

Submission to the Ontario Government's Hydrogen Strategy Consultation

Submitted by the Toronto Region Board of Trade

Overview

The Toronto Region Board of Trade (the Board) advocates on behalf of its more than 13,500 members for policy change that drives the growth and competitiveness of the Toronto region. Sustainable, reliable and affordable energy remains a top concern for families, small businesses, midsized manufacturers, and major industry and landlords across the province.

The Board supports the government's efforts to introduce a low-carbon hydrogen energy strategy in its overall Made-in-Ontario Environment Plan in the fight to reduce greenhouse gas emissions. This should not be a strategy to go "all in" on hydrogen: its costs are still higher than existing fuels and there remains significant uncertainty about the size of the market. Rather, the Board recommends that Ontario's strategy look to align with the Hydrogen Strategy for Canada while taking steps to pilot technologies and explore use cases – preparing Ontario for future growth in this sector.

The Board has focused its answers on a few questions from the discussion paper and would be pleased to speak about its ideas in greater detail. The Board's main contact for further consultation will be the Board's Director of Policy, Energy, Land Use and Environment, Craig Ruttan, who can be reached at cruttan@bot.com.

Consultation Responses

What should be the key outcomes of Ontario's hydrogen strategy?

The strategy should focus on growing both the supply of, and demand for, low-carbon hydrogen produced in Ontario. The Board encourages the government to remain technology-neutral where possible, to ensure it does not repeat the mistakes of the early wind and solar FIT procurements.

While it will take time to reach the full potential of the hydrogen market, initial steps such as pilot projects and support for innovative academic-industry partnerships should take place as soon as possible to grow the foothold that hydrogen already has as part of the province's energy supply. This can be a key component in achieving the Made-in-Ontario Environment Plan.

Moreover, the strategy should align with hydrogen activities across Canada, including the recently released Hydrogen Strategy for Canada, while encouraging each region's unique opportunities. As Ontario's hydrogen plan can be used in a jurisdictional way in its production and distribution, the strategy should provide a clear connection between ministries of all levels of government.

What actions can Ontario take to help Ontario companies get ready to meet expected international demand (for example research and development, innovation, procurement)?

Before looking internationally, Ontario should focus on helping to gradually grow the domestic market. With Ontario's competitive advantage in adopting low-carbon hydrogen due to its low-carbon electricity supply, there is opportunity for further growth through government investment in research, development and innovation. To do so, the Province should consider supporting several pilots for the production and use of hydrogen, and identify interested anchor customers, such as utilities, who could assist with the growth of the industry. Alternatively, the Province could assist with derisking production of hydrogen by offering to be a customer itself – for example, by committing to buying hydrogen to blend with natural gas and heat government buildings.

Additionally, there are three important things the Province can do to set Ontario companies up for international success:

1. Participate in discussions around international standards for hydrogen to ensure that all Ontario-produced hydrogen is appropriately categorized as low-carbon.
2. In anticipation of growth in the U.S., Ontario should seek to unlock opportunities for cooperation and trade in hydrogen fuel and services through establishing formal agreements with neighboring states.
3. In establishing its regulations and any government-led procurements, Ontario should learn from early renewable FIT procurements and ensure that no de facto trade barriers are created.

Finally, to foster an inclusive hydrogen economy, investments should include small, medium, and large businesses alike in the sector, providing equal opportunity for all. The Ministry of Labour, Training and Skills Development should also be engaged to advance workforce planning for the hydrogen sector.

How can hydrogen support a reliable and affordable energy system, including energy storage?

There are multiple ways that energy storage could be defined. In its strategy, the Province should clarify its use of the term “storage” in the context of hydrogen to ensure proper understanding across sectors and throughout the production chain.

Nonetheless, hydrogen has a potential to play a key balancing role in the province's electricity system, and to support further integration between its electricity and natural gas systems. Off-peak electricity can be used to generate hydrogen, which could then be stored for use by gas-fired power plants during peak hours or blended into the natural gas system and used to reduce its carbon footprint.

What are the barriers and opportunities for hydrogen in the energy system?

Opportunities:

- Ontario is well-positioned to drive growth in a low-carbon hydrogen economy, with its low-carbon electricity supply supported by an extensive natural gas distribution system as well as a growing hydrogen ecosystem.
- Future energy supply, including new small- or large-scale nuclear, could be designed with integrated hydrogen production capabilities.



- Energy-intensive industries (such as chemicals) may be able to integrate hydrogen as a feedstock or product.
- In transportation, the Windsor to Quebec City corridor offers a sizeable potential market for a hydrogen fuelling network.

Barriers:

- There is significant uncertainty in the regulatory framework for storage, transfer and transportation of hydrogen.
- There is also uncertainty around the stability of industrial electricity price policies (such as the Industrial Conservation Initiative) may inhibit investment.
- Additionally, there is uncertainty around the demand for the use for hydrogen, which also prevents investment in new sources of supply. Conversely, uncertainty around the availability of hydrogen also prevents potential customers from switching to hydrogen feedstocks (especially in transportation).

What are the best opportunities to cost-effectively support hydrogen across Ontario while respecting taxpayers?

The government should prioritize regulatory changes to better enable the blending of hydrogen with natural gas, as well as to address gaps related to storage, transfer and transportation.

In addition, in Ontario new energy infrastructure often prompts concerns and opposition from the public – sometimes based on misinformation. To combat this, upon the implementation of the hydrogen strategy the Province should invest in a public education and communications campaign, and ensure that municipalities are well-engaged in any procurement or development process.