

**Response to Ontario request for input** Re: Changes to Biogas Rules for Farms to Increase Economic Opportunity in Ontario's Renewable Natural Gas Sector

Submission to: [nmaconsultation@ontario.ca](mailto:nmaconsultation@ontario.ca)

**Who we are:**

Ontario Water Consortium (OWC) is dedicated to advancing the commercialization of innovative water technologies through private sector collaboration with academics. Since our founding, we have demonstrated our capacity to deliver significant economic benefits in Ontario.

OWC has established a Working Group focused on “Value generation from biosolids.” The Working Group was created with support from the Ministry of Research, Innovation and Science through the Business Growth Initiative to leverage OWC’s Advancing Water Technologies (AWT) funding program for technology development. The AWT funding program was funded by the Federal Economic Development Agency for Southern Ontario. The Working Group believes that Ontario has the potential to be a global leader in biosolids technologies and that the right policy environment could create the necessary conditions for such a cluster that can build on existing technology companies and research expertise.

Members include:

Youngseck Hong, Senior Technology Leader, SUEZ Water Technologies and Solutions (Working Group Chair)

Ted Mao, VP Research, Trojan Technologies (Vice Chair)

Phil Sidhwa, President, Orgatec Energy Inc.

Bill Mullin, Business Development Manager, Biorem

Sheng Chang, Professor, University of Guelph

Wayne Parker, Professor, University of Waterloo

Shelly Bonte-Gelok, Program Manager (Biosolids, Organics and Resource Recovery), Ontario Clean Water Agency (OCWA)

Sarah Mason-Renton, Business Development Manager, Lystek International

Sangeeta Chopra, Director of Process Optimization and Technical Services, OCWA

Don Hoekstra, Consultant

We are pleased to submit the following comments.

Signed,

**Brenda Lucas**

Executive Director

Ontario Water Consortium

## Submission:

We believe that there is currently an important opportunity for Ontario municipalities to lead a major shift toward resource recovery at wastewater treatment plants with existing anaerobic digesters. Specifically we see a transformation from “wastewater treatment” to energy recovery or “net zero energy” facilities.

The momentum for projects in this area is demonstrated by the active engagement of representatives from 12 Ontario municipalities, academics and technology providers with OWC and OCWA since 2016. It is anticipated that the City of Stratford will be in the construction stages of such a project this year that will involve upgrading its anaerobic digester, thereby increasing its digester capacity and allowing for the co-digestion of source separated organics and production of renewable natural gas (RNG). The upgrades at the Stratford plant align with the city’s implementation of the residential source separated organics (SSO) program, and will allow for the capture of methane gas for the supply of Renewable Natural Gas to the grid (in partnership with Union Gas).

OWC has hosted ongoing information sharing and discussions regarding the opportunity for other interested municipalities. OCWA has positioned itself as a leader and potential partner by working with municipalities to develop, secure funding for, and implement these projects. We see anaerobic co-digestion as a particular opportunity for medium-sized municipalities to benefit.

We have outlined in previous submissions, and through our engagement with the province, the opportunity to optimize and enhance existing anaerobic digesters at existing municipal wastewater treatment plants (WWTP) for co-digestion of sludge with other organic materials.

Co-digestion at existing WWTPs accomplishes:

- Optimizing existing infrastructure (in many cases these facilities require upgrades, or are operating below rated capacity)
- Providing new anaerobic digestion capacity to meet needs for diversion of organics from landfill
- Reduce the need to site new greenfield projects or stand-alone digesters
- Turn wastewater facilities into Resource Recovery Facilities
- Generate valuable renewable natural gas that can be a revenue stream for municipalities
- Provide a more consistent and reliable source of organic fertilizer (compared to small volumes handled by on-farm digesters)
- Increase opportunities for new investment models, led by municipalities.

Three critical pillars for success have been identified by our group:

### ➤ Approvals

The approvals regime for co-digestion has been worked through by the Stratford project (a final Environmental Compliance Approval is under final review and anticipated to be issued soon). The approval process has demonstrated that no regulatory changes are needed to facilitate co-digestion projects and we are encouraged by the support of MECP and its willingness to continue to be engaged with this innovative initiative and further clarify the process for future projects.

➤ Financing

While project funding has been complicated by the loss of dedicated funding programs for these types of projects, the renewable natural gas produced is a revenue source, which enables the use of new financing models for municipalities. Project financing requires long-term planning, including guaranteed supply of organic feedstocks.

➤ Long-term certainty of organic feedstocks

We are concerned that the current proposal may allow on-farm digesters to accept municipally generated organics and farms to become waste processing sites. In particular, post-consumer or household organic waste is not handled well by on-farm digesters. Speculation that on-farm digesters are an appropriate destination for those wastes is causing uncertainty in the market that could threaten the viability of these projects (and should be clarified).

Stratford must secure a long-term supply of organic materials for its project to be viable. Others will have the same need. **On-farm digesters offer an excellent opportunity to accept additional agricultural or other point sources of organics (e.g., food processing facilities). However, they should continue to be excluded as a destination for post-consumer organics from municipal sources.**

To “make the province a North American leader in the biogas sector” and enable “ways to boost biogas sector revenues by up to 50 per cent in five years” we recommend that the province:

1. Facilitate and support an informed, integrated approach to managing organics to maximize resource recovery, recognizing the potential for co-digestion at existing wastewater facilities;
2. **Maintain restrictions against on-farm digesters accepting source-separated organics or any feedstocks derived from SSO;**
3. Commit to implementing the previously proposed **ban on the landfilling of organics** over an appropriate period; and
4. Implement a **minimum renewable content** in natural gas.

Current approvals for on-farm digesters restrict owners from accepting the following:

- a. any waste that is classified as hazardous waste in accordance with Regulation 347;
- b. any waste that is classified as "Specified Risk Materials" as defined by the Canadian Food Inspection Agency Feed Act, 1993, as amended;
- c. any biosolids from the municipal wastewater treatment plants; any untreated septage as defined in O. Regulation 267/03 or hauled sewage as defined in Regulation 347; and
- d. any SSO from the curbside collection programs or collected by municipalities at a centralized location.

We think these restrictions should be maintained. Further, SSO that is pre-processed into a slurry (or other form) at a centralized location should be explicitly included in (d) and restricted from on-farm digesters. The restriction against slurry could be reconsidered in cases where an integrated, regional approach to organics management has been implemented and a mix of end users incorporated into a management plan.

We are supportive of making better use of on-farm digesters, and maximizing that existing capacity. However, given the complexity and sophistication of SSO management, we feel it is not a suitable destination for municipal organics.

#### **Further Background:**

This Working Group made a submission to the Ministry's previous **Discussion Paper: Addressing Food and Organic Waste in Ontario (EBR Registry Number: 013-0094)** which provided background and outlined the opportunity and benefits of integrating biosolids management into the province's organics framework. Our specific recommendations on the discussion paper included:

1. The province's goal should be to drive beneficial management and value generation from organics; with an integrated approach to the management of biosolids, septage and other organics.
2. The management of biosolids should be explicitly addressed in the proposed Organics Framework, articulating a clear provincial direction for reducing the volume of, and capturing the energy and nutrient value from, biosolids.
3. Consistent with the principle of using disposal bans to facilitate resource recovery and waste reduction, the province should ban landfilling (as Quebec, Nova Scotia and PEI have done) and require biosolids management that prioritizes beneficial use/reuse in support of the circular economy.
4. Require and provide financial support for the development of biosolids management master plans by all municipalities. Where appropriate, help them expediently and cost-effectively develop such master plans and broader organics management master plans.
5. Support regional consideration and planning for organics management capacity. This should focus on enhanced biosolids management solutions for biosolids volume minimization, energy generation, or resource recovery at wastewater treatment facilities to get the most out of current treatment capacity.
6. Building on the optimized WWTP capacity, consider centralized biosolids, septage and organics storage facilities and dedicated digester capacity on a regional basis.
7. Make infrastructure funding available to support regional treatment and storage capacity.
8. Create and execute a public education campaign regarding beneficial reuse of biosolids, to encourage public acceptance of and recognition of the benefits of reuse.
9. Introduce a **renewable content requirement for natural gas** and investments to promote the use of renewable natural gas as proposed in the Climate Change Action Plan (and noted in Table 5 of the Discussion Paper).
10. Create a comprehensive and publicly accessible database on the production and end use of biosolids and septage in Ontario.

We were very encouraged to see the **explicit connection to wastewater management and infrastructure, with the inclusion of two policy statements in the organics framework and action plan.** We look forward to continue to work with MECP to clarify that opportunity.