

EU Climate and Energy Perspectives

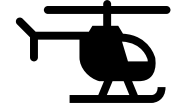
Trends, Projections & Policies

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Outline

Speeding up climate action in the EU



How to deliver on the climate & energy target(s)?

Need to double EU Power system flexibility



The EEA supports ambitious EU Climate policies

Collects, aggregates and distributes **EU data** to monitor climate transition

Helps implementation of current **policies** and support new ones



Biomass Puzzle: Challenges, opportunities and trade-offs around biomass in the EU



Upcoming- European Climate Risk Assessment: Assessing risks for societal preparedness



Flexibility solutions to support a decarbonised and secure EU electricity system



Trends and Projections: Assessing progress to target in climate mitigation and energy

Speeding up climate action in the EU

Accelerating Climate Change

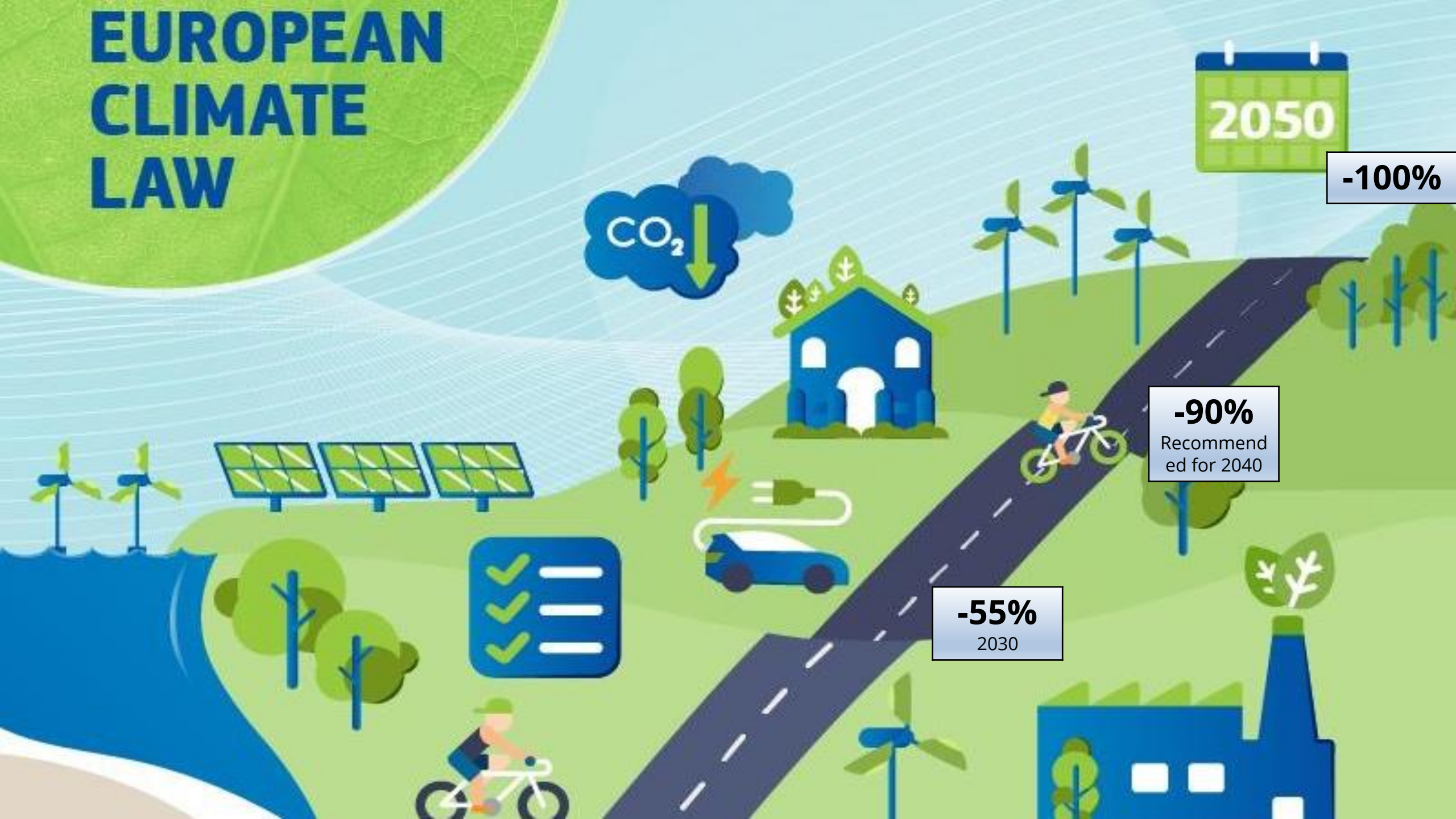


2023 record heat: 1.48°C above pre-industrial level

2022: € 52.3 billion loss by weather and climate extremes in Europe

2031-2050: possible loss of **€2400 billion** in high-warming pathway vs. 1.5°C Paris Agreement goal

EUROPEAN CLIMATE LAW



CO₂

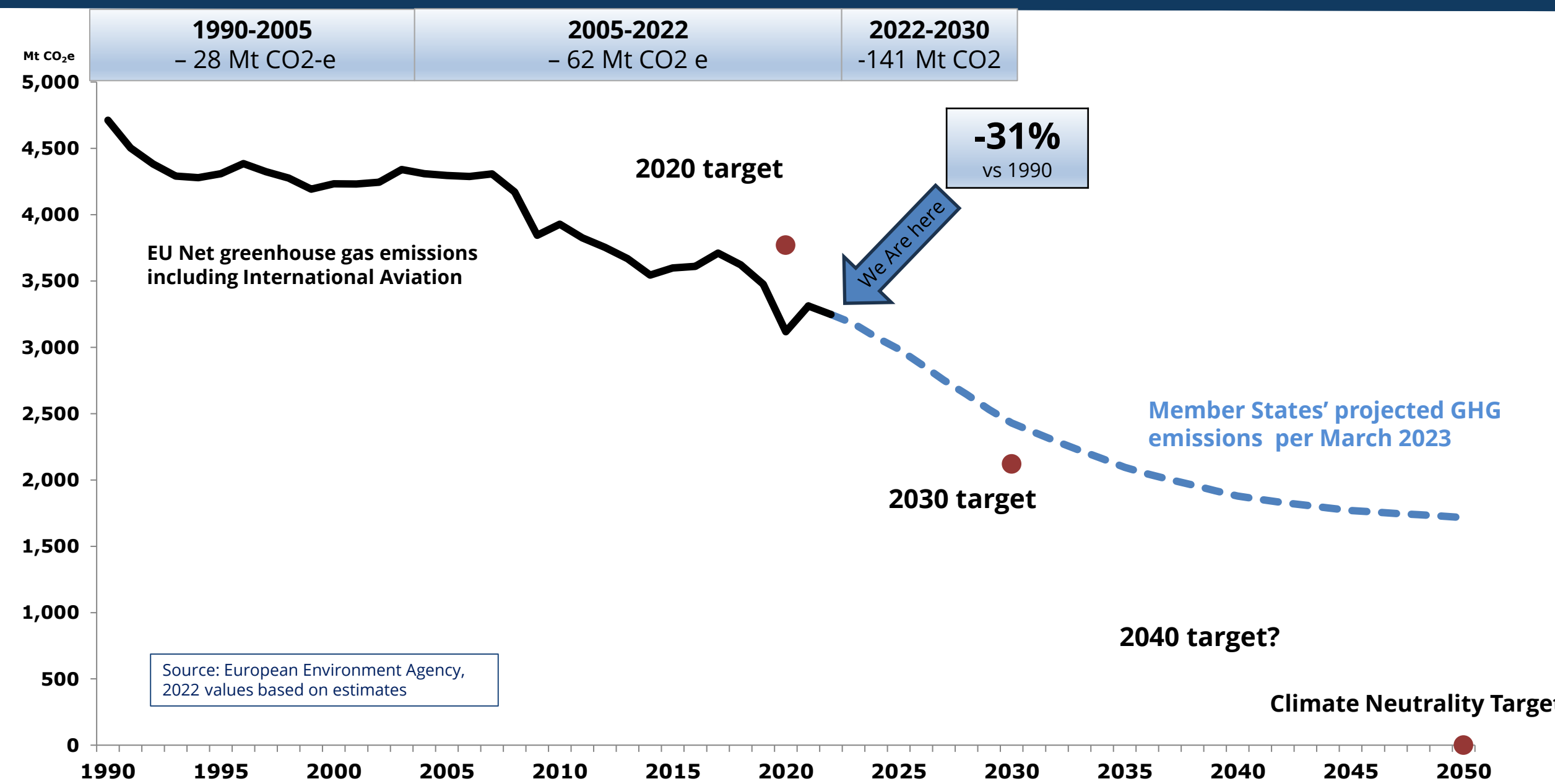
2050

-100%

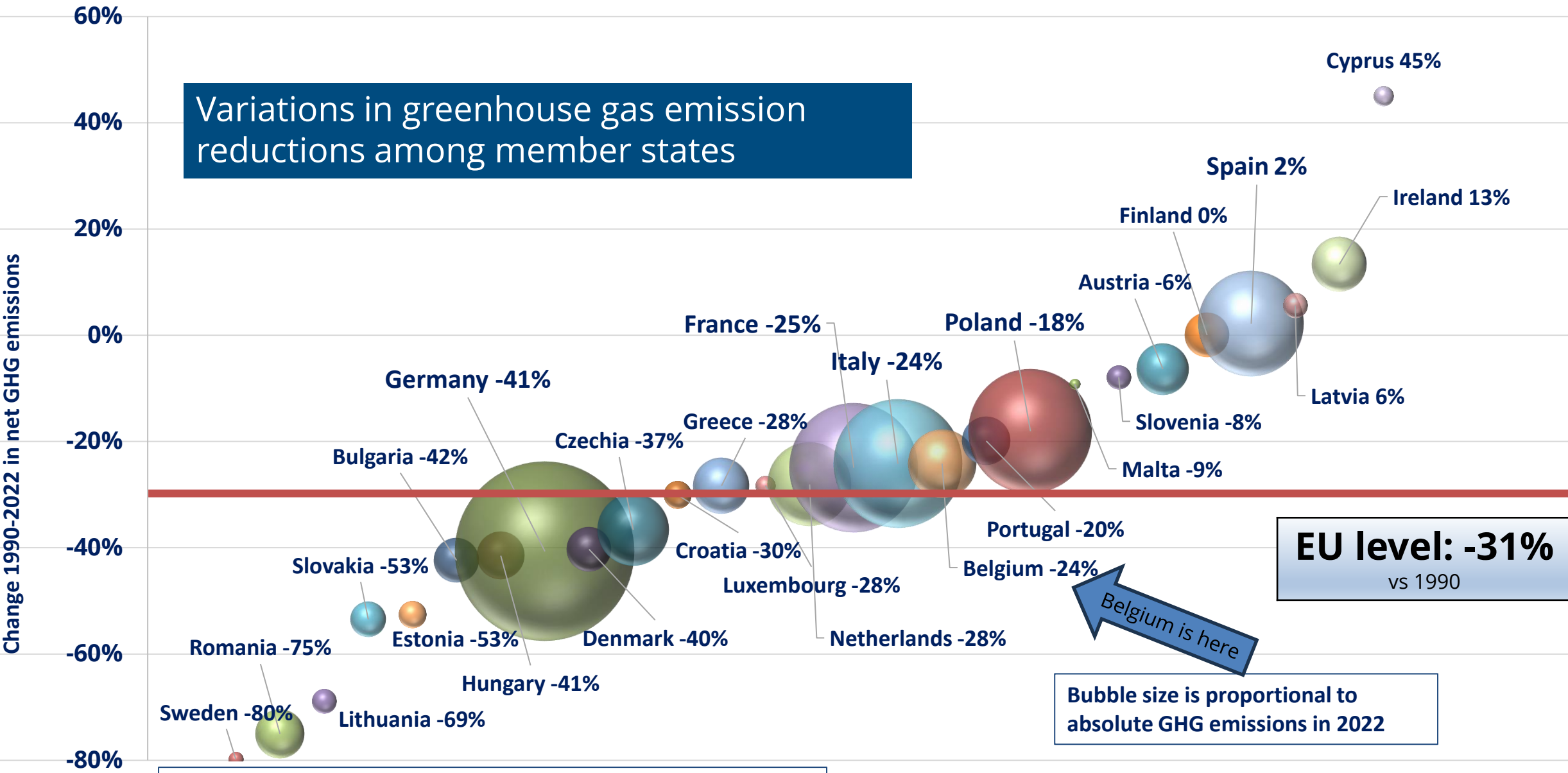
-90%
Recommend
ed for 2040

-55%
2030

EU Track Record: GHG emissions reduced with 31%



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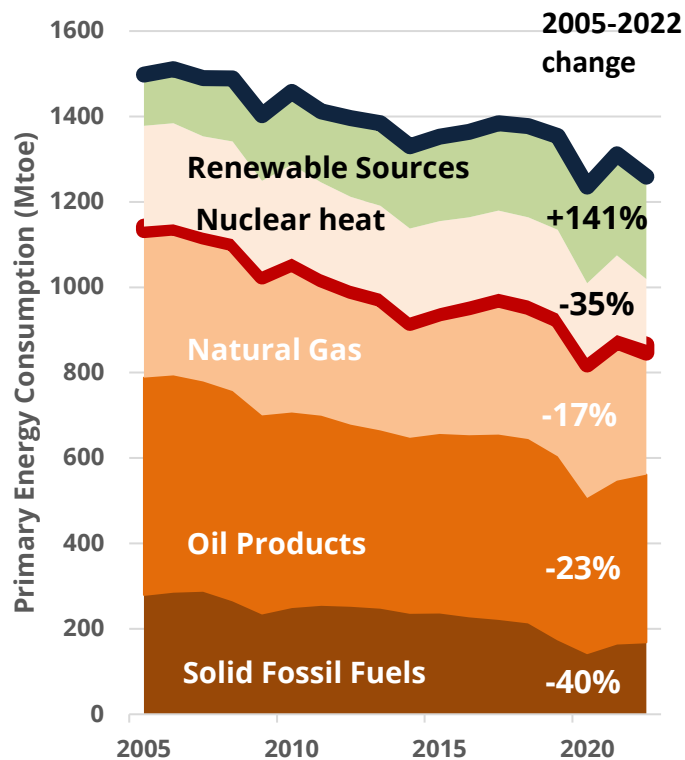
Source: European Environment Agency, 2022 values based on estimates

EU Track Record: Energy Transition gaining momentum

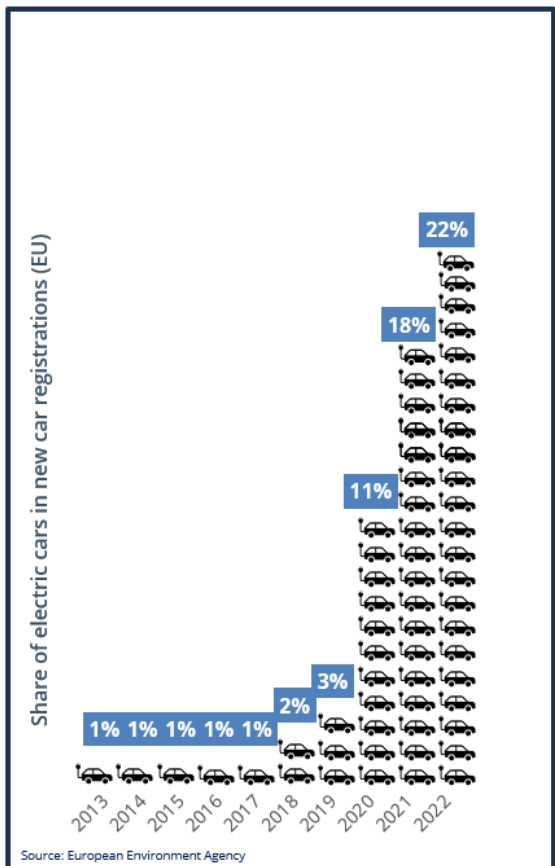
23% Renewable Energy Share, doubled since 2005



Considerable **reduction of fossil** fuel consumption

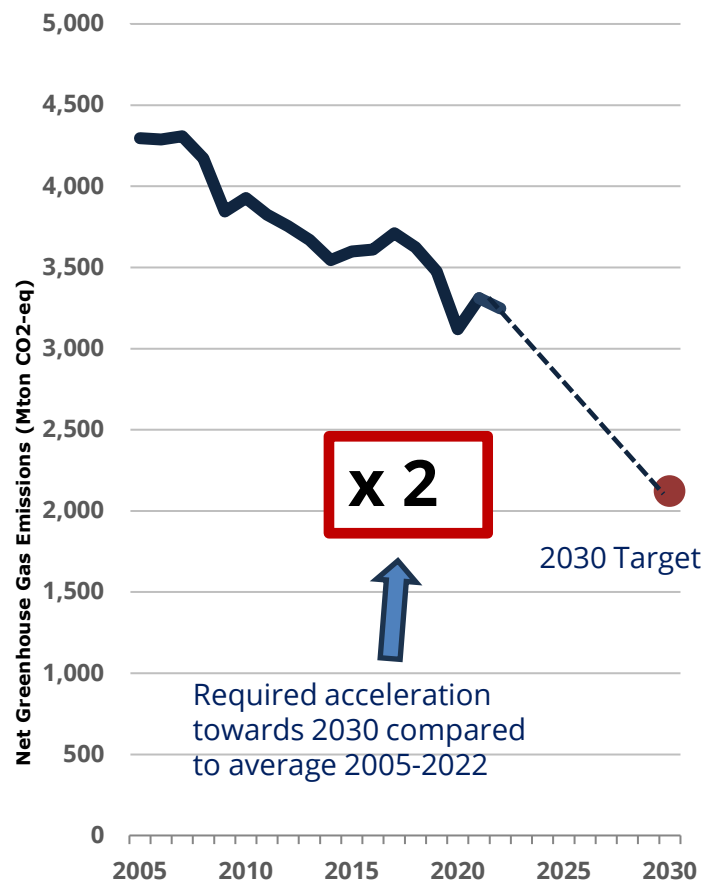


Sharp rise in sales of **electric vehicles**



Still work to be done towards 2030 (and beyond)

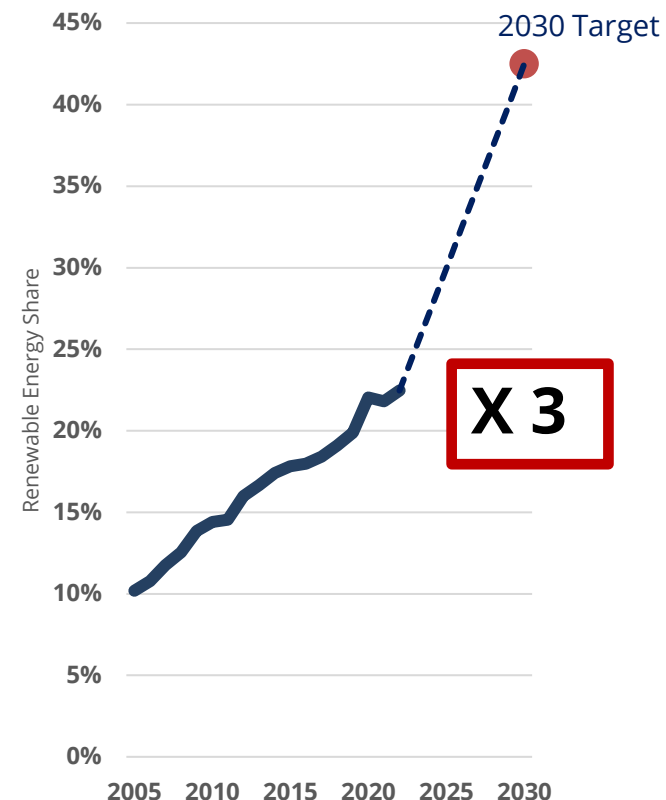
Greenhouse gas emissions



Final Energy Consumption



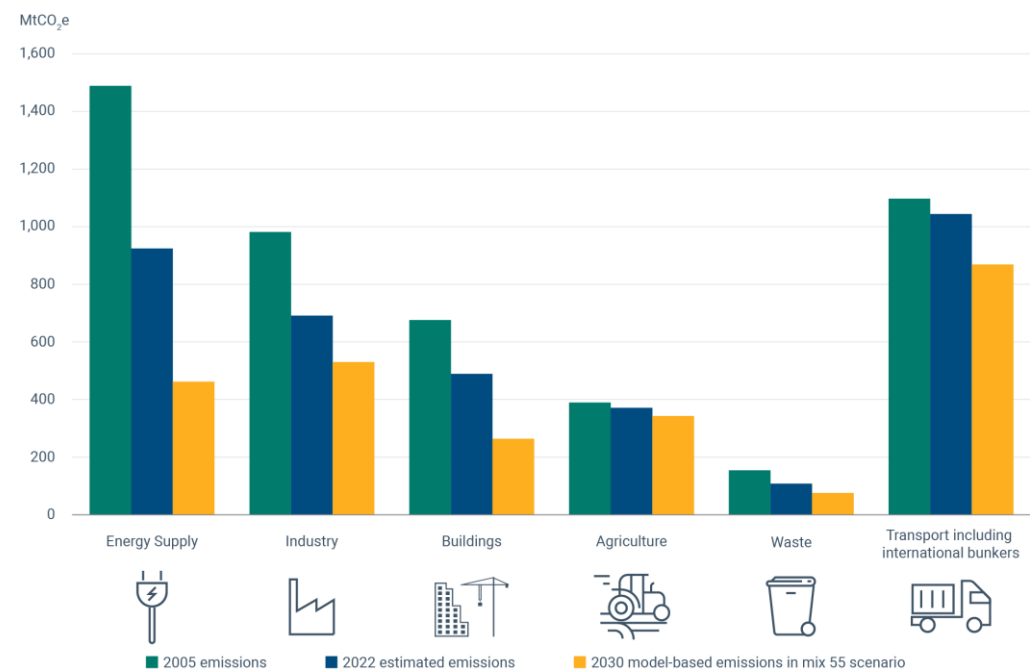
Renewable energy



Still work to be done towards 2030 (and beyond)

Sector perspective

Significant Cost-effective potential to reduce GHG emissions in buildings & energy supply



Source: European Environment Agency, 2022 values based on estimates

Member State Perspective



Projections based on existing measures as reported in March 2023

Implementation gap: current reported measures insufficient to reach 2030 Effort Sharing Targets

How to deliver on the climate & energy target(s)?



Beyond fragmented climate actions



Find synergies between policy objectives

Create enabling conditions

Implementation

Beyond targets and trajectories

Securing our future

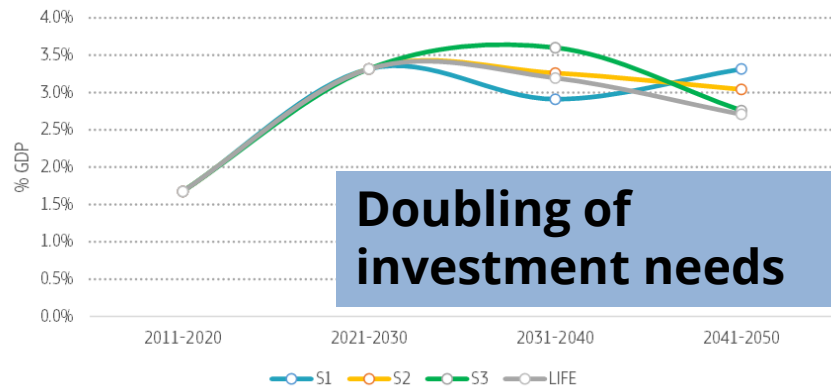
Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society



Costs and investments needs



Enabling Conditions



**Total energy costs:
initially rising,
eventually falling**

2011-2020	11.9%
2021-2030	12.5%
2031-2040	12.9%
2041-2050	11.3%

Strategic dialogue
(including with agriculture)

Focus on just transition

**Full implementation of the
2030 framework**

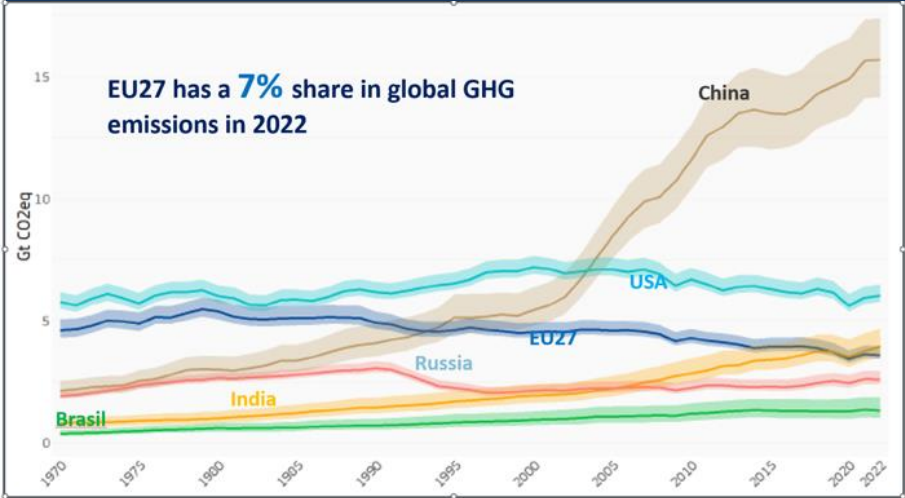
Ensuring competitiveness

**Level playing field with
international partners**



Beyond Europe & Belgium

Decreasing EU share of global emissions



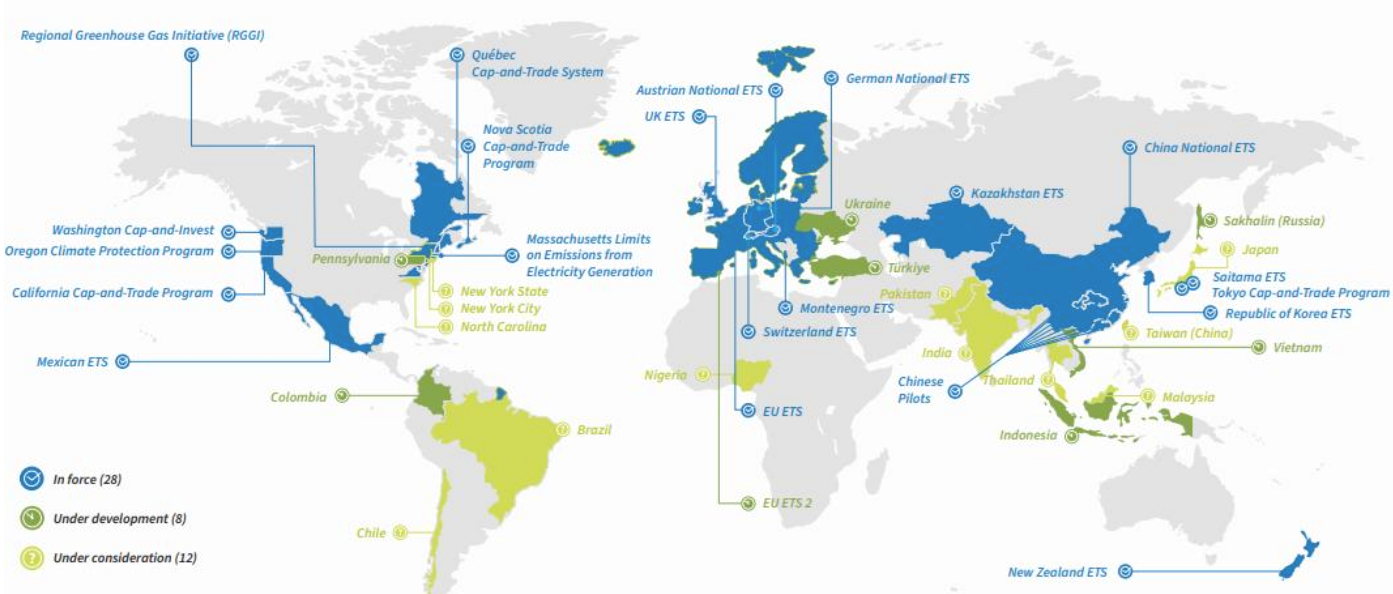
CO₂ emissions share (1850-2021)

USA	24%
EU27	17%
China	14%
India	3%

Source: Global Carbon Project (Friedlingstein et al., 2022)

Growing international carbon market after CBAM?

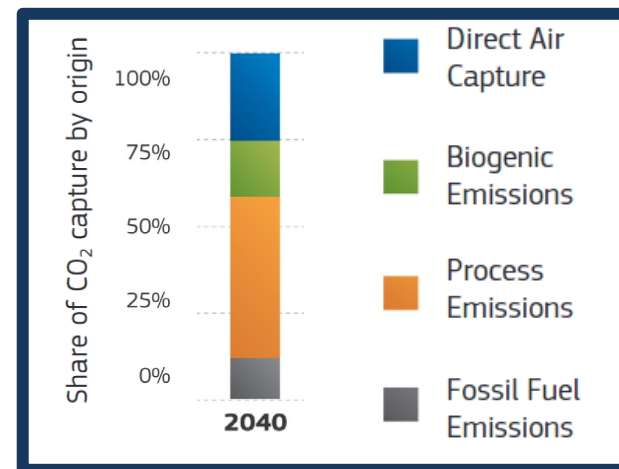
Transitioning away from fossil fuels in energy system



Beyond current technologies

All zero and low carbon energy solutions are necessary to decarbonise the energy system by 2040.

(including 280 Mton captured CO₂ by 2040, and nuclear, and all other current and future net-zero energy technologies)

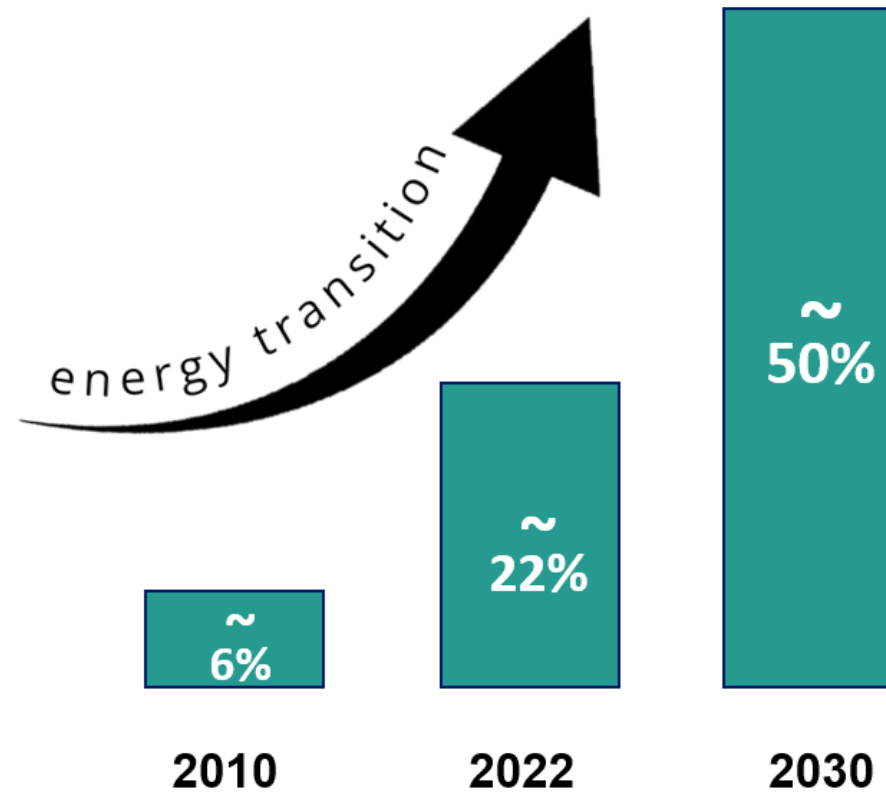


Need to double EU Power system flexibility

EU Track Record: Energy Transition gaining momentum

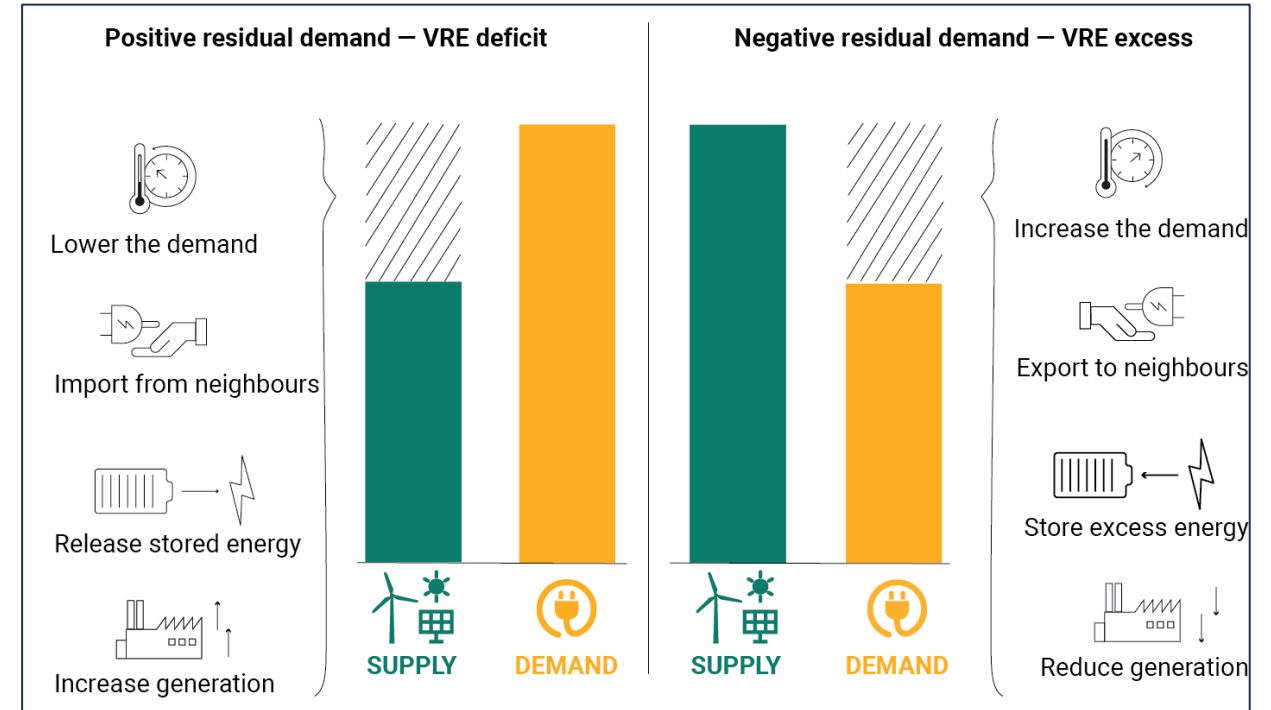
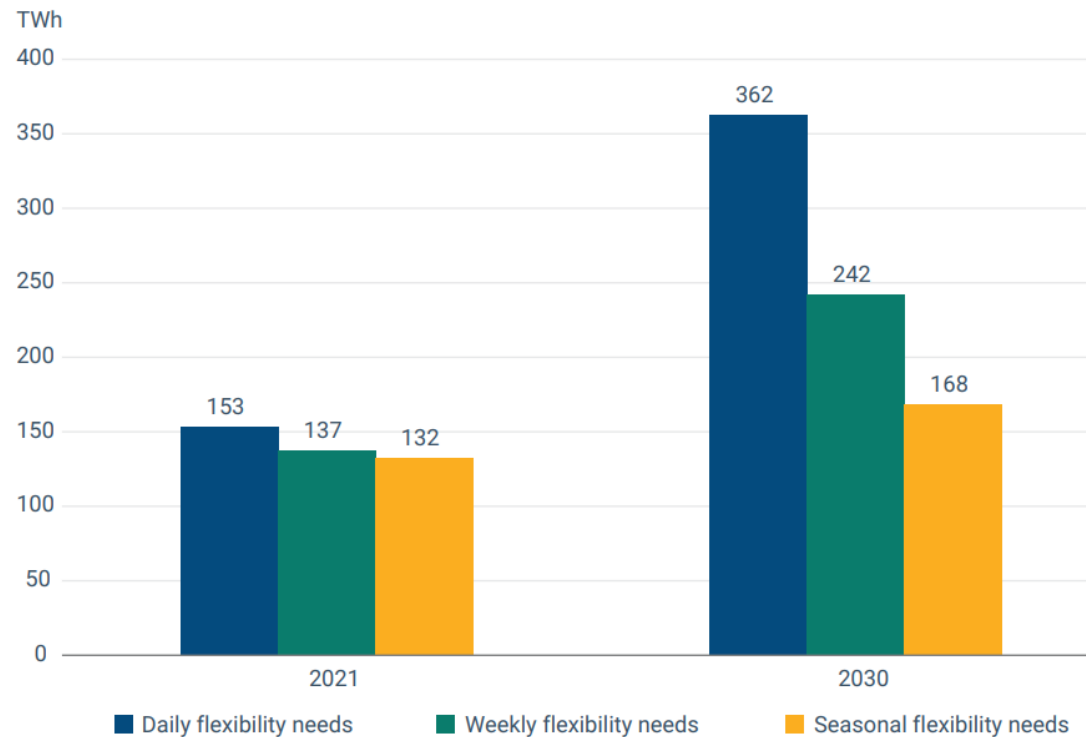


Increasing share of wind and solar electricity production in the EU



Flexibility must double to keep up with renewables (right amount)

Daily, weekly and annual flexibility needs in 2021 and 2030 in Europe



Conclusions

Innovative Action: Climate change requires swift and innovative responses

Neutrality: The EU is advancing towards Climate Neutrality

Now focus on delivery: Implementation, Investments & Global Action

Opportunities & Challenges: Need to match the deployment of renewables with flexibility rollout

Thank you



CLIMATE AND ENERGY IN THE EU

Find information on the EU and its Member States' progress towards their 2030 targets on climate and energy

Click (ctrl+click) the images to go to the report

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