RESPONSE BY ÉNERGIR TO INFORMATION REQUEST NUMBER 1 BY ELENCHUS: GENERIC FILE RELATING TO THE ALLOCATION OF COSTS AND RATE STRUCTURE OF ÉNERGIR (R-3867-2013)

Cost driver, real vs. projected profile

1. **References: *Gaz Métro-5, Document 12, B-0557, sections 1.1, 2.1.2 and 2.1.5***

Preamble:

Section 2.1.2 states on page 22:

In conclusion, the allocation of costs based on actual used and unused transportation units allows us to properly split the total costs of natural gas transportation between the stable equivalent consumption profile and a seasonal consumption profile. The real profile must be used, because it is the only one that reflects the effect of temperature on the client's consumption.

Clarification is sought on whether the actual total transportation costs incurred by Énergir are more directly caused by the real, or by the projected, load profile of customers.

Questions:

1.1 Given that Énergir contracts for transportation in advance of the gas year, please confirm that quantum of contracted transportation is based on projected requirements and not actual requirement. If this is not confirmed, please explain.

Response:

Regarding Énergir's supply planning, some clarification may be in order.

Each winter, Énergir evaluates its peak requirements for the next four years, from October onwards. Based on the projected peak in each year for all customers, Énergir determines its portfolio of required tools. During this evaluation, no purchase is specifically targeted to meet transportation needs, as defined in the average and excess demand method.

Basically, since Énergir's load has a significant seasonality and available franchise storage tools have limited capacity, the transportation tools to be contracted are always greater than the potential average demand.

For example, in establishing its requirements for the plan for Year 2020-2021, Énergir determined that a daily peak of 1,391 TJ per day was needed. Depending on the winter temperatures, the average daily requirement could range from 639 TJ to 678 TJ. Since the total transportation tools contracted and the expected franchise supply (transportation by customer and GNR) to meet peak are 1,001 TJ per day, well beyond the range of 639 TJ to 678 TJ, no specific plan for this demand is required.

In a case where specific planning is required regarding the range of 639 TJ to 678 TJ per day, a specific analysis is needed to determine the optimal profile of transportation tools to meet this need, as well as the threshold of the range to be addressed.

Énergir confirms that the purchase of the transportation and storage tools depends on the projected peak for all customers. The transportation contracts must meet this projected peak, in part or in total. The cost of these contracts must then be functionalized between transportation and load-balancing following a theoretical method (in this case, Énergir proposes to maintain the average and excess demand method).

1.2 Given the response to 1.1, please comment on the consistency with the principle of cost causality of (i) an allocator based on real demand (load profile) and (ii) an allocator based on the projected demand that is used for purposes of contracting for transportation.

Response:

Since Énergir determines its needs based on peak demand, Section 4 of Document B-0579 explains that the causality of supply costs is directly related to the peak demand of the customers. Énergir's analysis in this section shows that to the extent that the peak demand remains stable, the variance of total demand undergoes only small variance in total costs. Thus, at the level of cost causality, the overall costs of supply related to transportation and storage can be subdivided by the projected use by each type of customer based on needs for the peak day (1,391 TJ per day). However, this approach has certain problems:

- This approach does not divide the costs of supply into two distinct services (transportation and load-balancing). A customer who wishes to provide its own transportation service must therefore be credited with the equivalent of the cost of transportation;
- Customers who are not part of the peak (only active in summer) would profit from a free service, at least in establishing a minimal unit cost.

As explained in the answer to Question 1.1, since Énergir does not do planning or specific purchases directly based on the need for transportation, the specific subdivision of costs between transportation and load-balancing is not a need for supply planning, but rather for rate-setting. Therefore, for this subdivision the overall range of 639 TJ to 678 TJ could theoretically be used, representing the average use of transportation based on various temperature scenarios. Note that this range excludes any variance in consumption on any basis other than temperature (for example, gains or losses of customers, variance in economic activity).

Section 2.1.2 of Document B-0579 explains that ideally the causality of costs established for each customer do not change when the costs of supply are separated into two services, no matter what level is chosen for the range of transportation. To illustrate this situation, here is a simplified example that breaks down the peak demand for 2020-2021 and the cost of transportation and storage tools to meet this need between a customer with a stable profile and a customer with a seasonal demand:

	Peak demand	**Transportation use**	**Planned cost**[1]
	(TJ/d)	***(TJ/d)***	***($ million)***
Stable customer	380	380	93
Seasonal customer[2]	1,011	259 to 298	184 to 186
Total	1391	639 to 678	277 to 279

[1] To simplify the calculations the planned cost for the stable client is based solely on FTSH Parkway type tools.

[2] In the example, the seasonal customer includes self-consumption needs and gas losses.

This shows that the costs allocated for a stable customer would be $93 million, while those of a seasonal customer would be between $184 million and $186 million. To the extent that the allocation results in a unit rate specific to customer type, we find a rate of $0.67 per GJ for a stable customer and between $1.95 per GJ (lower limit) and $ 1.71 per GJ (higher limit) for a seasonal customer.

When the allocation and rate are specific to the customer, the significant difference observed in the potential unit rate for the seasonal customer does not pose a problem. However, to the extent that the total allocation of costs of supply is not done per customer, the theoretical subdivision between two services using a fixed value of transportation use for the seasonal customer will necessarily impact the cost allocation for a stable customer at some point.

Below are sample numbers that explain this difference based on a two-year period, a specific rate and allocation, and rate and allocation subdivided into two services, one common and one specific:

Example 1 –Single Service, with Allocation and Cost Specific to the Customer

	Peak demand	Transportation use	Planned cost	Deferred costs	Planned volume	Rate	Actual volume	Revenues	Shortfall
	(TJ/d)	*(TJ/d)*	*($ million)*	*($ million)*	*(TJ/d)*	*($/GJ)*	*(TJ/d)*	*($ million)*	*($ million)*
Year 1 – Supply service (transportation and storage… excluding supply)									
Stable customer	380	380	93	0	380	0.67	380	93	0
Seasonal customer	1,011	259 to 298	184 to 186	0	275	1.84	285	191	-6
Total	**1,391**	**639** to **678**	**277** to **279**	**0**	**655**	**1.16**	**665**	**284**	**-6**
Year 1 – Supply service (transportation and storage… excluding supply)									
Stable customer	380	380	93	0	380	0.67	380	93	0
Seasonal customer	1,011	259 to 298	184 to 186	-6	275	0.78	285	185	-6
Total	**1,391**	**639 to 678**	**277 to 279**	**-6**	**655**	**1.16**	**665**	**278**	**-6**

In this first example, the planned volume is not very significant, since the costs and shortfalls to be deferred are specific to each customer. Thus, the variance of the actual volume within the projected range allows the maintenance of an allocation over several years that faithfully reflects the cost caused by each type of customer.

Example 2 – Subdivision of the Cost Between 2 Services (Transportation and Load-Balancing), Unit Rate Allocation of Transportation and Specific Allocation of Load-Balancing

	Peak demand	Transportation use	Planned cost	Deferred costs	Plan volume	Rate	Actual volume	Revenues	Shortfall
	(TJ/d)	*(TJ/d)*	*($ million)*	*($ million)*	*(TJ/d)*	*($/GJ)*	*(TJ/d)*	*($ million)*	*($ million)*
Year 1 – Transportation Service									
Stable customer	380	380	93	0	380	0.67	380	93	0
Seasonal customer	1,011	259 to 298	63 to 73	0	275	0.67	285	70	-3
Total	**1,391**	**639** to **678**	**156** to **166**	**0**	**655**	**0.67**	**665**	**163**	**-3**
Year 2 – Transportation Service									
Stable customer	380	380	93	-2	380	0.66	380	91	0
Seasonal customer	1,011	259 to 298	63 to 73	-1	275	0.66	285	69	-3
Total	**1,391**	**639** to **678**	**156** to **166**	**-3**	**655**	**0.66**	**665**	**160**	**-3**

In subdividing the costs into services, one of which has an allocation of a single rate (the transportation service, not specific to the consumption profile), the cost allocation per customer diverges over the years from the observed causality based on the tools contracted to meet the needs of each customer (see details in Example 1).

This can be observed by the deferral of –$3 million from Year 1 of the transportation service that applies to all of the customers of the service, to Year 2, even if the difference is generated solely by seasonal customers, as in Example 1. However, since the transportation service is a single rate for all customers, in Year 2 the stable customers will be allocated 58% of the deferred difference from the previous year (as evidenced by the allocation of -$2 million in Year 2).

In terms of the load-balancing service, since the customer's consumption profile is used in allocating costs, there is no difference compared to Example 1.

Section 2.1.2 of Document B-0579 therefore explains that to maintain the causality of the costs coming from the planning of tools between the customers, to the extent that the allocation of costs is subdivided into two services, one of which is a flat rate for all types of customers, (as opposed to being specific to the customer), it is necessary to use the real profile is at one point or another in the cycle of functionalization.

However, Énergir understands that when costs are allocated the next winter's temperatures are unknown. Therefore, in its proposal, when allocating on the basis of the three-tier method, Énergir uses the planned volume in the supply plan, based on a "normal" winter. However, at the end of the year, Énergir proposes to apply the normalization of volumes between the transportation and load-balancing services. This allows a correction of the shortfall relative to the temperature experienced in the transportation service to include it in the future in the service that takes into account the specific consumption profile. In Example 2, this adjustment in effect defers the -$3 million difference in transportation at the end of the year towards load-balancing, where it will be put entirely on the seasonal customers, to arrive at the same outcome for cost allocation as in Example 1. This adjustment therefore helps ensure the long-term maintenance of cost causality in the planning of gas supply for transportation and storage tools.

At the moment of rate unbundling, this effect was not apparent. In fact, at the time Énergir was supplied mainly at Aeco/Empress.The allocation of the transportation service corresponded to the FTLH service and purchases made directly at Dawn. The capacity of these tools was roughly equal to the average customer demand. During the year, Énergir was able to sell transportation tools or adjust its purchases at Dawn based on the variance of average demand. The net costs of sales of transportation tools performed during the year to adjust to average demand were sent to load-balancing at the end of the year. These actions had a direct incidence on end of year costs that corresponded to revenue variance arising from demand variance. The Énergir proposal allows for a balance that has a similar effect as the new supply situation at Dawn.

1.3 Please clarify how the objective of designing a methodology that reflects cost causation, as discussed in section 1.1, is better achieved by using an "allocation of costs based on actual used and unused transportation units" rather than by using an allocation based on the projected transportation requirements that underpin Énergir's contracting to the projected requirements of its customers.

Response:

As explained in the answer to Question 1.2, from the moment when the costs of supply were subdivided between two services, of which at least one allocated costs by volume (without regard to the consumption profile) for customers with different

consumption profiles, the allocation of costs specific to each customer based on the projected contract for each one (Example 1) cannot be achieved over many years, unless an adjustment for actuals is made from time to time (Example 2 + Énergir normalization proposal).

In the case where supply costs are allocated specifically to the customer based on their consumption profile, as in Example 1, effectively all of the costs could be allocated based solely on projections. However, this is not possible where a distinction must be made between transportation and load-balancing services to meet rate needs.

1.4 Énergir's evidence discusses "use of the real vs. projected profile" in section 2.1.2 at pages 19-22 and it discusses the "difference between real … and projected demand" in section 2.1.5 at pages 42-45. The "profile" discussion appears to be based on variances in actual from forecasted temperature whereas the "demand" discussion appears to relate to changes in forecasted demand that result from changes that occur with the passage of time that are not related to in-year temperature variances. Please confirm that use of the terms "real" and "projected" are different in these sections and clarify the relationship between real and projected load profiles and demand in sections 2.1.2 and 2.1.5. In particular, please explain the relevance of each discussion to the determination of causal costs.

Response:

Sections 2.1.2 and 2.1.5 provide an analysis of a specific external effect on the costs of the distributor.

1.5 In each of these sections, Énergir compares the effect of a variance between projections in the allocation and what is actually observed. In the two cases, the projection relates to an estimate based on predetermined parameters while the actual relates to what is observed as it occurs.

In these sections, the customer demand refers to the consumption of a group of customers. According to this analysis, this group of customers can represent the consumption of a all customers or a sub-group of customers. Since the causal relation between customer demand and the temperature is nearly exact, Énergir often categorizes groups of customers according to their profile. The key measure of this profile is the customer's load factor (LF), that is its average daily demand divided by its projected peak demand. The closer a customer's profile gets to 1, the more its profile is considered stable, and the less it will be affected by the temperature. However, for a customer whose LF profile is not stable, the LF measure will vary by temperature. The colder it gets, the more its LF will increase, and the warmer it gets, the lower its LF will be.

The analysis of Section 2.1.2 is relevant since subdividing the costs between two services, of which one service with a single rate for all of the customers without regard for their LF, while in the long term the costs allocated to one or another of these customers will vary with the costs allocated by profile, as illustrated in the answer to Question 1.2.

The analysis in Section 2.1.5 shows why Énergir could find itself with a surplus of tools over the long term. Since cost allocation is done only for the current year, but the long-term surplus of tools is generally related to contracts made several years earlier, the explanation begins with the year when the contracts were signed. Thus, by using this projection and considering a real difference over several years from the projection at the moment of the contract, surplus tools can arise several years after the projection. Here the difference between the past projection and current projection (that is the effect of the real between the moment of each projection) is relevant since it is the cause of the cost of the surplus.

Supply costs caused by direct purchase customers

2. **References:** ***Gaz Métro-5, Document 12, B-0557, Sections 2.2 and 2.3***

Preamble:

In the discussion of the causality of the costs of supply in Section 2.2, one part of the cost of supply is attributed to direct purchase customers.

Could you clarify the practical aspects and follow-up of the direct allocation of additional supply caused by customers who purchase their own gas.

Questions:

2.1 Please describe a methodology that Énergir could adopt to identify and track the incremental supply costs that are caused by direct purchase customers and identify any practical difficulties with implementing the approach described. Please include each cost factor related to direct purchase customers, as identified in section 2.2 and 2.3.

Response:

It would be practically impossible for Énergir to directly allocate the incremental supply costs caused by customers who purchase directly. As mentioned in the answer to Question 1.15 in Information Request Number 2 by the Régie, there are two problems with this approach:

- The cost allocation exercise is performed at the moment of the rate case with no change in the projected delivery by customers buying directly (and therefore with no additional cost of supply), given that this practice remains exceptional since Énergir requires consistent delivery;
- The contract periods for customers purchasing directly vary from one to another and do not correspond to the rate year of October 1 to September 30.

Given the above, Énergir proposes to bill adjustment fees at the end of each contract period of customers buying directly, to cover the incremental supply costs that may arise on a real basis. This subject is dealt with in Part 2 of this file (B-0561, Gaz Métro-5,Document 14, section 3.5.5).

2.2 Please comment on whether directly allocating the incremental cost caused by direct purchase customers to those customers using the method described in the response to 2.1 above would adhere more closely to the principle of cost causality than the allocation methodology proposed in Énergir's evidence.

Response:

Please refer to the answer to Question 2.1.