Welcome to the launch webinar for the "H_2, CO_2 & CH_4 Consultations: Future Prospects" process

Please wait, the webinar is about to start.

Guidelines

This webinar will be recorded. The recording will be available on the NaTran and Teréga web pages about the initiative in the next few days.
By taking part in this webinar, you agree to be recorded for the purposes of capturing a video which will be available to view on the Teréga and NaTran websites.

Mute your microphone

Ask your questions in the Q&A section, specifying your full name and company in the question. Questions will be published automatically.

We will answer all the questions, either live (in writing or orally), or in the report on the webinar, which will be published on the NaTran and Teréga websites

AGENDA

9.05 am: **Introduction by A. Chevallier**

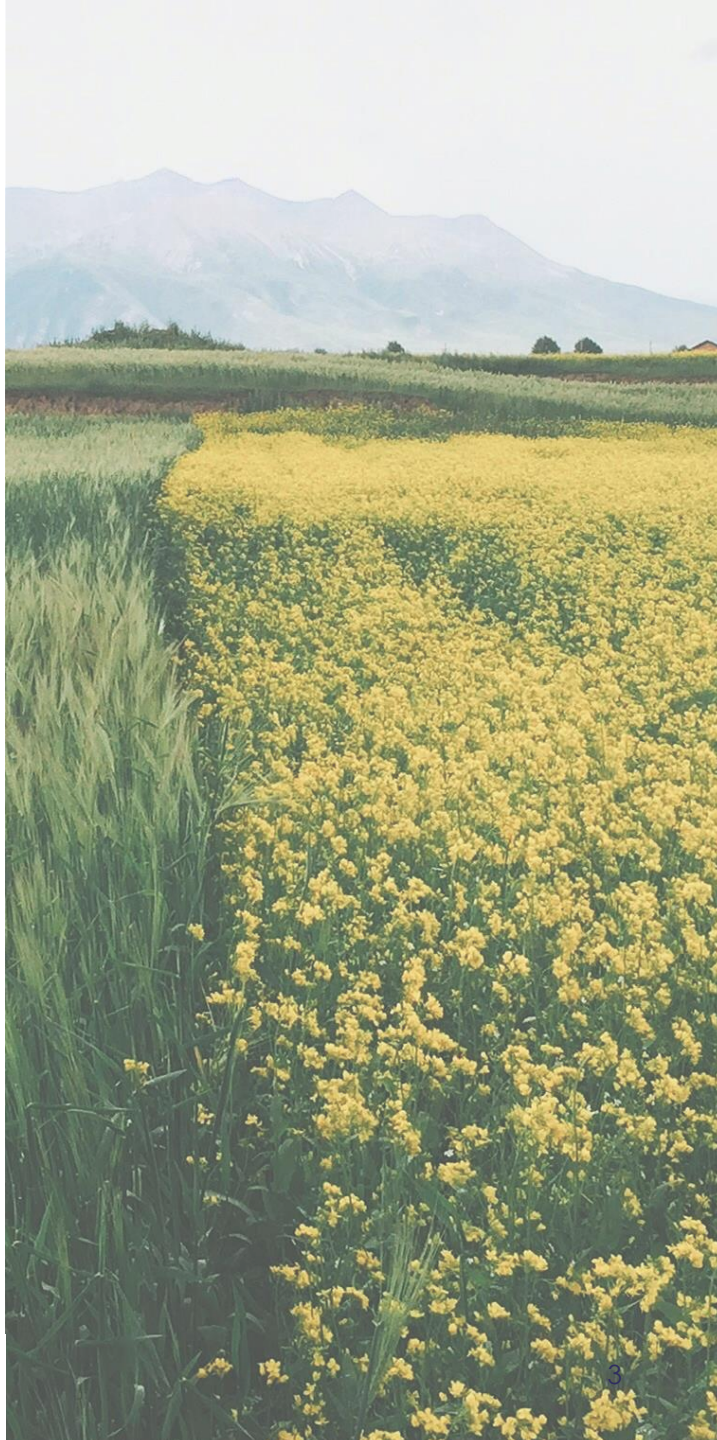
9.15 – 9.25 am: **Context and challenges**

9.25 – 9.35 am: **Presentation & how to take part (Q&A)**

9.40 – 10.20 am: **Prospective scenarios (Q&A)**

10.35 – 11.05 am: **H_2 and CO_2 prospective development plans (Q&A)**

11.15 am: **Conclusion**



Introduction by Alexandre Chevallier

Alexandre Chevallier

Deputy Director of Security of Supply and New Energy Products

DGEC (Directorate General for Energy and the Climate)

Presentation of the context and challenges

01

Philippe Madiec

Deputy General Secretary

NaTran

What is the background to this consultation process?
What issues does it raise?

The key role of transmission networks for rapidly emerging gas carriers:

- CH_4, H_2 and CO_2 carriers with interdependencies and synergies
- The networks: a major tool for optimising the energy system
- Ensuring optimised investment in the networks

Little visibility given to players on the need for relevant logistics and infrastructure

- Operators need to plan the development and construction of infrastructure
- Users need to initiate their transformation projects

French and European regulations

- Preparing for the new responsibilities arising from the 4th European Decarbonised Gas Market Package, which will be transposed by August 2026;
- Continuing to meet our legal obligations under the French Energy Code with regard to security of supply
- A pre-existing contribution to the European Ten Year Network Development Plan (TYNDP)

Why carry out a consultation process?

To work with you to build a shared, coherent vision of tomorrow's infrastructure

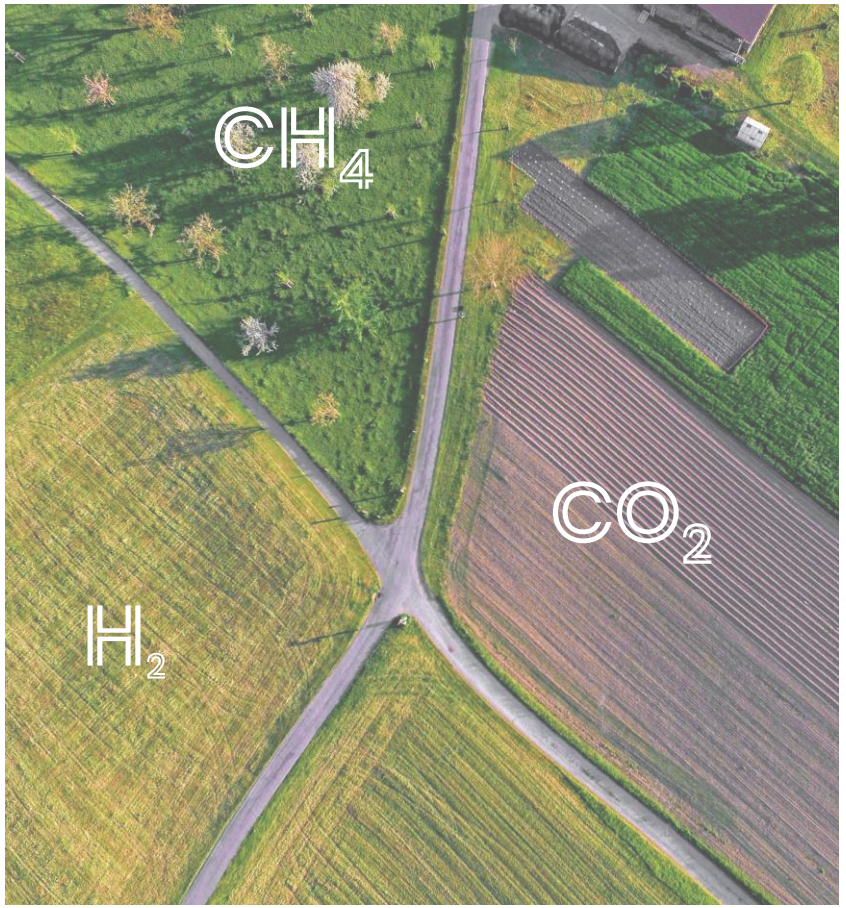
Our objectives:

Sharing the assumptions behind our development scenarios to ensure that they are consistent with your visions and consolidating them with your inputs

- ⇨ Providing input for the ten-year development plans and multi-year forecasts for CH_4
- ⇨ Consolidating the H_2 and CO_2 prospective development plans

Expectations you expressed when registering:

> *Understanding NaTran & Teréga's **vision of the future***
>
> *Viewing the **prospective development plans** for CO_2 and H_2 transmission*
>
> *Understanding the **objectives and scope** of the consultation*



Presentation of the process and how to take part

02

Marie-Claire Aoun

Director of Strategy and Institutional Relations

Teréga

What does the consultation process consist of?

A 1st edition designed for the long term

Aspects subject to consultation
Procedures for discussions with stakeholders

From 10 April, we will make the following documents available (in French and English):

- Webinar presentation and recording
- A note presenting the scenarios & an Excel spreadsheet detailing volumes and underlying figures
- A note setting out the H_2 and CO_2prospective development plans
- A document setting out all the points and questions we are putting to you

Where can I find the documents?

- **On the** NaTran and Teréga **websites**

What are we responding to? In what format?

- The dates for collecting contributions on the range of scenarios and the H_2 and CO_2 prospective development plans are **10 April to 2 May**
- Answers requested by email: **ConcertationsCH4H2CO2@natrangroupe.com** and **Concertationsch4h2co2@terega.fr**
- Option of signing a confidentiality agreement or holding bilateral talks with NaTran and/or Teréga

Further questionnaires will be opened during each of the three workshops

Questions & Answers

Over to you!

Ask your questions in the Q&A section, specifying your full name and company in the question.

We will answer all the questions, either live (in writing or orally), or in the report on the webinar, which will be published on the NaTran and Teréga websites

The prospective scenarios

03

Eglantine Kunle

Forecasting department manager

NaTran

Emilie Mauger

Head of prospective studies

Teréga

The prospective scenarios proposed: sensitivities around the government bodies' scenario

One of the aims of this consultation is to make sure the range of scenarios covers all the uncertainties and developments the various stakeholders have in mind, and then to consolidate them based on your feedbacks

« Acceleration of decarbonisation efforts »

Strong ambition for hydrogen and CCU, as well as sginification development of green gas

A

Scenario that has several fundamentals in common with the reference scenario in the French gas TSOs' and DSOs' Gas Perspectives documents and the references scenario in RTE's Generation Adequacy Report. Fit for 55 targets achieved

Central scenario

PP

Scenario constructed form the various elements provided by government bodies, including the PPE3 consultation documents

« Partial achievement of ET objectives, taking supply-demand balance uncertainties into account » sensitivity scenarios

More or less significant delays in implementing the energy transition in certain sectors, but also in the production mix, combined with uncertainties that raise questions about te suppy-demand balance

B

A delay of around 5 years compared with scenario A. Scenario based on the contingencies described in the Gas Perspectives and RTE's Generation Adequacy Report.Reduced and delayed ambitions for hydrogen and CCU, less marked drop in methane consumption than in the other scenarios.

A-Aléa prod

Scenario in which the transition of end uses is accelerated (final consumption from scenario A), combined with uncertainties in production that raise questions about the supply-demand balance.

The prospective scenarios proposed:
Focus on consumption and production assumptions

One of the aims of this consultation is to make sure the range of scenarios covers all the uncertainties and developments the various stakeholders have in mind, and then to consolidate them based on your feedback

« Acceleration of decarbonisation efforts »

Strong ambition for hydrogen and CCU, as well as sginification development of green gas

Cons. « A »

Cons. « A-bis »
Sensitivity of scenario A relating to industry

Prod. mix A

Central scenario

PP

Scenario constructed form the various elements provided by government bodies, including the PPE3 consultation documents

« Partial achievement of ET objectives, taking supply-demand balance uncertainties into account » sensitivity scenarios

More or less significant delays in implementing the energy transition in certain sectors, but also in the production mix, combined with uncertainties that raise questions about te suppy-demand balance

Cons. « B »

Cons. « A »

Prod. mix « B »

Prod. mix « Aléa Prod »

Simulation of the hourly supply-demand balance and flows at the French and European level

The methodology used to construct the energy consumption and production scenarios is based on a number of factors (reviews to date, regulatory, technical and economic factors, benchmarks)

Factors	Description	Scenario inputs	Example application (aviation for energy consumption)
Energy consumption	*Energy consumption, sector by sector, is forecast using:* ***1) Historical reviews** for each sector* ***2) Regulatory analyses*** ***3) Technical and economic analyses*** ***4) Benchmarks** with other studies*	**Historical review**	• **Current kerosene consumption** in France by airports • **Current logistics** for kerosene transport/production
		Regulation	• **RefuelEU Aviation (2023):** Minimum proportions of sustainable aviation fuels (SAF) and RFNBO from 2025 to 2050
		Technical and economic analyses	• **Fuel production costs** • **Specific consumption of H_2 and CO_2** for the production of bio- and e-fuels • **Kerosene transport costs** (pipeline, truck, rail and barge) • Location of **sources of biogenic CO_2** • **Proportion imported** versus produced in France
		Benchmark with other studies	• **Fuel mix** in aviation (ADEME, RTE, roadmap) • **Growth in air traffic and energy efficiency** • **Production of e-fuels** in France in 2030 and 2035 according to RTE
Energy production	***Example for H_2 production**, defined on the basis of:* ***1) H_2 consumption*** ***2) SMR production*** ***3) H_2 import rate*** ***4) Levels of flexibility** of electrolysers* ***Electrolytic production of H_2** (kt H_2/year) = H_2 consumption – SMR production – H_2 imports* ***Electrolyser capacity** (MW): based on annual production (kt H_2/year) and flexibility levels*	**H_2 consumption**	• Defined sector by sector as explained above
		SMR production	• **Bottom-up scenarios**, based on use, construction date and public announcements in line with the narrative specific to each scenario
		H_2 imports	• **Defined in line with the narrative of each** scenario.
		Level of flexibility of electrolysers	• **Analysis of RTE scenarios** (GAR 2035) • **Industrial feedback** • Organisation of a **workshop dedicated to electrolyser flexibility as part of this consultation process**

Source: PPE, SNBC 2, ADEME sectoral transition plans, 2024 Gas Perspectives, France Stratégie

Detailed presentation of the scenarios

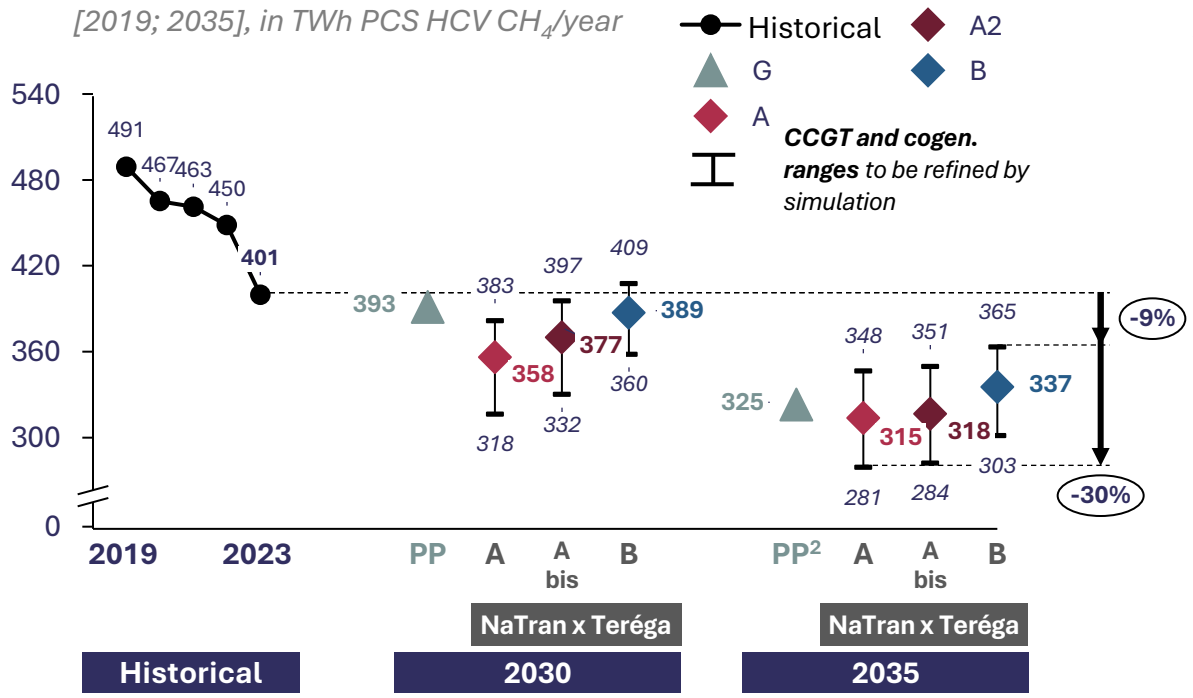
Contents

Total methane consumption in the scenarios falls by 9% to 30% between 2023 and 2035, while H_2 consumption increases by a factor of 4 over this period

Methane

TOTAL METHANE CONSUMPTION IN FRANCE *(final and secondary consumption, energy and non-energy, CA[3])*

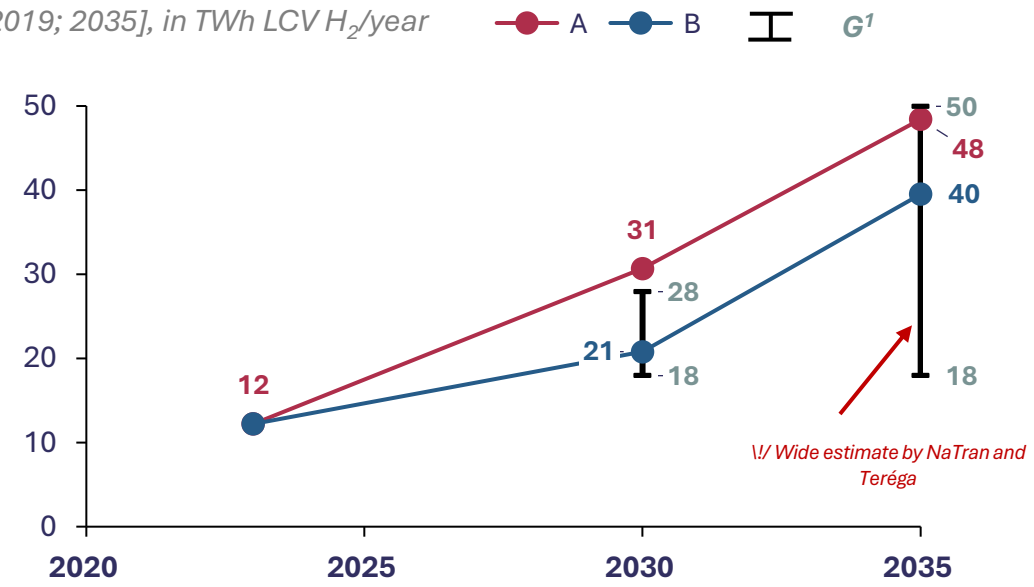
[2019; 2035], in TWh PCS HCV CH_4/year



Hydrogen

TOTAL HYDROGEN CONSUMPTION *(energy and non-energy use, **all types** – grey, green and blue, excluding co-products)*

[2019; 2035], in TWh LCV H_2/year



1) ***PPE:*** *Based on the PPE document, the planned production of ELY H2 is 9 to 19 TWh H2 LCV/year in 2030 and 16 to 40 TWh LCV/year in 2035. In addition, according to the evolution of "non-energy" methane consumption in the PPE EXCEL, H2 production by SMR could be around 10-11 TWh LCV/year for industry in 2030 (including refineries). In total, H2 consumption under the PPE could amount to 18-28 TWh H2 LCV/year in 2030 and 18 to 50 TWh H2 LCV/year in 2035 (max: 40 ELY + 10 SMR in 2035, min as PPE 2030). To keep the same scope for comparison, the 1 TWh H2 LCV/year per PPE for synthetic gas production has been removed because this consumption will be the subject of a more in-depth study by NaTran and Teréga*

2) *PPE in consultation for 2030 and interpolation between the 2030 figure from PPE 3 and the 2050 figure from SNBC 2, adjusted with the 2035 data in the PPE document (natural gas and biomethane, pages 48 and 82)*

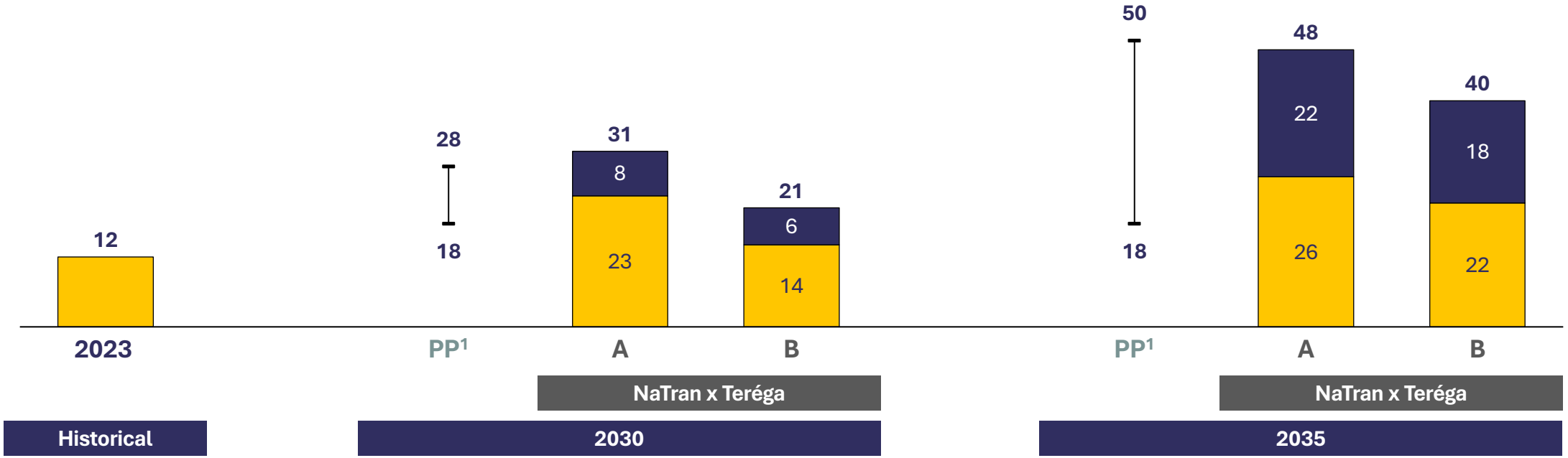
3) ***CA:*** *climate-adjusted*

Source: PPE 3 under consultation, NaTran x Teréga estimates

The scenarios proposed anticipate a greater role for hydrogen in decarbonising industry and mobility, mainly air and sea transport

TOTAL HYDROGEN CONSUMPTION IN FRANCE *(FINAL AND SECONDARY ENERGY, ALL TYPES, EXCLUDING CO-PRODUCTS)*
[2023-2035], TWh LCV H2/year

- ***Consumption of sustainable fuels (e-fuels) could increase**, in line with the European RefuelEU Aviation and FuelEU Maritime regulations adopted in 2023, and this consumption is estimated to be largely covered by French production*
- ***Hydrogen consumption in industry could increase in fertiliser production, refineries and steel, and to a lesser extent in chemicals** (methanol, phenol, HMD for nylon, hydrogen peroxide, etc.) and industrial heat (pilot projects for hydrogen furnaces for glass and ceramics)*



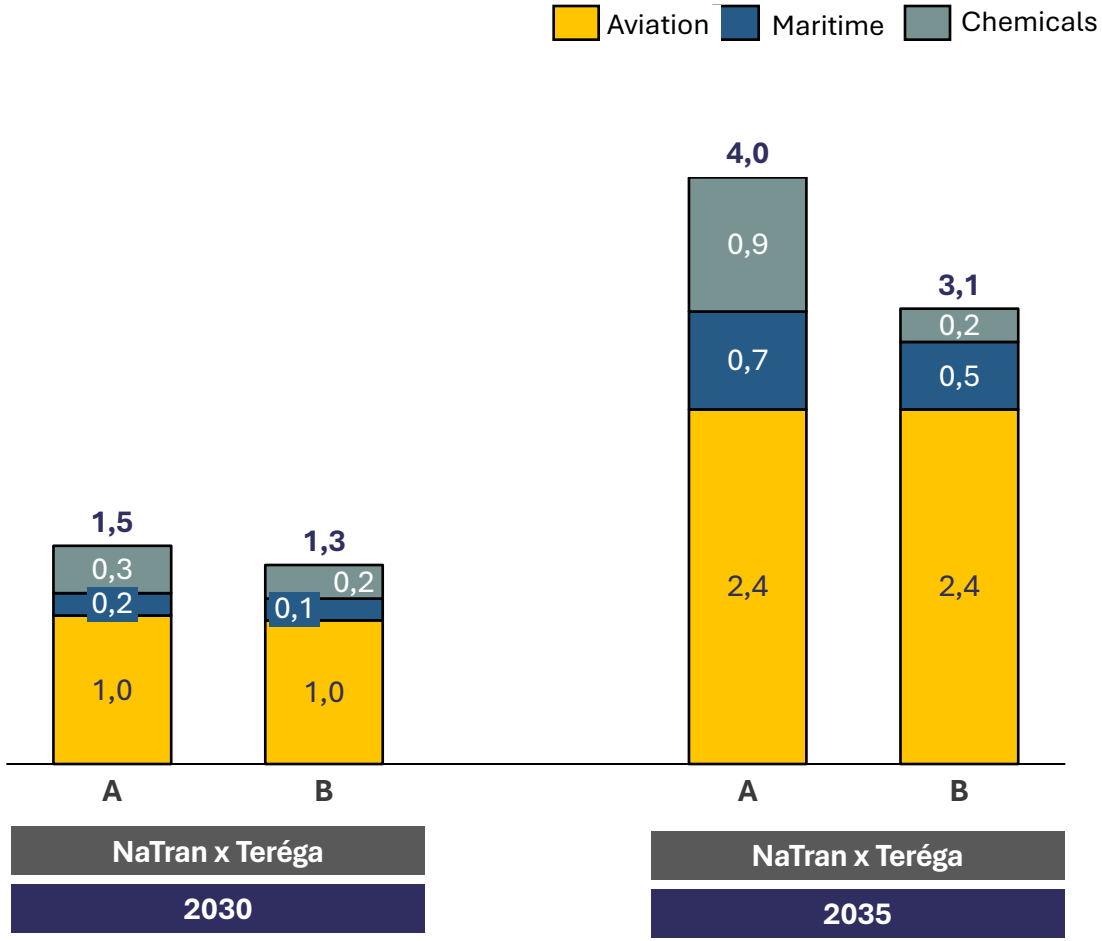
1) ***PPE:** Based on the PPE document, the planned production of ELY H2 is 9 to 19 TWh H2 LCV/year in 2030 and 16 to 40 TWh LCV/year in 2035. In addition, according to the evolution of "non-energy" methane consumption in the PPE EXCEL, H2 production by SMR could be around 10-11 TWh LCV/year for industry in 2030 (including refineries). In total, H2 consumption under the PPE could amount to 18-28 TWh H2 LCV/year in 2030 and 18 to 50 TWh H2 LCV/year in 2035 (max: 40 ELY + 10 SMR in 2035, min as PPE 2030). To keep the same scope for comparison, the 1 TWh H2 LCV/year per PPE for synthetic gas production has been removed because this consumption will be the subject of a more in-depth study by NaTran and Teréga*

Sources: PPE 3 under consultation, NaTran and Téréga scenarios

The scenarios for the production of sustainable fuels (e-fuels) or e-methanol for plastics chemicals will result in a growing need for CO_2 – essentially biogenic in the long term

CO_2 CONSUMPTION IN FRANCE BY ACTIVITY SECTOR

[2023-2035], Mt CO_2/year



Growing CO_2 consumption in the transport and chemicals sectors:

- ***RefuelEU Aviation and FuelEU Maritime*** → *sustainable fuels, including* ***e-kerosene for aviation and e-methane or e-methanol for maritime use***
- *In the* ***chemical industry, e-methanol*** *used to produce olefins (e-methanol-to-olefin) and formaldehyde, which are needed to make various plastics and MTBE, a petrol additive.*

A reminder about "sustainable fuels":

Sustainable fuels *are:*

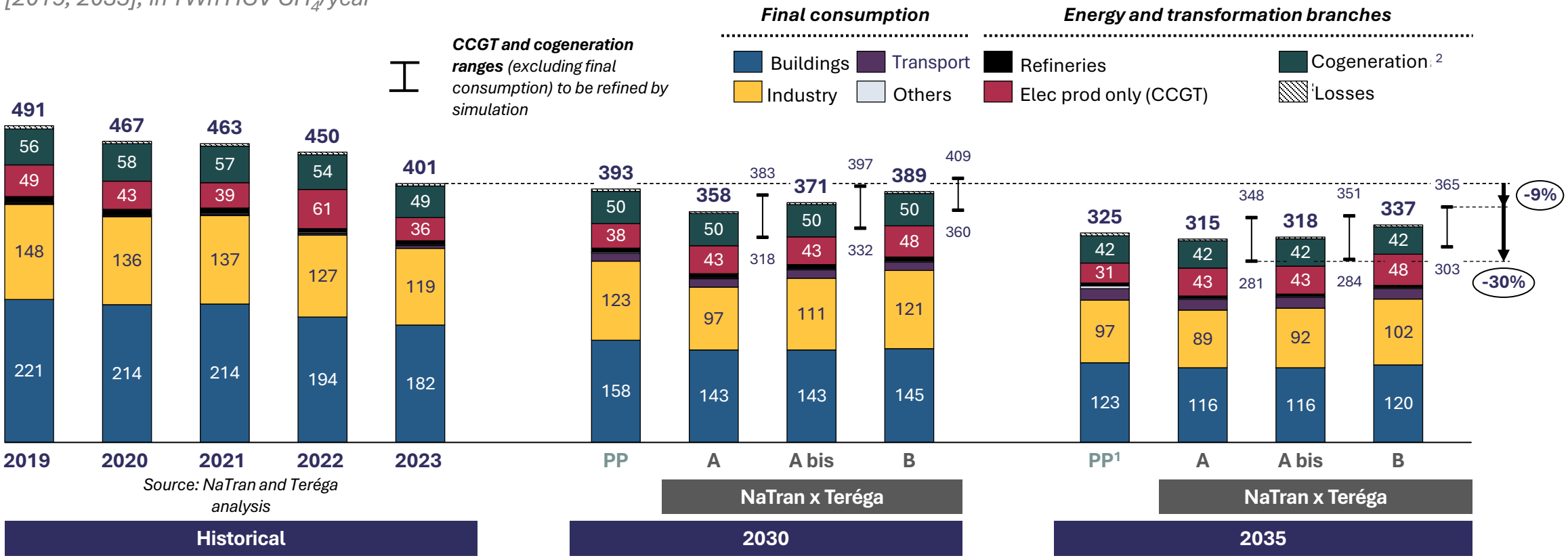
- *e-fuels (produced from H2* ***and, in some cases, CO_2****),*
- *biofuels (from biomass)*
- *direct use of hydrogen.*

RFNBO *e-fuels, for which there are specific targets, refer to e-fuels produced from green hydrogen and CO_2.* ***From 2041 onwards, CO_2 will have to be biogenic,*** *according to the delegated acts specifying the methodology for calculating RED III Renewable Fuels of Non Biological Origin emissions.*

Sources: NaTran and Téréga analyses, RefuelEU Aviation, FuelEU Maritime, RED III and its delegated acts

Under the proposed scenarios, methane consumption in France could fall by -9%to -30% between 2023 and 2035, rachng 281 to 365 TWh HCV/year in 2035

TOTAL METHANE CONSUMPTION IN FRANCE *(FINAL AND SECONDARY, ENERGY AND NON-ENERGY, CA[3])*
[2019; 2035], in TWh HCV CH_4/year



Source: NaTran and Teréga analysis

1) ***"Government" data:*** *The data in the "government" scenario corresponds to the PPE in consultation for 2030 and interpolation between the 2030 figure from PPE 3 and the 2050 figure from SNBC 2, adjusted with the 2035 data in the PPE document (natural gas and biomethane, pages 48 and 82)*
2) ***"Cogeneration"*** *refers to methane consumption for cogeneration units producing heat "sold" and for "heat production [sold] only", both of which are recorded in the "transformation" branch of energy balances and not in "industry" (EUROSTAT definition).*
3) ***CA:*** *climate-adjusted*

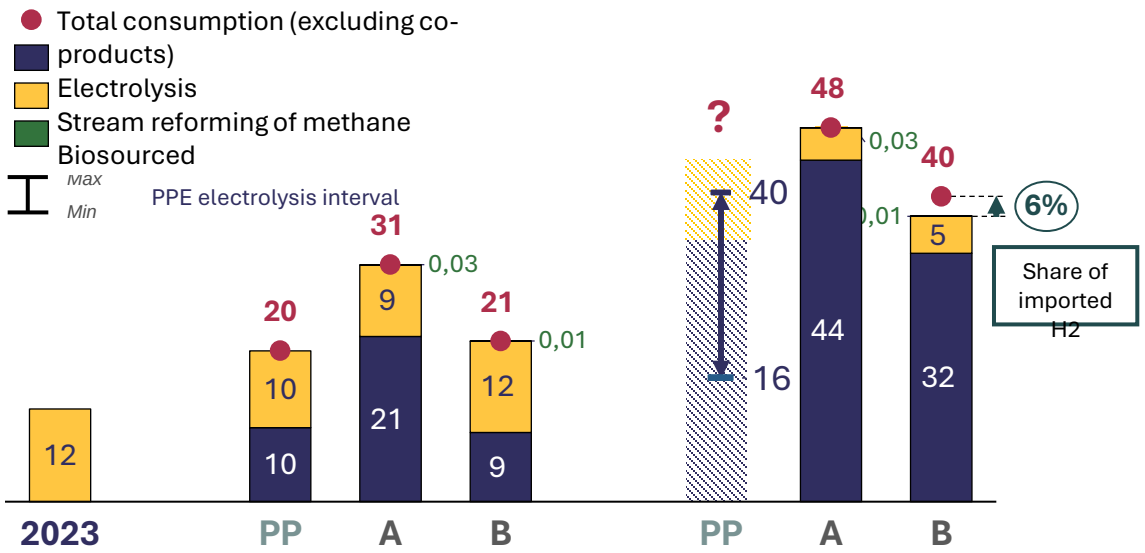
Sources: PPE consultation, SNBC 2

The production scenarios offer a varied range of hydrogen production methods and volumes of renewable, low-carbon methane

Hydrogen generation

INDICATIVE HYDROGEN PRODUCTION
(Electrolysis, steam reforming of methane, biosourced production)

[2019; 2035], in TWh LCV H_2/year



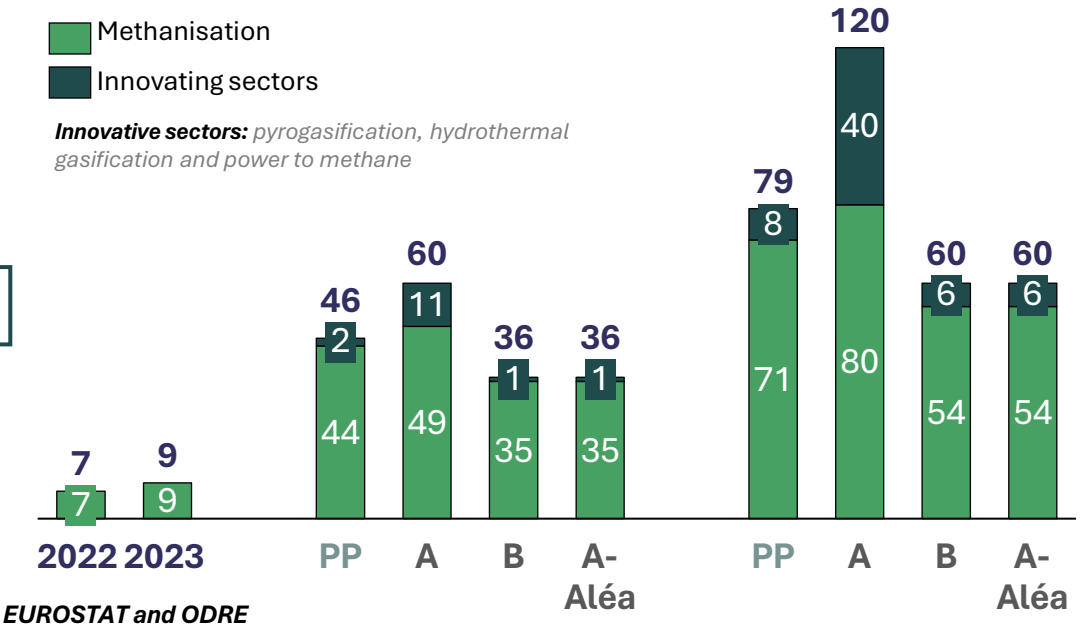
NaTran x Teréga — 2030

NaTran x Teréga — 2035

Renewable and low-carbon methane

RENEWABLE, LOW-CARBON METHANE PRODUCTION *(Anaerobic digestion, pyro.[1], hydrothermal gasification and power to methane)*

[2019; 2035], in TWh PCS HCV CH_4/year



EUROSTAT and ODRE

NaTran x Teréga — 2030

NaTran x Teréga — 2035

G scenario: addition of renewable and low-carbon gas production from innovative sectors not quantified in the PPE

1) Pyrogasification

Detailed presentation of the scenarios

Contents

Four scenarios were studied for industry: the “government” scenarios A and B, and a variant of scenario A to reflect the uncertainties associated with reindustrialisation

Elements	G	A	A2	B
Origin and inspiration of the scenario’s underlying assumptions	• **2030: PPE 3** under consultation • **2035:** interpolation between PPE 3 and SNBC2	**SNBC 2** **2024 Gas Perspectives** (reference scenario)	PPE 3, ADEME transition plans, SNBC 2, TYNDP26 scenario	PPE 3, ADEME transition plans, SNBC 2, TYNDP26 scenario
Scope	Industry (14 sectors) Construction (1 sector)	Same as G excluding construction	Same as G	Same as G
Industrial production	+ + + • **Strong reindustrialisation** • **Improved trade balance**	+ • **Slow increase** in industrial production	+ + • Close to G	+ • Same as A
Energy efficiency	+ + +	+ + *(SNBC 2)*	+ + + *(similar to G)*	+ *Slightly lower than A and G*
Energy mix	• Rapid large-scale electrification • Use of hydrogen	• **More sustained development of renewable, low-carbon methane and electrolytic hydrogen** than in G • Greater drop in methane consumption than in the PPE between now and 2030 as a result of the Fit for 55 targets and moderate industrial activity	**Similar to A and G in 2035 but more gradual** between 2025 and 2030	**Slower change in the energy mix** (5 years behind schedule)

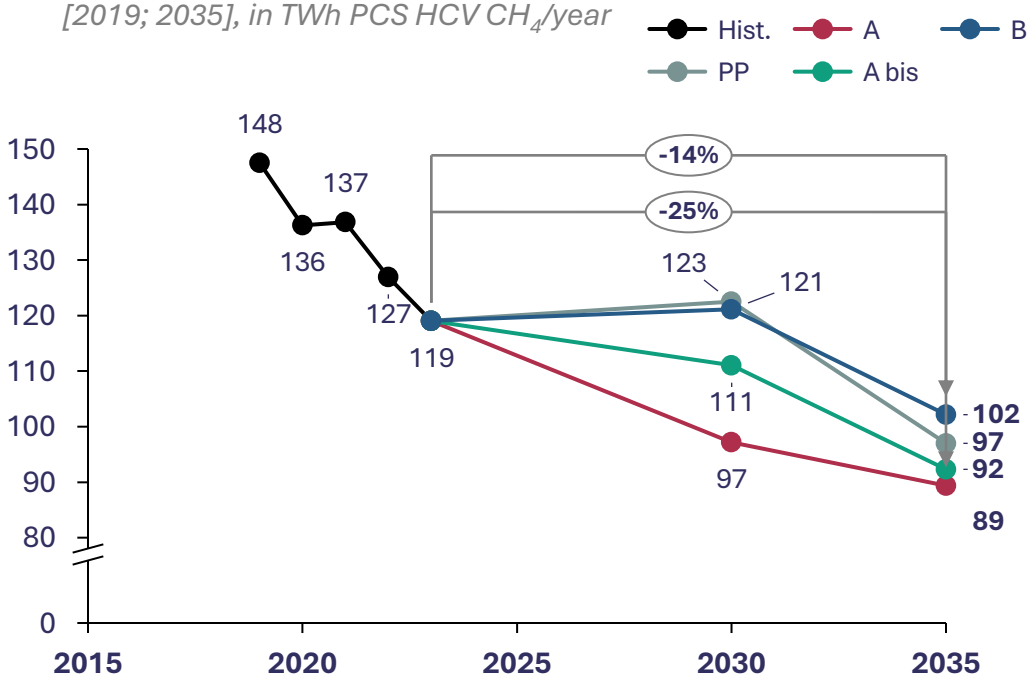
Source: PPE, SNBC 2, ADEME sectoral transition plans, 2024 Gas Perspectives, France Stratégie

In industry, the methane consumption forecast could fall by -14% to -25% between 2023 and 2035, while H_2 consumption could double

Methane in industry

METHANE CONSUMPTION IN INDUSTRY *(final consumption for energy and non-energy purposes, CA[2])*

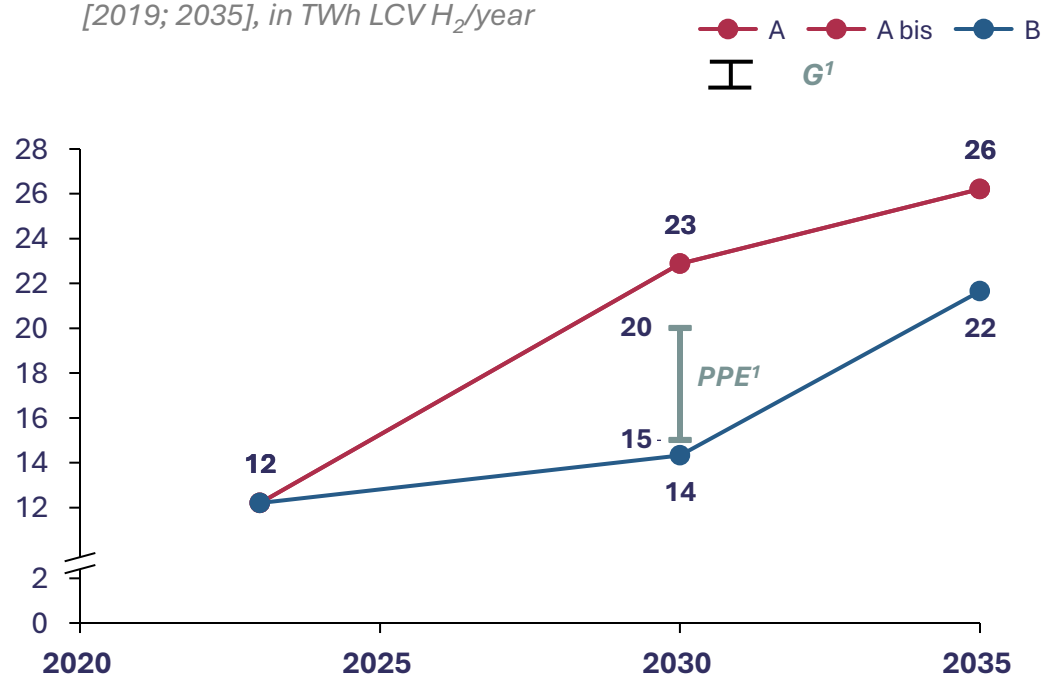
[2019; 2035], in TWh PCS HCV CH_4/year



Hydrogen in industry

HYDROGEN CONSUMPTION IN INDUSTRY *(energy and non-energy use, **all types** – grey, green and blue, excluding co-products)*

[2019; 2035], in TWh LCV H_2/year



1) ***PPE:*** *PPE EXCEL file: total electrolytic (ELY) H2 consumption in 2030 of 9.6 TWh H2 LCV/year, including 1 TWh LCV/year of "non-energy use" (fertiliser production) and 4 TWh LCV/year under "industry", i.e. 5 TWh LCV/year for industry. In the PPE document, mention is made of ELY H2 production of 9 to 19 TWh H2 LCV/year in 2030, i.e. potential production of 10 TWh H2 LCV/year more than in the PPE EXCEL file. By distributing these 10 TWh in proportion to the sectoral consumption of ELY H2 seen in the PPE Excel file, 5 TWh of the 10 could be destined for industry. In addition, according to the evolution of "non-energy" methane consumption in the PPE EXCEL, H2 production by SMR could be around 10-11 TWh LCV/year for industry in 2030 (including refineries). In total, industry H2 consumption under the PPE could amount to 15-20 TWh LCV/year.*

2) ***CA:*** *climate-adjusted*

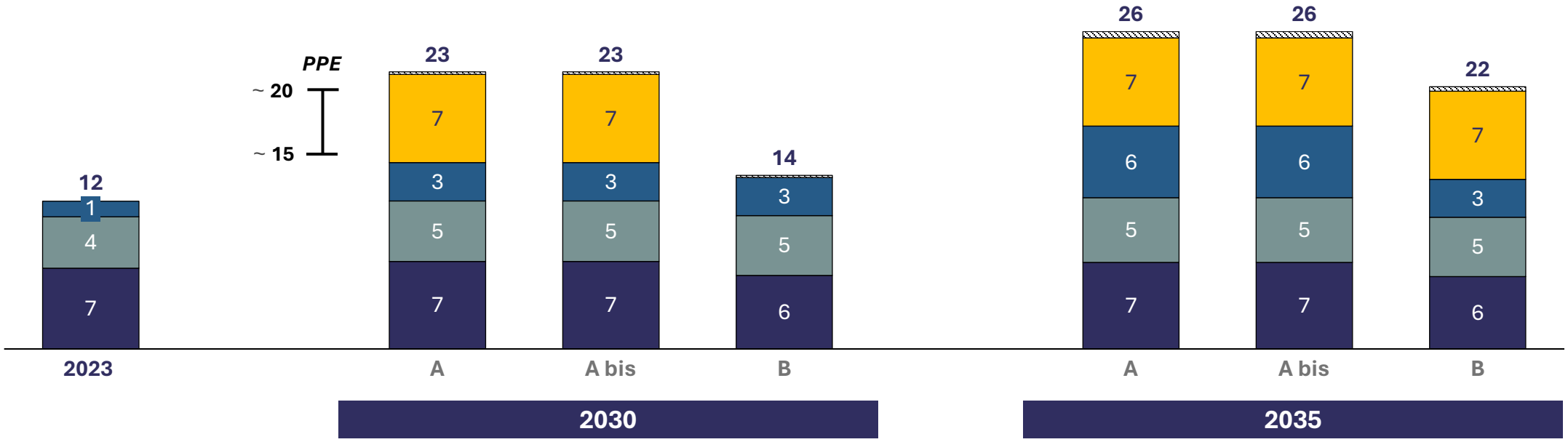
Source: PPE 3 under consultation, NaTran x Térega estimates

The scenarios anticipate H_2 consumption in industry of 14 o 23 TWh LCV/year in 2030,and22 to 26 TWh LCV/year in 2035

HYDROGEN CONSUMPTION IN INDUSTRY, ALL TYPES OF HYDROGEN (GREY, GREEN, BLUE)

[2019- 2035], TWh LCV H_2/year

- ***H_2 consumption in industry:*** *fertiliser production, refineries and steel (direct hydrogen reduction, DRI), and to a lesser extent chemicals (methanol, phenol, HMD for nylon, hydrogen peroxide, etc.) and industrial heat (pilot projects for H_2 kilns for glass and ceramics)*
- ***Within hydrogen demand:*** *gradual replacement of SMR (steam methane reforming) hydrogen production with electrolysers, particularly for fertiliser producers and refiners*
- ***Reduced steel:*** *the A scenarios anticipate the commissioning of a hydrogen-reduced steel production plant in 2030, which is delayed to 2035 for scenario B. Additional units are anticipated in the medium term (2040 or later).*



Sources: PPE

Detailed presentation of the scenarios

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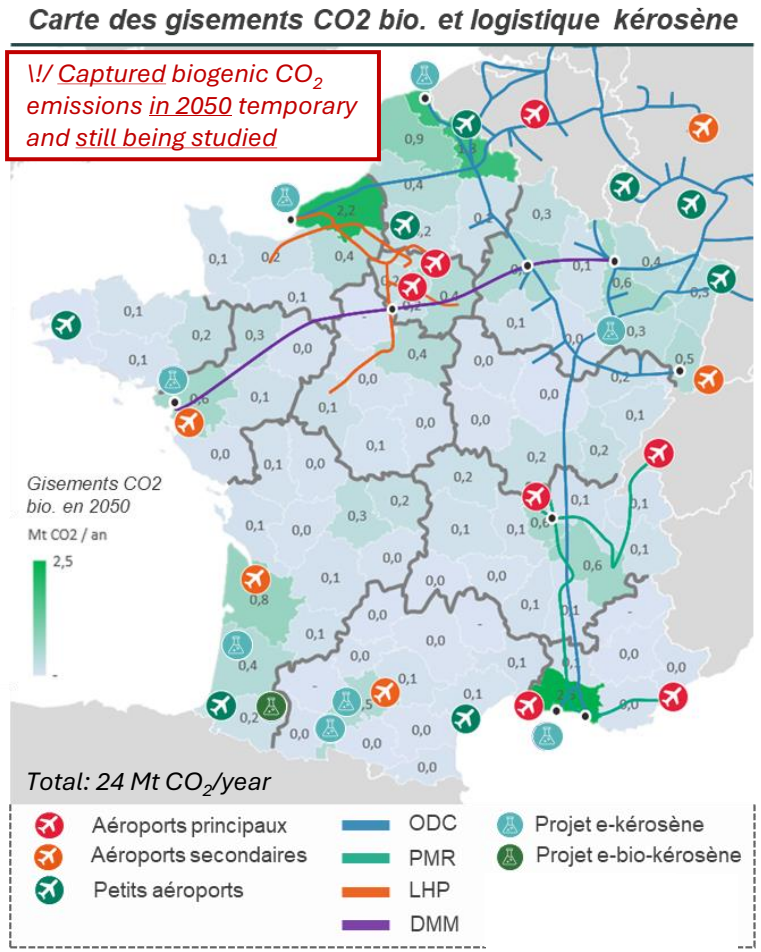
Regionalised visions of the scenarios are needed to provide input for the development plans, and are being studied

Example of e-SAF



NaTran analyses for illustrative purposes, information being studied

Keys to national regionalisation	Description
1. Sources of biogenic CO_2	*Biogenic CO_2 emissions by department. Obligation from 2041 to use biogenic CO_2 to produce fuels recognised as low-carbon (RED III)*
2. Existing kerosene transport infrastructure (pipelines)	• *Location of pipelines* • *Transport capacities available* • *Share of kerosene in current pipeline traffic* • *Connection to airports* • *Location of exit and entry points*
3. Land and any regulations relating to hazardous areas	*Not yet analysed*
4. Location of major consumer airports	• *Assessment of current and future kerosene consumption at major airports* • *Current airport kerosene supply logistics*

To transport SAF via existing pipelines, while maintaining environmental qualification, "Book & Claim" certification will be required. This will allow the locations of SAF production, injection into the pipeline network and consumption to be decoupled throughout the European Union.

Questions & Answers

Over to you!

Ask your questions in the Q&A section, specifying your full name and company in the question.

We will answer all the questions, either live (in writing or orally), or in the report on the webinar, which will be published on the NaTran and Teréga websites

Overview of the prospective development plans for the H_2 and CO_2networks

04

Nicolas Peugniez

Head of Strategy

NaTran

Youssef Chekli

Head of Institutional Relations and New Asset Regulation

Teréga

Overview of the prospective development plans

Why do we need prospective development plans for the H_2 and CO_2 networks?

H_2 transmission network

- Renewable, low-carbon hydrogen, **a pillar of the future French and European energy mix**
- A dedicated transport network tor:
  - **Guarantee a reliable** energy **supply**
  - Provide access to a **competitive choice of hydrogen sources** for French industry
  - **Optimise the electricity and hydrogen systems through joint management**
- A prospective plan to provide a coherent, relevant and interconnected **service to the regions**
- A vision **supported by numerous infrastructure projects** constructed jointly with the market (calls for expressions of interest)

CO_2 transmission network

- Decarbonising industry, **a major challenge in the fight against climate change**
- **Transporting CO_2 by pipeline**, an essential element in the **development of CCS & CCU** in France
  - Offering French industry **affordable access to already-mature CCS solutions**
  - Enabling **in-depth decarbonisation accessible to all the regions**
- A prospective plan to **organise and forecast long-term requirements** for CO_2 collection infrastructure

Overview of the prospective development plans

Methodology

A relatively clear long-term vision for the H_2/CO_2 transmission network.

Uncertainties remain, mainly concerning the **stages and sequencing**:

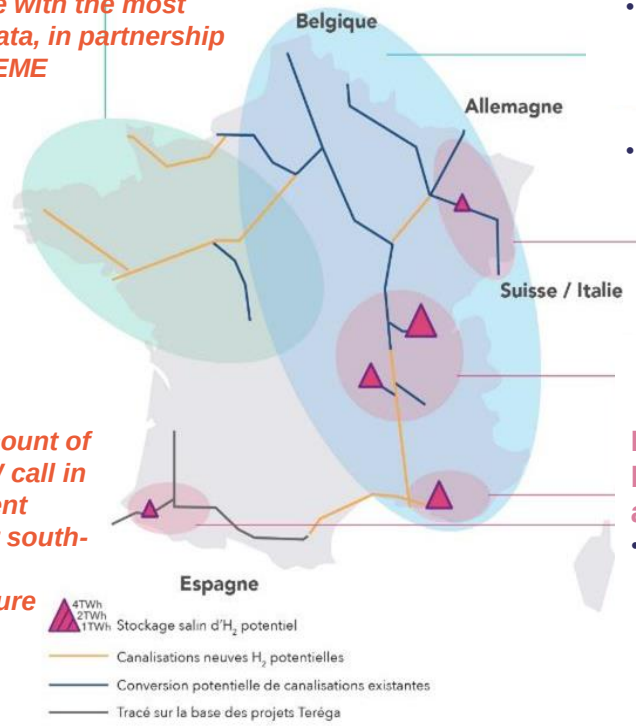
- prospective technical and economic studies under way in certain areas
- regular iterative discussions with local markets (the Dunkirk, Fos-sur-Mer and South-West zones, for example) and internationally (H2med)
- Working with adjacent operators directly or via the development plan

Focus on H_2

Northwest

- Potential benefit of a hydrogen network to relieve the electricity grid (in the event of greater concentration of renewable energy production)

Updating the analyses for this zone with the most recent data, in partnership with ADEME



https://www.natrangroupe.com/sites/default/files/2023-08/grtgaz_rte_etudeh2.pdf

Taking account of the HySoW call in development studies for south-western infrastructure

Eastern North-South backbone

- Flexibility for all electrolysers located in future major hydrogen basins: benefits for the electricity supply-demand balance at national level
- Limited development costs for the hydrogen network, thanks to the conversion of existing pipelines
- ~ 86% of national consumption

Application of the RTE-NaTran study to Auvergne-Rhône-Alpes

Local ecosystems connecting H_2 basins and storage in saline aquifers

- Flexibility for electrolysers with limited investment in terms of the hydrogen network; rapid gains possible for the electricity supply-demand balance at national level

Overview of the prospective development plans
Methodology

Focus on the results of the H2med call:

- ***170*** *respondents*
- ***500*** *projects announced*
- *In* ***France****, consumption could reach 0.9 Mt/year by 2050*
- *The* ***Iberian Peninsula*** *confirms its strong export potential from 2030 onwards*
- *Consumption projects in western* ***Germany*** *based on H2med supply will absorb half of H2med's capacity by 2035.*

The prospective development plans are:

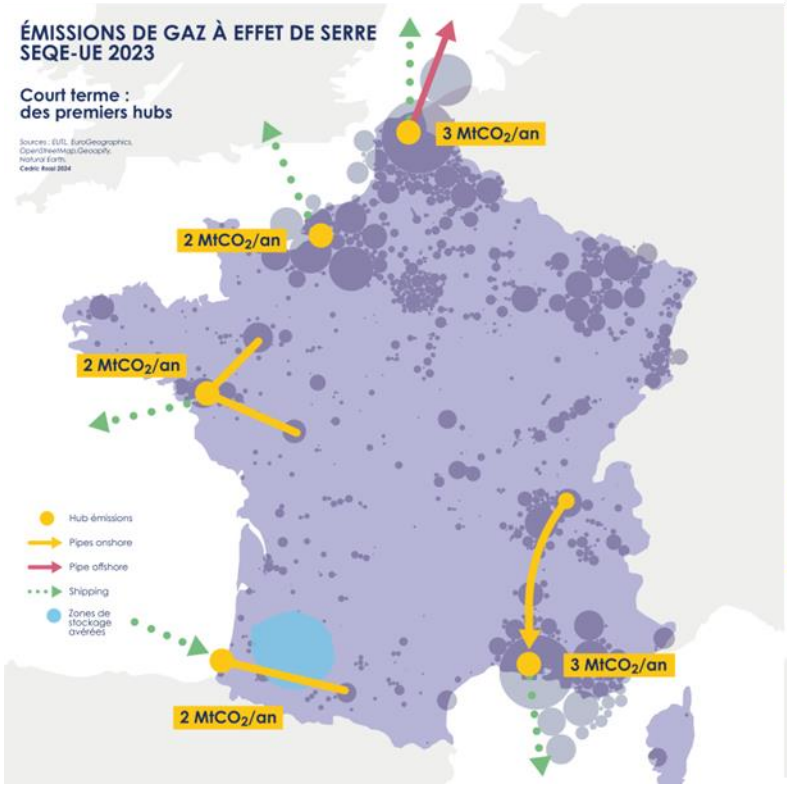
- A **geographical and temporal translation** of the **scenarios** for 2035
- A **forward-looking exercise** designed to shed light on the impact of the different possible developments
- Dependent on customers' ability to commit and the aggregation of identified needs
- **Evolving**, having to adapt over time to market needs and realities

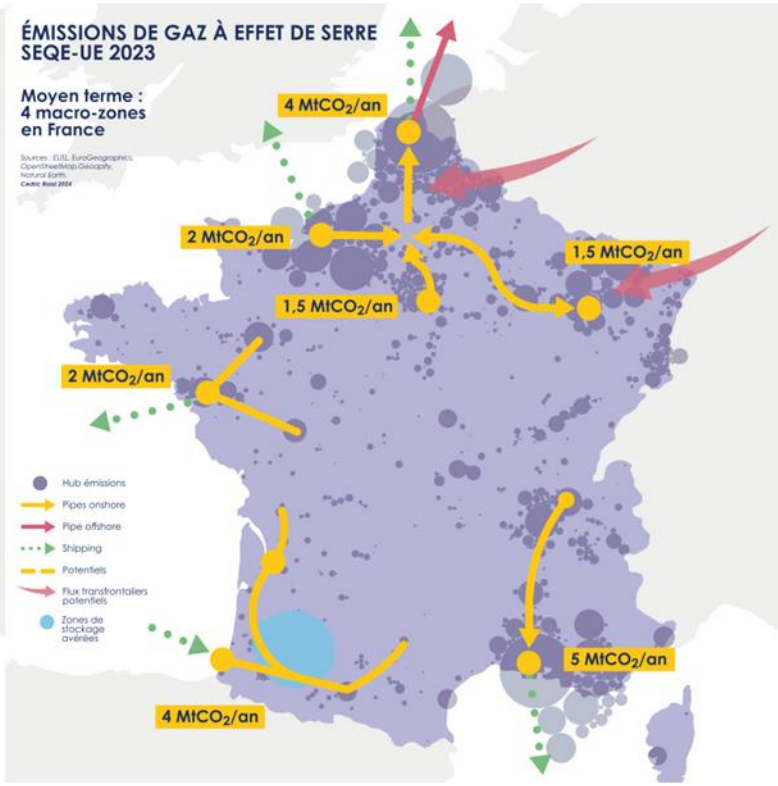
Overview of the prospective development plans

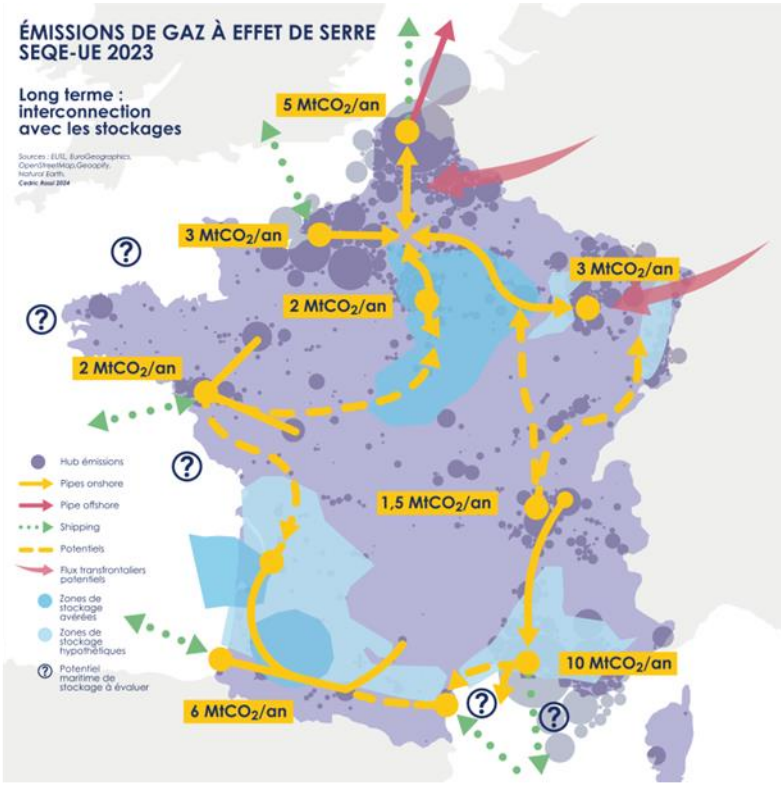
H_2 development plan

Overview of the prospective development plans

CO_2 development plan







Questions & Answers

Over to you!

Ask your questions in the Q&A section, specifying your full name and company in the question.

We will answer all the questions, either live (in writing or orally), or in the report on the webinar, which will be published on the NaTran and Teréga websites

Next steps & conclusion

04

Adeline Duterque

General Secretary of

NaTran

The next steps

Arrangements for consultation and analysis of your feedback

From 10 April: documents available on the NaTran and Teréga websites.

From **10 April to 2 May: Collection of contributions** on the range of scenarios and the H_2 and CO_2 prospective development plans.

In what format?

- Answers requested **by email**: **ConcertationsCH4H2CO2@natrangroupe.com** and **Concertationsch4h2co2@terega.fr**

Option of signing a confidentiality agreement or holding bilateral talks with NaTran and/or Teréga

Between now and the end of the year, we'll get back to you with:

- **A summary of the contributions and adaptations to the scenarios**
- **Updates to the prospective H_2 and CO_2 development plans incorporating your contributions**
- Adaptation and potential launch of additional topics based on your feedback at the workshops

The next steps

Three workshops for H_2, CO_2 and CH_4 experts

01 H_2 workshop

13 May morning – Paris

On the programme:

- Presentation of the **method for constructing the assumptions** behind the H_2 scenarios
- Detailed draft **prospective development plan** for the H_2 transmission network
- **Work in sub-groups** – Thinking and talking about subjects with a major impact on transport logistics:
  - E-fuels
  - Electrolyser flexibility
  - Sourcing & continuity of supply

Lunch

02 CO_2 workshop

13 May afternoon – Paris

On the programme:

- Presentation of the **method for constructing the assumptions** behind the CO_2 scenarios
- Detailed draft **prospective development plan** for the CO_2 transmission network
- **Work in sub-groups** – Thinking and talking about subjects with a major impact on transport logistics:
  - E-fuels
  - Decarbonisation of industry: levers and obstacles (focus on "hard to abate" emissions)
  - CO_2 recovery and uses: obstacles and opportunities

03 CH_4 workshop

3 June morning – Paris

On the programme:

- Presentation of the **method for constructing the assumptions** behind the (organic) CH_4 production/consumption scenarios
- **Work in sub-groups** – Thinking and talking about specific issues linked to the scenarios presented
  - Decarbonisation of industry: levers and obstacles (focus on renewable low-carbon gas)
  - Scenarios, assumptions about locations and injection profiles for anaerobic digesters
  - Non-European supply patterns and European flows

Conclusion

This consultation process is essential to:

- Provide a shared basis for optimising investment in the H_2, CO_2 and CH_4 transmission networks, taking local and European dynamics into account.
- Provide input for our fundamental documents, such as the Ten-Year Development Plans (PDD),
- Co-constructing, with market players in the regions, an infrastructure roadmap that is consistent with the decarbonisation trajectories,
- Identify synergies between energy sources and anticipate the energy system's need for flexibility.

Your contacts

ConcertationsCH4H2CO2@natrangroupe.com

Concertationsch4h2co2@terega.fr

End of the launch webinar for the "H_2, CO_2 & CH_4 Consultations: Future Prospects" process

Thank you for taking part.