

Position Paper: *Low-calorific natural gas in Belgium*

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Description

When natural gas was introduced in Belgium in the 60's, it was initially gas coming from the Netherlands, namely Slochteren (Groningen), where a quite large gas field was discovered in 1959. Since then, Belgium has two gas zones, one for gas with low-calorific value (gas with a relatively low combustion value of 9,769kWh/Nm³ and further a quite large content of inert gasses, especially N₂), which represents more or less 27% of the market, and one for gas with high-calorific value (the 'normal' gas with a calorific capacity of 11,630kWh/Nm³). The L grid stretches *grosso modo* over the province of Limburg, the Kempen, towards the south over Flemish Brabant and towards the north over Walloon Brabant and parts of Liège to the Hainaut. It encompasses cities such as Antwerp and Brussels. Outside our borders, L gas is also used in the Netherlands, the north of France and the west of Germany.

L gas is imported from the Netherlands, partly through Zandvliet, but mainly from Poppel (Dutch exit point Hilvarenbeek). It circulates straight across Belgium via the main ax Poppel-Blaegnies, in order to supply the north of France. Our country owns two swap stations in Lillo and Loenhout, where high-calorific gas can be converted into low-calorific gas by adding nitrogen. The Netherlands own several of such swap stations. Our country does not have its own storage facilities for low-calorific gas.

Gas of low calorific value and high calorific value are not substitutes. They cannot be used together in the same pipeline, and belong thus to separate gas markets. In Belgium, Eni (taken over by Eneco since 10/7/2017) is the largest supplier of L gas. Engie (formerly GDF Suez) too is quite active, besides amongst others RWE and some smaller market players. In 2008, Eni/Eneco has moreover extended its long term contract with GasTerra (the producer of L gas in the Netherlands) by 20 years.

The Dutch policy relative to L gas has from early days been focused on guaranteeing the supply of its own needs. Therefore, export of L gas takes place mainly by exporting "normal", rich gas mixed ("reduced") with nitrogen. It is estimated that in this way, half or more of the exported L gas today is reduced H gas. The Netherlands have moreover virtually fused both markets a few years ago, by using a swap service through which H and L gas can be freely exchanged at every entry point (the cost of this service is socialized in the transport tariff).

In Belgium, there have been no investments in the development of infrastructure for L gas since 2004. In the L gas zone, not only can the development for the use of natural gas, e.g. for heating, therefore no longer be promoted, but the opportunities for increasing the consumption of existing customers is in addition limited. The last few years, there is an increasing risk of congestion in the L gas zone. The conversion of (parts of) that zone to H gas is therefore effectively being prepared. In this way, the Port of Antwerp (only industrial clients) was converted for a large part, and part of West-Limburg was converted to high-calorific gas as from September 2015 (only residential clients). In September 2015, most of industrial users alongside the Albert canal were converted to H-gas.

On 17 January 2014, the Cabinet of the Netherlands has announced, as a result of the increasing frequency and force of earth quakes in the extraction area, that gas extraction from five production locations around Loppersum would diminish by 80%. Moreover, the gas production from the Groningenveld was limited to 42, 5 billion m³ per year in 2014 and 2015, and to 40 billion m³ in 2016. Later it was decided to further lower this to 27 billion m³ in the gas year 2015-2016, to 24 billion m³ in 2016-2017, and even to 12 billion m³ in 2023. In 2030, extraction must be put to an end completely. In Belgium, Synergrid worked out a plan for a full conversion to H-gas by 2030. Given the accelerated phase-out of exploitation of gas fields in Groningen and the successful results of the conversion up till now, this deadline was in the meantime however accelerated to 2024. This program was coordinated by a Task Force within the Energy Administration, and concerns the analysis of real and potential congestions, the planning of possible conversions, as well as the possible financing mechanisms for their costs (see also <https://www.gaschanges.be/en>).

The principal advantages of L gas in Belgium are the following:

- security of supply: in 40 years, the supply of L gas from the Netherlands was not interrupted once;
- limited risk: close by field, politically stable country of origin;
- diversity of the origin of natural gas;
- flexibility (the Distrigas/Eni contract offers a lot of opportunities with regard to flexibility, both in the short and in the long term, thus reducing the need of own storage facilities for our country).

The most important disadvantages of L gas are listed as follows:

- There is only one source and one entry route;
- Flexibility within Belgium: there is no storage facility of L gas in Belgium;
- Limited competition: there is only one producer upstream. This problem is partially resolved by means of the swap possibilities in the Netherlands, although the opportunities for the Belgian consumers to benefit from this are limited due to the congestion on the Dutch grid;
- Higher transport costs: transport of L gas is more expensive than transport of H gas;
- Environment: a lot of export of L gas from the Netherlands is more and more often reduced H gas...;
- Combustion efficiency: combustion plants on L gas lose about 0,5% efficiency compared to H gas;
- Congestion: due to the halt of investments, the chances of congestion in the L gas zone increase systematically;
- The availability of L gas in the gas field of Slochteren is limited. Sooner or later, we will have to switch to H gas in any case.

Objectives of Febeliec

Febeliec acknowledges the merits of low-calorific gas in the early phase of natural gas import in our country. The existence of separate grids and markets for H and L gas, however, was not foreseen at the introduction of the liberalized single EU gas market after the year 2000. Since then, for its members, a connection to the L gas grid is nevertheless often a competitive disadvantage, given the above mentioned negative characteristics. Principally, Febeliec believes that the lack of competition on the Belgian L gas market, the higher transport costs and the consequences for the environment and the combustion efficiency for its members are not compensated by the advantage of having gas producers nearby and of the diversity of primary gas sources (both national as well as European goals). This is why Febeliec suggests to switch industrial consumers in priority and as soon as possible to high-calorific gas, given they experience the disadvantages of L gas the most.

In the short term and pending a permanent conversion of all industrial consumers:

- the total H/L swap capacity must be offered by Fluxys to all market players on the basis of a market conform allocation methodology and with UIOLI (Use-It-Or-Lose-It) obligation;
- it must be examined whether in Belgium too a swap service between H and L gas can be introduced (this is already the case in the Netherlands and in France);
- it must be examined, together with the Netherlands and France, how the available import capacity from Hilvarenbeek can be increased and allocated in a balanced way.

As regards conversion of the entire Belgian L gas grid to high-calorific gas, Febeliec wishes to highlight that industrial customers connected to the Fluxys grid had to bear the conversion costs of their installations themselves. For financing the conversion costs of distribution grids, Febeliec thus pleads in favour of solidarity between all distribution customers on the territory (also of the H gas grid, given the fact that nobody in the past has had the choice between H of L gas). For industrial users on distribution grids, competitiveness must be guaranteed by means of a lowered or degressive tariff and a capped levy per site.