HI WEST 15 B (Less-Advanced)

Interconnection France-Belgium from Dunkerque

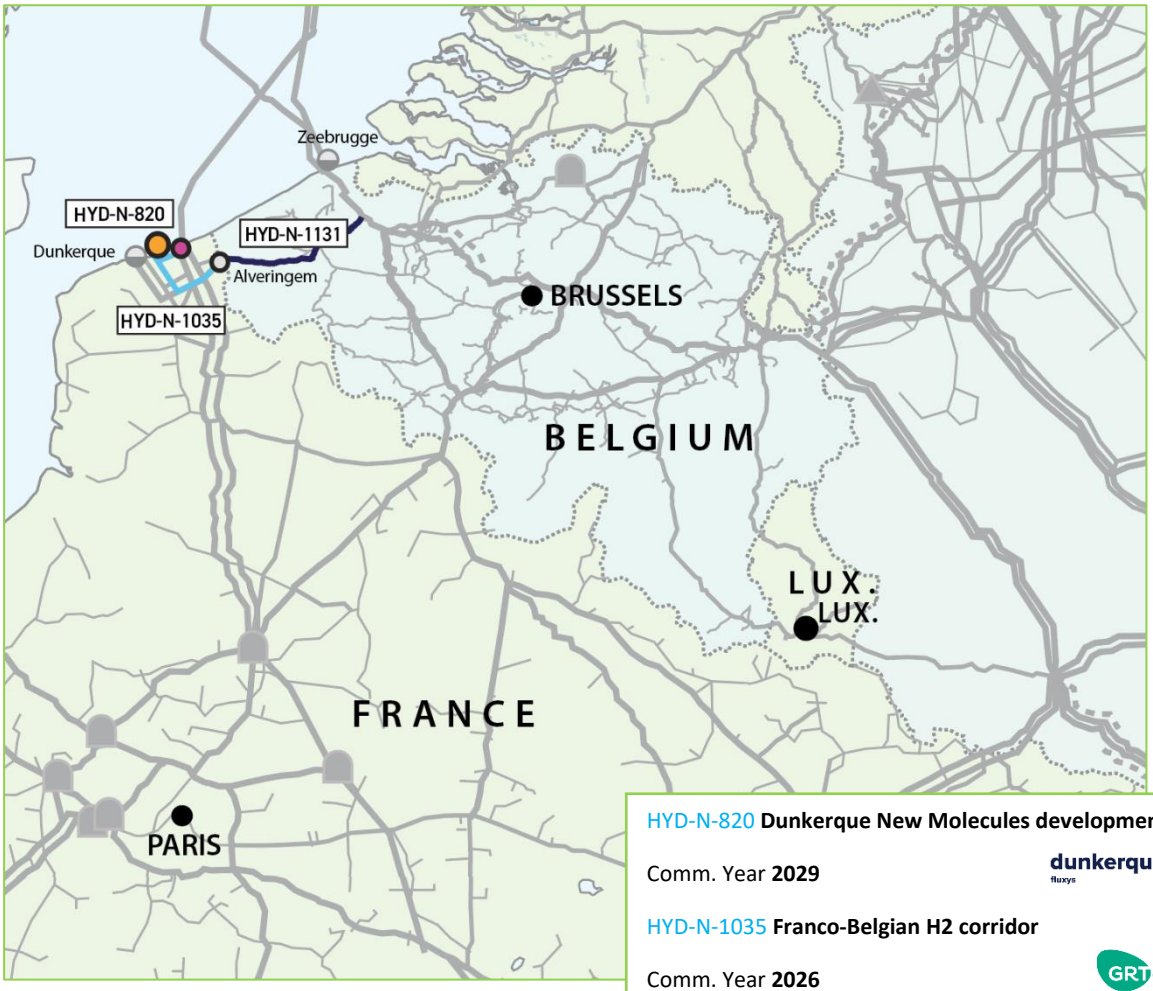
Reasons for grouping [ENTSOG]

The project group is an interconnection between France and Belgium, linked to a terminal in France.

This project will enable imports of hydrogen to Belgium (HYD-N-1131) via France (HYD-N-1035) from a terminal in Dunkerque (HYD-N-820).

Objective of the group [Promoter]

Fluxys and GRTgaz are accommodating reliable flows of hydrogen (H2) and hydrogen derivatives such as ammonia (NH3) at scale from ports to industrial hubs across Europe. This project is key to transition towards a resilient and efficient European energy & economic system. Imported hydrogen (via NH3) via a terminal in Dunkirk can enter the European market, both in a local demand cluster, developed by GRTgaz, as towards further demand clusters in Belgium and neighboring countries via a connection with the Belgian Hydrogen Network of Fluxys.



HYD-N-820 **Dunkerque New Molecules development**

Comm. Year **2029**

HYD-N-1035 **Franco-Belgian H2 corridor**

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]	Compressor power [MW]
HYD-N-1131	Alveringem-Maldegem	New/repurposing	tbd	82	
HYD-N-1035	Hydrogen network in Dunkirk + Dunkirk – Alveringem	New	tbd	50	

Liquified Hydrogen Terminal

TYNDP Project code	Hydrogen carrier	H_2 Import capacity [GWh/d]	Injection capacity [GWh/d]	Storage capacity [m^3]
HYD-N-820	Dunkerque LNG		48	

Capacity increment [ENTSOG]

TYNDP Project code	Point name	Operator	From system	To system	Capacity increment [GWh/d]	Comm. year
HYD-N-820	LH2_Tk_FR	Dunkerque LNG	Terminal France (LH2_Tk_FR)	Transmission France (FR Hydrogen)	48	2029
HYD-N-1035	H2_IP_BE-FR	GRTgaz	Transmission France (FR Hydrogen)	Transmission Belgium (BE Hydrogen)	48	2029
HYD-N-1311	H2_IP_BE-FR	Fluxys	Transmission France (FR Hydrogen)	Transmission Belgium (BE Hydrogen)	48	2029

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-820	500	40%	40	40%
HYD-N-1035	151	40%	3	40%
HYD-N-1311	220	40%	35	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.

Costs estimates are based on pre-feasibility study results.

Details of the main CAPEX expenditure items:
Studies (project management, land purchase studies, impact assessment, hazard study, public dialog, route study…)
New pipelines:

- Supply and installation of pipelines and sectioning equipment
- Construction of delivery and injection facilities

Details of the main OPEX expenditure items:
It was made based on ratios proposed from the analysis of maintenance costs evaluated on the existing natural gas network. These ratios have been increased due to the need to develop dedicated hydrogen IT tools and due to higher maintenance standards.

Given the state of the studies (pre-feasibility) to date and the information gathered at this stage, we propose to retain standard contingencies of the order of 40% of the total amount**.** These

contingencies take into account our experience on various projects, as well as current assumptions concerning specific price variations such as the impact of economic events (e.g. rise in raw materials prices). As the international situation is currently having a particular impact, these assumptions may change over the course of the project's phases.

C. Project Benefits [ENTSOG]

C.1 Summary of benefits

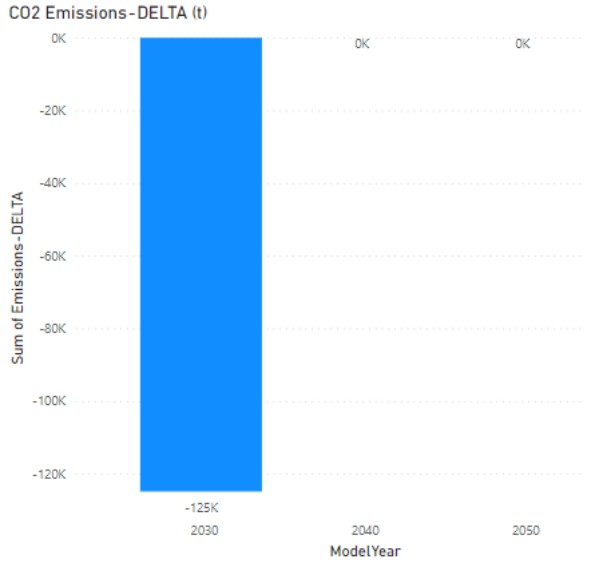
This section provides a summarised analysis by ENTSOG of the main benefits stemming from the realisation of the overall group. More details on the indicators are available in Annex D of TYNDP 2022[1].

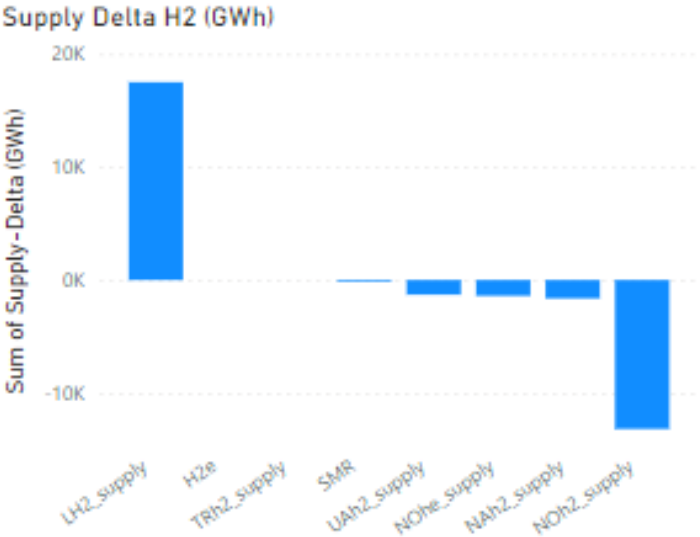
[1] https://www.entsog.eu/sites/default/files/2023-04/ENTSOG_TYNDP_2022_Annex_D_Methodology_230411.pdf

Distributed Energy

Sustainability benefits

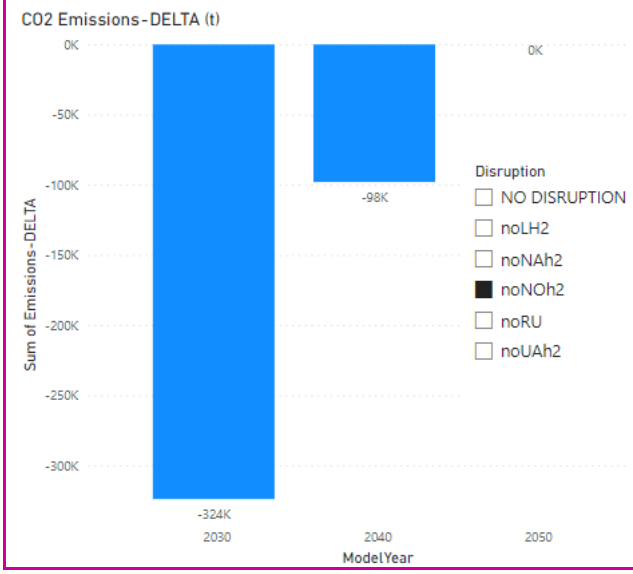
In the reference case, which analyses yearly demand in two periods (average winter and average summer), the project group will contribute to sustainability by reducing overall CO2 emissions by 125 kt in 2030. The project group enables imports of green hydrogen and so then replacing use of Norwegian supply which is considered as blue hydrogen in 2030.

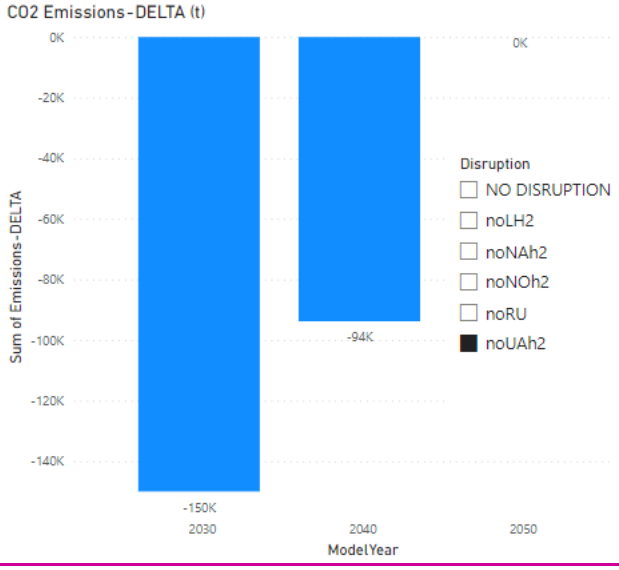


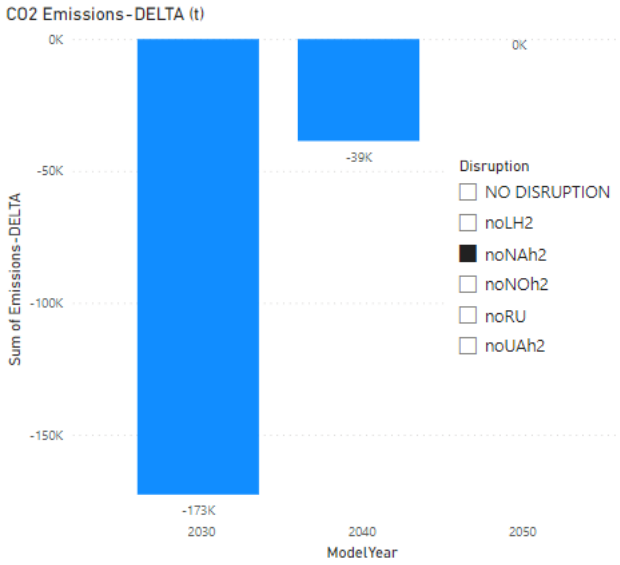


Similar trend is expected under any supply disruption in 2030 with even more benefits, up to 325 kt. In 2040, has some more sustainability by reducing the use of SMRs.

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







Security of Supply:[2]

> Reference case

In the reference case, the project is contributing to further mitigation of hydrogen demand curtailment risk in average summer and average winter a little from 2030, that cannot be displayed on the map.

> 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 demand curtailment by 2% in almost all European countries in 2030.

[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.*

> Disruption cases (S-1):

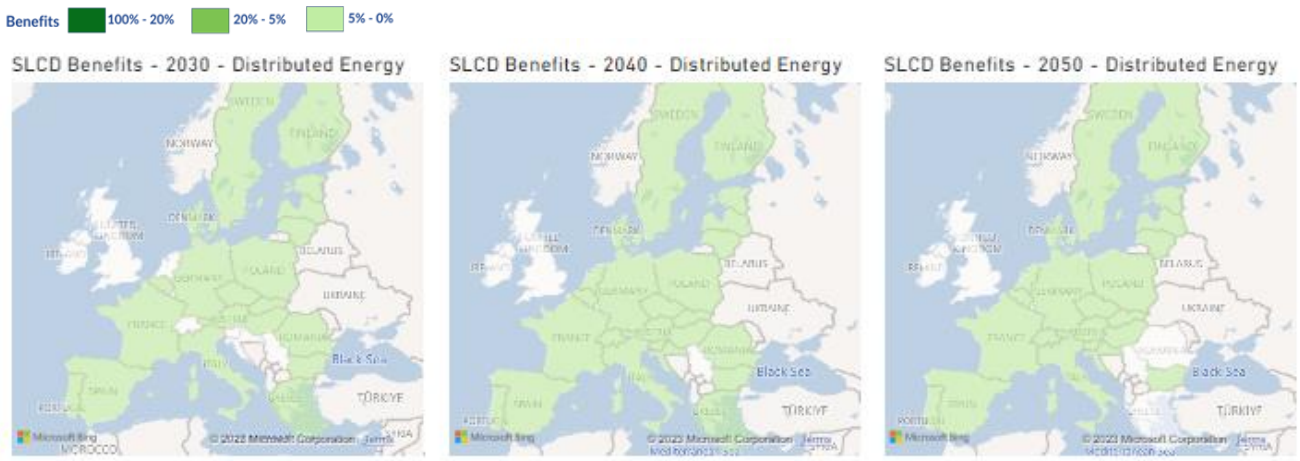
Similarly, under supply disruption cases, the project group mitigates demand curtailment in some European countries, depending of cases, from 2040 by 1-2%.

Maps for specifics disruptions: 1 noNOh2 : Norway disruption / 2 noNAh2 : North Africa disruption

1 noNOh2 : Norway disruption

2 noNAh2 : North Africa disruption

> Single largest capacity disruption (SLCD):

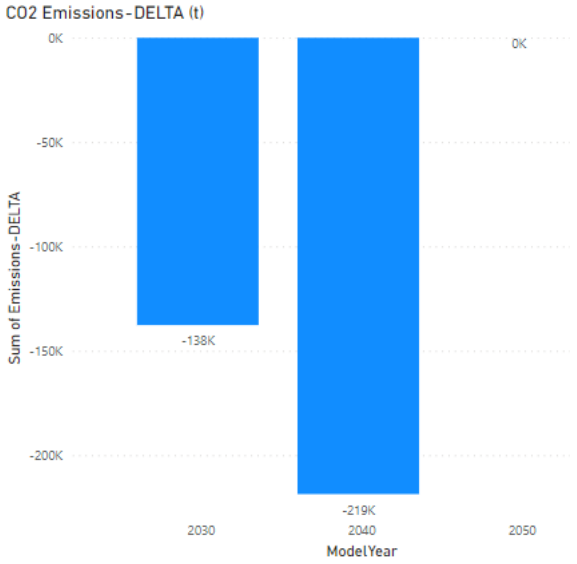


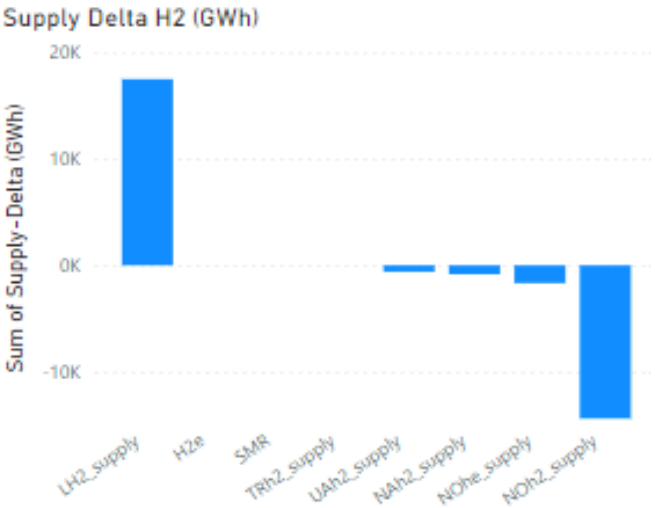
In case of single largest capacity disruption (SLCD), the project group reduces the risk of demand curtailment in all Europe from 2030, by 2-3%. Indeed, imports in France are able to flow to Belgium first and then to reach all Europe.

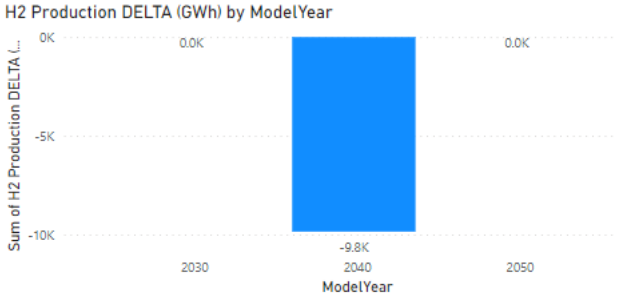
Global Ambition

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 138 kt in 2030. The project group enables the transport of green hydrogen and so then replacing use of Norwegian supply which is considered as blue hydrogen in 2030. Moreover, in 2040, as the hydrogen demand is higher, the terminal will decrease overall CO2 emissions by using less SMRs.

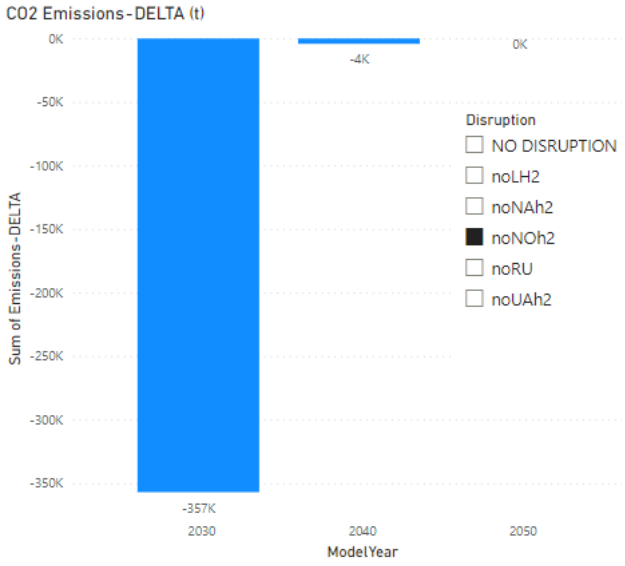


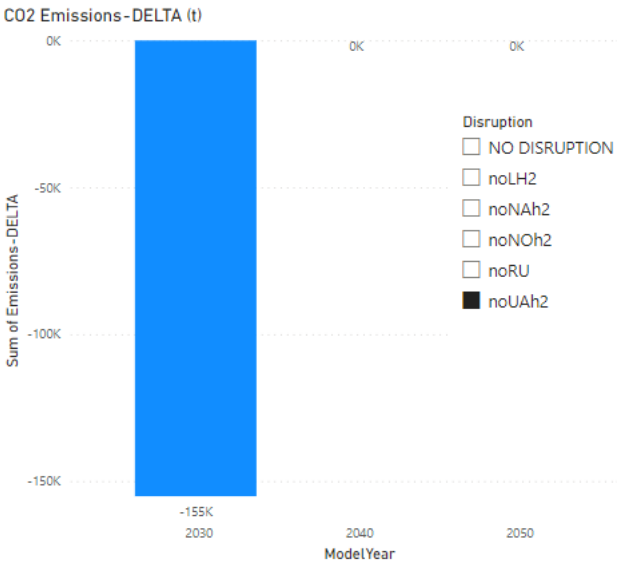


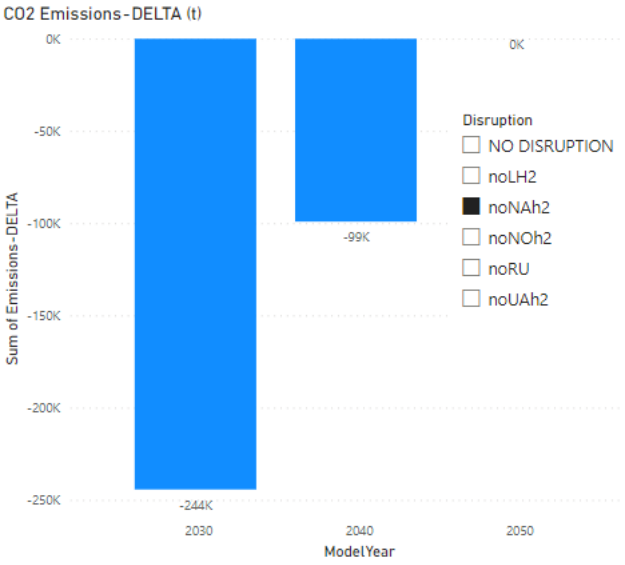


Similar trend is expected under supply disruptions.

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







Security of supply benefits

> Reference case

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> 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 demand curtailment by 2% in almost all European countries in 2030.

> Disruption cases (S-1):

Similarly, under supply disruption cases, the project group mitigates demand curtailment in some European countries, depending of cases, from 2040 by 1-2%.

Maps for specifics disruptions: 1 noNOh2 : Norway disruption / 2 noUAh2 : Ukraine disruption/ 3 noNAh2 : North Africa disruption

1 noNOh2 : Norway disruption

2 noUAh2 : Ukraine disruption

3 noNAh2 : North Africa disruption

> *Single* largest capacity disruption *(SLCD):*

In case of single largest capacity disruption (SLCD), the project group reduces the risk of demand curtailment in all Europe from 2030, by 2-3%. Indeed, imports in France are able to flow to Belgium first and then to reach all Europe.

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	-124897,63	538677299	538802196,7
2030	noLH2	DE	tonne	0,00	540175890,2	540175890,2
2030	noNAh2	DE	tonne	-172686,46	539785356,1	539958042,6
2030	noNOh2	DE	tonne	-323975,85	538877197,8	539201173,7
2030	noUAh2	DE	tonne	-149959,32	539378771,9	539528731,3
2030	NO DISRUPTION	GA	tonne	-137634,78	592910448,4	593048083,2
2030	noLH2	GA	tonne	0,00	594817481,2	594817481,2
2030	noNAh2	GA	tonne	-244330,96	594141433,2	594385764,1
2030	noNOh2	GA	tonne	-357030,51	593310994,3	593668024,8
2030	noUAh2	GA	tonne	-155124,51	593627617,9	593782742,4
2040	NO DISRUPTION	DE	tonne	0,00	392077044	392077044
2040	noLH2	DE	tonne	0,00	392213883,4	392213883,4
2040	noNAh2	DE	tonne	-38621,53	392188097,7	392226719,2
2040	noNOh2	DE	tonne	-98050,17	392144022,6	392242072,8
2040	noUAh2	DE	tonne	-93797,45	392399182,9	392492980,3
2040	NO DISRUPTION	GA	tonne	-218603,85	396523251,6	396741855,5
2040	noLH2	GA	tonne	0,00	397455196,7	397455196,7
2040	noNAh2	GA	tonne	-99115,93	397301976,6	397401092,6
2040	noNOh2	GA	tonne	-4219,61	397450977,1	397455196,7
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):

Country	2030-DE-DELTA	2030-GA-DELTA	2040-DE-DELTA	2040-GA-DELTA	2050-DE-DELTA	2050-GA-DELTA
Czechia	-2%	-2%	-3%	-2%	-3%	-1%
Estonia	-2%	-2%	-3%	-1%	-2%	-1%
Latvia	-2%	-2%	-3%	-1%	-2%	-1%
Lithuania	-2%	-2%	-3%	-1%	-2%	-1%
Poland	-2%	-2%	-3%	-1%	-2%	-1%
Portugal	-2%	-2%	-3%	-1%	-1%	-1%
Slovenia	0%	0%	-3%	-1%	-2%	-1%
France	-2%	-2%	-3%	-1%	-2%	-1%
Germany	-2%	-2%	-2%	-2%	-1%	-1%
Austria	-2%	-2%	-2%	-2%	-2%	-1%
Belgium	-2%	-2%	-2%	-2%	-2%	-1%
Denmark	-2%	-2%	-2%	-2%	-2%	-1%
Finland	-2%	-2%	-2%	-1%	-2%	-1%
Italy	-2%	-2%	-2%	-1%	-2%	-1%
Spain	-2%	-2%	-2%	-2%	-2%	-1%
Sweden	-2%	-2%	-2%	-1%	-2%	-1%
Switzerland	0%	0%	-2%	-1%	-1%	-1%
The Netherlands	0%	0%	-2%	-2%	-2%	-1%
Bulgaria	-2%	-2%	-1%	-1%	-1%	-1%
Croatia	0%	0%	-1%	-1%	-1%	-1%
Greece	-2%	-1%	-1%	-1%	0%	-1%
Hungary	-2%	-2%	-1%	-1%	-1%	-1%
Romania	-1%	-2%	-1%	-1%	0%	-1%
Slovakia	-2%	-2%	-1%	-1%	-1%	-1%

Curtailment Rate (Climatic Stress):

SimulationPeriod	Country	2030-DE-DELTA	2030-GA-DELTA	2040-DE-DELTA	2040-GA-DELTA	2050-DE-DELTA	2050-GA-DELTA
Average2W	Austria	-2%	-2%	-1%	-1%	-1%	-1%
Average2W	Belgium	-2%	-2%	-1%	-1%	-1%	0%
Average2W	Bulgaria	0%	-2%	-1%	-1%	0%	0%
Average2W	Croatia	0%	0%	-1%	-1%	0%	-1%
Average2W	Cyprus	0%	0%	0%	0%	0%	0%
Average2W	Czechia	-2%	-2%	-1%	-1%	-1%	-1%
Average2W	Denmark	-1%	-2%	-1%	-1%	-1%	-1%
Average2W	Estonia	-2%	-2%	0%	-1%	-1%	-1%
Average2W	Finland	-2%	-2%	-1%	-1%	-1%	-1%
Average2W	France	-2%	-2%	-1%	-1%	-1%	-1%
Average2W	Germany	-2%	-2%	0%	0%	0%	0%
Average2W	Greece	0%	-2%	-1%	0%	0%	0%
Average2W	Hungary	0%	-2%	-1%	-1%	0%	-1%
Average2W	Ireland	0%	0%	0%	0%	0%	0%

Average2W	Italy	-2%	0%	-1%	-1%	0%	0%
Average2W	Latvia	-2%	-2%	0%	-1%	0%	-1%
Average2W	Lithuania	-2%	-2%	-1%	-1%	-1%	-1%
Average2W	Luxembourg	0%	0%	0%	0%	0%	0%
Average2W	Malta	0%	0%	0%	0%	0%	0%
Average2W	Poland	-2%	-2%	-1%	-1%	-1%	-1%
Average2W	Portugal	-2%	-2%	-1%	-1%	0%	-1%
Average2W	Romania	0%	-2%	-1%	-1%	0%	-1%
Average2W	Serbia	0%	0%	0%	0%	0%	0%
Average2W	Slovakia	-2%	-2%	-1%	-1%	0%	0%
Average2W	Slovenia	0%	0%	-1%	-1%	-1%	-1%
Average2W	Spain	-2%	-2%	-1%	0%	-1%	0%
Average2W	Sweden	-2%	-2%	-1%	0%	-1%	-1%
Average2W	Switzerland	0%	0%	-1%	-1%	-1%	0%
Average2W	The Netherlands	0%	0%	-1%	-1%	-1%	0%
Average2W	United Kingdom	0%	0%	0%	0%	0%	0%
Average2WDF	Austria	-2%	-2%	-1%	-1%	-1%	-1%
Average2WDF	Belgium	-2%	-2%	-1%	-1%	-1%	0%
Average2WDF	Bulgaria	0%	-2%	-1%	-1%	0%	0%
Average2WDF	Croatia	0%	0%	-1%	-1%	0%	-1%
Average2WDF	Cyprus	0%	0%	0%	0%	0%	0%
Average2WDF	Czechia	-2%	-2%	-1%	-1%	-1%	-1%
Average2WDF	Denmark	-1%	-2%	-1%	-1%	-1%	-1%
Average2WDF	Estonia	-2%	-2%	-1%	0%	-1%	-1%
Average2WDF	Finland	-2%	-2%	-1%	-1%	-1%	0%
Average2WDF	France	-2%	-2%	-1%	-1%	-1%	-1%
Average2WDF	Germany	-2%	-2%	0%	-1%	0%	0%
Average2WDF	Greece	0%	-2%	-1%	-1%	0%	0%
Average2WDF	Hungary	0%	-2%	-1%	0%	0%	-1%
Average2WDF	Ireland	0%	0%	0%	0%	0%	0%
Average2WDF	Italy	-2%	0%	-1%	0%	0%	0%
Average2WDF	Latvia	-2%	-2%	-1%	0%	0%	-1%
Average2WDF	Lithuania	-2%	-2%	-1%	0%	-1%	-1%
Average2WDF	Luxembourg	0%	0%	0%	0%	0%	0%
Average2WDF	Malta	0%	0%	0%	0%	0%	0%
Average2WDF	Poland	-2%	-2%	-1%	0%	-1%	-1%
Average2WDF	Portugal	-2%	-2%	-1%	-1%	0%	0%
Average2WDF	Romania	0%	-2%	-1%	-1%	0%	-1%
Average2WDF	Serbia	0%	0%	0%	0%	0%	0%
Average2WDF	Slovakia	-2%	-2%	-1%	-1%	0%	-1%
Average2WDF	Slovenia	0%	0%	-1%	-1%	-1%	-1%
Average2WDF	Spain	-2%	-2%	-1%	-1%	-1%	0%
Average2WDF	Sweden	-2%	-2%	-1%	-1%	-1%	0%
Average2WDF	Switzerland	0%	0%	-1%	0%	-1%	-1%
Average2WDF	The Netherlands	0%	0%	-1%	-1%	-1%	0%

Average2WDF	United Kingdom	0%	0%	0%	0%	0%	0%
DC	Austria	-1%	-2%	0%	0%	-1%	-1%
DC	Belgium	-1%	-2%	0%	0%	0%	0%
DC	Bulgaria	0%	-1%	-1%	0%	0%	0%
DC	Croatia	0%	0%	-1%	0%	0%	-1%
DC	Cyprus	0%	0%	0%	0%	0%	0%
DC	Czechia	-1%	-1%	0%	0%	-1%	-1%
DC	Denmark	-2%	-1%	0%	0%	0%	0%
DC	Estonia	-1%	-2%	-1%	0%	-1%	-1%
DC	Finland	-1%	-1%	0%	0%	-1%	0%
DC	France	-1%	-1%	-1%	0%	-1%	0%
DC	Germany	-2%	-1%	-1%	-1%	0%	0%
DC	Greece	0%	-1%	-1%	0%	0%	0%
DC	Hungary	0%	-1%	-1%	0%	0%	-1%
DC	Ireland	0%	0%	0%	0%	0%	0%
DC	Italy	-1%	-1%	0%	0%	-1%	0%
DC	Latvia	-1%	-2%	-1%	0%	0%	-1%
DC	Lithuania	-1%	-2%	-1%	0%	0%	0%
DC	Luxembourg	0%	0%	0%	0%	0%	0%
DC	Malta	0%	0%	0%	0%	0%	0%
DC	Poland	-1%	-2%	-1%	0%	0%	0%
DC	Portugal	-1%	-1%	-1%	0%	0%	0%
DC	Romania	0%	-2%	-1%	0%	0%	-1%
DC	Serbia	0%	0%	0%	0%	0%	0%
DC	Slovakia	-1%	-2%	-1%	0%	0%	0%
DC	Slovenia	0%	0%	-1%	0%	0%	-1%
DC	Spain	-1%	-2%	0%	-1%	-1%	-1%
DC	Sweden	-1%	-1%	0%	0%	-1%	0%
DC	Switzerland	0%	0%	0%	0%	-1%	0%
DC	The Netherlands	0%	0%	0%	-1%	-1%	0%
DC	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-1035	Transmission	TBD	TBD

Potential impact	Mitigation measures	Related costs included in project CAPEX and OPEX	Additional expected costs
Industrial Safety Measures	Specific design and studies about safety with their impacts and mitigations measures to avoid or accept them. (Maintenance equipment, mechanical protections, monitoring systems)	CAPEX : roughly 7% of the Project Cost	
Environmental Impacts (ecological, humans, society, industrial and economical)	Specific study by independent consultant to analyze and propose the best corridor (minimum impact). Measuring all the impact and looking for solutions to avoid or compensate. (animals, flowers, water, protected aeras…)	OPEX : - 30% of Project Studies (pre-commissioning) 1% of the Project Cost (for monitoring)	

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.
For pipeline infrastructures: 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 GRTgaz have also a long outstanding experience with the construction and exploitation of pipelines in good relationship with concerned neighbours/farmers/….
For the terminal and for the pipeline will in line with the EIA Directive an environmental impact assessment or environmental screening be executed and mitigating measures will be foreseen when needed.

Fluxys and GRTgaz have a strong track record concerning limitation of the impact on environment due to new pipelines. Mitigations measures are included in the costing and respect the Avoid / Reduce / Compensate principle. The specific study led by an independent consultant at the very beginning of the FEED allow to adapt the project's layout (to Avoid sensitive areas) and identify needed measures to reduce or compensate.

In France, the specific environmental requirements defined by this study will be followed by French authorities all along the pipeline's life. A team within GRTgaz is dedicated to the follow-up of this topic.

Moreover, explicit support from the region will further allow to reduce the risk from public and local opposition.

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]

Concreteness

The 1st step of the project which aims at developing a first local network in the Port of Dunkirk, benefits from established relationships with key H2 producers and offtakers. It is a first concrete step to meet industrial decarbonization targets as of 2028. Such benefits at local level can not be highlighted with the current CBA analysis. In our vision, these local hubs are necessary and the first step for the development of a European hydrogen market. They will allow to future proof the whole hydrogen value chain.

Concretely, in autumn 2022, GRTgaz conducted a call for expressions of interest to qualify and confirm market interest for a hydrogen transport infrastructure project in the Port of Dunkirk.
11 companies have confirmed their needs, validating the opportunity for an initial hydrogen transport infrastructure in the port. Among these 11 companies

- 5 producers with up to 1 GW of installed electrolysis capacity expressed an interest in connecting renewable or low-carbon hydrogen production projects to the transport network.
- 6 industrial consumers have also expressed an interest in the project. Hydrogen consumption projects aim to develop new industrial activities (e.g. to produce e-fuels) on the Port, or to decarbonize existing industrial activities, mainly in the steel sector, and thus meet the decarbonization targets set by manufacturers. The projects vary in terms of maturity and hydrogen volumes, with some of them aiming for rapid deployment.

On the basis of this feedback, GRTgaz has launched a feasibility study for a twenty-kilometers pipeline along a route that will connect the projects of respondents who have agreed to co-finance the study.

Decarbonisation of European Industry

The project will help decarbonise a large part of the current fossil-based industrial usages in North-Western Europe with the substitution of conventional fossil-fuels by low carbon and renewable hydrogen, thereby meeting the EU ambitions to decarbonise the energy system. The project is a key milestone in the development of a renewable hydrogen market as envisioned by the European Commission. The supply of hydrogen via an open-access pipeline will offer a competitive alternative of clean energy supply to a wide range of industrial consumers. Linking major industrial

areas in France, Belgium and Germany the project will be key in supporting several European industrial and mobility sectors in reaching their decarbonisation objectives. The infrastructure will notably enable the replacement of coke in the steel and other fossil-fuels in other industries as well as in the mobility sector by renewable and low-carbon hydrogen.

Security of supply

Acting as a connector between hydrogen ecosystems, the project will be instrumental to the development of an integrated energy system, by conjoining the areas with the best production potential in North-West Europe with demand areas, especially the areas with a higher density of hard-to decarbonise industries like the Dunkirk, Ghent and Antwerp areas. Therefore, the project will largely contribute to the security of supply of the French, Belgian and globally North-West European market, which is of paramount importance for several years for Europe with regards to growing geopolitical tensions.

Job Creation

The project is expected to have a significant impact on job creation, both for the energy sector and for consumers of renewable hydrogen that will be connected to the project. For the energy sector, the deployment of hydrogen infrastructure requires supplementary skills that already lead GRTgaz to train and upskill its employees. As this project aims to connect renewable energy production sites and can incentivise the development of additional renewable energy capacity, it is expected to contribute to relocating energy production to Europe. This assessment is in line with the findings of the recent study ("Hydrogen generation in Europe: Overview of costs and key benefits, July 2020") prepared for the European Commission. This study estimates that more than 10 000 jobs would be created for each billion EUR invested into the "hydrogen value chain, be it in 2030 or 2050".

F. Useful links [Promoter]

Useful links:

Web site dedicated to the call for interest launched by GRTgaz to assess market players' hydrogen transmission needs in the Port of Dunkirk: https://www.grtgaz.com/nos-actions/open-season-hydrogene-dunkerque

Website dedicated to the French part of the project https://www.grtgaz.com/en/our-actions/renewable-gas-circular-economy/dhune

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