

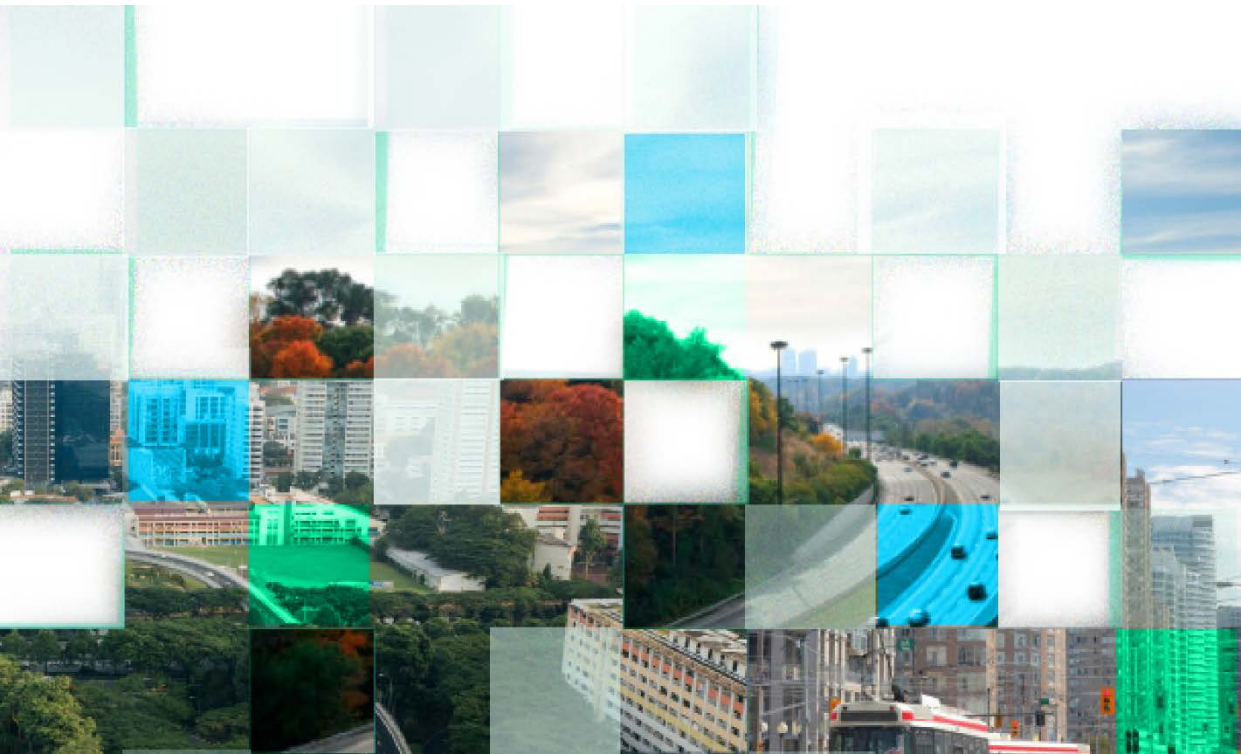
CLIMATE ECONOMY

STRATEGIC COUNCIL

A PARTNERSHIP INITIATIVE OF



Presentation to GTAA Consultative Committee
September 12th, 2022



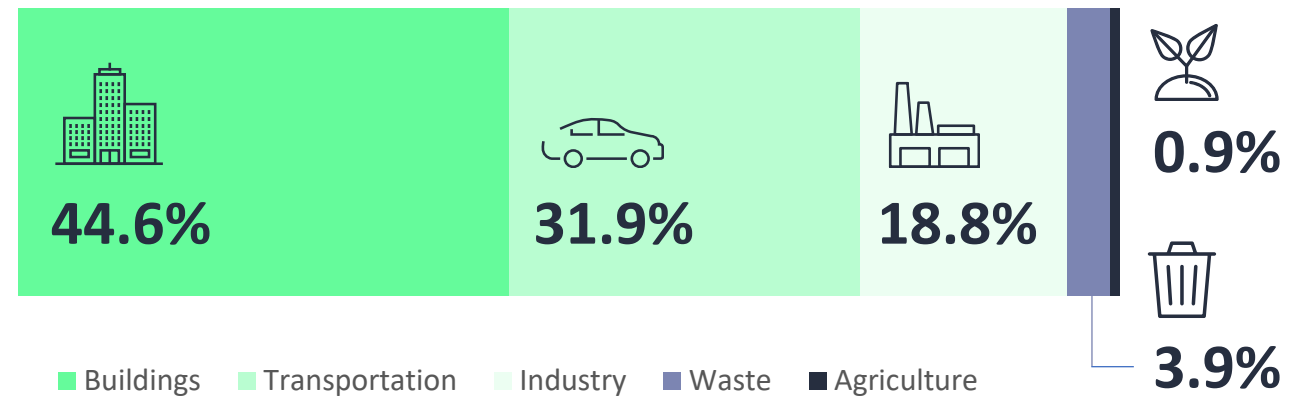
Our Collective Net-Zero Challenge

In 2020, the GTHA produced
47.8 million
tonnes of carbon emissions.

That's equal to
44%

of Ontario's carbon emissions.

GTHA – 2020 Sources of Emissions



Source: [TAE](#)

Our Collective Net-Zero **Opportunity**

Global cleantech market
projected to exceed
\$3.3 trillion
in 2022.

McKinsey has estimated
climate transition costs
at more than
\$9 trillion
per year.

13
Canadian companies
included on the 2022
Global Cleantech 100 list.

Climate Economy Strategic Council

- Co-led by the Toronto Region Board of Trade and MaRS Discovery District
- Established in March 2022
- **Membership includes civic and business leaders from across the region:**
 - Borden Ladner Gervais LLP
 - CAAT Pension Plan
 - City of Toronto
 - **Greater Toronto Airports Authority**
 - International Institute for Sustainable Development
 - Kilmer Developments
 - OMERS
 - Resilient LLP
 - Toronto Hydro
 - Treasury Board Secretariat, Government of Canada
 - University of Toronto
 - Waterfront Toronto



What are we solving for?

The Climate Economy Strategic Council will solve for the **cleantech adoption** necessary for the Toronto Region to lead in the climate economy and reach net zero by 2050.

Potential Levers to Utilize

Pilots • Policy • Regulations • Investment



CEESC Structure

2 Lighthouse Projects

- **Toronto Pearson Hydrogen Hub**
 - Build a hydrogen hub at Canada's largest airport, a significant and critical economic engine located at the heart of Canada's second largest employment zone.
- **University of Toronto Pilot Project**
 - Support the integration of local technology providers where possible into a massive-scale multi-technology net zero acceleration project (including thermal energy, battery storage, renewable gas, and advanced energy management), all coordinated through an aggregator.

4 Enablement Working Groups

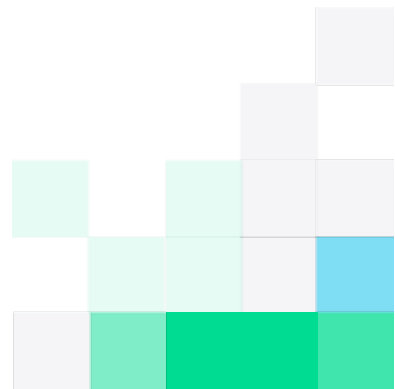
- **Financial Innovation Working Group**
 - Identify, advance and scale viable financial models to accelerate climate action in the Toronto region.
- **Waterfront Innovation Working Group**
 - Connect innovators and developers interested in deploying climate-positive technologies.
- **Electrification Working Group**
 - Recommend investments, partnerships, and approaches needed to supply additional clean power for projects critical to meet climate economy goals.
- **New Transit Technology Working Group**
 - Explore opportunities to deploy innovative transit technologies to solve local or regional connectivity challenges.

Toronto Pearson Hydrogen Hub

The focus of the pilot project at Toronto Pearson is to build a hydrogen hub at Canada's largest airport, a significant and critical economic engine located at the heart of Canada's second largest employment zone.

Objectives for this pilot include:

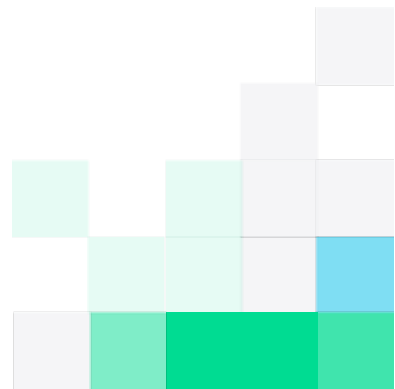
- Determining the constraints and considerations that could impact the siting of the hub (e.g. safety, electricity grid connections, expected capital cost, source and type of hydrogen, etc.)
- Assessing the potential users and end-uses of hydrogen to determine potential size of a hub
- Identifying viable innovative financial models to enable the hub, including blended public-private sources
- Advocating for necessary government support (financial, regulatory, etc.) to assess feasibility and build the business case



Hydrogen Hub: Potential Uses

Hydrogen at Toronto Pearson could feed a wide variety of end uses, including:

- Powering GTAA ground transportation vehicles, including passenger buses and ground servicing vehicles
- Providing fuel for back-up generators
- Serve external airport partners' needs, including hotel shuttles, taxi and limo fleets, and airline ground service equipment
- Serve external distribution and logistics needs (e.g. trucking fleets, warehouse vehicles)
- In future, could provide an input into Sustainable Aviation Fuel (SAF) or even fuel hydrogen-powered aircraft

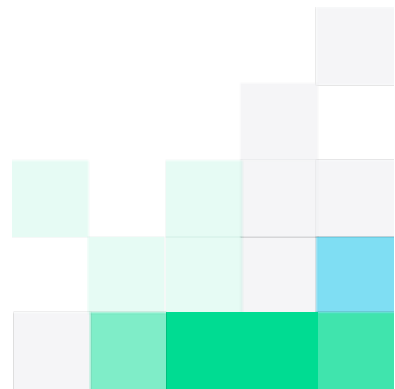


Toronto Pearson Hydrogen Hub: Progress

Hosted a roundtable with industry experts in August 2022 to gather insights and feedback to assess project feasibility.

Key takeaways:

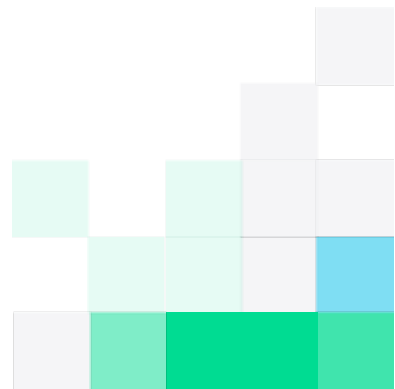
- Hydrogen production and use are advancing across the region and nationally. Pearson is well-positioned to produce, store, and distribute hydrogen:
 - Strategically located near numerous on-site and nearby end users
 - Directly connected to 400-series highways
- A challenge to consider is planning for the production and procurement required to meet existing and forecasted demands while maintaining economic feasibility.
- Will require financial support to establish a production hub and plan for scalability



Next Steps

The CESC is laying out a two-year workplan to deliver:

- Tangible progress on the lighthouse projects
- Concrete insights and recommended pathways from the enablement working groups
- Actionable playbooks and guides to allow other businesses, institutions and organizations to learn from these projects and implement their own emissions-reduction projects



CLIMATE ECONOMY

STRATEGIC COUNCIL

A PARTNERSHIP INITIATIVE OF



Roselle Martino
Vice President, Public Policy
rmartino@bot.com

Craig Ruttan
Senior Director, Policy
cruttan@bot.com

