

CHARACTERISTICS OF A CONTRACT  
FOR THE PURCHASE OF RNG  
(COOP AGRI-ÉNERGIE WARWICK)

**BACKGROUND**

1 On August 21, 2019, Énergir and Coop Agri-Énergie Warwick (the “Coop”) entered into a first  
2 Agreement<sup>1</sup> to connect the renewable natural gas (RNG) production site to Énergir’s distribution  
3 system. The project, which consists of connecting a biomethanation complex to Énergir’s system,  
4 will have an annual production capacity of 2.3 Mm<sup>3</sup> of RNG. The Coop was formed by agricultural  
5 producers in the Warwick region. They will operate the first cooperative agricultural anaerobic  
6 digester in Québec to produce RNG which will be injected into Énergir’s system. Jointly with the  
7 Coop, a request was filed with the Régie de l’énergie (the “Régie”) for connection and the  
8 application of the receipt rate to this new customer.<sup>2</sup>

9 Agricultural production is a key element in the development of the RNG sector in Québec. A study  
10 conducted by Deloitte and WSP—*Renewable natural gas production in Québec: A key driver in*  
11 *the energy transition*—states that the potential from the agricultural sector alone represents close  
12 to 9% of volumes distributed by Énergir:

13 “The 2018 technical and economic potential amounts to a little over 25.8 million GJ,<sup>3</sup> which  
14 corresponds to 12% of the volume of natural gas currently distributed by Énergir in Québec.<sup>4</sup> It is  
15 composed of volumes generated from biomethanation of agricultural plant biomass (61%), residual  
16 biomass from agri-food industries (11%), and biogas capture from engineered landfills (27%).”

17 The importance of this sector was also confirmed in the report, *Trajectoires de réduction*  
18 *d’émissions de GES du Québec – Horizons 2030 et 2050* (in French only), prepared by Dunsky  
19 for the Ministère de l’Environnement et de la Lutte contre les changements climatiques. In addition  
20 to identifying RNG as one of the renewable energies that contribute to reaching the GHG  
21 reduction targets set for 2030 and 2050 (66% of the natural gas distributed in 2050 could be  
22 renewable), it identifies that the biomethanation of manure has significant potential to reduce GHG  
23 emissions inexpensively (less than \$50/t CO<sub>2</sub> eq). In this context, Transition énergétique Québec  
24 (TÉQ)—through the Technoclimat grant program—Investissement Québec and Desjardins have  
25 confirmed funding for the Coop project as Québec’s first agricultural biomethanation project to  
26 inject RNG into a gas system.

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<sup>1</sup> R-4098-2019, Énergir-1, Document 2

<sup>2</sup> R-4098-2019, Énergir-1, Document 1

<sup>3</sup> 680,918,448 m<sup>3</sup>

<sup>4</sup> Assuming an RNG purchase price of 56.84 ¢/m<sup>3</sup> (\$15/GJ),

<https://www.recyc-quebec.gouv.qc.ca/sites/default/files/documents/etude-production-gaz-naturel-renouvelable.pdf>, page 6

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1 A second Agreement,<sup>5</sup> this time for Énergir to purchase RNG produced by the Coop, was also  
2 entered into on August 20, 2019. Under this Agreement, Énergir would set the RNG purchase  
3 price at [REDACTED] over a period of [REDACTED]. Details of the  
4 Agreement's volumes are presented in section 1.3.

5 Énergir believes that the characteristics of the agreement are attractive to its customers, allowing  
6 Énergir to meet the demands of the *Regulation respecting the quantity of renewable natural gas*  
7 *to be delivered by a distributor* (the "Regulation"), as will be described in more detail below.

8 In its letter dated August 7, 2019 (A-0051), the Régie ruled on the processing of File R-4008-  
9 2017. Pending the conclusion of step B concerning the characteristics of RNG supply contracts  
10 that Énergir intends to enter into in order to meet the minimum quantity of RNG delivered by  
11 natural gas distributors as of 2020, Énergir will submit to the Régie, on a case-by-case basis for  
12 approval, the characteristics of RNG supply contracts that it intends to enter into.

13 In this regard, Énergir respectfully invites the Régie to approve the characteristics of the RNG  
14 supply contract entered into between Énergir and the Coop, within 45 days of the submission of  
15 this [REDACTED] evidence. [REDACTED]

16 [REDACTED]  
17 [REDACTED] of 45 days is driven by the project  
18 timeline and aims to avoid cost increases. Certain equipment, including purification equipment,  
19 must be ordered by October 15 at the latest, failing which the impact of long delays and additional  
20 costs will affect project completion. Moreover, the financial agreement for the payment of a grant  
21 under TÉQ's Technoclimat program must be signed this fall, which requires that a sale agreement  
22 be signed for the RNG produced.

**1. CHARACTERISTICS AND ATTRACTIVENESS OF THE AGREEMENT**

23 At the time of drafting this section, Énergir is in the process of gathering additional evidence that  
24 will address the methods for appropriately determining the value of the RNG and will propose an  
25 RNG purchasing strategy (step B).

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<sup>5</sup> See Gaz Métro 1, Document 12, of this file

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1 However, Énergir can affirm that the Agreement is attractive to its customers. To demonstrate  
2 this, the price, duration, quantity and the distributor's circumstances will be presented in the  
3 following sections.

**1.1. PRICE**

4 In order to determine the attractiveness of the Agreement, we must first establish a comparative  
5 basis for the price. While there is no price index for RNG, there are a number of markets for  
6 environmental attributes. For example, California uses spot market pricing for the Low-Carbon  
7 Fuel Standard (LCFS) and Renewable Fuel Standard (RFS), and more specifically Renewable  
8 Identification Numbers (RINs) to value RNG as a motor vehicle fuel. To do this, the commodity  
9 price of traditional natural gas is increased by the credit value of these programs. This is the price  
10 that RNG, produced in the same way as the RNG in Warwick, could sell for in the United States.

11 To obtain a general idea of the value of RNG on the motor vehicle fuel market in the United States,  
12 Énergir applied the following assumptions:

- 13 ➤ Price of traditional gas: UNION DAWN DAILY-NGX price index.
- 14 ➤ Value of LCFS credits: These are assessed based on the carbon intensity of the entire  
15 project. The result is provided based on the number of grams of CO<sub>2</sub> emitted per  
16 megajoule of energy produced. There is no single result for RNG, due to the fact that  
17 the type of production has a major influence on RNG. According to the American  
18 Biogas Council, biogas results may range from -300 g of CO<sub>2</sub>/MJ for manure and liquid  
19 manure, from dairy operations, to 60 g of CO<sub>2</sub>/MJ for landfills.<sup>6</sup> A result of 0 g of  
20 CO<sub>2</sub>/MJ is used below.
- 21 ➤ Value of RFS credits: The type of RINs vary according to the technology and inputs  
22 used. While D3 RINs are generated from agricultural residues, municipal biosolids or  
23 landfills, D5 RINs come from such non-cellulosic residues as fat, sugars and most food  
24 residue (organic waste separated at source, agri-food waste, etc.). D5 RINs are used.
- 25 ➤ US\$1.00 = C\$1.30.<sup>7</sup>

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<sup>6</sup> <https://americanbiogasCouncil.org/resources/rin-calculator/>

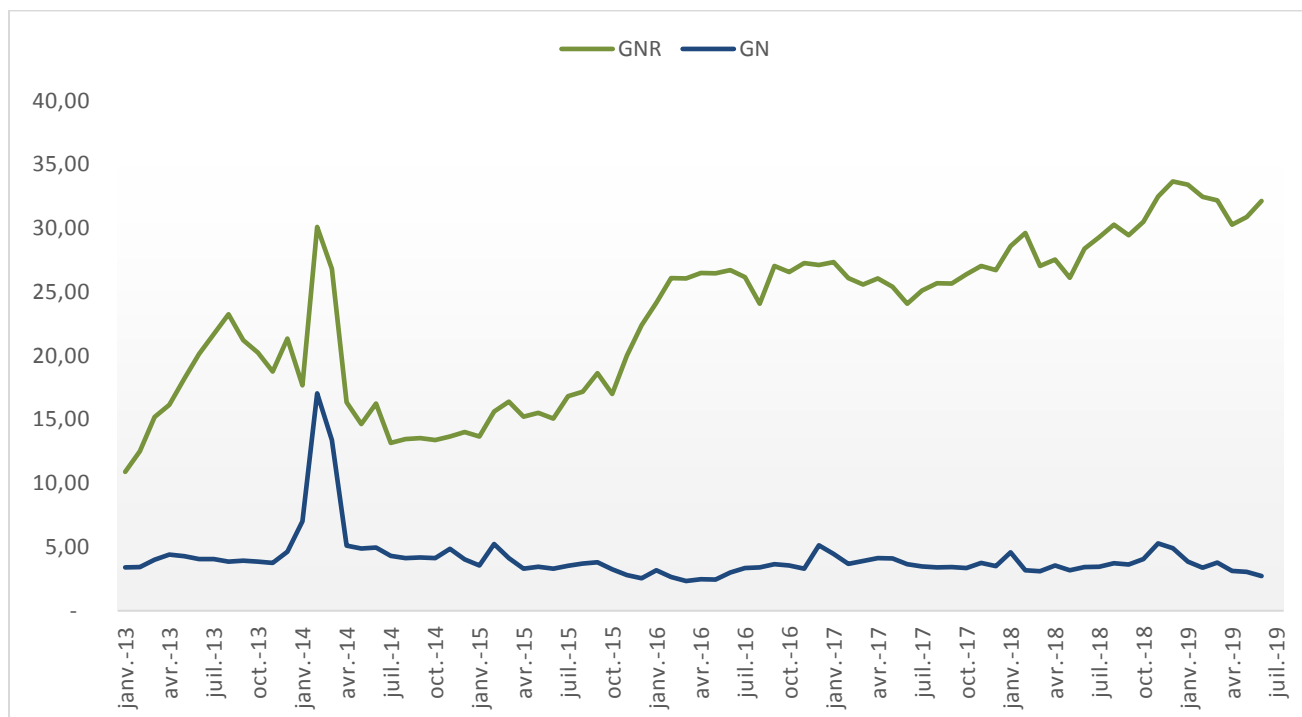
<sup>7</sup> CAN-US exchange rate variations are available here:

<http://www.stat.gouv.qc.ca/statistiques/economie/comparaisons-economiques/interprovinciales/chap12.pdf>

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1 The following graph shows the change in RNG value on the motor vehicle fuel market in the  
 2 United States based on the above assumptions.

3 **Graph 1 – Change in the value of RNG vs. traditional natural gas on the motor vehicle**  
 4 **fuel market in the United States**



5 Since 2016, the price of RNG has fluctuated between \$24/GJ (90.94 ¢/m<sup>3</sup>) and \$33/GJ  
 6 (125.04 ¢/m<sup>3</sup>), showing an upward trend since 2014. The price of traditional natural gas has  
 7 remained stable while the environmental attribute is gaining in value.

8 The Coop uses agricultural and agri-food residue. A comparable project on the motor vehicle fuel  
 9 market in the United States would likely obtain a D5 RIN and a carbon intensity result of -50g of  
 10 CO<sub>2</sub>/MJ. For June, details of calculations are as follows:

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**Table 1 – Valuation of a comparable RNG project for June 2019**

Price component	Qualification	Value (\$/GJ)	Value (¢/m <sup>3</sup> )
Methane (CH <sub>4</sub> )	Price of traditional natural gas	2.73*	10.34
LCFS	-50g (CI score)	37.12**	140.65
RFS	D5 RIN***	5.11	19.36
<b>Total</b>		<b>44.96</b>	<b>170.35</b>

\* June monthly average of the UNION DAWN DAILY-NGX price index

\*\*US\$14.05/MMBTU (US\$13.32/GJ) according to the LCFS calculator\* 1.3 ref. (fx): <https://www.arb.ca.gov/fuels/lcfs/dashboard/creditpricecalculator.xlsx>

\*\*\* 11.06 RIN/GJ (US\$0.43/RIN June price average)

2 As shown previously, the value is significantly higher on the U.S. fuel market than the price in the  
3 Agreement at [REDACTED], which clearly demonstrates that the  
4 price Énergir intends to pay to the Coop is competitive. Énergir would also like to point out that its  
5 knowledge of RNG production enabled it to ensure during negotiations that the price agreed to is  
6 a fair reflection of production costs and provides a reasonable return for the producer.

**1.2. PERIOD OF TIME**

7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]

12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]

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1	[REDACTED]
2	[REDACTED]
3	[REDACTED]
4	[REDACTED]
5	[REDACTED]
6	[REDACTED]
7	[REDACTED]
8	[REDACTED]

**1.3. VOLUMES**

9 The Annual Contractual Quantity (ACQ) of RNG purchased by Énergir is:

**THIS TABLE IS FILED IN CONFIDENCE**

10	[REDACTED]
11	[REDACTED]
12	[REDACTED]
13	[REDACTED]
14	[REDACTED]
15	[REDACTED]

16 Although these volumes may appear marginal, they are necessary, since meeting the 5% target  
17 will not be possible without the biomethanation of agricultural and agri-food biomass.

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**2. IMPACT ON TRANSPORTATION AND BALANCING**

1 RNG produced by the Coop will be injected directly into the Énergir system, hence in-franchise.  
2 Consequently, the impact on transport and balancing tools will be the same as that for an  
3 equivalent project in the City of Saint-Hyacinthe.

4 As indicated in File R-4018-2017 concerning the 2018–2019 rate case, Énergir adopts a prudent  
5 approach on the impact of in-franchise-produced RNG under the supply plan. More specifically:

6 *“Because it is a new supply source and Énergir expects that future producers will require a run-in*  
7 *period, it decided it would be better to wait two years during which it would be able to observe*  
8 *continuous production before considering the impact of RNG suppliers’ production on the tools*  
9 *available to meet peak demand. For example, although the supply from a new RNG producer is*  
10 *provided for under the 2019–2020 plan, the availability of its deliveries to meet ongoing customer*  
11 *demand during peak periods is only considered from 2021–2022.”<sup>8</sup>*

12 The supply plan was approved in decision D-2018-158. The same approach will be recommended  
13 for the Coop project and the supply plan tools will be adjusted according to the method described  
14 above.

**3. AGREEMENT-RELATED RISKS**

15 In a letter submitted on June 18, 2019 (A-0034), the Régie noted that the absence of a regulatory  
16 mechanism that allows Énergir to recover sufficient revenues to offset the entire RNG acquisition  
17 cost could pose a risk to the Distributor and its customers. Énergir reiterated that many of its  
18 customers had already showed interest in RNG. To be able to respond, an application to set a  
19 provisional RNG supply tariff<sup>9</sup> was filed on June 19, 2019.

20 In its evidence in support of this recent application, Énergir mentioned that:

21 *“Thus, Énergir already knows that it would be possible to sell its RNG inventory to interested*  
22 *customers at the price indicated in section 2. Since the provisional tariff proposed by Énergir*  
23 *enables all purchase costs to be recovered from voluntary customers, to the extent that all the RNG*  
24 *units purchased by the distributor are depleted, there is no harm to existing customers. In fact, this*  
25 *method—which enables all the costs incurred in purchasing RNG to be recovered from voluntary*

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<sup>8</sup> R-4018-2018, GM-H, Document 1, page 75

<sup>9</sup> R-4008-2017, Gaz Métro-1, Document 8



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1 *customers—reduces the needed amounts accrued in the DEA to record the differences, until such*  
2 *time as the Régie rules on the allocation of these amounts.”<sup>10</sup>*

3 This provisional measure would help minimize the risk raised by the Régie. It should be noted  
4 that, as determined by the Régie in its letter dated August 7, 2019 (A-0051), the interest shown  
5 by customers for the voluntary purchase of RNG units will be demonstrated in step C of this file.

**4. CONCLUSION**

6 Contextual evidence in support of the request to approve the characteristics of an RNG purchase  
7 agreement between Énergir and the Coop was presented. Énergir submits that this evidence  
8 demonstrates the attractiveness of these characteristics.

9 **Énergir asks the Régie to approve the characteristics of the agreement to purchase RNG**  
10 **produced by the Coop Agri-Énergie Warwick, at a purchase price of [REDACTED]**  
11 **[REDACTED], and the volumes detailed in section 1.3 over a period of [REDACTED].**

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<sup>10</sup> R-4008-2017, Gaz Métro-1, Document, page 5, lines 16 to 23