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ORTECH Power Points™

**The OPA and the Law of Unintended Consequences
or
“It seemed like a good idea at the time.”**

by

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On Tuesday, May 13, 2008, the Ontario Power Authority, (the “OPA”) released a document entitled “Renewable and Clean Energy Supply Procurement Update”. This document, among other things, sets out proposed changes to the Renewable Energy Standard Offer Program (the “RESOP”). The changes, most of which were not specifically identified, appeared to be in response to two perceived problems: (i) transmission constraints at transformer stations primarily in southwestern Ontario and (ii) the monopolization of grid access by commercial proponents with the resultant freeze out of small and community projects with particular concern for farm based biomass projects. While awash with commitment to stakeholder consultation, the document is a testament to the inexorable law of unintended consequences, both in the past and potentially in the future.

To open up access to the grid, the OPA took two steps. It froze all current standard offer contracts to completed applications as of the close of business Monday, May 12, the previous day. Any new applications will be subject to the revised RESOP contract which has yet to be published. Secondly, the new RESOP rules will contain two restrictions: (i) no more than 10 MWs of projects per proponent per transformer station and (ii) no more than 50 MWs of projects per resource type before commercial operation of any one project. In addition, the new RESOP contract will contain project milestones, presumably so that developers could not tie up access to the grid and yet fail to expeditiously bring their projects to commercial operation.

The almost retro-active staying of the current standard offer contracts is noteworthy. In the first place, the OPA clearly knew what was occurring and actually abetted the subdivision of larger projects into 10 MW components. For example, an ORTECH client had a 30 MW project which he intended to divide into 10 MW segments. At each of the earlier OPA teleconferences he managed by one means or another to ask the OPA whether this segmentation of a larger project into three smaller projects was acceptable under the RESOP rules. In each case the OPA answered, almost religiously, that this was permissible provided that each of the 10 MW

projects was separately metered and connected. In reliance on the OPA's public statements he proceeded to develop his projects. This particular developer and others like him have a very good argument that they were induced to spend money developing projects that they may not be able to bring into commercial operation. The situation is reminiscent of the case of the "early movers". These early movers were companies that had built or begun construction of projects in reliance on the opening of the Ontario electricity market in May 2002. When power prices were frozen in late summer 2002 in response to public clamour over high electricity prices, these early movers or "orphans" were left to the mercies of the spot market with the result that their investments had negative or at best marginal rates of return. The outcome was that the government settled with these early movers either by negotiating separate PPA's or, ironically, making these projects eligible for standard offer contracts. The OPA might find itself in a position where it is obligated to consider a similar mitigating measure or at least grandfathering projects that are sufficiently advanced in development to warrant such treatment. Even the much maligned "SIFT" legislation which effectively terminated the market for income trusts contains "phase in" provisions to allow participants time to adjust to abrupt changes in policy.

The decision to limit a proponent to 10 MWs per transformer station may have unintended consequences. The major problem will be the definition of "proponent". For instance, there are certain equity investors that are purely financial investors which independent developers rely on for equity capital. Given the capital intensive nature of renewable energy projects, these financial investors will generally provide in excess of 90 per cent of the capital for a standard offer contract with the developer having a sliver of equity. In determining who is a "proponent" under this rule and the 50 MW rule, will these equity investors be limited to one project per transformer station or a maximum of 50 MWs under development? Is it really the intention of the OPA to constrain the sources of capital in the Ontario market? Left unanswered, as well, are the implications of these rules for the Northern Hydro Initiative.

The clear favouring of community based projects in the new RESOP program is also problematic. These community groups are often strong on enthusiasm but short on technical and financial expertise. Wind, in particular, is a highly technical business and a shortfall in revenue or an increase in operating costs or a combination of both so that net operating revenues fall by 10 per cent will leave a project with a negative rate of return. With a 10 MW limit, a RESOP wind project has no bargaining power with major turbine suppliers. US statistics for 2006, show a range of turbine pricing from US\$1.3 MM/MW to US\$1.6 MM/MW. The low end of the price range is available only to repeat customers with "frame" or long-term supply agreements. The RESOP wind project would be at the top end of the range which will significantly increase in 2007 and 2008 because of rising commodity prices. There are two potential results, both adverse, from the increase in turbine prices. The RESOP contract at current pricing including CPI adjustments, will not be economical even for community groups that are prepared to accept a reduced rate of return if these groups intend or are able to purchase equipment from major turbine manufacturers. Secondly, the community groups may be forced to turn to tier 2 turbine suppliers with equipment that is unproven or difficult to finance. Even without the dramatic rise in turbine pricing, an increase in RESOP pricing is necessary because most of the good wind areas in Ontario have already been leased up so that community projects are often relegated to lands with substandard wind regimes. At current

turbine costs and RESOP pricing, ORTECH considers average wind speeds of 6.8 metres per second at 80 metre hub height barely able to produce marginal rates of return. If community based projects are in areas with lower wind speeds, which is probably the case, then higher RESOP pricing will be required.

There are two other factors to be considered. Turbine supply agreements and warranty and maintenance contracts are complex documents. Turbine prices are usually subject to foreign exchange risk and commodity pricing adjustments. Turn key contracts are rare or expensive and warranty provisions have been severely reduced from the early contracts when wind was being established in Canada and there was a glut of turbines on the market because of the temporary expiry of the US production tax credit. Not only do community groups lack leverage to extract better terms from the turbine manufacturers, in many cases these groups will be unaware of the technical and operational risks that they are assuming, particularly once the limited warranty runs out. Secondly, the size of a 10 MW wind project with a capital cost between \$22 and \$25 MM is too small to attract the attention of sophisticated long-term lenders. The absence of these lenders has lead the community groups to finance projects either through sales of notes to their members and the community at large or through approaches to non-traditional lenders. It is questionable whether non-traditional lenders have the sector specific expertise to properly evaluate the risk they are assuming. A public default on notes distributed locally would be an embarrassing setback to the development of community based renewable projects. While the OPA is not responsible for the financial success of any project, it may be proposing a system that could inadvertently contribute to the failure of the very community groups it is attempting to assist.

There are two other models that could be considered. Various community based groups in the US have teamed with private sector developers to build and operate their projects. These developers have access to turbines, the financial clout to deal with turbine manufacturers and the technical expertise to construct and operate wind facilities in cooperation with the community. These programs could be replicated in Ontario; however, these developers may be hamstrung by the proposed 10 MW per transformer station and 50 MWs under development rules. A second approach is the Quebec model where priority is given to developers that have community support and equity participation.

Ironically, almost at the same time that the OPA issued the update, the C.D. Howe Institute published a commentary entitled "Power Failure: Addressing the Causes of Underinvestment, Inefficiency and Governance Problems in Ontario's Electricity Sector". One of the author's arguments is that central procurement as epitomized by the OPA leads to inefficient allocation of capital and carries the danger of political interference. The RESOP measures proposed in the OPA's update seem almost unwittingly to reinforce the Institute's conclusions. Like the law of supply and demand, the law of unintended consequences lurks in the background. The implications of these proposals should be fully examined before they are implemented.

Should you be interested in following up on this topic, please visit ORTECH at Booth #2147, Windpower 2008, Houston, Texas from June 1 – 4, 2008.

We invite you to attend the following ORTECH Power presentation at

Windpower 2008:

Estimating Long Term Operating Costs of Wind Farms

Uwe Roeper, President, ORTECH Power

Session Title: Operating Wind Projects Post-Warranty

Tuesday, June 3, 2008, 3:00 p.m. – 4.30 p.m. (Ballroom A)

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