HI WEST 10 (Less-Advanced)

MosaHYc

Reasons for grouping [ENTSOG]

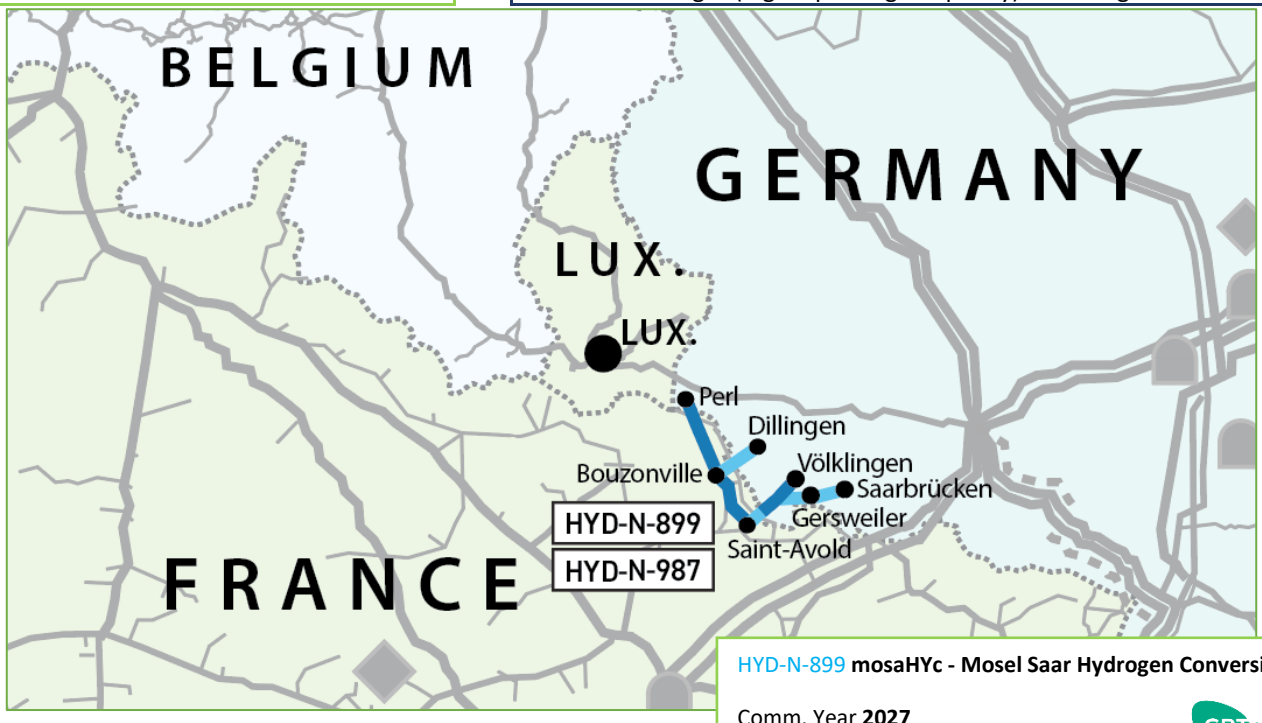
The project group is a standalone project shared by GRTgaz and Creos to repurpose a former Methane infrastructure by a newly Hydrogen.

The group includes investments in France (HYD-N-899) and Germany (HYD-N-987).

Objective of the group [Promoter]

MosaHYc is a cross-border hydrogen network linking several producers of renewable and low carbon hydrogen with industrial and mobility consumers across France and Germany in the Mosel-Saarland region at the heart of Europe. This first hydrogen hub will meet the challenges of decarbonizing local industries and heavy mobility by securing the access for users to several electrolysers as of 2027. They will allow to future proof the whole hydrogen value chain including repurposing of existing assets (such benefits cannot be enhanced by the CBA analysis).

The project is developed in cooperation by GRTgaz and CREOS. The overall length of the first phase of the project, expected to be commissioned in 2027, is 100km of which 70km are repurposed pipelines. During future phases, the project will interconnect with GRTgaz' HY-FEN project as a key milestone to an integrated European hydrogen backbone linking the Iberian Peninsula with demand centers in France, Germany and the Benelux countries. From commissioning, mosaHYc will provide significant decarbonisation potential across a range of hard-to-abate sectors and future-proof the competitiveness of its industrial and mobility clients, thus addressing major environmental and societal challenges (e.g. improving air quality) in the region.



HYD-N-899 **mosaHYc - Mosel Saar Hydrogen Conversion**

Comm. Year **2027**

HYD-N-987 **mosaHYc (Mosel Saar Hydrogen Conversion) – Germany**

Comm. Year **2027**

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-899	Bouzonville Fr – cross boarder (to Dillingen De)	New	600	3	0
HYD-N-899	Carling Fr – Merschweiller Fr	Repurposing	250	46	0
HYD-N-899	Carling Fr – cross boarder (to Fürstenhausen De)	New	150	3	0
HYD-N-987	Cross boarder (from Bouzonville Fr) – Dillingen De	New	600	15	0
HYD-N-987	Cross boarder (from Merschweiller Fr) – Perl De	Repurposing	250	7	0
HYD-N-987	Fenne Völklingen De – Fürstenhausen De	Repurposing	100/200	2	0
HYD-N-987	Fürstenhausen De – cross boarder (to Carling Fr)	Repurposing	150/200	17	0
HYD-N-987	Fürstenhausen De – Saarbrücken De	New	300	10	0

Capacity increment [ENTSOG]

TYNDP Project code	Point name	Operator	From system	To system	Capacity increment [GWh/d]	Comm. year
HYD-N-899	H2_IP_DE-FR	GRTgaz	Transmission Germany (DE Hydrogen)	Transmission France (FR Hydrogen)	0,9	2026
HYD-N-899	H2_IP_DE-FR	GRTgaz	Transmission France (FR Hydrogen)	Transmission Germany (DE Hydrogen)	5,5	2026
HYD-N-987	H2_IP_DE-FR	Creos Deutschland Wasserstoff GmbH	Transmission France (FR Hydrogen)	Transmission Germany (DE Hydrogen)	5,5	2026

HYD-N-987	H2_IP_DE-FR	Creos Deutschland Wasserstoff GmbH	Transmission Germany (DE Hydrogen)	Transmission France (FR Hydrogen)	0,9	2026

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-899	30	20%	1,1	20%
HYD-N-987	78	30%	4	50%

Description of the cost and range [Promoter]
Costs estimates are based on feasibility study results and empirical values from other Creos and GRTgaz pipeline projects, offers obtained from companies and based on standard service specifications negotiated with the construction service providers.

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

Repurposed pipelines:

- Pigging operations to evaluate the steel integrity
- Deviation of the pipeline when mandatory (hazard studies)
- Adaptation of sectioning equipment
- Construction of new sectioning equipment

Most of the repurposed pipelines are already inerted

Details of the main OPEX expenditure items:

It was made on the basis of 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 on repurposed network.

Given the state of the studies to date and the information gathered at this stage, we propose to retain standard contingencies of the order of 30% of the total amount. These contingencies take into account our experience on the 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

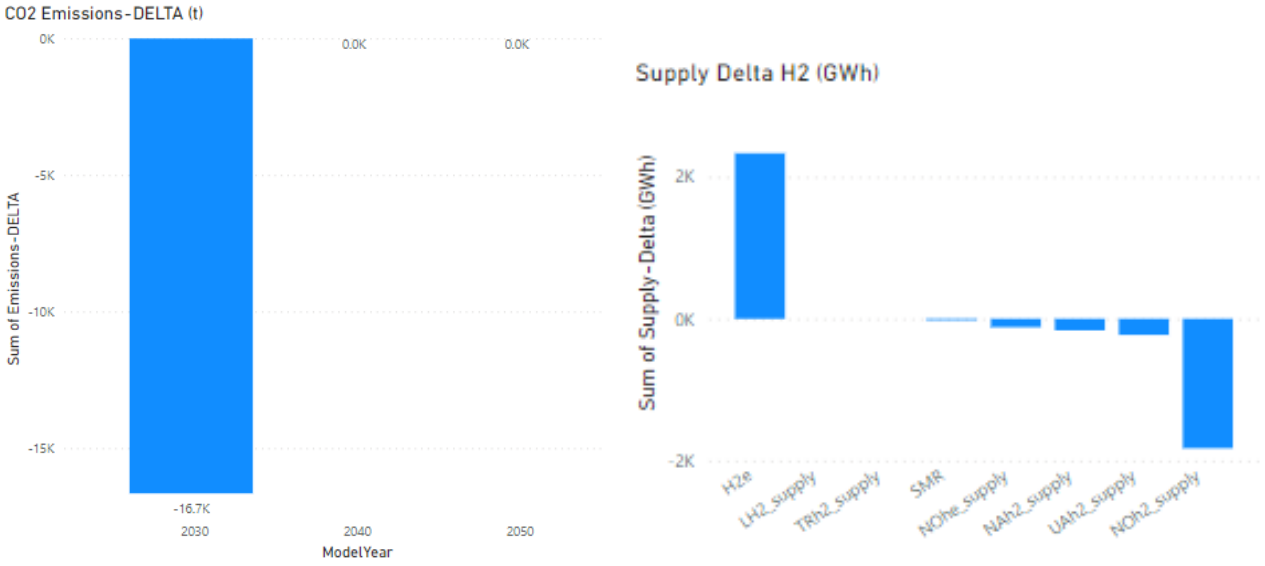
This section provides a summarised analysis by ENTSOG of the main benefits stemming from the realisation of the overall group. More details on the indicators are available in Annex D of TYNDP 2022[1].

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

Distributed Energy

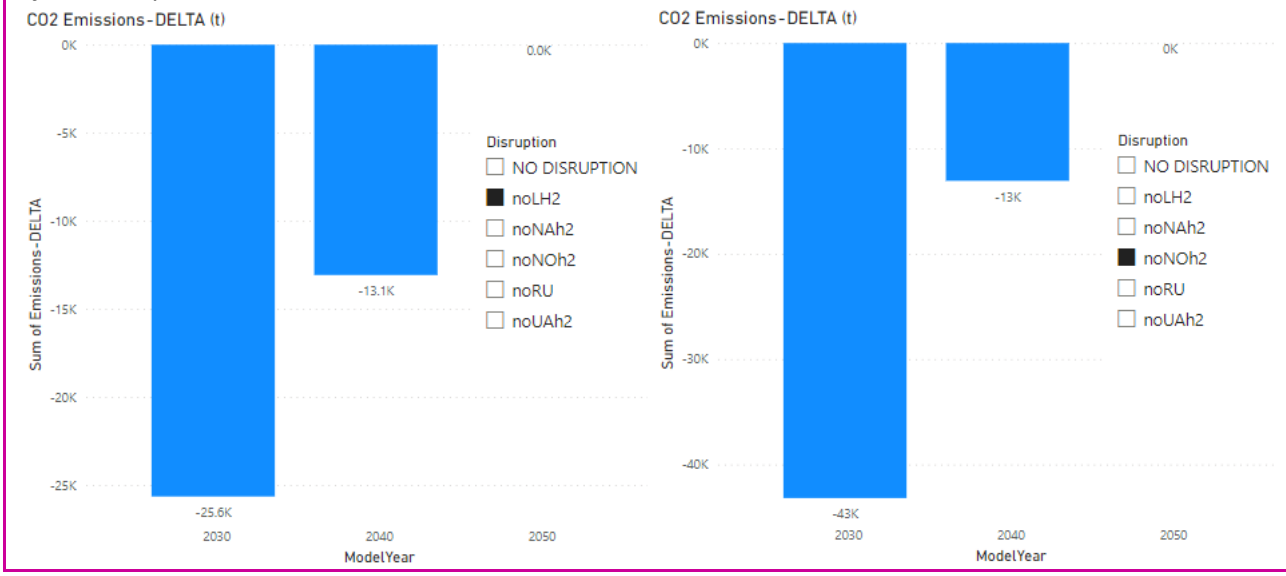
Sustainability benefits

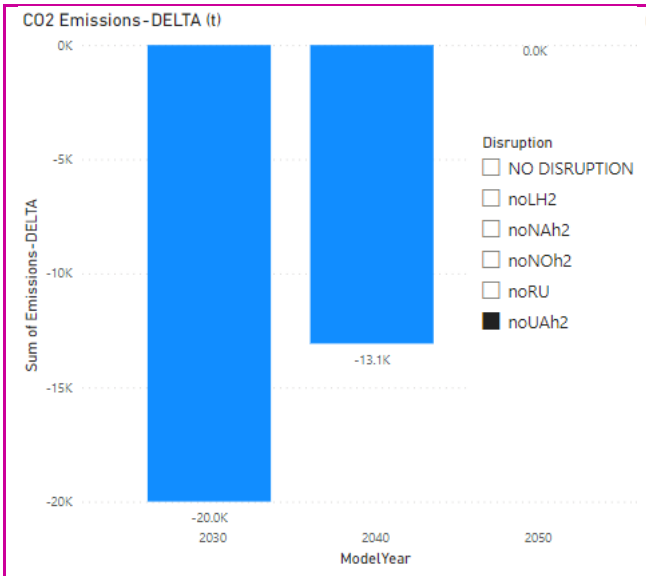
In the reference case, which analyses yearly demand in two periods (average winter and average summer), the project group will contribute to sustainability by reducing overall CO2 emissions by 16,7 kt in 2030. The project group enables the transport of green hydrogen and so then replacing use of Norwegian supply which is considered as blue hydrogen in 2030.

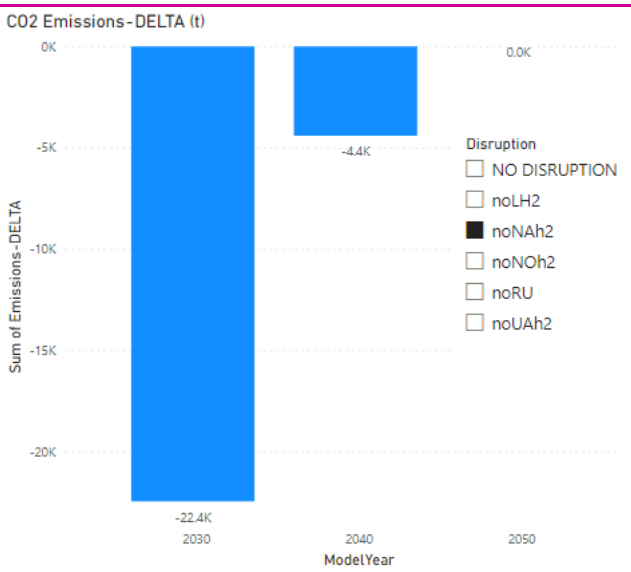


Similar trend is expected under any supply disruption in 2030. Moreover, sustainability benefits are expected under any disruption in 2040.

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







Security of Supply:[2]

It is important to notice as the capacities are very low, small SOS benefits are expected with this project.

> 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

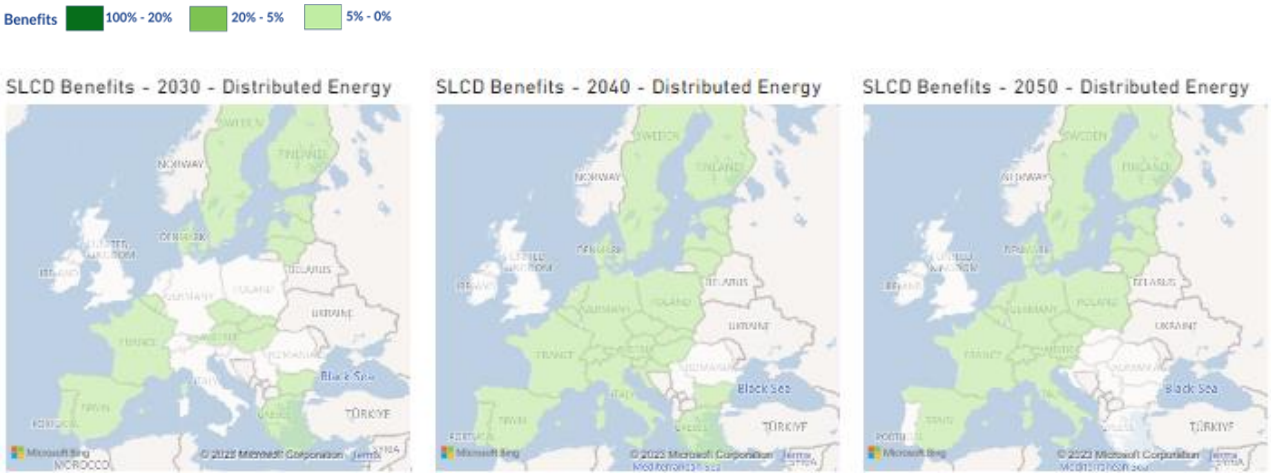
Under 2 -week and 2-week dunkelflaute climatic stress case, as well as under peak day climatic case the project group is also not showing security of supply benefits.

[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 is not further contributing to the mitigation of hydrogen demand curtailment risk.

> Single largest capacity disruption (SLCD):

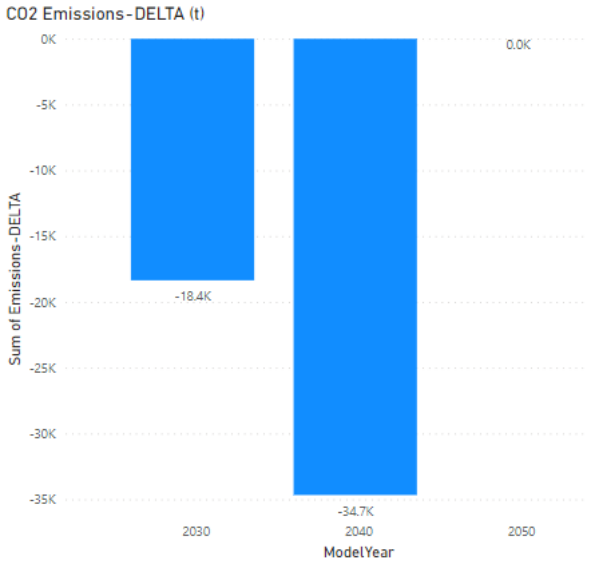


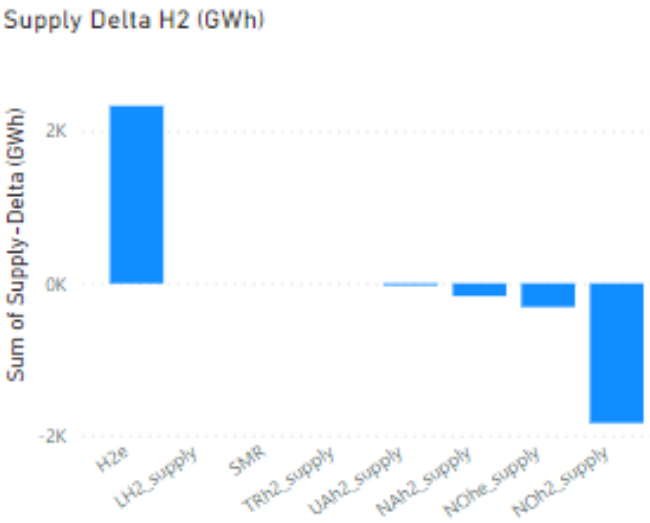
In case of single largest capacity disruption (SLCD), the project group reduces the risk of demand curtailment in some countries by 1% in 2030. In addition, from 2040, the project group helps to mitigate the risk of demand curtailment due in almost all countries.

Global Ambition

Sustainability benefits

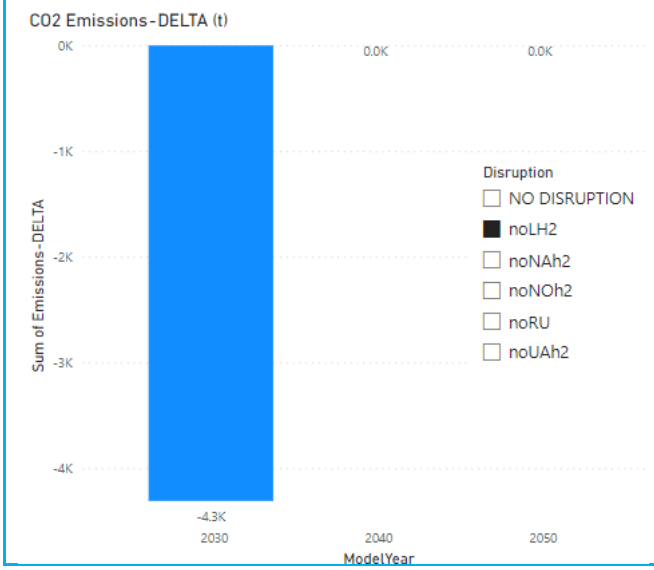
In the reference case, which analyses yearly demand in two periods (average winter and average summer), the project group will contribute to sustainability by reducing overall CO2 emissions by 18,4 kt in 2030 and 34,7 kt in 2040. The project group enables the transport of green hydrogen and so then replacing use of Norwegian supply which is considered as blue hydrogen in 2030.

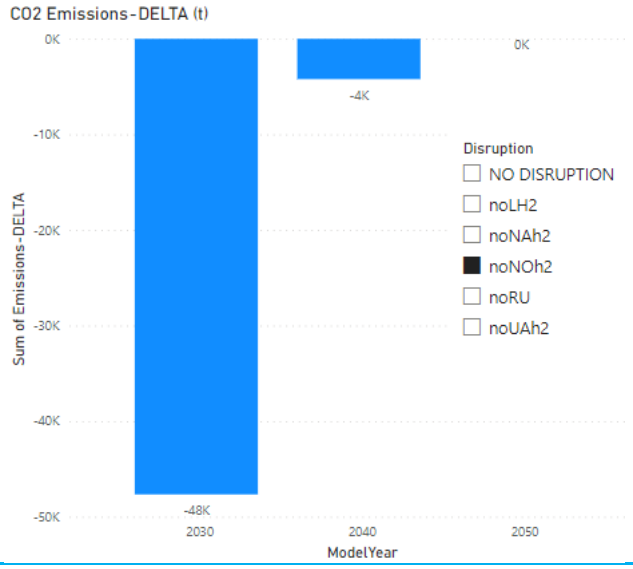


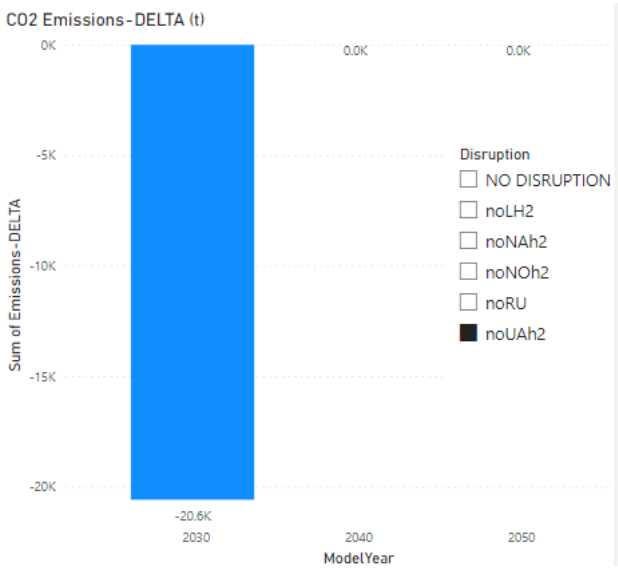


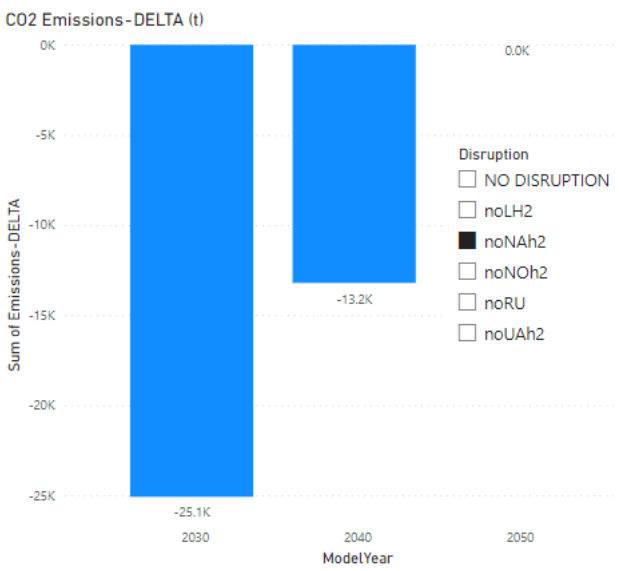
Similar trend is expected under any supply disruptions.

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









Security of supply benefits

> 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 in 2040, that cannot be displayed on the map.

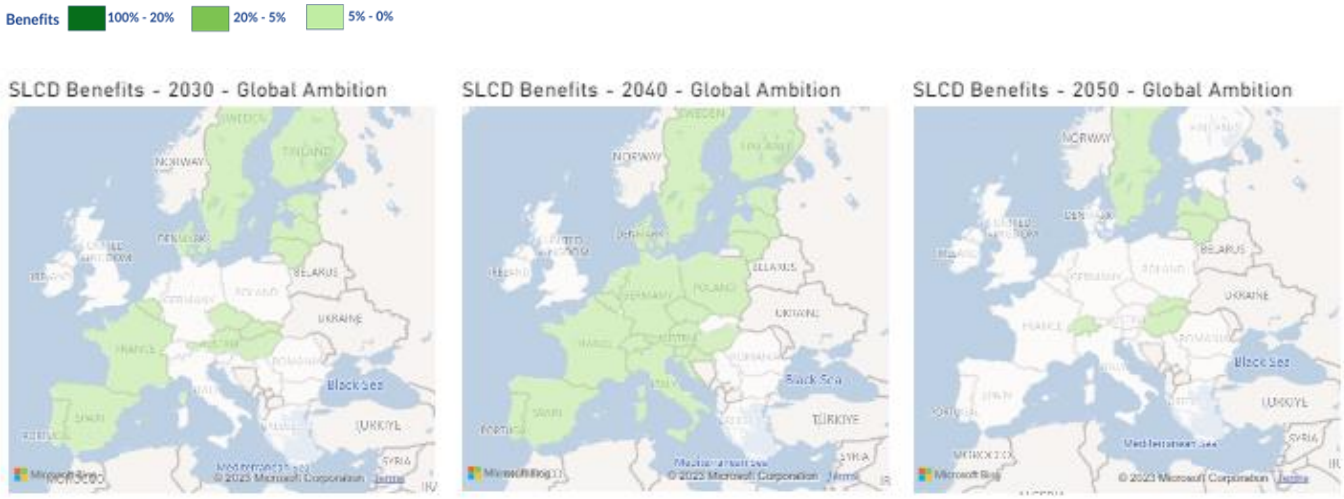
> Climatic stress cases

Under 2 -week and 2-week dunkelflaute climatic stress case, as well as under peak day climatic case the project group is also not showing security of supply benefits.

> Disruption cases (S-1):

Similarly, under supply disruption cases, the project group is not further contributing to the mitigation of hydrogen demand curtailment risk.

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



In case of single largest capacity disruption (SLCD), the project group reduces the risk of demand curtailment in some countries by 1% in 2030. In addition, in 2040, the project group helps to mitigate the risk of demand curtailment due in almost all countries.

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	-16653,02	538677299	538693952,1
2030	noLH2	DE	tonne	-25645,92	540175890,2	540201536,1
2030	noNAh2	DE	tonne	-22442,00	539785356,1	539807798,1
2030	noNOh2	DE	tonne	-43182,90	538877197,8	538920380,7
2030	noUAh2	DE	tonne	-19994,58	539378771,9	539398766,5
2030	NO DISRUPTION	GA	tonne	-18356,40	592910448,4	592928804,8
2030	noLH2	GA	tonne	-41262,61	594817481,2	594858743,8
2030	noNAh2	GA	tonne	-25081,89	594141433,2	594166515,1
2030	noNOh2	GA	tonne	-47659,59	593310994,3	593358653,9
2030	noUAh2	GA	tonne	-20576,61	593627617,9	593648194,5
2040	NO DISRUPTION	DE	tonne	0,00	392077044	392077044
2040	noLH2	DE	tonne	-13073,36	392213883,4	392226956,7
2040	noNAh2	DE	tonne	-4405,15	392188097,7	392192502,8

2040	noNOh2	DE	tonne	-13073,36	392144022,6	392157096
2040	noUAh2	DE	tonne	-13073,36	392399182,9	392412256,2
2040	NO DISRUPTION	GA	tonne	-34672,81	396523251,6	396557924,4
2040	noLH2	GA	tonne	0,00	397455196,7	397455196,7
2040	noNAh2	GA	tonne	-13215,46	397301976,6	397315192,1
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
Belgium	-1%	-1%	-2%	-1%	-1%	0%
Czechia	-1%	-1%	-2%	-2%	-2%	-1%
Estonia	-1%	-1%	-2%	-1%	-2%	0%
Finland	-1%	-1%	-2%	-1%	-2%	-1%
Germany	0%	-1%	-2%	-1%	-1%	0%
Latvia	-1%	-1%	-2%	-1%	-1%	-1%
Lithuania	-1%	-1%	-2%	-1%	-1%	-1%
Poland	-1%	-1%	-2%	-1%	-1%	0%
Portugal	-1%	-1%	-2%	-1%	0%	-1%
Slovenia	0%	0%	-2%	-1%	-1%	0%
Sweden	-1%	-1%	-2%	-1%	-2%	-1%
Switzerland	0%	0%	-2%	-1%	-1%	-1%
The Netherlands	0%	0%	-2%	-1%	-2%	0%
France	-1%	-1%	-2%	-1%	-1%	0%
Austria	-1%	-1%	-2%	-1%	-2%	0%
Bulgaria	-1%	0%	-1%	0%	0%	0%
Croatia	0%	0%	-1%	-1%	0%	-1%
Denmark	-1%	-1%	-1%	-1%	-1%	0%
Greece	-1%	0%	-1%	0%	0%	0%
Hungary	-1%	-1%	-1%	-1%	0%	-1%
Italy	-1%	-1%	-1%	-1%	-2%	0%
Slovakia	-1%	-1%	-1%	0%	0%	-1%

Spain	-1%	-1%	-1%	-1%	-2%	0%
Romania	0%	-1%	-1%	0%	0%	0%

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

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

DC	Switzerland	0%	0%	0%	0%	-1%	0%
DC	The Netherlands	0%	0%	0%	0%	0%	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-899	New Pipeline – DN150 - Carling Fr – cross boarder (to Fürstenhausen De) + DN600 - Bouzonville Fr – cross boarder (to Dillingen De)	Total 3km in Creutzwald, Diesen and Carling + 3 km in Bouzonville, Heining-lès-Bouzonville	- The project is partially located in a Sensitive Natural Area, state-owned forests - It crosses potential wetlands - Located in a biodiversity reservoir / potential presence of patrimonial species
HYD-N-987	New Pipeline – DN600 - cross boarder - Dillingen De	Total 15 km from boarder to Dillingen	- The project is partially located in a protected landscape areas (5.54km) and nature reserves (50m) - It crosses areas with groundwater (4.47km) and flood areas (1.56km) - Protected biotopes must be crossed (184m) This is the result of in-depth environmental impact assessments

Potential impact	Mitigation measures	Related costs included in project CAPEX and OPEX	Additional expected costs
Industrial Safety Measures **Environmental Impacts (ecological, humans, society, industrial and economical)**	Specific design and studies about safety with their impacts and mitigations measures to avoid or accept them. (Maintenance equipment, mechanical protections, deviation, monitoring systems)	CAPEX: around 7% of the Project Cost ~7 M€ OPEX: - Around 30% of Project Studies (pre-commissioning)	

	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…) Prevent any damage that could impact environment	- Around 1% of the Project Cost (for monitoring) - Around 30% of maintenance costs (after commissioning) to prevent any impact	

Environmental Impact explained [Promoter]

The environmental impact concerns mainly the new pipelines. CREOS 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.

Concerning repurposing, the environmental impact is very limited, but certain diversions must be anticipated with the updating of hazard studies.
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]

mosaHYc benefits from established relationships with key H2 producers and offtakers, it is a first concrete step to meet industrial and heavy mobility decarbonization as of 2027. Such benefits at local level cannot 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 including repurposing in 2027.

Concretely:

- The project benefits from explicit and concrete support from local, regional and national governments and established relationships with key stakeholders on the hydrogen supply and demand side in the region
- Strong relationships (incl. contracts) also exist with key clients for decarbonised hydrogen across both countries, since the 01.10.2022 we highly increased the efforts of the development of the commercial contracts between GRTgaz, Stahl-Holding-Saar/ ROGESA and Creos to meet the ambitious timeline of the project. GRTgaz, CREOS and SHS are working on an Investment Decision Contract to secure the investment, the signature is planned in September 2023 as well as the inter-operator agreement between the operators.

Conversion process:

- In France, a first pigging of the main repurposed part 'Carling-Merschweiller' allowed to have a repurposing work plan
- In Germany, technical investigations of a first subsection for the repurposing of section 1 'Fürstenhausen-Carling' are done and shown the measures to be implemented for conversion. These measures can be transferred for the other sections conversion 'Perl – Besch' and 'Fenne – Fürstenhausen'

Construction process:

- In Germany, the technical part of the project has been started with the approval of preliminary start of project measures ("vorzeitiger Maßnahmenbeginn") on the 01.10.2022 by the Federal Ministry for Economic Affairs and Climate Protection of the Federal Republic of Germany ("Bundesministerium für Wirtschaft und Klimaschutz der Bundesrepublik Deutschland"). Progress includes the first technical studies, land use planning, environmental impact studies for the new pipeline section 5 'Bouzonville-Dillingen'
- In France, the feasibility study ended in June 2022 and the basic engineering studies started in September 2022 and will be achieved in January 2024

- mosaHYc will benefit from ADEME national grant (7 m€) for R&D issues (https://librairie.ademe.fr/cadic/7731/mosahyc-2023.pdf) and is under IPCEI process for the German part
- mosaHYc is an active member of the EEIG Grande Region Hydrogen (11 members – www.grande-region-hydrogen.eu) – the valley has recently be labeled by Clean Hydrogen partnership and Mission Innovation (https://h2v.eu/hydrogen-valleys/grande-region-hydrogen-eeig)

The capacity provided by the project will allow to accommodate hydrogen volumes that far outweighs the demand of the local cluster, thus unlocking important benefits for European consumers through mosaHYc's integration and interoperability with cross-border hydrogen projects and ultimately an integrated, cross-border hydrogen network in the HI West priority corridor. This will ensure security of supply and energy independence across the Union while being cost-efficient (relying on repurposing of existing gas pipelines) and drives the development of economic growth. Finally, open access to the network will allow for effective competition driving lower prices. A note setting out more detail is attached to this application.

In the emerging hydrogen valley, mosaHYc is an enabler to decarbonise the energy sector and the steel industry in the region, thus securing the sustainability of approximately 40,000 jobs. Furthermore, the transition from natural gas to hydrogen provides a long-term purpose for the existing pipeline network and the jobs at its operators.

Indeed, mosaHYc will become an essential part of the hydrogen value chain which will not only impact its production, transmission and storage but also drive the development of new use cases (e.g. mobility applications across the zone) which will require a wide range of new skills. As a result, there are significant positive externalities of our project for growth across the French, German and European economy as a whole.

F. Useful links [Promoter]

Useful links:

- mosaHYc is an active member of the EEIG Grande Region Hydrogen (11 members – www.grande-region-hydrogen.eu) – the valley has recently be labeled by Clean Hydrogen partnership and Mission Innovation (https://h2v.eu/hydrogen-valleys/grande-region-hydrogen-eeig)
- mosaHYc dedicated website (mosaHYc | grtgaz.com)
- mosaHYc will benefit from ADEME national grant (7 m€) for R&D issues (https://librairie.ademe.fr/cadic/7731/mosahyc-2023.pdf) and is under IPCEI process for the German part