

**HOW TO USE THE SUPPLY AND DISTRIBUTION MAINS COST  
ALLOCATION SIMULATION**

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## **1 MAINS COST ALLOCATION SIMULATION**

1 The simulation provided in Exhibit B-0020, Gaz Métro-2, Document 5 is used to calculate the  
2 mains cost allocation factor, meaning the percentages of costs applicable to the various  
3 rate classes. The simulation, originally produced for the 2012-2013 budget allocation,  
4 was updated for the 2013/2014 budget allocation, and a new version was filed in Exhibit Gaz Métro-2,  
5 Document 12. This document contains instructions to assist in understanding and using the  
6 simulation.

7 The Excel simulation spreadsheet has three tabs:

- 8 - The *Sommaire* [Summary] tab presents possible simulation assumptions and  
9 allocation results using each assumption. The simulation results are presented  
10 on lines 10 to 44, and possible assumptions on lines 2 to 8.
- 11 - The *Calcul* [Calculation] tab presents each step in the calculation of the allocation  
12 factor.
- 13 - The *Tables* tab contains all data on which the calculations are based.

14 Before using the simulation, it may be useful to hide any comments that appear in the *Sommaire*  
15 [Summary] tab. Right-click on cells B1, A8 and F2 and select Hide Comments. Once the  
16 comments are hidden the text behind them can be seen. To see the comments again, place the  
17 cursor in the cells (B1, A8 and F2).

### **1.1 POSSIBLE SIMULATION ASSUMPTIONS**

18 Using the simulation, the assumptions used to calculate the allocation factor can be changed.  
19 Seven assumptions in all have to be determined. These are selected from the drop-down menu  
20 that appears when you click on cells B2 to B8. Click on the cell and then click on the arrow to the  
21 right of the cell to view the drop-down menu.

1 You must activate the automatic calculation function before selecting assumptions. Click on File  
2 in the upper right-hand corner, and then click on Options and then Formulas. In the Calculation  
3 options section, under Workbook Calculation, check Automatic and then click OK at the bottom  
4 of the window to accept the change.

5 The Summary tab has the following options:

6 **Minimum system (cell A2):** This assumption refers to the method used to determine  
7 the percentages of the cost of mains that will be functionalized between the *accès*  
8 [customer] component (allocated based on number of customers or number of  
9 connections) and the *capacité* [demand] component. The option *Minimum system 2po*  
10 [minimum system 2 inch] or *Intercepte zéro* [zero intercept] is selected depending on the  
11 method selected as the assumption.

12 **Conduites [Mains] (cell A3):** This assumption refers to the treatment of supply mains  
13 in the calculation of the allocation factor. When they are treated in the same way as the  
14 distribution mains, as Gaz Métro is proposing, the *Distribution+Alimentation*  
15 [Distribution+Supply] option must be selected. When the assumption is that the supply  
16 mains must be treated as transmission mains, the *Distribution* option must be selected.

17 **Indice [Index] (cell A4):** This cell refers to the price index used to state the value of the  
18 mains in real terms. Gaz Métro proposes using the Handy Whitman price index,  
19 which is referred to here as HW. *IPC* [CPI] refers to the Quebec consumer price index.

20 **Accès [Customer] (cell A5):** This assumption refers to the way in which the customer  
21 component of the mains cost is allocated, i.e., based on the number of connections,  
22 as Gaz Métro is proposing, or on the number of customers. The *Branchements*  
23 [Connections] option allocates the costs based on the number of connections, whereas  
24 the Clients [Customers] option allocates costs based on number of customers for  
26 the 2014 rate case.

27 **Capacité [Demand] (cell A6):** This assumption concerns the method for assessing the  
28 demand component of mains. When this component is estimated by the capacity  
1 attributed based solely on the DQM [MDD]<sup>1</sup>, the CA (DQM) [CA-MDD] option is selected.  
2 When this component is estimated using the capacity attributed and used method, the  
3 CAU option is used.

4           **Calcul Réseau [System calculation] (cell A7):** This hypothesis concerns the treatment  
5 of the regions in the calculation of the mains allocation factor. Maintaining the existing  
6 method, i.e., using weighted regional data, is the *Régions* [Regions] option. Weighting  
7 data at the preparation stage, as Gaz Métro is proposing, is the *Global* [Overall] option.

8           **Alimentation [Supply] (cell A8):** The cost of supply mains will be allocated based on  
9 a capacity attributed value (CA(MDD)) or based on the capacity attributed and used  
10 (CAU), depending on the assumption used. Here, an assumption must be selected  
11 only if the Distribution option was selected in cell A3.

12 Lines 10 to 44 show the results of the allocation of supply and distribution mains expressed  
13 in percentages. The corresponding rate is shown in Column A. The upper rate boundary is  
14 shown in Column B, and the percentages applicable to the rates and levels indicated and  
15 resulting from the assumptions used are shown in Column C. For example, the first level  
16 of rate D<sub>1</sub> is allocated 4.351% of mains costs when the following assumptions are used:

<b>Minimum system</b>	Minimum System 2 inches
<b>Mains</b>	Distribution + Supply
<b>Index</b>	HW
<b>Customer</b>	Connections
<b>Demand</b>	CA (MDD)
<b>System calculation</b>	Global
<b>Supply</b>	CA (MDD)

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<sup>1</sup> *Demande quotidienne maximale* [maximum daily demand], see B-0006, Gaz Métro-1, Document 2, pages 49-51.

## **1.2 DETERMINATION OF THE ALLOCATION FACTOR**

- 1 The steps for calculating percentages of costs attributed to the various rate classes are  
2 presented in the *Calcul* [Calculation] tab.
- 3 In Table 1, the average cost per linear metre of mains is calculated using accounting data.
- 4 In Table 2, the system value is estimated using engineering data on mains type, diameter  
5 and length and the actual average cost calculated in Table 1. If an average cost cannot be  
6 determined from the accounting data, it is estimated using linear regression.
- 7 In Table 3, the relative importance of the *accès* [customer] and *capacité* [demand] components  
8 is calculated.
- 9 In Table 4, the *accès* [customer] component is allocated among the various rates and levels, based  
10 on either the number of customers or the number of connections, depending on the assumption  
11 selected in the *Sommaire* [Summary] tab.
- 12 In Table 5, the *capacité* [demand] component is allocated among the various rates and levels,  
13 based on either the CA or CAU, depending on the assumption selected.
- 14 In Table 6, the *accès* [customer] and *capacité* [demand] components are allocated among the  
15 various rates and levels. The result obtained is shown in lines 10 to 44 in the *Sommaire*  
16 [Summary] tab.

## **1.3 DATA USED IN CALCULATIONS TO DETERMINE THE ALLOCATION FACTOR**

- 17 The Tables tab shows all the data used to calculate the mains allocation factor.
- 18 The first block of data (lines 1 to 42) represents the actual value of supply and distribution  
19 mains, by region and overall, calculated using the Handy Whitman price index.

- 1 The second block of data (lines 44 to 85) shows the actual value of supply and distribution
- 2 mains, by region and overall, calculated using the Quebec consumer price index.
  
- 3 The third block of data (lines 87 to 128) shows the actual value of distribution mains only,
- 4 by region and overall, calculated using the Handy Whitman price index.
  
- 5 The fourth block of data (lines 130 to 171) shows the actual value of distribution mains only,
- 6 by region and overall, calculated using the Quebec consumer price index.
  
- 7 The last block of data (lines 173 to 239) shows data on the number of customers and
- 8 connections and the DQM [MDD].