Renewable natural gas (RNG) production:

Key driver in the energy transition and economic development for Québec regions

Study background

A study conducted by Aviseo Consulting concluded that in addition to propelling the energy transition forward, RNG production is a major driver for economic development in all regions of Québec. That study came on the heels of one released by WSP and Deloitte in November 2018 confirming that two thirds of the natural gas distributed in Québec could come from renewable sources by 2030.

Study objective

- Study the economic and tax benefits related to the technical and economic potential of RNG production by 2030 for Québec as a whole and all its administrative regions.
- Identify RNG's role in the circular economy.
- Analyze the foundational impacts for various players in the economy.

Major economic and tax impacts for Québec and its regions

- The $1.6 billion contributed annually to Québec's GDP from RNG production operations is equivalent to the contribution from Québec's crop production sector (excluding greenhouse, nursery and floriculture production).
- The regions would benefit because more than **70%** of the GDP generated by RNG production would come from the region where the production facilities are located.
- Since forest residues represent the largest potential for RNG production, Saguenay–Lac-Saint-Jean could account for over a quarter of the investments and spinoffs. Other regions with abundant forest residues, such as Mauricie, Nord-du-Québec, Abitibi-Témiscamingue, Côte-Nord and Laurentides, would also attract a substantial share of that activity. In addition, with 70% of the potential for RNG production from agricultural residue, the Montérégie region could also benefit from a large share of the estimated economic spinoffs.

Expected spinoffs from producing 144.3 million GJ of RNG

(2/3 of the natural gas currently distributed in Québec)

	Investment for construction (total)	Annual expenditures during operation
Expenditures	$19.8 billion	$1.8 billion/year
Jobs	88,000	15,000/year
Contribution to Québec's GDP	$7.9 billion	$1.6 billion/year
Government tax revenues (Québec and federal)	$867 million	$256 million/year

Information

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Additional positive impacts for communities

Municipalities

For municipalities, such as Saint-Hyacinthe, which operates Québec's first municipal biomethanation plant, RNG production presents the following advantages:

- Lower landfill costs
- Better air quality from using RNG for transportation
- Diversified revenue sources

Agricultural sector

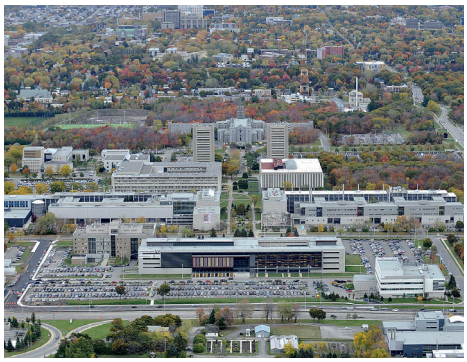
Thanks to initiatives such as the Warwick agricultural cooperative project, the agricultural sector could reap the following benefits:

- Reduced odours from spreading manure
- Diversified revenue sources
- Fertilizer originating from the digestate produced by the process

Forestry sector

For the forestry sector, RNG production could present the following advantages:

- Potential for optimizing forest management
- Diversification for the forest industry
- High quality green jobs that cannot be outsourced away from regions



RNG consumers

RNG consumers, such as our customers L'Oréal Canada, National Defence and Université Laval benefit from the following:

- Use of local renewable energy
- Reduction in their GHG emissions
- Access to the eco-conscious consumer market

Demonstrable potential and foundational impacts: Opportunity for Québec to develop a new renewable energy sector.

WSP and Deloitte study on technical and economic potential

Technical and economic potential of RNG production between now and 2030:

- Up to two thirds of the natural gas volumes distributed in Québec
- New revenue source for the agricultural, municipal, agrifood, forestry and other sectors
- Potential is present in all Québec regions
- Potential for preventing 7.2 Mt of GHG emissions, which would equate to taking 1.5 million cars or 53,000 heavy trucks off the road per year[1]

[1] Emissions avoided by replacing 144.3 million GJ of conventional gas with RNG. The volume avoided could be higher if RNG were used to replace diesel in heavy transport.

02-2019, 8643 Colpron, EN

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