

City of Toronto RNG Program at AD Facilities

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Agenda

- Toronto at a Glance
- TransformTO/Circular Economy
- Our Approach
- Anaerobic Digestion and RNG Facilities
- Benefit of RNG to Organization



Toronto at a Glance

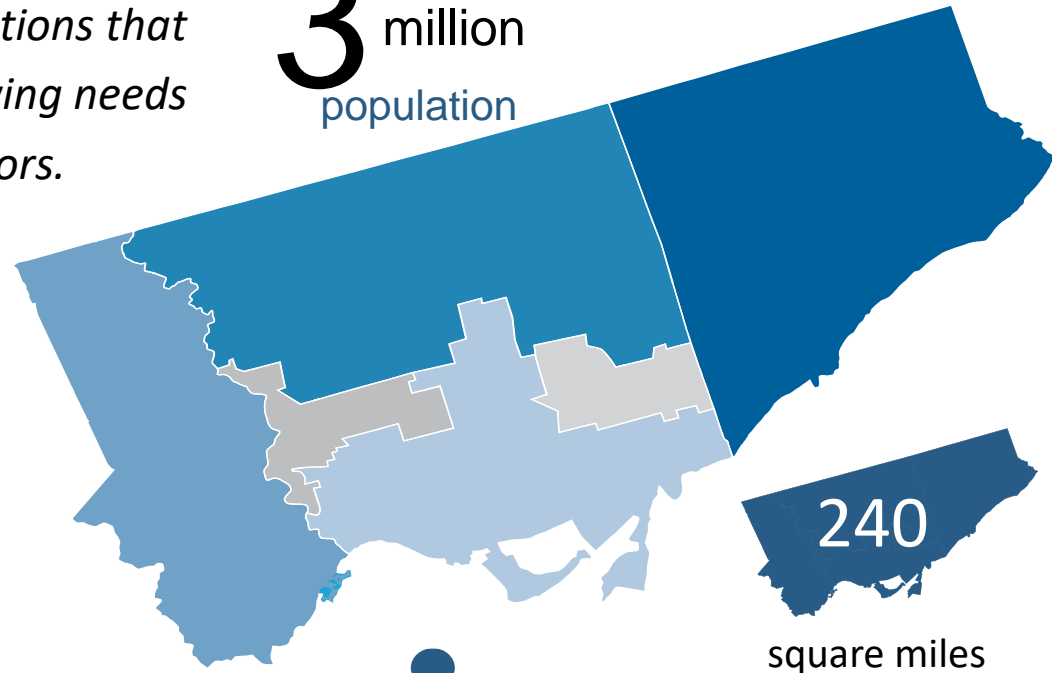


Toronto at a Glance

Vision: To deliver innovative, sustainable, and customer-focused waste management solutions that adaptively respond to the unique and evolving needs of Toronto's residents, businesses, and visitors.



3 million
population



240
square miles



Millions of
visitors
annually

Total Organic Waste Managed (2023): 170,000 tonnes

Annual Operating Budget: \$410 million (2023)

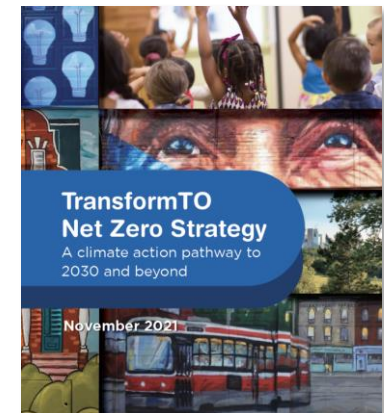
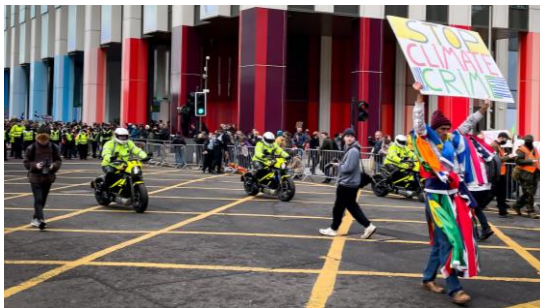
TransformTO/Circular Economy



TransformTO Net Zero Strategy

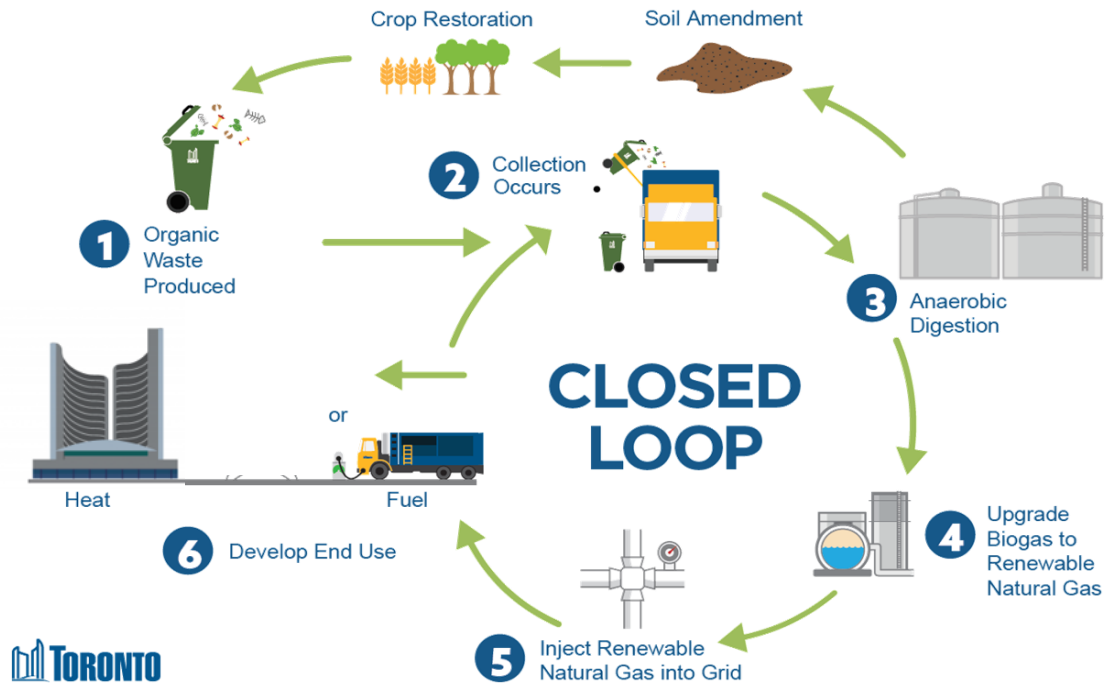
TransformTO is Toronto's ambitious climate action strategy. TransformTO lays out a set of long-term, low-carbon goals and strategies to reduce local greenhouse gas emissions and improve our health, grow our economy, and improve social equity. Solid Waste Management Services Division can help to achieve the following TransformTO goals :

- *Reduce 107,00 tCO₂e per year through organics processing and LFG utilization*
- *Generate and utilize 1.5 million GJs of energy from biogas.*
- *City-owned buildings reach net zero emissions by 2040*



Circular Economy

- Divert organics from landfill
- Process organics in a municipal facility
- Develop a circular model, with waste used to create green energy.

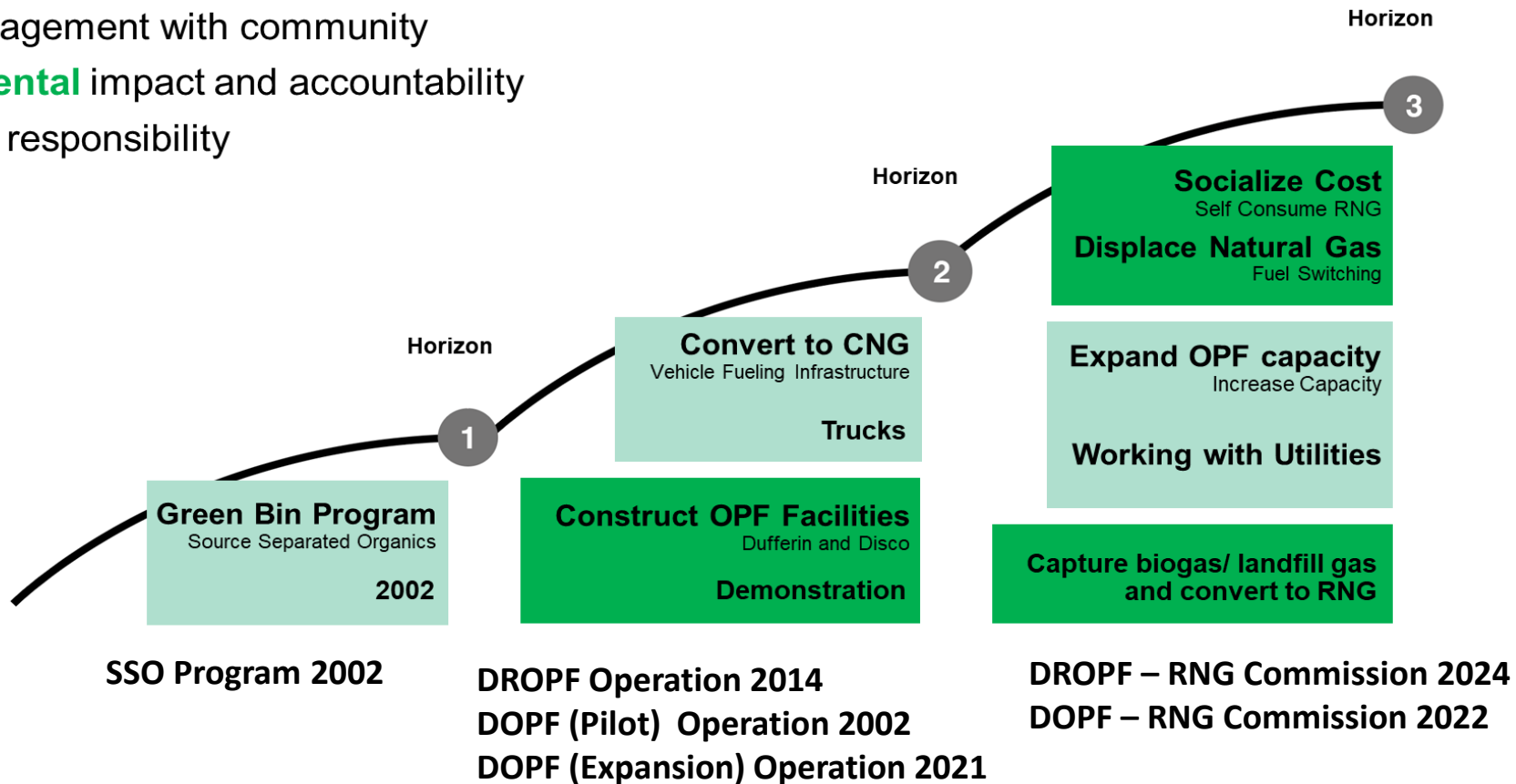


Our Approach



Milestones on Our Journey

Social engagement with community
Environmental impact and accountability
Economic responsibility

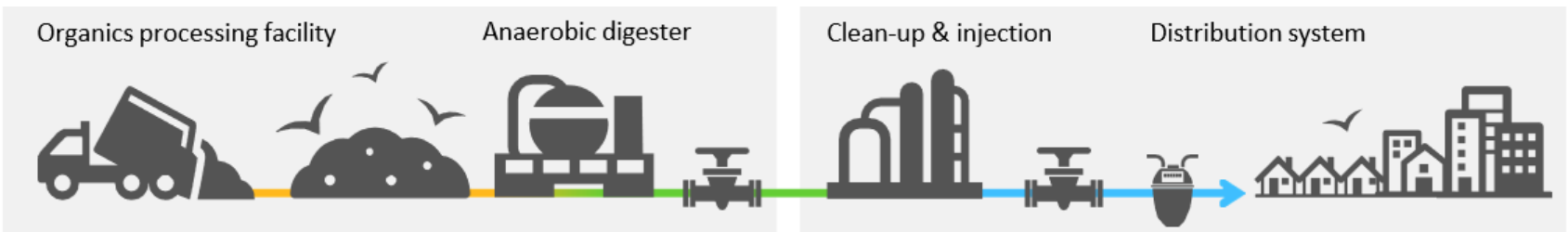


Dufferin Organics Processing Facility (DOPF)

Disco Road Organics Processing Facility (DROPF)

Vision to Reality

- Agreement with Enbridge Gas (EGI) Local Gas Utility:
 - EGI Financed upfront capital.
 - Once facility is fully operational, the City will pay a utility fee to pay back capital and cover operating costs of upgrading station
- EGI is committed to enabling RNG projects and will have a forthcoming Low Carbon Voluntary Program.
- City retains RNG, green molecules and associated attributes
- Socializing the Cost of RNG Across users within the Corporation



Anaerobic Digestion/RNG Facilities



Anaerobic Digestion

DOPF



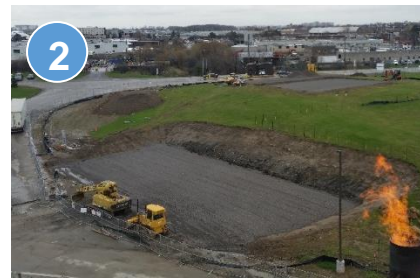
DROPF



A feasibility study was completed in 2017 for RNG production in two AD facilities and three landfills owned by the City of Toronto. One conclusion of the study was that the City's two AD facilities (above) were determined to be good candidates for RNG projects.

DOPF - RNG

- The facility was commissioned in November 2022.



DOPF - RNG



DROPF - RNG

- Construction started in April 2023
- Construction was completed in February 2024 and commissioning is in progress
- Commissioning has been scheduled to be completed by the end of Q2, 2024



DROPF – Biogas Upgrading



DROPF – Injection Station



Benefits



How organizations can benefit from RNG Projects

- Meet climate change and sustainability goals.
- Reduce the need for landfilling.
- Fuel transit and waste truck fleets.
- Heat buildings with blended RNG.
- Use the existing natural gas infrastructure.
- Manage costs and reduce CO2 emissions.



A sustainable energy source.



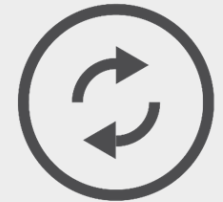
A path to net zero.



A cost-effective solution.



An effective way to create energy resilience.



A circular economy approach.

Thank you!



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