

June 30, 2023

Electrification and Energy Transition Panel (EETP)

Mr. David J. Collie, Professor Monica Gattinger, Chief Emerita Emily Whetung

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Re: Open Call for Written Submissions 2023

Industrial Gas Users Association (IGUA) Comments

The Industrial Gas Users Association (IGUA) represents the largest industrial natural gas consumers from the chemicals, refining, steel, forest products, mining and manufacturing sectors in Ontario and Quebec. IGUA was first organized in 1973 and it provides a coordinated and effective public policy and regulatory voice for those industrial firms depending on natural gas as a fuel or feedstock. IGUA's members are Ontario's largest natural gas consumers. Our members create jobs and contribute to the provincial and local economies, many in remote and rural areas. Access to reliable and competitive energy attracts industrial investment and ensures competitiveness.

IGUA is pleased to comment on the work of the EETP, and Ontario's energy transition. While all five themes explored by the EETP are important, our comments primarily relate to energy planning, governance and accountability, emerging technologies, and facilitating economic growth.

Best regards,



Dr. Shahrzad Rahbar

President

Executive Summary

IGUA's comments are addressed at the framework for energy planning, and Ontario's energy transition. We defer to AMPCO in respect of electricity-specific issues. We also defer to Indigenous leaders to comment on how the EETP can best recognize, respect, and benefit from the values, priorities and knowledge of Ontario's Indigenous peoples.

IGUA members are committed to environmental stewardship and take pride in having lower emissions intensity than many of their competitors. All IGUA members have aggressive carbon reduction plans for 2030, and most have committed to net-zero by 2050. IGUA members have publicly committed to decarbonization, while ensuring that Canada's industries are globally competitive throughout the transformation of our energy system.

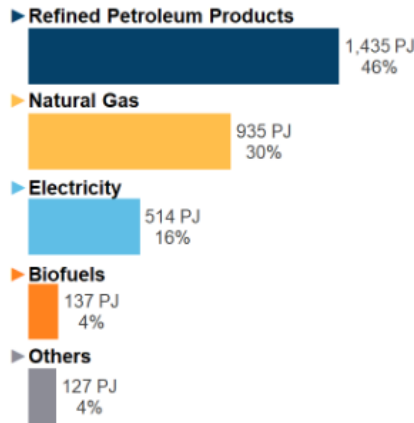
A successful energy transition for Ontario would do the following:

1. Keep Ontario's industrial sectors competitive for a successful energy transition;
 - i. Exclude EPS-regulated facilities from OEB carbon reduction initiatives and related costs
 - ii. Take full advantage of RNG and its carbon intensity
2. Plan for ALL energy sources to minimize the cost of carbon abatement; and,
 - i. Develop the capacity for "all energy" planning
 - ii. Use all energy options to implement the lowest marginal cost of carbon abatement
 - iii. Foster industrial access to growing and competitively priced zero emissions energy supply
3. Ensure that energy consumers are at the table throughout energy transition planning and decision-making.

Finally, if electricity is to play a larger role in Ontario's industries, then the government must also address the reliability issues with the electricity grid relative to the exceptional reliability of the natural gas grid.

IGUA members are Ontario's largest energy consumers, and we look forward to the EETP helping Ontario succeed, and to the release of your report.

A. Context



According to data from the Canada Energy Regulator, Ontario’s 2019 end-use energy demand totalled over 3,100 petajoules, of which 30% was natural gas, with Ontario’s industries consuming about 30% of total natural gas use.¹

We appreciate the opportunity to provide comments to the EETP. The world will continue to need conventional commodities and new bio-based bulk materials during and after the energy transition, and Ontario can have a competitive advantage as a supplier of low carbon bulk materials. This will require a variety of options, including renewable natural gas (RNG), hydrogen, electrification, and carbon capture, utilization, and storage. Trade exposed industry involvement is critical to getting the energy mix and competitiveness right, and as

stated above, the mix of solutions and path to net zero emissions is facility-specific.

Furthermore, Ontario’s energy mix is already cleaner than the vast majority of North American jurisdictions. Having access to natural gas as an ongoing part of the supply is essential to Ontario’s industrial competitiveness. A moratorium should not be considered, as there is much lower hanging fruit for GHG reductions, such as renovating IGUA member’s steel plants to reduce (or eliminate) coal use.

B. Energy Transition and the Role of Industry

IGUA members are committed to environmental stewardship and take pride in having lower emissions intensity than many of their competitors. All IGUA members have aggressive carbon reduction plans for 2030, and most have committed to net-zero by 2050. IGUA members have publicly committed to decarbonization, while ensuring that Canada’s industries are globally competitive throughout the transformation of our energy system.

Transition pathways for decarbonizing heavy industry are complex and facility-specific. Unlike residential space heating, simple electrification is not realistic or cost effective. Each facility will have a unique solution, based on the industrial processes, location, investment cycles, and how technology evolves. For industrial electrification, the priority must be cost-effective pathways to achieve decarbonization, such as electric heat pumps. To support this effort, electricity costs must be competitive with competing jurisdictions to provide a viable business case for electrification projects.

In addition, large industrial gas consumers have multiple drivers for decarbonization:

- Direct regulatory obligations from multiple levels of government.

¹ See Exploring Canada’s Energy Future for additional data (<https://apps2.cer-rec.gc.ca/energy-future/?page=landing&mainSelection=&yearId=§or=&unit=&view=&baseYear=&compareYear=&noCompare=&priceSource=&scenarios=&provinces=&provinceOrder=&sources=&sourceOrder=>)

- Investor demand and /or corporate commitments.
- Steadily growing market demand for low carbon commodities.

Considered together, all of these developments are driving an energy transition that commends, and demands, a more integrated view of “energy services”. The historical view focused on separate and distinct energy systems has been displaced by technological advancement and creativity. It is an exciting time for responsible and effective energy planning, with a plethora of demands and an array of possibilities.

C. IGUA Recommendations

1. Keep Ontario’s industrial sectors competitive for a successful energy transition

Governments need to keep industry competitive during the energy transition using efficient regulation, Innovation support, de-risking investment, green public procurement. Industrial priorities for Ontario are as follows:

- Leverage energy transition and Ontario strengths -- workforce, clean power, extensive natural gas network and storage, financial stability -- with solid regulation, and competitive taxation to grow the economy and attract industrial investment.

Any future energy transition mandate for the Ontario Energy Board (OEB) should avoid an inadvertent assault on industrial competitiveness, and should ensure reliable access to clean and affordable energy. The complexity and order of magnitude of the investments require industry control, not a third party OEB or the utility. Industry will want to secure its own clean fuel supply, such as RNG, just as it currently does its natural gas supply, so avoid mandatory RNG or other fuel content regulations.

Affordability and ensuring a cost-effective and reliable transition are critical for improving industrial competitiveness. Granting carte blanche access to ratepayers’ finances to support the utility business transition would be too expensive. We believe that utilities need to evolve their business model, and can still be profitable companies with lower volumes. **Ask, “What is being protected?” Is it the energy transition, or the utility business model, or the rate-payers?**

1(i) Exclude EPS-regulated facilities from OEB carbon reduction initiatives and related costs

Efficient regulation, for example, will avoid “pancaking” the rules. **Exclude obligated facilities under the provincial Emissions Performance Standards (EPS) program from OEB carbon reduction initiatives, and from industrial utility costs for managing customer decarbonization**, because the emissions are already regulated under the EPS program.

1(ii) Take full advantage of RNG and its carbon intensity

Ontario should also better leverage the advantages that RNG offers, with some projects being potentially carbon-negative. Developing such projects will be critical to competitive decarbonization efforts. This can be further enabled by ensuring a “book and claim” treatment under the EPS program – this would allow RNG to be injected into the natural gas grid, with the owner deemed to have

consumed the RNG for the purpose of measuring GHG emissions, without physically receiving the RNG molecules.

Finally, tracking the carbon intensity of such projects is required, along with separating the RNG molecule from the environmental attributes. An effective way to do this would be to add an offsets system to the EPS program, as well as fully recycling EPS revenues back to the industrial emitters who paid into the program. These steps would also have the advantage of incentivizing investment in the agriculture sector, which is where much of the best carbon-negative RNG potential exists.

2. Plan for ALL energy sources to minimize the cost of carbon abatement

2(i) Develop the capacity for “all energy” planning

A siloed approach to planning will increase the cost of energy transition to a lower carbon economy and is no longer appropriate or prudent in Ontario. Given the diverse uses and sources of energy, and their respective characteristics, carbon intensities and promising synergies, **robust energy planning will be based on the principle of taking an “all energy” approach**, to advance the sustainability, resilience, and cost effectiveness of Ontario’s energy systems.

Ontario does not currently have the agency capacity to plan a robust energy transition – the IESO specializes in only electricity transmission and markets, and the Ontario Energy Board (OEB) does not have the capacity and is focussed on only economic regulation and “pipes and wires”, with little experience in transportation fuels, district energy, and the emerging array of market-oriented energy services. Energy transition will require addressing the limited governance capacity.

Ontario should develop the capacity for “all energy” planning across all energy forms (electricity, natural gas, and petroleum products) to advance the sustainability, resilience, and cost effectiveness of Ontario’s energy systems.

2(ii) Use all energy options to implement the lowest marginal cost of abatement

An important pathway to industrial decarbonization is low-cost clean electricity, and we commend the government for increasing its focus on electricity. The Independent Electricity System Operator (IESO), in its Pathways to Decarbonization study found that it is difficult to replace the flexibility offered by natural gas for power generation. Furthermore, the IESO sees gas-fired generation helping to provide reliable electricity out to at least 2035, and that decarbonizing just the electricity grid will require hundreds of billions of dollars.

Natural gas-fired generation provides affordable, reliable, flexible clean energy services that help provide Ontario with one of the lowest emissions grids in North America. For some time to come, there will be far more cost-effective and economically competitive ways to reduce emissions than getting the final tonnes of greenhouse gas emissions out of the electricity grid. **Decarbonization, as a lengthy process, should be based on the fundamental test of lowest marginal cost of carbon abatement at each step along the way to zero emissions.**

Similarly, IGUA’s members value the clean, competitively priced, and flexible services that natural gas

provides. An all-energy lens is needed to evaluate Ontario’s energy transition pathways, and we recommend that you consider economic efficiency to ensure the energy transition retains and attracts investment. In fact, during the energy transition, some industries will increase natural gas consumption in order to replace higher emissions fossil fuels, as some IGUA members are already in the process of doing. In addition, remote industrial facilities and mines could increasingly rely on liquefied or compressed natural gas to replace higher-emitting fossil fuels, such as diesel.

An all-energy lens includes understanding that many industries will rely on gaseous fuels beyond 2050. Therefore, natural gas infrastructure – pipelines and underground storage -- that provides competitive and resilient energy services today will still be needed beyond 2050, particularly for use by energy-intensive trade exposed industries.

2(iii) Foster industrial access to growing and competitively priced zero emissions energy supply

Industrial applications have a high potential for growing and sustaining a market for zero emissions energy, in particular, by providing “anchor” customers. Potential industrial customers have:

- Higher GHG reduction potential,
- Large and stable demand, and
- Greater environmental and economic impact than in other economic sectors.

Growing and reliable access zero emissions fuels, including electricity and RNG, is critical to facilitate the decarbonization of heavy industry. However, these fuels must be cost competitive to protect international competitiveness.

Applying the lowest cost of carbon abatement approach, zero emissions electricity is too valuable for other uses, such as heat pumps, than to use to produce vast quantities of hydrogen for heat and power generation. Hydrogen is appropriate and cost effective for niche applications like long-haul large transport, or where the storage and transport flexibility is helpful, but generally cost prohibitive for industrial heating. The efficiency losses on the life cycle of green hydrogen make it far less competitive than direct electrification for heating. There are also limitations on hydrogen’s compatibility with existing natural gas infrastructure and gas-fired equipment.

RNG, however, has the advantage of being a direct substitute for natural gas, taking advantage of existing infrastructure. As a result of the importance of RNG and other zero emissions carbon fuels to industrial decarbonization, and using a lowest marginal cost of carbon abatement approach, IGUA urges caution when considering having a monopoly buyer, such as the IESO or energy utilities, dominate the market for these scarce fuels. Monopoly buyers would effectively be putting their entire customer ratebase in competition with other RNG consumers; with the monopoly buyers being able to pass on costs to captive ratepayers, while other fuel consumers do not have that luxury. IGUA members will increasingly look to these scarce zero emissions fuels to contribute to industrial decarbonization.

In addition to this, **we urge the government to accelerate the growth of RNG supply, to make it more abundant, and to make it more competitively priced.** This would help industrial consumers decarbonize using a fuel with the same flexibility as natural gas, while enhancing their competitiveness in growing green products markets.

3. **Ensure that energy consumers are at the table throughout energy transition planning and decision-making**

Energy discussions are traditionally dominated by conflicting input from the energy sector and environmental groups, without much input from rate-payers. An energy consumer perspective must be in the mix to strike the right balance at each step of the way.

An effective plan for consumers would **ensure that industrial energy consumers are integral to the energy transition discourse, and are at the table when decisions are made.** At the same time, IGUA strongly endorses independent, agency-led energy planning. Independent, agency-led planning is most effective when the government sets clear planning objectives and defers to its independent, expert agencies in respect of detailed and fact based planning, operations and governance in the energy sector.

Acknowledging the influence and impact that energy policy can and does have on other public policy priorities, the government in its energy transition plans and policies should;

- Clearly indicate where the government expects implementation of energy policy to support policy objectives extraneous to energy; and
- In such instances, provide guidance on how the government expects the implementing agencies to **balance achievement of the non-energy policy objectives with the central energy policy objectives of safety, reliability, resiliency, and affordability of energy services.**

D. Concluding Remarks

An energy transition plan that permits Ontarians to benefit from emerging energy technologies and opportunities, and removes legacy energy system silos in favor of a modernized and robust Ontario plan can ensure Ontario’s industries are competitive while decarbonizing the economy.

IGUA members are Ontario’s largest energy consumers, and we look forward to the EETP helping Ontario succeed, and to the release of your report. IGUA and its members are available to assist and advise as needed. Do not hesitate to contact me if you require clarification or additional information.