

# Belgium - Hydrogen import and transit hub



Flux50 Smart Energy Academy

15 November 2023

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# Agenda



1. **Fluxys in a nutshell**
2. Energy transition
3. Hydrogen infrastructure



# Who we are?

## 4 facts about Fluxys, a midstream infrastructure company not involved in energy production or supply

- 1 Fully independent energy infrastructure partner headquartered in Belgium
- 2 Strong European presence with associated companies across Europe and entities in LatAm
- 3 A growing group of 1 300 employees
- 4 Purpose-driven company committed to building a greener energy future for the generations to come



shaping together a bright energy future

Terminalling



380 TWh/y of LNG regasification capacity with terminals in Belgium, France, Greece & Chile

Transmission



24 000 km gas pipelines in operation

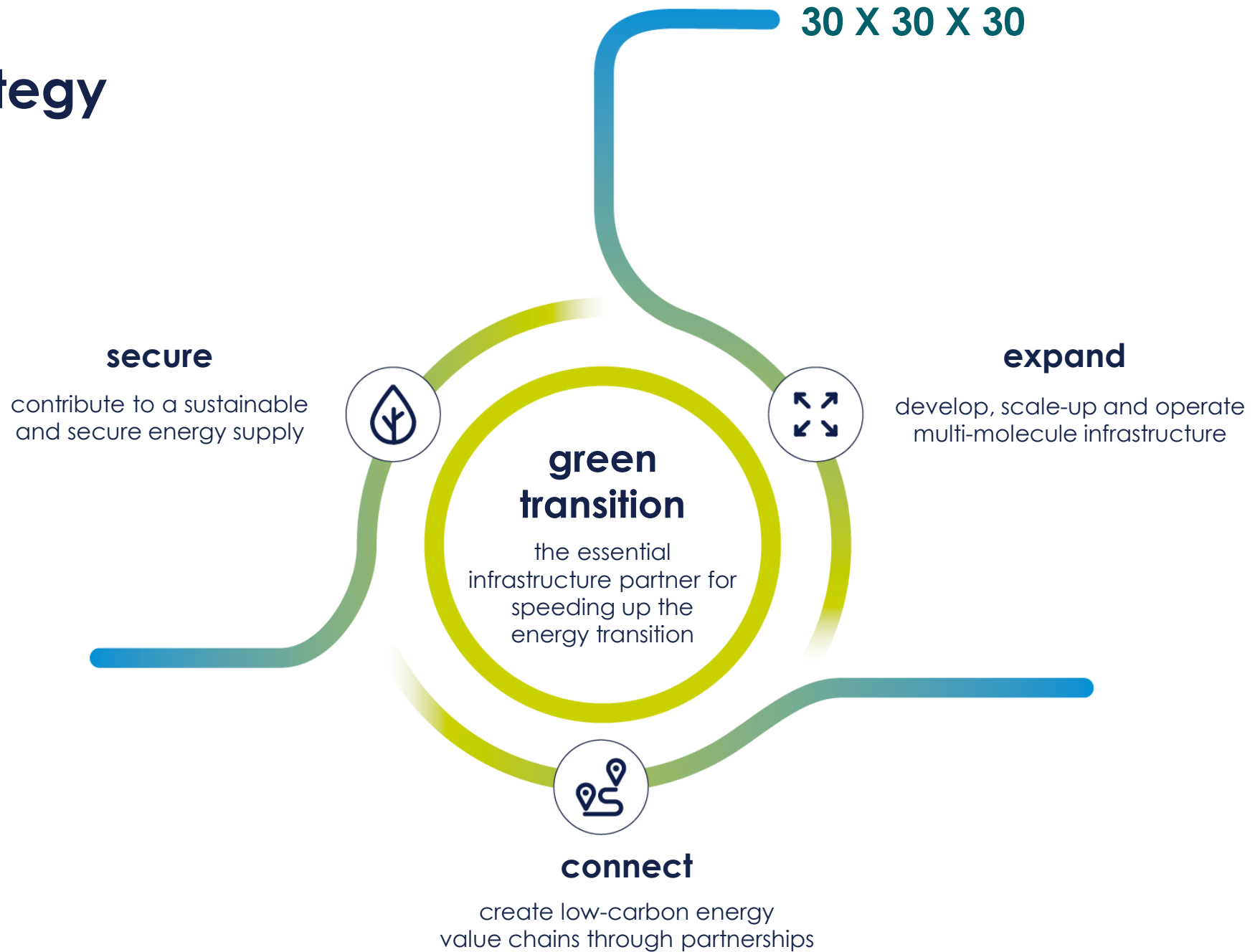
Storage



7610 GWh underground gas storage in Belgium



# Our strategy



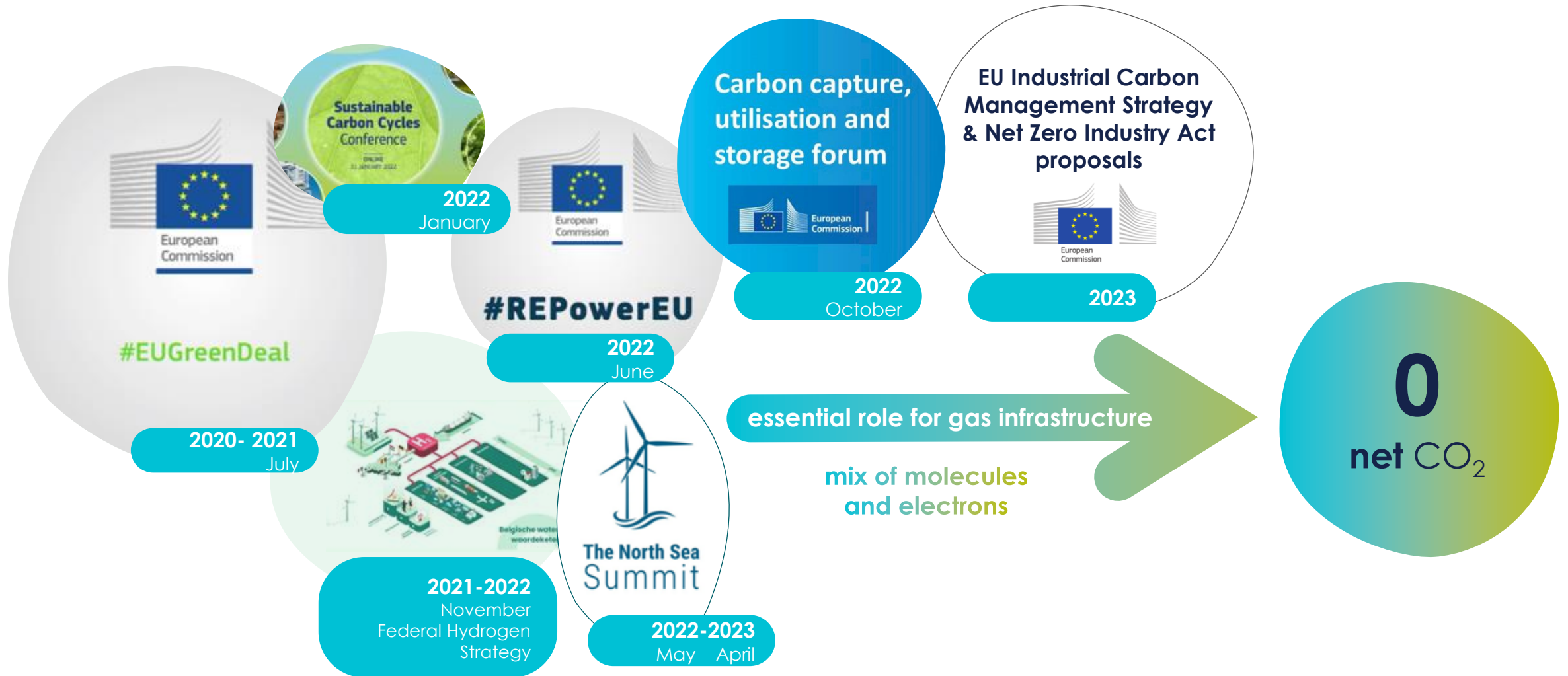
# Agenda



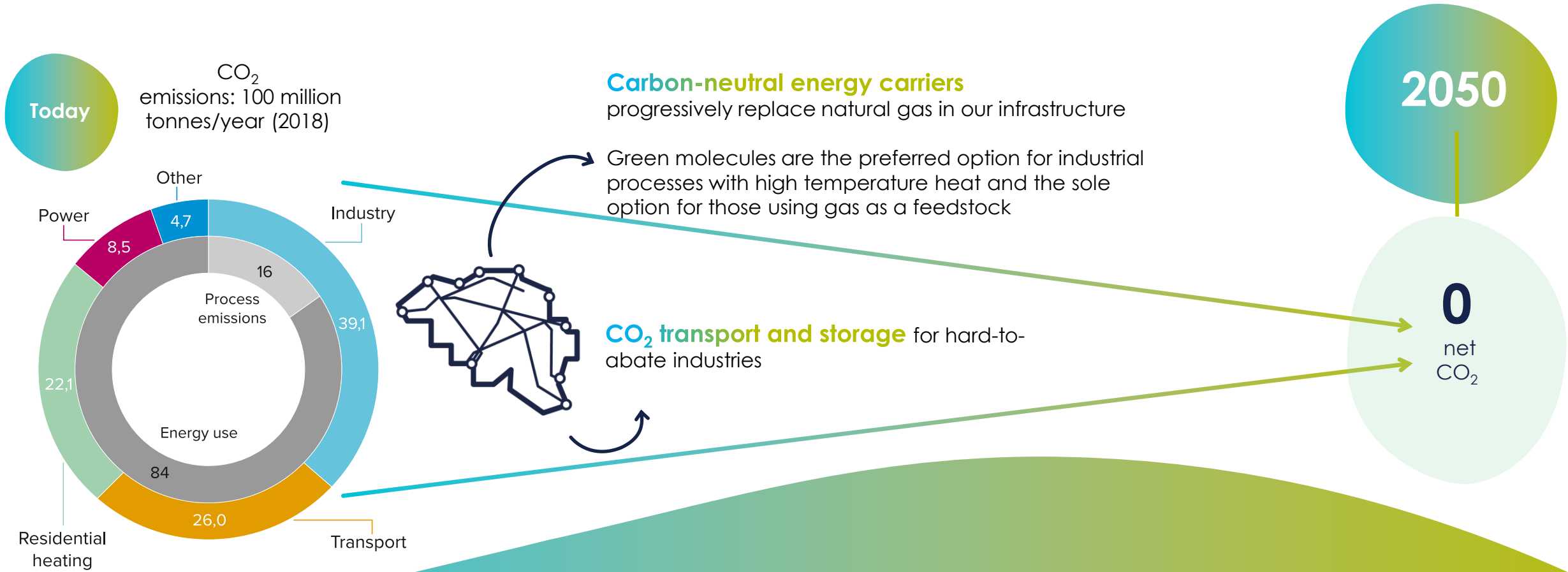
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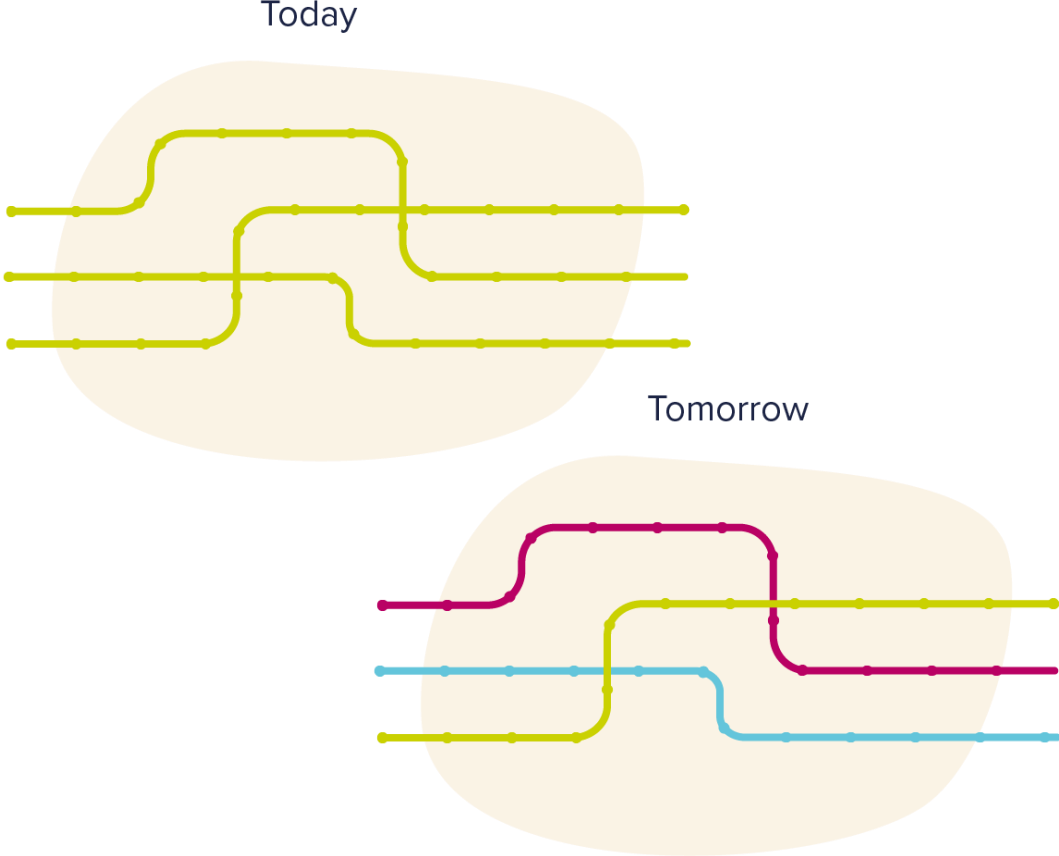
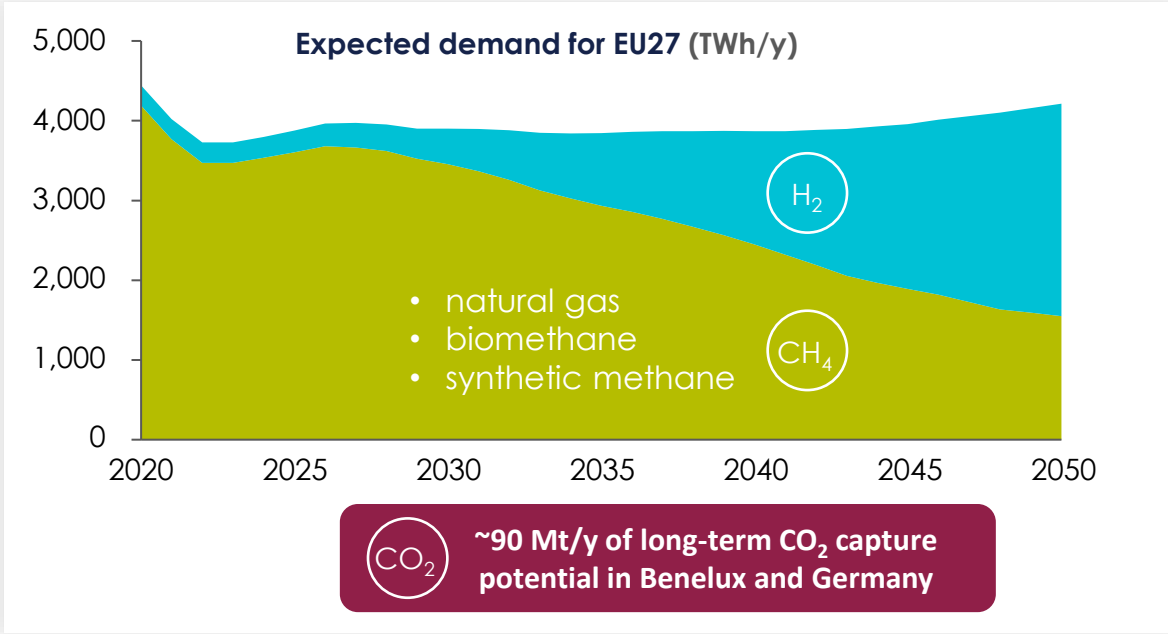
# Fluxys fully supports the European Green Deal and major policy steps to bring net CO<sub>2</sub> emissions to zero by 2050



# With our infrastructure we can contribute to the decarbonisation



# Fluxys in full swing to develop and re-use our infrastructure into a multi-molecule system supporting industries' decarbonisation path



CH<sub>4</sub>    H<sub>2</sub>    CO<sub>2</sub>

Sources for expected demand: S&P Global (IHS) base case, ETS database, Fluxys analysis





# Almost 100% of pipelines repurposable



Plug and play  
Pressure reduction



Valve replacement  
Rebuild compressor units  
Pressure configuration  
pipe per pipe

A yellow rectangular sign with black text 'V76<sup>A</sup>' mounted on an orange post. The background of the slide is a photograph of a rural landscape with green fields, trees, and buildings under a hazy sky. A large, semi-transparent grey shape is overlaid on the top half of the image, framing the text and icons.

V76<sup>A</sup>

# Agenda



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# H<sub>2</sub>



# Belgian Hydrogen Strategy has four key pillars

Hydrogen anchored within an overall Federal strategy to enable 100% renewable, competitive and secured supply, with an adequate mix of energy carriers



## Belgium as import & transit hub



**Entry gate** into Western EU market, leveraging central position, with **existing ports and interconnected transport grid**

## Belgium as leader in H2 technologies



Pioneer position and strengthened innovation from private companies & public research institutions, supported by new federal funding mechanisms

## A robust H2 market



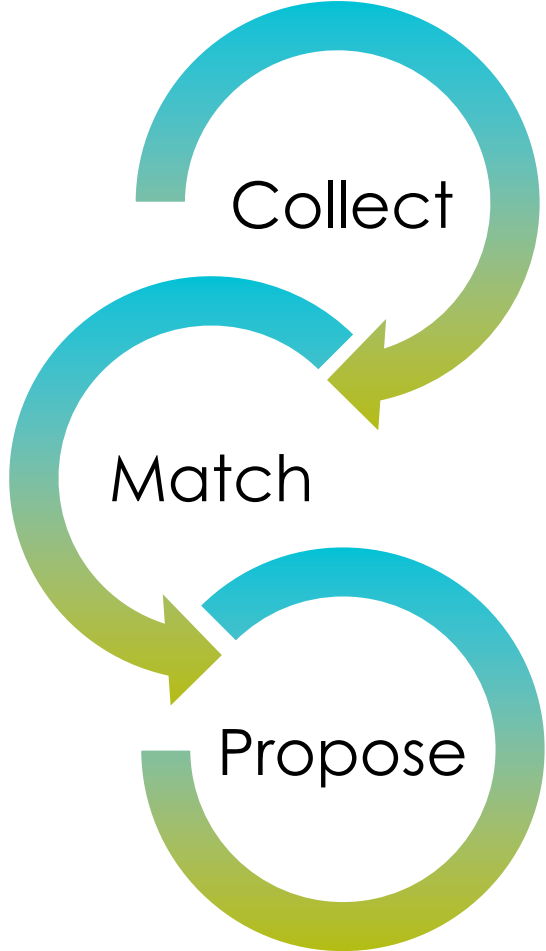
Unified, competitive H2 market, with healthy deployment of a safe, reliable, dedicated and **open-access H2 backbone.**

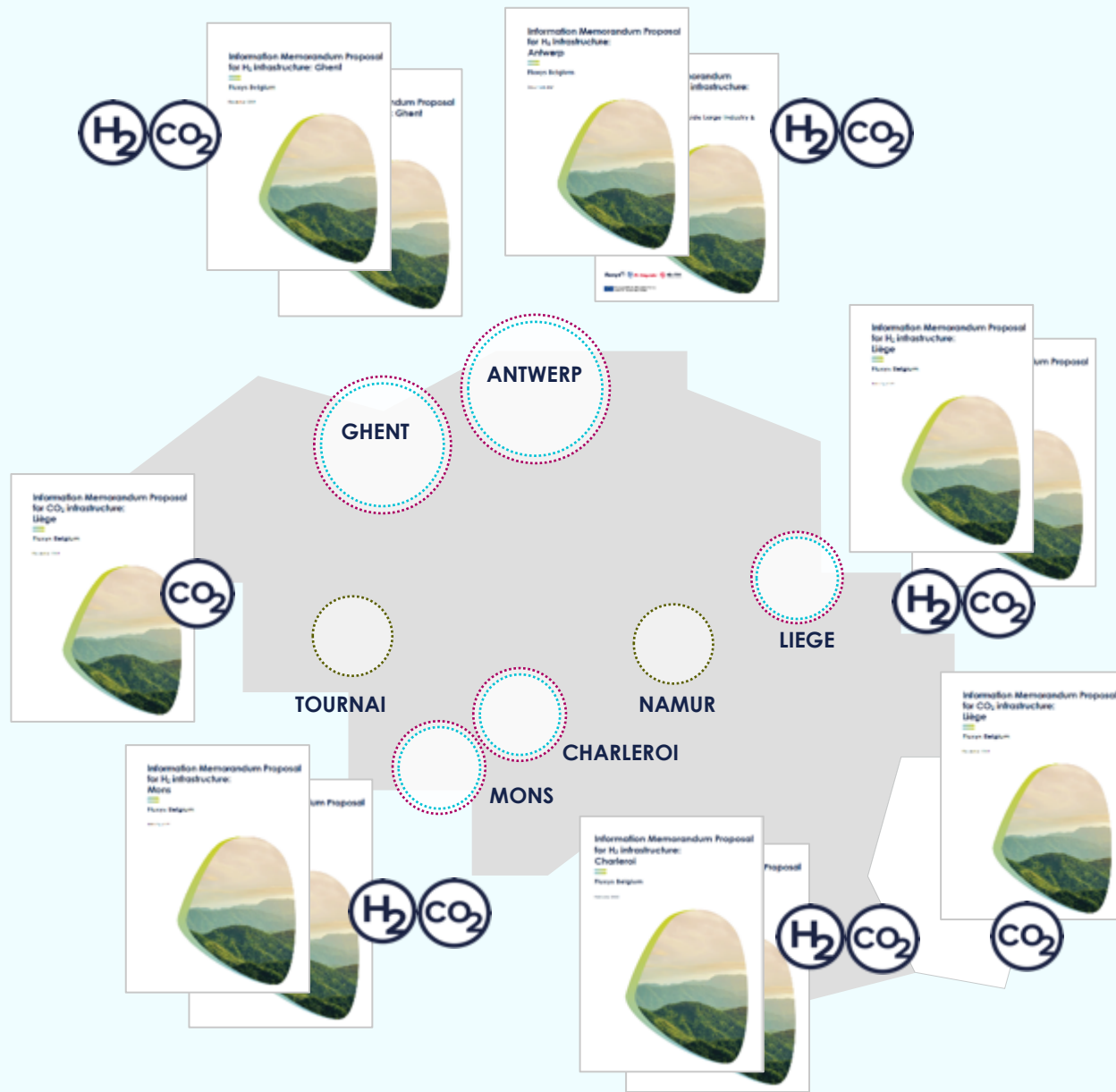
## Cooperation as key success factor



Strengthened collaboration with national bodies and foreign players, including setting up Belgian Hydrogen Council as sectoral organisation

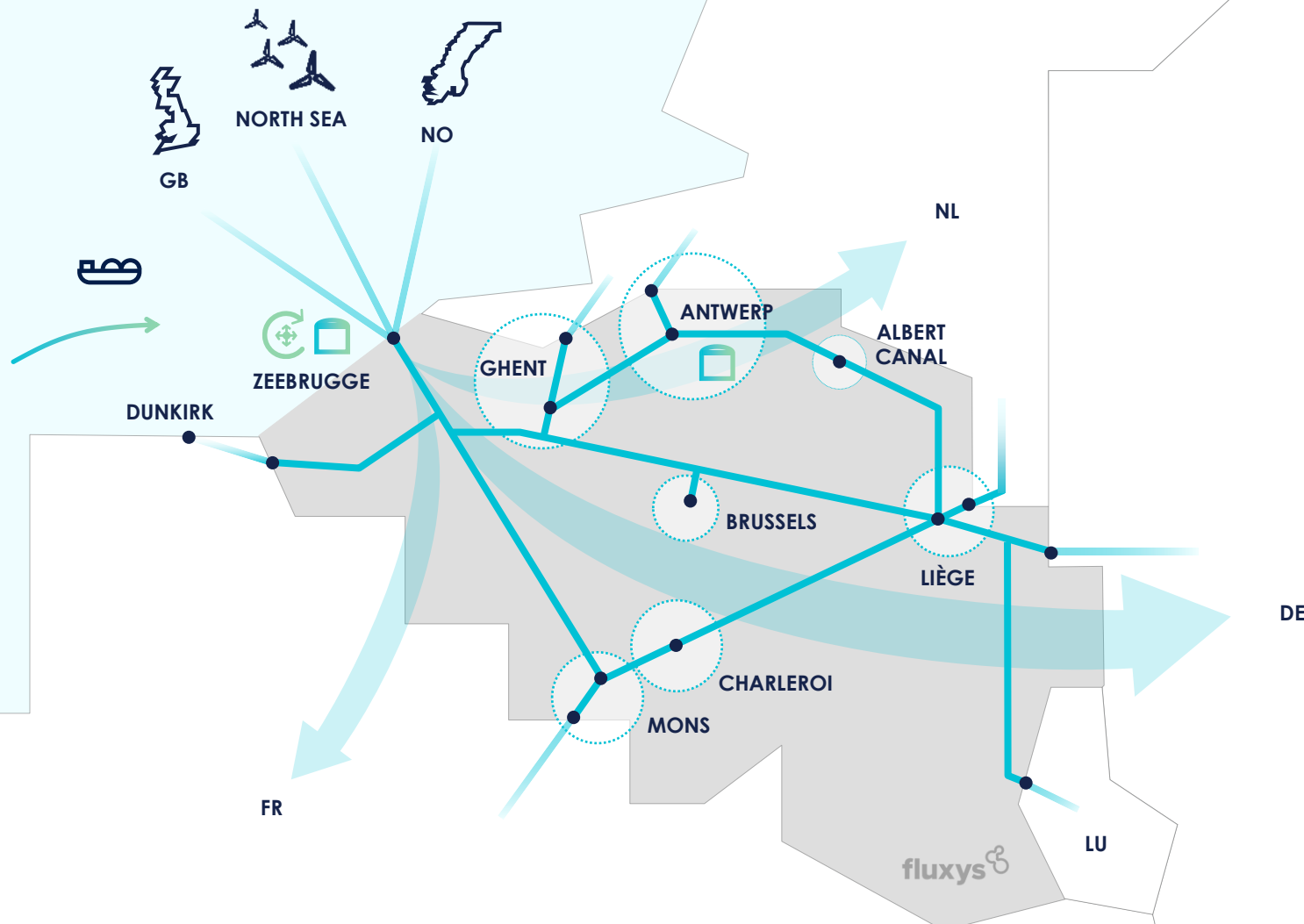
# Strong interest from industry








first infrastructure in 2026  
length 150 km

# Fluxys Hydrogen network



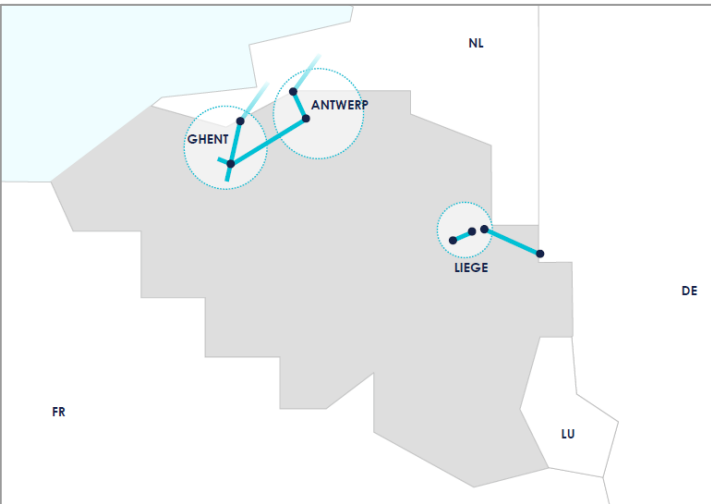
## Shaping the hydrogen and carbon infrastructure for Belgium and beyond

-  H<sub>2</sub> pipeline
-  Interconnection Hub
-  Import terminal (different carriers)

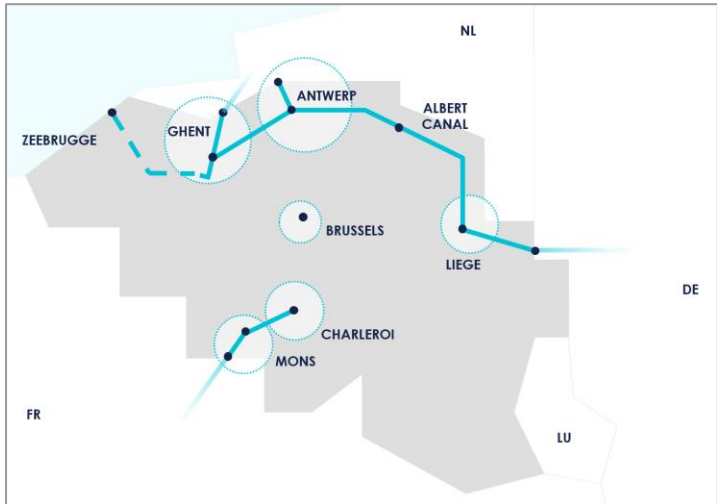


# Fluxys' network development enables a cost-efficient future build-out towards mature backbone in next phases

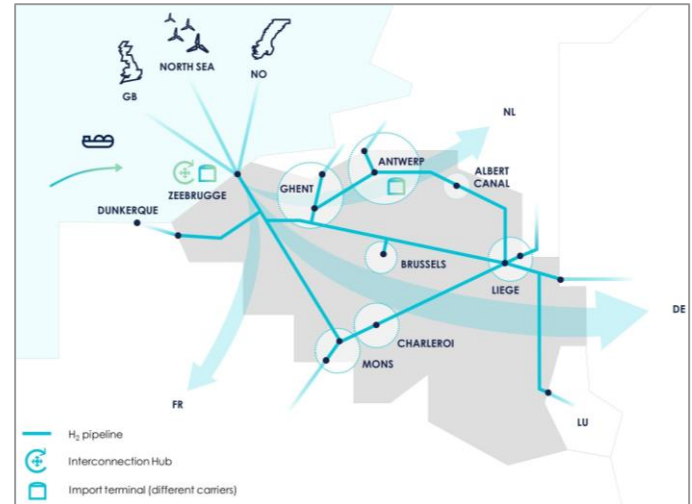
Phase 1: By 2026



Phase 2: 2028 - 2030

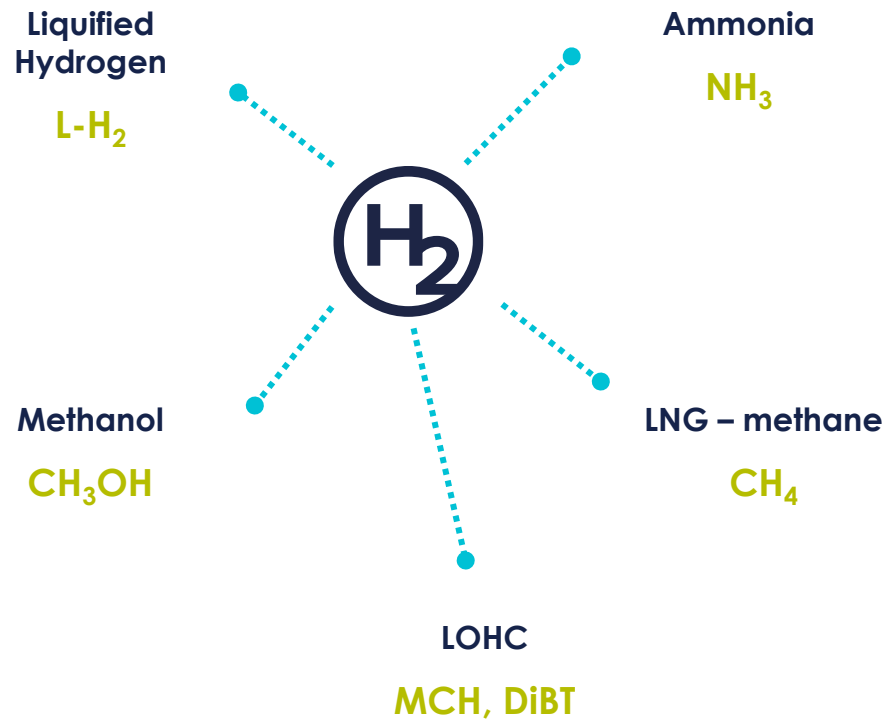


Phase 3: Beyond 2030



# The import of low carbon molecules from outside EU likely to become necessary

Wind and sun rich regions outside Europe: hydrogen export through different carriers





# Belgian hydrogen import coalition demonstrating technical and economical feasibility of imports

Extensive logistics chain analysis for several regions with promising conditions for efficient hydrogen production

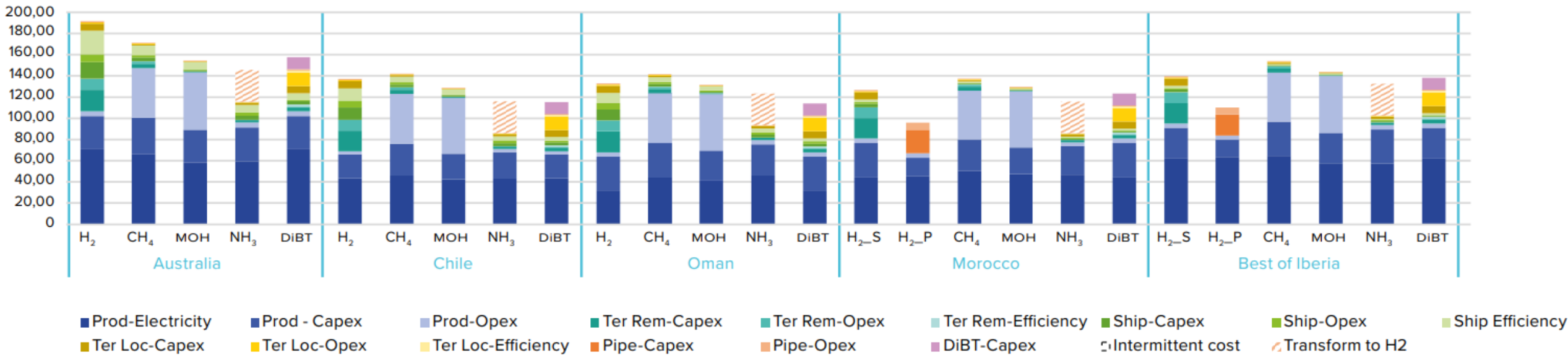




# Hydrogen import coalition study (update 2023)



LCOH (€<sub>2023</sub>/MWh) - 2030

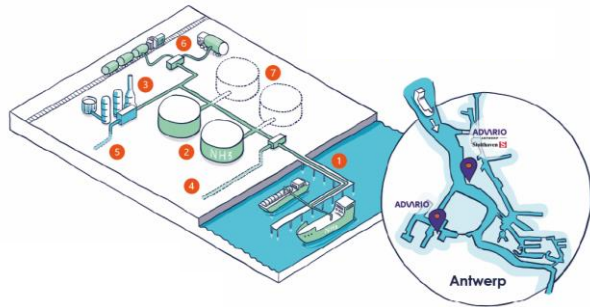


# Hydrogen: high interest across Belgium but imbalance between domestic production and domestic demand



# Driving an array of projects to accommodate hydrogen supply

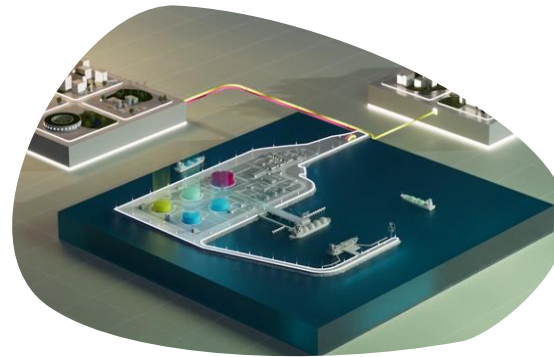
## Antwerp green ammonia/ hydrogen import



- Project with Advario
- Status: Feasibility study ongoing
- Commissioning target: 2028/2029

**ADVARIO** fluxys

## Zeebrugge multimolecule hub



- Green ammonia/hydrogen import and CO<sub>2</sub> buffer storage for export
- Status: preparatory studies

## North Sea hydrogen



- North Sea Summit 2023: joint approach by North Sea gas system operators
- Unlock green hydrogen supply from North Sea wind



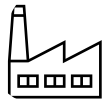
# Storing hydrogen in Loenhout

**Project BE-HyStore** explores the underground storage of hydrogen

Storing **2,4 TWh** of hydrogen



matching the capacity of **178 million home batteries**



energy to supply industry and power plants



with the support of  
the Energy Transition  
Fund



FPS Economy, S.M.E.s, Self-employed and Energy

in collaboration with



**fluxys**   
**nextgrid**