 of the *Ontario Energy Board Act, 1998*, as follows:

> **Board objectives, electricity**
>
> **1. (1) 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. 2004, c. 23, Sched. B, s. 1.**
>
> **Facilitation of integrated power system plans**
>
> **(2) 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. 2004, c. 23, Sched. B, s. 1. (emphasis added)

Nowhere in the OPA's Proposed Issues List is there any apparent recognition that, in considering whether the proposed IPSP should be approved, the Board must be guided by these statutory objectives. There would appear to be two possible explanations for this omission.

First, the OPA may suggest that it is understood that these statutory objectives are applicable to everything the Board must do with respect to electricity, and therefore specific reference was redundant and unnecessary. If that is the case, the PWU disagrees. The most striking example of the omission of a statutory objective is the absence of any apparent need to examine the IPSP to determine whether it is likely to provide sufficient *adequacy* of electricity supply. For example, nowhere in the Proposed Issues List is there any opportunity for the Board to consider whether the forecast of electricity demand on which the IPSP is premised is appropriate, or even a reasonable demand forecast. In the absence of an assurance with respect to the OPA's analysis of the demand side of the equation, it is not possible for the Board to fulfill its statutory object of ensuring the adequacy of electricity supply. This paucity appears to be consistent with the OPA's position put forth in Exhibit A, Tab 2, Schedule 2 of the IPSP application that limits the scope of the OEB's review.

The second possibility is that the OPA may be of the view that the objectives set out in s. 1 of the *Ontario Energy Board Act, 1998* are not applicable to the Board's review of the proposed IPSP, presumably on the basis that the scope of the Board's review of the proposed IPSP is set out in s. 25.30(4) of the *Electricity Act*. If this is the OPA's position, the PWU disagrees. As a matter of statutory interpretation, there is nothing which excludes the application of s. 1 of the *Ontario Energy Board Act, 1998* when the Board is exercising its jurisdiction under s. 25.30(4) of the *Electricity Act*. To the contrary, the provisions of s. 1 of the *Ontario Energy Board Act, 1998* are explicit – the Board is to be guided by the prescribed objectives whether it is purporting to exercise its jurisdiction under the *Ontario Energy Board Act, 1998*, or whether it is exercising its authority under "any other Act".

b. Issues List as Framework of Factual Issues

The PWU's second generic concern with the Proposed Issues List is that the document is framed almost solely from the perspective of the adequacy of the proposed IPSP, *from a legal perspective.* The PWU does not deny that this is an important issue for the Board to consider, and decide. That said the Proposed Issues List, as currently framed, is unhelpful to the Board and to the other parties to the proceeding, in providing a roadmap for the hearing, *from a factual perspective.*

Both the Board and regular intervenors at the Board are very familiar with the kind of issues list that is typically approved by the Board for use in hearings before it. Since much of the exercise in any hearing relates to the building of the factual record (whether it be testimony from witnesses, from written reports, or other documentary evidence) upon which any decision will be based, it is critical for all parties to be able to understand the precise *factual* scope for each portion of a proceeding. The factual scope will determine which witnesses will be called, and which documents received at each stage of the hearing. It will also determine whether a particular line of questioning is permissible.

In a case such as the IPSP review, a clear understanding of the factual scope of the hearing is essential, because it is very likely that the participants will find it necessary to retain experts to assess and critique the evidence tendered by the OPA, and potentially to provide alternative perspectives. Given the complexity of the IPSP matters, the time, energy and expense involved in retaining appropriately qualified experts, it is essential that parties know, in advance, whether the subject matter of their proposed expert evidence will be considered to be "in scope" or "out of scope". Ordinarily, the issues list will provide essential guidance on this issue. Moreover, in the event of any dispute, the wording of the issues list will be the standard ultimately relied upon by the Board to make its determination with respect to the relevance of the evidence in question. It is the PWU's view that the Proposed Issues List, as currently framed, does not provide this critical guidance.

3 PWU INPUT ON THE PROPOSED ISSUES LIST

As noted above, in the PWU's view the Proposed Issues List provides broad identification of the legal issues for review in the IPSP proceeding. In the absence of more specific and detailed issues that need to be reviewed under the two issues identified by the OPA, an inordinate amount of time will be spent arguing matters of scope rather than substance.

Given the Board's Filing Guidelines which were developed through consultations with stakeholders, it is the PWU's view that the Filing Guidelines speak to the specific factual issues that stakeholders and the Board identified as requiring regulatory review.

Therefore, the PWU proposes the following issues list for the Board's consideration consistent with the Filing Guidelines.

PART 1: THE IPSP

3.1 THE SUPPLY MIX DIRECTIVE

The following issues consider whether and how the IPSP achieves the goals set out in the Supply Mix Directive in an economically prudent and cost effective manner.

3.1.1 DEMAND AND SUPPLY FORECASTS AND ADEQUACY ASSESSMENT

1. *Does the OPA adequately identify for each year covered by the Near-term Plan, and biennially for the period beyond that covered by the Near-term Plan:*

   a. *The net load growth, including the peak load component, after separately accounting for:*

i. *end-use and economic load growth as identified in studies conducted by the OPA and others for this purpose;*

ii. *load reduction resulting from "natural conservation" (i.e., the effect of ongoing energy efficiency and conservation improvements in building codes, household appliances and the like) disaggregated, to the extent feasible, by separately identifying applicable influences (such as price and regulatory and market influences);*

iii. *on-site load displacement generation that has not already been accounted for elsewhere in the IPSP (i.e., already included as a conservation resource);*

iv. *increases or decreases in system reliability margins;*

b. *generation capacity assumed to exist at the relevant time, and the basis for the assumptions made in that regard;*

c. *transmission capacity assumed to exist at the relevant time, and the basis for the assumptions made in that regard;*

d. *the resultant adequacy assessment that identifies shortfalls in generation or transmission capacity that will need to be met through "project-specific" conservation activities (i.e., specific targeted conservation initiatives - locally or system-targeted - undertaken by the OPA), transmission system expansions or improvements and/or investments in or purchases of generation?*

2. *Does the load forecast utilized by the OPA in the proposed IPSP adequately:*

a. *identify the load growth (or decline) assumptions by region, for the province as a whole;*

b. *include annual regional forecasts for each year covered by the Near-term Plan for both energy and capacity requirements;*

c. *include biennial provincial forecasts for the period beyond that covered by the Near-term Plan for both energy and capacity requirements;*

d. *identify the load growth or decline assumptions associated with electricity commodity prices over the relevant planning period;*

e. *include a range of forecasts - together with the likelihood of each forecast - to reflect possible future load changes resulting from various economic and end-use scenarios;*

f. *separately identify the impact of natural conservation on the forecasts, together with applicable assumptions and range estimates;*

g. *express in weather-corrected terms, together with a description of the methodology employed;*

h. *identify the impacts and risks associated with extreme weather; and*

i. *include the effects of commodity, fuel price and price elasticity to the extent that these are significant?*

3. *Does the OPA adequately describe and address the following in relation to the proposed IPSP:*

a. *the load growth scenario(s) being assumed (e.g. end-use increases/decreases and low, median or high economic growth) and the forecast methodology employed;*

b. *the load reduction activities being assumed as a result of conservation initiatives, and the forecast methodology employed for identifying separately "natural conservation" improvements and the impact of "project-specific" conservation activities;*

c. *the specific level of transmission system reliability/adequacy and generation reserve margins selected by the OPA;*

d. *the methodology and metrics used for determining the generation reserve margin and the transmission system reliability/adequacy requirements, and the justification for the selected methodology and metrics;*

e. *the assumptions being made about the remaining operating lives of existing facilities, and the basis for the assumptions made in that regard; and*

f. *the baseload component of CDM?*

3.1.2 RESOURCE PLANNING AND ACQUISITION: THE NEAR-TERM PLAN

The following issues relate to resource investments identified in the Near-term Plan.

3.1.2.1 GENERAL

1. *In presenting the resource acquisition/investment portion of the Near-term Plan, does the OPA adequately:*

   a. *identify the total need for resources and associated timelines;*

   b. *indicate the allocation between generation and conservation resources, as well as the rationale for that apportionment;*

   c. *identify the rationale for selecting the preferred solution in terms of factors such as costs, financial risks to be assumed by electricity consumers, benefits, reliability and quality of service, where one resource solution has been preferred over an alternative resource solution (whether of the same or a different type);*

d. *describe the critical preliminary work, consultations or substantive approvals that must be undertaken or obtained, as well as the costs and timetable associated with those activities;*

e. *set out the assumptions made in relation to the sharing of risks between the OPA and consumers, on the one hand, and the entity providing the resource, on the other, when identifying the cost associated with the acquisition of resources;*

f. *express the costs in a consistent manner for all generation and conservation resources (i.e., cost per MW or MWh supplied or not consumed);*

g. *identify the manner in which it expects or proposes that a generation or conservation resource will be procured or acquired, where known, and the basis upon which the OPA believes that the process will result in the economically prudent and cost effective procurement of the resource;*

h. *identify the nature of the procurement process where a procurement process is proposed to be used;*

i. *identify the entity that will be making the transmission resource investment, if known; and*

j. *identify and include the costs associated with the method of obtaining the resource in estimating the total costs of a resource?*

2. *Does the OPA adequately identify and quantify costs associated with using a process other than a contract-based mechanism such as:*

a. *the development of and compliance with new or additional legal or regulatory requirements (such as market rules, licences, codes, etc.);*

b. *the need for new infrastructure if the mechanism cannot be supported by existing infrastructure or new infrastructure that is known to be required for other purposes (such as wholesale market settlement systems and distribution customer information and billing systems);*

c. *the stranded costs associated with the mechanism if it cannot be accommodated by existing infrastructure or new infrastructure that is known to be required for other purposes;*

d. *the need for existing and potential market participants to acquire new skills or resources; and*

e. *the identification and quantification of the benefits related to the use of mechanisms that are not contract-based (e.g. the enhancement of consumer choice for electricity products and services; the enhancement of electricity commodity price stability; the reduction or limitation on increases in regulatory charges; and the shift of commodity risk away from consumers)?*

3. *Does the OPA provide adequate additional information where use of a non contract-based mechanism for obtaining resources is proposed including:*

   a. *evaluation of the ability of existing and potential market participants to assume the financial and operation risks associated with the initiative, including a consideration of creditworthiness criteria; and*

   b. *assessment of the degree to which the mechanism will either reduce or create new or additional barriers to entry or participation for existing and potential market participants?*

3.1.2.2 CONSERVATION RESOURCES

The following issues consider whether the programs and actions included in the IPSP which aim to reduce projected peak demand by 1,350 MW by 2010 and by an additional 3,600 MW to 2025 are reasonable.

1. *In proposing a portfolio of conservation resource initiatives that will achieve the short-term and long-term targets set out in the Supply Mix Directives, does the OPA adequately identify:*

a. *initiatives by sector and by end-use;*

b. *criteria used in evaluating, selecting and prioritizing the conservation initiatives that are being put forward;*

c. *the manner in which the OPA will evaluate, monitor and verify the contribution to reductions in peak energy demand (and, where applicable, energy consumption) from the conservation initiatives; and*

d. *evaluate, monitor and verify the cost effectiveness of the conservation initiatives?*

2. *For each proposed conservation resource initiative that is not in the form of generation, does the OPA adequately identify:*

   a. *the full capital and operating cost (per unit of demand and/or consumption) expected to be associated with implementation of the resource initiative, regardless of the person that bears the costs;*

   b. *the savings (in demand and/or consumption) expected to be associated with implementation of the resource initiative, including the timing and persistence of those savings;*

   c. *the major assumptions that underlie the OPA's determination of the expected costs and savings referred to above;*

   d. *whether the resource initiative is intended principally to address local area reliability or supply issues; and*

   e. *how the conservation resource initiative will be procured and from which sector, and at which end use it is targeted?*

3. *For each proposed conservation resource initiative that is in the form of generation, does the OPA provide the information set out in the applicable portions under "Generation Resources" below?*

Achievement of Conservation Targets

4. *Is the manner in which the OPA compares the costs of the different types of conservation measures (e.g. customer-based generation programs or energy efficiency programs) in determining which portfolio of measures achieve the conservation targets in an economically prudent and cost effective manner reasonable?*

3.1.2.3 GENERATION RESOURCES

General

1. *For each of the generation resources proposed, are the criteria used by the OPA to identify the following attributes reasonable:*

    a. *the size (capacity), fuel source, capacity factor and general location of the resource (including an indication of distance from existing transmission or distribution system facilities and loads) and the rationale for that location;*

    b. *the estimate of the full cost of the project (i.e., construction, delivered fuel, operation, waste disposal and decommissioning) to the extent available, including the directly attributable cost of transmission or distribution investments that would be necessary to incorporate and deliver energy from the project to the network. The most significant cost elements should be expressed as range estimates (e.g., plus/minus one standard deviation);*

    c. *the estimate of the impact of the resource on transmission constraints and congestion costs;*

    d. *the estimate of any impact (other than a transmission rate or congestion cost impact) of the project on existing affected transmission customers, including system losses where applicable;*

e. *the description of the major assumptions that underlie the OPA's determination of the estimated costs referred to above;*

f. *the estimate of the in-service date of the project and an assessment of the risk of project delays;*

g. *the assessment of the economic and financial risks associated with the project that is commensurate with the magnitude of the project, including in relation to such factors as additional investments in existing facilities, project delays and uncertainty regarding fuel costs;*

h. *the assessment of whether the resource initiative is intended principally to address local area reliability or supply issues;*

i. *the capability factor of the generation facility on an annual basis and, where relevant, on a seasonal and daily basis;*

j. *the level of dispatchability of the generation resource, and any measures for enhancing dispatchability or load following capabilities or for mitigating intermittency;*

k. *the life expectancy of the generation resource;*

l. *the determination of how the generation resources will be procured, if applicable; and*

m. *the assessment of all of the substantive approvals and permits that would be required to construct and operate the resources?*

Renewable Energy Generation Resources

The following issues consider whether the IPSP is adequate in assisting the government in reasonably meeting its target for 2010 of increasing the installed capacity of new renewable energy sources by 2,700 MW from the 2003 base, and increasing the total capacity of renewable energy sources used in Ontario to 15,700 MW by 2025.

2. *In proposing a portfolio of renewable energy resource development measures that will meet the short-term and long-term targets set out in the Supply Mix Directive has the OPA made a reasonable identification of the following for each initiative that targets generation from renewable resources:*

    a. *the eligible fuel sources;*

    b. *the OPA's expectations or assumptions regarding acquisition of generation from each type of fuel source;*

    c. *the risks associated with each proposed resource and how these risks are expected to be managed; and*

    d. *an assessment of the impact of renewable generation on baseload generation?*

3. *Is the manner in which the OPA compares the costs of the different types of renewable energy generation resources in determining which resources achieve the renewable energy targets in an economically prudent and cost effective manner reasonable?*

Achievement of Renewable Energy Targets

4. *Does the achievement of renewable energy targets envisioned in the proposed IPSP allow for the comparison of economic prudence and cost-effectiveness of different renewable resources to achieve the renewable energy target in an economically prudent and cost effective manner?*

Nuclear Generation Resources

The following issues consider whether the IPSP's 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 is reasonable.

5. *The IPSP must include a plan for using nuclear energy to meet base-load electricity requirements, up to a maximum of 14,000 MW of installed, in-service capacity. Are the OPA's assessments of the following reasonable:*

    a. *the level of base-load generation required over the forecast period, and the gap between that forecast and existing resources available to serve base-load;*

    b. *the economic feasibility and timing of refurbishment or additions of new nuclear power capacity up to the 14,000 MW ceiling; and*

    c. *the economic and financial risks associated with life extension options for existing nuclear facilities and with new nuclear facilities?*

6. *To the extent that the results of activities related to the Government's direction to Ontario Power Generation Inc. ("OPG"), are known at the relevant time, is the OPA's consideration of these results reasonable:*

    a. *a feasibility assessment on the refurbishment of existing facilities to review the economic, technological and environmental aspects of refurbishment;*

    b. *risks associated with Case 1B (no Pickering B refurbishment); and*

    c. *an environmental assessment process for the construction of new units at an existing nuclear facility?*

<u>Achievement of Nuclear Energy for Baseload</u>

7. *Does the OPA adequately demonstrate how the IPSP implements the nuclear energy portion of the Supply Mix Directive and whether the means by which any*

nuclear supply investments will be effected (i.e., by the refurbishment of existing facilities, by the construction of new facilities, or by a combination of both refurbishment and new facilities) are economically prudent and cost effective?

Gas-fired Generation Resources

The following issues consider whether the IPSP plan reasonably maintains the ability to use natural gas capacity at peak times and pursue applications that allow high efficiency and high value use of the fuel.

8. *Paragraph 3 of section 2(1) of the IPSP Regulation requires the OPA to identify opportunities to use natural gas in high efficiency and high value applications in electricity generation. These applications appear to be the same as, or at least a subset of, the applications that allow high efficiency and high value use of natural gas that the OPA is required to pursue under the terms of the Supply Mix Directive. Accordingly, the opportunities must be realistic from a physical and commercial perspective. In evaluating whether the requirements of this element of the IPSP Regulation and the Supply Mix Directive have been met, has the OPA properly identified:*

    a. *the criteria that it has used to determine whether an application is high efficiency and high value;*

    b. *the economic potential for such generation, above what may be included in contracts listed in the Prescribed Contracts re Sections 78.3 and 78.4 of the Act, O. Reg. 578/05; and*

    c. *any barriers to the pursuit of those applications, as well as the means by which those barriers can be eliminated?*

<u>Achievement of Natural Gas in High Efficiency, High Value Applications</u>

9. *Does the OPA adequately address how the IPSP allows for the use of natural gas capacity at peak times and enables the pursuit of applications that allow high*

efficiency and high value use of natural gas in an economically prudent and cost effective manner?

10. *Does the OPA's forecast fairly and realistically assess natural gas price risk and volatility?*

Replacement of Coal-Fired Generation

11. *Does the OPA adequately address practical factors that affect the operation of the coal-fired generating units until they are replaced (e.g. supply chain issues, unit operability to respond to system requirements, staffing and community impacts)?*

Achievement of Replacement of Coal-Fired Generation

12. *Does the OPA adequately demonstrate how the schedule set out in the IPSP allows for the replacement of coal-fired generation in the earliest practical time frame while ensuring adequate generating capacity and electricity system reliability, and that the replacement plan is cost effective and economically prudent?*

13. *Is the OPA's proposed use of new natural gas-fired generation as a means to achieve the replacement of coal-fired generation in the earliest practical time frame consistent with the provisions of the Minister's Directive, which limits the use of new natural gas-fired generation to "high efficiency, high value applications"?*

14. *The OPA has proposed the use of coal facilities as "insurance" to help mitigate the risks associated with the IPSP. Has the OPA adequately:*

    a. *measured the costs of this "insurance" and the ability to effectively rely on this insurance;*

    b. *identified these costs;*

c. *identified how much lead time would be required to call on the insurance; and*

d. *identified transmission constraints that inhibit use of the coal insurance?*

Generation Resources Outside of Ontario

15. *For each generation resource initiative that targets generation resources located outside the province, has the OPA identified:*

    a. *all significant agreements that would need to be entered into in order to allow for the construction and operation of the project, and the status of those agreements, if known;*

    b. *how much lead time is required for each project; and*

    c. *how and, if known, by whom associated transmission investments will be secured?*

3.1.2.4 TRANSMISSION RESOURCES

1. *Are the OPA's cost estimates for the following transmission resources reasonable, in particular, with respect to:*

    a. *the directly attributable cost of the transmission investments that would be necessary to incorporate and deliver energy from the generation resource to the network;*

    b. *the impact of the generation resource on transmission constraints and congestion costs; and*

    c. *the impact (other than a transmission rate or congestion cost impact) of the project on existing customers?*

2. For each of the transmission system initiatives that are proposed to address the requirements outlined in the Supply Mix Directive to strengthen the transmission system does the OPA adequately:

    a. *identify the need for the resource initiative (e.g. to comply with a reliability standard; to meet anticipated load growth; to reduce transmission congestion costs, etc.) and the relationship between the initiative and other projects it immediately supports and/or that it is supported by;*

    b. *provide a description of the transmission resource initiative, including the length and capacity of the transmission line if known, routing or general siting information and an estimate of the total project cost;*

    c. *provide a description of each phase of the project, together with a year-by-year time schedule until the planned in-service date;*

    d. *provide a schedule of estimated costs, for each project identified in item (b) above, broken down to meet the following requirements:*

        i. *costs must be expressed in dollars of the year;*

        ii. *acquisition/capital costs and interest costs must be identified separately and expressed as a single best estimate (point estimate) and as a range estimate (e.g. plus/minus one standard deviation) cumulatively until the planned in-service date;*

        iii. *annual costs must be specified, including operating and maintenance costs;*

    e. *where the resource initiative is required in order to meet a system reliability standard, identify the standard, as well as any material underlying assumptions or issues in relation to the interpretation or application of that standard; and*

f. *where the resource initiative is required or desired for another purpose, identify and quantify the benefits associated with the investment. Such other purposes could include reducing transmission system losses, reducing congestion, increasing generation reserve margins or enhancing the flexibility of transmission system operations and maintenance?*

3. *In relation to each transmission resource that is proposed for the purpose of meeting a system reliability standard, does the OPA adequately demonstrate that the proposed solution offers the greatest net benefit of all alternatives considered?*

4. *For each transmission resource that is not designed for the purpose of meeting a system reliability standard, or is designed to exceed a system reliability standard, has the OPA adequately demonstrated that the benefits of the resource exceed its costs, and that the proposed solution offers the greatest net benefit of all alternatives considered?*

Achievement of Strengthening of the Transmission System

5. *Does the IPSP plan strengthen the transmission system to:*

   a. *enable the achievement of the supply mix goals set out in this directive;*

   b. *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 of opportunities exist; and*

   c. *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?*

6. *Does the OPA adequately demonstrate how the IPSP provides for the strengthening of the transmission system to achieve the diverse goals?*

7. *To the extent that strengthening of the transmission system is proposed for purposes of system efficiency and congestion reduction, does the OPA adequately identify how and to what degree system efficiency will be improved or*

congestion will be reduced, as well as adequately justify the selection of the chosen levels of efficiency and congestion reduction?

3.2 RESOURCE PLANNING AND ACQUISITION: BEYOND THE NEAR-TERM PLAN

1. *With regard to solutions or initiatives for years beyond the period covered by the Near-term Plan that are expected to be presented at a more conceptual level in relation to resource planning and acquisition, does the OPA adequately:*
    a. *identify the need for resources;*
    b. *anticipate the composition of the resource portfolio (generation, conservation and transmission) and, for the generation resource element, anticipate the composition of the generation resource portfolio in terms of capacity, fuel source, technology and similar distinguishing features;*
    c. *provide the rationale used to arrive at the portfolio compositions, including a general description or assessment of the following, in as much detail as practicable, including:*
        i. *expected direct costs (such as capital and commodity costs);*
        ii. *expected method of procurement or acquisition;*
        iii. *expected in-service or availability dates;*
        iv. *expected or potential location of resources or, in the case of non-generation conservation resources, the persons or class of persons targeted to deliver the resources;*
        v. *integration implications (such as associated transmission or distribution system upgrades);*
        vi. *material risks and uncertainties related to the feasibility of the portfolio compositions (such as uptake under the standard offer program, technological advances, performance under existing*

contracts, changes in demand growth, resource intermittency and the need for regulatory approvals);

d. address the impact of higher/lower load growth on the need for the transmission initiative?

3.3 THE OVERALL PLAN

The following issues address the robustness of the future energy system proposed for Ontario in ensuring adequate generating capacity and electricity system reliability in the province.

1. *Is the OPA's plan, including conservation, generation and transmission resource initiatives, together with the following, reasonable:*

   a. the evaluation criteria (economic, environmental and social) used in developing the plan and the manner in which the criteria were applied;

   b. the year-by-year cumulative resource acquisition/capital cost and, separately, the interest cost for the plan, each expressed as a single best estimate (point estimate) and as a range estimate (e.g. plus/minus one standard deviation), with all costs expressed in dollars of the year;

   c. the net present value ("NPV") for the plan, expressed as a single best estimate (point estimate) and as a range estimate (e.g. plus/minus one standard deviation), with all NPV calculations being stated in dollars of a single base year. The NPV must include all applicable costs and the discount rate used must be justified;

   d. the estimated impact on wholesale electricity prices and on transmission revenue requirements (in percentage terms), expressed as a single best estimate (point estimate) in each year and as a range estimate (e.g. plus/minus one standard deviation) in each year;

e. *generating capacity vs. transmission capacity trade-offs, generation location vs. additional transmission trade-offs, schedule acceleration vs. deceleration trade-offs, and other resource trade-offs;*

f. *analysis of the plan's flexibility/robustness to changes in implementation schedule;*

g. *supporting sensitivity analysis, including all financial risks, high and low forecast risks and other significant risks;*

h. *how those risks will be managed;*

i. *how the plan can address a range of contingencies such as unexpectedly rapid or slow growth in electricity demand and material deviations in fuel prices; and*

j. *the estimated air emissions associated with the plan?*

3.4 IMPLEMENTATION OF THE IPSP INITIATIVES

1. *With regard to the monitoring of the implementation and evaluating the effectiveness of the IPSP initiatives on an on going basis:*

   a. *what are the initiatives the OPA will be required to provide updates on between triennial reviews of the IPSP, that the Board will make publicly available; and*

   b. *what will be the required timing of the updates on the issues identified in (a) above?*

3.5 SATISFYING THE REQUIREMENTS OF THE IPSP REGULATION

The following issues consider whether the requirements of the IPSP Regulation have been adequately met.

3.5.1 MARKET EVOLUTION

In Section 2.(1) 4 of the IPSP Regulation the OPA has been instructed to "Identify and develop innovative strategies to encourage and facilitate competitive market-based responses and options for meeting overall system needs".

1. *Does the OPA adequately identify and develop innovative strategies to encourage and facilitate competitive market-based responses and options?*
2. *Does the OPA adequately identify a medium term view of a competitive-market based response and options?*
3. *What specific programs has the OPA developed?*
    a. *when will they be implemented;*
    b. *what are the costs, benefits and risks of these programs;*
    c. *what other actions are required for implementing these programs and by whom; and*
    d. *what are the minimum criteria to be met to introduce each element?*

3.5.2 PLAN PREPARATION

1. *Has the OPA ensured through its consultation process, that it is clear to interested parties which projects (i.e., projects identified in the Near-term Plan that are not already the subject of review in a rates proceeding or a leave to construct proceeding) will be addressed as part of the IPSP review and may not be reconsidered by the Board after that time?*
2. *Does the OPA adequately and reasonably weigh and evaluate safety, environmental protection and environmental sustainability in the IPSP?*

a. *does the OPA indicate how it has considered these matters in developing the IPSP; and*

b. *does the OPA adequately demonstrate whether and the extent to which the IPSP was affected by a consideration of these matters as well as the basis upon which the OPA determined how implementation of the IPSP will be as predicted with respect to these matters?*

3.5.3 ALTERNATIVES TO OPA PROCUREMENT

1. *For purposes of the four elements of the IPSP Regulation, does the OPA adequately:*

   a. *identify alternatives to reliance on OPA procurement processes for the purposes of meeting the conservation and supply goals set out in the IPSP Directives, and indicate how each such alternative will reduce reliance on OPA procurement processes;*

   b. *identify how implementation would be accelerated relative to implementation by way of OPA procurement process for each innovative strategy that is identified and developed to accelerate the implementation of conservation, energy efficiency and demand management measures;*

   c. *identify how the alternative would encourage and facilitate the responses and options and how they would assist in meeting overall system needs for each innovative strategy that is identified and developed to encourage and facilitate competitive market-based responses and options;*

   d. *describe the merits and disadvantages of different options, and identify a process for further development of those options; and*

   e. *for the factors to be considered in determining that it is advisable to enter into procurement contracts for conservation or supply, identify how and why each factor was determined to be relevant to this determination?*

2. *To the extent that the IPSP contemplates implementation of an innovative strategy referred to above, does the OPA adequately identify the following:*
    a. *the costs and benefits associated with the innovative strategy relative to the costs and benefits associated with use of the OPA's procurement processes; and*
    b. *barriers to implementation of the innovative strategy, as well as the means by which those barriers can be mitigated or eliminated?*
3. *Has the OPA adequately identified the steps, timing and criteria that it will use to cease being the party responsible for procurement?*

3.5.4 ENVIRONMENTAL ISSUES

1. *Paragraph 8 of section 2(1) of the IPSP Regulation requires the OPA to ensure that, for certain "electricity projects" (transmission line, generation facility, distribution station or transformer station) that are proposed in the IPSP, the IPSP contains a sound rationale including: (i) an analysis of the impact of the project on the environment; and (ii) an analysis of the impact on the environment of a reasonable range of alternatives to the project. For purposes of this paragraph of the IPSP Regulation, does the OPA adequately:*
    a. *identify each electricity project that meets the criteria set out in section 2(2) of the IPSP Regulation and explain the basis for that determination;*
    b. *describe the following for each electricity project identified in item (a) above:*
        i. *the environment that will or might reasonably be expected to be directly or indirectly affected by the electricity project;*
        ii. *the effects that the electricity project will or might reasonably be expected to have on the environment;*

iii. *the actions that are or might reasonably be expected to be required in order to prevent, change, mitigate or remedy the effects referred to in item (ii) above;*

c. *identify a reasonable range of alternatives to each electricity project identified in item (a) above;*

d. *describe the elements set out in item (b) above for each alternative identified in item (c) above; and*

e. *for each electricity project, provide a comparative evaluation of its environmental impact relative to the alternatives identified for that project?*

3.5.5 ENVIRONMENTAL EXTERNALITIES

1. *Does the OPA adequately take environmental externalities ("EE") into account in considering alternative ways of achieving the goals set out in the Supply Mix Directive?*

   a. *does the OPA address EE in a consistent manner for all IPSP resources (transmission investments, generation resources and conservation initiatives);*

   b. *does the OPA only include EE that are expected to have a significant impact;*

   c. *does the OPA quantify EE in appropriate physical units and does the OPA identify the assumptions underlying such quantification;*

   d. *does the OPA quantify EE on a life cycle basis to the extent practical; and*

   e. *does the OPA show, to the extent practical, how EE will be considered in planning decisions?*

PART TWO: PROCUREMENT PROCESSES

3.6 COMPETITIVE PROCUREMENT

1. *Do the OPA's competitive procurement processes adequately address the following provisions:*

    a. *identify the resource being procured and, where applicable, the region in which the resource is required to be located. For generation resources, this should include eligible fuel sources and minimum capacity and output parameters, as well as the total number of MW to be procured under the process. For conservation resources, this should include a description of the eligible conservation activities (such as demand response, load shifting or behind the meter generation) and the total number of MW to be procured in relation to each;*

    b. *identify the criteria that will be used to evaluate each proposal, how those criteria will be applied or evaluated and the weight given to each criterion and ensure that the criterion are applied in a consistent and fair manner to all proponents, and include the following:*

        i. *date of availability of the resource;*

        ii. *type and status of project financing;*

        iii. *creditworthiness or financial strength of the proponent;*

        iv. *need for and status of substantive project and site approvals or permits;*

        v. *need for and status of acquisition of land use rights;*

        vi. *for generation resources, all indirect costs (such as the extent of any costs associated with any necessary network investments, waste disposal or remediation costs, etc.) and all indirect benefits (such as congestion reduction);*

vii. *for generation resources, the impact on affected transmission or distribution systems and/or natural gas infrastructure in Ontario;*

viii. *technical or equipment requirements for the resource and technical or operational experience of the proponent;*

ix. *maturity of the project technology;*

x. *major project risks, such as delays in implementation, regulatory risks and financial risks and obligations of electricity consumers (such as the financial risk of non-performance by the counterparty), and measures for mitigating those risks;*

xi. *pricing;*

c. *Where a prequalification phase is used, does the OPA adequately consider a number of the above evaluation criteria for purposes of that phase and reasonably address the following:*

i. *require the proponent to agree that, if selected, the proponent will execute a contract on specified terms;*

ii. *include either a copy of the contract that selected proponents will be required to execute or an adequate summary of the key terms and conditions of that contract – key terms should include term, pricing, critical timelines for being in-service or available, penalties for non-performance by the selected proponent that are appropriate to the nature of the resource being procured, and adequate measures enabling the OPA to assess and verify performance by the selected proponent. Contract terms may be flexible or open to negotiation provided that this does not affect the fairness of the process;*

iii. *except where unreasonable, include a requirement that all proponents provide bid security in an amount commensurate with the project size and development status, and the terms on which*

that security may be forfeit in whole or in part (such as failure of a selected proponent to enter into a contract with the OPA);

iv. *include mechanisms that ensure that conflicts of interest and collusion between bidders are avoided and that no proponent will have an unfair advantage in relation to the procurement process by reason of preferential access to information or otherwise;*

d. *Does the OPA articulate the following as part of competitive procurement processes:*

i. *how prospective proponents will be informed that a procurement process has been initiated by the OPA;*

ii. *mechanisms that will allow prospective proponents to obtain information about procurement opportunities generally as well as about specific procurement initiatives, and how the procurement process operates; and*

iii. *any registration or other similar conditions that must be met in order for a prospective proponent to participate in the process?*

3.7 NON-COMPETITIVE PROCUREMENT

1. *Does the OPA articulate the following as part of non-competitive procurement processes:*

a. *the circumstances under which that process can or will be used;*

b. *how the financial risks and obligations of electricity consumers (such as the financial risk of non-performance by the counterparty) that might result from use of that process can be mitigated;*

c. *the process by which the OPA will approve and document its decision to use that process; and*

d. *an obligation on the OPA in each case to make public its decision to use that process and the reasons justifying that decision?*

3.8 STANDARD OFFER PROCUREMENT

1. *Does the OPA articulate the following as part of a standard offer process:*

   a. *the resources to be procured, including the nature of the resources and the quantity to be procured;*

   b. *the methodology to be used to determine the standard offer price(s) for each resource;*

   c. *whether the standard offer will be subject to a ceiling or cap in terms of total participation;*

   d. *measures that will be used to avoid the "hoarding" of standard offer contracts;*

   e. *how financial risks and obligations of electricity consumers (such as the financial risk of non-performance by the counterparty) that might result from use of the standard offer process can be mitigated;*

   f. *other key elements of the standard offer, including:*

      i. *eligibility criteria (including in relation to type of fuel or activity, ownership, location, in-service or availability date, creditworthiness, etc.);*

      ii. *security requirements;*

      iii. *queuing procedures, if applicable; and*

      iv. key standard offer contract or tariff terms and conditions (including term and default provisions)?