



International  
Association  
of Oil & Gas  
Producers

# Moving Together, Into Tomorrow

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Regional Director Europe

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# European Membership

## Our Members in Europe



### OIL & GAS REPRESENTS



57% of EU Overall Energy Demand  
(Oil = 33% , Gas = 24%)

## Our Associate Members in Europe



# Our Products & Services

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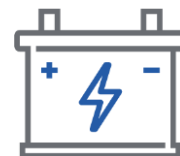
Oil



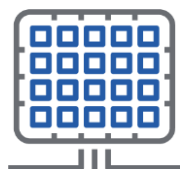
Biofuels



Gas



Batteries



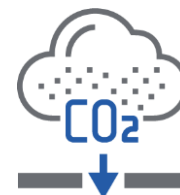
Solar



Hydrogen



Wind



CC(U)S

# The Challenge

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Emissions are rising

Climate is changing

We need to go below  
2°C

We must transition to  
a cleaner system

# The Problem

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The transition is  
expensive

It's technologically  
challenging

It's disruptive for  
society

Energy demand is  
stable, or rising

# We all need to act

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“ The Climate debate is way too polarised: We need a cool-headed discussion to prevent temperature to rise. We cannot exclude anyone from the “grand coalition” we need. ”

Fatih Birol  
*IEA, Executive Director*

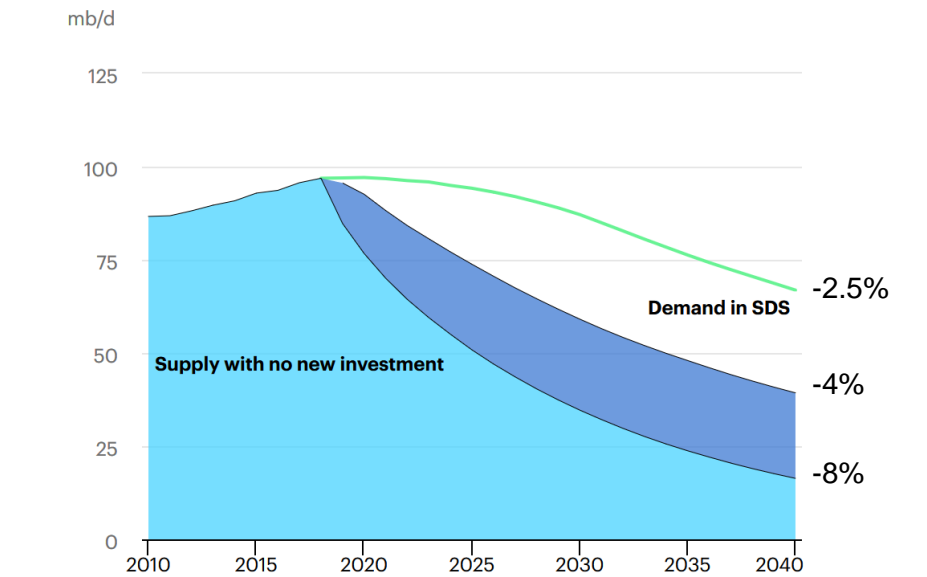
How do we meet demand...

... and reduce emissions?

# Yes, we still need to invest in Oil & Gas

Global oil demand in the Sustainable Development Scenario and decline in supply from 2019 to 2040

Open ↗

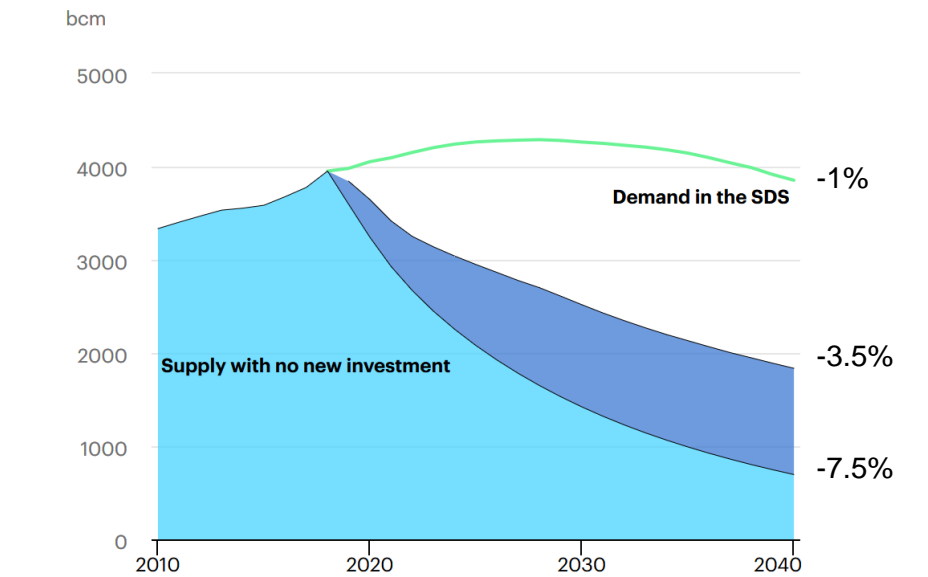


IEA. All Rights Reserved

- Supply with no new investment
- Supply with investment in existing fields
- Demand in SDS

Global gas demand in the Sustainable Development Scenario and decline in supply from 2019 to 2040

Open ↗



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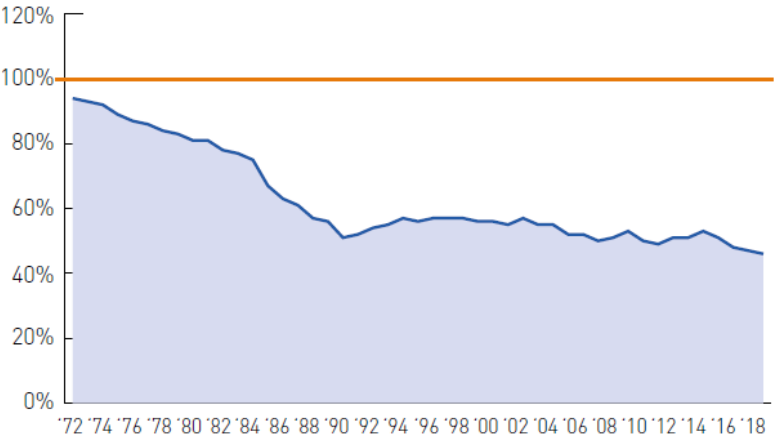
- Supply with no new investment
- Supply with investment in existing fields
- Demand in the SDS



# We produce ½ the gas we consume

## Still meeting half of the region's demand

Gas: Production Indicator 1972-2018




Source: BP Statistical Review of World Energy 2019 and IOGP calculations

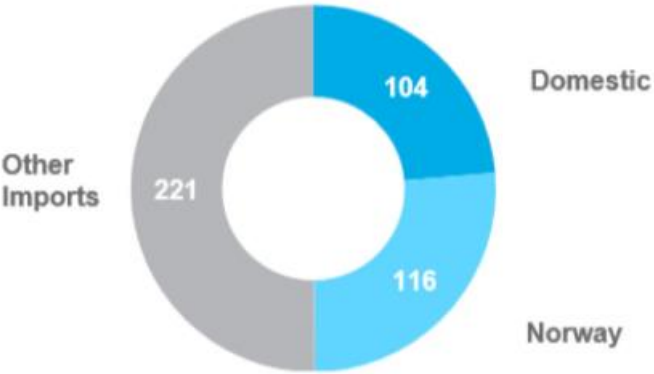
Europe's  
**PRODUCTION  
INDICATOR FOR GAS is**

**46%**

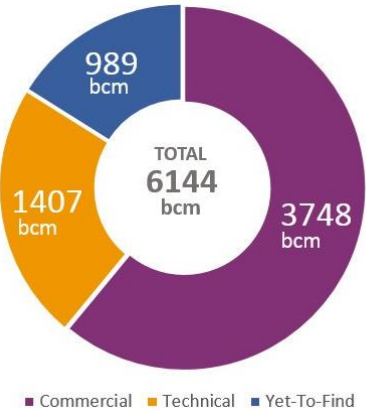
Europe is still able to meet nearly half of its consumption with domestic demand, in spite of a decline in production for the past decade



EU28 + Norway Gas Supply Mix (bcm)



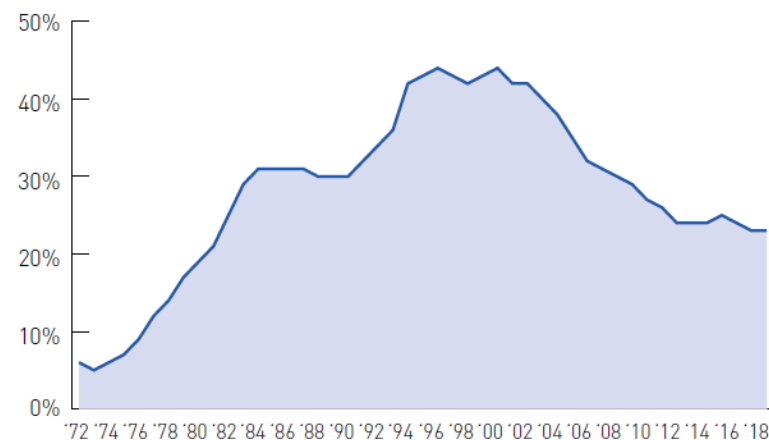
EU28 + Norway Gas Resources



# We produce ¼ of the oil we consume

## Europe imports more than three quarters of its oil

Oil: Production Indicator 1972-2018



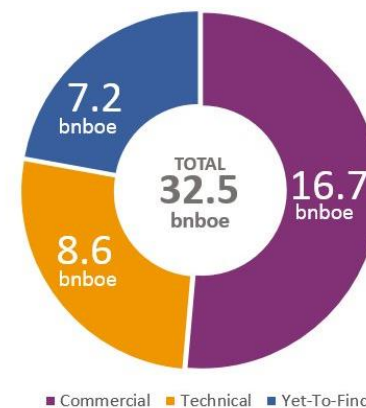
Source: BP Statistical Review of World Energy 2019 and IOGP calculations

Europe's  
**PRODUCTION  
INDICATOR FOR OIL is**  
**23%**



Just below the average of the past 5 years

## EU28 + Norway Oil Resources



# Our Way Forward

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Reducing our carbon  
footprint

Supplying cleaner  
energy

Developing long-term  
solutions

# 1. Reducing our carbon footprint

“

As of today, 15% of global energy-related GHG emissions come from the process of getting oil and gas out of the ground and to consumers.

”

IEA

*Oil & Gas in Energy Transitions, 2020*

# Methane Emission – How we deal with it



OIL AND GAS CLIMATE INITIATIVE

-9% CH<sub>4</sub>  
in 2018 !



Objective:  
Zero Routine Flaring  
By 2030



- A blue circle containing a white molecular structure icon with a green arrow pointing down.
- 1  
Continually reduce methane emissions
- A blue circle containing a white line graph icon with a green arrow pointing up.
- 2  
Advance strong performance across the gas supply chain
- A blue circle containing a white pie chart icon with a green arrow pointing up.
- 3  
Improve accuracy of methane emissions data
- A blue circle containing a white document icon with a green checkmark.
- 4  
Advocate sound policy and regulations on methane emissions
- A blue circle containing a white document icon with a green arrow pointing up.
- 5  
Increase transparency

## 2. Supplying Cleaner Energy

“

We all want energy that is reliable and affordable, but that is no longer enough. It must also be cleaner.

”

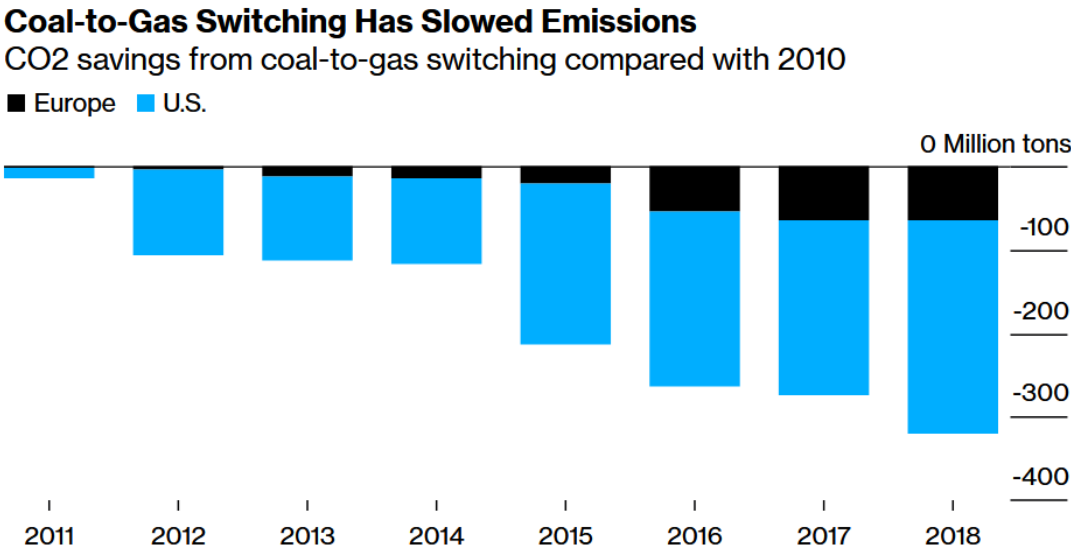
Bernard Looney  
*CEO, BP*

# Switch to Gas

Our portfolios rebalance in favour of gas

Replaces coal, helps integrate renewables

Drives emissions reductions across the globe



Source: Bloomberg, IEA

# Low-Carbon Investments



Capital investment by the Majors and selected other oil and gas companies in selected energy technologies, 2015-18



Note: Capital investment is measured as the ongoing capital spending in new capacity from when projects start construction and are based on the owner's share of the project. Companies include the Majors and selected others (ADNOC, CNPC, CNOOC, Equinor, Gazprom, Kuwait Petroleum Corporation, Lukoil, Petrobras, Repsol, Rosneft, Saudi Aramco, Sinopec, Sonatrach). CCUS investment is in large-scale facilities; it includes developments by independent oil and gas companies in Canada and China and capital spend undertaken with government funds.

Source: IEA



### 3. Developing Long-Term Solutions

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Carbon Capture & Storage will definitely be one of the technological mechanisms to achieve carbon neutrality by 2050.

”

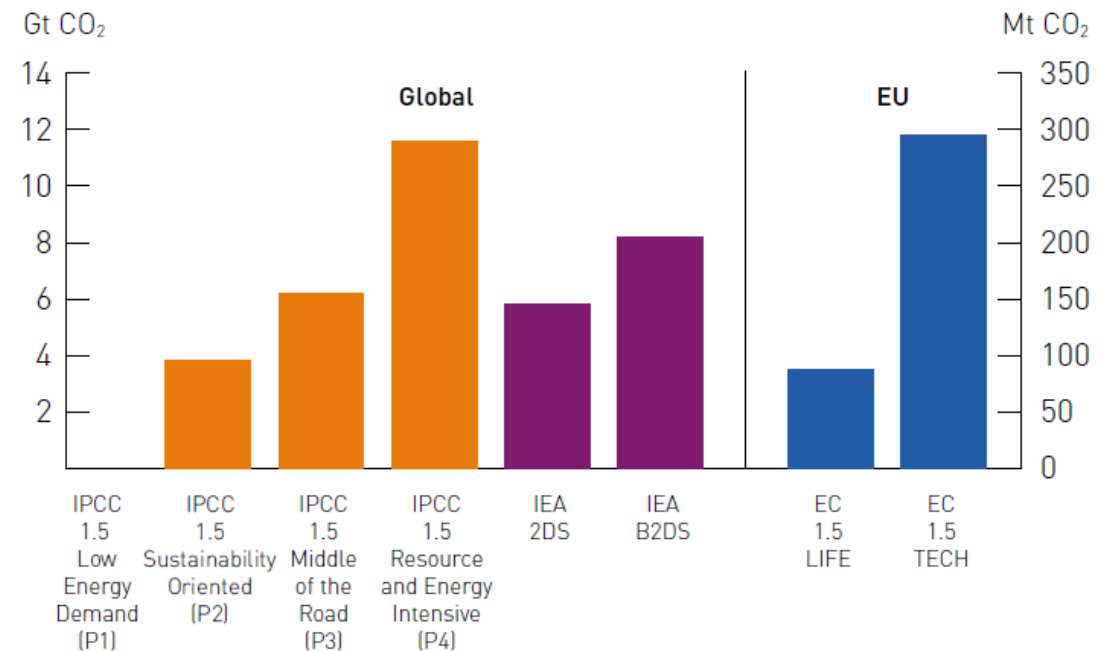
Kadri Simson  
*Energy Commissioner*

# Without CCUS, Paris goals are impossible to reach

- IPCC, IEA and European Commission all see CCS as essential to meet Paris Agreement targets
- Political support at Commission level is stronger
- Only 3 large-scale CCS facilities operate in Europe

➔ **Need political support for carbon management !**

## The role of CCS in global and EU 2°C and 1.5°C scenarios CO<sub>2</sub> stored in 2050



Source: data from IPCC (2018), IEA (2017), GCCSI (2018).

# CCUS – Projects in the pipe

## Overview of existing and planned CCS facilities

### Norway

- 1. Sleipner CO<sub>2</sub> Storage\*
- 2. Snøhvit CO<sub>2</sub> Storage\*
- 3. Northern Lights\*

### Sweden

- 15. Preem CCS\*

### Republic of Ireland

- 4. ERVIA

### UK

- 5. Acorn\*
- 6. Caledonia Clean Energy
- 7. H21 North of England\*
- 8. Liverpool-Manchester Hydrogen Cluster
- 9. OGCI Teesside Clean Gas Project\*
- 10. Humber Zero Carbon Cluster\*

### The Netherlands

- 16. Porthos (Port of Rotterdam)\*
- 17. Athos (Ijmond)
- 18. Aramis (Den Helder)
- 19. Magnum (Eemshaven)\*

### Croatia

- 20. iCORD\*
- 21. CO<sub>2</sub> EOR Project Croatia\*
- 22. Bio-Refinery Project\*

### France

- 11. Lacq\*
- 12. DMX Demonstration in Dunkirk\*

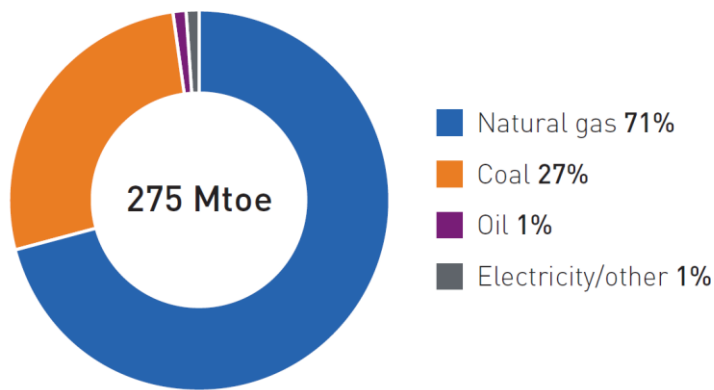
### Belgium

- 13. Leilac
- 14. Port of Antwerp

\* Project where IOGP members are involved  
Projects listed in **bold** are in operation

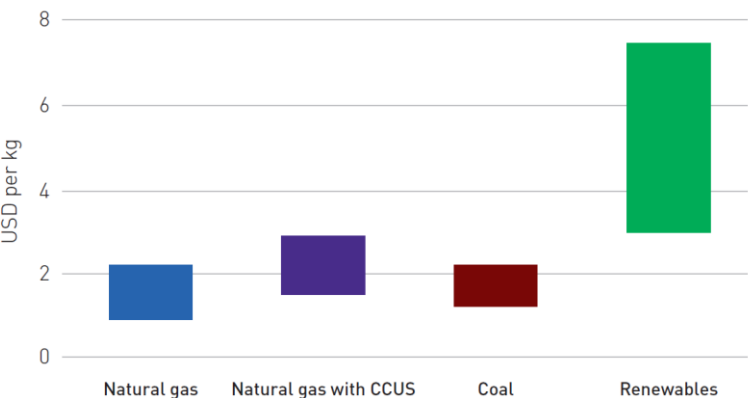
# Hydrogen – Let’s scale it up!

World dedicated hydrogen production  
- Energy input by source



Source: IEA 2019

Hydrogen production costs, 2018



Source: IEA 2019



As a feedstock in the **chemical, refining and steel industry**, and as low-carbon fuel in energy-intensive processes



Using the gas grid to decarbonise **residential and commercial heating**



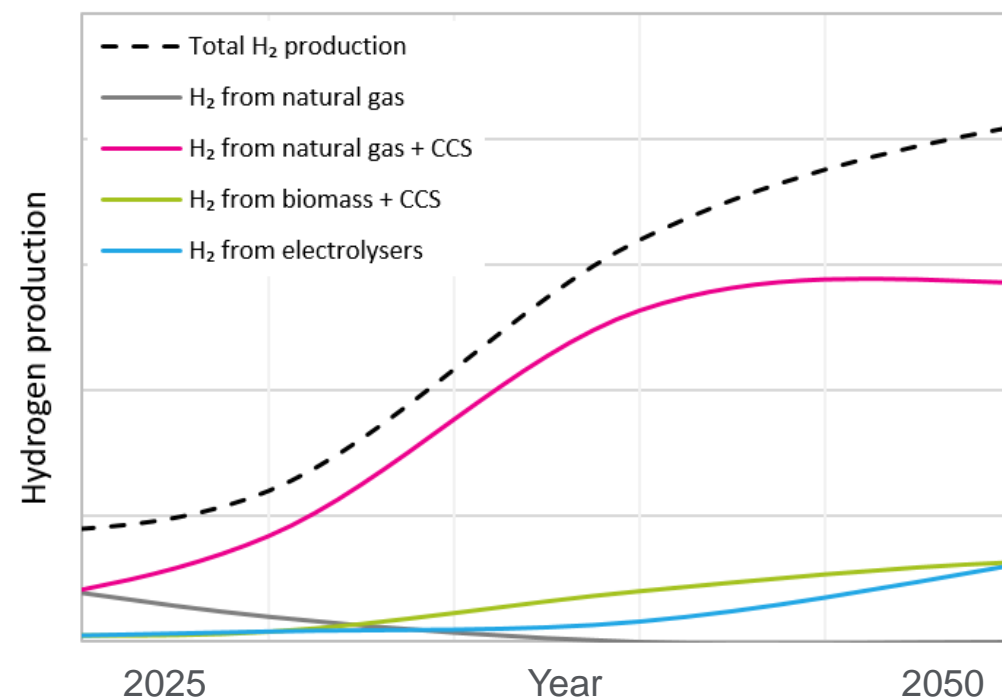
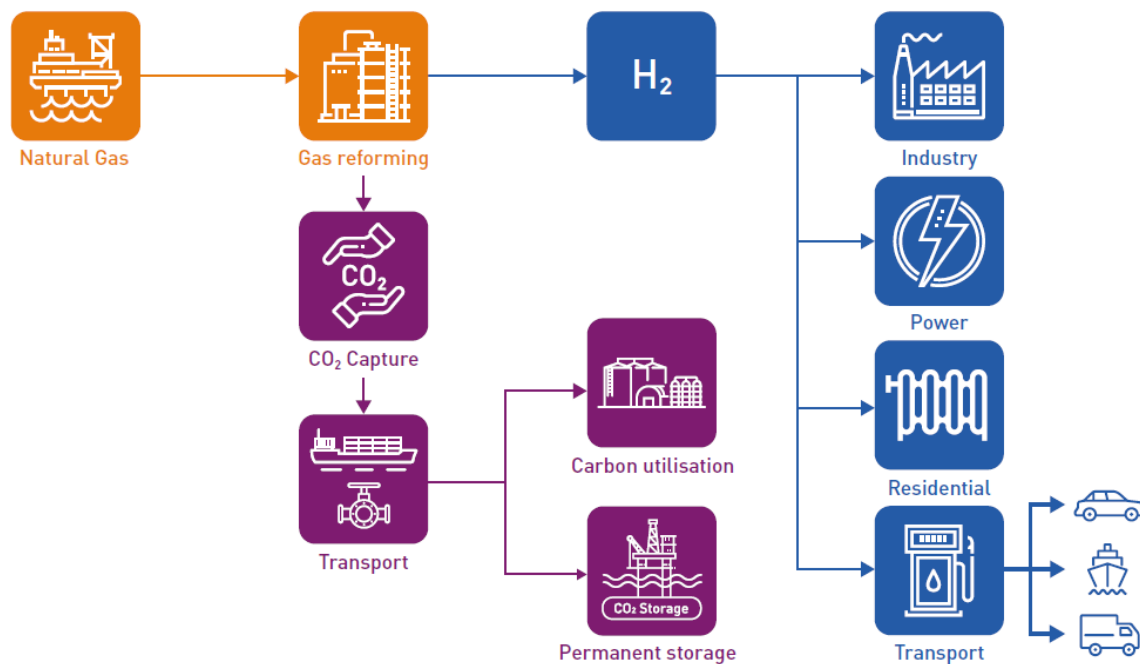
In **heavy and long-haul road and maritime transport**



In the **power sector**, supporting the transition towards net-zero emissions

# Combining both CCS & H2 from Natural gas

Hydrogen and CCUS value chain options



Gas pyrolysis is another available option to produce H<sub>2</sub>

# We know what we have to do

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1. Reducing our  
carbon footprint

2. Supplying cleaner  
energy

3. Developing long-  
term solutions

# To Conclude

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“

The transformation of the energy sector can happen without the oil and gas industry, but it would be more difficult and more expensive.

”

IEA

*The Oil & Gas Industry in Energy Transitions, 2020*



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