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A journalist sent me some critiques and inquiries regarding my report on the Environmental and Economic Consequences of the Ontario Green Energy Act. My responses are as follows.

*1. In a press release after the report was released, the Canadian Wind Energy Association charged that the report was too simplistic and failed "to take into consideration the fundamental fact that there is dramatic need to invest in new electricity generation and infrastructure after decades of underinvestment. According to the Conference Board of Canada, \$347 billion in investment in Canada's electricity system is required between now and 2030 - and all of these costs will be passed on to consumers."*

I did not ignore the need for maintenance, retrofitting and upgrading of existing power gen facilities in Ontario. Those are built into the cost projections in the 2005 cost-benefit analysis by DSS consulting, and I brought those dollar figures forward into 2010 dollars.

I am not familiar with the Conference Board estimate, but it is highly implausible that as we go into an era with excess power supply in many provinces (especially Ontario) that we will have to spend \$347 billion nationwide on new generating facilities. I suspect that the CB, like CANWEA, and Pembina, put their finger on the scale by imposing an assumption that we have to make a major switch to costly renewables under any scenario, so when they say that wind is not all that expensive compared to the alternative, it is only because they assumed an artificially expensive alternative.

*2. A report commissioned by the Canadian Wind Energy Association (found here: <http://www.canwea.ca/pdf/Custom-Bill-Impacts-of-Generation-Sources-in-Ontario.pdf>) analyzed the bill of an average residential customer in Burlington, showing that supply costs make up about half of the total average monthly bill and of that about half (49%) is paid to nuclear generators, 18% is for generation from hydroelectric sources, 15% is for gas-fired generation, and 6% is for coal. Wind is 5% of the total supply cost and solar, biomass and other sources make up the remaining 7%. It found that 10% of the increase from 2009 to 2012 was due to wind power, and some of that higher cost came from higher payments to Ontario Power Generation "to continue to maintain the coal plants to supply energy when needed and higher payments to other generation resources such as gas-fired plants that came into operation during the period." It also indicated nearly 30% of the increase in a monthly bill is from the introduction of the HST.*

The breakdown of supply costs based on the current mix is not a good indicator of where the cost increases going forward are coming from. While it is true that wind is not the only cause of the current price escalation, the rapid takeoff in power prices happened alongside the provincial embrace of renewable sources, and this is not a coincidence. In my calculations I assigned one-third of the ongoing increases in the Global Adjustment to renewables (p. 11). If anything this is an underestimate.

Both government and independent private sector analysis puts the majority of the blame for rising prices on the renewables sector. The 2010 Auditor General Report says (p. 89):

- ...In November 2010, the Ministry forecast that a typical residential electricity bill would rise about 7.9% annually over the next five years, with 56% of the increase due to investments in renewable energy that would increase the supply to 10,700 MW by 2018, as well as the associated capital investments to connect all the renewable power sources to the electricity transmission grid.

7.9% compounded annually for 5 years is 46%. This is very similar to the increases in the forecast prepared independently by Aegent Energy Advisors in a report to a coalition of Ontario power consumers. The Aegent report breaks out increases in the Global Adjustment for each year out to 2016, arising from increased payments to each generating source (p. 8). The FIT, RESOP and Samsung deals make up 62% of these increased costs as of the end of 2015.

Additionally: the proliferation of multiple small wind energy sources to replace two large central power plants imposes unnecessarily large costs on the transmission network, which the AGO priced at \$1.5 billion. Finally, the Ontario Clean Energy Benefit was estimated by the AGO to offset only about half of the costs to households of renewable energy expenses, and expires in 2015. This cost increase to households needs to be taken into account.

So I am not overstating the role of renewables in the price increases experienced to date and going forward.

*3. A 2011 report by the Pembina Institute (see the media release and link to report here: <http://www.pembina.org/media-release/2237>) looked at two scenarios, one where the Green Energy Act investment in renewable energy was ended in 2011 and one where it was continued. It concluded: "consumer electricity prices are set to continue rising sharply over the next decade under either scenario — with prices peaking around 2022, when Ontario's nuclear fleet is currently scheduled to undergo significant shut downs. Even if future contracts for renewable energy were ended in 2011, the model shows there would be very little change to projected electricity price increases — amounting to roughly a \$4 difference on the average household's monthly electricity bill."*

The Pembina report only compared continuation of the GEA against an alternative that relied on expanding gas plant capacity, rather than retrofitting the coal plants. They also assumed rising gas prices (despite the current declining price path) and very high CO2 emission prices (\$32-\$58/tonne). These assumptions inflated the cost of the non-GEA alternative. So they have, again, compared a GEA path against an artificially expensive alternative.

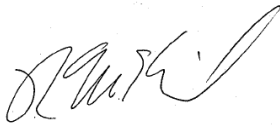
The most obvious question to ask is, if the wind industry really believes they are cost-competitive against the most likely alternatives, why not cancel the FIT system? And why was nobody willing to build wind turbines until the FIT system starting paying them 3x the wholesale price for a guaranteed 20 years? They can't have it both ways, saying they are not a source of higher system costs, while also saying they can't operate without massive above-market support and forced sales into the system regardless of demand.

*4. Ontario's environment commissioner, Gord Miller, also responded to the study. His response is here: <http://www.eco.on.ca/blog/2013/04/12/fraser-report-on-green-energy-act-misses-the-mark/>. I'm hoping in your response, if you are able to give one, that you can help me sort out some of the research and commentary that's out there on this subject, including Mr. Miller's insights above.*

It is astonishing for the Environment Commissioner to say that the GEA was not meant to reduce air pollution. While this at least appears to be a recognition that the GEA won't improve air quality, it is at odds with everything the government has said on the matter. It confirms that the GEA was even more pointless than we have been told. Regarding CO2 emissions, he ignores the fact that my calculations included the cost of fully offsetting the CO2 from Lambton and Nanticoke. Even if he believes CO2 reduction was the main justification for the GEA, that still doesn't justify pursuing a path that achieves the goal at a cost more than 10 times what was necessary. He seems to be of the view that any reduction in CO2 emissions is justified for any cost, regardless of how much damage it does to the economy or whether a cheaper alternative was available. This is simply bad logic, and leads to bad policy advice.

I am also disappointed that the "Environment Commissioner" is so unconcerned about the environmental harm being done by the spread of wind turbines in rural areas, on bird migratory paths and in some of the great unspoiled scenic areas of the province. He is so focused on abstract green ideology that he is not seeing the actual, real world environmental damage being done before our eyes by the proliferation of wind turbines.

Yours truly,



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