

Products and Journey across the Fluxys Group



Transmission, LNG, and Storage



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Our strategy

En route for a green tomorrow with investments in Belgium, Europe and beyond



Be fit and grow in Belgium and Europe

We optimise our operations in Belgium and Europe while growing our assets selectively in view of the low-carbon future

Be the transporter of the future energy carriers

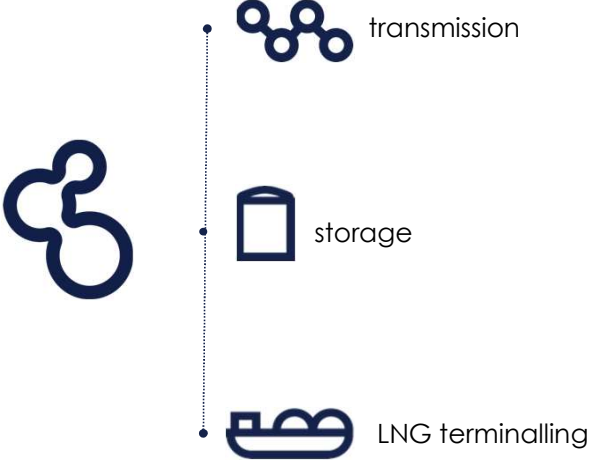
We support biomethane initiatives, explore new technologies and invest in infrastructure to accommodate hydrogen, CO₂ and other molecules for the low-carbon future

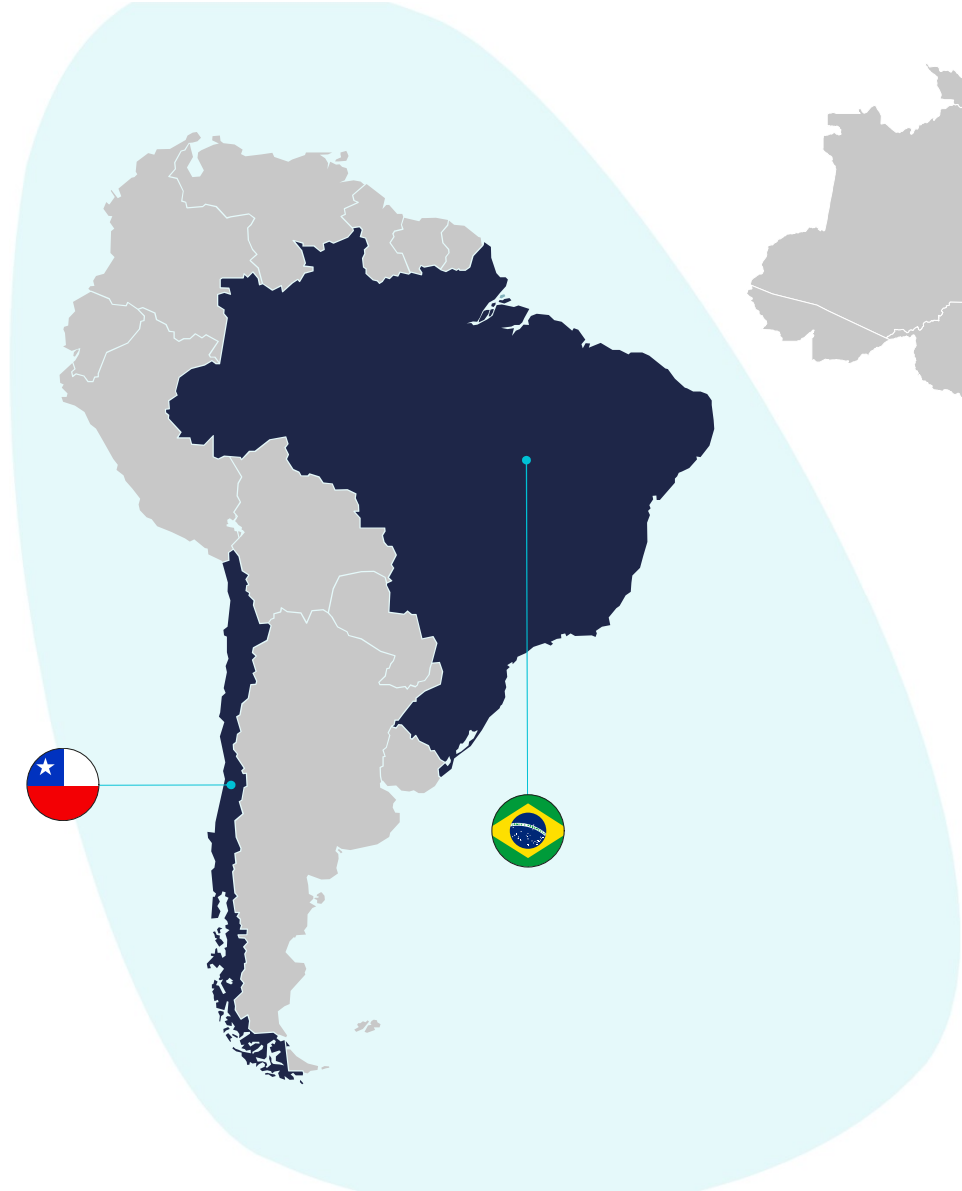
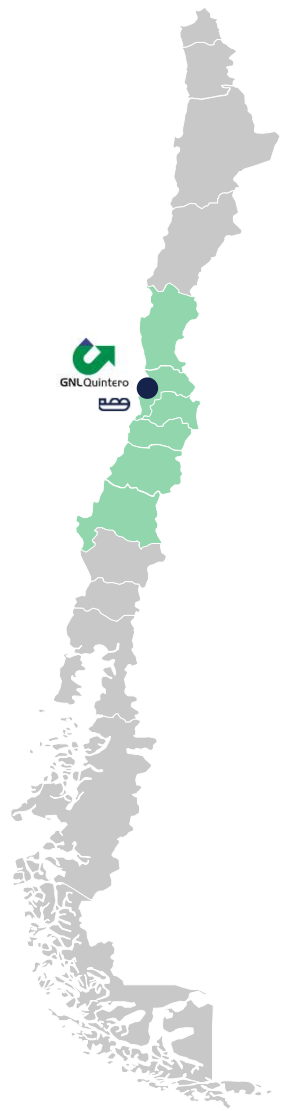
Invest outside Europe

We target infrastructure supporting the energy transition



Overview of Fluxys Group Assets





Solutions provided by the Fluxys Group



LNG to Germany and Italy via Dunkerque LNG or Zeebrugge LNG



LNG to the UK via Dunkerque LNG or Zeebrugge LNG



LNG directly to Germany

- Bring LNG into our LNG terminals, and
 - access Continental Europe through the Fluxys Belgium, Fluxys TENP and FluxSwiss capacity
 - access the NBP and UK market through the Interconnector pipeline



Diverse gas sources to EU and UK

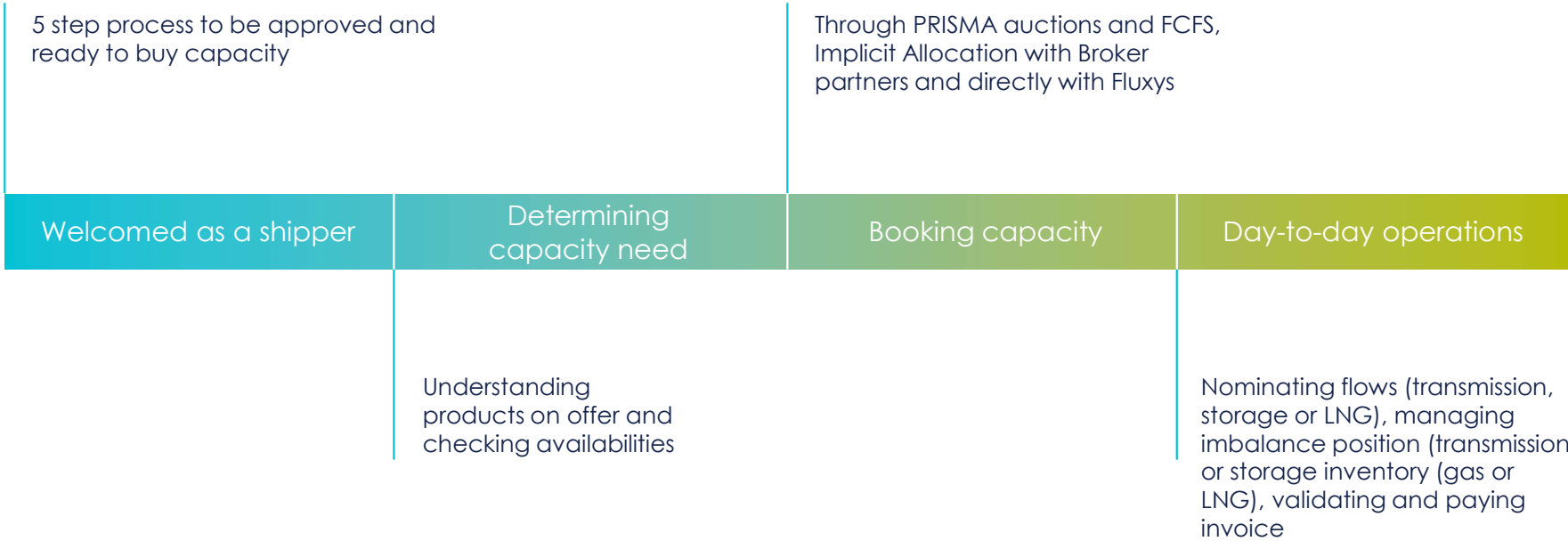


Continental Storage to UK

- Supply Continental Europe and the UK through the Fluxys Group capacity
- Access Continental Storage to meet UK market needs through the Interconnector pipeline and Fluxys Group assets



The shipper journey across the Fluxys Group



5 steps to become a shipper



Follow this 5 step process to become a shipper with any entity of the Fluxys Group:

1. Contact us/register on PRISMA/with Partners¹
2. Provide company and financial info²
3. Accept contractual terms
4. Meet credit requirements
5. Approved as a shipper³

¹ Balancing Partners for Fluxys BE, Fluxys TENP and Fluxys DE, Implicit Allocation Partners for INT

² Provide signed Confidentiality Agreement for Dunkerque LNG

³ Accepted on PRISMA if applicable, fully signed contract, shipper code issued, technical readiness completed



Understand the products on offer across the Group: Transmission



			INT	Fluxys BE	Fluxys DE	Fluxys TENP	FluxSwiss
Firm	Entry/Exit	Firm under all circumstances	●	●	-	● (FZK)	● (entry+exit)
	Optimised	Firm products optimised for dedicated routes	-	● (OCUC)	● (DZK)	● (DZK)	● -
	Conditional	Firm except under certain circumstances	-	● (Backhaul)	-	● (bFZK)	● (Product with waive days)
Interruptible	Entry/Exit	Could be interrupted due to physical limits	●	●	● (uFZK)	● (uFZK)	● (entry+exit)



Understand the products on offer across the Group: LNG

		Welcomed as a shipper	Determining capacity need	Booking capacity	Day to day operations
		Dunkerque LNG		Zeebrugge LNG	
Large-scale solutions	Unload, store & regas LNG	●	●		
	Reload LNG	●	●		
	Transship LNG				●
Small-scale solutions	Small-scale ship loading	●			●
	Small-scale ship unloading				●
	Truck loading		●		●
	(BIO) LNG Liquefaction				●



Understand the products on offer across the Group: Storage



Loenhout Storage	
Yearly Products	SBU - Standard Bundled Unit volume + injection + send-out (in pre-defined quantity) ●
	Additional Yearly Product* Priority Booster, volume, injection, send-out ●
Short-term products*	Volume rights ●
	Injection rights – Priority Booster ●
	Send-out rights – Priority Booster ●

* If capacity remains available after the sale of SBUs



Book capacity



- Range of booking methods
 - PRISMA* auction & FCFS; Implicit Allocation with Broker partners for INT
 - buy directly from FluxSwiss, Dunkerque LNG and Zeebrugge LNG
 - storage products available through FCFS, auctions and subscription windows from Fluxys Belgium
- Standard transmission products available across the Fluxys Group
 - Gas Year, Quarter, Month, Day-Ahead, Within-Day
- Non-standard transmission products available
 - from INT, FluxSwiss and from Fluxys BE in the Zeebrugge area
- LNG terminalling available: regulated (Zeebrugge) and exempted (Dunkerque)
 - Find all available LNG capacities on our [website](#)

* PRISMA is the Central European Capacity Platform for booking capacity. If PRISMA is unavailable then overnomination is the back-up procedure used across the Fluxys Group to allow Shippers to book transmission capacity



Using capacity

Welcomed as a shipper

Determining capacity need

Booking capacity

Day to day operations

- Monitor your capacity portfolio and nominate flows
 - using standard Fluxys-designed Electronic Data Platform across the Group
 - available for transmission, storage and LNG terminalling services
- Manage your imbalance position or your storage inventory
 - daily balancing with within-day tolerances for Fluxys BE, Fluxys TENP* and Fluxys DE*
 - In = out on an hourly basis for INT and FluxSwiss
 - manage your LNG inventory at Zeebrugge LNG or Dunkerque LNG and your gas-in-store at Loenhout
- Validate and pay your invoice
 - capacity charges plus commodity/variable charges where applicable
- Find all the Terms and Conditions on our website (for regulated services)

Our commercial teams are available to support you at any stage

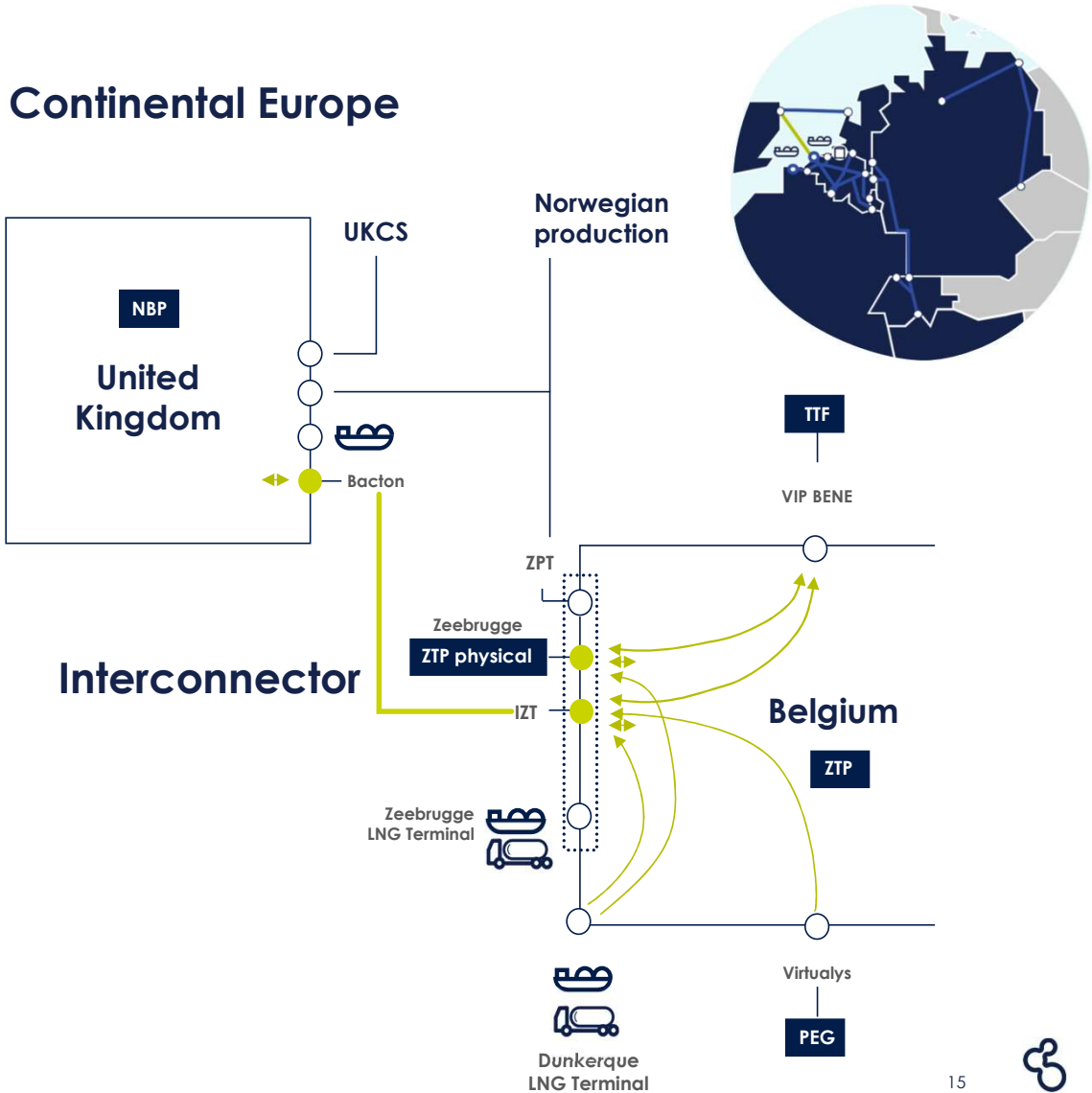
* With Trading Hub Europe as market area operator in Germany



Interconnector: connecting the UK to Continental Europe

what we offer / who are we

- **Physical connection between NBP and ZTPP/ZTP**. Allowing the UK to access continental storage and connecting Zeebrugge LNG and Dunkerque LNG to the NBP via Fluxys Belgium
- **Bi-directional pipeline** between Bacton (UK) and Zeebrugge (Belgium) allows transit UK-BE of 20 bcm/y or BE-UK of 25 bcm/y
- Capable of changing physical flow direction several times within each day in function of market signals
- Sign up to be ready to buy capacity on the primary or secondary market (alongside 39 shippers)



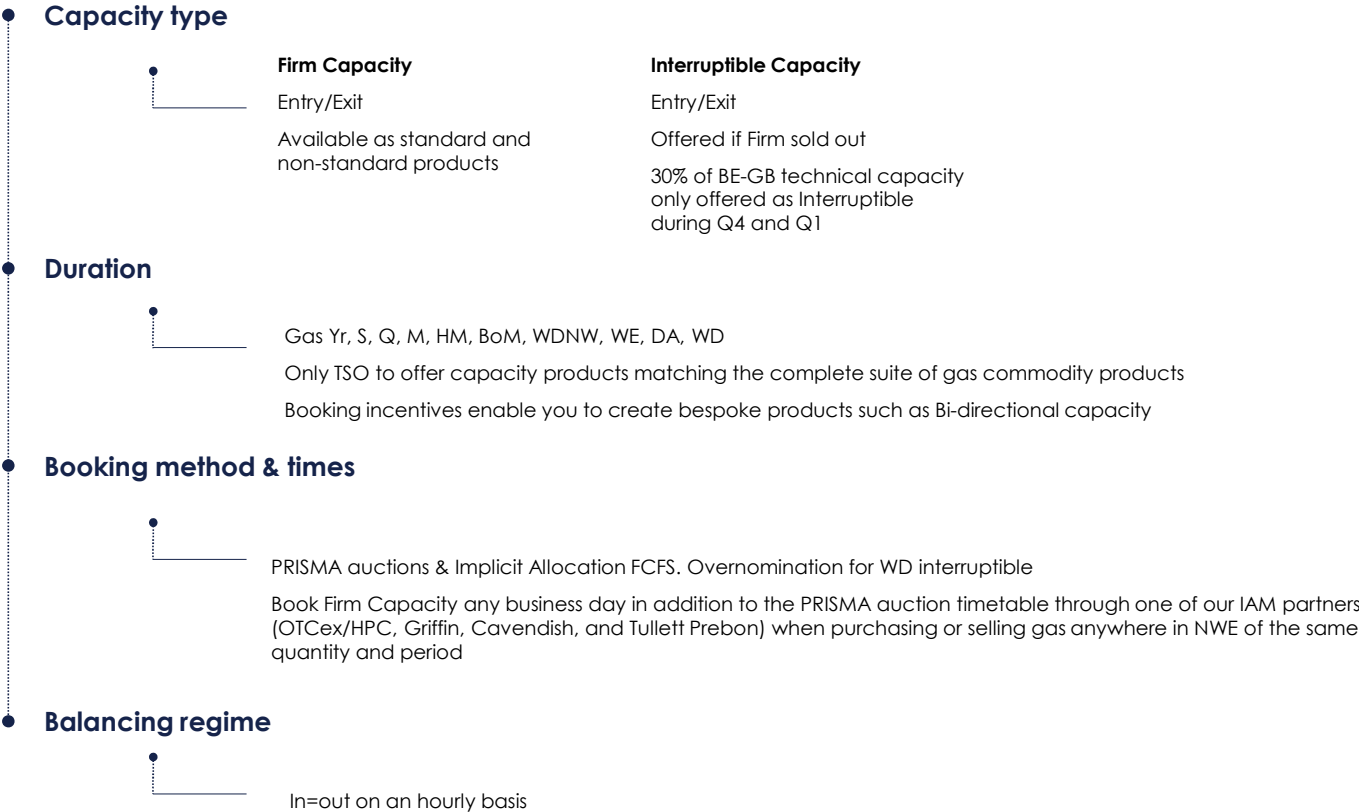
Interconnector: determining capacity need

Key contacts:

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charlotte.williams@interconnector.com

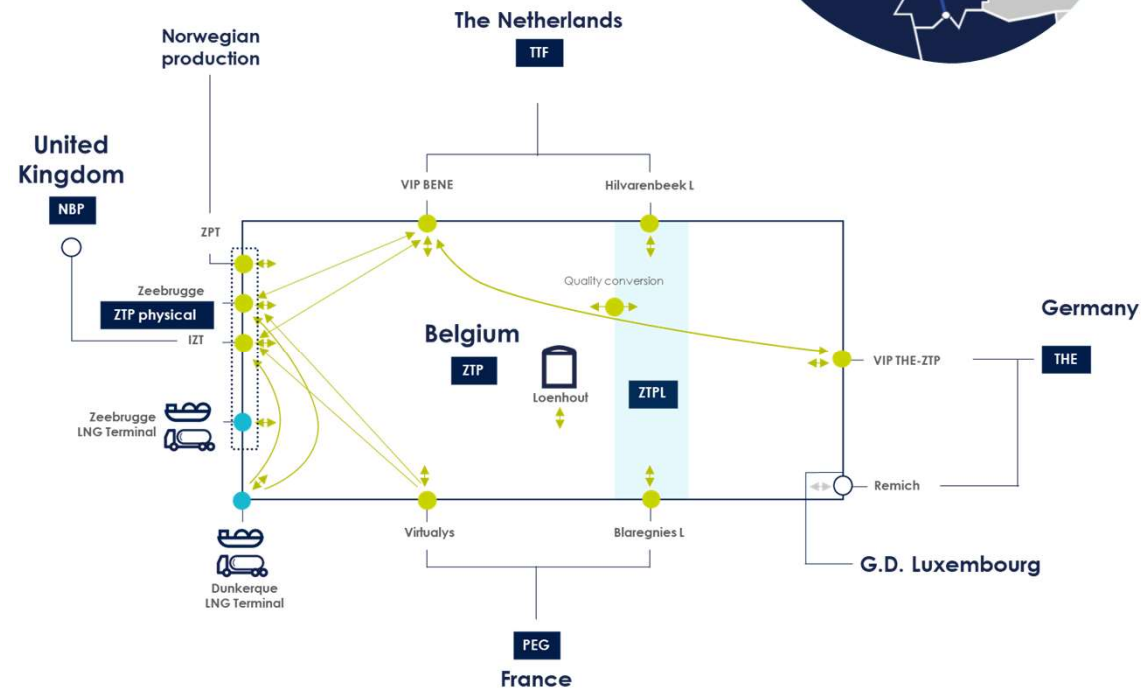
Based in London, UK



Fluxys Belgium: crossroads for cross-border flows

what we offer / who are we

- **Transit to/from UK, France, Germany, The Netherlands, LNG and Norwegian import**, access storage, trade at ZTP physical or ZTP, supply customers in Belgium and Luxembourg
- **121 bcm/y entry capacity, 80 bcm/y exit capacity** connecting Europe as well as 17 bcm/y Belgian market
- 50% public distribution, 25% power generation, 25% industrial customers
 - made up of 12 bcm/y H gas and 5 bcm/y of L gas
- **Zeebrugge LNG**, direct access from **Dunkerque LNG**, and **Loenhout underground storage**
- Sign up to be ready to buy capacity on the primary or secondary market (alongside 100+ shippers)



10% reduction on Fluxys Belgium's transmission tariffs effective 1 July 2022!



Fluxys Belgium: determining capacity need

Key contacts:
info.transport@fluxys.com
 Based in Brussels, Belgium



	Firm Capacity	Optimised Capacity	Conditional Capacity	Interruptible Capacity
Capacity type	Entry/Exit Book any entry point or any exit point independently. Firm access to or from ZTP VTP. Use Cross-border delivery service to flow directly from Dunkerque LNG to ZTP	Shorthaul (OCUC), Wheeling, Zeeplatform Cheap Firm point to point balanced flow. Convert Firm Entry and Exit Capacity within 15 days of purchase via PRISMA for OCUC or Wheeling. Sign up for Zeeplatform access for a monthly fee to enable unlimited Wheeling in the Zeebrugge area	Backhaul Usable as long as there is sufficient forward flow at the interconnection point	Entry/Exit Offered if Firm sold out
Duration	GY, Q, M, DA, WD Plus non-standard durations for Zeebrugge area points (except IZT and Dunkerque LNG)			
Booking method & times	PRISMA auctions, PRISMA FCFS and overnomination for WD interruptible Capacity offered according to PRISMA auction timetable. Points in the Zeebrugge area offered FCFS on PRISMA as well as Domestic Exit Points			
Balancing regime	Daily balancing with within-day market tolerances (managed by Balansys from 1st June 2020)			

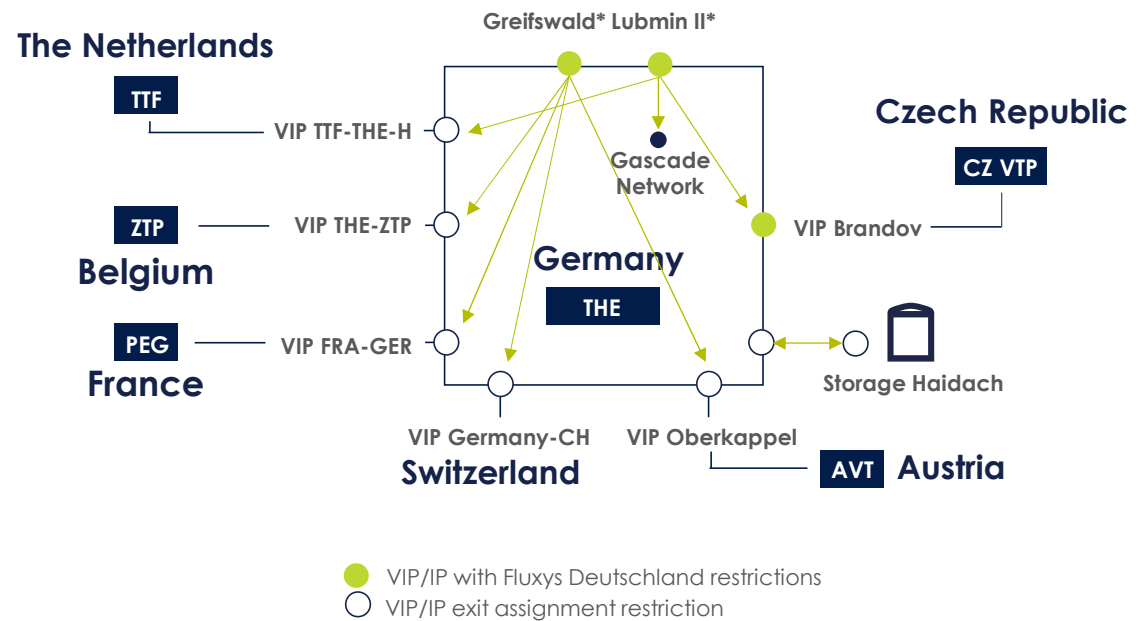


Fluxys Deutschland: contributing to Security of Supply in Germany and beyond



what we offer / who are we

- **Connecting production with Germany and neighbouring countries**, esp. to Czech Republic, access storage, trade at THE VTP
- **NEL pipeline** (approx. 440km) connects storage, THE VTP, and other internal connection points, i.e. VIP THE-ZTP and VIP Germany-CH
- **EUGAL pipeline** connects to THE VTP and internal German connection points, but also to Czech Republic (EUGAL Line 1 Lubmin II-Deutschneudorf approx. 480km and EUGAL Line 2 Lubmin II-Weisslack approx. 329km)
- Sign up to be ready to buy capacity on the primary or secondary market



Fluxys Deutschland: determining capacity need

Key contacts:
friedrich.rosenstock@fluxys.com
daniel.weber@fluxys.com
Based in Düsseldorf, Germany



Capacity type



Optimised Capacity
DZK
Firm for the balanced part of entry and exit nominations. Any additional unbalanced part of nominations has interruptible access to the THE VTP

Interruptible Capacity
uFZK Entry/Exit
Offered in case firm capacity is sold out (DA always on offer)

Duration



GY, Q, M, DA, WD

Booking method & times



PRISMA auctions and overnomination for WD interruptible
Capacity offered according to PRISMA auction timetable

Balancing regime



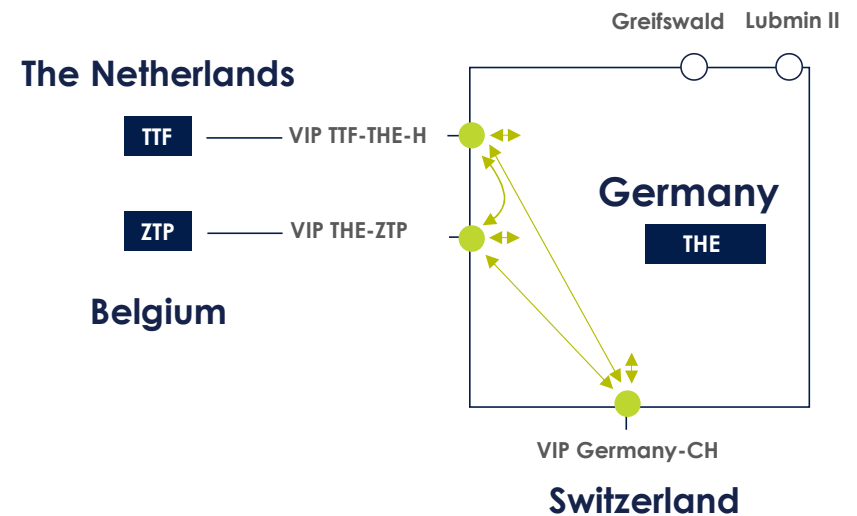
Daily balancing with hourly tolerance per Shipper managed by THE
Shipper needs to have a balancing group with THE to be able to book capacity with Fluxys Deutschland



Fluxys TENP: connecting European Hubs

what we offer / who are we

- **Connecting the German THE market area with Belgium, the Netherlands, Switzerland, and onward to Italy.**
Enabling access to full THE market area with possibilities for supplying customers & storage
- **TENP pipeline system** of 1 010 km, entry and exit at Belgium, Dutch and Swiss borders allow North-South or South-North flow through Switzerland
- Sign up to buy capacity on the primary or secondary market (alongside 90+ shippers)



○ VIP/IP Fluxys Deutschland



Fluxys TENP: determining capacity need

Key contacts:

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frederick.pfeiffer@fluxys.com
 Based in Düsseldorf, Germany

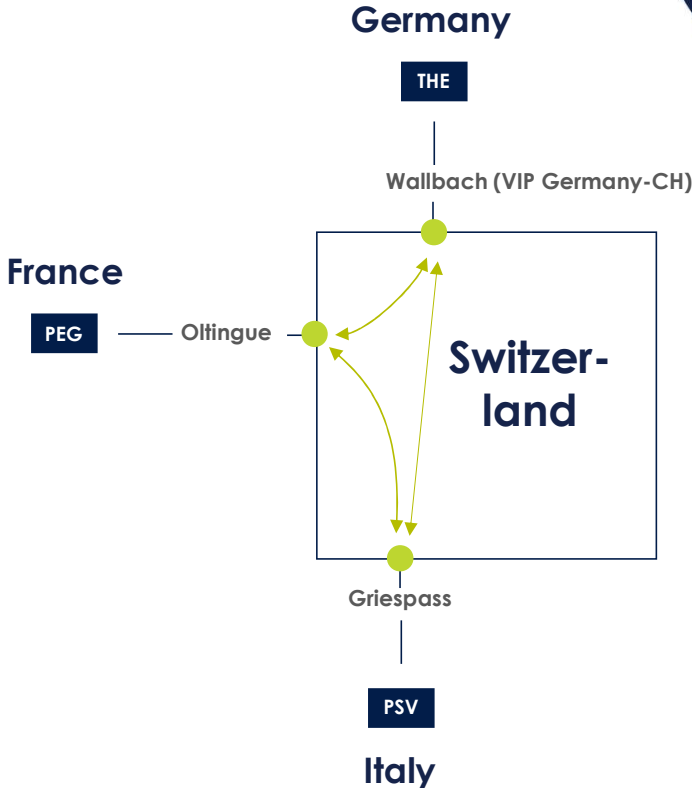


FluxSwiss: connecting the German, French & Italian markets



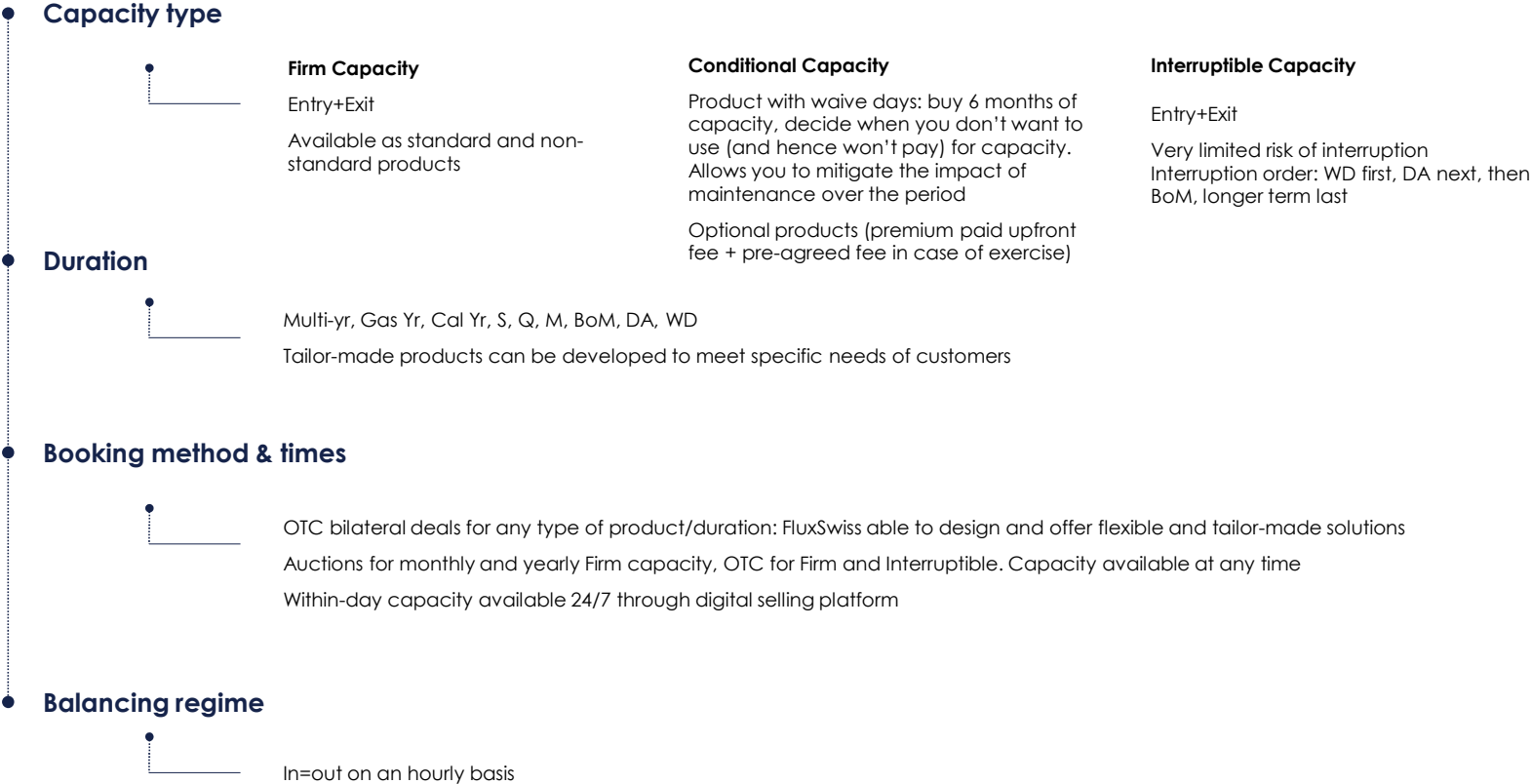
what we offer / who are we

- **Transit to/from France, Germany and Italy**
- **Transitgas pipeline** allows flow North-South and South-North
- Sign up to be ready to buy capacity on the primary or secondary market (alongside ~50 shippers)



FluxSwiss: determining capacity need

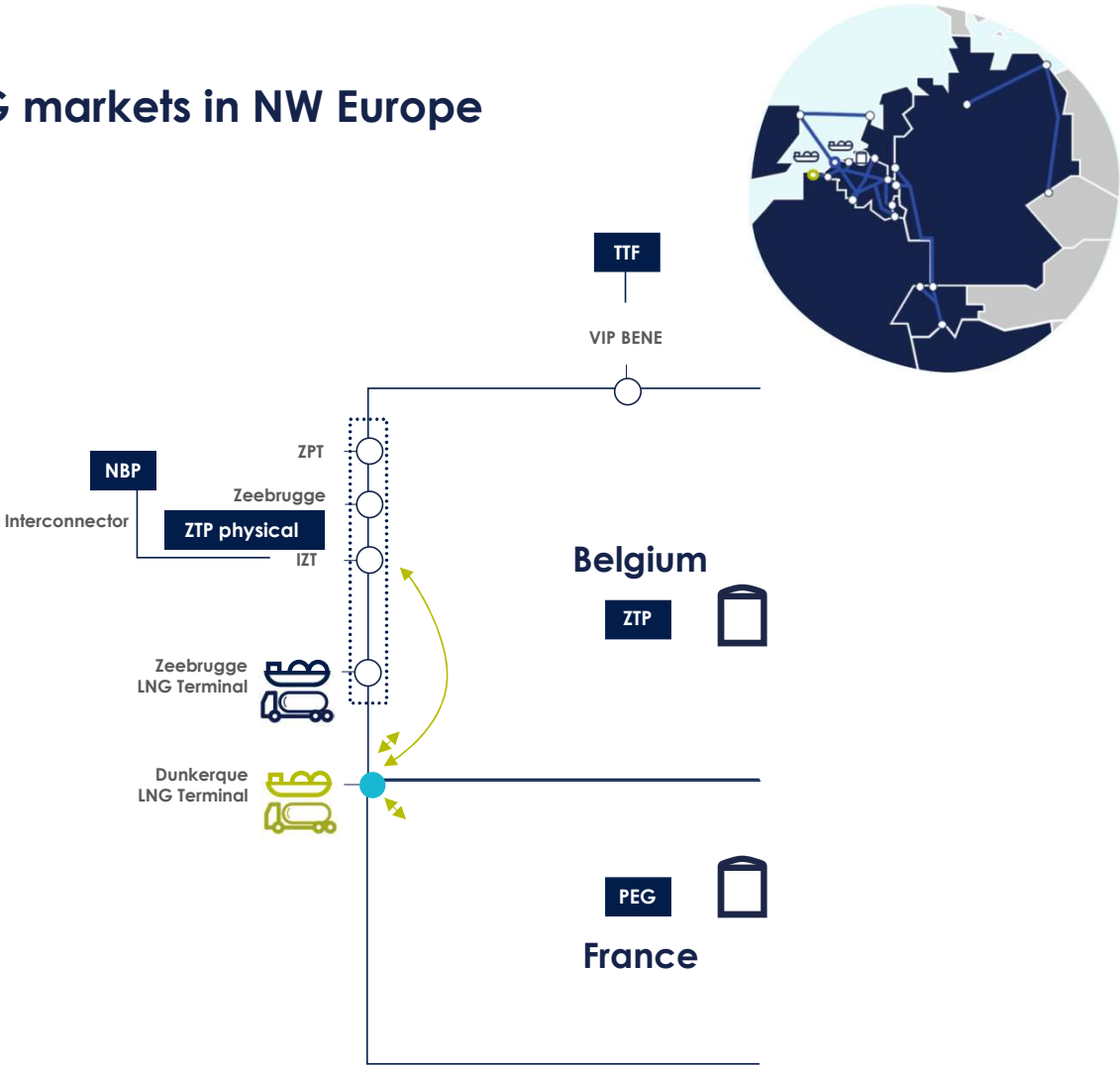
Key contacts:
luca.fomiatti@fluxswiss.com
raoul.raffagli@fluxswiss.com
 Based in Paradiso, Switzerland



Dunkerque LNG: Access gas and LNG markets in NW Europe

what we offer / who are we

- Direct access to France and Belgium
- Ability to unload LNG carriers with capacities between 5,000 and 267,000 m³
- Deep water port and 570,000 m³ storage (excl min inventory)
- Contact us to buy capacity on the primary or secondary market



Dunkerque LNG: determining capacity need

Key contacts:

commercial@dunkerquelng.com

Based in Paris, France



● **Large-scale solutions**

● **Unload, Store & Regas**
Berthing, storage and send out rights with inventory and send out managed entirely by the shipper within the limits of the rights allocated. Additional storage and send out available as add-ons
Ship unloading rate up to 14,000m3/h

● **Reload LNG**
Berthing rights can be used to reload large-scale ships.
Reloading rate up to 8,800m3/h

● **Small-scale solutions**

● **Small-scale ship loading**

● **Truck loading**
3,000 slots per year. Each loading slot provides max. flexibility (40m3 loading time within a 90 minutes time window), scheduling via online platform

● **Booking method**

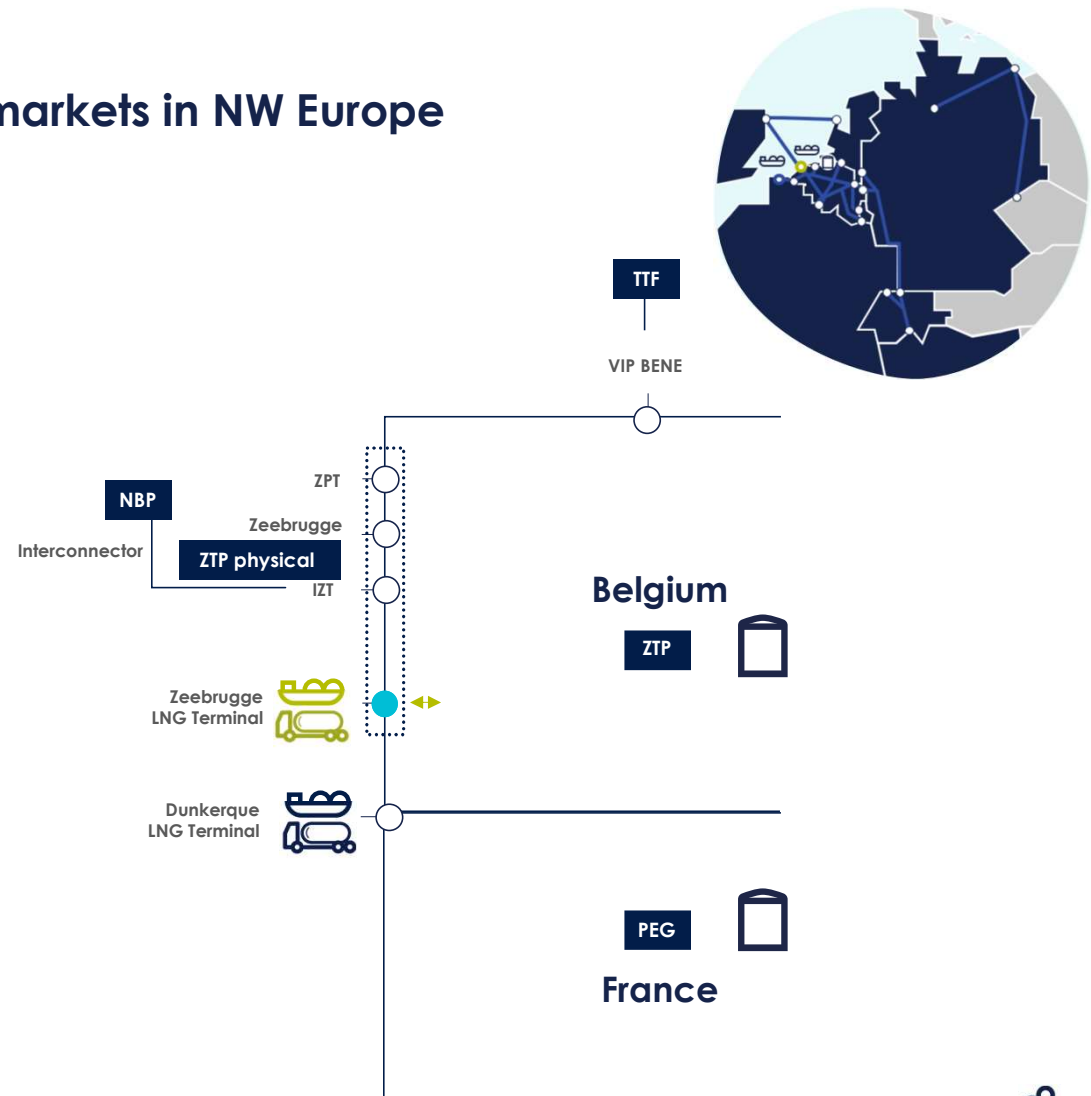
● Open Season for long-term capacity, FCFS for short-term capacity
Spot slots and UIOLI slots published on fluxys.com and the Dunkerque LNG EBB. Subscribe to alerts announcing unloading opportunities



Zeebrugge LNG: Access gas and LNG markets in NW Europe

what we offer / who are we

- **Gateway to European gas markets**
- **Competitive** tariffs and **small-scale services**
- Ability to unload LNG carriers with capacities between **1,000 and 267,000 m³**
- Simultaneous unloading possible at **two jetties**
- Convert gas with a biomethane certificate to LNG with a **BioLNG** certificate
- Create LNG by counter-nominating your gas on the regasified flows
- Sign up to our contractual framework for free to buy capacity on the primary or secondary market



Zeebrugge LNG: determining capacity need

Key contacts:

Info.LNG@fluxys.com

Based in Brussels, Belgium



Large-scale solutions

Unload, Store & Regas
Standard bundle: berth, store and send out 140,000m³ of LNG over 10 days. Additional storage and regas available as add-ons
Ship unloading rate 12,000m³/h

Reload LNG
Additional berthing rights to reload large-scale ships. Reloading rate 6,000m³/h for ships of 30,000m³ or larger.

Transship LNG
Two ships simultaneously berthed at the jetties. Transshipment rate 10,000 m³/h

Small-scale solutions

Small-scale ship loading and unloading
Additional berthing rights for reloading and loading small-scale ships.

Liquefaction and BioLNG
Convert gas with a biomethane certificate to LNG with a **BioLNG** certificate. Create LNG by counter nominating your gas on the regasified flows.

Truck loading
8,000 slots per year, 1.5 hr slot provides flexibility (40m³ loading time approx. 45 mins), scheduling via online platform

Booking method

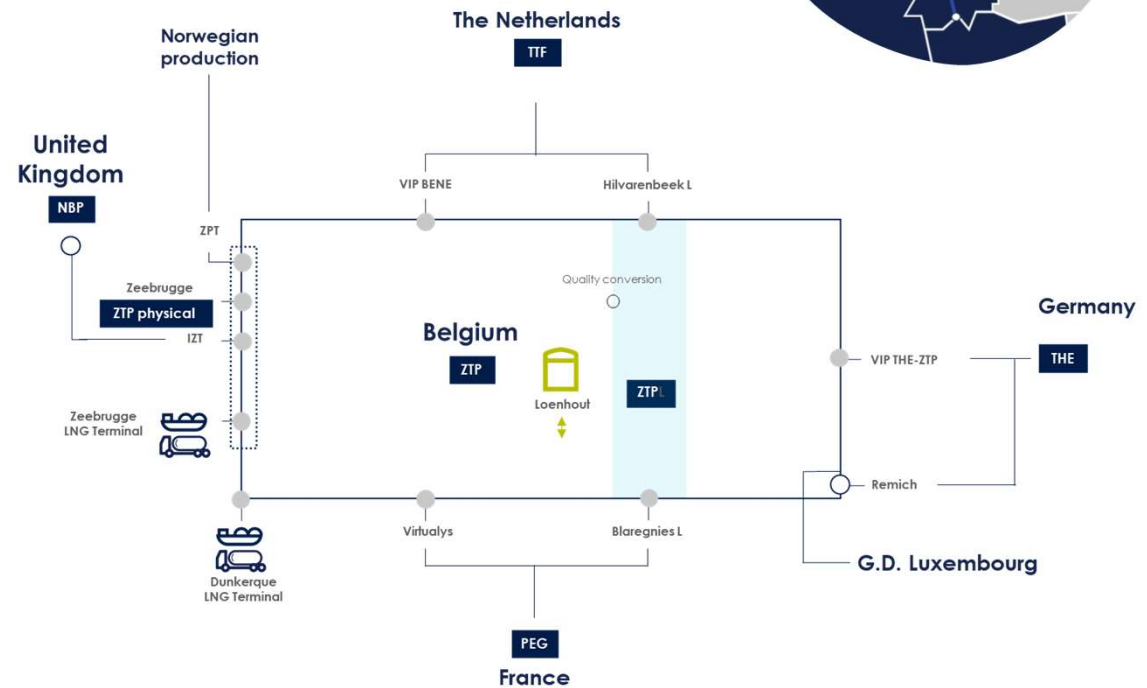
Subscription window for long-term capacity, FCFS and Auctions for short-term capacity
Spot slots and UIOLI slots published on Fluxys.com. Subscribe to alerts announcing unloading opportunities



Loenhout Storage: flexible storage options

what we offer / who are we

- Use our different storage services to **increase your flexibility within the Belgian market and in Europe**
- Underground storage with max physical volume of **9 TWh** (=770Mm³); max injection capacity (inj): 325k m³/h and max send out capacity (wd): 625k m³/h
- Unique location close to major hubs provides flexibility for Belgium and European markets



Loenhout Storage : determining capacity need

Key contacts:
Info.storage@fluxys.com
Based in Brussels, Belgium



Storage solutions

SBU (Standard Bundled Unit)
Yearly product starting 1 April
Fixed firm bundle:
132 inj /84 wd days

- Volume: 30.44 MWh
- Injection: 0.011 MWh/h
- Send-out: 0.022 MWh/h

Priority Booster
Get priority on the available unused inj/wd capacity on a daily basis with a maximum of the subscribed amount for that period

Booking method

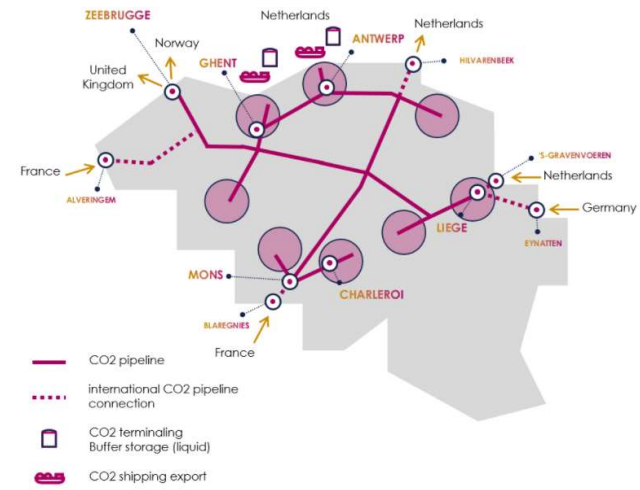
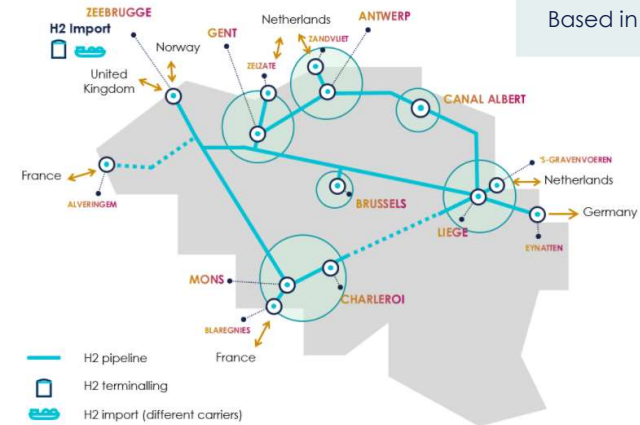
1. **Subscription Window** for **Long Terms SBUs**: 2 storage years or more
2. **Auction** and **FCFS** for **Short term SBUs**: 1 storage year
3. **Auction** and **FCFS** for **Priority Booster Capacity**: Seasonal, Quarterly, Monthly, BOM



Shaping the hydrogen and carbon infrastructure for Belgium

Key contacts:
info.hydrogen-carbon-transport@fluxys.com
 Based in Brussels, Belgium

- Fluxys is **ready to build the gas network of the future**, by progressively reconfiguring the natural gas network into complementary systems for the transport of **hydrogen, carbon and methane**.
- **Progressive development** in close **collaboration** with industry, market players and neighbouring operators:
 - Short-term development enabling decarbonisation starting from industrial clusters and followed by inter-cluster connections and interconnections with adjacent networks
 - Mix of repurposed natural gas pipelines and new infrastructure
 - Zeebrugge as energy entry gate: enable green renewable energy upscaling
 - Enable economy of scale of carbon capture and usage/storage activities through CO₂ networks and CO₂ exit routes



Hanseatic Energy Hub “in a nutshell”

Direct access to the largest gas market in Europe where demand will grow and liquidity will increase.

Key contacts:

sales@hanseatic-energy-hub.de

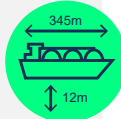
Based in Hamburg, Germany



Good accessibility



1 jetty allowing tankers up to **Q-Max size** and a dedicated small-scale jetty



Proximity to Hamburg port means ideal location for **bunkering services**.

Also offered: **truck-loading & rail-loading**



High flexibility



Up to 13,3 bcm/a capacity and 21,7 GW peak capacity

Large-scale reloading possible

Short connection distance to German gas transport grid with access to key customers



Future-proof concept



Existing industrial site and port location

Zero-emissions terminal by using heat from nearby industrial site of Dow

Ready for future decarbonised energy solutions

Strong and **dedicated partners** with long-term vision



Summary of Key Contacts

- **Interconnector**
 - Sarah Cooper (sarah.cooper@interconnector.com)
 - Charlotte Williams (charlotte.williams@interconnector.com)
- **Fluxys Belgium** (Info.transport@fluxys.com)
- **Fluxys Deutschland**
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- **Zeebrugge LNG** (info.LNG@fluxys.com)
- **Loenhout Storage** (info.storage@fluxys.com)
- **Fluxys H2CO2** (info.hydrogen-carbon-transport@fluxys.com)
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shaping together
a bright energy
future