

Bringing the Energy Union forward

What Strategy for the next 5 Years?

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Strasbourg, 13 March 2019

A united Europe can end Russia's energy stranglehold¹

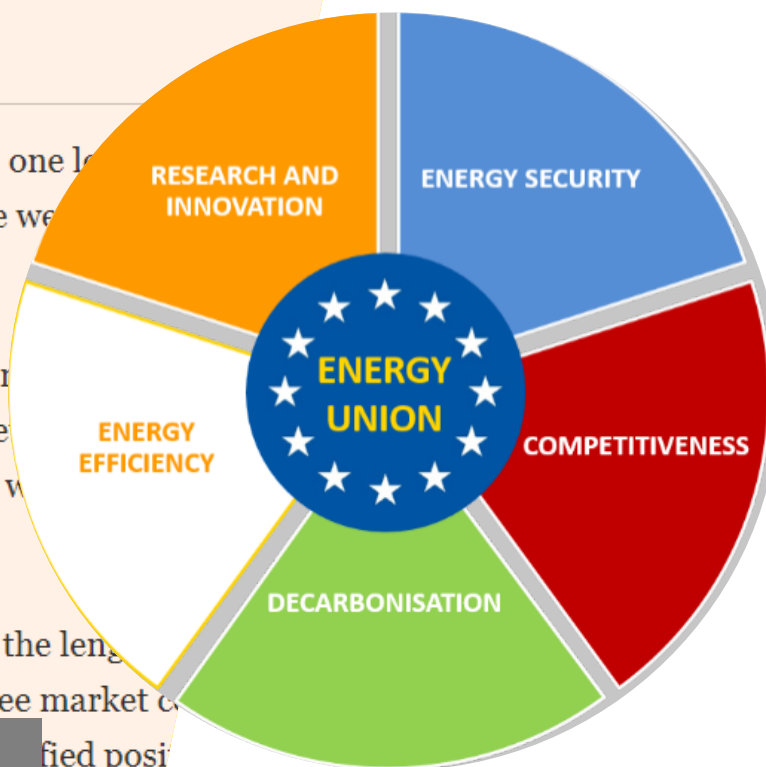
An energy union could restore competition, says Donald Tusk

Donald Tusk APRIL 21, 2014

Regardless of how the stand-off over Ukraine develops, one lesson is clear: excessive dependence on Russian energy makes Europe weak. Russia will not sell its resources cheap – at least, not to everyone.

This, of course, is basic economics. A dominant supplier can raise prices and reduce supply. The way to correct this market failure is for Europe to confront Russia's monopolistic position with a body charged with buying its gas.

Once this has been achieved, Europe should undertake the long-term task of breaking up the Russian gas monopoly and restoring free market competition.



defined position

pinning

financial institutions. The bloc's 28 members jointly buy uranium and nuclear power plants through the EU's atomic energy agency, IAEA. The bloc should take the same approach with Russia's gas.

Energy Union reform steps

- FEB 2015** **Energy Union Strategy launch.**
Definition of the 5 axis of work
- JUL 2015** **«Summer Package»** including the reform of the EU carbon pricing (EU ETS)
- FEB 2016** **«Winter Package»** addressing:
Security of gas supplies, IGAs, LNG Strategy
- NOV 2016** **«Clean Energy Package»** on the Reform of the Electricity Market Design, Renewables, Energy Efficiency
- NOV 2017** **Amendment to the Gas Directive** (application of EU rules to import pipelines)
- DIC 2017** Agreement on EU ETS Reform
- DIC 2018** Agreement on all files of the Clean Energy Package (including GHG, Efficiency and RES targets)



What challenges going forward? Delivering on the 2030 targets with an eye to 2050...

CIRCULAR ECONOMY & CARBON SINKS

- Turning waste into sustainable energy resources
- Delivering on CCU and CCS

ENERGY SECURITY

- Securing and diversifying EU growing share of energy imports



CLIMATE & ENVIRONMENT

- Timely phase-out coal in power generation
- Bringing forward policy solutions to decarbonise gas and heat networks



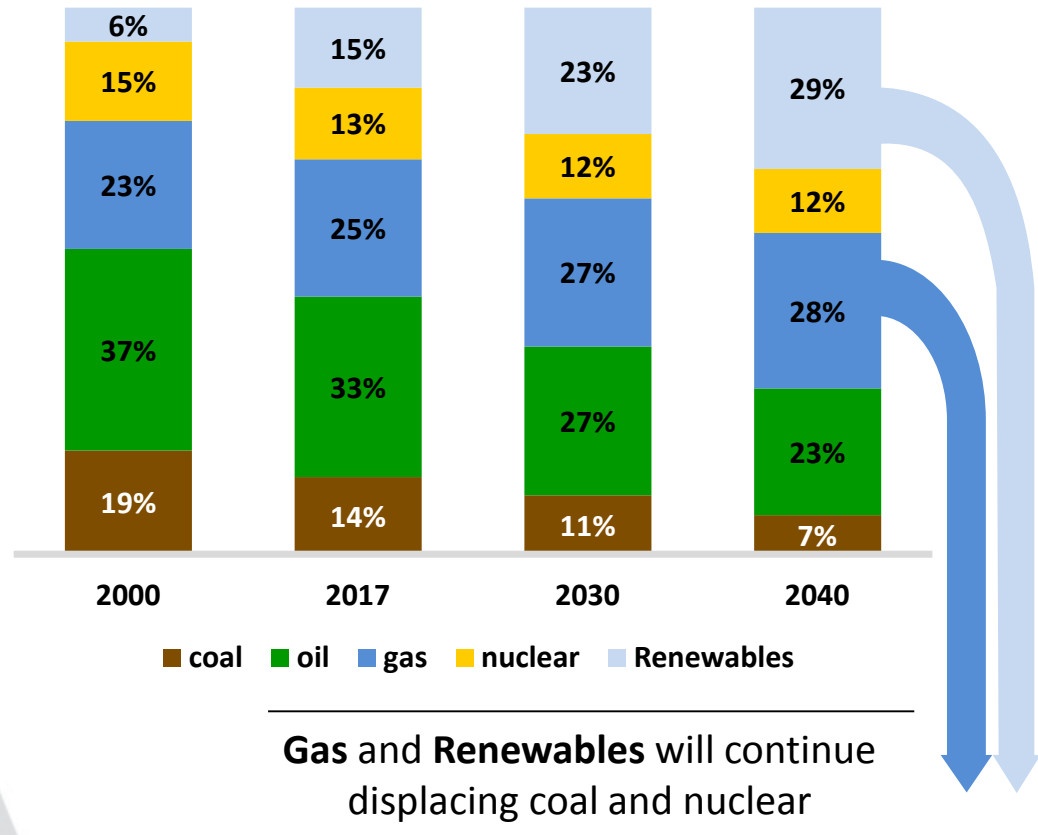
COMPETITIVENESS

- Increasing system efficiency by integrating electricity, gas and industrial heat

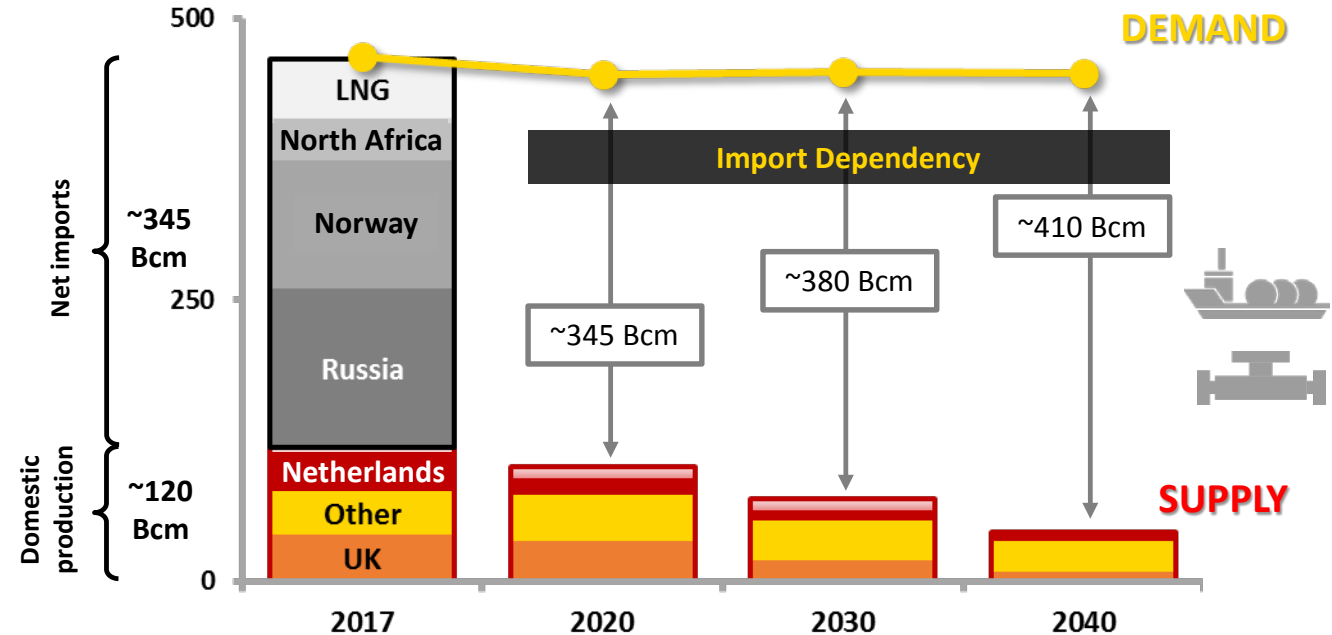
ENERGY UNION 2.0

Europe's gas import will grow due to falling domestic production

EU28 Energy mix | Mtoe

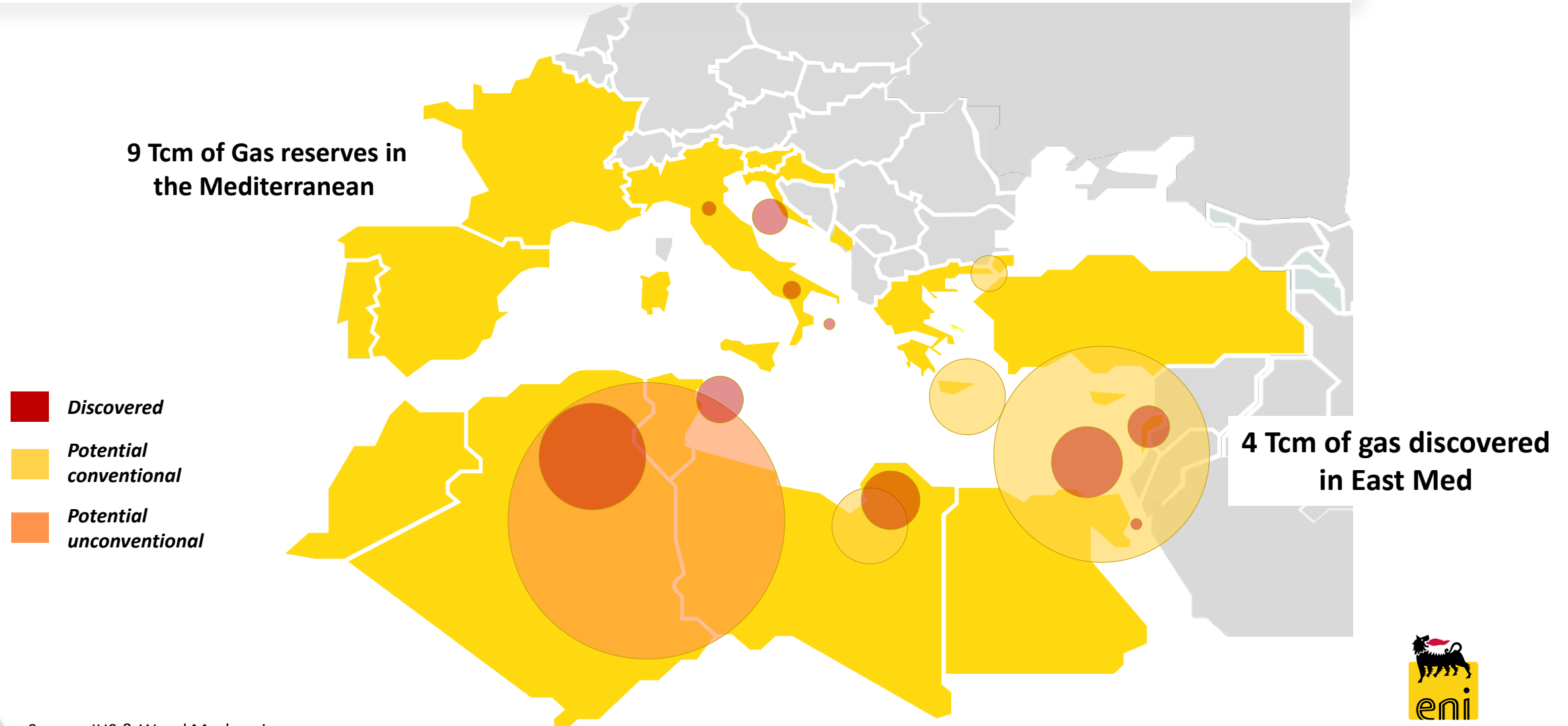


EU28 Gas Supply-Demand balance | Bcm



Energy Diplomacy in the Mediterranean is central to improve security of supply and neighbourhood stability

- Mediterranean potential about 48 Tcm, more than Russia's (44 Tcm)
- 85% in North Africa, with 14 Tcm of conventional gas (mainly Nile Delta) and 27 Tcm unconventional (Algeria)



The East Med could become a strategic energy hub for the EU

The evolution of the East Med

4,000 Bcm

Main recent discoveries:



Tamar (2009)

380 Bcm



Leviathan (2010)

790 Bcm



Aphrodite (2011)

170 Bcm



Glaucus (2019)

142-227 Bcm



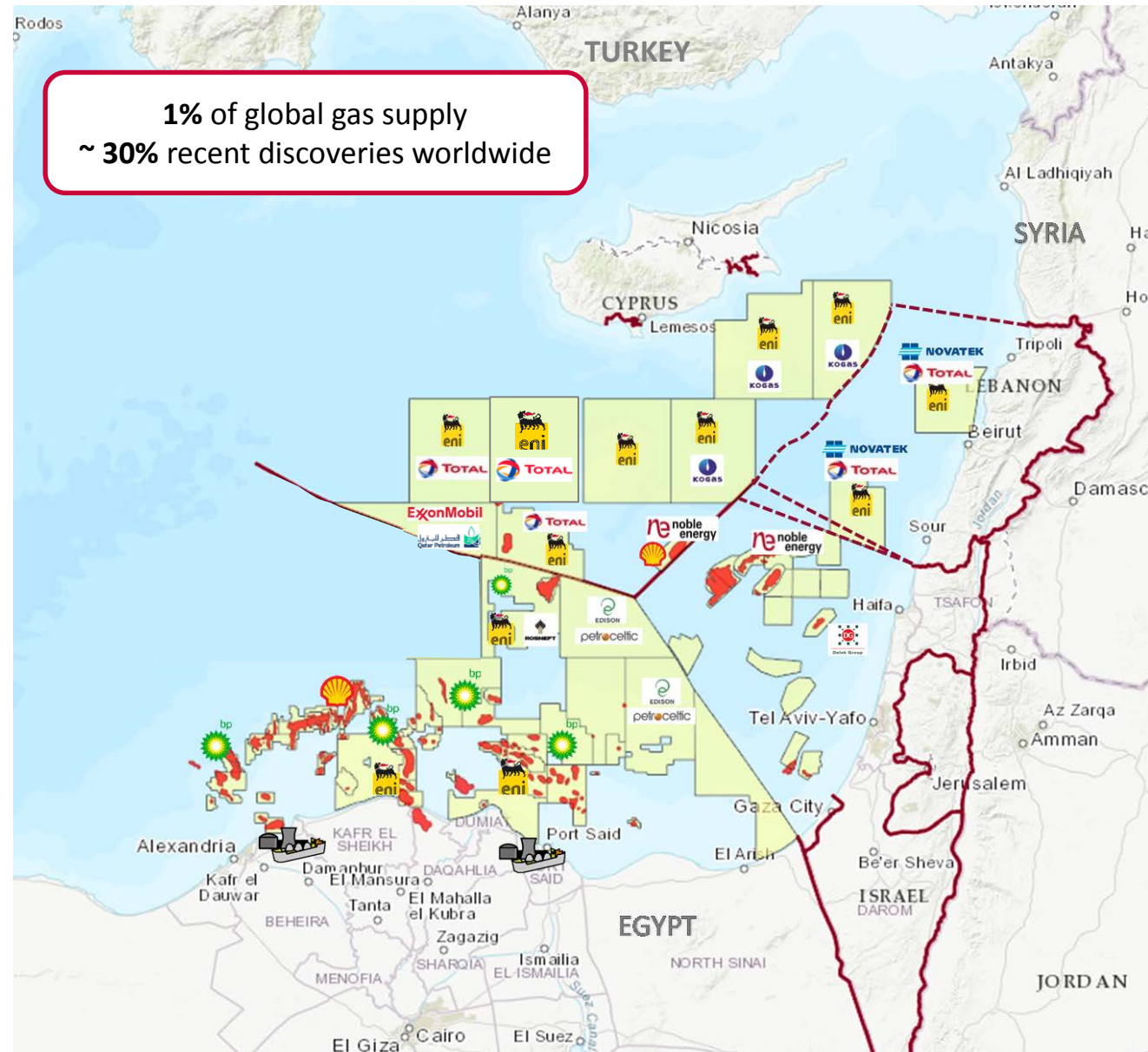
Zohr (2015)

850 Bcm

POTENTIAL YET TO BE FOUND

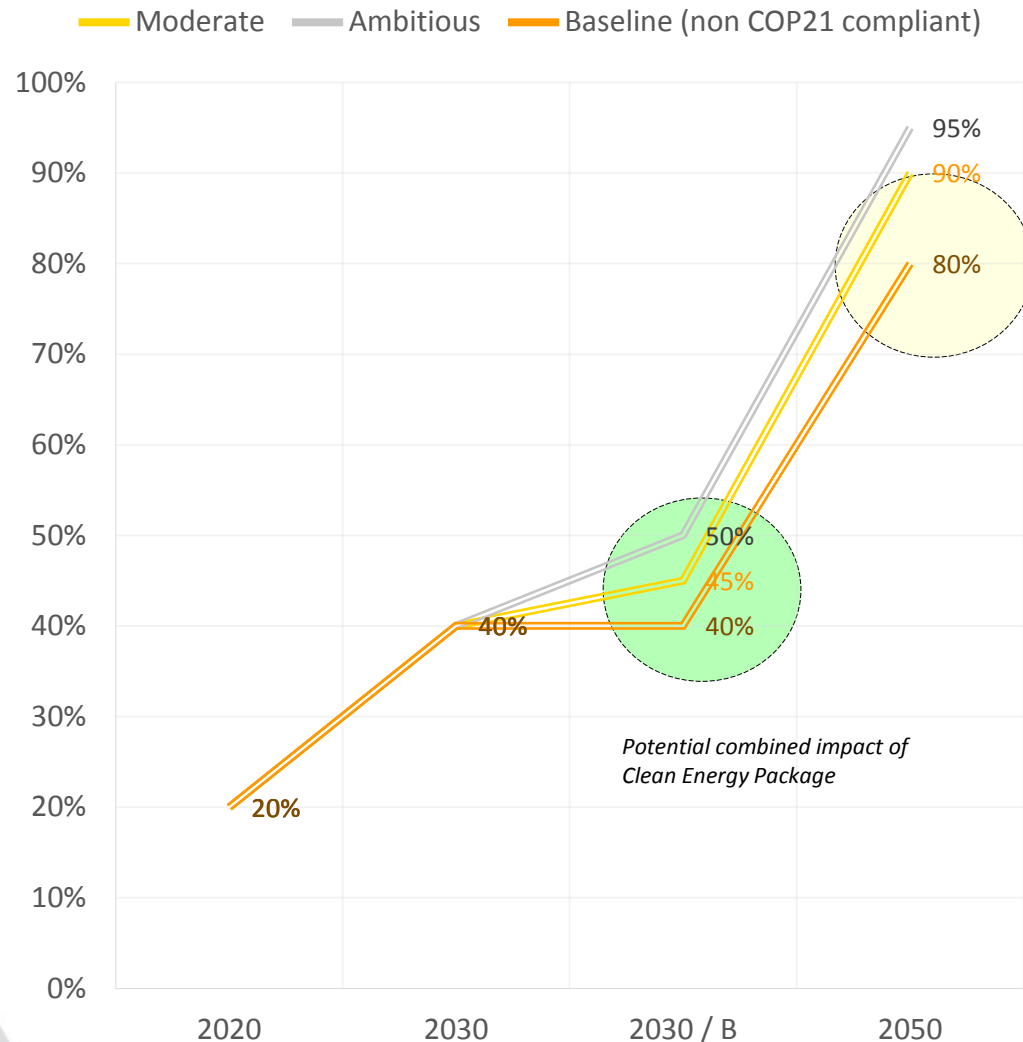
GAS RESOURCES

2,800 - 8,500 Bcm



The next 5 years will also be central to meeting the 2030 and 2050 climate targets

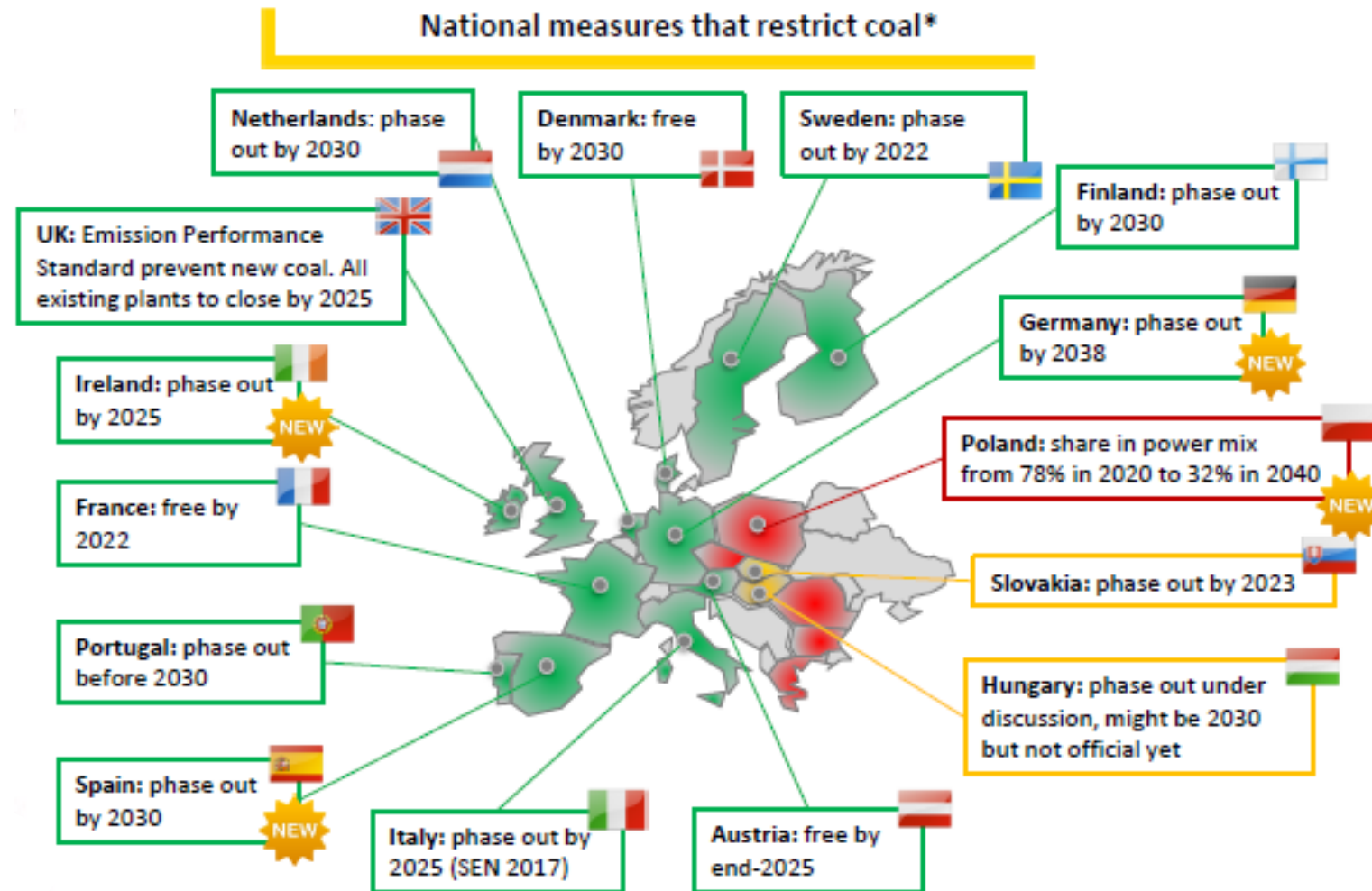
GHG emissions reduction targets in the EU¹



Today's consensus: pre-conditions to meet the EU targets?

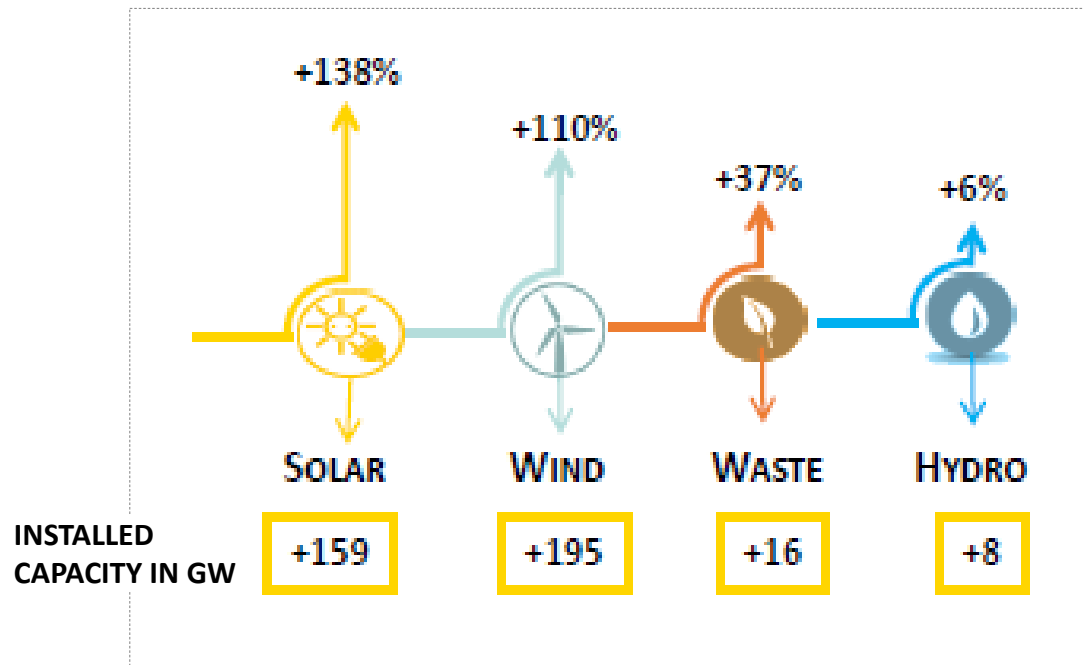
- Substantial coal phase-out (-77% by 2030 according to the IEA)
- Successful energy efficiency policies
- Renewables > 50% of the electricity generation mix
- Support to circular economy solutions, CCUS and system integration

Phasing out coal remains a priority...



So as integrating an increasingly high share of intermittent renewables...

Renewables capacity growth by technology 2018 vs 2040¹



Gas provides more than 1500TWh of flexible energy every year²

EV CARS BATTERIES
20 000 000 000 X



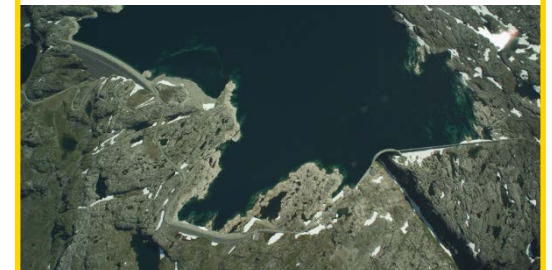
Tesla P75D LiOn Battery Pack

BATTERY PARKS
11 600 000 X



*World's largest battery park
Australia 129 MW*

LARGE HYDRO
200 X

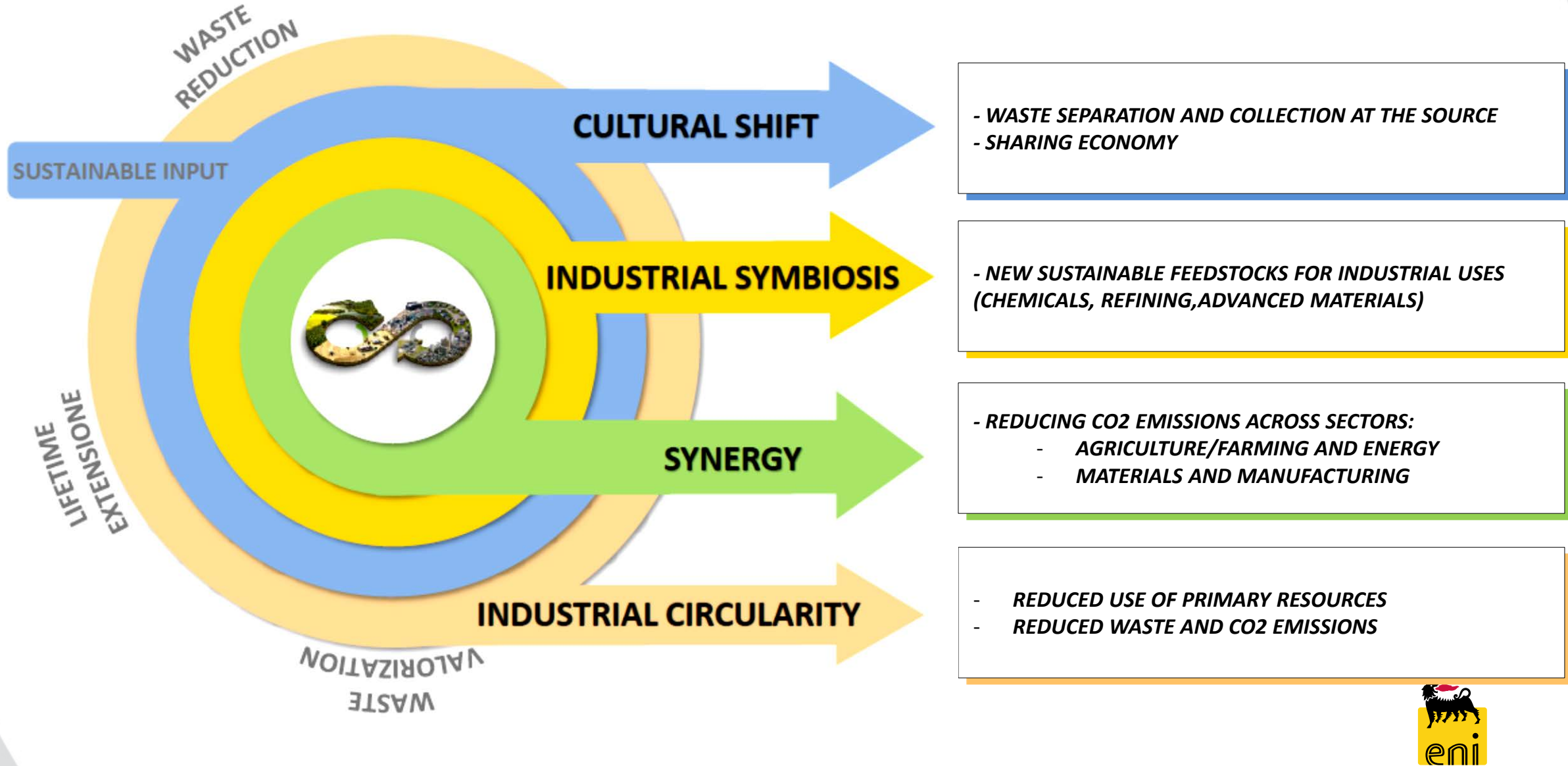


*Norway's biggest hydro storage
(Blasjo)*

1 Source: Eurostat, Eni data elaboration

2 Source: ENTSG, Tesla, Statkraft, Eni data elaboration

Mainstreaming circularity



Eni has already started a process of deep transformation towards the circular economy...

GREEN CONVERSION



- VENEZIA: 1° BIO-REFINERY IN THE WORLD
- GELA: start up IQ 2019

Industrial plants can treat animal fats, green chemistry by-products, non-edible oils by a proprietary process and residues from plastic production

Green diesel within 2021

1 Mton/y

WASTE VALORIZATION

RECOVERY



SUSTAINABLE MOBILITY

USED COOKING OIL



PLASMIX



ORGANIC AND INORGANIC WASTES



ADVANCED BIOFUELS

BIOMETHANE/H₂

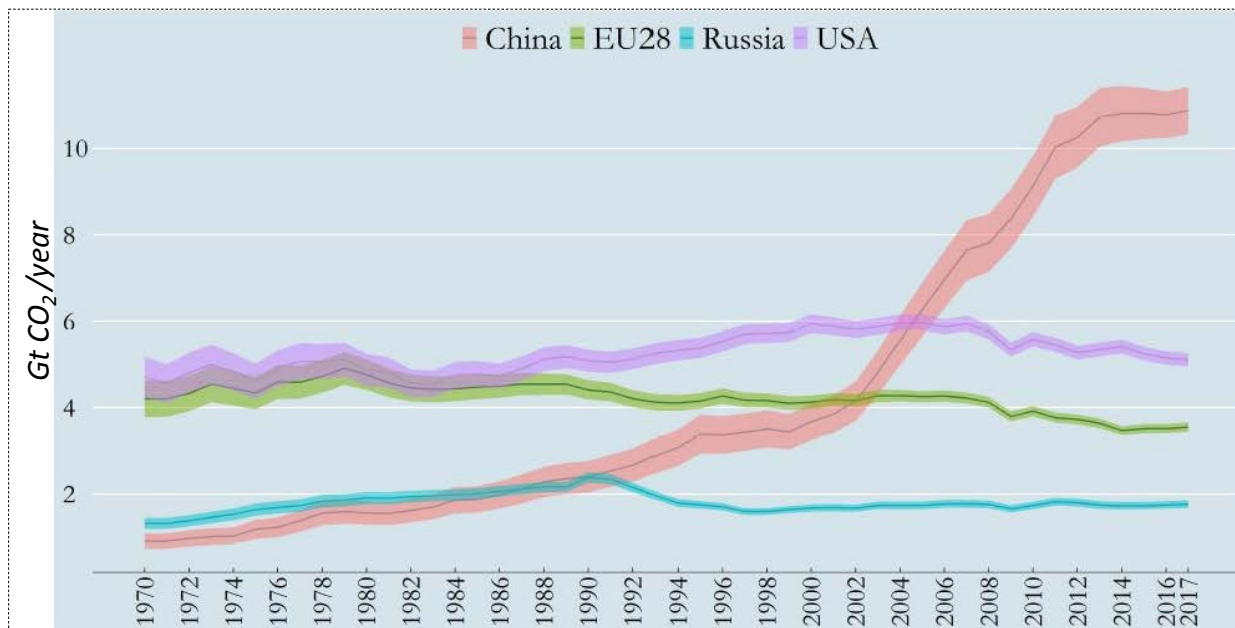
Car Sharing

enjoy



Europe's climate policy success will be measured also in terms of global alignment with its policies...

Annual GHG emissions per region with uncertainties*



- In 2017, the EU's CO₂ emissions were 19.5% lower than in 1990, and 16.5% (or 3.5 GT) lower than in 2005.
- Per capita emissions in the EU are now below those of China and half of those in the US.
- The CO₂ intensity of the EU economy is around a third below the US and around two thirds below China.
- EU emissions will account for ~6-7% of global GHG emissions behind China, US and India

THE EU SHOULD SUPPORT ACTIVE CLIMATE POLICIES IN ITS NEIGHBOURHOOD AND IN THIRD COUNTRIES AS A MEANS TO COUNTER THE DECREASING IMPACT OF ITS DOMESTIC EMISSION REDUCTION POLICIES

Conclusions

- *The Energy Union is the most ambitious reform package ever delivered in the EU energy sector.*
- *The next five years will be crucial to deliver on the Energy Union goals and to prepare for deeper decarbonisation.*
- *Europe's energy interdependence with its neighbourhood is a strength and an opportunity.*
- *Delivering carbon neutrality in the energy sector by 2050 will depend on the speed of implementing existing policies as well as the upcoming reform of the gas sector.*
- *Circular economy should be mainstreamed and become the default design of every policy*