

Zeebrugge Terminalling Call for Market Interest



Fluxys Terminalling Services Extension

November 2023



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Planning tomorrow's infrastructure services

Fluxys in its strategy to speed up the energy transition is committed to anticipate tomorrow's market needs to deliver on the challenging decarbonisation targets ahead. Large-scale maritime imports of low-carbon hydrogen or derivatives will be required as well as the export of massive quantities of CO₂ for safe and permanent sequestration under the seabed. To support this transition, sufficient inflow of natural gas serving the new flow configurations in Europe is a continued need for which the decarbonisation potential of carbon-neutral biomethane and synthetic methane can be leveraged.

A cornerstone infrastructure for Northwest Europe's security of supply today, the Zeebrugge terminal has all it takes to serve the market as tomorrow's multi-molecule hub of choice. Its optimum port location, deep connectivity into the Northwest European hinterland and nearly 40 years of operational experience are the solid bedrock for reshaping the terminal's infrastructure and offer the market a unique opportunity for the future. With an open access multi-molecule decarbonisation services offer available in one single ecosystem serving the Northwest-European market, market players have a sweet spot to widen their business scope into the low-carbon energy markets key to steer society towards climate neutrality.

As flagship project in Fluxys' strategy, the initiative to broaden the Zeebrugge terminal's services range and infrastructure into tomorrow's decarbonisation needs fully shoulders both the Belgian federal hydrogen strategy and the objective of Port of Antwerp-Bruges to become a green energy and feedstock hub.

Close cooperation with the market is at the core of Fluxys' approach and this Call for Market Interest is a first initiative towards reshaping the Zeebrugge terminal into a multi-molecule hub. Market players can specify a wide range of services they would consider contracting at the terminal: both **methane related services** (syn-LNG, bio-LNG, CNG, conventional LNG) and **hydrogen/ammonia (H₂/NH₃) services**.

The market response to this Call for Market Interest will allow Fluxys to aggregate the overall level and nature of interest as well as its development over time. Through this mapping Fluxys will finetune its terminal development plans in line with market interest and get back to the market to move ahead.

Methane (syn/bio-LNG/CNG/CH4) services

Regulated open access terminal with excellent safety & availability track record and competitive pricing

In operation since 1987, the LNG terminal is located in the outer port of Zeebrugge on a site of ca. 30 hectares and LNG carriers from 1.000 m³ LNG up to 266.000 m³ LNG can dock at the facility. The terminal includes the following infrastructure:

- 2 LNG jetties,
- 5 LNG storage tanks,
- send-out facilities for injection of regasified LNG into the European high-pressure gas network,
- several truck loading bays and related facilities.

The Zeebrugge terminal has an excellent safety track record, with no incidents involving LNG or natural gas causing a fire since commissioning in 1987. Service availability holds particularly strong as well, with an average operational availability of 99.8% over the last 10 years.

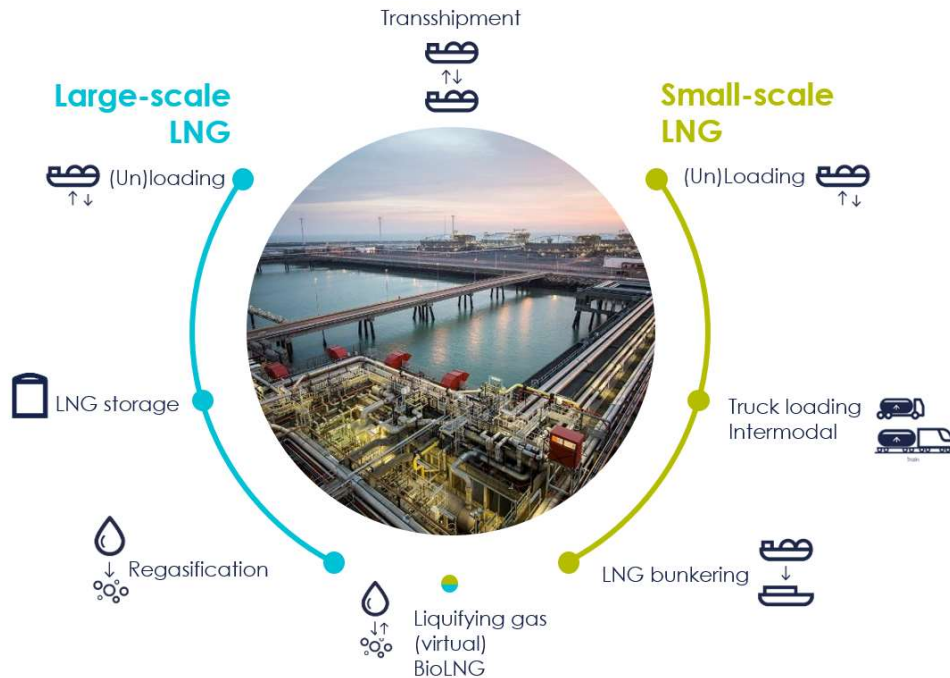
The Zeebrugge terminal is a multi-user, open access facility with a fully regulated service offer at competitive tariffs. This regulated environment holds several benefits to the market:

- standard terminalling contracts are publicly available and ensure a non-discriminatory approach to the market.
- tariffs are publicly available as well and tariff regulation ensures a transparent fee structure.

Current services offering

A broad set of large and small-scale LNG services

The current services offering at the Zeebrugge terminal reflects Fluxys LNG's market responsiveness, having introduced different large- and small-scale service components in line with evolving market needs (e.g. biomethane liquefaction service).



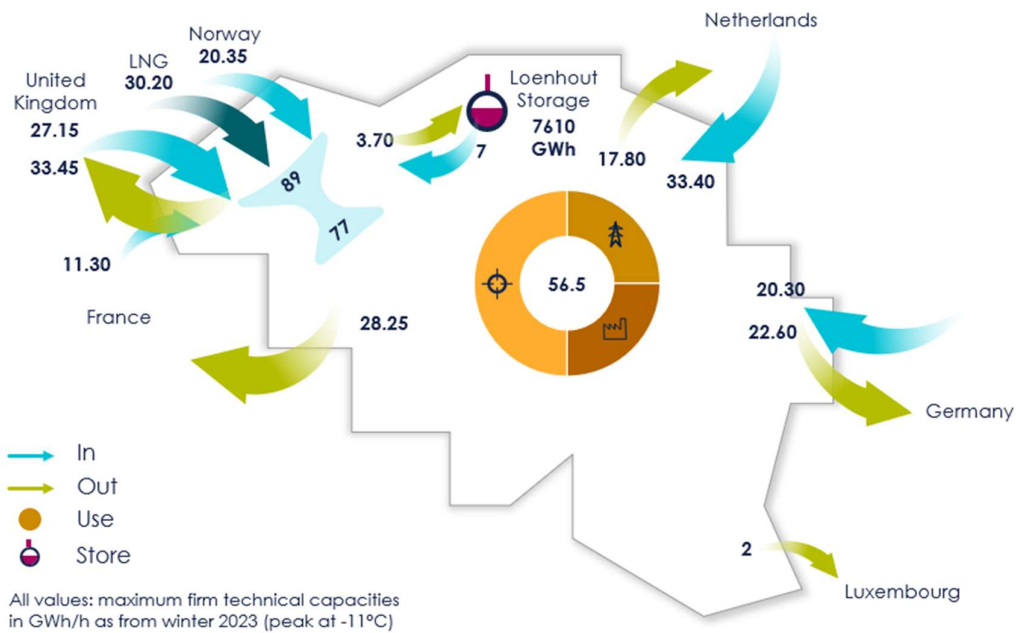
The current service offering in a few key numbers

- 110 berthing slots/year, booked on the primary market through long-term contracts;
- Additional slots booked via auctions on a regular basis throughout the year;
- Transshipment capacity of 107 transshipments (214 ships)/year;
- Cycling storage of 380.000 m³ of LNG;
- Transshipment storage of 180.000 m³ of LNG;
- 1.9 mcm/h of natural gas send-out capacity, increasing to 2.4 mcm/h as from 2024 and 2.6 mcm/h as from 2026;
- 8,000 LNG truck loading slots, increasing up to 10,000 slots until end 2024 and up to 20,000 afterwards;
- Fully digital secondary market Emix platform where clients can offer and/or request Zeebrugge LNG related services in the retail market.

Deep connectivity into the Northwest European market

The Zeebrugge LNG terminal is directly tied into the Belgian gas transmission network and Fluxys Belgium has developed the latter into a highly interconnected system with the larger Northwest European market. Ample capacity is available in the Belgian gas transmission network to move gas from the LNG terminal to the markets surrounding the terminal.

Technical gas capacities in Belgium H-gas (hourly)



Ready for further service expansions

Fluxys LNG is ready to expand its services to meet the market needs for conventional LNG, CNG, bio-LNG and syn-LNG.

Hugely increased West to East natural gas flows in Europe have been compensating for the decline in the historical East to West flows to ensure security of supply. LNG sourcing has proven to be instrumental to support these flow patterns while imports of carbon neutral liquefied biomethane (bio-LNG) and liquefied synthetic methane (syn-LNG) help achieving the decarbonisation targets. As for bio-LNG and syn-LNG, Fluxys LNG offers its expertise and experience in the certification space to accommodate compliance with the applicable regulation.

Compressed natural gas (CNG) shipping is a new supply avenue emerging in the market and Fluxys LNG is open to explore this possibility. We have extensive experience and in-depth knowledge with the associated CNG installations (compressors, heating/cooling powers, storage, ...) to partner in this solution and accommodate at the Zeebrugge terminal the connection between CNG vessels and the Belgian gas grid.

Hydrogen/ammonia (H₂/NH₃) services

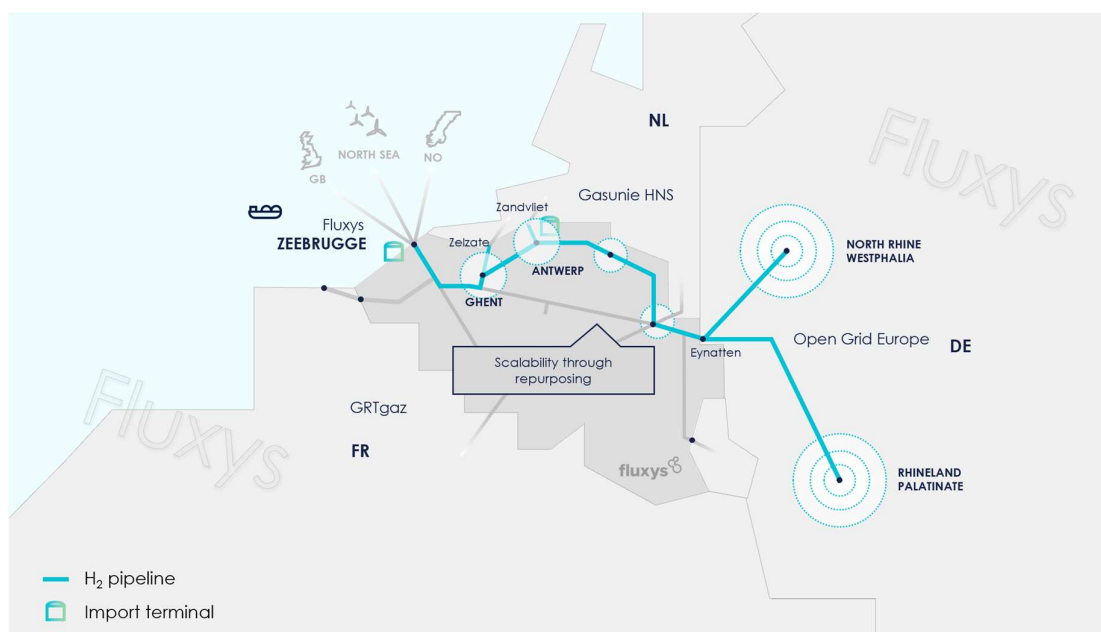
An array of hydrogen/ammonia import and cracking services

Fluxys in its strategy to speed up the energy transition is committed to develop, scale-up and operate multi-molecule infrastructure including facilities to accommodate hydrogen or derivatives imports and onward transmission. In this framework, Fluxys is developing several import infrastructure projects for hydrogen carriers in North-West Europe.

Key among these projects is the extension of the Zeebrugge terminal to reshape & diversify the facility into a hub for large-scale hydrogen/ammonia (H₂/NH₃) imports. Fluxys is looking to develop terminaling import facilities of up to 6 Mtpa of NH₃ and the corresponding NH₃/H₂ cracking capacity, leading to up to 0,8 - 1 Mtpa ~33 TWh/y of H₂ import. The terminaling facilities would provide state-of-the-art infrastructure allowing to unload (and load) at high rate vessels up to Very Large Gas Carriers as well as to connect into to the Belgian and European H₂ pipeline network.

Deep connectivity into the Northwest European hydrogen transmission system

The Zeebrugge terminal is set to directly tie into the Northwest European hydrogen transmission system as Fluxys Belgium Group is preparing the development of a H₂ network connecting Zeebrugge with main H₂ industrial valleys in Belgium, Germany and the Netherlands, in collaboration with the adjacent TSOs.



In particular, Fluxys Belgium Group and Open Grid Europe (OGE) intend to develop a 3.8 GWh/h cross-border capacity in Eynatten. A new built pipeline connection between Zeebrugge and Eynatten is to deliver the molecules to the German border. In the longer run, additional transport capacity to Germany could be unlocked in line with market evolutions by repurposing of one of the two gas lines connecting the Zeebrugge hub with the German market at the Belgian border in Eynatten. Also, Fluxys Hydrogen and Hydrogen Network Services (Gasunie) are working on the development of interconnections in Zelzate and/or Zandvliet.

Through a bundle of services, Fluxys intends to offer to interested parties an end-to-end service from import of NH₃ to delivery of H₂ at demand centres in Belgium or at the Belgian borders.

Anticipating considerable hydrogen demand increase in the mid-term

The envisaged hydrogen/ammonia terminalling services anticipate the considerable mid-term uptake in hydrogen demand expected in line with European decarbonisation targets. The REPowerEU plan to fast forward the green transition sets the target of 10 million tonnes of domestic renewable hydrogen production in Europe and 10 million tonnes of imports by 2030.

The envisaged hydrogen/ammonia terminalling services fully align with the Belgian federal hydrogen strategy targeting Belgium as an import and transit hub for renewable molecules in Europe and aim to make a key contribution to the objective of Port of Antwerp-Bruges to become a green energy and feedstock hub. They also sync in with the roadmap for Belgium as a hydrogen import hub as brought forward by the Belgian Hydrogen Import Coalition.

Request for Market Interest: process overview

Potential interested parties for infrastructure at the Zeebrugge terminal are first invited to fill out our Request for Market Interest: a questionnaire allowing Fluxys to get a clear overview on the market needs. The deadline for filling out this questionnaire is **16 February 2024**.

In a next step, open exchanges will be executed in which first technical orientations will be addressed.

Once the commercial and technical plans have been outlined, for methane services, open seasons could be organized by Fluxys LNG, under CREG regulation, wherein interested parties could participate for booking the related capacities.

For hydrogen/hydrogen derivatives and associated decarbonisation services Fluxys will interact with the different interested parties. Next steps will be further outlined later.

For participating to the Request for Market Interest, participants are kindly requested to fill in the **online questionnaire**. For any other associated inquiries, email can be sent to marketing@fluxys.com

Non-binding request. The Request for Market interest is non-binding: completing the request does not engage your company to any future service of Fluxys.

Non-disclosure agreement. All information you share with Fluxys through the Request for Market Interest will be treated as confidential in accordance with the non-disclosure agreement below. If you wish to formalise this non-disclosure agreement, you can fill out, sign and send the document back to marketing@fluxys.com prior to filling out the Request for Market Interest.