ALLOCATION OF GAZ MÉTRO'S COST OF SERVICE

ADDITIONAL EVIDENCE

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1 BACKGROUND

In Decision D-2014-144, the Régie de l'énergie ("the Régie") ordered Gaz Métro Limited Partnership ("Gaz Métro") to file a detailed cost allocation study based on the approved forecasts for 2013/2014. The Régie specified that the study should break down the costs in each expense category by function and subfunction, and by rate level and sublevel. The Régie directed that the figures be expressed in dollars, \$/customer and c/m^3 , and that the study be filed in Excel format.

The Régie also directed Gaz Métro to complete its evidence by filing a results analysis that meets the expectations expressed in its Decision D-2014-144:

[15] The Régie therefore orders Gaz Métro to file, in accordance with the timetable specified below, a complete, detailed cost allocation study based on the approved forecasts for the 2013-2014 rate year. The detailed study should break down the costs in each expense category by function and subfunction, and by rate level and sublevel. The figures should be expressed in dollars, \$/customer and ¢/m³. The study should be filed in Excel format, among others. Finally, the Distributor shall complete its evidence by filing a results analysis that meets the expectations expressed by the Régie in its Decision D-2011-182.

This document complements the cost allocation study filed in the form of Excel spreadsheets, numbered Gaz Métro-2, Document 7 and Gaz Métro-2, Document 8.

In its recent Decision D-2014-193 on participants' budgets for phase 1, the Régie also directed Gaz Métro to file databases containing detailed accounting and engineering data on distribution mains across its network. Two databases used to calculate the factor relating to distribution mains have therefore been filed as exhibits Gaz Métro-2, Document 9 and Gaz Métro-2, Document 10. A brief description of the information contained in these databases is presented in section 1.

Finally, Gaz Métro notes that, in accordance with the Régie's directives in Decision D-2011-182, a review of customer segmentation and analyses of rate structures and their relationship to distribution costs have been undertaken. As directed by the Régie in Decision D-2014-011, Phase 1 of the case deals only with "*cost allocation methodologies as a whole.*"¹ Therefore, analyses of customer segmentation and the rate structure, including the cost analyses called for by Decision D-2011-182, will be filed to support Gaz Métro's application in Phase 2 of this case. However, results expressed in terms of \$/customer and \$/10³m³ are included in this cost allocation study.

¹ D-2014-011, par. 23.

2 2013 / 2014 COST ALLOCATION STUDY

The cost allocation study was based on the 2013/2014 budget approved by the Régie in Decision D-2014-088. The figures are forecasts approved by the regulator.

The study used two approaches:

- First, the methodologies currently approved by the Régie and applied in the 2014 rate case were used. The results are presented in the revised Exhibit Gaz Métro-2, Document 7. The file consists of 46 tabs. The first four show the results of application of the factors to the various components of the cost of service and the others the detailed calculations for each of the allocation factors; and
- Secondly, the changes proposed by Gaz Métro in Exhibit B-0016, Gaz Métro-2, Document 1 were applied. The results are presented in the Excel file filed as the revised Exhibit Gaz Métro-2, Document 8. The file consists of 40 tabs. The first four show the results of the study and the others the detailed calculations for each of the factors. The factors are defined in Exhibit Gaz Métro-2, Document 4.

The study presents the allocation of distribution service-related expenses by the categories, functions and subfunctions usually reported in rate cases, as directed by the Régie in Decision D-2014-144. The results of the allocation by rate and rate level, using the current and proposed methodologies, can therefore be compared for each expense category. Only operating expenses are organized according to the proposed new categories and therefore are not directly comparable. The proposed new expense categories do not allow for direct comparison with the current categories. The results are likewise expressed in dollars, $/10^3m^3$.

2.1 SUMMARY OF RESULTS

The results of the cost allocation study based on the 2013/2014 budget are similar to those based on the 2012/2013 budget, filed as part of the evidence in chief.²

The following table shows the overall results of the 2013/2014 cost allocation study, produced by the current and proposed methodologies.

	2013/	/2014	Relative weight				
Rate	Current methodology	Proposed methodology	Clients	Volume (10 ³ m ³)			
D1: 0-3,650 m ³	29.5%	32.4%	69.8%	3.7%			
D1: 3,650- 36,500 m ³	24.6%	23.8%	24.1%	10.6%			
D1: 36,500 + m ³	20.9%	20.0%	5.2%	19.9%			
Rate RT	6.8%	5.8%	0.6%	9.2%			
D1	81.9%	82.0%	99.8%	43.4%			
D3	1.9%	1.4%	0.1%	3.2%			
D4	12.9%	12.2%	0.0%	41.4%			
D5	3.4%	4.4%	0.1%	12.1%			
Total	100.00%	100.00%	100.00%	100.0%			

Table 1
Allocation of cost of distribution service, 2013/2014 (%)

As can be seen, small-volume customers (those that withdraw 3,650 m³ or less per year) make up 69.8% of the customer base and are allocated 32.4% of distribution costs with the proposed methodology, compared with 29.5% using the current approach. The share of costs allocated to customers that withdraw between 3,650 m³ and 36,500 m³ per year, who account for 24.1% of the customer base, decreases by 0.8 percentage points. Overall, there is little change in the proportion of costs allocated to Rate D1 customers. Within the high-volume customer group, the proportion of costs allocated to Rate D5 interruptible customers increases slightly while that allocated to Rate D4 customers decreases by slightly less than 1 percentage point.

² B-0017, Gaz Métro-2, Document 2, page 97.

Application concerning Gaz Métro's cost of service and rate structure, R-3867-2013

The following table shows the total amounts allocated to the various rate groups and the major subgroups within Rate D1 under the two approaches. The results are also presented by customer and by unit of volume $(10^3 m^3)$.

2013/2014	Distribution costs		Per client		Per 10 ³ m ³	
Rate	Current methodology	Proposed methodology	Current methodology	Proposed methodology	Current methodology	Proposed methodology
D1: 0-3,650 m ³	\$175,534,740	\$192,476,208	\$1,282	\$1,406	\$847	\$928
D1: 3,650- 36,500 m ³	\$146,464,364	\$141,359,827	\$3,092	\$2,984	\$246	\$237
D1: 36,500+ m ³	\$123,896,392	\$118,748,077	\$12,211	\$11,704	\$111	\$106
Rate RT	\$40,668,111	\$34,500,836	\$32,123	\$27,252	\$79	\$67
D1	\$486,563,607	\$487,084,948	\$2,486	\$2,489	\$200	\$200
D3	\$11,176,146	\$8,480,699	\$46,182	\$35,044	\$62	\$47
D4	\$76,504,004	\$72,465,422	\$850,044	\$805,171	\$33	\$31
D5	\$19,933,244	\$26,145,932	\$144,894	\$190,054	\$29	\$39
Total	\$594,177,000	\$594,177,000	\$3,029	\$3,029	\$106	\$106

 Table 2

 Allocation of cost of distribution service, 2013/2014 (\$)

The redistribution of costs within customer categories is primarily due to the proposed changes to the allocation of distribution main costs, changes to the allocation of operating expenses and the proposed changes to the allocation of income tax related to returns and income tax not related to returns.

2.2 EFFECT OF PROPOSED CHANGES ON MAJOR EXPENSE CATEGORIES

Table 3 below shows the combined effect of all the proposed changes on the proportion of costs allocated to the various rate categories. For example, the proportion of operating expenses allocated to Rate D1 customers that use 3,650 m³ or less will decrease by 1.3 percentage points with the proposed changes to cost allocation. The proportion of operating expenses allocated to Rate D5 customers will increase by 1.6 percentage points with the proposed changes.

As can be seen from these results, the changes will have a significant impact on income tax, particularly income tax related to returns, as well as on property tax and levies. It will have a less significant impact on the allocation of amortization expenses, operating expenses and Global Energy Efficiency Plan (GEEP) expenses.

Table 3

Increase/decrease in proportion of costs allocated to rate categories, by cost category

		Rate D1							
DISTRIBUTION COST ITEMS			3,650 -						
	Allocation	0 - 3,650	30,300	36,500 +	Rate RT	D1	D3	D4	D5
Operating expenses	\$185,721,000	-1.3%	-1.0%	0.9%	-1.3%	-2.7%	-0.7%	1.8%	1.6%
Distribution expenses	\$35,369,000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Global Energy Efficiency Plan	\$18,257,000	1.7%	2.0%	16.6%	-4.6%	15.7%	-0.4%	-11.5%	-3.9%
Green Fund	\$25,382,030	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Amortization	\$94,857,000	0.1%	-0.7%	-0.3%	0.4%	-0.6%	0.1%	-1.5%	2.0%
Amortization of deferred expenses	\$49,780,000	-1.2%	-0.4%	7.5%	0.6%	6.6%	-0.6%	-4.2%	-1.7%
Property tax and levies	\$26,208,000	12.2%	-4.4%	-9.0%	-2.4%	-3.5%	-0.9%	3.0%	1.4%
Income tax related to returns	\$25,494,000	62.2%	-3.6%	-41.7%	-10.9%	6.1%	-2.8%	-2.0%	-1.3%
Income tax not related to returns	\$4,516,000	-2.7%	-1.0%	3.4%	0.3%	-0.1%	-0.1%	-2.6%	2.7%
Consumption discount and other discounts	\$1,028,000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Return on rate base	\$128,007,000	0.5%	-0.6%	-0.4%	-0.1%	-0.6%	-0.1%	-1.5%	2.1%
TOTAL: DISTRIBUTION COSTS (including LNG)	\$594,619,000	2.8%	-0.9%	-0.9%	-1.0%	0.1%	-0.5%	-0.7%	1.0%
0	\$(140.000)	0.00/	0.00/	0.00/	0.00/	0.001	0.00/	0.001	0.00/
COST OF LING	\$(442,000)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL: DISTRIBUTION COSTS, not including LNG	\$594,177,000	2.9%	-0.9%	-0.9%	-1.0%	0.1%	-0.5%	-0.7%	1.0%

2.2.1 Operating expenses

The proposed changes to the allocation of operating expenses³ will have a marginal overall effect on cost allocation. In general, the proposed changes will slightly favour low-volume customers. Rate D1 customers consuming less than 36,500 m³ per year will be allocated 63% of operating expenses, compared with 65% under the current approach. Rate D4 and D5 customers will absorb approximately 16% of operating expenses, compared with 13% currently.

³ B-0016, Gaz Métro-2, Document 1, section 7.

This result is due to the breakdown of administrative expenses into various components, some of which are allocated on the basis of allocated capacity. Under the proposed approach, expenses related to gas supply will be allocated on the basis of allocated capacity and a portion of general expenses will be allocated on the basis of a factor that combines number of customers and capacity. Allocating some operating expenses on the basis of allocated capacity produces a distribution that favours low-volume customers. Under the current methodology, administrative expenses are allocated using the derived factor. The following table shows the allocation of operating expenses by rate group and the major subgroups within Rate D1.

2013/2014	Allocated amount		Per client		Per 10 ³ m ³	
Rate	Current methodology	Proposed methodology	Current methodology	Proposed methodology	Current methodology	Proposed methodology
D1: 0-3,650 m ³	\$76,130,548	\$73,740,869	\$556	\$539	\$367	\$356
D1: 3,650- 36,500 m ³	\$44,235,115	\$42,415,172	\$934	\$895	\$74	\$71
D1: 36,500+ m ³	\$22,201,519	\$23,916,410	\$2,188	\$2,357	\$20	\$21
Rate RT	\$15,333,075	\$12,829,574	\$12,111	\$10,134	\$30	\$25
D1	\$157,900,258	\$152,902,024	\$807	\$781	\$65	\$63
D3	\$4,563,588	\$3,210,938	\$18,858	\$13,268	\$25	\$18
D4	\$18,507,642	\$21,842,382	\$205,640	\$242 ,693	\$8	\$9
D5	\$4,749,512	\$7,765,655	\$34,524	\$56,448	\$7	\$11
Total	\$185,721,000	\$185,721,000	\$947	\$947	\$33	\$33

Table 4Allocation of operating expenses

2.2.2 Income tax

Income tax related to returns is currently allocated using the REVNETD factor, which is based on net distribution revenues attributable to each rate category.

Exhibit B-0016, Gaz Métro-2, Document 1, section 8.6 explains that this factor is not appropriate, since it results in cross-subsidization of Rate D1 determining the proportion of costs allocated to the various rate categories. Since the first levels of Rate D1 generate negative net revenues, these customers are not allocated income tax under the current approach. Instead, they receive a credit as a result of application of the REVNETD allocation factor due to cross-subsidization of Rate D1.

Application concerning Gaz Métro's cost of service and rate structure, R-3867-2013

Gaz Métro proposed that the BASETARD derived factor be used to allocate income tax. The impact of this change on the first levels of Rate D1 is significant, as the following table shows.

2013/2014	Allocated amount		Per cl	ient	Per 10 ³ m ³	
Rate	Current methodology	Proposed methodology	Current methodology	Proposed methodology	Current methodology	Proposed methodology
D1: 0-3,650 m ³	\$(6,669,811)	\$9,195,056	\$(49)	\$67	\$(32)	\$44
D1: 3,650- 36,500 m ³	\$7,082,036	\$6,175,022	\$149	\$130	\$12	\$10
D1: 36,500+ m ³	\$15,391,466	\$4,769,399	\$1,517	\$470	\$14	\$4
Rate RT	\$3,868,461	\$1,086,448	\$3,056	\$858	\$8	\$2
D1	\$19,672,151	\$21,225,924	\$101	\$108	\$8	\$9
D3	\$891,162	\$175,511	\$3,682	\$725	\$5	\$1
D4	\$3,496,691	\$2,987,338	\$38,852	\$33,193	\$2	\$1
D5	\$1,433,995	\$1,105,227	\$10,424	\$8,034	\$2	\$2
Total	\$25,494,000	\$25,494,000	\$130	\$130	\$5	\$5

Table 5Allocation of income tax related to returns

Income tax not related to returns is currently allocated using the IMMOBILD factor, which reflects the distribution by rate category of total capital costs in the distribution rate base. Income tax not related to returns consists of temporary income tax generated by the difference between regulatory and fiscal standards. Gaz Métro has proposed that the BASETARD factor be used to allocate these amounts, as it will be for income tax related to returns.⁴ The transition from the IMMOBILD factor to the BASETARD factor has a marginal impact on allocation since capital assets make up the bulk of the rate base and there is therefore little difference between the two factors.

⁴ B-0016, Gaz Métro-2, Document 1, section 8.7.

The following table shows the impact of the proposed changes to the allocation of income tax not related to returns.

2013/2014	Allocated amount		Per o	client	Per 10 ³ m ³	
Rate	Current methodology	Proposed methodology	Current methodology	Proposed methodology	Current methodology	Proposed methodology
D1: 0-3,650 m ³	\$1,752,236	\$1,628,810	\$13	\$12	\$8	\$8
D1: 3,650- 36,500 m ³	\$1,137,887	\$1,093,842	\$24	\$23	\$2	\$2
D1: 36,500+ m ³	\$692,405	\$844,850	\$68	\$83	\$1	\$1
Rate RT	\$180,475	\$192,453	\$143	\$152	\$0	\$0
D1	\$3,763,003	\$3,759,954	\$19	\$19	\$2	\$2
D3	\$33,498	\$31,090	\$138	\$128	\$0	\$0
D4	\$644,434	\$529,176	\$7,160	\$5,880	\$0	\$0
D5	\$75,065	\$195,780	\$546	\$1,423	\$0	\$0
Total	\$4,516,000	\$4,516,000	\$23	\$23	\$1	\$1

 Table 6

 Allocation of income tax not related to returns

2.2.3 Property tax and levies

Gaz Métro proposes acceptance of Dr. Overcast's recommendation that property tax and income tax related to capital assets be allocated on the same basis as the capital assets in question. Property tax on buildings would therefore be allocated using the EXPLOITD factor, i.e. on the same basis as expenses related to Gaz Métro's buildings.⁵

Gaz Métro also corrects an omission in its evidence in chief concerning the allocation of tax on the network. This expense is currently allocated using the REVBRUTD factor, which is based on gross distribution revenues. In accordance with the principle that expenses related to a capital asset should be allocated in the same way as the asset, Gaz Métro proposes that tax on the network be allocated using the CONDPRIN factor, which is used to allocate distribution main costs. Gaz Métro is therefore adding a proposal to this effect. It should be noted however that this change has been presented in Exhibit B-0018, Gaz Métro-2, Document 3, page 2.

⁵ B-0016, Gaz Métro-2, Document 1, section 8.5.

Use of the CONDPRIN factor, which is based on number of customers and a measure of capacity, has the result of assigning a larger portion of costs to low-volume customers than does the REVBRUTD factor. Because of cross-subsidization of Rate D1, the relative weight of the revenues generated by low-volume customers is considerably less than their weight in terms of number of customers or capacity.

Table 7 shows the impact of Gaz Métro's proposed changes to the allocation of property tax and tax on the network.

2013/2014	Allocated amount		Per o	client	Per 103m3	
Rate	Current methodology	Proposed methodology	Current methodology	Proposed methodology	Current methodology	Proposed methodology
D1: 0-3,650 m ³	\$3,154,359	\$6,361,684	\$23	\$46	\$15	\$31
D1: 3,650- 36,500 m ³	\$5,204,096	\$4,057,387	\$110	\$86	\$9	\$7
D1: 36,500+ m ³	\$6,799,861	\$4,449,697	\$670	\$439	\$6	\$4
Rate RT	\$2,276,059	\$1,649,445	\$1,798	\$1,303	\$4	\$3
D1	\$17,434,375	\$16,518,212	\$89	\$84	\$7	\$7
D3	\$616,814	\$384,471	\$2,549	\$1,589	\$3	\$2
D4	\$6,569,819	\$7,352,180	\$72,998	\$81,691	\$3	\$3
D5	\$1,586,993	\$1,953,137	\$11,536	\$14,197	\$2	\$3
Total	\$26,208,000	\$26,208,000	\$134	\$134	\$5	\$5

Table 7Allocation of property tax and levies

Gaz Métro asks the Regie to approve allocation of tax on the network using the CONDPRIN factor.

2.2.4 Global Energy Efficiency Plan (GEEP)

The proposed changes lead to a significant increase in the amount allocated to Rate D1 customers. Their contribution to GEEP expenses increases from 67% to 83% of the total. This redistribution is due primarily to the fact that in the future financial assistance would be allocated directly, rather than on the basis of a calculation into which volume and revenue are factored, as is currently the case. That calculation favoured low-volume customers but did not reflect the actual distribution of financial assistance, as does the direct allocation that Gaz Métro is proposing for this portion of GEEP amounts.

2013/2014	Allocated amount		Per client		Per 10 ³ m ³	
Rate	Current methodology	Proposed methodology	Current methodology	Proposed methodology	Current methodology	Proposed methodology
D1: 0-3,650 m ³	\$861,121	\$1,180,437	\$6	\$9	\$4	\$6
D1: 3,650- 36,500 m ³	\$3,829,452	\$4,188,526	\$81	\$88	\$6	\$7
D1: 36,500+ m ³	\$6,304,139	\$9,335,591	\$621	\$920	\$6	\$8
Rate RT	\$1,259,029	\$422,842	\$994	\$334	\$2	\$1
D1	\$12,253,741	\$15,127,395	\$63	\$77	\$5	\$6
D3	\$601,325	\$534,192	\$2,485	\$2,207	\$3	\$3
D4	\$3,809,437	\$1,714,833	\$42,327	\$19,054	\$2	\$1
D5	\$1,592,497	\$880,580	\$11,576	\$6,401	\$2	\$1
Total	\$18,257, 000	\$18 257,000	\$93	\$93	\$3	\$3

Table 8Allocation of GEEP expenses

The GEEP factor, calculated using the current methodology, could not be updated because of time considerations and computer issues. The factor for the year 2012/2013 has therefore been used to allocate the GEEP amount using the current methodology. It is Gaz Métro's view, however, that calculation of this factor using the current approach and 2013/2014 data would provide a better basis of comparison for assessing the impact of the proposed changes to the allocation of GEEP expenses.

2.2.5 Return on rate base

The overall impact of the changes on the rate base is marginal for Rate D1 customers. The portion allocated to interruptible customers will increase by approximately 2 percentage points, while that allocated to Rate D4 customers will decrease by 2 percentage points, mainly because of changes to the CONDPRIN factor, which is used to allocate some elements of the rate base.

The following table compares the results of the current and proposed methodologies for allocation of the return on the rate base.

2013/2014	Allocated amount		Per o	client	Per 10 ³ m ³	
Rate	Current methodology	Proposed methodology	Current methodology	Proposed methodology	Current methodology	Proposed methodology
D1: 0-3,650 m ³	\$45,577,192	\$46,168,961	\$333	\$337	\$220	\$223
D1: 3,650- 36,500 m ³	\$31,735,964	\$31,005,178	\$670	\$654	\$53	\$52
D1: 36,500+ m ³	\$24,449,596	\$23,947,455	\$2,410	\$2,360	\$22	\$21
Rate RT	\$5,528,609	\$5,455,126	\$4,367	\$4,309	\$11	\$11
D1	\$107,291,360	\$106,576,720	\$548	\$545	\$44	\$44
D3	\$969,217	\$881,250	\$4,005	\$3,642	\$5	\$5
D4	\$16,921,987	\$14,999,612	\$188,022	\$166,662	\$7	\$6
D5	\$2,824,435	\$5,549,417	\$20,531	\$40,338	\$4	\$8
Total	\$128,007,000	\$128,007,000	\$652	\$652	\$23	\$23

Table 9Allocation of return on rate base

2.3 COMMENTS ON CERTAIN FACTORS

2.3.1 Elimination of FS13 factor

The FS13 factor allocates amounts pro rata to revenues, as does the FB09 factor. These two factors have different names but are the same. While the FB09 factor is not used to allocate the cost of distribution service, it is applied to the calculation of some factors. Gaz Métro proposes that the FS13 factor, which is the same as the FB09 factor, be eliminated.

Application concerning Gaz Métro's cost of service and rate structure, R-3867-2013

Gaz Métro asks the Régie to approve the removal of the FS13 factor from the cost allocation methodology.

2.3.2 FB01D

The gas loss stabilization expenses included in deferred expenses are allocated using the FB01D factor, which is also used to allocate the rate base components related to gas loss.

3 FILING OF DATA

In response to the Régie's directive (D-2014-193), Gaz Métro is filing the two databases used to construct the distribution main cost allocation factor (CONDPRIN). These databases can be found in exhibits Gaz Métro-2, Document 9 and Gaz Métro-2, Document 10.

3.1 ENGINEERING DATA

The engineering database covers all Gaz Métro distribution mains. It contains the following information:

Region: Geographic location of pipes,

Pressure: Natural gas pressure measured in kilopascals (kPa),

Diameter: Pipe diameter measured in millimetres,

Materials: Classification of steel, plastic and aluminum pipes,

Length: Pipe length measured in metres.

3.2 ACCOUNTING DATA

The accounting database contains information on the value of pipes. It was constructed from information on capital investment projects.

While this database does include information on pipe diameter and length, the data is taken from the information on capital investment projects and is not a precise reflection of the pipe network. The engineering data must therefore be used to determine the network's technical characteristics. The accounting database is used only to estimate average pipe cost based on manufacturing materials and diameter, and to reconstitute total network value.

The accounting database contains the following information:

Region: Geographic location of pipes,

Materials: Classification of steel, plastic and aluminum pipes,

Diameter: Pipe diameter measured in millimetres,

Length: Pipe length measured in metres,

Laying date: Year each pipe was laid,

Capitalized amount: Capitalized value of each pipe.