TRANSFORMING TORONTO
Local Power is the Answer

December 12, 2007

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2700
Toronto, ON M4P 1E4

Re: Transforming Toronto – Initial Submissions for Issue List
EB-2007-0707-OPA-IPSP and Procurement Processes- Phase 1

Dear Ms. Walli:

We are pleased to provide our submissions on the Issues List for the Ontario Power Authority's (OPA) Integrated Power Systems Plan ("IPSP") in accordance with the Ontario Energy Board's *Notice of Application*.

Transforming Toronto (www.transformingtoronto.ca) is a citizen group that was formed to present an alternative vision for energy supply and management for the City of Toronto. As such, we feel the IPSP put forth by the OPA is lacking in certain fundamental areas. Our comments below reflect our perspective on six additional issues that should be included in the evaluation of the IPSP.

1. **<u>Additional Issue Number 1:</u> Could the OPA meet Ontario's electricity requirements at a lower cost or lower risk (or both) by additional procurement from some or all of the following:**
    a. **Conservation, demand management, energy efficiency**
    b. **Renewable energy, including wind, solar, small run-of-river hydro, geothermal and biomass**
    c. **Combined heat and power**

Transforming Toronto submits the IPSP is heavily weighted toward large-scale nuclear power resources (over 50% of the province's needs), and this puts the ratepayer at undue risk, and potentially higher costs than are necessary.

There are a number of types of risks that are evident with the approach put forth in the IPSP. The first is 'portfolio risk'. Just as a financial advisor would advise against having 50% of an individual's investment portfolio in one stock, there is also a high degree of risk associated with this amount of generation from one source. Transforming Toronto submits that a more diverse energy portfolio, both in size/scale as well as type of resource, reduces the risk to the ratepayer.

The second risk associated with the IPSP approach relates to 'price risk'. Nuclear has a well-documented history of delays, cost overruns and breakdowns which can ultimately increase the actual versus estimated cost of new or re-furbished facilities. In addition, these facilities will require additional transmission capacity or upgrades, which are expensive and, we submit, not accounted for in the costs of nuclear. In contrast, conservation and demand management costs can be managed in a more dynamic manner, while the extension and expansion of programs such as Standard Offer Contracts can provide a more concrete price forecast.

The third risk associated with the IPSP relates to 'delivery risk'. Again, the history and nature of nuclear power development requires long lead times, extensive and expensive environmental assessment processes, and a high degree of social friction. With a ten-year time horizon for construction, Transforming Toronto suggests it is reasonable to assume that the potential for delays is high. This places greater risk on the ability of the OPA to ensure sufficient capacity within the timeframe it is required. Conservation and demand management efforts can be accelerated and begin delivering immediate benefits, while renewables such as wind, solar and geothermal can typically be implemented within a 2-3 year period, at most. Given the urgency to replace disappearing capacity noted in the IPSP, Transforming Toronto suggests that the IPSP does not prudently consider the delivery risk associated with putting all its eggs in a nuclear basket.

Transforming Toronto therefore submits that the IPSP must adopt a more balanced, diversified supply mix portfolio that will reduce both risk and cost to the ratepayer.

2. **<u>Additional Issue Number 2:</u> Does the IPSP sufficiently consider the social, environmental and health concerns of the proposed supply mix and associated infrastructure?**

   Transforming Toronto suggests that the guiding mandate of the OPA in the development of the IPSP limits the overall effectiveness of the plan. In essence, a plan is only useful if it has the potential for successful implementation.

   The IPSP is primarily evaluated on its compliance with directions from the Minister and whether it is economically prudent and cost effective. It is assumed that the Plan will be able to transcend or mitigate any social or environmental considerations as part of the implementation process. While these issues are occasionally highlighted in the plan -- such as community resistance to transmission line construction or large

nuclear power plants – in and of themselves they do not seem to have been given sufficient weight in the consideration of the options.

Transforming Toronto suggests that since it is the ratepayers in communities across Ontario who will ultimately pay for the recommendations in this Plan, that the Plan should place a high degree of importance on these social and environmental considerations at the outset, including proactive community engagement. Furthermore, where there are documented potential health risks – for example, studies have demonstrated double the incidence of childhood leukemia adjacent to high-voltage transmission lines – we submit that the precautionary principle be employed at a minimum, and the health-related impacts and costs be factored into the analysis. Just as the OPA would not select a resource that would be recklessly expensive, we submit they should not recommend resources (or associated infrastructure such as transmission lines) that will place a social or environmental/health burden on the communities across the province.

Transforming Toronto therefore submits that the IPSP must more proactively address the social, environmental and health impacts of the various options considered for the Plan.

3. **<u>Additional Issue Number 3:</u> Has the IPSP fully pursued the potential for conservation and demand management as well as renewables beyond the minimum levels directed by the Minister?**

   The Minister has directed the OPA to maximize feasible conservation and renewable resources before other supply resources. Based on a variety of studies, as well as demonstrated experience in other countries or regions, Transforming Toronto submits that the OPA has been overly conservative or even pessimistic in the assumptions for conservation and renewables in the IPSP. Other markets such as Germany, California, and Spain have already implemented far greater contributions from conservation and renewables than what is forecast in the IPSP for the next 10 years. For example, Germany – a country the size of southwestern Ontario -- currently generates 2,600 MW of solar power, while the OPA projects only 80 MW of solar here by 2027. With the right procurement policies in place, as well as with the anticipated reductions in costs through design innovation and economies of scale, conservation and renewables will be more cost-effective and can form a greater contribution in meeting Ontario's energy needs.

   Transforming Toronto submits that the OPA can and should incorporate more aggressive conservation and renewable goals into the IPSP.

4. **<u>Additional Issue Number 4</u>: Has the OPA's analysis fully evaluated the potential for maximizing demand response resources, and does it provide for a process to facilitate such procurement?**

Transforming Toronto submits that the procurement of cost-effective demand response resources should take priority over the procurement of additional high-cost peaking resources, and that the IPSP does not fully take into account the potential of demand response options, nor does it provide for a process that facilitates the procurement of these resources.

In light of the fact that the Government of Ontario places a priority on demand response resources, it would seem that the IPSP should seek to maximize this resource. Experience suggests that demand response efforts can be significantly more cost-effective than the development of additional capacity. And since a significant amount of new built capacity is being planned to accommodate peak loads, Transforming Toronto submits that resources and methods that can reduce or shift peak loads should be aggressively pursued.

In order to fully maximize the potential, we also submit that a competitive and transparent procurement process needs to be implemented. With such a process, the market will determine the optimal amount of demand response resource supplied much more effectively than an arbitrary allocation.

5. **<u>Additional Issue Number 5:</u> Are the IPSP's avoided cost estimates reasonable?**

Transforming Toronto submits that the OPA's avoided cost estimates appear to be low since they are based on overly optimistic assumptions about the costs of new and refurbished nuclear. Based on Ontario's experience with nuclear power facilities over the years, the construction costs appear to be low while the capacity utilization rates appear to be too high. Furthermore, evidence suggests that worldwide demand for nuclear is creating significant price increases for reactor-grade uranium as well as project construction resources. As a result, the avoided costs for nuclear generation appear low, thereby making alternatives such as conservation and renewables appear to be less cost-effective than they really are.

6. **<u>Additional Issue Number 6:</u> Does the IPSP properly account for the benefits of local distributed generation, both in terms of cost and system reliability/security?**

Transforming Toronto submits that the IPSP is disproportionately focused on large-scale, centralized power plants, which in turn will often require the construction of new transmission lines or extensive upgrades to existing lines. Transforming Toronto submits that these costs do not get fully loaded into the cost of these resources (e.g. nuclear power), and therefore further underestimates the cost of these technologies.

In contrast, smaller scale local generation such as rooftop solar PV, small-scale wind power, local geothermal and conservation do not require expenditures for transmission as they simply connect to the distribution system. As a result, Transforming Toronto submits that there are significant savings from these technologies that are not accounted for in the IPSP. For example, the proposed 'third-

line' into Toronto is estimated to cost $600 million, primarily to accommodate nuclear capacity. However, since the OPA and the IPSP do not appear to consider the distribution system as within the scope of their mandate, these opportunities do not appear to have been sufficiently evaluated.

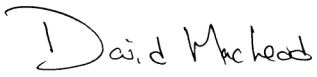
Furthermore, new transmission lines and upgrades are proposed to enhance the reliability of the system. Transforming Toronto submits that a significant portfolio of small-scale, local and distributed generation resources integrated into the distribution system will result in a more secure, reliable and resilient grid. Simply put, 1,000 diverse, small-scale generation points distributed across Toronto will provide greater stability than three main transmission 'arteries'. If one wind turbine goes down, the whole system is not threatened with collapse; whereas if one nuclear plant goes down or one transmission line from a nuclear plant goes down, than the entire system is under threat of blackout.

Transforming Toronto submits that there is a strong need to factor in the financial and system reliability benefits of local distributed generation.

Ms. Walli, based on the points outlined above, we respectfully submit that these additional items should be added to Issues List for the IPSP.

If you have any questions or require clarification on any of these points, please feel free to contact us. Thank you for the opportunity to provide our submission.

Sincerely



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