

EMAIL

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Ms. Rachel Sebareme
Commission Secretariat Coordinator
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140, Grande-Allée Est, suite 650 Québec
(Québec) G1R 5N6

**Subject: Final Waste Inventory and Management –
Additional Information**

Dear Madam,

As you know, the mission of the Ministère de l'Énergie et des Ressources Naturelles (Ministry) is to manage and support sustainable energy, mineral resources, and regional development in Québec.

As part of the final waste management mandate entrusted to you by the Government of Québec, we understand that you are specifically seeking the Ministry's intervention assessment regarding the development of Québec's energy resources.

Energy recovery is part of a coherent governmental approach to waste management in Québec. This is usually the last option before the ultimate disposal of these materials.

The Québec government has also set ambitious targets for energy transition, particularly for bioenergy production. Thus, the Ministry is working with its partners to develop Québec's first green hydrogen and bioenergy strategy.

As such, the Ministry is pleased to contribute to this matter which is of such importance for Québec.

At the same time, we would like to send you information and clarifications on the topics you would like us to document. These elements are attached in Appendix 1.

Director,

Xavier Brosseau

Xavier Brosseau

APPENDIX 1

Supplemental Information to that Requested by the Commission from the Ministère de l'Énergie et des Ressources Naturelles

Topic 1: The residual materials energy recovery framework, including possible financial support programs for biomethane production.

The Ministry does not specifically regulate the energy recovery of residual materials.

However, certain Ministry initiatives may contribute to energy recovery from some residual materials, including organic material for bioenergy production.

As such, the 2030 Energy Policy and the 2030 Plan for a Green Economy aim to increase bioenergy production in Québec by 50%. To achieve this, in the fall of 2021, the Québec government intends to propose the first Québec strategy for green hydrogen and bioenergy. This strategy will aim to remove barriers to local consumption and production and to determine the necessary conditions for developing these sectors.

In recent years, the Ministry has launched several initiatives promoting bioenergy development.

Regulatory Initiatives

- In March 2019, the Government of Québec issued [the Regulation Respecting the Quantity of Renewable Natural Gas to be Delivered by a Distributor](#) (chapter R-6.01, r. 4.3). This regulation aims to promote the increased use of renewable natural gas (RNG) by specifying the minimum quantity of RNG that natural gas distributors will be required to deliver annually: 1% starting in 2020, 2% starting in 2023 and 5% starting in 2025. Local RNG consumption, which is produced by the biomethanization of domestic and agricultural organic matter or by capturing biogas from landfills, can reduce the volume of fossil natural gas imports and greenhouse gas (GHG) emissions. This regulation creates a market for RNG in Québec.
- The Ministry is working on a draft regulation regarding integrating low-carbon-intensity fuel content in fossil fuels. This regulation will help reduce GHG emissions in the transport sector by providing volumetric minimum requirements for low-carbon content in gasoline of 15% and 10% in diesel fuel, by 2030. In addition to volumetric requirements, the standards for the use of fuels with limited environmental impact, based on carbon intensity, prioritize the use of those with low carbon content.

Support for the Development of Bioenergy Projects

- As part of Québec's March 2020 Budget Plan, the government announced \$70 million in financial support for developing an RNG production and distribution chain in Québec. In July 2020, the Québec government announced financial support of \$45 million to implement eight RNG projects that will be ready to start production by the end of 2023 (Appendix 2).
- In November 2020, the Ministry launched its new [Programme de Soutien à la Production de GNR, à Son Injection ou à Sa Connexion au Réseau de Distribution de Gaz Naturel](#). The program provides financial support for the implementation of RNG production projects aimed at injecting RNG into the gas network.
- The [Technoclimat](#) innovation program supports bioenergy production technology demonstration projects. Projects must involve a pre-commercial technological innovation, the testing of a technology that is not present in the Québec market or a first commercial bioenergy production unit.

Topic 2: Technology and Innovations to Recover Energy from Residual Materials in Québec

a. Description and balance sheets (amount of energy produced and RM recycled, associated GHG reduction)

The Ministry does not compile data on energy production from residual materials.

[L'État de l'Énergie 2021](#), published by the HEC chair of energy sector management, presents the balance sheet of biofuel production, biogas valorization, RNG and syngas production projects in Québec (pp. 21-24). This balance sheet specifies production volume, the number of projects and the main materials used in the production process for the various types of biofuels.

The Ministry has commissioned a study that aims to draw a portrait of bioenergy production in Québec and to make an inventory of the biomass available to produce bioenergy. The results are expected in the coming weeks. The Ministry could forward this study to the commission when it becomes available.

b. Residual materials currently disposed of in Québec that have energy recovery potential

The Ministry does not have this information. The current study could provide a picture for biomass from residual materials.

Additionally, several disposed-of materials have energy recovery potential. According to the Plan d'Action 2019-2024 de la Politique Québécoise de Gestion des Matières Résiduelles, the regulatory framework that defines the residual materials energy recovery criteria should be completed by 2022. This framework should make it possible to recover energy from residual materials that are currently destined for disposal, but without diverting residual materials to sectors such as re-use and recycling.

c. Economic criteria promoting energy recovery: site size, proximity to the network, proximity to the buyer, etc.

The price of energy and the costs associated with the alternative treatment of these materials are the most decisive factors in project feasibility. However, it is difficult to establish objective criteria regarding the technical and economic potential of residual materials energy recovery due to the various forms of energy produced, technologies used, types of materials available, market potentials, opportunities for managing co-products, marketing costs and accessibility to public infrastructure.

An assessment of the technical and economic potential for each project is generally preferred. This should be considered before developing new disposal sites.

d. Energy projections from recovery and disposal sites for the next 20 years

The Ministry does not compile data on energy production at recovery and disposal sites.

Topic 3: Technologies and Innovations for Recovering Energy from Residual Materials Elsewhere in Canada and around the World.

a. Description and potential for Québec

The Ministry does not have a specific inventory of available energy recovery technologies that meet Québec's residual materials management framework.

However, bioenergy production technologies can be adapted to the treatment of residual biomass, including biomethanization.

APPENDIX 2

RNG Production Projects Supported by the Ministère de l'Énergie et des Ressources Naturelles

Name of the RNG Production Project Sponsor	Location	Type of RNG Project Targeted	Target Volume of RNG Received in the Network (Mm ³ /a)
ADM-Agri-Industries Company	Candiac	Biomethanization	5.0
Centre de Traitement de la Biomasse de la Montérégie Inc.	Saint-Pie	Biomethanization	2.1
GFL Environmental Inc.	Chicoutimi	Engineered landfill	2.0
Groupe Bioénertek Inc.	Sainte- Sophie-de- Lévrard	Agricultural	1.6
Coopérative de Solidarité Carbone	Victoriaville	Agricultural	3.0
Régie Intermunicipale de Gestion des Matières Résiduelles de Brome- Missisquoi	Cowansville	Engineered landfill	3.0
Carbonaxion Bioénergies Inc.	Neuville	Engineered landfill	1.9
Régie de Gestion des Matières Résiduelles de la Mauricie	Saint- Étienne-des- Grès	Engineered landfill	8.0