

IESO Engagement

From: John Stephenson
Sent: May 2, 2021 1:33 PM
To: IESO Engagement
Subject: Gas-Phase-Out Impact Assessment

It's good the IESO is undertaking this assessment.

For starters, here is a point by point rebuttal of the main points in the IESO's letter to Toronto City Council on March 9, 2021, referenced by the numerical order of paragraphs.

P3: it was misleading to claim gas generation accounts for only 7% of electricity produced. The Annual Planning Outlook Dec 2030 data table for Figure 24 indicates the % of electricity production (Ontario Demand + Exports – Imports) from Natural Gas rises to 20% by 2030 and 24% by 2040. And it could rise higher, depending on demand and performance of other sources because there are no alternatives planned for the next twenty years.

P4: implies a straw man, that the motion requires decommissioning of all gas plants by a certain date.

P5: the straw man fallacy endemic in all letters opposing the motion is further revealed by comments on consequences of replacing the Portlands Energy Centre (PEC). The motion does not require replacement of any gas fired capacity by any specific date. The only goal is to reduce emissions associated with energy production from natural gas. The capacity could stay put to meet peak demands at much reduced capacity factor if additional sources were added. In that case, reinforcement of the transmission system would not be required. Moreover, the fuel used by the PEC could be changed to hydrogen, generated and stored on-site using abundant cheap power available from adding significant wind and solar power to the grid. Some wind and solar power could be generated on the PEC site, similar to Nanticoke. When the current equipment at the PEC is decommissioned, it could be replaced wholly or partly on-site by a different type of generation that does not emit greenhouse gases.

P6: gas generation was only 4% of electricity production in 2017, yet the lights stayed on. That begs the question why that ratio must be increased 6 times over the current planning period. And the Texas events suggest reinforcing interconnections, which could also help displace gas generation.

P7: it is hard to accept that nuclear refurbishments significantly modify the point opposite P6 because nuclear power has limited maneuverability anyway. Moreover, the paragraph falsely implies natural gas generation is projected to increase only in the near term, while the aforementioned Annual Planning Outlook Figure 24 shows it increasing constantly through 2040. In no way can this be excused as "the near term" as the science is clear we must roughly halve emissions by 2030.

P8: given the severity and urgency of the climate crisis, the complaint that phasing out gas will be more challenging than coal will find little sympathy among a large section of the public

P9: phasing out coal is now a sunk cost, hence irrelevant for economic decision-making. The IESO should consider the total future costs to Ontario rate-payers, consumers and tax-payers. This means taking into account the cost of equivalent emission reduction in other sectors. This means imputing the carbon price to fossil fuelled generation, currently \$40/tonne rising to \$170/tonne in 2030. At that level, assuming the fuel cost of natural gas fired generation is about 3 cents/kWh, the total true running cost would be about 10 cents/kWh, roughly double current expected contract costs of wind and solar. Then we could afford to contract for about the amount of wind and solar energy that would

result in 50% of it being surplus, assuming zero value for surplus power. We concerned citizens don't know exactly how much that would be, but we know the IESO could model that. Moreover, \$170/tonne was to achieve a 30% reduction by 2030, while the current federal commitment, soon to be enshrined in law under Bill C-12, the Climate Accountability Act, is to cut 40-45% by 2030, which would require a higher carbon price. The environmental movement is pushing for an even larger cut, 60% by 2030, and has modelled that to require a carbon price two-three times the current \$170/tonne. Convert that into cents/kWh and you'll see how very expensive natural gas fired generation is in reality to society at large. Remember the recent Supreme Court decision gives the federal government jurisdiction over carbon prices. Soon all provinces will be legally required to have the same carbon prices. And Border Carbon Adjustments are coming, which means that heavy emitters like electricity generation will no longer be shielded from the full carbon price by the various out-put based free allowances.

P10: refer to the rebuttals of P5 and P6. The claim there is no option that can replace gas "fast enough" is based on the straw man presumption that the motion referred to complete decommissioning of all gas plants by a specific date. It doesn't.

P11: is quite true as far as it does, but omits the fact that emissions could also be reduced simply by contracting for more generation from existing proven technologies like wind, solar, run-of-river, pumped storage and bioenergy. The cost would be doubtless higher than the fuel cost of gas (assuming that is about 3 cents/kWh) but, to an extent, lower than the true running cost of gas, including the cost of carbon that should be applied, see rebuttal of P9.

P12: the same self-sufficiency could be achieved simply by keeping gas plant capacity in reserve. And, as regards cost, see rebuttal of P9.

P13: the implication that natural gas fired generation is essential to electrification of transportation and building heating is tenuous, if not downright illogical, rests partly on the straw man that we require all gas capacity to be decommissioned. and ignores the fact that the efficacy of electrification depends on the emissions intensity of electricity and also the possibilities offered from having abundant surplus power from increasing installation of variable sources. Again, there is a misleading statement referring to today's situation, not "where the puck is going". For Ontario to comply with even the minimum federal target of 40% cut by 2030 that would take it to about 98 million tonnes, and if electricity generation was as projected in Figure 24 of the APO in 2030, 12.2 million tonnes, that would represent over 12%, four times the number claimed. In any case, the % is irrelevant. What matters is how many tonnes can be reduced cost effectively, taking into account the cost of reductions in other sectors.

P14: refers to the straw man explicitly "taking gas out of our supply mix by 2030". The motion is for "as soon as possible". Transitioning from gas brings added cost only according to a narrow definition of cost that ignores the environmental cost. As outlined opposite P9, adding the true cost including the cost of pollution is higher than wind or solar. The reliability risks only follow from your straw man fallacy.

P15: we are pleased the IESO is undertaking a comprehensive study and trust it will take into account all costs including the cost of pollution and not indulge in the straw man or nothing "either/or".

The above are my own views but as I correspond daily with many climate activists I can safely say they are representative of a large and growing number of Ontario voters.

Sincerely,

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John Stephenson

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