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February 3, 2006

The Honourable Dalton McGuinty
Premier of Ontario
Legislative Building
Queen's Park
Toronto, Ontario
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Dear Premier McGuinty:

**Re: Ontario Power Authority's *Supply Mix Advice Report*, December 2005
EBR# PO05E0001**

I am writing to provide comments on the Ontario Power Authority's (OPA's) December 2005 *Supply Mix Advice Report* (EBR# PO05E0001). At this time, the Province of Ontario is defining its energy future. We have an opportunity to embrace sustainable energy and reap the benefits long into the future. However, the plan described in the OPA report will not help us to achieve this vision. This letter describes my key concerns about the OPA's recommendations, and provides steps that would lead us to an alternative vision, a sustainable energy strategy.

(1) Energy conservation and demand management

The OPA report recommends reliance on nuclear power, plus some renewable energy. However, the report recommends a remarkably small role for energy conservation and demand management (CDM). Of all the energy supply options available to Ontario, CDM provides the greatest environmental health benefit. By reducing energy demand and increasing energy productivity, we can prevent new sources of air pollution, greenhouse gases or radioactive waste. Embracing CDM would also reduce the need to build more expensive energy supply and transmission capacity in Ontario.

Considering these benefits, the OPA should be a great champion of CDM. The report should have a generous CDM target as its foundation and primary goal, and describe the steps Ontario will take to achieve this vision. Instead, the report indicates that OPA was not able to properly assess the potential for conservation (Volume 1, p. 16). As a result of this inability, OPA assumes that there will be little demand reduction through CDM efforts, and makes up for this by recommending more new energy supply capacity. CDM is not included in the OPA's comparison of the energy options'

environmental impacts (Volume 1, p. 31), indicating that CDM was not considered on an equivalent basis as new energy supply.

At its meeting July 20, 21 and 22, 2004, Toronto City Council requested that the Government of Ontario set targets to reduce electricity demand by 40 percent by 2020, using energy efficiency and conservation. According to a study by the Pembina Institute and the Canadian Environmental Law Association (2004), it is possible for Ontario to reduce energy demand by 40 percent by the year 2020, relative to business as usual. This would be achieved through a combination of financial incentives, approaches to financing, and reducing barriers to cogeneration. The study also estimates that Ontario is capable of producing more than 55 percent of its energy supply from renewable sources by 2020, if implemented in concert with these aggressive energy conservation measures. Even if these estimates are ambitious, there is room for a much larger role for CDM than the five percent demand reduction by 2025 assumed by the OPA (Volume 1, page 5).

To achieve a sustainable energy future, the Province must explore innovative CDM approaches and best practices, with the goal of truly creating a culture of conservation. For example, the OPA should examine and expand successful techniques, such as providing local electric utilities with the resources and flexibility needed to reduce their customers' energy demand. This approach has encouraged Toronto Hydro Electric System Ltd. to commit to reducing its customers' peak energy demand by five percent by 2007. By helping utilities reduce their customers' demand on peak demand days, particularly on smog alert days, the OPA could reduce Ontario's need for expensive energy imports while improving air quality and health.

(2) Nuclear energy

While I support Ontario's decision to phase out coal-fired electricity generation by 2009, I have concerns about the potential reliance on nuclear power recommended in the OPA report. Canada is already storing 36,000 tonnes of radioactive uranium waste. The risks from radioactive waste continue for thousands of years after the fuel has been used to generate electricity, and the waste requires management over this time period. The use of nuclear energy can result in releases of radioactive material during operations, and there is a very low chance of a catastrophic release caused by natural events, accidents or foul play. Nuclear power also raises a number of questions regarding cost and reliability. Ontario's nuclear reactors have routinely incurred cost overruns for building, refurbishment and operation of facilities, and many have underperformed relative to expectations. The use of nuclear power creates risks that must be managed for many generations to come. This energy source therefore does not adhere to the key principle of sustainable development. In contrast, CDM and renewable energy do not carry these risks and impacts.

In addition to concerns about reliance on nuclear power, I also have concerns about the adequacy and completeness of the OPA's assessment of nuclear power. While the report indicates that it assesses the life-cycle impacts of energy options (Volume 1, p. 30), the main report (Volume 1) does not mention the chance of a catastrophic event occurring at a nuclear energy facility. While the probability of this type of mishap is low, the potential impacts on health are substantial, and must be considered in any meaningful discussion of nuclear power.

In addition, I do not believe that OPA's conclusion that, "the environmental indicators show that nuclear energy has lower impact over its life cycle than many other supply sources, including natural gas generation" (Volume 1, p. 25), is sufficiently well-founded. First, the assessment of nuclear power did not consider all potential adverse impacts from the energy source, including a catastrophic

outcome. Second, the weighting system used to compare the environmental characteristics of the energy options (Volume 1, p. 30), was not balanced appropriately: it puts too much emphasis on impacts from greenhouse gas emissions (weight of 20), compared to impacts such as radioactivity, waste and water impacts (weight of 1 each).

(3) Recommendations

Recommendation 1:

I urge the OPA and the Government of Ontario to create a sustainable energy strategy that gives clear priority to conservation and demand management approaches, and supply from low-impact, renewable energy sources, rather than placing such a heavy emphasis on nuclear energy.

This recommendation is consistent with the request made by City Council in July 2004 for the Province to develop a strategy using, "a combination of measures, in the following order of priority: energy conservation and efficiency, ecologically sustainable renewable electricity supply sources and small scale high-efficiency natural gas-fired co-generation power plants that replace existing mono-generators and provide electricity and heat to local district heating grids, rather than by nuclear energy".

Recommendation 2:

I recommend that a comprehensive Health Impact Assessment of Ontario's energy options should be undertaken, including nuclear power and conservation and demand management. I recommend that the Province of Ontario engage an independent party to complete the HIA, with advice from the Chief Medical Officer of Health.

As described above, in my opinion, the OPA report describes Ontario's energy options without sufficiently characterizing and assessing their environmental and health impacts. Having a clear picture of the environmental and health impacts of the various energy options is key to understanding their long-term costs and suitability for Ontario. Health Impact Assessment (HIA) is the most comprehensive means available for assessing the health, social, economic and environmental impacts and benefits of our energy options. An HIA for Ontario's energy options should include quantitative estimates of all inputs required and outputs generated by the energy options, using a true lifecycle assessment. It should include an assessment of a catastrophic event at a nuclear energy facility. It should also include an assessment of any anticipated benefits to air quality and health from reduced demand for domestic and imported energy. Health care costs should also be estimated for all energy options.

With innovation and a strong will to create a sustainable energy strategy, I believe Ontario is capable of moving toward this vision over the long-term.

Sincerely,

ORIGINAL SIGNED BY

David McKeown, MDCM, MHSc, FRCPC
Medical Officer of Health

cc: The Honourable Donna Cansfield, Minister of Energy
The Honourable Laurel Broten, Minister of Environment
The Honourable George Smitherman, Minister of Health and Long-Term Care
Dr. Sheela Basrur, Chief Medical Officer of Health
Mr. Jan Carr, Chief Executive Officer, Ontario Power Authority
Mr. Peter Love, Chief Energy Conservation Officer, Ontario Power Authority
Coordinator, Energy Economics, Office of Energy Supply and Competition

Attach: Letter from MOH to the Honourable Dwight Duncan, Ontario Minister of Energy, dated
August 24, 2005, *Recommendations on Ontario's Future Energy Supply Mix*