



- EU Climate Action -

Directorate-General for Climate Action

A European Green Deal

“I will propose a European Green Deal in my first 100 days in office.”

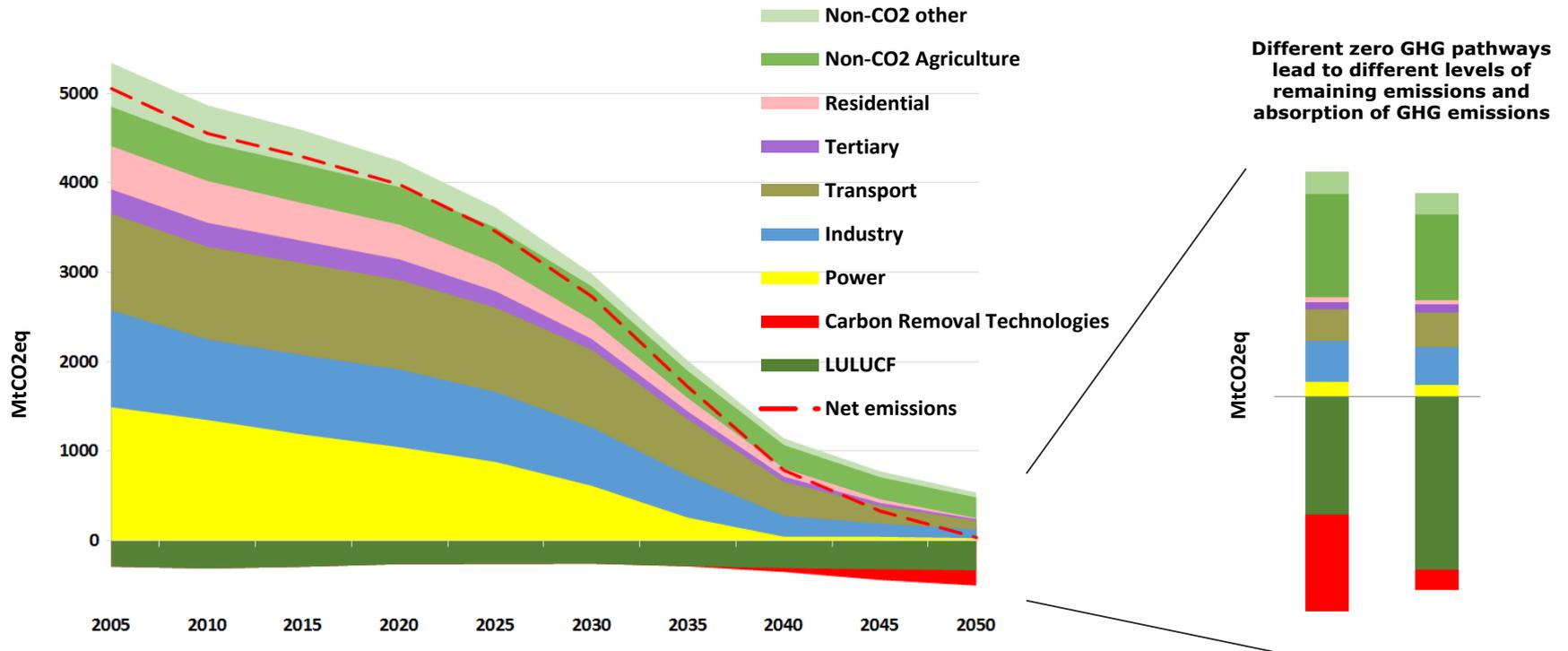


Climate Neutrality by 2050

"I want Europe to strive for more by being the first climate-neutral continent."

"This will include the first European Climate Law to enshrine the 2050 climate-neutrality target into law."

The Commission's Vision for a Clean Planet by 2050



7 Building Blocks

1. Energy efficiency
2. Deployments of renewables
3. Clean, safe & connected mobility
4. Competitive industry and circular economy
5. Infrastructure and inter-connections
6. Bio-economy and natural carbon sinks
7. Tackle remaining emissions with carbon capture and storage

Building Block 1 Energy efficiency

Central role, **energy consumption reduced by as much as half** in 2050 compared to 2005

Buildings key, most of the housing stock of 2050 existing already today, higher renovation rates, fuel switching

Requires adequate financial instruments and skilled workforce, integrated policy approach and consumer engagement to sustain higher renovation rates

Building Block 2 Deployment of renewables

Primary energy in 2050 **largely coming from renewable** sources

The share of electricity in final energy demand will at least double, more than **80% of it will be renewable**.

Renewable electricity allows production and deployment of carbon-free energy carriers such as **hydrogen and e-fuels** to decarbonize heating, transport and industry.

Decentralized, smart and flexible power system.

Reduction of energy import dependence, cumulative savings from reduced import bill of € 2-3 trillion over the period 2031-2050.

Building Block 3 Clean, safe & connected mobility

Carbon-free power, cheaper and efficient **batteries**, highly efficient electric powertrains, connectivity and autonomous driving offers prospects to decarbonise road transport.

No single silver bullet for all transport modes with alternative fuels having a role in **heavy duty or long distance transport** modes (advanced biofuels, carbon-free e-fuels, hydrogen).

Digitalisation, data sharing and interoperable standards leading to a more efficient mobility system.

Innovative mobility for urban areas and smart cities, underpinned by changing behaviour, leading to improvement of quality of life.

Building Block 4 Competitive industry

Competitive **resource-efficient industry** and **circular economy**, increased recovery and recycling of raw materials (including critical materials), new materials and business concepts.

Electrification, energy efficiency, hydrogen, biomass and renewable synthetic gas to reduce **energy emissions in the production** of industrial goods.

Process-related reductions more difficult. **Biomass and hydrogen** can reduce certain emissions (steel production, some chemicals), others will require CO₂ to be captured and stored or used.

In the next 10 to 15 years, technologies that are already known will need to demonstrate that they can work at scale.

Building Block 5 Network infrastructure

Integrated and interconnected smart infrastructure, spurring sectoral integration.

Completion of the **Trans-European Energy and Transport Networks**.

Smart electricity and data/information grids, **hydrogen pipelines**.

Smart charging or refuelling stations for transport. Increased synergy between transport and energy systems.

Retrofitting existing infrastructure and assets and timely replacement of ageing infrastructure compatible with the deep decarbonisation objective.

Building Block 6

Agriculture, forest and bio-economy

Agriculture to provide sufficient food, feed and fibre. **Agricultural non-CO2 emissions** can be reduced (but not to zero) and soil carbon can be increased through improved farming techniques.

Biomass is multipurpose: supply direct heat, biogas, biofuels, alternative to carbon intensive materials and generate negative emissions when coupled with carbon capture and storage; therefore increased demand (up to 80%).

Key role of energy crops to avoid unsustainable use of forests, maintain the natural carbon sink while preserving ecosystems.

Natural carbon sink can be enhanced through afforestation and restoration of degraded forest lands and other ecosystems (benefiting biodiversity, soils and water resources and increase biomass availability over time).

Building Block 7 Carbon Capture and Storage

Rapid deployment of renewable energy and new options to decarbonize industry **reduced the need for CCS.**

But to achieve net-zero greenhouse gas emissions, **CCS still required for certain energy-intensive industries** and eventually to generate **negative emissions.**

CCS today is facing **barriers**: lack of demonstration plant and proof of economic viability, regulatory barriers in some MS, public acceptance.

Coordinated action needed on demonstration and commercial facilities to overcome the obstacles

Just Transition

"We need a just transition for all"

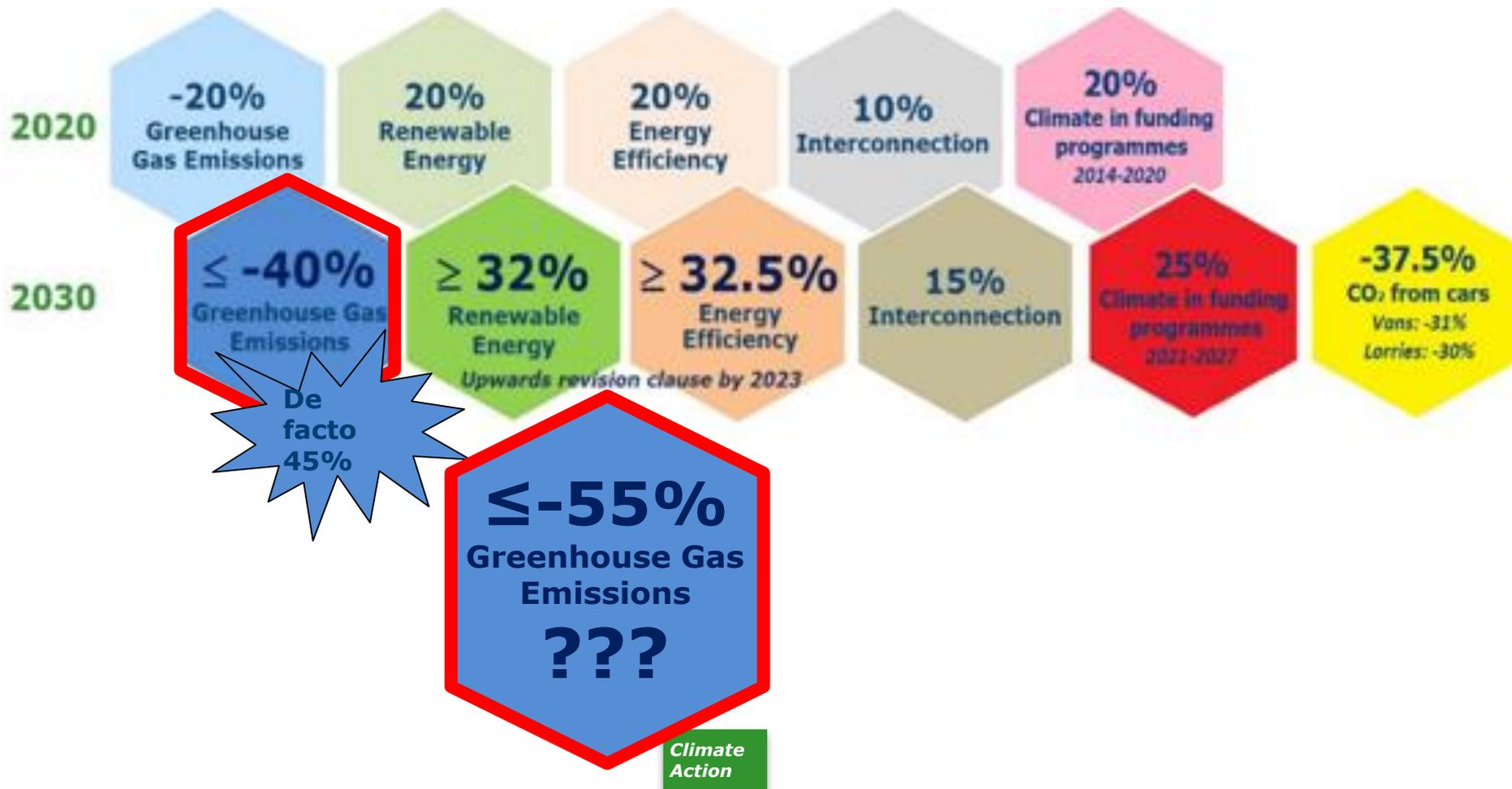
"We will support the people and regions most affected through a new Just Transition Fund. This is the European way: we are ambitious and we leave nobody behind"

More ambitious targets for 2030

"We have to be more ambitious when it comes to our 2030 targets. I want to reduce emissions by at least 50% by 2030."

"I commit myself to putting forward a comprehensive plan to increase the European Union's target for 2030 towards 55% in a responsible way."

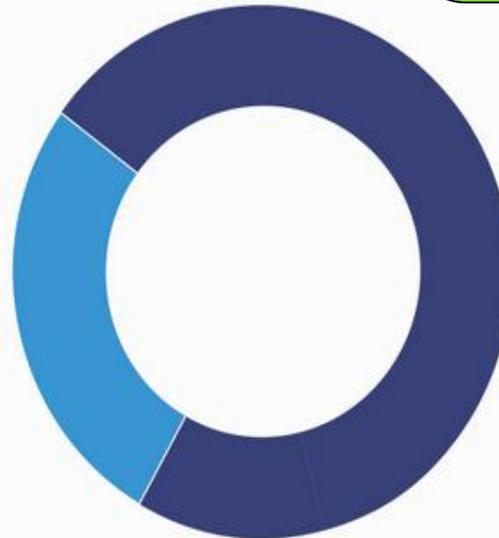
EU 2030 Climate and Energy Framework



New CO2 standards for road transport

Emission target
- **30 % (trucks)**

Emission target
- **37.5% (cars)**
- **31% (vans)**



73%
CARS & VANS

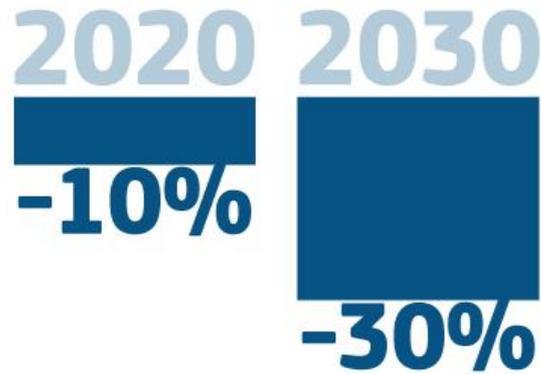


Emissions Trading System

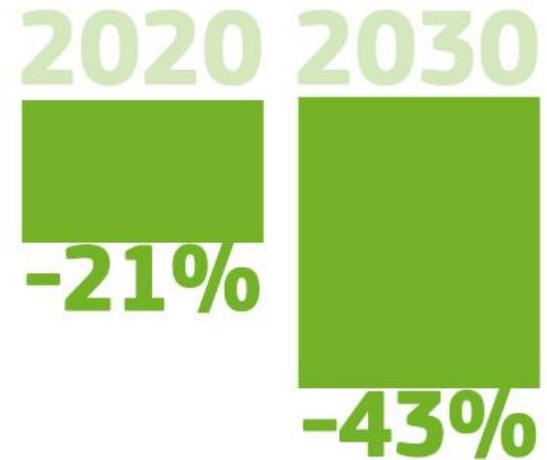
"I will propose to extend the Emissions Trading System to cover the maritime sector and reduce the free allowances allocated to airlines over time."

"I will also propose to extend this further to cover traffic and construction"

EMISSION REDUCTIONS IN ETS AND NON-ETS COMPARED TO 2005



**NON
ETS** INCLUDING
ROAD TRANSPORT,
HOUSING,
AGRICULTURE
etc.



ETS INCLUDING
POWER/ENERGY
SECTOR & INDUSTRY

European Investment Bank

"I will also propose to turn parts of the European Investment Bank into Europe's climate bank."

"The bank is already the largest multilateral provider of climate finance worldwide, with 25% of its total financing dedicated to climate investment. I want to at least double this figure by 2025."



Thank you!

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