



Ontario Power Authority

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April 22, 2008

Mr. Jack Gibbons, Chair
Ontario Clean Air Alliance
625 Church Street, Suite 402
Toronto ON M4Y 2G1

Dear Jack:

I am in receipt of your letter of April 10, 2008, criticizing the Ontario Power Authority's proposal to procure a 350 MW natural gas-fired peaking power plant in Northern York Region.

I must admit some surprise and confusion at your position for the following reasons:

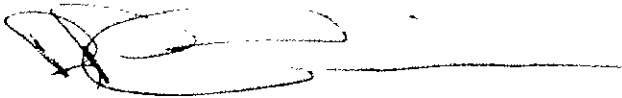
- 1) You were a strong proponent for the elimination of coal-fired generation in Ontario and its replacement by natural gas-fired facilities.
- 2) You were an active participant in the Northern York Region Community Working Group in 2005 which concluded that local gas-fired generation was preferred over transmission. The group, with your participation, accepted the report.
- 3) While we both agree on the importance of conservation, you need to recognize that the building of conservation as a sustained behaviour requires incentives as in demand reduction, installation of new technology, and personal commitment, all of which take time to put in place – while the community electricity use continues to grow at well above the provincial average from an electricity reliability margin that is smaller than the provincial norm.
- 4) You are aware that this high growth region is serviced by only one transmission line today, which does not provide the level of reliability or local security of supply needed to meet IESO standards and community expectations – an expectation that is entirely justified in that it is enjoyed by other Ontarians.
- 5) I am sure you are also aware that a gas-fired plant which is likely to be used less than 1000-1500 hours per year is more cost-efficient, when considering both capital and operating costs over its life, as a single-cycle plant rather than either a cogeneration or combined cycle technology.
- 6) Since you speak frequently about thermal efficiency, I presume you must also be aware that the highest efficiency figures for combined-cycle and cogeneration plants are only achieved under steady-state operating conditions at the design-output for the plant. This is not the duty cycle that will be seen by the proposed plant since the requirement is to respond rapidly to dynamically changing gaps between electricity supply and demand.


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Jack, you have been an effective contributor to the evolution of public policy in the electricity industry over the years. I am therefore quite surprised and somewhat disturbed to be advised that in the many public meetings you have attended in Northern York Region, you have not addressed obvious statements of misinformation from your colleagues. These include the claim that “the proposed plant will use 40,000 gallons of water an hour” – this is a gross exaggeration; that “the plant will emit radon gases” in highly toxic quantities – this is completely false; and that the exhaust stacks “will be over 200 feet high” – exhaust stacks depend on site and technology but are unlikely to be any higher than half that amount. Responsible decision making, like reasonable conversation, requires all parties to contribute accurate information.

I attach a copy of David Butters of APPRO’s recent letter which addresses a number of the technical issues relating to the plant. I hope you will find David’s letter both informative and educational.

Yours truly,



 Dr. Jan Carr
Chief Executive Officer

cc: David Butters, President and CEO
Association of Power Producers of Ontario

Attachment

25 Adelaide St. E
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Toronto ON, M5C 3A1



APPrO
ASSOCIATION OF
POWER PRODUCERS
OF ONTARIO

April 15, 2008

Her Worship Mayor Phyllis Morris
Town of Aurora
1 Municipal Drive, Box 1000
Aurora, Ontario L4G 6J1

Your Worship,

Recently there has been a lot of discussion about the pros and cons of the Ontario Power Authority's Request for Proposals for a 350MW peaking generation station in Northern York Region.

The Association of Power Producers of Ontario (APPrO), which represents almost all of Ontario's electricity generators, believes that for residents and decision-makers in Northern York Region to make the best informed decisions regarding plans for a peaker, it is important that every effort be made to ensure that the right information is available, and that misunderstandings and wrong information be corrected. That's just common sense.

Unfortunately, our members who are participating in the Ontario Power Authority's Northern York Region Request for Qualifications (the "NYR RFQ") are prohibited from speaking out under the terms of the RFQ.

APPrO and its members include both publicly and privately owned companies who are highly qualified and successful in building all types of power plants all over the continent: big and small, using every type of generation technology from nuclear to windpower. They have no vested interest in any particular type of generation (and in fact support conservation and demand efforts where economically rational) but are responding to the RFQ to make it a reality in as timely, low risk and cost effective manner as possible for Ontario's electricity ratepayers. Since they cannot speak for themselves, then APPrO must speak for them.

I want to set the record straight on a few things since there have been so many misrepresentations and misunderstandings on this matter:

Claim:

- *NYR doesn't need a 350 MW peaker -- all of Northern York Region's electricity needs can be met by conservation, demand management and a small 30 MW peaker...*

Fact:

- The 350 MW facility is being built partially for reliability reasons and partially to address growth demand across the region:
 - Current regional load is about 1700 MW¹.
 - Local peak demand reached about 375 MW in 2005, and load growth is estimated to be 3.25% / year: about 55 MW per year, or 140 MW of additional demand by 2015. Recognize that this is local demand only -- provincial peak demand is far greater than this.
 - The adequacy of transmission service to Northern York Region (NYR) has been an ongoing concern for some time:
 - Ontario's Independent Electricity System Operator's (IESO) reliability rules require ensuring redundancy in the case of the loss of a primary supply line serving the area;
 - Reliability risk is primarily to the northern communities:
 - 6 out of 9 York Region municipalities and Bradford West Gwillimbury in Simcoe County;
 - Infrastructure to the northern communities is limited to one 230 kV double-circuit transmission line and Armitage Transformer Station (TS);
 - In NYR, should a major transmission failure occur local demand could not be met by any combination of conservation or demand management (you can't conserve it if you don't have it...)...or a 30 MW peaker;
 - A transmission upgrade was not an acceptable local option.
 - The Ontario Power Authority (OPA) and a Community Representative Working Group collaborated on a review of all possible alternatives which included participation from all of the impacted municipalities. The final Working Group recommendations were conditionally supported by various stakeholders including the Town of Aurora.
 - A plan to meet both NYR's reliability AND growth needs as well as Ontario's integrated system needs resulted in the current proposal. It was approved at the Ontario Energy Board later that year, and the OPA is now implementing the plan.

¹ Northern York Region Electricity Supply Study Consultation Report, 2005

- Basically, the plan states that after conservation and demand reductions to manage peak demand:
 - Generation in Northern York Region is preferred over transmission plus generation elsewhere;
 - The needs of Northern York Region would be best met by a natural gas-fuelled simple-cycle (peaking) generating plant;
 - If a generation contract could not be secured in the area, then transmission would become the long-term supply solution.
- Because Ontario operates an integrated electricity system, there is also a need to provide peaking capacity to meet system wide demands (we all share all of Ontario's energy resources). This is even more important considering the complete phase out in 2014 of Ontario's coal-fired generation which currently help to meet intermediate and peak system needs.
- The OPA's NYR plan is a responsible and cost-effective way to meet all the above needs.

Interestingly, Mr. Jack Gibbons, the chair of the Ontario Clean Air Alliance participated in, and supported that plan in 2005, although he now takes a different position. Mr. Gibbons' organization also supported the OPA-contracted Portlands Energy Centre's gas-fired 525 MW plant, designed to meet Toronto's local reliability needs. Mr. Gibbons' also has championed Ontario's coal phase-out for many years. In fact, the OCAA promoted converting the 4000 MW Nanticoke coal-fired plant to natural gas (an expensive and impractical idea).

Ontario's Integrated Power System Plan's (IPSP) which is now before the Ontario Energy Board, and incorporates the NYR plan, calls for a "smart gas strategy" which includes using gas for peaking applications such as in NYR.

Claim:

- *The OPA plan for a 350 MW peaker is too big, too costly and too polluting...*

Fact:

- On a cost per megawatt basis, a peaking plant is the least expensive gas-fired generator that can be built:
 - Other more complex generation types such as Combined Cycle Gas Turbine (CCGT) or Combined Heat and Power (CHP) are at least 2 to 3 or more times more expensive to build than a peaker for the same capacity.
- Peakers can also stop and start far more quickly than either CCGTs or CHP units, which are less flexible. Local reliability and Ontario's system needs this kind of flexibility.

- Some residents have stated that peaking plants need water. A peaker doesn't use any water for cooling. CCGTs and CHPs on the other hand do use large volumes of water. APPrO understands that water use is a major issue for the Region.
- CCGT and CHP make more efficient use of the heat from gas-fired turbines by using that heat to convert water into steam for a steam turbine. The steam turbine is also connected to an electric generator. As a result they are more complicated and expensive to build. CHP also produces heat for heating, or for industrial processes.
- All gas fired turbines operate within a similar range of efficiency when burning gas:
 - For the same gas turbine and the same run time, a turbine operating in combined cycle or CHP mode will emit the same amount as a peaking unit;
 - Combustion units operating in CHP mode need to go through a staged start-up process so as not to overheat and stress the heat recovery steam generator. This staged start-up often has higher emissions levels than the start-up levels of a peaking unit;
 - The OPA rules for a very fast dispatch of the Peaker mean it gets to low NOx operation very quickly. A CHP plant that is dispatched daily likely will have higher total emissions than a peaker due to the prolonged staged start-up (for the same combustion unit and same run time);
 - As the CHP plant will operate more frequently than a peaker, the total mass of emissions released into the local air shed will be higher for the CHP plant than a peaker, who's operation is likely to be very intermittent.
 - A CHP plant, by definition, needs to be located near a thermal host, and the host may have its own emissions which must be considered when assessing the total local impacts;
 - Regardless, if a turbine is fired with natural gas, its emissions are lower than coal firing;
 - In Ontario, plants must meet strict MOE standards for ground level concentrations of pollutants. Stack dispersion modeling is used to determine stack heights. Simple cycle and combined cycle plants are subject to the same environmental regulations and stack heights are not necessarily affected by the type of plant;
 - All power plants require a Certificate of Approval from the Ministry of Environment and must meet very stringent emissions as well as other environmental safeguards. The penalties for non-compliance are extremely onerous.
- 99% of overall NYR emissions come from traffic, residential and commercial sources. Continued growth in the area will result in far greater emissions than a high-efficiency, closely monitored plant designed only to operate 10% of the time:

- Improved building codes and development practices would do more to address emissions concerns than rejecting any type of local gas fired generation at this point.

It's time to focus on what's real.

The OPA's current solution to the challenges in Northern York Region is one which is responsible and practical in terms of local and provincial needs, sound planning principles, environmental sustainability, and ratepayer costs. Nor is the generation component of the plan being advanced in isolation from other initiatives either: conservation and demand management are an important part too.

But we should be clear that the alternative to the peaker isn't Mr. Gibbons' proposal or anything like it - it's a major new transmission line which Mr. Gibbons has made clear he is also opposed to. That's reality and those are the choices. Mr. Gibbons does a grave disservice to the people of your region and to the entire province when he chooses to ignore these facts.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Butters', written over a large, light-colored oval shape.

David Butters
President