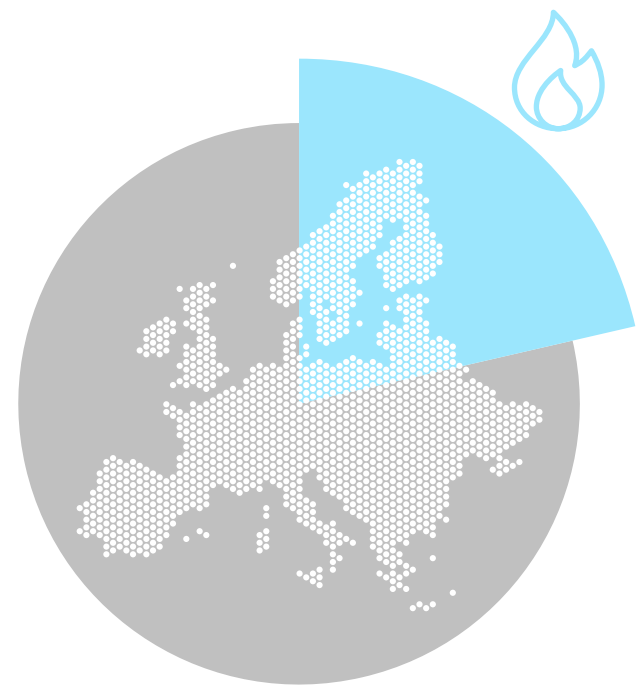


KEY FACTS ABOUT GAS IN THE EU



GAS REPRESENTS
21.5%
OF THE EU'S PRIMARY ENERGY CONSUMPTION.

It is the dominant source of energy for households – **32.1%**.



AROUND
40%
OF HOUSEHOLDS ARE CONNECTED TO THE GAS NETWORK.

On average, they spend **EUR 700** on gas, **2.5%** of their average income (EUR 27,911). However, this conceals considerable differences among Member States.



THE AVERAGE FINAL HOUSEHOLD PRICE FOR kWh OF ENERGY FROM GAS IS

6.5
cents/kWh,

three times lower than from electricity – **21.6 cents/kWh.**



THE EU-27 PLUS UK GAS SUPPLY BILL RANGES FROM
75-100 BN €
PER YEAR,

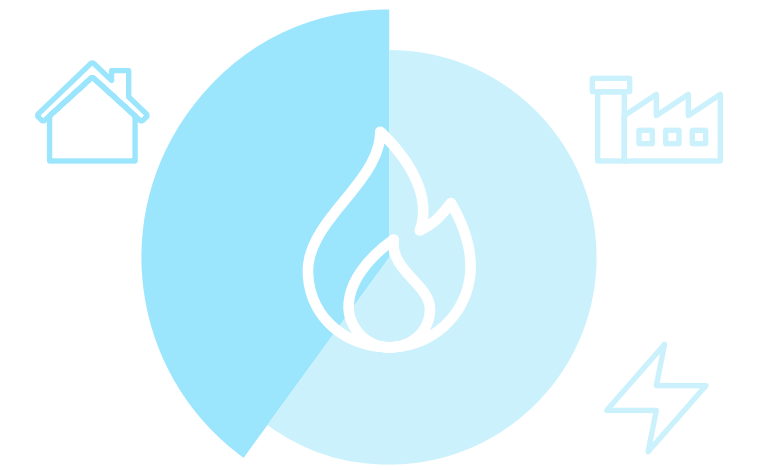
depending on the wholesale sourcing price levels.

At retail level, the final expenditure on gas accounts for approx. **EUR 200 bn per annum.**



THE EU IMPORTS
80%
OF ITS TOTAL GAS NEEDS.

Domestic production has **halved in the last 10 years.**



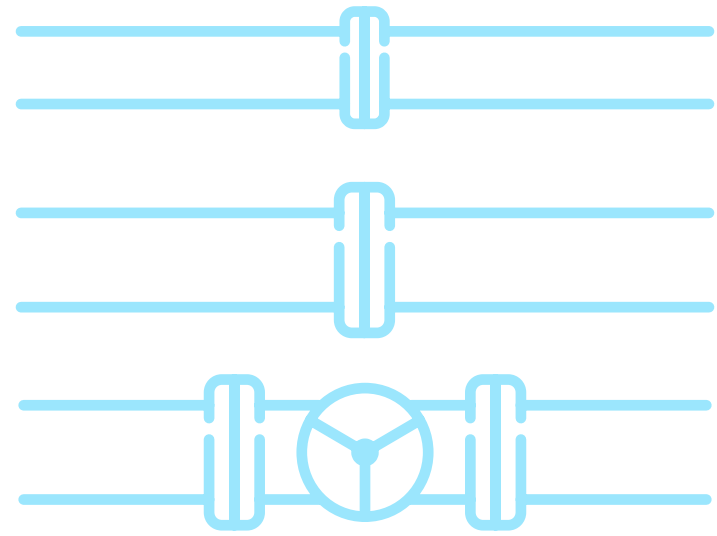
THE RESIDENTIAL SECTOR ACCOUNTS FOR MOST EU GAS DEMAND

40%

FOLLOWED BY INDUSTRY AND GAS USE FOR POWER GENERATION.

Industry consumption has **declined by 20%** since 2000, whereas in the same period **gas use for power generation has risen by 15%**. These trends are due to the EU's economic transition from industry to energy services and structural changes in the energy-intensive industry.

KEY ATTRIBUTES OF GAS AND THE INTERNAL GAS MARKET



The EU gas network is capable of **transporting and storing large quantities of energy.**

It constitutes more than

200,000 km

OF TRANSMISSION PIPELINES,

+ 2,000,000 km

OF DISTRIBUTION NETWORK

+ 20,000

**COMPRESSOR AND
PRESSURE REDUCTION
STATIONS.**

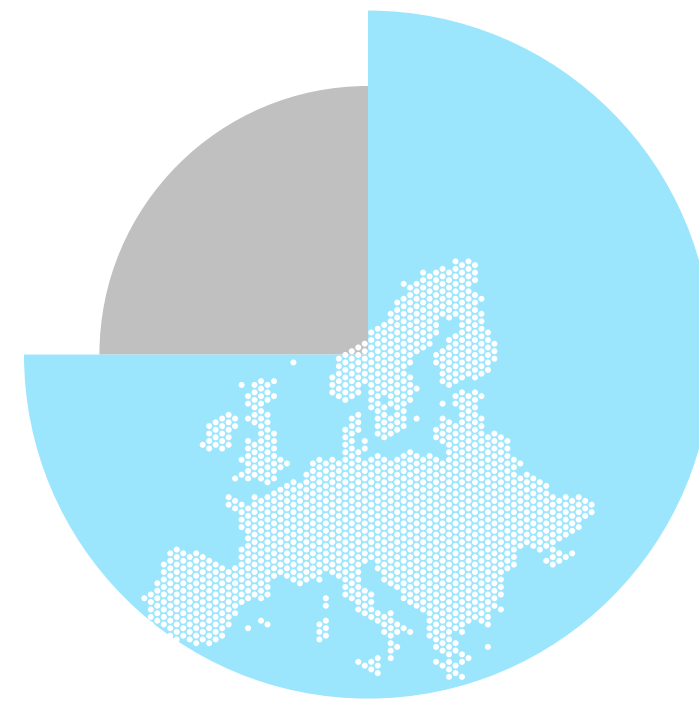


**THE VALUE OF THE
TOTAL INFRASTRUCTURE
INVESTMENTS IS
APPROXIMATELY**

65 BN €

in EU Transmission System
Operators' regulated asset
bases.

**Distribution assets add
to that figure at least by a
factor of 3.**



**MARKET INTEGRATION HAS
SHOWN ITS EFFECTIVENESS
IN AREAS COVERING**

3/4

OF EU GAS CONSUMPTION.

Gas price convergence
is notably strong in
North West Europe.



A more complete realisation
of the **Internal Gas Market**
could still bring extra benefits,
chiefly to some Central and East
European, South South-East and
Mediterranean Member States.

Sourcing gas there at the
price levels attainable at most
liquid North West European
hubs would yield at least

3 BN €



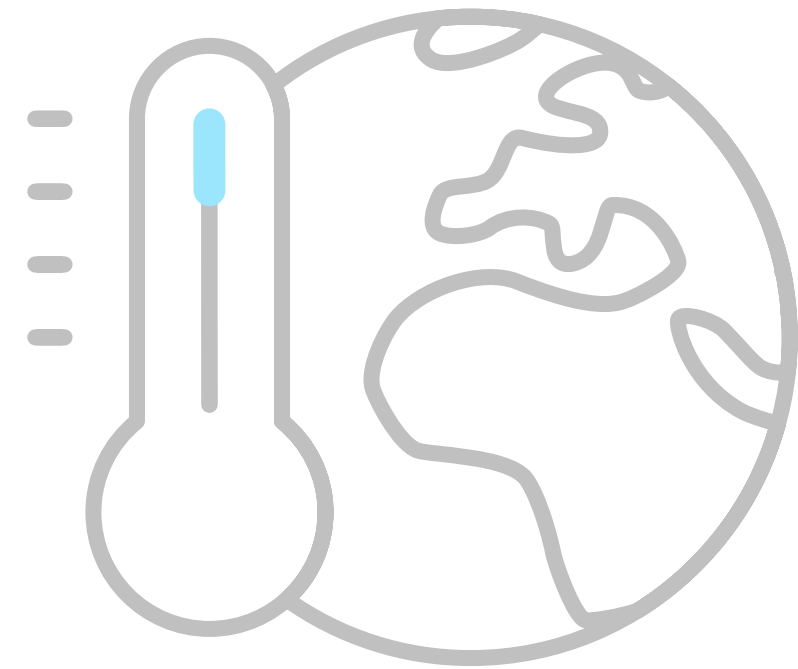
The resilience of the EU
gas system **has increased
significantly** in recent years
following regulatory initiatives
(Network Codes, reverse
flows, etc.) and relevant
infrastructure investments
that have contributed to
diversify the origins of supply.



An efficient **internal gas
market** based on the
progression of liquid hubs
is the best guarantee of
the **security of gas supply**
across the Union; the system
has proved its resilience
under all recent weather and
political/technical situations.

THE ROLE OF GAS IN A TRANSITION PHASE TOWARDS DECARBONISATION

A) The European Green Deal aims to fully decarbonize the gas sector by 2050

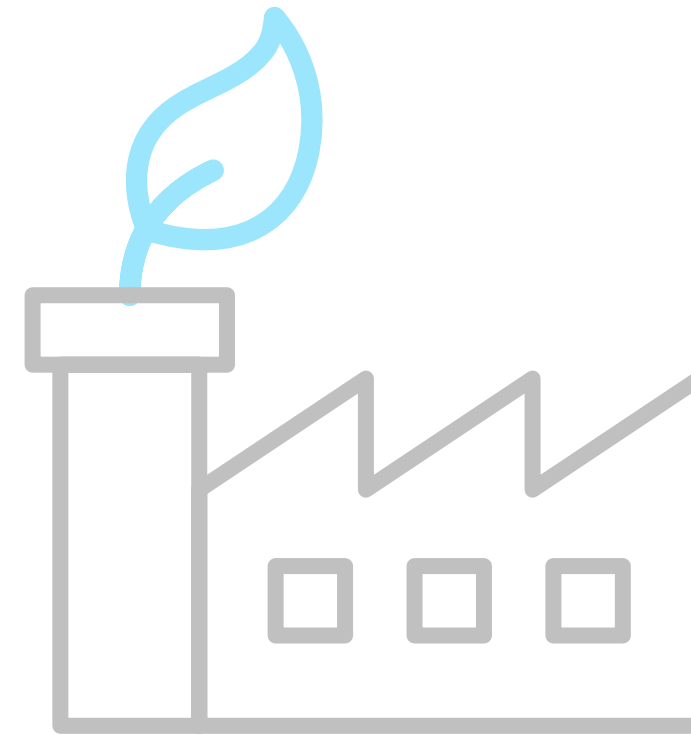


THE GAS SECTOR ACCOUNTED FOR

1/4

OF EU'S GREENHOUSE GAS EMISSIONS IN 2020.

Its relative share has slightly risen over the last decade as an outcome of the decrease in consumption of coal and oil and of coal to gas switches (the emissions associated to power generation at newer gas-fired plants are **up to 50% lower** than at newer coal-fired plants).



TO MEET THE DECARBONISATION TARGETS,
THE EU AIMS TO SHIFT INTO

LOW-CARBON GASES

WHILST REDUCING ITS TOTAL GAS CONSUMPTION.

A clear roadmap still needs to be approved. Commissioner Kadri Simson: **"The bloc needs to cut its gas demand by 25% by 2030"**.



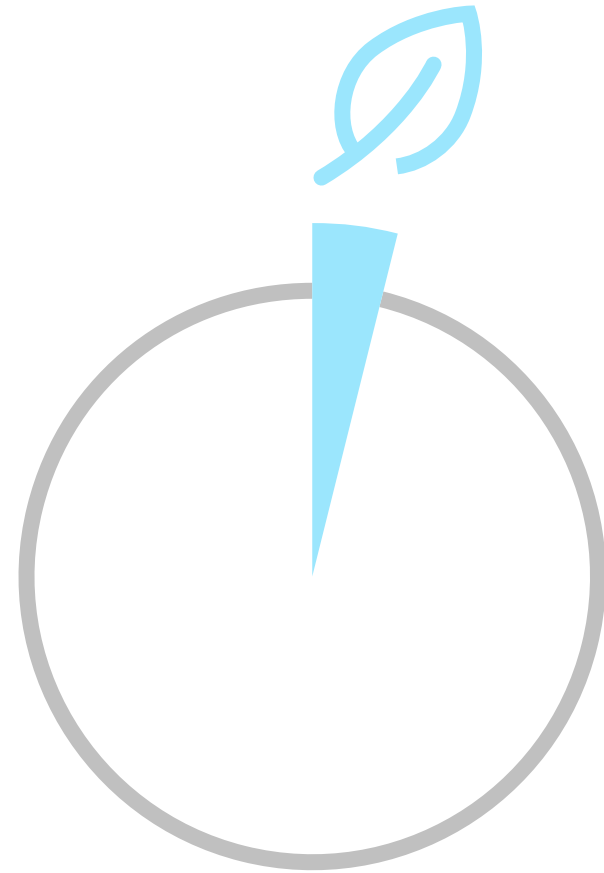
THE REDUCTION OF METHANE LEAKAGES
IS ALSO IMPERATIVE.
THE EU AIMS TO REDUCE THEM BY

29%

by 2030 compared to 2005 levels.

THE ROLE OF GAS IN A TRANSITION PHASE TOWARDS DECARBONISATION

B) Biogas and hydrogen will play the leading role



IN 2020

4%

OF TOTAL CONSUMED GAS IN THE EU-27 PLUS UK WAS LOW-CARBON GAS, CHIEFLY BIOGAS.

Total volumes have more than **doubled** in the last 10 years.

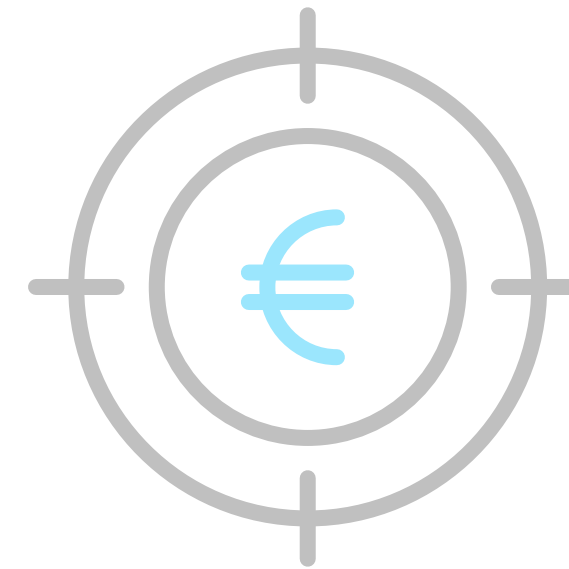


H₂

HYDROGEN HAS BECOME THE CENTRAL ELEMENT IN THE PLANS TO DECARBONISE THE SECTOR.

National Energy and Climate Plans and the European Commission strategy have committed to install **2x40 GW** of electrolyzers by 2030.

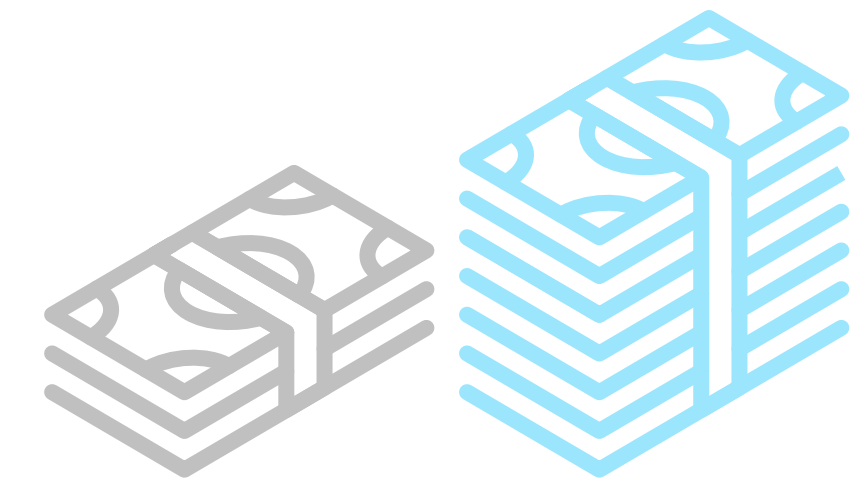
LOW CARBON GASES ARE TO ACCOUNT FOR MORE THAN 15% OF GAS CONSUMPTION BY THEN.



THE INDUSTRY AND POLICY MAKERS PERCEIVE THE TRANSITION AS A

STRATEGIC BUSINESS OPPORTUNITY.

Investments for carbon neutral gases production, additional energy generation from renewable sources and network adaptation could mobilize **hundreds of billions of euros** until 2050.



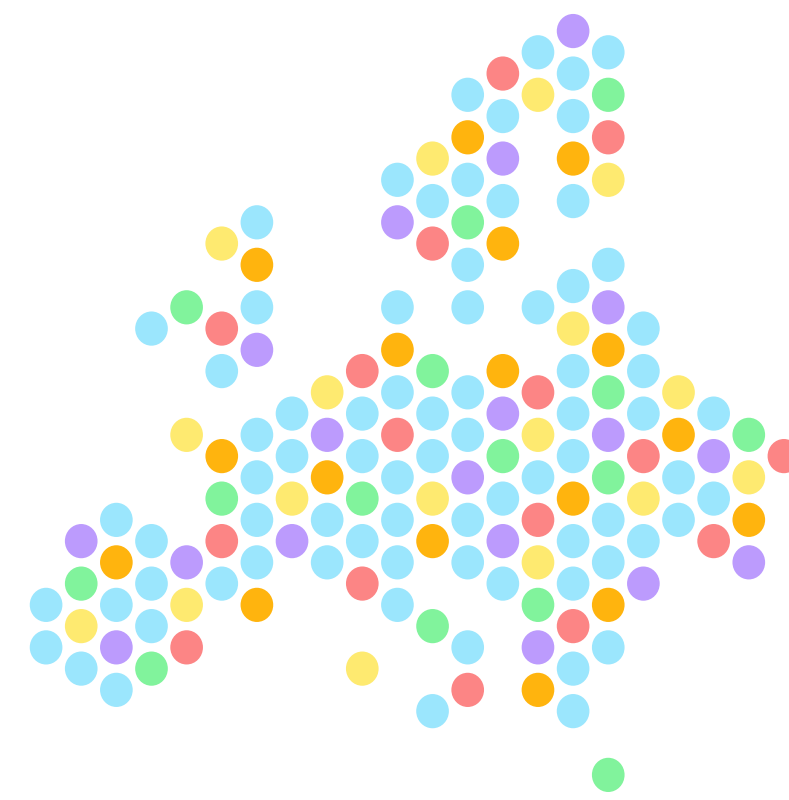
THE MAJOR CHALLENGE IS REDUCING THE LOW CARBON GAS CURRENT PRICE GAP, WHICH MAKES IT AT LEAST

3X COSTLIER

THAN CONVENTIONAL GAS.

Technology and scale improvements, together with a revision of carbon emissions costs are needed to make blue and green hydrogen competitive across the next decade(s).

C) Impacts on the sector in the years to come



EUROPEAN GAS NETWORKS

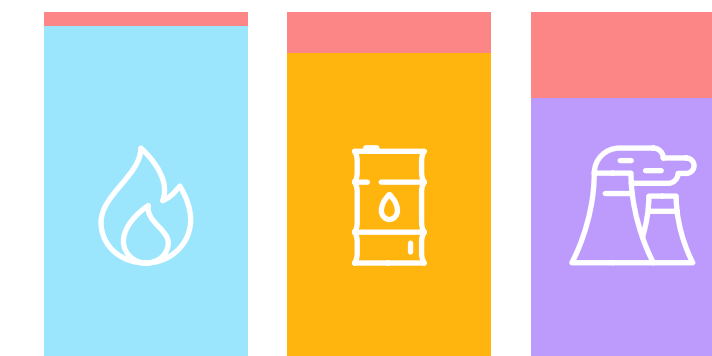
WILL REQUIRE ADAPTATION AND SOME NEW INVESTMENTS TO ENABLE THE LOW CARBON SHIFT.

The reduction in demand could lead to some existing gas infrastructure becoming stranded.

VARIANT PRESENCE OF GAS TYPES ACROSS MARKETS MAY ENTAIL SOME

RISK OF MARKET FRAGMENTATION

OR HINDER WHOLESale TRADING IF SOME TECHNICAL ASPECTS ARE NOT MADE COMPATIBLE.



The gas sector demonstrated its resilience during the Covid-19 crisis: **EU GAS CONSUMPTION FELL**

4%

YOY IN 2020 WHILE OIL DEMAND DROPPED BY 12% AND COAL BY CIRCA 25%.



GAS PRICES REACHED HISTORICAL RECORD LOWS

IN MID-2020, AMID COVID-19 IMPACTS COMBINED WITH INCREASED LIQUEFIED NATURAL GAS AVAILABILITY.

Following the opening up of economies, prices gradually recovered from autumn 2020.