

# What is the role of gas in the energy transition?

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## key questions

What role for gas in the energy transition? How to ensure cost-effectiveness? What can the gas industry deliver?





What role for gas in the energy transition?

### One objective. Two distinct pathways.

Eurogas scenario delivers full decarbonisation

- On time
- Cost-effective
- Realistic



#### Share in final energy demand



## European Commission confirms strong role of gas

- Current annual EU gas consumption 350-400 bcm, of which 95% is natural gas
- 25% of total energy consumption: accounts for 20% of electricity production, and 39% of heat production
- Biomethane, renewable and low-carbon hydrogen will gradually replace natural gas
- The share of natural gas will decline and be coupled with CCUS
- Energy carried by gaseous fuels would stay at about 85% of the current level by 2050





Continued gaseous energy use to 2050 and beyond is necessary to ensure a successful and cost-effective energy transition



How to ensure costeffectiveness? Electrifying heat not costeffective

1,300



#### Decarbonising heating with **gas saves €1.3 trillion** otherwise needed to expand power networks underutilised most of the time

Daily Power Grid Peak Demand



Source: Eurogas DNV 2020

#### Making use of existing gas infrastructure

Blending is an essential and cost-effective market development tool Most of the gas infrastructure needed is already available Retrofitting and repurposing essential next to new built



A balanced decarbonisation pathway can save Europe 130 billion per year. A total of 4.1 trillion by 2050.



# What can the gas industry deliver?



#### How much can we produce and what do we need to meet net zero?

- Gaseous energy supply in 2050 in the Eurogas scenario increases by 18% over 2017 levels natural gas supply declines by 35%
- Both scenarios show an important role for hydrogen from reformed natural gas as an early driver to provide scale by 2030
- The share of hydrogen from electrolysis overtakes hydrogen from reformed natural gas by 2050

Eurogas projection for renewable and low-carbon gas supply potential



■ Biomethane ■ Blue H2 ■ Green H2

# Whatever the scenario we choose. CCS is not an option. It is a necessity.

- Both scenarios rely on CCS, especially to decarbonize the power and manufacturing sector to fully decarbonise gas consumption
- Eurogas decarbonizes the energy system with 15% lower cumulative CCS deployment towards 2050 than 1.5TECH
- Both scenario's use 11%-13% of available storage capacity, and have 114-130 years of storage left in 2050

#### CCS uptake Eurogas scenario







#### CCS uptake 1.5TECH scenario

All gases – natural, renewable and low-carbon – will be needed to meet net zero by 2050.





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