



# EU Energy Policy & Fit for 55 package

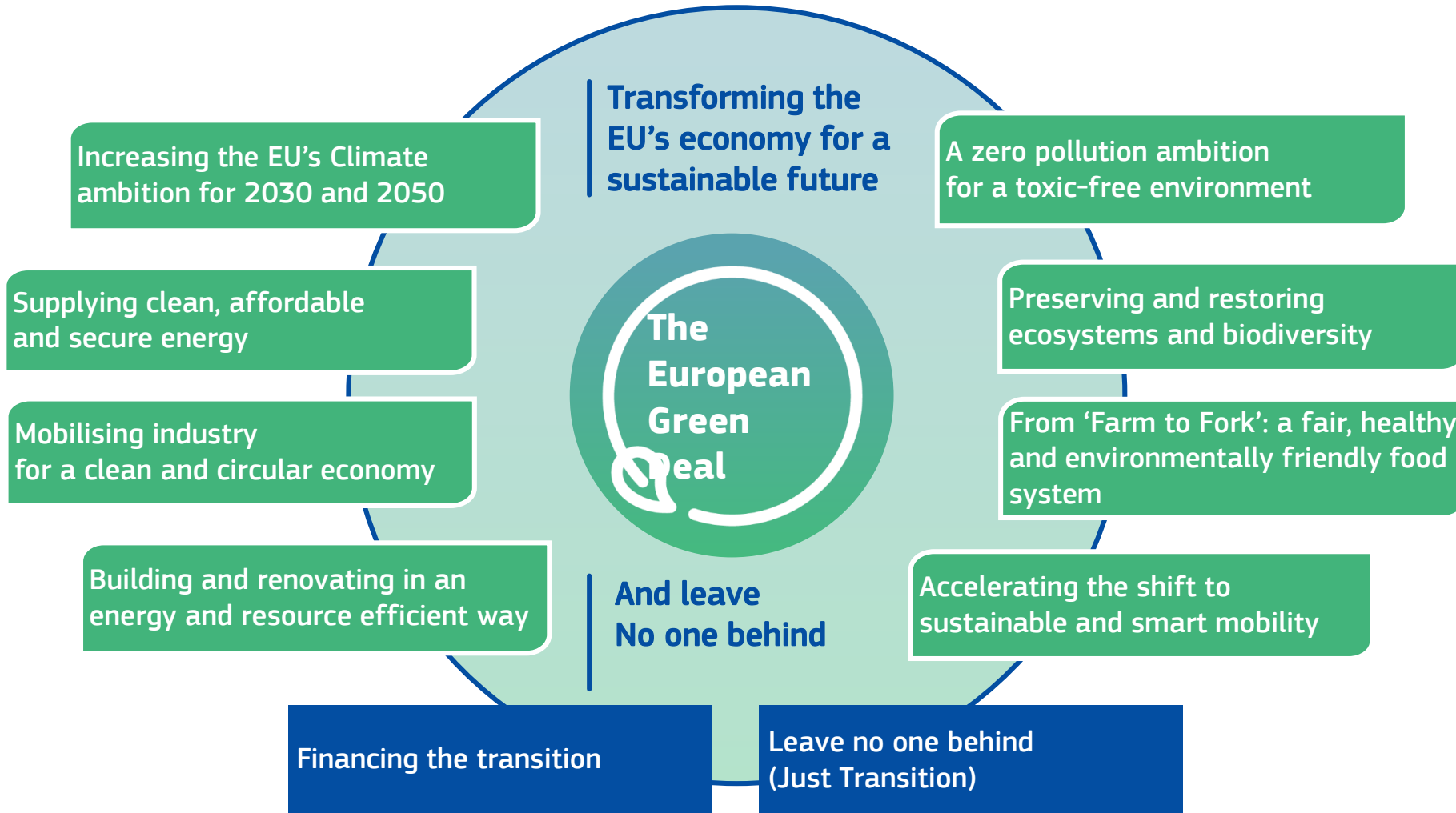
Dr. Tudor Constantinescu

Principal Adviser

DG Energy, European Commission

11 Octobre 2021

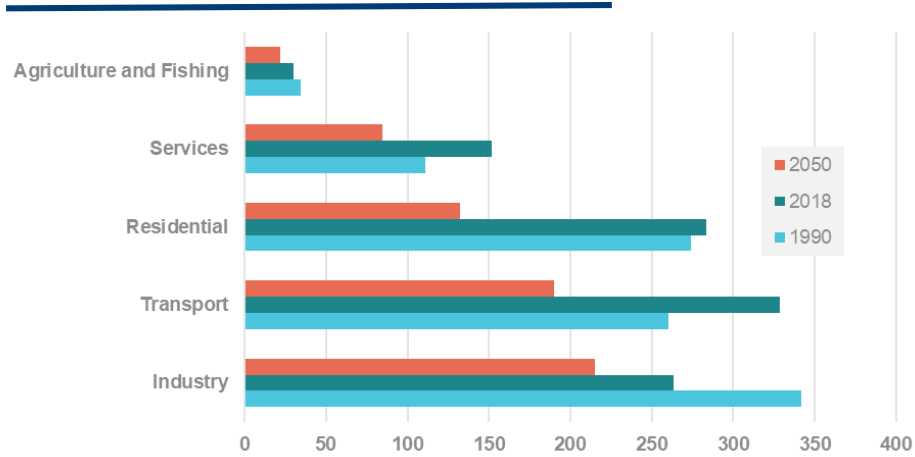
# The European Green Deal



The EU as a global leader

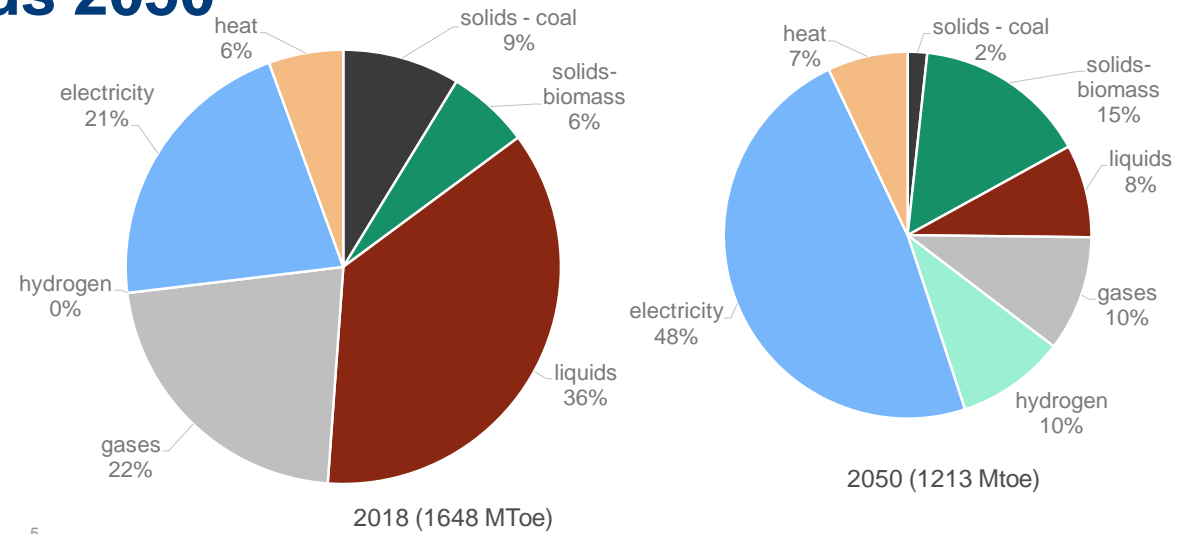
A European Climate Pact

# A changing energy landscape towards 2050



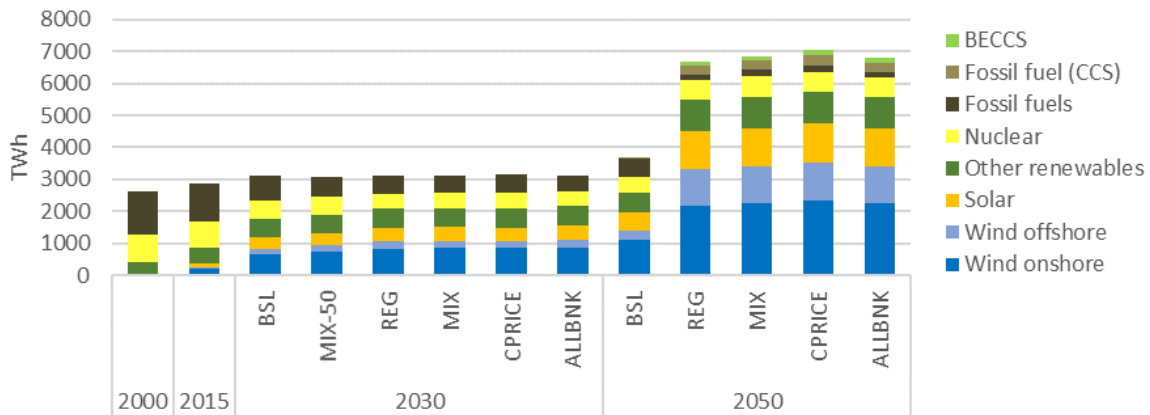
Source: Mtoe, based on EU28 Eurostat/LTS 1.5LIFE/TECH scenarios

## (1) Changing demand



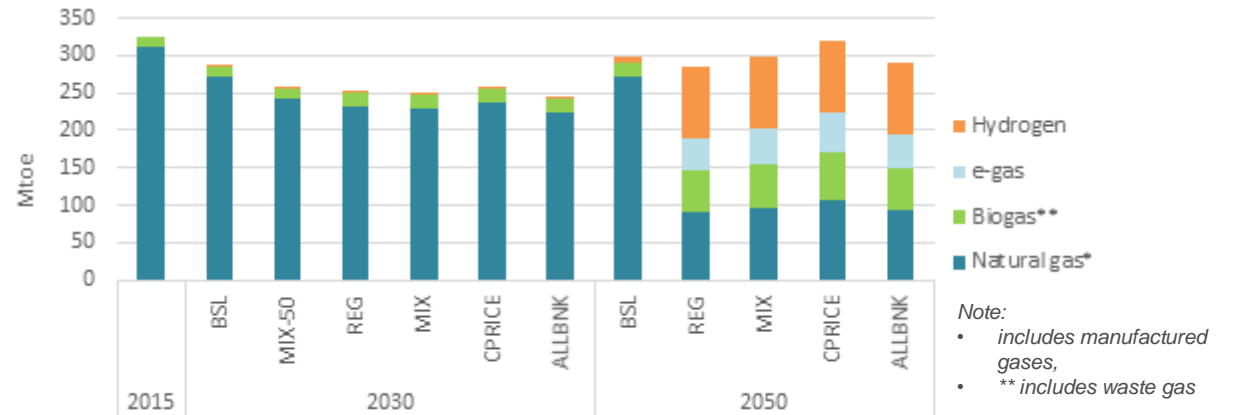
Source: Based on EU28 Eurostat/LTS 1.5LIFE/TECH scenarios

## (2) Changing energy carriers



Source: 2015: Eurostat, 2030-2050: PRIMES model

## (3) Massive increase RES-E

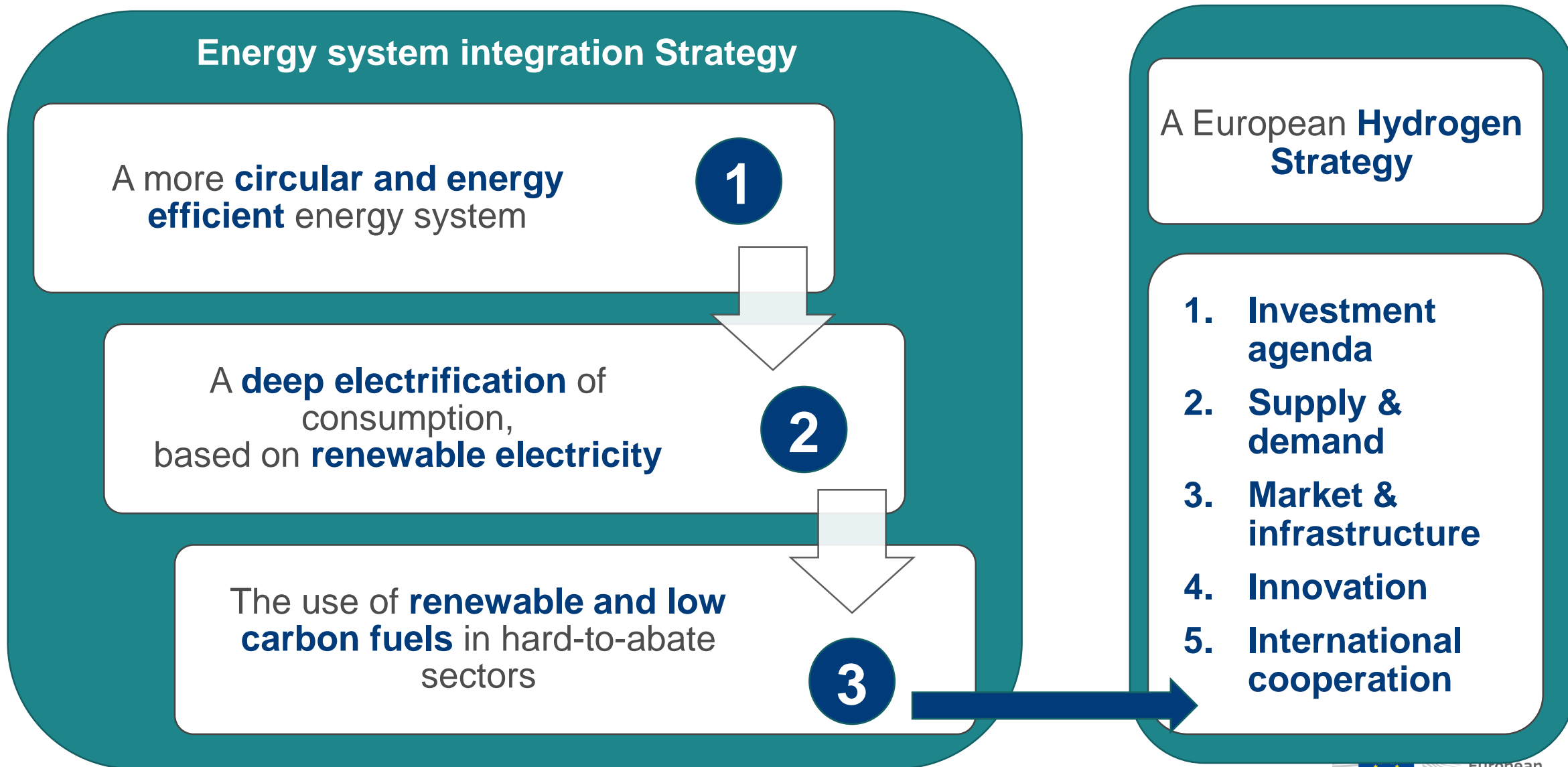


Source: 2015: Eurostat, 2030-2050: PRIMES model

## (4) Renewable and low-carbon gases



# Laying the foundation for a climate-neutral energy system

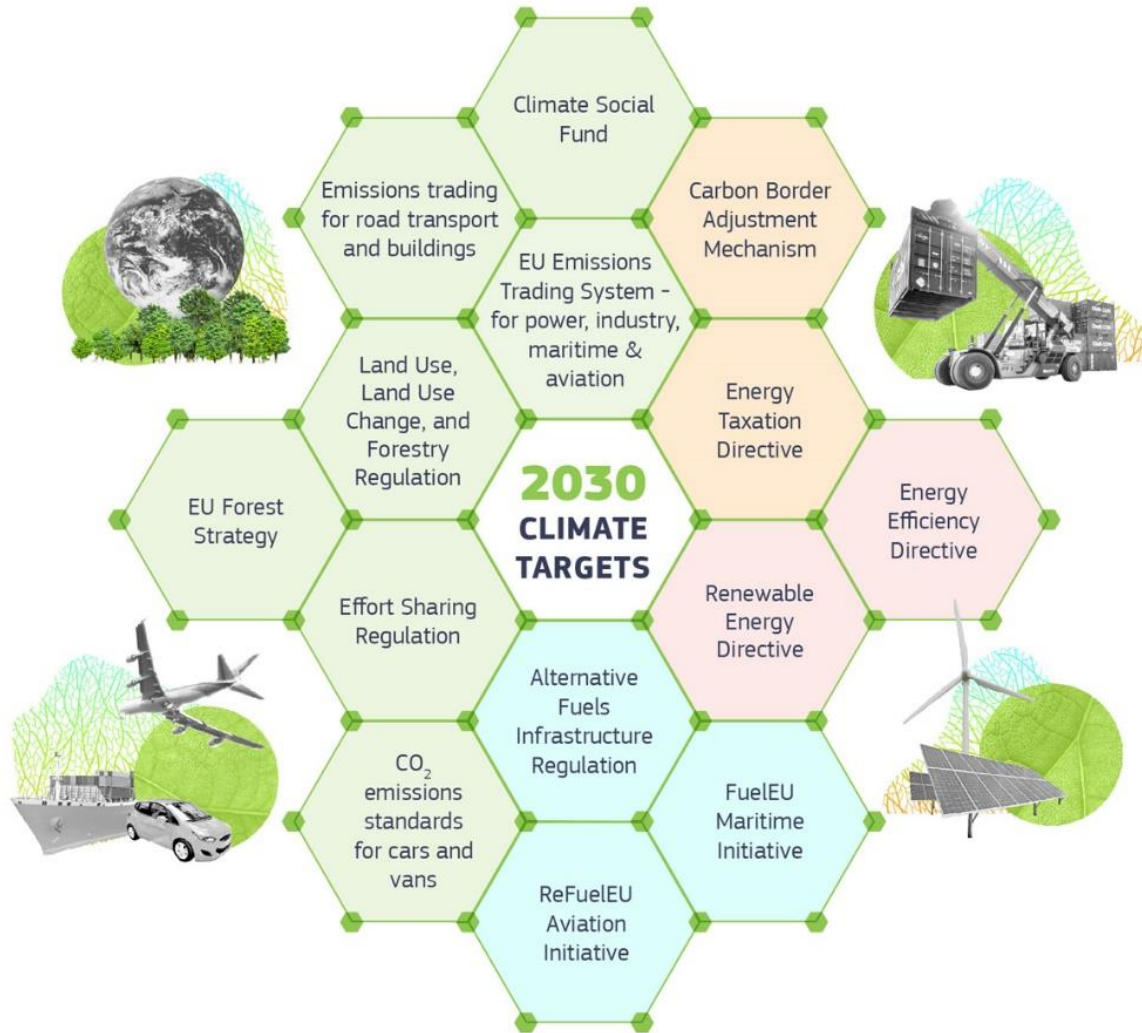


# EU Hydrogen Strategy: an action plan

Full value chain approach,	Actions oriented towards	Main tools involved (*)
<b>An investment agenda</b>	<ul style="list-style-type: none"> <li>• Create project pipeline</li> <li>• €220-340 bln renewable power, €24-42 bln electrolysers, €65 bln infrastructure</li> </ul>	Clean Hydrogen Alliance, InvestEU, IPCEI, State aid, Cohesion policy
<b>Boosting demand and scale up production</b>	<ul style="list-style-type: none"> <li>• Comprehensive terminology and EU-wide certification of hydrogen</li> <li>• Support schemes and CCfD for renewable and low-carbon hydrogen</li> <li>• Demand-side policies in end-use sectors</li> </ul>	RED, EU ETS, Transport policy, Industrial strategies
<b>Develop hydrogen infrastructure and markets</b>	<ul style="list-style-type: none"> <li>• Planning of hydrogen transport, storage and dispatch infrastructure</li> <li>• Ensure access, develop liquid hydrogen markets and integrity of internal gas market</li> </ul>	TYNDPs, TEN-E, TEN-T, AFID, CEF, decarbonisation of gas package
<b>Research and Innovation</b>	<ul style="list-style-type: none"> <li>• Scale up electrolysers</li> <li>• Develop hydrogen value chain</li> <li>• Innovative hydrogen technologies</li> </ul>	Clean Hydrogen Partnership, ETS Innovation Fund, Horizon Europe,
<b>The international dimension</b>	<ul style="list-style-type: none"> <li>• International standards, regulation and definitions for hydrogen</li> <li>• Promote cooperation</li> </ul>	IEA, IRENA, CEM, G20, Neighbourhood policy, EU-Africa Green Energy Initiative, bilateral energy dialogues, € benchmark

(\*) *Non-exhaustive list*

# The Fit for 55 Package – Overview



The package aims to make the EU 'fit for 55' and **deliver the transformational change** needed in a

- **fair,**
- **cost-efficient and**
- **competitive way.**

It cements the **EU's global leadership** by action and by example in the **fight against climate change**

# Policy mix at a glance

Pricing	Targets	Rules
<ul style="list-style-type: none"><li>• Stronger ETS including in aviation</li><li>• Extending the ETS to maritime, road transport, and buildings</li><li>• Updated Energy Taxation Directive</li><li>• Carbon Border Adjustment Mechanism</li></ul>	<ul style="list-style-type: none"><li>• Updated Effort Sharing Regulation</li><li>• Updated LULUCF Regulation</li><li>• Updated Renewable Energy Directive</li><li>• Updated Energy Efficiency Directive</li></ul>	<ul style="list-style-type: none"><li>• Stricter CO<sub>2</sub> performance for cars &amp; vans</li><li>• New infrastructure for alternative fuels</li><li>• ReFuelEU: More sustainable aviation fuels</li><li>• FuelEU: Cleaner maritime fuels</li></ul>
Support measures		
Using revenues and regulations to promote innovation, build solidarity and mitigate impacts for the vulnerable, notably through the new Social Climate Fund and enhanced Modernisation and Innovation Funds		

The Fit for 55 Package consists of a set of **inter-connected proposals that strike a careful balance** between pricing, targets, standards and support measures.

# Fit for 55 package: focus on initiatives (1)

## ✓ RED II proposal:

- fostering the % renewables in the EU's energy mix by 2030 and certification and a certification system for **renewable and low-carbon fuels**.
- Overall target: substantial **increase in renewable energy** from the current **32% target today** to **38%- 40% by 2030**.

## ✓ Energy Efficiency Directive

- a more ambitious binding annual target for reducing energy use at EU level.
- Overall target: new EU binding target for final and primary energy consumption (36% and 39%)



# Fit for 55 package: focus on initiatives (2)

- ✓ **Alternative Fuels Infrastructure Regulation:** 12.9% target for the reduction of the greenhouse GHG emissions for transport fuels, incl. at least one electric charging station each 60 km and h2 refuelling station each 150 Km
- ✓ **FuelEU aviation and maritime proposals:** stimulate the uptake of sustainable fuels, including hydrogen
- ✓ **EU Emission Trading Scheme:** extending and deepening the scheme, also production of H2 with electrolyzers to receive free allowance and carbon contracts for difference
- ✓ **Energy Taxation Directive:** preferential tax rates for the use of renewable and low carbon H2
- (.....)
- ✓ **Proposal for Decarbonised Gas and Hydrogen Market (due in December):** Amendment of the Directive including legal framework for the development of hydrogen infrastructure

# Support measures for a fair transition

- The **Recovery and Resilience Facility** and the **EU Structural Funds**
- The **Social Climate Fund**: 1) **support households, transport users, and micro-enterprises**; 2) **support investments** in energy efficiency, buildings renovation, clean heating and cooling, integration of renewable; 3) **provide direct income** support for vulnerable households; 4) **finance zero-and low-emission mobility**
- **Financed by the EU budget**, using an amount equivalent to **25% of the expected revenues ETS building and road transport**. It will provide **€72.2 billion** for the period **2025-2032**



# The role of gas turbines

- Support **flexibility** in the energy system
- Important role to support **decarbonisation** and **energy system integration**
- **Technological developments** for new and existing gas turbines with the objective to handling up to **100% renewable H2 in future**
- **Transition period**: wide range of variable hydrogen/natural gas mixtures while maintaining operational flexibility



Thank you

[tudor.constantinescu@ec.europa.eu](mailto:tudor.constantinescu@ec.europa.eu)