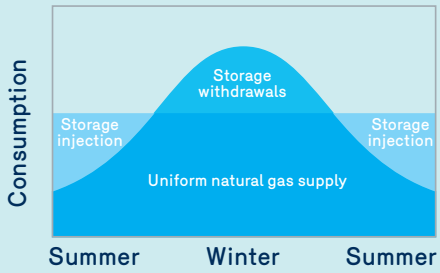
Load-Balancing Service

Overview

Load-balancing is the management of variations between summer and winter consumption. While there may be significant seasonal fluctuations in a customer's natural gas consumption, Énergir receives natural gas uniformly, i.e. the same quantity every day. Énergir therefore must find a balance between the time it receives the gas and the time it is consumed by the customer.



Storage is a load-balancing tool. Natural gas is stored in summer, when consumption is lower, and withdrawn during winter, when customers' energy needs are greater.

Costs of load-balancing service

Service Components

Natural gas is primarily stored in two ways:

1. Underground storage in a gaseous state:
   - Enbridge Gas at Dawn in southwestern Ontario;
   - Intragaz at Pointe-du-Lac, near Trois-Rivières;
   - Intragaz at Saint-Flavien, on the south shore of Quebec City.
2. Storage in a liquid state:
   - Énergir's liquefaction, storage and regasification plant (LSR Plant) in the Montreal area.

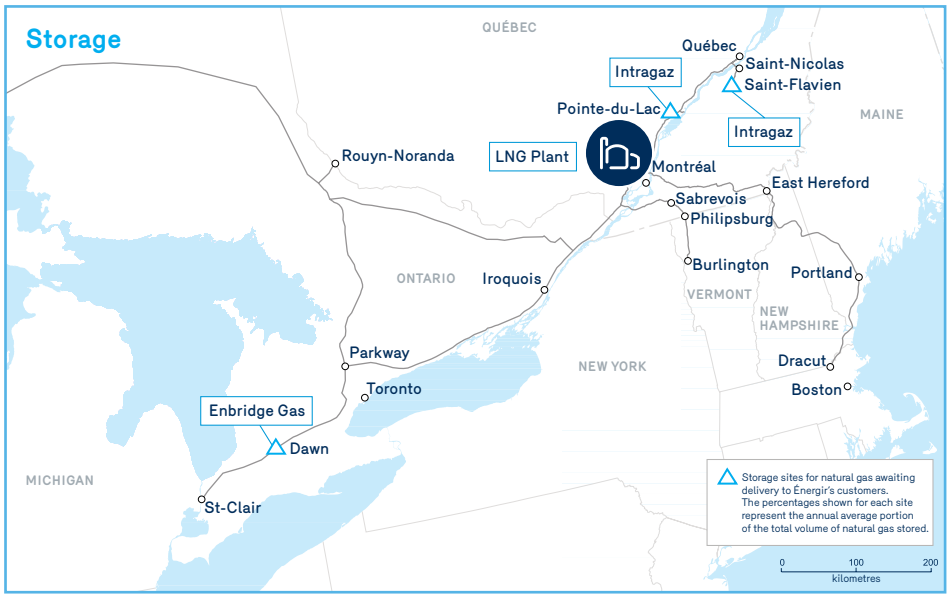
Purchases at Dawn, along with the transportation capacities needed to route them to our territory, are also important load-balancing tools.

Regulated Rates

Storage in Ontario, as well as transportation between Dawn and our territory, are regulated by the Ontario Energy Commission and the Canada Energy Regulator. The storage sites in Québec, as well as the LSR plant, are regulated by the Régie de l'énergie.

Each year, Énergir evaluates its load-balancing tool needs. The costs of these tools and their impact on the price of the load-balancing service are then submitted to the Régie de l'énergie for approval.

Énergir bills load-balancing at the same price it pays its various suppliers for the tools, which means it makes no profit on this service.



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Énergir's load-balancing rate

Seasonal and Operational Flexibility Tools

Énergir's load balancing service consists of load-balancing tool costs, which are classified according to "seasonal" and "operational flexibility" functions. What purpose do these two types of tools specially serve?

- **Seasonal tools:** are used to serve seasonal winter volumes, equal to the difference between annual and winter average demand. Underground storage capacities of natural gas during the summer for withdrawal in the winter as well as transportation tools and liquified natural gas are the main tools.
- **Operational Flexibility tools:** are used to balance daily injections and withdrawals which are not linked to winter load-balancing. They are used to normalize daily deliveries.

Load-balancing Service Price

The seasonal tools are billed based on a customer's consumption patterns. Two consumption parameters — **P** and **A** – are calculated and used to determine the price:

- **P** is the daily peak load; and
- **A** is the annual average daily load.

The Load Factor (LF), or the quotient of the annual average daily load over the peak load (A/P), estimates the customer's load profile. The LF is incorporated into the calculation formula to reflect the customer's use of seasonal load-balancing tools.

The use of operational flexibility components, not being affected by the customers' load profiles, their costs are added to the calculation formula without being modified by the customer's LF.

$$\left[\left(\frac{1}{LF} - 1\right) \times APR\right] + AOCR$$

The calculation formula reads as follows:

Where:

- **APR** is the portion that accounts for the seasonal tools; and
- **AOCR** is the portion that accounts for the operational flexibility tools.

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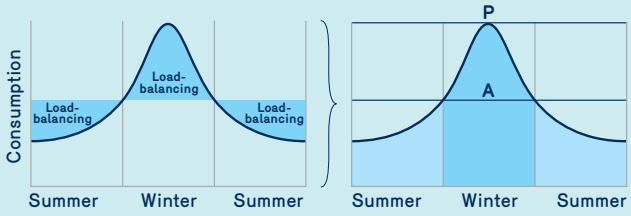
Impact of Consumption Profile on the Price

The price paid by customers reflects their consumption profile since it recognizes each customer's larger or smaller load-balancing needs — the bigger the differences between the parameters, the higher the load-balancing price, and vice versa.

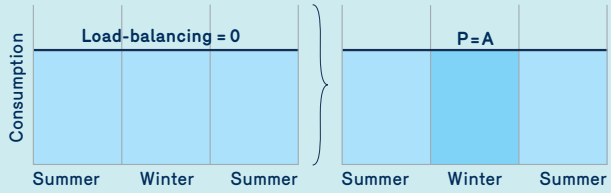
Profile of Heating Customers

The LF for heating customers whose consumption profile requires natural gas storage in the summer to supply volumes required in winter will be relatively low.



Profile of Stable Consumption Customers

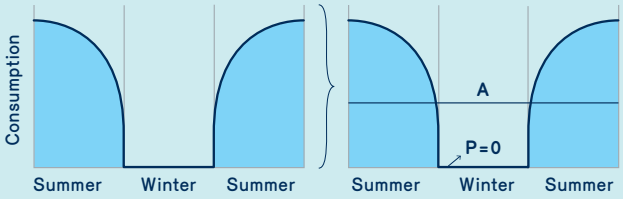
In contrast, no storage is required for customers who always consume the same volume, regardless of the season. There is therefore no difference between the parameters (LF equals to 100%) and no load-balancing charges are billed.



Other Consumption Profiles

What happens if a customer only consumes in summer? Not only does this type of profile not require any seasonal load-balancing; it also allows Énergir to reduce its overall load-balancing needs. The benefits are therefore passed on to the customer.

The P parameter is zero for this type of customer, which translates into a LF that tends to infinity. The result will therefore be a credit for the load-balancing price.



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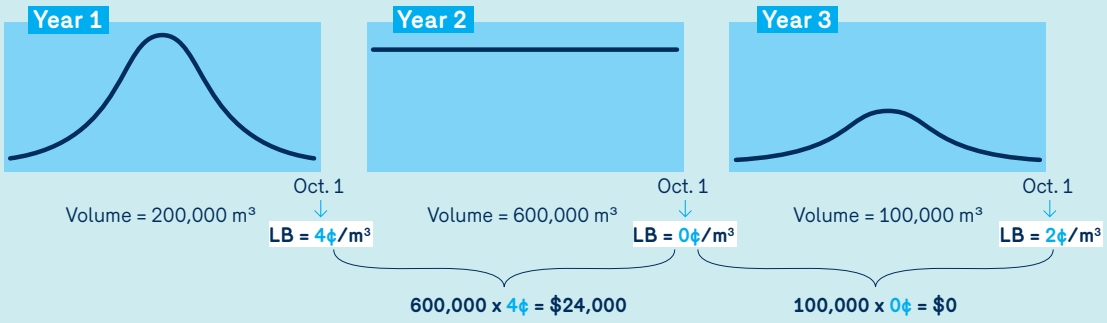
Time Lag between Volume Used for Calculation and its Application

We have seen that the load-balancing price varies according to different consumption profiles. This is also true for customers whose consumption profile changes from year to year.

The load-balancing price for customers is established on October 1st of each year, based on the preceding 12 months' consumption up to September 30. This price is then billed for the next 12 months. The example below helps visualize the impact of a change in consumption profile during a year on the price paid the following year.

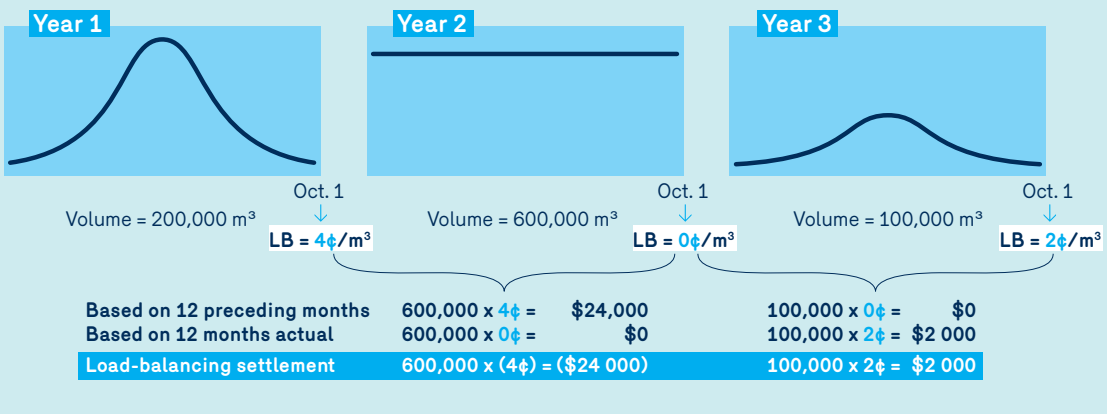
The example shows that the price calculated based on the heating profile for Year 1 will have an impact on the amount paid in Year 2 when volumes are much higher. Similarly, the beneficial impact of consumption stability in Year 2 will only be felt in Year 3, when the volumes are again lower.



Load-balancing Service Settlement

A customer with a consumption history of at least 12 months can choose a billing method for the load-balancing service that includes a service settlement as of September 30.

A second calculation is therefore made to determine what the load-balancing price would have been had it been calculated based on the current year's consumption (instead of the preceding 12 months). The difference between the two amounts is billed or credited to the customer at the end of the year.



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Average price

As the A and P parameters are based on the preceding 12 months' consumption, a customer who does not have a 12-month consumption history will be billed an average load-balancing price, which will differ depending on the customer's applicable distribution rate. The average price reflects the consumption pattern of all customers covered by each rate.

General Distribution Rate D_1 customers whose annual consumption is below 75,000 m^3 are also billed according to an average price.

Processing of deliveries

In addition to the consumption profile, the natural gas delivery profile also has an impact on the load-balancing service used by a customer.

For customers who use Énergir's natural gas supply service and who have a uniform delivery profile, the load-balancing service is simply based on the consumption profile.

However, in the case of customers who provide their own supply service, the load-balancing price will be based on their delivery profile.

Load-balancing rate making assumes a uniform gas supply throughout the year. Uniform delivery is simply equal to total deliveries divided by 365 days.

So, what happens if actual deliveries differ from uniform delivery? The impacts on load-balancing (LB) needs are summarized in the following table:

		Winter	Summer
Delivery >	Uniform delivery	LB↘	LB↗
Delivery =	Uniform delivery	''Normal'' LB	'' Normal'' LB
Delivery <	Uniform delivery	LB↗	LB↘

Volume Transposition

In the case of customers providing both their supply and transportation service, volume transposition applies, allowing non-uniform natural gas delivery profiles in the calculation of the load-balancing price.

The transposed consumption is established as follows:

$$TL = L + TUD - DCV$$

Where:

- **TL** = Transposed Load (monthly or daily, as the case may be)
- **L** = Load (monthly or daily, as the case may be)
- **TUD** = Theorical Uniform Delivery
- **DCV** = Daily Contract Volume

The calculation is made each day in order to obtain the new transposed consumptions. The new **A** and **P** parameters, which are required to determine the load-balancing price, are then evaluated on this basis.

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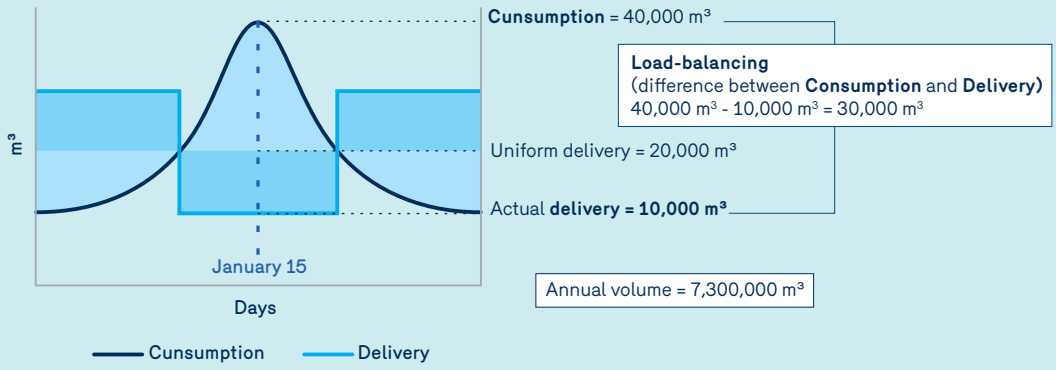
To illustrate this transposition, let's assume that a customer has an annual volume of 7,300,000 m³ and withdraws 40,000 m³ on a particular day.

If, during that day, the customer delivers 10,000 m³, the customer's load-balancing need for the day is: 40,000 m³ - 10,000 m³ = 30,000 m³.

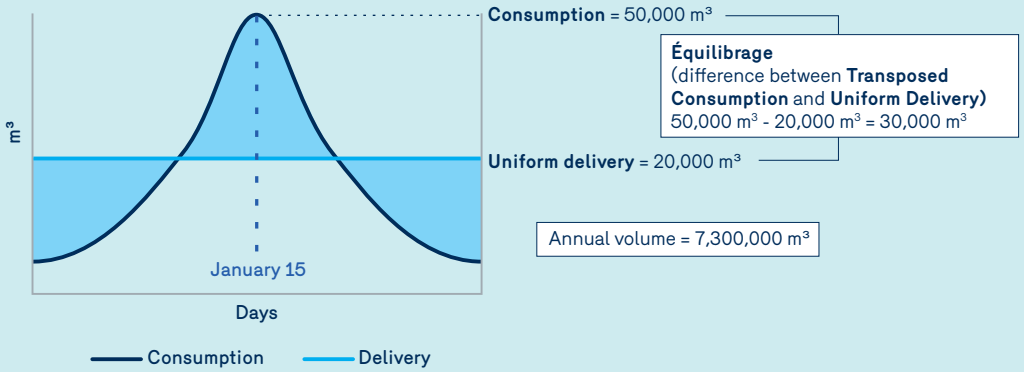
Load-balancing needs as at January 15 based on actual delivery profile (before transposition)



Based on the example above, the uniform delivery profile of that customer is 7,300,000 m³/365 days = 20,000 m³/day.

That day's transposed consumption is therefore 50,000 m³, i.e. 40,000 m³ - 10,000 m³ + 20,000 m³, which gives the same load-balancing need of 30,000 m³.

Load-balancing needs as at January 15 based on actual delivery profile (after transposition)



Adjustment Charges

In the case of customers providing their supply service and using Énergir's transportation service, adjustment charges apply instead.

When the DCV is different from the TUD, the difference is, in the case of a surplus, purchased by Énergir, and, in the case of a deficit, sold to the customer. These deviations are billed at a price based on Énergir's supply service and the market on the day the deviation occurred.

No Treatment

For customers engaged in a fixed-price supply agreement, neither transposition nor adjustment charges apply in the event of deviation from the uniform delivery profile.

Customer-provided service

Under certain conditions, customers may provide their own load-balancing service. In such cases, they have to deliver the exact volume they consume every day.

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