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Ms. Christy Taglieri
Senior Policy Advisor
Ontario Ministry of Agriculture, Food and Rural Affairs
Food Safety and Environmental Policy Branch
1 Stone Road West, 2nd Floor SW
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RE: Comments by the Ontario Environment Industry Association (ONEIA) on ERO # 019-1234: Proposed Regulatory Amendments to the General Regulation (O. Reg. 267/03 – General) Under the Nutrient Management Act to Support On-farm Regulated Mixed Anaerobic Digestion Facilities

Dear Ms. Taglieri:

On behalf of our province's more than 3,000 environment and cleantech firms, the Ontario Environment Industry Association (ONEIA) is pleased to provide our comments on the Proposed Regulatory Amendments to the General Regulation Under the Nutrient Management Act to Support On-farm Regulated Mixed Anaerobic Digestion Facilities (Discussion Paper).

Ontario is home to Canada's largest group of environment and cleantech companies. The most recent statistics show that Ontario's environment sector employs more than 65,000 people across a range of sub-sectors. This includes firms working in such diverse areas as water/wastewater/stormwater treatment and management, materials collection and transfer, resource recovery, organics processing, composting, recycling solutions, alternative energy systems, environmental consulting, brownfield remediation – to name just a few. These companies contribute more than \$8-billion to the provincial economy, with approximately \$1-billion of this amount coming from export earnings.

According to the Province, Ontario citizens generate nearly a tonne of waste per person every year and our overall diversion rate has stalled below 30% over the last 15 years. We agree that Ontario needs to reduce the amount of waste that we generate and to also divert more waste from landfill through proven and emerging methods. The Province is a leader in North America in the area of food and organic waste recovery and processing and more can be done in this area to increase our diversion efforts.

The processing of these materials supports economically valuable activities, including facilities in the areas of composting, anaerobic digestion (AD), biofuels, animal feed and rendering. Currently, Ontario is home to approximately 76 facilities with a current processing capacity of 2.3 million tonnes per year. This includes 41 compost facilities and 35 AD systems, including 29 on-farm facilities and six off-farm facilities. The development of this infrastructure has seen Ontario develop expertise that is currently exported to other jurisdictions such as California, British Columbia, Massachusetts, and Quebec.

Members of ONEIA are committed to engaging with governments to develop policies and regulations that are consistent with our principles of sound science, a sound environment and a sound economy. To that end, we convened members of our Resource Recovery

Committee drawn from across the organics management supply chain to review the Discussion Paper. Throughout this process, as well as any consultation related to the Discussion Paper, our members are ready to offer a wealth of “made-in-Ontario” expertise that can help the Province achieve its goals of economic prosperity and environmental protection for current and future generations.

Detailed Comments on the Proposed Regulatory Amendments

The Province is consulting with industry on the identification of potential changes that would allow farmers to develop new, larger volume AD facilities, participate in the emerging renewable natural gas (RNG) market in Ontario and make the Province a North American leader in the biogas sector. This vision can create a tremendous opportunity across the entire supply chain (i.e. waste generators, waste management companies, haulers, engineering and construction firms, utilities, land application firms, etc.) to create well-paying, long-term jobs and drive economic development in the rural Ontario landscape.

ONEIA members (many of which participate in the existing organics management supply chain) firmly believe there are multiple key points that need to be addressed on the policy and regulatory front to eliminate hurdles and facilitate growth across the entire supply chain. We firmly believe the modification of one policy measure will not stimulate the intended growth of the farm biogas sector and thus, the policy measures outlined below need to be viewed holistically through a farm-to-fork-to-fuel supply chain lens.

In regard to high-level goals, ONEIA believes that the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) should pursue the following areas:

1. Organic waste from the industrial/commercial/institutional (ICI) and residential sectors has to be available in order to allow for the production of RNG at tipping/processing rates competitive to landfills and for the required infrastructure to be profitable and provide long-term, robust, durable outlets for converting these organic waste streams.
2. Companies require clear guidance on the allowable size of on-farm biogas operations. The potential environmental risks must be understood and mitigation processes put in place to allow this infrastructure to operate in compliance with relevant environmental regulations. This includes proper guidance on siting to mitigate issues related to farms and rural homeowners. For example, farms with volumes of below 2,000 tonnes per year could be exempt, while up to 10,000 tonnes per year could be governed by permit-by-rule and farms above 10,000 tonnes per year of off-farm material would require an ECA.
3. Digestate has to be managed in an environmentally sustainable manner (including the elimination of plastics and other inert constituents) in order to avoid further polluting Ontario’s prime agricultural lands.
4. The management of digestate should include policies that support the redistribution of macro nutrients such as nitrogen, phosphorus and potassium (NPK) to areas of the province that need them rather than concentrating potential issues at farms that already have these nutrients available. The organic matter in digestate is another benefit and should be considered, along with its nutrients, when considering soil health.
5. Supporting the broader agricultural and waste management industries to minimize the production of greenhouse gas (GHG) emissions from methane, nitrous oxide, etc. while improving soil health should be paramount.
6. We need to ensure access to natural gas infrastructure to facilitate the movement of RNG to markets (which will pay a premium for this energy) in a cost-effective, transparent manner. As suggested, farms will have challenges with the expected

access and interconnection costs to the natural gas network. The regulated utilities quote extremely high capital installation and on-going operational and maintenance costs for tapping into this infrastructure.

With these key points in mind, the Province (through its Environment Plan, Healthy Soils Initiative and Land Use Planning policy measures) could engage with the Federal Government on mutual climate goals while having positive impacts on the broader agricultural and waste management industry. It will also support the Province in its focus on the reduction of red tape and the growth of untapped economic opportunities for on-farm biogas operations and the broader supply chain.

Below we have segmented the relevant policy components that would allow the Province to address the points outlined above. We are open to meet to discuss the details further with an objective to work together to help develop a go-forward plan and regulatory framework.

1. Design, Construction, Operations and Approvals

Our comments are founded on the core principle of maintaining a fair and equitable playing field for all participants in the organics management supply chain – including farms. We are supportive of growing success of AD in the farm sector but not to the detriment of the broader AD sector or through rules that increase environmental risks and create an economic and regulatory imbalance. Our specific comments are:

- AD facilities will benefit from land use planning changes that allow for the construction of biogas facilities and digestate storages in rural Ontario. This would allow for better redistribution of the nutrients and organic matter to cash crop farms including Non-Agricultural Source Material (NASM) and Canadian Food Inspection Agency (CFIA) registered fertilizers that were generated from digestate. This work needs to occur in concert with Ministry of Municipal Affairs and Housing (MMAH) as they are currently developing a Provincial Policy Statement (PPS) on land use planning.
- Ontario will benefit from further evaluation on the segregation of the off-farm wastes from manure prior to digestion. Currently, many on-farm digesters mix inputs with their manure and apply the mixture to land without digestion.
- Compliance with D-series guidelines for the development of all AD facilities would be helpful, including clarity on the requirements related to the size of the facility and the types of organics that are to be processed.
- The inclusion of odour management requirements that are founded on current science and a condition for the development of Emissions Summary and Dispersion Modelling (ESDM) reports, depending on operations size, including on-going source testing would be beneficial for large facilities. Consideration for a broader environmental management strategy that includes traffic, dust, and pests is also recommended.
- The requirement for some level of financial assurance, dependant on the size of the operation, should be implemented.
- Development of testing requirements for annual reports as well as on-going feedstock and digestate testing would allow for industry transparency and thus proper accountability across the entire supply chain.
- The continued requirement for the farms with higher volumes of off-farm organics to develop nutrient management strategies (NMS) and nutrient management plans (NMPs) on an annual basis should be supported.
- The grandfathering of existing AD facilities should occur related to the tonnage or type of materials and to the design criteria for new and/or improved AD facilities.

- We are requesting further discussion with respect to any technical requirements, such as digester conformity and design, to ensure there is an open process of knowledge sharing to avoid unintended consequences that restrict projects from being deployed.
- Continued support for Ontario Ministry of Environment, Conservation and Parks (MECP) as they work on the modernization of approvals under the Food & Organic Waste Diversion Framework consultation process. Farms need to source off-farm materials from the waste sector and could be impacted by the slow progress of this process.
- Consideration for the impacts to rural roads with increased truck weights and trip frequency is needed and should be linked to decisions regarding allowances for manure transfer from farm to farm using other methods, such as a pipeline. To be effective and mitigate environmental harms, the approach to the enforcement of any new regulations requires further discussion. We want to ensure there is an appropriate degree of oversight and penalties that are consistent with the requirements for off-farm AD facilities.

2. Permitted Feedstocks to Farm Digestion

A broad range of organics profiles are collected in the Province today. Many contain inert elements that need to be removed to create regulatory compliant soil amendment products from the digestate. We recommend the Province consider the following points in the new regulatory framework:

- Development of definitive classifications of what a farm-based digester can receive based on the size of the operations. Currently, a variety of terms such as agricultural based inputs, on-farm inputs and Agricultural Source Material (ASM) are currently outlined in the Nutrient Management Act (NMA). This covers a broad range of materials; however, currently some farm digesters receive feedstocks under a Renewable Energy Approval (REA) or Environmental Compliance Approval (ECA). Further dialogue needs to occur around these types of materials as some may not be acceptable for use (e.g. acidic waste from a food processor would be considered hazardous waste due to its pH).
- Elimination of direct land application practices for undigested organics generated in the ICI and residential sectors would increase the feedstocks available for on-farm digestion and allow the materials to be stabilized from a GHG (methane) release perspective prior to being land applied.
- Development of allowable contamination in off-farm materials needs to be structured and subsequently monitored. As an example, waste from a grocery store or restaurant chain will often have contamination in the form of plastic, metal, and glass. Farm-based digesters are not typically designed to deal with this profile. The waste industry could provide a role by first cleaning up these materials which allows on-farm AD facilities to properly handle them.
- Clarity on the role that residential source-separated organics (SSO) could play in on-farm AD should be developed. It is currently understood that there are restrictions for farm-based digesters accepting residential SSO if it has human waste (e.g. diapers and sanitary products). If this waste has gone through a pre-processing system to remove the inert contamination, it is unclear on the science-based rationale for the farm-based AD not being allowed to receive these wastes. Another option could be pasteurization of these materials to eliminate any risks that were determined through science-based research.
- The ICI and residential sectors require clarity on the homes for their organics streams to allow for proper reporting from an economic and sustainability perspective. Therefore, any farm that manages off-farm materials should be

required to annually track the type and tonnages of material that they receive, which is now tracked through their Nutrient Management Strategy. This information could then be consolidated through OMAFRA in coordination with MECP to ensure proper accountability throughout the supply chain. The Province is keen to track and report its progress in organic waste diversion as well as methane emissions reductions and the production of these records would harmonize the effort. As an example, currently farms do not have to prepare annual reports that inform the MECP of their waste management activities as they report under the NMA.

- Further discussion on the form of receipt of organic waste needs to occur including raw, unprocessed organics through to the receipt of pre-processed organics in a slurry or cake form, as well as the management of materials requiring de-packaging.
- The allowable volume of off-farm material needs further discussion including whether it is a tonnage limit or risk-based on the tonnage or the percentage of off-farm materials in relation to the amount of on-farm materials that are digested. However, clear guidance needs to be provided that if recipients want to process more than 50% off-farm, then compliance with the industrial AD regulations that are governed by the MECP and the ECA process is required.
- ONEIA would request the continued implementation of the Organics Diversion Framework with the MECP to allow for the feedstocks to be generated to allow for more digestion to occur and discussion should occur on how these timelines could be accelerated.
- Support on the development of standards for digestibility of compostable products to ensure that fine compostable plastics can be broken down through AD and be suitable when land applying the digestate. This work would include the elimination of some polymers that have been found to not break down in the natural environment.
- More clarity and a definitive process regarding any future feedstock profile or volume changes would be beneficial to creating certainty for developers.
- Requirements to follow a prescriptive set of reporting data, including the need for scaling of all in and out trucks, that is consistent with other organics facility reporting requirements will allow for proper tracking, measurement and management of Provincial organics diversion achievements.

3. Digestate Management / NASM Products Market Development

The benefits of using digestate to improve soil health are known outside Ontario. Further discussion is needed to foster the development of the agricultural end use to the benefit of both the on-farm and off-farm producers of soil amendment products derived from digestate. Specific points for consideration are:

- Development of a policy that would allow digestate that meets a cleanliness specification as well as a time/temperature specification to be land applied (i.e. a separate category in the NMA similar to biosolids and thus not require testing or odour profiling).
- Clarity on the foreign materials in digestate including plastics, per- and polyfluorinated alkyl substances (PFAS) and other contaminants that need to be addressed further up in the supply chain (products and packaging manufacturers).
- Clear guidance and financial support (tax incentives and procurement rules) in the form of government procurement for the use of digestate to build soil health

and enhance fertility in source water protection areas as well as in the Lake Erie and Lake Simcoe watersheds.

- At a minimum, the elimination or complete overhaul of the NASM Odour Guide, as the standards respecting setback and odour testing was not adequate and requires review.
- Currently a large volume of organic waste is managed through composting that produces a poor-quality compost (i.e. NASM compost). The elimination of NASM compost (foreign matter) as an allowed material would facilitate the anaerobic digestion of these materials.
- Further consideration needs to be given to the siting of facilities and the nearness to soils that need the nutrients and organic matter available in digestates. Not all areas need the same degree or range of improvement and the market for end use must match a science-based understanding of end user needs.
- Consideration for the development of technical design and operating standards for the expansion of the storage capacity that will be needed for the increased volume of land application materials that will be produced under this proposal.
- Support for further research and demonstration of concepts to develop market value in Ontario that is derived from the addition of micro-nutrients, organic matter, and microbes using a closed loop cycle. Areas of interest include applications during growing seasons and winters, and further processing the raw form into other products.

4. Renewable Natural Gas Market Development

We are strongly supportive of any activities that stimulate the development of a thriving RNG market for both on- and off-farm producers. For this to occur, we believe there are multiple considerations and corresponding choices to be made to build the foundation of an economically beneficial market. We believe the key considerations are:

- Request a review of the RNG interconnection process and cost with the Ministry of Energy and the OEB. This further dialogue is necessary to ensure the efforts outlined above will not be stymied if the farms cannot economically justify connection to the natural gas infrastructure. At present the process and cost is not sustainable for farms and other biogas facilities.
- The development of a voluntary RNG offtake program would be beneficial as ICI organic waste producers and municipalities would like to source RNG for their own internal uses to offset fossil fuel use and reduce their GHG emissions.
- Discussion with the pipeline infrastructure providers to understand the process, timing, and cost to expand the grid into rural areas currently not serviced by natural gas is necessary to compiling the total cost of injecting RNG into the pipeline.
- Support for further research and demonstration of concepts to develop market value in Ontario that is derived from the local production and use of a low impact fuel using a closed loop cycle.

5. Other Considerations

Our additional comments related to the proposed amendments are:

- If OMAFRA is going to continue as both the approver and monitor of on-farm digesters, there is increased risk with expansion in tonnage. ONEIA's members are concerned that OMAFRA has too little oversight in relation to compliance with NMA on farms. Therefore, either the MECP should be included in the oversight of

these facilities, as it can act as a more of a policing body, or the farms should stay with the volumes that are currently allowed.

- ONEIA has recently reviewed a farm digester permit that allowed the handling of significant tonnages (60,000 tonnes per year) of off-farm material. ONEIA does not believe that the digestate management protocol defined under this permit is sufficient from a nutrient management perspective and sets an uneven playing field between off-farm and on-farm facilities. Thus, ONEIA believes that farms wishing to process this quantity of off-farm material must manage their digestate as waste (NASM or request a CFIA approval). WE are concerned with the precedent of allowing some farms to be permitted on the “front end” like a waste site while they are not required to act on the “back end” in the same manner.
- As outlined throughout this submission, once a farm crosses a certain volume of waste it needs to comply with many of the regulations that govern waste disposal facilities. If there is not a uniform set of regulations, operators will be encouraged to manipulate the system and could be encouraged to portray a waste disposal facility as a farm which sets the stage for the potential of a Walkerton type event.
- Further dialogue needs to occur across various government ministries including MECP, Ministry of Municipal Affairs and Housing (MMAH) and the Ministry of Energy (MOE) before any expansion and supporting regulations are created.
- Development of proper and standardized nomenclature should occur across the supply chain as the definitions of waste, organics, SSO and on-farm organics gets easily confused. Standardization is necessary across all regulations. Every definition seems to be open to interpretation and varies between OMAFRA and MECP such as MECP’s recent use of “non-putrescible ICI organic waste”. A set of common definitions between the ministries for use in documents would be helpful and would create consistency across the projects and what controls regulations need to be in place based on what you can take.

Summary

ONEIA looks forward to working with the Province to strengthen and implement the proposed changes and to participating in consultations on the priorities and next steps. ONEIA member companies and their representatives are willing to participate in advisory panels on the Discussion Paper. ONEIA believes it has identified the aspects of greatest importance and priority within the Discussion Paper and areas where our member companies can provide the most support.

ONEIA believes that time is of the essence, and we will collaborate with the Province in an expeditious manner with respect to advancements of actions identified within the Discussion Paper. We welcome the opportunity to discuss our ideas further. Please contact Alex Gill, ONEIA Executive Director, at agill@oneia.ca or at (416) 531-7884 should you have any questions.

Yours truly,



Alex Gill
Executive Director

CC: Ontario Minister of Energy
Ontario Minister of Environment, Conservation and Parks
Ontario Minister of Economic Development, Trade and Employment
Ontario Minister of Infrastructure