

Your Total
Water Solutions
Provider

Cornwall Net Zero Project Codigestion, biogas, electricity and RNG

Presenter: OCWA

Date: August 10th, 2020



Post-covid infrastructure funding

- Shovel ready and shovel worthy
- GHG reduction and clean fuels
- Big focus on codigestion and RNG projects
- Feasibility studies

PROCESS OPTIMIZATION & MODELING

ENERGY MANAGEMENT

Trusted advisor to clients on energy conservation, energy plan, M&V and optimization.

BIOSOLIDS EXPERIENCE

Gain access to the best available practices and technologies for biosolids management. Regularly test and measure all plant parameters and chemical dosages



INFORMATION AND INFORMATION TECHNOLOGIES

Innovative technologies to integrate systems and process to reduce redundancy

COMPLIANCE

Support operations and maintenance with the most up to date training on regulatory changes

DISTRIBUTION SUPPORT

Support operations with distribution maintenance and repairs.

CAPITAL PROJECT DELIVERY

Skilled employees for most major maintenance projects.



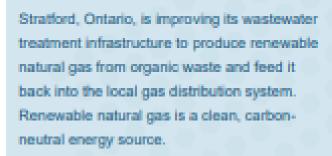
Environmental Plan 2018



A Made-in-Ontario Environment Plan



Success story:
City of Stratford turning
organic waste into natural gas



support biogas, RNG, and organic waste diversion, including requiring natural gas utilities to implement a voluntary renewable natural gas option for customers, consulting on the appropriateness of clean content requirements for RNG, and developing a proposal to ban food waste from landfills.

Source: https://www.ontario.ca/page/made-in-

ontario-environment-plan



Ministry of the Environment, Conservation and Parks



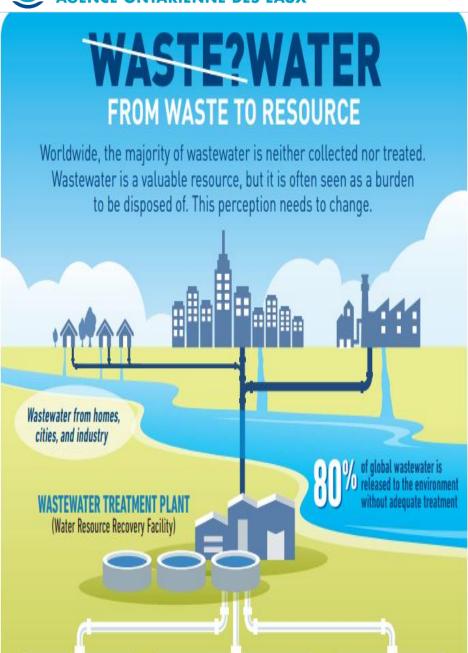
2.4 REDUCE AND DIVERT FOOD AND ORGANIC WASTE

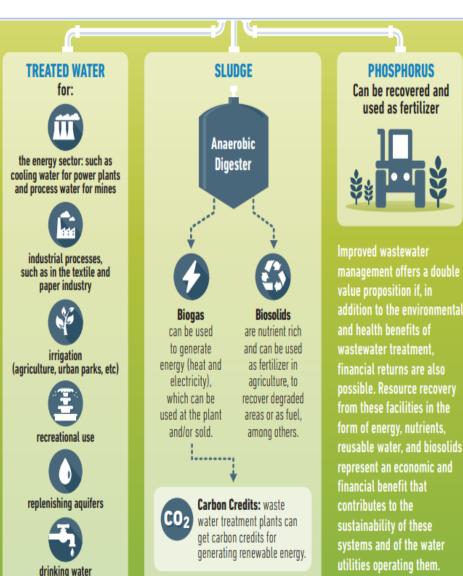
A landfill ban on food and organic waste could create new opportunities for waste reduction, surplus food rescue, and offer new approaches to resource recovery creating value at all levels of the value chain. A landfill ban could drive investment in resource recovery systems, create jobs and support innovation in the province.

2.7 RECOVER THE VALUE OF RESOURCES

Whether Ontario should recognize additional recovery approaches as an alternative to landfill.

- Whether certain types/uses of thermal treatment technology should count as waste diversion
- How Ontario's regulatory and approvals framework can support greater adoption of chemical recycling and thermal treatment while still ensuring that these technologies meet Ontario's stringent air standards and waste management requirements
- Lessons learned from other jurisdictions to see how thermal treatment



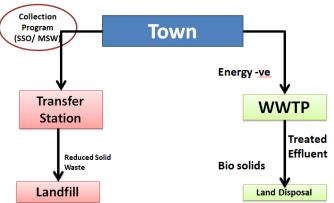


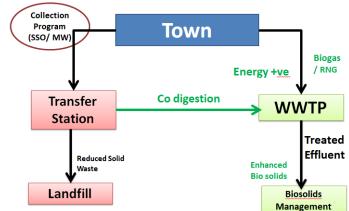
Overall Shift from Wastewater Treatment to Resource Recovery and Net Zero Facilities



A Zero Organic Waste Future

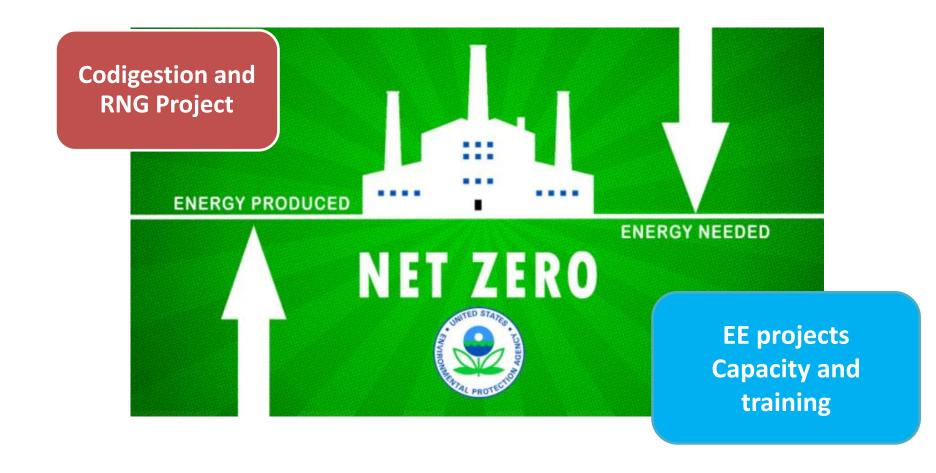




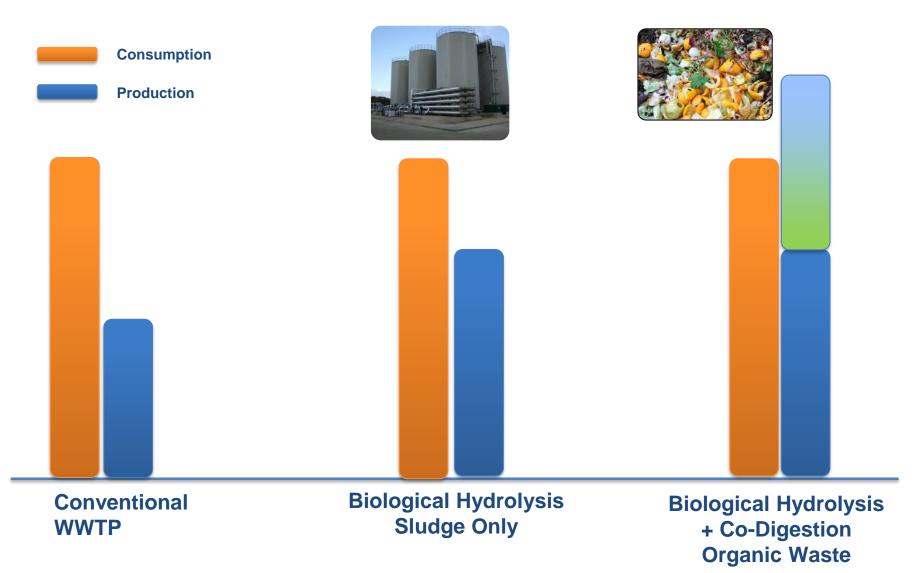




Goal: Net Zero Plant



Co-digestion for Energy Neutrality





Cornwall Net Zero Project

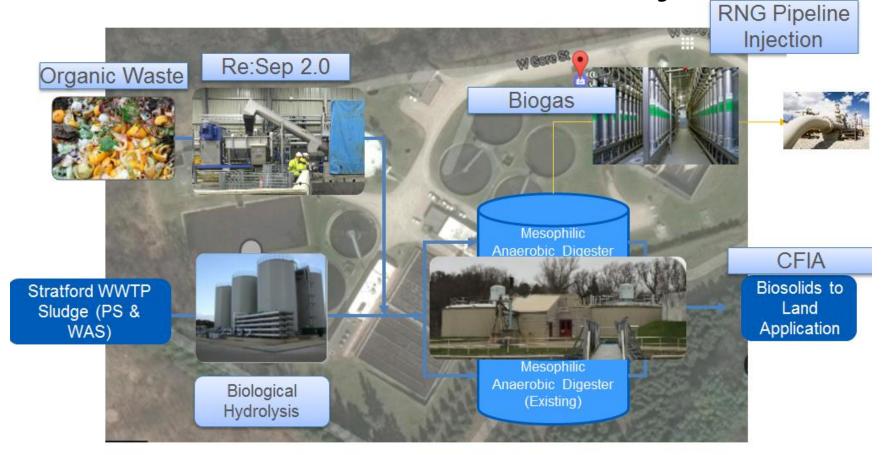
- Review existing WWTP operating capacity
 - Free up the digester capacity with innovative technology and optimization
- Organics availability assessment
 - Organics, WW, FOG, ICI
- Biogas Usage Assessment
 - Electricity, Renewable Natural Gas, other
- Biosolids beneficial usage
 - Fertilizers
- Stakeholder Engagement
- Organics Collection Program



Cornwall Net Zero Project

- Present various scenarios with cost and ROIs
- Present project delivery models
- Present available funding program
- Present cost-benefits information on
 - Energy savings
 - GHG reduction
 - Cobenefits (economic and social)
- Pave path forward for partnership with public entities to implement

Stratford Net Zero Project



Reducing GHG Emissions by 48,951 TCO₂eq/yr Increasing Biogas Production by 4 Times

Circular Economy/ Co-benefits

Landfill Diversion

40% Waste Diversion/ extended life for landfill





Maximize Existing Assets

Demonstrate Innovative Technology



Reduce the need for the import of synthetic fertilizers



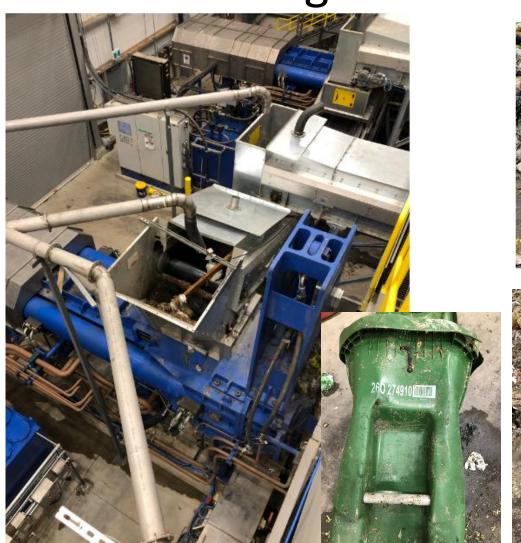
Reach 3.5
Million
Households with
RNG

GHG Reductions

Establish GHG measurement and validation methodology in W &WW



Dufferin Organics Processing Facility









Other Municipal Projects

Stand Alone SSO	Co-Digestion
County of Simcoe- MW	City of Stratford
Region of Peel-MW	Town of Petawawa*
County of Oxford- MW	City of Belleville*
Region of Durham-MW	Town of Espanola*
Region of York?	City of Windsor*
City of Toronto: Disco Road	City of Brantford City of Kingston
City of Ottawa: Biogas	City of Cornwall*
Region of Halton: Biogas	

Discussion





Path to Meeting Ontario's 2030 Emission Reduction Target

