HI WEST 18 (Less-Advanced)

Interconnection Netherlands -Belgium (Zelzate & Kallo)

Reasons for grouping [ENTSOG]

The project group aims at interconnecting future hydrogen infrastructure between Netherlands and Belgium by partially repurposing existing natural gas infrastructure.

The group includes investments in Netherlands (HYD-N-468) and Belgium (HYD-N-1311).

Objective of the group [Promoter]

Fluxys and Gasunie aim to kick-start the development of the hydrogen economy in North-West Europe. The Belgian – The Netherlands interconnection will be among the first hydrogen cross-border interconnections in Europe. With this project, Fluxys and Gasunie will connect the demand clusters of Ghent, Antwerp, Moerdijk and Rotterdam with multiple production projects and import projects in the ports. In a later phase, this project will enable imported hydrogen from the Belgian and Dutch ports to flow via the hydrogen networks of Fluxys and Gasunie towards Germany.

HYD-N-468 **National H2 Backbone (Part)**

Comm. Year **2026**

HYD-N-1311 **Belgian Hydrogen Backbone (Part)**

Comm. Year **2026**

A. Project group technical information [Promoter/ ENTSOG]

Project technical information [Promoter

Hydrogen Transmission

TYNDP Project code	Section name	New / Repurposing	Nominal Diameter [mm]	Section Length [km]
HYD-N-468	Section Moerdijk to Zelzate, Zandvliet	Repurposing	400-700	83
HYD-N-1311	Hydrogen network phase 1	New	150-600	98

Capacity increment [ENTSOG]

TYNDP Project code	Point name	Operator	From system	To system	Capacity increment [GWh/d]	Comm. year
HYD-N-468	H2_IP_BE-NL	Gasunie Transport Services B.V.	Transmission Netherlands (NL Hydrogen)	Transmission Belgium (BE Hydrogen)	24	2026
HYD-N-1311	H2_IP_BE-NL	Fluxys Belgium	Transmission Netherlands (NL Hydrogen)	Transmission Belgium (BE Hydrogen)	24	2026
HYD-N-468	H2_IP_BE-NL	Gasunie Transport Services B.V.	Transmission Belgium (BE Hydrogen)	Transmission Netherlands (NL Hydrogen)	24	2026
HYD-N-1311	H2_IP_BE-NL	Fluxys Belgium	Transmission Belgium (BE Hydrogen)	Transmission Netherlands (NL Hydrogen)	24	2026
HYD-N-468	H2_IP_BE-NL	Gasunie Transport Services B.V.	Transmission Netherlands (NL Hydrogen)	Transmission Belgium (BE Hydrogen)	24	2030
HYD-N-1311	H2_IP_BE-NL	Fluxys Belgium	Transmission Netherlands (NL Hydrogen)	Transmission Belgium (BE Hydrogen)	24	2030
HYD-N-468	H2_IP_BE-NL	Gasunie Transport Services B.V.	Transmission Belgium (BE Hydrogen)	Transmission Netherlands (NL Hydrogen)	24	2030
HYD-N-1311	H2_IP_BE-NL	Fluxys Belgium	Transmission Belgium (BE Hydrogen)	Transmission Netherlands (NL Hydrogen)	24	2030
HYD-N-468	H2_IP_BE-NL	Gasunie Transport Services B.V.	Transmission Netherlands (NL Hydrogen)	Transmission Belgium (BE Hydrogen)	24	2040

HYD-N-1311	H2_IP_BE-NL	Fluxys Belgium	Transmission Netherlands (NL Hydrogen)	Transmission Belgium (BE Hydrogen)	24	2040
HYD-N-468	H2_IP_BE-NL	Gasunie Transport Services B.V.	Transmission Belgium (BE Hydrogen)	Transmission Netherlands (NL Hydrogen)	24	2040
HYD-N-1311	H2_IP_BE-NL	Fluxys Belgium	Transmission Belgium (BE Hydrogen)	Transmission Netherlands (NL Hydrogen)	24	2040

B. Project Cost Information

During the TYNDP 2022 Project Data Collection, promoters were asked to indicate whether their costs were confidential or not. The following tables display the non-confidential costs provided by the promoters (as of December 2022, end of PCI project collection). The amounts provided can differ from the figures used by the project promoters in other contexts, where costs can be updated and/or evaluated using different methodologies or assumptions.

[ENTSOG]

TYNDP Project code	CAPEX [M€]	CAPEX range [%]	OPEX [M€]	OPEX range [%]
HYD-N-468	86	40%	1	40%
HYD-N-1311	200	40%	7	40%

Description of the cost and range [Promoter]

The financial assumptions and business plan build-up is driven by standard pipeline projects and specific in-house knowledge. The financial numbers are subject to market conditions and commercial commitments.

NL (Gasunie): NL (Gasunie): Supported by the conclusions of HyWay27, Gasunie continued with the preparations for the development of the national hydrogen network, “the hydrogen backbone”. The input in the template is based on figures from Hyway27. Since the publiciation of Hyway27, there are new developments around the backbone. The latest information, scope and timing can be found on our website: https://www.hynetwork.nl/

C. Project Benefits [ENTSOG]

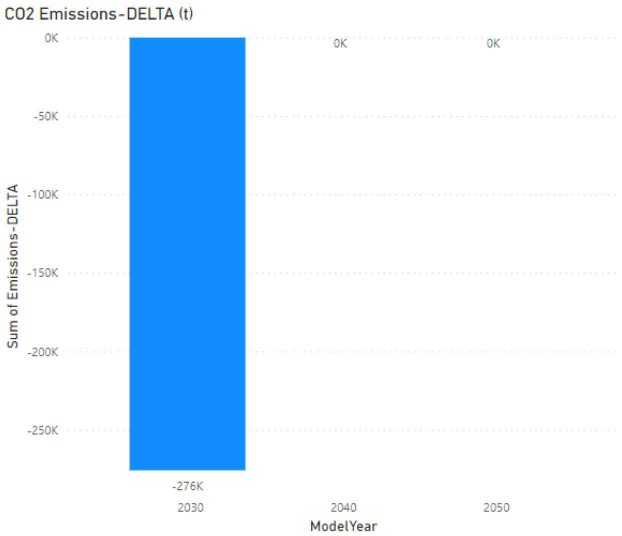
C.1 Summary of benefits

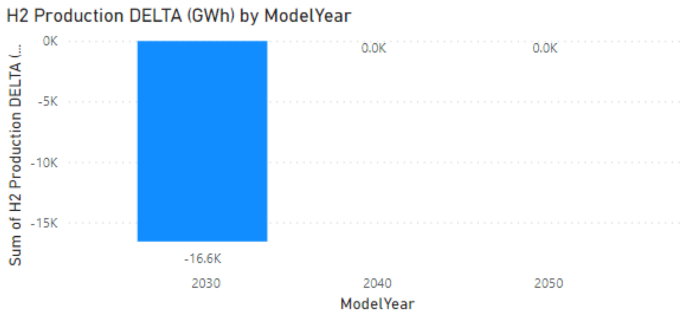
This section provides a summarised analysis by ENTSOG of the main benefits stemming from the realisation of the overall group. More details on the indicators are available in Annex D of TYNDP 2022[1].

Distributed Energy

Sustainability benefits

In the reference case, which analyses yearly demand in two periods (average winter and average summer), the project group will contribute to sustainability by reducing overall CO2 emissions by 276 kt in 2030. Thanks to the project group less hydrogen produced by SMR (blue hydrogen) will be used in 2030.

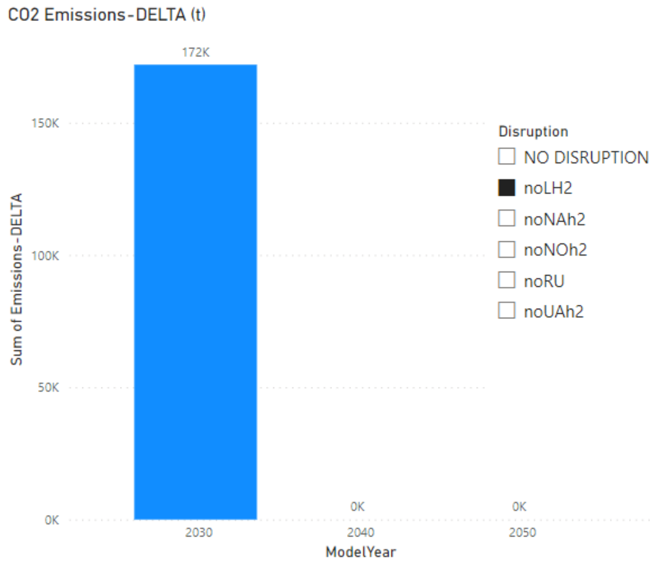


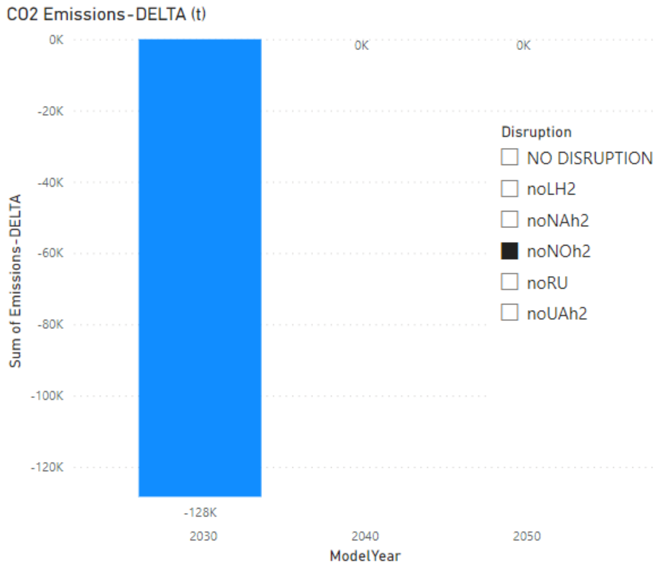


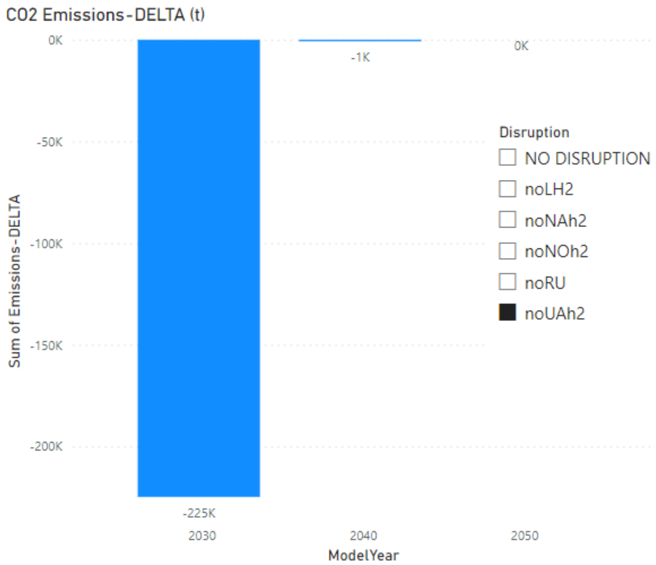
The Project group shows increased sustainability benefits in 2030 under Ukraine and North Africa disruption cases and maintains positive benefits in case of LH2 and Norway disruption.

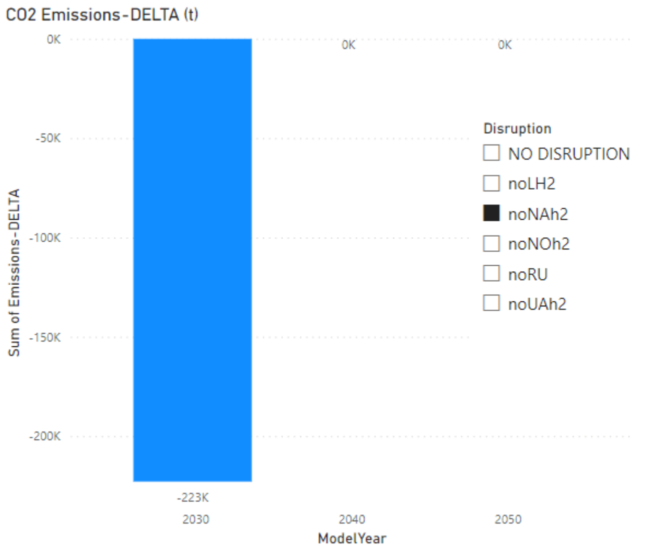
1 noLH2 : LH2 disruption / 2 noNOh2 : Norway disruption / 3 noUAh2 : Ukraine disruption/ 4 noNAh2 : North Africa disruption

[1] https://www.entsog.eu/sites/default/files/2023-04/ENTSOG_TYNDP_2022_Annex_D_Methodology_230411.pdf









Security of Supply:[2]

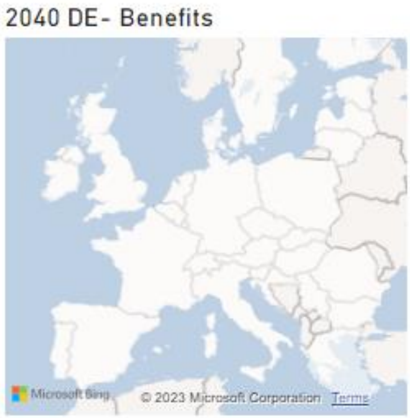
> Reference case:

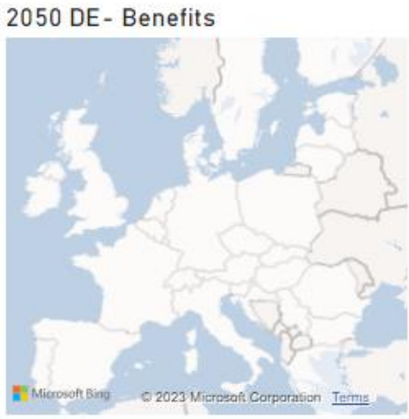
The conversion of the existing natural gas infrastructure doesn't impact the methane demand. However, in the reference case, the project is not further contributing to the mitigation of hydrogen demand curtailment risk in average summer and average winter.

[2] *As for the hydrogen system there is no existing infrastructure level available yet, ENTSOG has identified a possible hydrogen network according to the information provided by promoters in their project submission for the TYNDP/PCI process (i.e., H2 Infrastructure level). Therefore, the System Assessment shows the results that could be reached (for different timestamps) under the hypothesis of a full commissioning of the H2 infrastructure projects that were submitted by project promoters but that are not yet in place. Therefore, even in configurations where no demand curtailment is identified (e.g., average winter in 2030) these results should not be read as an absence of H2 infrastructure needs for the given scenario. On the contrary, the full availability of the planned infrastructures composing the H2 infrastructure level is assumed to avoid the potential demand curtailment.*

> Climatic stress cases:

Under 2 -week and 2-week dunkelflaute climatic stress case, as well as under peak day climatic case the project group mitigates the risk of hydrogen demand curtailment in the Netherlands by 12% in 2030.





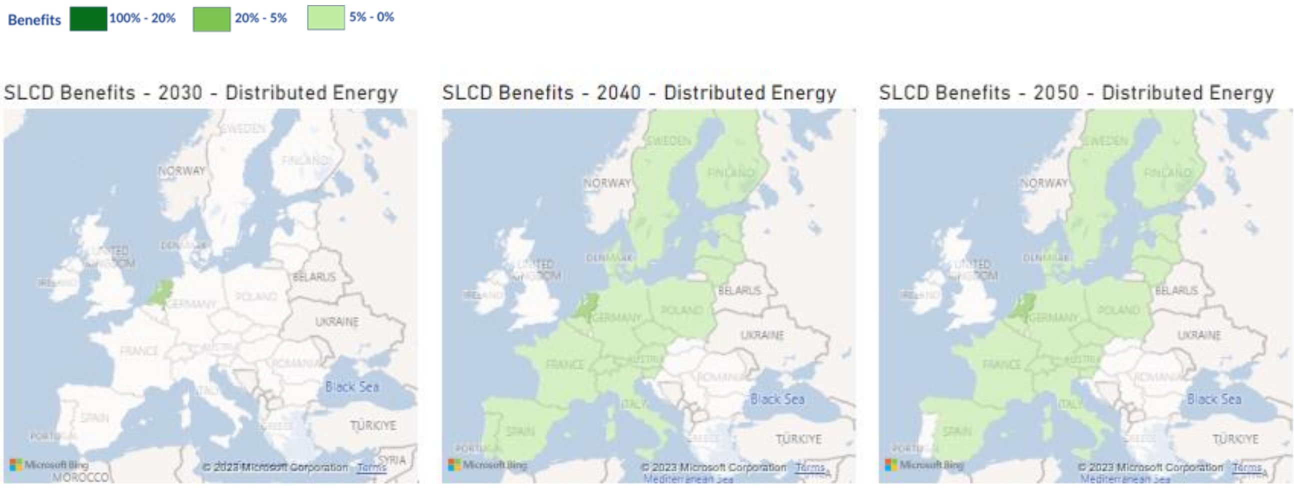
> Disruption cases (S-1):

Under LH2 supply disruption case the project mitigates the risk of demand curtailment in 2030 for the Netherlands by 21%. In other supply disruption cases, such as Norway, Ukraine or North Africa disruption, the project group doesn’t further mitigate the risk of H2 demand curtailment.

1 noLH2: LH2 disruption

> Single largest capacity disruption (SLCD):

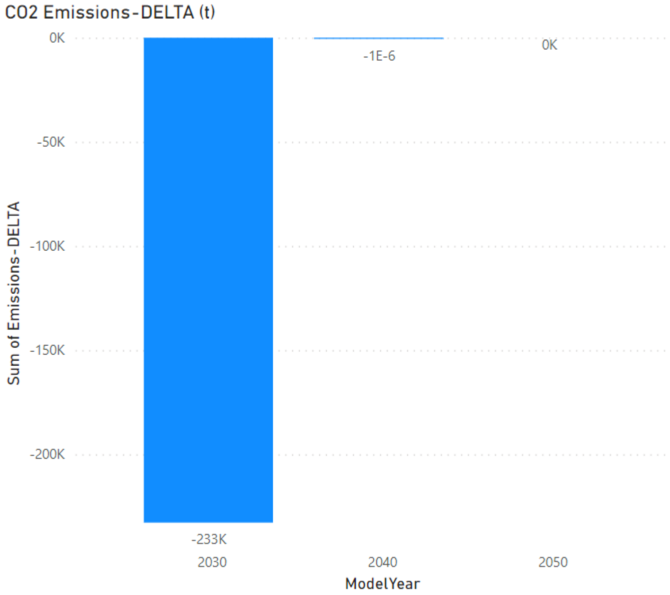
In case of SLCD the Netherlands are benefitting in all three timestamps by mitigating the risk of demand curtailment by 7-12%. Furthermore many European countries can mitigate their risk of demand curtailment by 1-2% in 2040 and 2050.

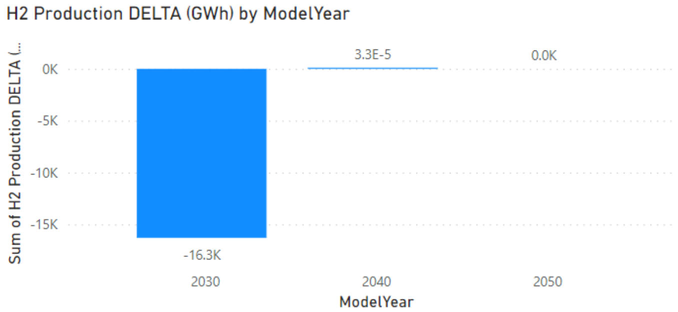


Global Ambition

Sustainability benefits

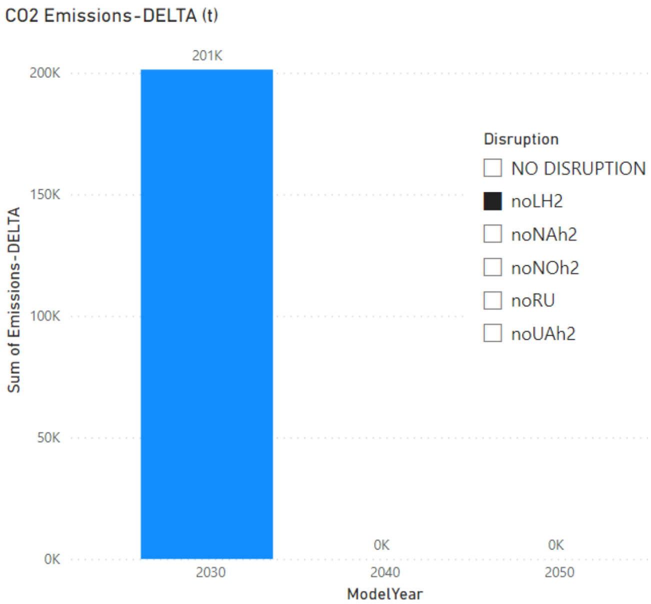
In the reference case, which analyses yearly demand in two periods (average winter and average summer), the project group will contribute to sustainability by reducing overall CO2 emissions by 233 kt in 2030. This is explained as the project group will enable replacement of blue hydrogen supplies and, therefore, will reduce natural gas imports, with different hydrogen supply sources.

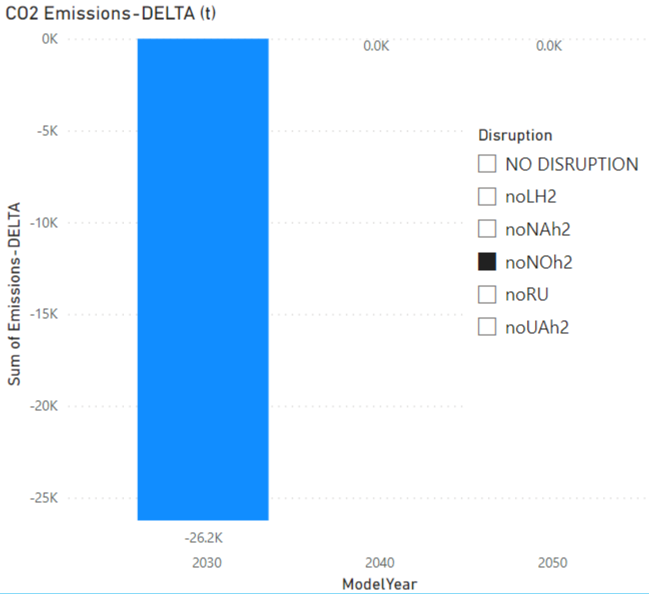


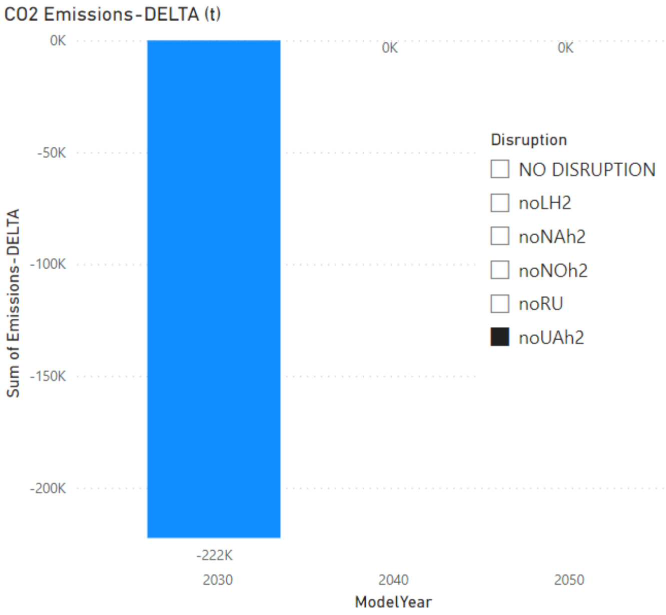


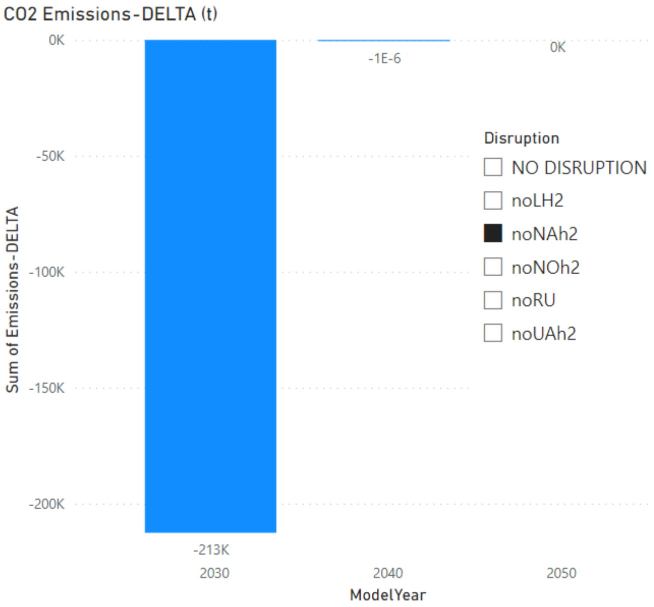
Under supply disruption cases such as Norway, Ukraine, and North Africa disruption, the project group maintains positive sustainability benefits for 2030.

1 noLH2 : LH2 disruption / 2 noNOh2 : Norway disruption / 3 noUAh2 : Ukraine disruption/ 4 noNAh2 : North Africa disruption









Security of supply benefits

> Reference case

The conversion of the existing natural gas infrastructure doesn't impact the methane demand. However, in the reference case, the project is not further contributing to the mitigation of hydrogen demand curtailment risk in average summer and average winter.

> Climatic stress cases

Under 2 -week and 2-week dunkelflaute climatic stress case, as well as under peak day climatic case the project group can reduce demand curtailment in 2030 for the Netherlands by 10%.

> Disruption cases (S-1):

Under LH2 supply disruption case the project mitigates the risk of demand curtailment in 2030 for the Netherlands by 15%. In other supply disruption cases the project group doesn't further mitigate the risk of H2 demand curtailment.

1 noLH2: LH2 disruption

> Single largest capacity disruption *(SLCD):*

In case of SLCD the Netherlands are benefitting in all three timestamps by mitigating the risk of demand curtailment, including a maximum of 8% in 2030. Furthermore, many European Countries can reduce the risk of demand curtailment by 1% in 2040.

Benefits 100% - 20% 20% - 5% 5% - 0%

SLCD Benefits - 2030 - Global Ambition

SLCD Benefits - 2040 - Global Ambition

SLCD Benefits - 2050 - Global Ambition

C.2 Quantitative benefits [ENTSOG]

The following tables display all the benefits quantified by ENTSOG through specific indicators and stemming from the realisation of the considered project group.

CO2 Emissions:

ModelYear	Disruption	Scenario	Unit	Emissions-DELTA	Emissions-PLUS	Emissions-MINUS
2030	NO DISRUPTION	DE	tonne	-275849,81	538677299	538953148,8
2030	noLH2	DE	tonne	171949,68	540175890,2	540003940,5
2030	noNAh2	DE	tonne	-222864,00	539785356,1	540008220,1
2030	noNOh2	DE	tonne	-128379,12	538877197,8	539005576,9
2030	noUAh2	DE	tonne	-224783,46	539378771,9	539603555,4
2030	NO DISRUPTION	GA	tonne	-232721,71	592910448,4	593143170,1
2030	noLH2	GA	tonne	201331,50	594817481,2	594616149,7
2030	noNAh2	GA	tonne	-212565,89	594141433,2	594353999,1
2030	noNOh2	GA	tonne	-26241,54	593310994,3	593337235,8
2030	noUAh2	GA	tonne	-222435,83	593627617,9	593850053,7
2040	NO DISRUPTION	DE	tonne	0,00	392077044	392077044
2040	noLH2	DE	tonne	0,00	392213883,4	392213883,4
2040	noNAh2	DE	tonne	0,00	392188097,7	392188097,7
2040	noNOh2	DE	tonne	0,00	392144022,6	392144022,6
2040	noUAh2	DE	tonne	-778,37	392399182,9	392399961,3
2040	NO DISRUPTION	GA	tonne	0,00	396523251,6	396523251,6
2040	noLH2	GA	tonne	0,00	397455196,7	397455196,7
2040	noNAh2	GA	tonne	0,00	397301976,6	397301976,6
2040	noNOh2	GA	tonne	0,00	397450977,1	397450977,1
2040	noUAh2	GA	tonne	0,00	397478498,3	397478498,3
2050	NO DISRUPTION	DE	tonne	0,00	232557734,8	232557734,8
2050	noLH2	DE	tonne	0,00	232557734,8	232557734,8
2050	noNAh2	DE	tonne	0,00	232557734,8	232557734,8
2050	noNOh2	DE	tonne	0,00	232557734,8	232557734,8
2050	noRU	DE	tonne	0,00	232557734,8	232557734,8
2050	noUAh2	DE	tonne	0,00	232557734,8	232557734,8
2050	NO DISRUPTION	GA	tonne	0,00	228306706,5	228306706,5
2050	noLH2	GA	tonne	0,00	228306706,5	228306706,5
2050	noNAh2	GA	tonne	0,00	228306706,5	228306706,5
2050	noNOh2	GA	tonne	0,00	228306706,5	228306706,5
2050	noRU	GA	tonne	0,00	228306706,5	228306706,5
2050	noUAh2	GA	tonne	0,00	228306706,5	228306706,5

Curtailment Rate (SLCD):

ModelYear	Disruption	Scenario	Unit	Emissions-DELTA	Emissions-PLUS	Emissions-MINUS
2030	NO DISRUPTION	DE	tonne	-275849,81	538677299	538953148,8
2030	noLH2	DE	tonne	171949,68	540175890,2	540003940,5
2030	noNAh2	DE	tonne	-222864,00	539785356,1	540008220,1
2030	noNOh2	DE	tonne	-128379,12	538877197,8	539005576,9
2030	noUAh2	DE	tonne	-224783,46	539378771,9	539603555,4
2030	NO DISRUPTION	GA	tonne	-232721,71	592910448,4	593143170,1
2030	noLH2	GA	tonne	201331,50	594817481,2	594616149,7
2030	noNAh2	GA	tonne	-212565,89	594141433,2	594353999,1
2030	noNOh2	GA	tonne	-26241,54	593310994,3	593337235,8
2030	noUAh2	GA	tonne	-222435,83	593627617,9	593850053,7
2040	NO DISRUPTION	DE	tonne	0,00	392077044	392077044
2040	noLH2	DE	tonne	0,00	392213883,4	392213883,4
2040	noNAh2	DE	tonne	0,00	392188097,7	392188097,7
2040	noNOh2	DE	tonne	0,00	392144022,6	392144022,6
2040	noUAh2	DE	tonne	-778,37	392399182,9	392399961,3
2040	NO DISRUPTION	GA	tonne	0,00	396523251,6	396523251,6
2040	noLH2	GA	tonne	0,00	397455196,7	397455196,7
2040	noNAh2	GA	tonne	0,00	397301976,6	397301976,6
2040	noNOh2	GA	tonne	0,00	397450977,1	397450977,1
2040	noUAh2	GA	tonne	0,00	397478498,3	397478498,3
2050	NO DISRUPTION	DE	tonne	0,00	232557734,8	232557734,8
2050	noLH2	DE	tonne	0,00	232557734,8	232557734,8
2050	noNAh2	DE	tonne	0,00	232557734,8	232557734,8
2050	noNOh2	DE	tonne	0,00	232557734,8	232557734,8
2050	noRU	DE	tonne	0,00	232557734,8	232557734,8
2050	noUAh2	DE	tonne	0,00	232557734,8	232557734,8
2050	NO DISRUPTION	GA	tonne	0,00	228306706,5	228306706,5
2050	noLH2	GA	tonne	0,00	228306706,5	228306706,5
2050	noNAh2	GA	tonne	0,00	228306706,5	228306706,5
2050	noNOh2	GA	tonne	0,00	228306706,5	228306706,5
2050	noRU	GA	tonne	0,00	228306706,5	228306706,5
2050	noUAh2	GA	tonne	0,00	228306706,5	228306706,5

Curtailment Rate (Climatic Stress):

Country	2030-DE-DELTA	2030-GA-DELTA	2040-DE-DELTA	2040-GA-DELTA	2050-DE-DELTA	2050-GA-DELTA
Austria	0%	0%	0%	0%	0%	0%

Belgium	0%	0%	-1%	0%	0%	0%
Bulgaria	0%	0%	0%	-1%	0%	0%
Croatia	0%	0%	0%	0%	0%	0%
Cyprus	0%	0%	0%	0%	0%	0%
Czechia	0%	0%	0%	0%	0%	0%
Denmark	0%	0%	0%	-1%	0%	0%
Estonia	0%	0%	0%	0%	0%	0%
Finland	0%	0%	0%	0%	0%	0%
France	0%	0%	0%	0%	0%	0%
Germany	0%	0%	0%	0%	0%	0%
Greece	0%	0%	0%	0%	0%	0%
Hungary	0%	0%	0%	0%	0%	0%
Ireland	0%	0%	0%	0%	0%	0%
Italy	0%	0%	0%	0%	0%	0%
Latvia	0%	0%	0%	0%	0%	0%
Lithuania	0%	0%	0%	0%	0%	0%
Luxembourg	0%	0%	0%	0%	0%	0%
Malta	0%	0%	0%	0%	0%	0%
Poland	0%	0%	0%	0%	0%	0%
Portugal	0%	0%	0%	0%	0%	0%
Romania	0%	0%	0%	0%	0%	0%
Serbia	0%	0%	0%	0%	0%	0%
Slovakia	0%	0%	0%	0%	0%	0%
Slovenia	0%	0%	0%	-1%	0%	0%
Spain	0%	0%	0%	0%	0%	0%
Sweden	0%	0%	0%	0%	0%	0%
Switzerland	0%	0%	0%	0%	0%	0%
The Netherlands	-12%	-10%	0%	0%	0%	0%
United Kingdom	0%	0%	0%	0%	0%	0%
Austria	0%	0%	0%	0%	0%	0%
Belgium	0%	0%	0%	0%	0%	0%
Bulgaria	0%	0%	0%	0%	0%	0%
Croatia	0%	0%	0%	0%	0%	0%
Cyprus	0%	0%	0%	0%	0%	0%
Czechia	0%	0%	0%	0%	0%	0%
Denmark	0%	0%	0%	0%	0%	0%
Estonia	0%	0%	0%	0%	0%	0%
Finland	0%	0%	0%	0%	0%	0%
France	0%	0%	0%	0%	0%	0%
Germany	0%	0%	0%	0%	0%	0%
Greece	0%	0%	0%	0%	0%	0%
Hungary	0%	0%	0%	0%	0%	0%
Ireland	0%	0%	0%	0%	0%	0%
Italy	0%	0%	0%	0%	0%	0%
Latvia	0%	0%	0%	0%	0%	0%
Lithuania	0%	0%	0%	0%	0%	0%
Luxembourg	0%	0%	0%	0%	0%	0%
Malta	0%	0%	0%	0%	0%	0%
Poland	0%	0%	0%	0%	0%	0%

Portugal	0%	0%	0%	0%	0%	0%
Romania	0%	0%	0%	0%	0%	0%
Serbia	0%	0%	0%	0%	0%	0%
Slovakia	0%	0%	0%	0%	0%	0%
Slovenia	0%	0%	0%	0%	0%	0%
Spain	0%	0%	0%	0%	0%	0%
Sweden	0%	0%	0%	0%	0%	0%
Switzerland	0%	0%	0%	0%	0%	0%
The Netherlands	-12%	-10%	0%	0%	0%	0%
United Kingdom	0%	0%	0%	0%	0%	0%
Austria	0%	0%	0%	0%	0%	0%
Belgium	0%	0%	0%	0%	0%	0%
Bulgaria	0%	0%	0%	0%	0%	0%
Croatia	0%	0%	0%	0%	0%	0%
Cyprus	0%	0%	0%	0%	0%	0%
Czechia	0%	0%	0%	0%	0%	0%
Denmark	0%	0%	0%	0%	0%	0%
Estonia	0%	0%	0%	0%	0%	0%
Finland	0%	0%	0%	0%	0%	0%
France	0%	0%	0%	0%	0%	0%
Germany	0%	0%	0%	0%	0%	0%
Greece	0%	0%	0%	0%	0%	0%
Hungary	0%	0%	0%	0%	0%	0%
Ireland	0%	0%	0%	0%	0%	0%
Italy	0%	0%	0%	0%	0%	0%
Latvia	0%	0%	0%	0%	0%	0%
Lithuania	0%	0%	0%	0%	0%	0%
Luxembourg	0%	0%	0%	0%	0%	0%
Malta	0%	0%	0%	0%	0%	0%
Poland	0%	0%	0%	0%	0%	0%
Portugal	0%	0%	0%	0%	0%	0%
Romania	0%	0%	0%	0%	0%	0%
Serbia	0%	0%	0%	0%	0%	0%
Slovakia	0%	0%	0%	0%	0%	0%
Slovenia	0%	0%	0%	0%	0%	0%
Spain	0%	0%	0%	0%	0%	0%
Sweden	0%	0%	0%	0%	0%	0%
Switzerland	0%	0%	0%	0%	0%	0%
The Netherlands	-9%	-8%	0%	0%	0%	0%
United Kingdom	0%	0%	0%	0%	0%	0%

D. Environmental Impact [Promoter]

Any gas infrastructure has an impact on its surroundings. This impact is of particular relevance when crossing some environmentally sensitive areas. Mitigation measures are taken by the promoters to reduce this impact and comply with the EU and National regulations.

TYNDP Code	Type of infrastructure	Surface of impact	Environmentally sensitive area
HYD-N-468	Hydrogen pipelines (Repurposed part)	Reconstruction of existing above-ground objects or locally limited interferences	Minimal environmental impacts expected due to repurposing of pipeline or locally limited interferences.
HYD-N-468 / HYD-N-1311	Hydrogen pipelines (New built part)	New construction of underground pipelines and associated above-ground facilities	The official procedures (regional planning and planning approval) are used to weigh up the environmental aspects very carefully. For this purpose, the developer prepares a spatial resistance analysis so that the potential sensitive areas (natural areas, forest, water, people, etc.) are ideally not affected at all or, if so, only minimally. In an iterative process, the environmental expert ensures that environmental concerns are always heard and taken into account during the technical planning phase.

Potential impact	Mitigation measures	Related costs included in project CAPEX and OPEX	Additional expected costs
HYD-N-468 / HYD-N-1311	Minimal environmental impacts expected due to repurposing of pipeline and or locally limited interferences and as much reduced environmental impact as possible for new built parts in accordance with applicable regulations	detailed calculation not available yet	Not expected

Environmental Impact explained [Promoter]

The infrastructure project is not expected to lead to a significant increase in the emissions of pollutants into air, water or land.
During transport of hydrogen, any leakage from the infrastructure will be prevented. In case of interventions, maintenance... best available techniques will be selected to prevent/reduce losses. Transport by (underground) pipeline is the most sustainable way of transporting molecules and will not have a detrimental impact on biodiversity and ecosystems. Fluxys and Gasunie have also a long outstanding experience with the construction and exploitation of pipelines in good relationship with concerned neighbours/farmers/….
In line with the EIA Directive an environmental impact assessment or environmental screening will be executed and mitigating measures will be foreseen when needed.

NL, Gasunie: The project will follow the strict EIA regulatory framework as required by the Dutch Ministry for Economic Affairs and Climate and will consider all environmental impact aspect during the permitting procedures. No significant harm to the environment or any negative effect on climate change will be created by the project.

E. Other benefits [Promoter]

Missing benefits are all benefits of a project which may be not captured by ENTSOG analysis.

As a necessary condition a missing benefit cannot have discrepancies with the benefits already covered by the assessment run by ENTSOG and this condition needs to be proved and justified.

Description of Other benefits [Promoter]

- **NL) Gasunie;** Hydrogen is expected to make up 20-25% of the total energy demand of the EU and the UK by 2050 but infrastructure connecting H2 producers and consumers is lacking. The objective of the H2 Backbone project is to create an open access non-discriminatory national and cross-border network for hydrogen transportation. The existing natural gas network will be repurposed for H2-transport (85% of the network), with the addition of new pipes in areas where connections are not yet available. Once complete, the Dutch H2 Backbone will connect on- and off-shore H2 sources with consumers in the Netherlands, Germany and Belgium. As such, the H2 Backbone will form a vital part of the European Hydrogen Backbone and help kickstart the shift towards carbon-neutral energy in Europe.
- Fluxys has the ambition to link hydrogen import facilities in 3 terminals (Antwerp, Zeebrugge and Dunkirk) and local hydrogen production in Belgium with industrial clusters through an interconnected hydrogen backbone. This projects aims to kickstart the development of the hydrogen economy in North-West Europe. Clean hydrogen import gates in maritime ports and interconnections with adjacent countries such as Germany, The Netherlands and France are foreseen to ensure security of supply and flexibility. Repurposing existing infrastructure is put forward in order to reduce the system cost of the hydrogen value chain.

- **NL(Gasunie) / BE(Fluxys)**Market Integration, inter alia through connecting existing or emerging hydrogen networks of Member States, or otherwise contributing to the emergence of an Union-wide network for the transport and storage of hydrogen, and ensuring interoperability of connected systems.

- **NL(Gasunie) / BE(Fluxys)** Security of Supply and flexibility, inter alia through appropriate connections and facilitating secure and reliable system operation.

- **NL(Gasunie) / BE(Fluxys)** Sustainability, including by reducing greenhouse gas emissions, by enhancing the deployment of renewable or low carbon hydrogen, with an emphasis on hydrogen from renewable.

- **NL(Gasunie) / BE(Fluxys)** Competition, inter alia by allowing access to multiple supply sources and network users on a transparent and non- discriminatory basis.

F. Useful links [Promoter]

Useful links:

https://www.hynetwork.nl/

https://www.hyway27.nl/

Fluxys - Preparing to build the network: https://www.fluxys.com/en/about-us/energy-transition/hydrogen-carbon-infrastructure/hydrogen_preparing-to-build-the-network