GAZ MÉTRO ALLOCATION OF SERVICE COSTS

ADDITIONAL EVIDENCE

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1   B A C K G R O U N D

1   In its decision D-2014-144, the Régie de l'énergie (the "Régie") ordered

2   Gaz Métro Limited Partnership ("Gaz Métro") to submit a detailed cost allocation study

3   on the approved estimates for 2013/2014. The Régie requested that

4   the study present the distribution of costs for each expense category, according to each

5   of its functions and sub-functions and according to its segmentation into rate levels and

6   sub-levels. The Régie requested that the study, expressed in dollars, $/customer and ¢/m³, be

7   submitted in Excel format.

8   The Régie also requested that Gaz Métro complete their evidence by submitting an analysis

9   of the results meeting the expectations set out in Decision D-2014-144.

10   *"[15] The Régie hereby orders Gaz Métro to file, according to the calendar*
11   *set out below, a full and detailed cost allocation study on the*
12   *approved estimates for the 2013-2014 rate year. The detailed*
13   *study shall present the allocation of costs for each expense category*
14   *according to each function and sub-function, and according to the segmentation*
15   *by rate level and sub level. The study must be expressed in dollars, in*
16   *$/customer and ¢/m³ and must be submitted in Excel format. Finally,*
17   *the Distributor must round out its evidence by filing an analysis of the results*
18   *meeting the expectations expressed by the Régie in Decision D-2011-182.* "

19   This document constitutes information complementary to the cost allocation study

20   filed in Excel format, numbered Gaz Métro-2, Document 7

21   and Gaz Métro-2, Document 8.

22   In its recent Decision D-2014-193 on the participation budgets for Phase 1, the Régie

23   also requested that Gaz Métro submit detailed databases containing

24   accounting and engineering data on the mains for its entire

25   network. Two databases used for calculating the mains factor

26   are therefore being filed as Exhibits Gaz Métro-2, Document 9 and Gaz Métro-2,

27   Document 10, respectively. A short description of the information contained in these

28   databases is presented in section 1.

1   Finally, Gaz Métro emphasizes that, in keeping with the Régie's requests set out in

2   Decision D-2011-182, it has undertaken an examination of customer segmentation and studies of

3   rate structures and their relationship with distribution costs. As ordered by

4   the Régie in Decision D-2014-011, Phase 1 of the file deals solely with "all

5   *cost allocation methods.'*[1] Consequently, the analysis of

6   customer segmentation and the rate structure, including the cost

7   analyses requested in Decision D-2011-182, will be filed in support of

8   Gaz Métro's applications for Phase 2 of this file. Results expressed in

9     $/customer and $/10³m³ are, however, included in this cost allocation

10   study.

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[1] D-2014-011, para. 23.

2 2013 / 2014 COST ALLOCATION STUDY

1   The cost allocation study was conducted using the 2013/2014 budget approved by the Régie

2   in Decision D-2014-088. It involves estimates approved by the regulator.

3   The study was conducted using two approaches:

4   -   Firstly, the study was conducted using the methods currently

5   approved by the Régie and applied in the 2014 rate case. The results of this study are

6   presented in the file for Exhibit Gaz Métro-2, Document 7. This

7   file features 39 tabs. The first two tabs present the results of applying factors

8   to the different amounts composing the cost of service, while the following tabs

9   set out the detailed calculations for each allocation factor; and

10 -   Secondly, the study was conducted applying the changes proposed by

11   Gaz Métro in Exhibit B-0016, Gaz Métro-2, Document 1. The results of this

12   study are set out in the Excel file for Exhibit Gaz Métro-2, Document 8. This

13   file has 37 tabs. The first two tabs set out the results of the study, while the following

14   tabs provide the detailed calculations for each factor. These factors were defined

15   in Gaz Métro-2, Document 4.

16 The study sets out the distribution service cost allocation according to the categories,

17 functions and sub-functions usually reported in the framework of rate cases,

18 as requested by the Régie in Decision D-2014-144. The results of the allocation according to the

19 current and proposed methodologies by rate and rate level can therefore be compared

20 for each expense category. Only operating expenses are grouped based on

21 the proposed new categories and are therefore not directly comparable. The proposed new

22 expense groups do not allow for direct comparison with

23 the current groups. The results are also expressed in dollars, in $/customer and in

24 $/10³m³.

23.1 SUMMARY OF RESULTS

1. The results of the cost allocation study carried out using the 2013/2014 budget data
2. are similar to those obtained using the 2012/2013 budget data and submitted as part of the
3. main evidence[2].

4. The following table presents the global results for the 2013/2014 cost allocation study
5. obtained using the current and proposed methodologies.

Table 1

2013/2014 allocation of distribution costs in percentage

Rates	2013/2014		Relative weight	
	Current methodolog	Proposed methodology	Customers	Volume $(10^3 m^3)$
D_1 0-3,650 m³	30.0%	32.5%	69.8%	3.7%
D_1 3,650-36,500 m³	25.1%	24.0%	24.1%	10.7%
D_1 36,500 + m³	20.6%	20.4%	5.2%	20.0%
Rate $_{RT}$	6.8%	5.9%	0.6%	9.2%
D_1	82.4%	82.8%	99.8%	43.7%
D_3	1.8%	1.4%	0.1%	3.2%
D_4	12.7%	11.5%	0.0%	41.7%
D_5	3.0%	4.3%	0.1%	11.4%
Total	100.0%	100.0%	100.0%	100.0%

6. Note that low-volume customers who withdraw up to 3,650 m³ per year, who
7. represent 69.8% of the customer base, will be allocated 32.5% of the distribution costs
8. based on the proposed methodology, compared with 30% under the current approach. Customers withdrawing between
9. 3,650 m³ and 36,500 m³ annually, who represent 24.1% of the customer base, will have their
10. share of the costs decrease by 1.1%. Overall, there is little change to the proportion of costs
11. allocated to customers with D_1 rates. For high-volume customers, there is a slight increase

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

1   in the proportion of costs attributed to interruptible customers at rate D_5, while customers

2   at rate D_4 decrease by around 1%.

3   The following table presents the total amounts allocated to the different rates and t

4   the new broad groups of rate D_1 levels according to the two approaches. The results are

5   also presented by customer and by unit of volume ($10^3 m^3$).

Table 2

2013/2014 allocation of distribution costs in dollars

2013/2014	Distribution costs		By customer		By $10^3 m^3$	
Rates	Current methodol	Proposed methodol	Current methodol	Proposed methodol	Current methodol	Proposed methodol
D_1 0-3,650 m³	$177,976,528	$193,092,904	$1,300	$1,410	$858	$931
D_1 3,650-36,500 m³	$149,090,198	$142,491,018	$3,147	$3,008	$250	$239
D_1 36,500 + m³	$122,435,189	$121,241,749	$12,067	$11,950	$110	$109
Rate $_{RT}$	$40,352,034	$35,019,384	$31,874	$27,661	$78	$68
D_1	$489,853,949	$491,845,055	$2,503	$2,513	$201	$202
D_3	$10,665,238	$8,602,348	$44,071	$35,547	$59	$48
D_4	$75,628,911	$68,455,658	$840,321	$760,618	$33	$30
D_5	$18,028,902	$25,273,940	$131,598	$184,481	$28	$40
Total	**$594,177,000**	**$594,177,000**	**$3,029**	**$3,029**	**$107**	**$107**

6   The reallocation of costs within customer categories is primarily caused by the

7   proposed changes to the allocation of mains costs, by changes to

8   the allocation of operating expenses, and proposed changes to

9   the allocation of income tax on return on equity and income tax not related to

10   return on equity.

23.2 EFFECTS OF PROPOSED CHANGES ON THE BROAD EXPENSE CATEGORIES

11   Table 3 below presents the combined effect of all proposed changes to the

12   portion of costs allocated to different rate categories. For example, the portion of operating

13   expenses assigned to rate D_1 customers that consume up to 3,650 m³ will fall by 1.7%

14   after applying the proposed changes to the allocation of these costs. The share of operating

1 expenses attributed to rate D_5 customers will increase 2.0% after the proposed changes

2 are applied.

3 These results show that the effect of these changes is pronounced for

4 taxes, especially income tax on return on equity. It is less pronounced for

5 the allocation of amortization costs, operating expenses and

6 GEEP expenses.

Table 3

Increase/Decrease in the proportion of costs assigned to rate categories by broad cost category

DISTRIBUTION COSTS HEADINGS	Allocation	Rate D_1 0 - 3650	3,650 - 36,500	36,500 +	Rate $_{RT}$	D_1	D_3	D_4	D_5
Operating expenses	$185,721,000	-1.7%	-1.4%	0.8%	-1.2%	-3.6%	-0.6%	2.2%	2.0%
Distribution costs	$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	$25,382,000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Amortization expenses	$94,857,000	0.0%	-0.8%	-0.3%	0.5%	-0.7%	0.1%	-1.3%	1.9%
Deferred cost amortization expenses	$49,780,000	-1.2%	-0.4%	7.7%	0.7%	6.8%	-0.6%	-4.5%	-1.7%
Taxes and duties	$26,208,000	12.3%	-4.3%	-8.9%	-2.4%	-3.4%	-0.9%	3.0%	1.4%
Income tax on return on equity	$25,494,000	58.9%	-5.2%	-31.2%	-11.6%	11.0%	-1.8%	-8.2%	-1.0%
Income tax not related to return on equity	$4,516,000	-2.9%	-1.2%	4.3%	0.8%	1.0%	0.1%	-4.0%	3.0%
Consumption discounts 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	0.4%	-0.7%	0.7%	0.5%	0.8%	0.0%	-3.2%	2.4%
TOTAL : DISTRIBUTION COSTS, including LNG	**$594,619,000**	**2.5%**	**-1.1%**	**-0.2%**	**-0.9%**	**0.3%**	**-0.3%**	**-1.2%**	**1.2%**
LNG costs	($442,000)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL : DISTRIBUTION COSTS, excluding LNG	**$594,177,000**	**2.5%**	**-1.1%**	**-0.2%**	**-0.9%**	**0.3%**	**-0.3%**	**-1.2%**	**1.2%**

2.2.1   Operating expenses

7 All of the changes proposed for the allocation of operating expenses[3] will have

8 a marginal effect on cost allocation. In general, the proposed changes will slightly

9 favour low-volume customers. Rate D_1 customers consuming less than

10 36,500 m³ annually will be assigned 63% of the operating costs

11 while, under the current approach, they are assigned 66% of such expenses. Furthermore,

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

1 rate D_4 and D_5 customers will absorb around 15% of the operating expenses, from 11%

2 under the current approach.

3 The breakdown of administration costs by components, some of

4 which are allocated according to assigned capacity, explain this result. In fact, according to

5 the proposed approach, expenses pertaining to gas supply will be allocated according to

6 assigned capacity and a portion of the general expenses will be allocated according to

7 a factor that combines the number of customers and capacity. The fact that some

8 operating expenses are allocated to factor in attributed capacity leads to

9 an allocation that favours low-volume customers. Under the current method,

10 administrative expenses are allocated with the derivative factor. The following table presents

11 the results of the allocation of operating expenses by rate and major groups

12 of rate D_1 levels.

Table 4

Allocation of operating expenses

2013/2014	Amount allocated		By customer		By $10^3 m^3$	
Rates	Current methodol	Proposed methodol	Current methodol	Proposed methodol	Current methodol	Proposed methodol
D_1 0-3,650 m³	$77,305,597	$74,171,723	$565	$542	$373	$358
D_1 3,650-36,500 m³	$45,937,594	$43,350,326	$970	$915	$77	$73
D_1 36,500 + m³	$23,209,906	$24,632,247	$2,288	$2,428	$21	$22
Rate $_{RT}$	$15,155,049	$12,842,266	$11,971	$10,144	$29	$25
D_1	$161,608,146	$154,996,563	$826	$792	$66	$64
D_3	$4,323,569	$3,197,089	$17,866	$13,211	$24	$18
D_4	$16,749,263	$20,794,439	$186,103	$231,049	$7	$9
D_5	$3,040,022	$6,732,910	$22,190	$49,145	$5	$11
Total	$185,721,000	$185,721,000	$947	$947	$33	$33

2.2.2 Income tax

13 Income tax on return on equity is currently allocated using the

14 REVNETD factor, which represents net distribution revenue attributable to each rate

15 category.

1   Section 8.6 of Exhibit B-0016, Gaz Métro-2, Document 1 explains that this factor is
2   not appropriate, given that the cross-subsidization that characterizes rate
3   D_1 determines the proportion of costs assigned to rate categories. Since the
4   first levels of rate D_1 generate negative net income, these customers
5   do not contribute to the allocation of income tax under the current approach. On the
6   contrary, the first levels of rate D_1 receive a credit by applying the REVNETD
7   allocation factor, due to the cross-subsidization that occurs for rate D_1..

8   Gaz Métro has proposed using the BASETARD derivative factor for allocating
9   income tax amounts. This has a sizable effect on the first
10 levels of rate D_1, as shown in the table below.

Table 5

Allocation of income tax on return on equity

2013/2014	Amount allocated		By customer		By $10^3 m^3$	
Rates	Current methodol	Proposed methodol	Current methodol	Proposed methodol	Current methodol	Proposed methodol
D_1 0-3,650 m³	($5,791,821)	($9,219,022)	($42)	$67	($28)	$44
D_1 3,650-36,500 m³	$7,522,344	$6,193,747	$159	$131	$13	$10
D_1 36,500 + m³	$12,943,592	$5,002,004	$1,276	$493	$12	$4
Rate $_{RT}$	$4,130,571	$1,182,333	$3,263	$934	$8	$2
D_1	$18,804,686	$21,597,106	$96	$110	$8	$9
D_3	$657,684	$198,859	$2,718	$822	$4	$1
D_4	$4,617,080	$2,538,132	$51,301	$28,201	$2	$1
D_5	$1,414,550	$1,159,903	$10,325	$8,466	$2	$2
Total	$25,494,000	$25,494,000	$130	$130	$5	$5

11 Income tax not related to return on equity is currently allocated using the IMMOBILD
12 factor, which reflects the allocation of total capital costs in the distribution rate base
13 by rate category. Income tax not related to return on equity
14 is the temporary tax generated by the difference between regulatory and fiscal
15 standards. Gaz Métro has proposed adopting the BASETARD factor for allocating

1 these amounts, as will be the case for the income tax on return on equity[4]. The

2 change from IMMOBILD to BASETARD has a marginal effect on allocation,

3 as facilities form the largest part of the rate base and

4 there are consequently few differences between the two factors.

5 The following table presents the effects of the proposed changes to allocating

6 income tax not related to return on equity.

Table 6

Allocation of income tax not related to return on equity

2013/2014	Amount allocated		By customer		By 10³m³	
Rates	Current methodol	Proposed methodol	Current methodol	Proposed methodol	Current methodol	Proposed methods
D_1 0-3,650 m³	$1,763,376	$1,633,055	$13	$12	$9	$8
D_1 3,650-36,500 m³	$1,152,426	$1,097,159	$24	$23	$2	$2
D_1 36,500 + m³	$693,306	$886,054	$68	$87	$1	$1
Rate $_{RT}$	$173,636	$209,438	$137	$165	$0	$0
D_1	$3,782,743	$3,825,705	$19	$20	$2	$2
D_3	$32,915	$35,226	$136	$146	$0	$0
D_4	$629,567	$449,604	$6,995	$4,996	$0	$0
D_5	$70,775	$205,465	$517	$1,500	$0	$0
Total	$4,516,000	$4,516,000	$23	$23	$1	$1

2.2.3 Taxes and duties

7 Gaz Métro proposes to apply Dr. Overcast's recommendations to the effect that

8 tax on capital assets should be allocated in the same way as

9 those assets. The property tax on the place of business related to buildings would be

10 allocated using the EXPLOITD factor, as expenses for

11 Gaz Métro[5] physical plant are.

12 Gaz Métro also corrects an omission in its main proof concerning allocation of the tax

13 on the network. This expense is currently allocated with the REVBRUTD factor,

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

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

1   representing gross distribution income. In accordance with the principle that holds that

2   expenses pertaining to a capital asset should be allocated in the same way

3   as that asset, Gaz Métro proposes to allocate the tax on the network using the

4   CONDPRIN factor used to allocate mains costs. Gaz Métro is therefore adding a

5   proposal to that effect. However, note that this change was presented in Exhibit

6   B-0018, Gaz Métro-2, Document 3, page 2.

7   Use of the CONDRPIN factor, which is based on the number of customers as well as

8   on a measure of capacity, applies a larger proportion of the costs to low-volume customers

9   than the REVBRUTD factor. In fact, the relative weight of the revenue generated by

10   low-volume customers, given the cross-subsidization that occurs with rate D_1, is much lower

11   than its relative weight in terms of clientele or capacity.

12   Table 7 presents the results of the changes proposed by Gaz Métro with regard to

13   allocating property taxes and the network tax.

Table 7

Allocation of taxes and duties

2013/2014	Amount allocated		By customer		By $10^3 m^3$	
Rates	Current methodol	Proposed methodol	Current methodol	Proposed methodol	Current methodol	Proposed methodol
D_1 0-3,650 m³	$3,178,000	$6,391,232	$23	$47	$15	$31
D_1 3,650-36,500 m³	$5,239,432	$4,100,648	$111	$87	$9	$7
D_1 36,500 + m³	$6,797,169	$4,454,711	$670	$439	$6	$4
Rate $_{RT}$	$2,256,217	$1,623,231	$1,782	$1,282	$4	$3
D_1	$17,470,818	$16,569,822	$89	$85	$7	$7
D_3	$615,962	$384,014	$2,545	$1,587	$3	$2
D_4	$6,535,614	$7,311,277	$72,618	$81,236	$3	$3
D_5	$1,585,605	$1,942,888	$11,574	$14,182	$3	$3
Total	$26,208,000	$26,208,000	$134	$134	$5	$5

14   **Gaz Métro requests that the Régie approve the allocation of network taxes using the**

15   **CONDPRIN factor.**

2.2.4 Global Energy Efficiency Plan (GEEP)

1   The proposed changes lead to a considerable increase in the amounts allocated

2   to rate D_1 customers, whose contribution to GEEP expenses will go from 67% to

3   83% in total. The reallocation is largely due to the fact that

4   financial assistance amounts would, in future, be allocated directly, rather than using a rule

5   that factors in volume and revenue, as is the case now. This rule favoured

6   low-volume customers but did not reflect the real allocation of financial assistance

7   as done by the direct allocation that Gaz Métro proposes for this portion of the GEEP

8   amount.

Table 8

Allocation of GEEP expenses

2013/2014	Amount allocated		By customer		By 10^3m³	
Rates	Current methodol	Proposed methodol	Current methodol	Proposed methodol	Current methodol	Proposed methods
D_1 0-3,650 m³	$861,121	$1,180,437	$6	$9	$4	$6
D_1 3,650-36,500 m³	$3,829,452	$4,188,526	$81	$88	$6	$7
D_1 36,500 + m³	$6,304,138	$9,335,591	$621	$920	$6	$8
Rate $_{RT}$	$1,259,031	$422,842	$994	$334	$2	$1
D_1	$12,253,741	$15,127,395	$63	$77	$5	$6
D_3	$601,325	$534,192	$2,485	$2,207	$3	$3
D_4	$3,809,437	$1,714,833	$42,327	$19,054	$2	$1
D_5	$1,592,497	$880,580	$11,624	$6,428	$3	$1
Total	**$18,257,000**	**$18,257,000**	**$93**	**$93**	**$3**	**$3**

9   The GEEP factor calculated according to the current method could not be updated due to

10   time considerations and computer issues. The factor for 2012/2013 was therefore used to

11   allocate the GEEP amount under the current methodology.

12   However, Gaz Métro believes that the calculation for this factor under the current approach

13   using 2013/2014 data provides the best basis of comparison for evaluating the effect

14   that the proposed changes would have on GEEP expense allocation.

2.2.5 Return on rate base

1   The effect of all of the changes on the rate base is marginal for

2   rate D_1 customers. Interruptible customers will see their share increase by around 2%,

3   while rate D_4 customers will see their share decrease by 3%. This effect mainly

4   stems from the changes made to the CONDPRIN factor which is used to allocate

5   many components of the rate base.

6   The following table compares the results of the allocation under the current methodology and

7   the proposed methodology for allocating the return on the rate base.

Table 9

Allocation of the return on the rate base

2013/2014	Amount allocated		By customer		By $10^3 m^3$	
Rates	**Current methodol**	**Proposed methodol**	**Current methodol**	**Proposed methodol**	**Current methodol**	**Proposed methodol**
D_1 0-3,650 m³	$45,811,492	$46,289,299	$335	$338	$221	$223
D_1 3,650-36,500 m³	$31,977,437	$31,099,198	$675	$656	$54	$52
D_1 36,500 + m³	$24,260,469	$25,115,381	$2,391	$2,475	$22	$23
Rate $_{RT}$	$5,359,408	$5,936,570	$4,233	$4,689	$10	$12
D_1	$107,408,806	$108,440,448	$549	$554	$44	$45
D_3	$954,082	$998,482	$3,942	$4,126	$5	$6
D_4	$16,865,327	$12,744,123	$187,393	$141,601	$7	$5
D_5	$2,778,785	$5,823,947	$20,283	$42,511	$4	$9
Total	**$128,007,000**	**$128,007,000**	**$652**	**$652**	**$23**	**$23**

2.3 COMMENTS ON CERTAIN FACTORS

2.3.1 Removal of factor FS13

8   Factor FS13 allocates amounts prorated to revenue, as does factor FB09.

9   The two factors have different names, but represent the same allocation.

10   Although factor FB09 is not used to allocate one of the distribution service costs,

11   it is involved in the calculation of some factors. Gaz Métro proposes to remove

12   factor FS13, which matches factor FB09.

1 | **Gaz Métro requests that the Régie approve the removal of factor FS13 from the cost**
2 | **allocation method.**

2.3.2 FB01D

3 Expenses pertaining to *Lost gas smoothing* included as deferred costs are
4 allocated using factor FB01D, the same factor used to allocate the rate base
5 components pertaining to lost gas.

3   FILING OF DATA

1   Pursuant to the Régie's request (D-2014-193), Gaz Métro is filing the two databases

2   used to construct the mains costs allocation factor (CONDPRIN).

3   The databases appear in Exhibits Gaz Métro-2, Document 9 and Gaz Métro-2,

4   Document 10.

3.1   ENGINEERING DATA

5   The engineering database records all of Gaz Métro's mains.

6   The database contains the following information:

7   Region: Geographic location of mains

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

9   Diameter: Diameter of mains in millimetres

10   Materials: Classification of steel, plastic and aluminium mains

11   Length: Length of mains in metres

3.2   ACCOUNTING DATA

12   The accounting database includes information on the value of the mains. It was

13   assembled based on information on investment projects.

14   Although this database includes information on the diameter and length of

15   mains, the data has been deduced from information on the investment projects,

16   and is not an exact reflection of the mains network. The engineering data must

17   therefore be used to determine the network's technical characteristics. The accounting

18   data base is used solely to estimate the average cost of mains based

19   on what they are made of and their diameter, and reconstitute the network's total value.

20   The accounting database contains the following information:

21   Region: Geographic location of mains

22   Materials: Classification of steel, plastic and aluminium mains

1   Diameter: Diameter of mains in millimetres

2   Length: Length of mains in metres

3   Landing date: Year each main was landed

4   Capitalized amount: Capitalized value of each main