

OPERATIONAL FLEXIBILITY

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INTRODUCTION

1 Gaz Métro Limited Partnership (“Gaz Métro”) presented its analysis of the evaluation of
2 operational flexibility costs in exhibit B-0138, Gaz Métro-5, Document 4.

3 In its decision D-2016-126, the Régie de l’énergie (the “Régie”) issued the following statement:

4 **“Operational flexibility**

5 *[70] The Régie also orders the Distributor to determine a new function to which operational*
6 *flexibility costs will be allocated. Once it has isolated the costs associated with this function, the*
7 *Distributor shall determine the link between the evidence submitted in this file and the evidence*
8 *submitted as part of files R-3720-2010^[footnote omitted] and R-3752-2011.^[footnote omitted] As part of this*
9 *exercise, the Distributor shall identify the storage volumes required for operational flexibility*
10 *needs, as well as the associated costs.”*

11 This document aims to address this follow-up.

1. IDENTIFICATION OF A NEW “OPERATIONAL FLEXIBILITY” FUNCTION

12 Operational flexibility is a component of load balancing. In fact, although it is not load-balancing
13 throughout the winter, operational flexibility is used to balance daily volumes.

14 Therefore, as recommended in exhibit B-0133, Gaz Métro-5, Document 1,¹ operational flexibility
15 must be functionalized at the load-balancing service.

16 However, since the cost causation for operational flexibility differs from that of the tools needed
17 to serve the peak demand, Gaz Métro recommends processing operational flexibility costs
18 separately as part of the load-balancing rate. This translates to a separate column in the
19 revenue requirement model in which associated costs are clearly identified.²

2. IDENTIFICATION OF A STORAGE VOLUME AT DAWN FOR OPERATIONAL FLEXIBILITY NEEDS

20 In section 3.5 of exhibit B-0138, Gaz Métro-5, Document 4, Gaz Métro associated the operational
21 flexibility costs with the costs related to the availability of nomination windows throughout the day

¹ Section 7.

² Gaz Métro-5, Document 5, Appendix 3, Excel sheet, “Revenu Requis DT-2017” tab, c.5.

1 at the Union Gas storage site. In decision D-2016-126, the Régie also asked that the storage
2 volumes required for operational flexibility needs and the related costs be identified.

3 As at October 1, 2016, Gaz Métro had 349,037 10³m³ of storage capacity, entirely with Union
4 Gas. This capacity will be used as a benchmark for the purposes of this analysis.

5 Gaz Métro notes that as part of the 2018 Rate Case,³ it filed an application for approval of the
6 characteristics of a storage contract in lieu of a contract with Union Gas, which expired on
7 March 31, 2017. The evidence in support of this application, filed under confidential cover,
8 presents an analysis of storage needs.

9 As outlined in this evidence, storage plays two main roles in Gaz Métro's supply structure,
10 including, among others:

- 11 • adjustment of injections and withdrawals during the day over the six nomination windows,
12 based on variations in demand, which is identified as the operational need; and
- 13 • optimization of the supply tools, taking into account the cost of storage, differences between
14 the winter and summer prices, and the resale value of transportation capacities; this
15 optimization essentially takes the form of injections during the summer and withdrawals
16 during the winter, in order to meet the basic needs of customers during this period.

17 Gaz Métro specified in section 3.1 of this evidence that the withdrawal and injection capacities
18 corresponding to the historical average variations in maximum nominations during the day represent
19 the operational need associated with storage volumes. These clarifications were made as part of the
20 various Union Gas storage capacity renewal files, including the 2011 Rate Case.⁴

21 As such, to meet its operational needs, given the contracts in effect as at April 1, 2017,
22 Gaz Métro must contract an additional injection capacity of 837 10³m³/day, slightly lower than
23 that resulting from the renewal capacity (871 10³m³/day).

24 This could lead to the conclusion that almost all of the storage volumes currently held are
25 necessary from an operational standpoint. Thus, all costs related to the Union Gas storage site

³ R-3987-2016, B-0014, Gaz Métro-3, Document 2.

⁴ R-3720-2010, confidential exhibit B-7, Gaz Métro-4, Document 16, section 1.2.

1 would be considered as operational flexibility costs and billed prorata to the volumes
2 consumed.⁵ However, Gaz Métro does not accept this conclusion.

3 On the surface, Gaz Métro agrees that the storage volumes are established based on required
4 variations in injections and withdrawals throughout the day. However, the acquisition of injection
5 and withdrawal capacities required for operational purposes is accompanied by a storage
6 volume (physical or virtual), which meets operational needs and more. For example, according
7 to the Union Gas contracts that stipulate an injection ratio of 0.75%, the acquisition of an
8 additional injection capacity of $837 \cdot 10^3 \text{m}^3/\text{day}$ would involve an additional storage capacity of
9 $111.6 \cdot 10^6 \text{m}^3$ ($837 \cdot 10^3 \text{m}^3 / 0.75\% / 1,000$).

10 The forecast use of the storage volumes described in the supply plan⁶ indicate that the latter are
11 not used solely to meet operational needs—quite the contrary. In fact, the operational needs
12 established by Gaz Métro represent the maximum forecast needs that it must meet in all
13 circumstances. In reality, with the exception of extreme situations that would result in maximum
14 forecast capacities, Gaz Métro does not use all of its storage volumes for operational purposes.
15 Instead of leaving these volumes unused, Gaz Métro uses them to optimize its supply. This
16 optimization essentially takes the form of injections of the commodity during the summer and
17 withdrawals during the winter. Injections of the commodity during the summer and withdrawals during
18 the winter are directly related to the customer's consumption profile. To avoid any inequality, it
19 therefore becomes essential not to bill almost all of the storage costs⁷ according to volumes. In fact,
20 customers with stable profiles, including major customers at Rate D₄, who represent more than 45% of
21 the volumes distributed, do not have to bear the costs related to the actual use of storage volumes.

22 Moreover, Gaz Métro notes that the variation in demand throughout the day could result from a
23 number of different elements, including weather conditions, which have a direct impact on
24 demand from customers with an unstable profile but less so on demand from customers with a
25 stable profile.

⁵ B-0133, Gaz Métro-5, Document 1, section 7.3.

⁶ For example, R-3970-2016, B-0176, Gaz Métro-2, Document 1, Appendix 6, p. 1, l. 10 and 30.

⁷ Considering that a portion of the costs has already been identified as operational flexibility.

1 To evaluate the storage volume associated with operational flexibility, Gaz Métro proposes
2 a different approach to split the storage volume into optimization needs and operational needs,
3 based on the actual use of the site.

4 As part of the 2011 Rate Case,⁸ Gaz Métro identified the average withdrawal over the winter as
5 a basic need (synonym of “optimization need”) and the maximum variation in withdrawals as an
6 operational need. Taking a similar approach, the total storage volume currently contracted with
7 Union Gas can be split into operational needs and optimization needs, the latter being
8 determined based on the withdrawals actually forecast for the winter, which directly involves the
9 injection need during the summer.

10 Currently, Gaz Métro has 349,037 10³m³ of storage volume with Union Gas. In its supply plan,
11 Gaz Métro aims to have an inventory level of 44,867 10³m³ at the end of the winter to manage
12 specific operational needs resulting from actual winter conditions. As such, close to 304,170 10³m³
13 of natural gas injected the previous summer is expected to be withdrawn over the winter. Moreover,
14 according to the management strategy for this storage site implemented in 2015,⁹ Gaz Métro
15 intends to withdraw the natural gas mainly over the period from December to February to meet the
16 basic needs of its customers, rather than make natural gas purchases during the winter.

17 To withdraw the natural gas stored during the summer and expected to be withdrawn during the
18 winter (304,170 10³m³), and assuming uniform withdrawals will be made over the period from
19 December to February, a withdrawal capacity of 3,380 10³m³/day would be needed at the
20 storage site (=304,170 10³m³/90 days).

21 According to Union Gas’s regular standards, the maximum withdrawal capacity is established at
22 1.2% of the storage volume. As such, to be able to withdraw 3,380 10³m³/day, a storage volume
23 of 281,667 10³m³ (=3,380/0.012) would be required, i.e., 80.7% of the total storage volume
24 contracted from Union Gas. Gaz Métro therefore proposes associating these storage volumes
25 with optimization needs, which are ultimately used to meet the basic demand from customers.
26 The balance of volumes under contract—67,370 10³m³, or 19.3%—would then be identified as
27 being storage volumes related to operational flexibility.

⁸ R-3720-2010, confidential exhibit B-7, Gaz Métro-4, Document 16, section 1.2.

⁹ Further to decision D-2014-077, para. 113. See R-3992-2016, B-0066, Gaz Métro-12, Document 8.

1 Moreover, in section 3.5 of exhibit B-0138, Gaz Métro-5, Document 4, Gaz Métro states that
2 2.5% of the storage costs are related to the availability of nomination windows throughout the
3 day at the Union Gas storage site.

4 Thus, the total costs related to the item “Underground gas storage at Dawn”¹⁰ would be split
5 as followed:

- 6 • 21.8% of functionalized balancing costs: operational flexibility costs (=19.3% + 2.5%); and
- 7 • 78.2% of functionalized balancing costs: seasonal costs related to the purchase and
8 transportation of the supply (balance).

9 Based on the costs related to the storage capacity presented in table 13 of exhibit B-0138,
10 Gaz Métro-5, Document 4, the operational flexibility cost would be \$2.1 million.

11 Note that the operational flexibility costs would be re-evaluated with each rate case according to the
12 proposed methodology and taking into account the storage contracts in effect at the time at Dawn.

CONCLUSION

13 This document aims to respond to the follow-up requested by the Régie in its decision
14 D-2016-126 (para. 70).

Gaz Métro asks the Régie to:

- 15 **1. acknowledge the responses to the follow-up on decision D2016-126 and to declare its**
16 **satisfaction therewith;**
- 17 **18 2. approve the functionalization of operational flexibility costs at the load-balancing**
19 **service and its processing; and**
- 20 **21 3. approve the evaluation method for operational flexibility costs related to storage**
22 **capacities contracted with Union Gas; being that this evaluation method complements**
that described in section 3.5 of exhibit B-0138, Gaz Métro-5, Document 4.

¹⁰ Item considered in the “Annual transportation, load balancing, and distribution costs for the 12-month period ending September 30, 20xx” budget document of the Rate Case (see R-3970-2016, B-0253, Gaz Métro-8, Document 8, p. 2, l. 3).