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THE CHALLENGES OF THE ENERGY TRANSITION IN THE CONSTRUCTION INDUSTRY

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ERA Convention 2024

“The future of rental solutions”, Lisbon, May 15th - 16th



GLOBAL POPULATION GROWTH

How can we safely feed a population that will increase by 2 billion people by 2050 with the same amount of land?

CLIMATE CHANGE

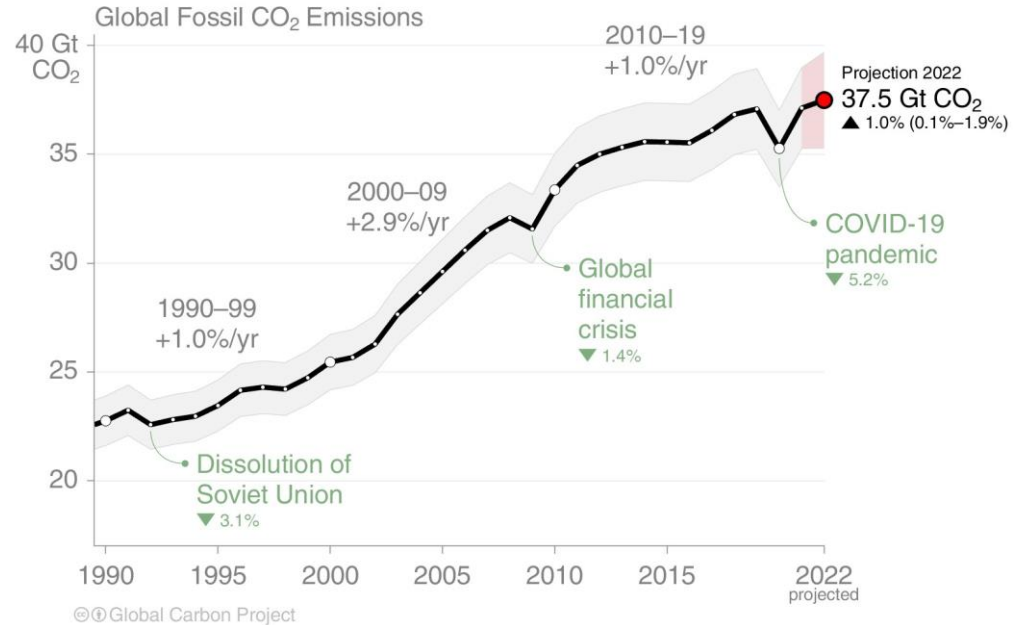
How can we achieve carbon neutrality and prevent global temperatures from rising by more than 2°C (ideally 1.5°C)?

SUSTAINABILITY

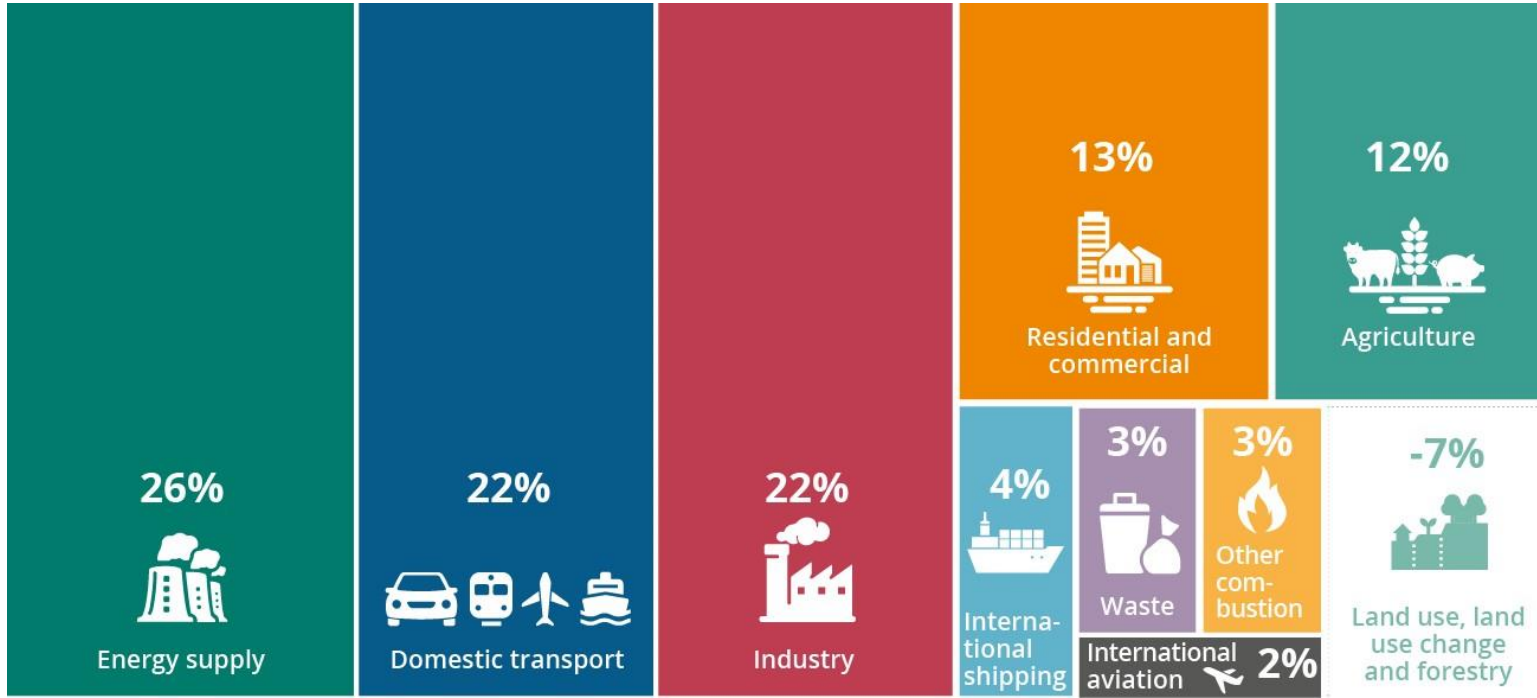
How can increased production be reconciled with environmental, social and economic sustainability?

THE TEMPERATURE IN 2022 IS ESTIMATED TO BE AROUND 1.15°C ABOVE THE AVERAGE OF 1850-1900

- A carbon budget from 2020 to limit warming to 1.5°C with a 50% probability is 500 GtCO₂ (IPCC 2022)
- This means we could use up this budget in 13 years!

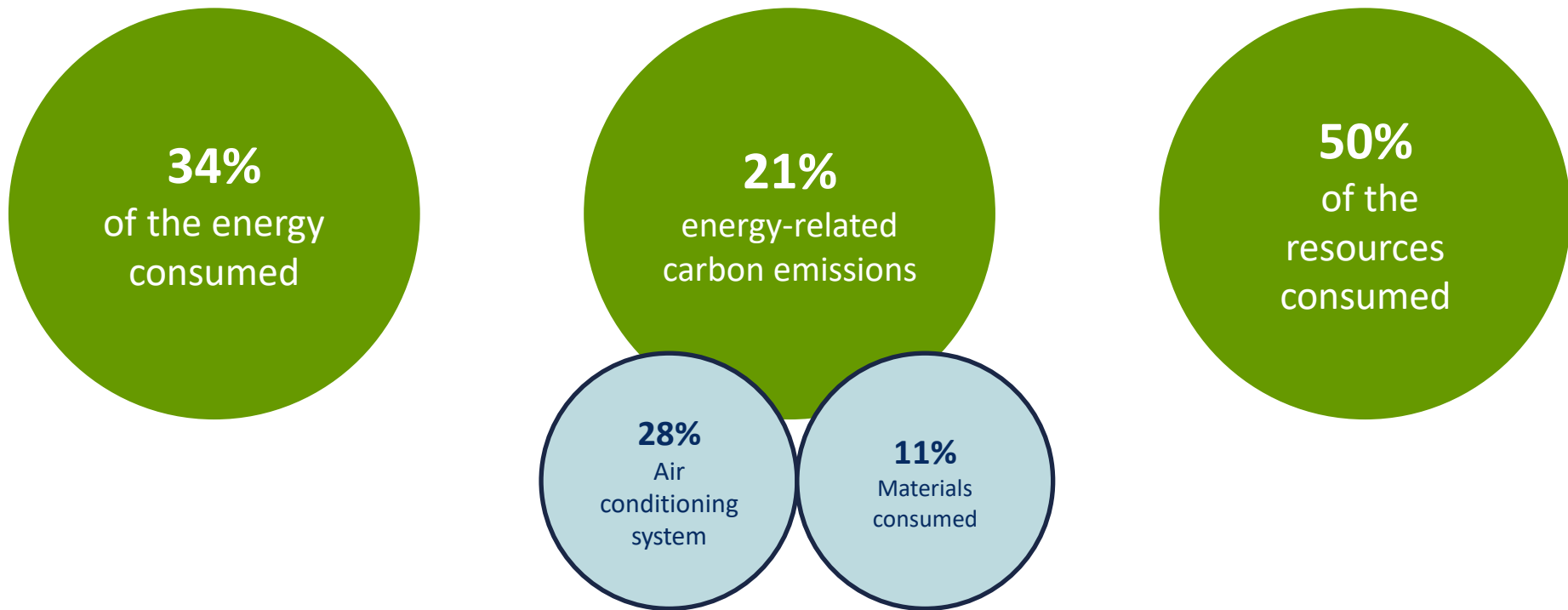


THE GLOBAL PICTURE OF EUROPE'S GHG EMISSION SOURCES IN 2021



Source: <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>

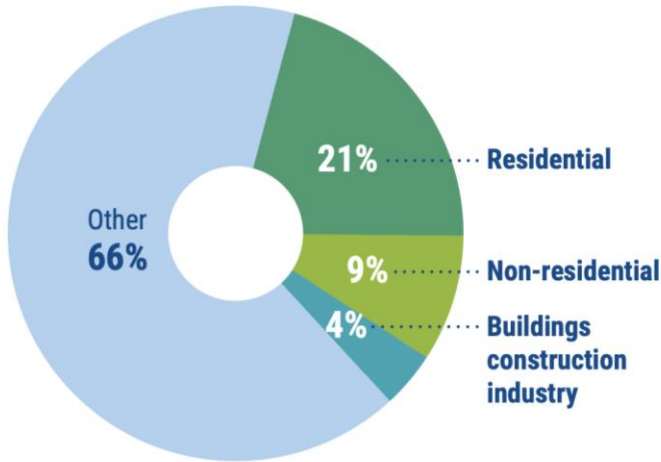
The buildings are currently responsible for



If nothing is done, these figures will double by 2060

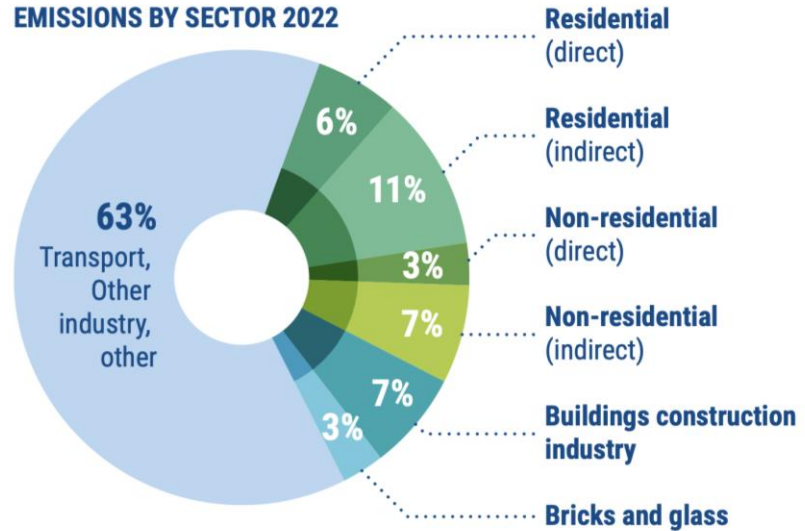
Share of buildings in total final energy consumption in 2022

ENERGY DEMAND BY SECTOR 2022



Share of buildings in global energy and process emissions in 2022

EMISSIONS BY SECTOR 2022



(Source: IEA 2023a. Adapted from 'Tracking Clean Energy Progress')

Notes: Buildings construction industry refers to materials used in construction, including concrete, steel and aluminium. Other materials shown separately.

Buildings in Europe are responsible for

40%
of the
energy
consumed

75%
are not energy
efficient

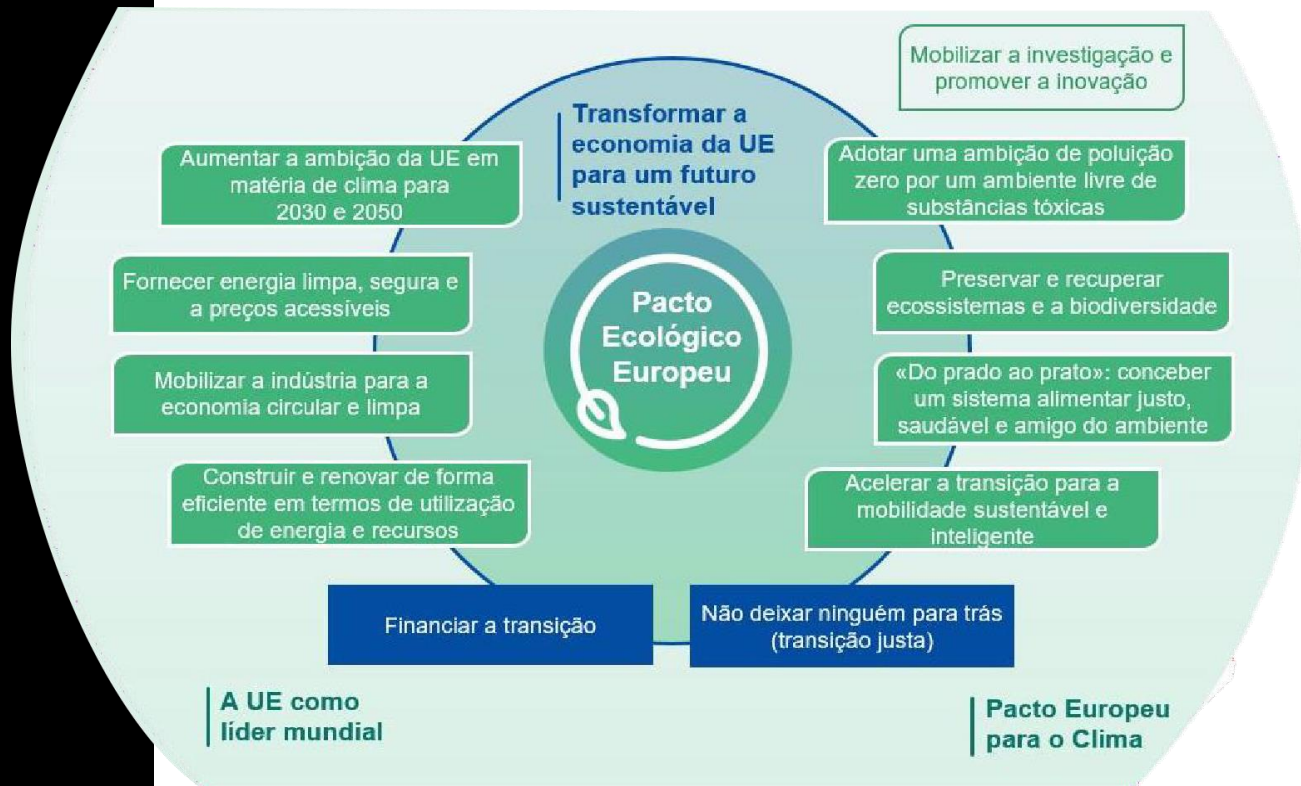
36%
energy-
related
carbon
emissions

85-90%
will still
exist in 2050

Buildings consume 80% of Europe's energy on heating, cooling, and hot water.

EUROPEAN ECOLOGICAL PACT

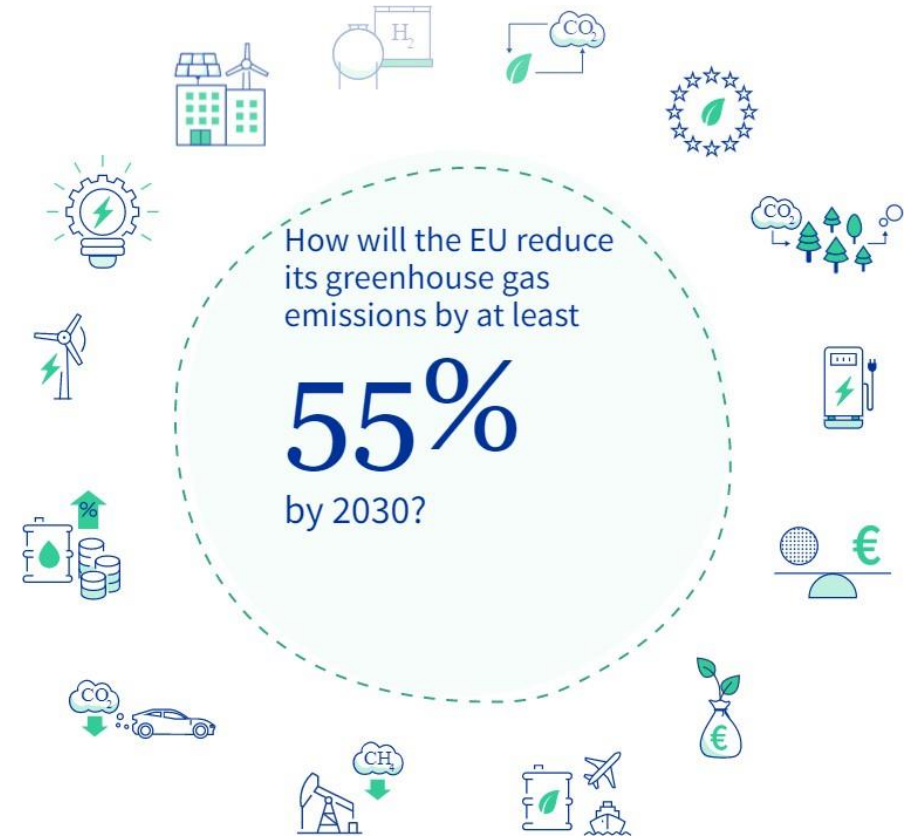
THE PLAN TO MAKE
EUROPE THE FIRST
CLIMATE-NEUTRAL
CONTINENT



"FIT FOR 55"

PACKAGE OF PROPOSALS TO ENSURE THAT THE TARGET OF REDUCING EMISSIONS BY 55% BY 2030 IS ACHIEVED

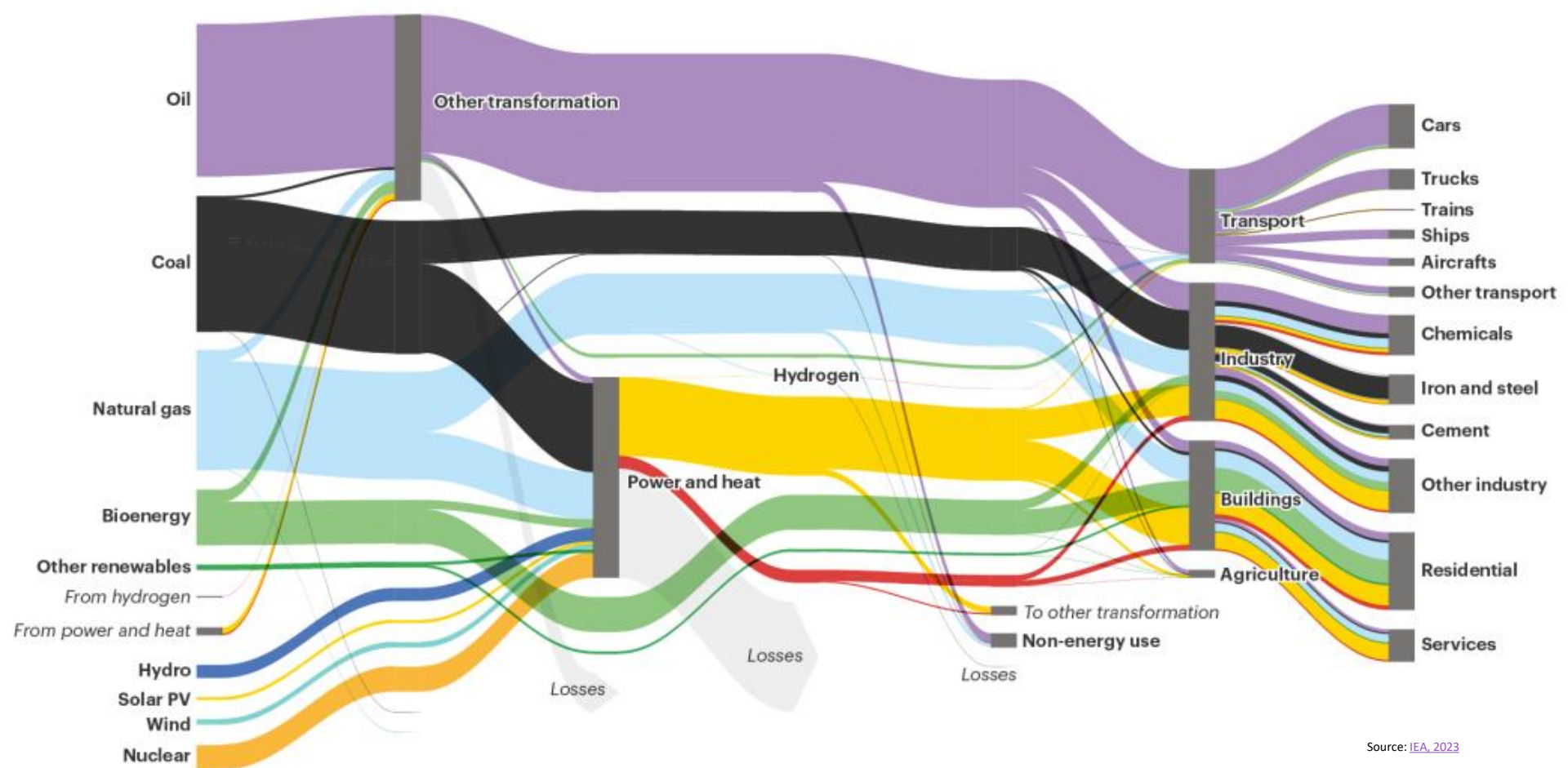
- Review of the EU ETS
- Carbon Adjustment Mechanism
- Cross-Border Adjustment (CBAM)
- Energy Efficiency Standards
- Decarbonising industry
- Revision of the Energy Directive renewable (RED II)
- Creating a hydrogen market



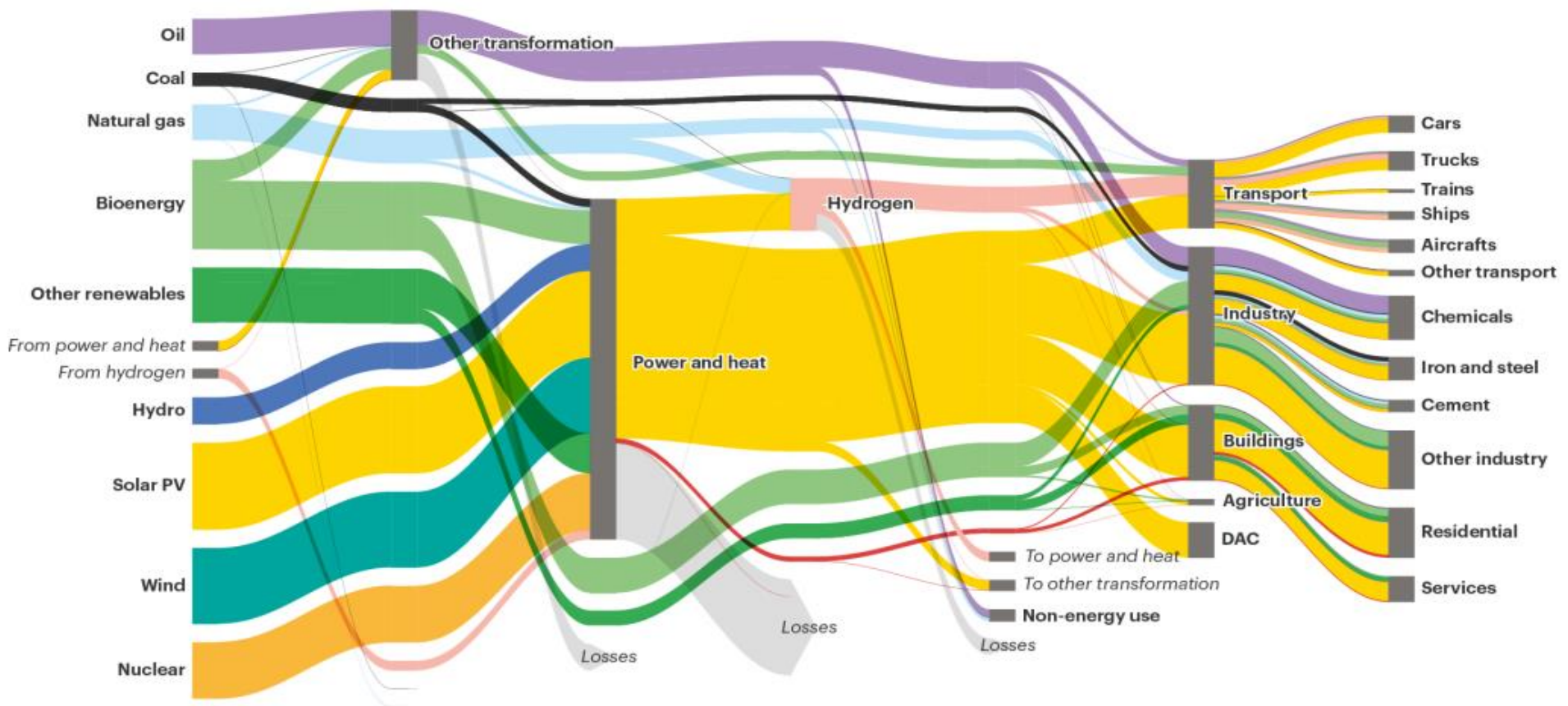
CHALLENGES & OPPORTUNITIES

- Energy Transition -

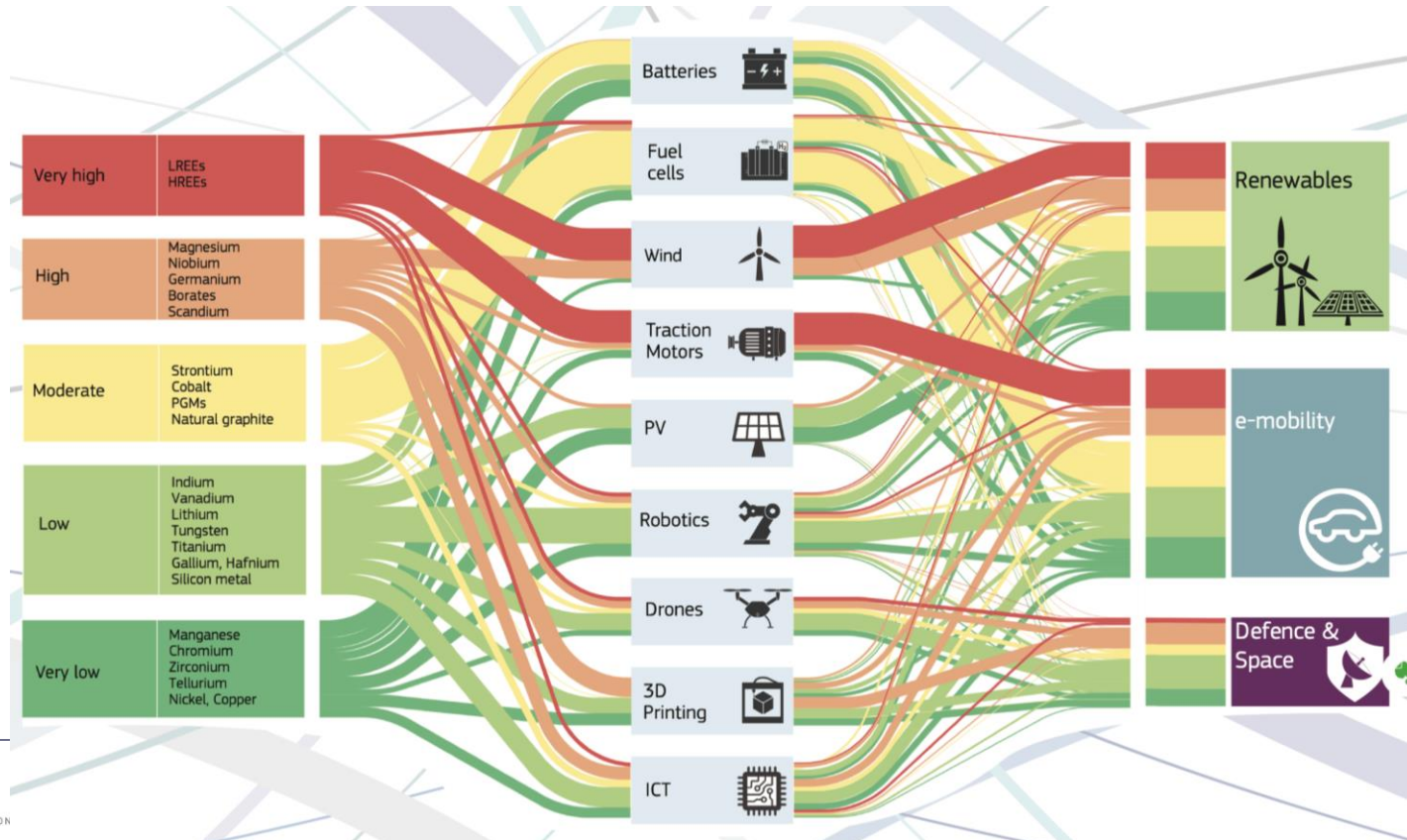
GLOBAL ENERGY FLOW 2021



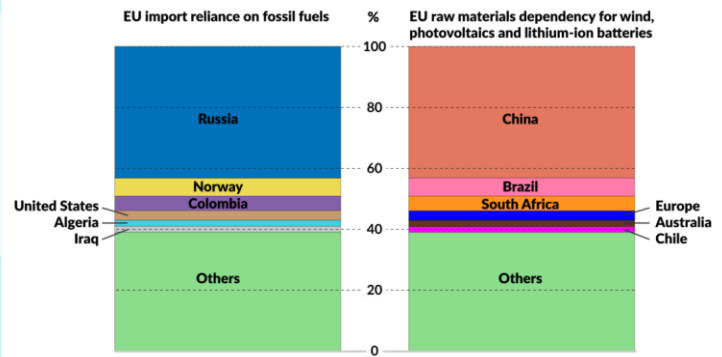
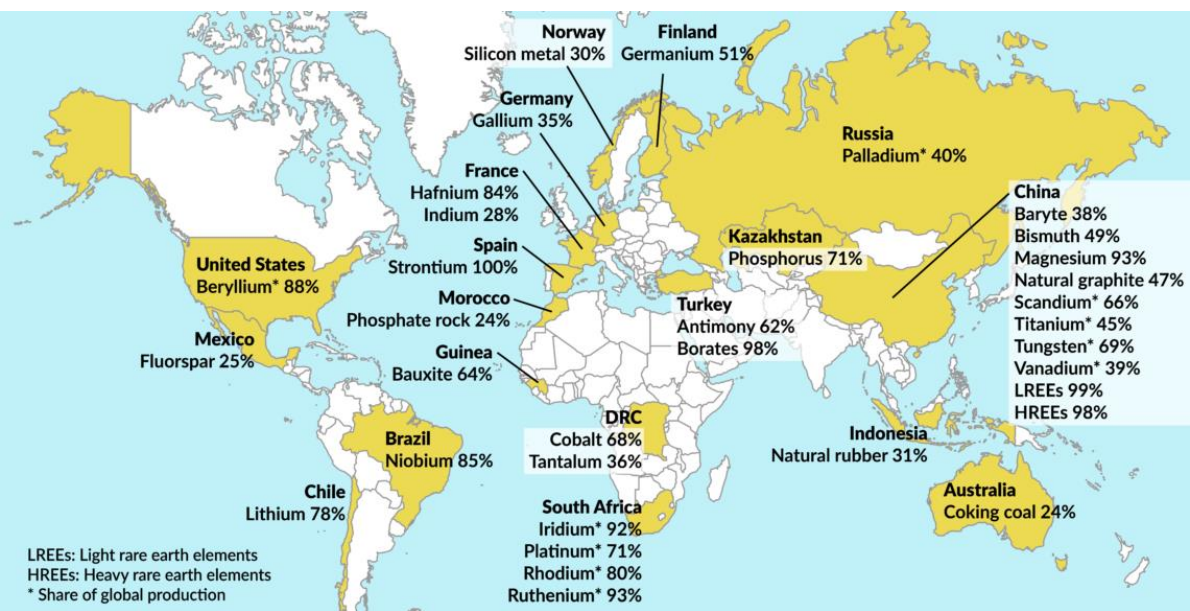
GLOBAL ENERGY FLOW 2050



The European Commission publishes a list of Critical Raw Materials (CRM) for the EU, which is reviewed and updated regularly. The CRM brings together raw materials of high importance to the EU economy and with a high risk associated with their supply.

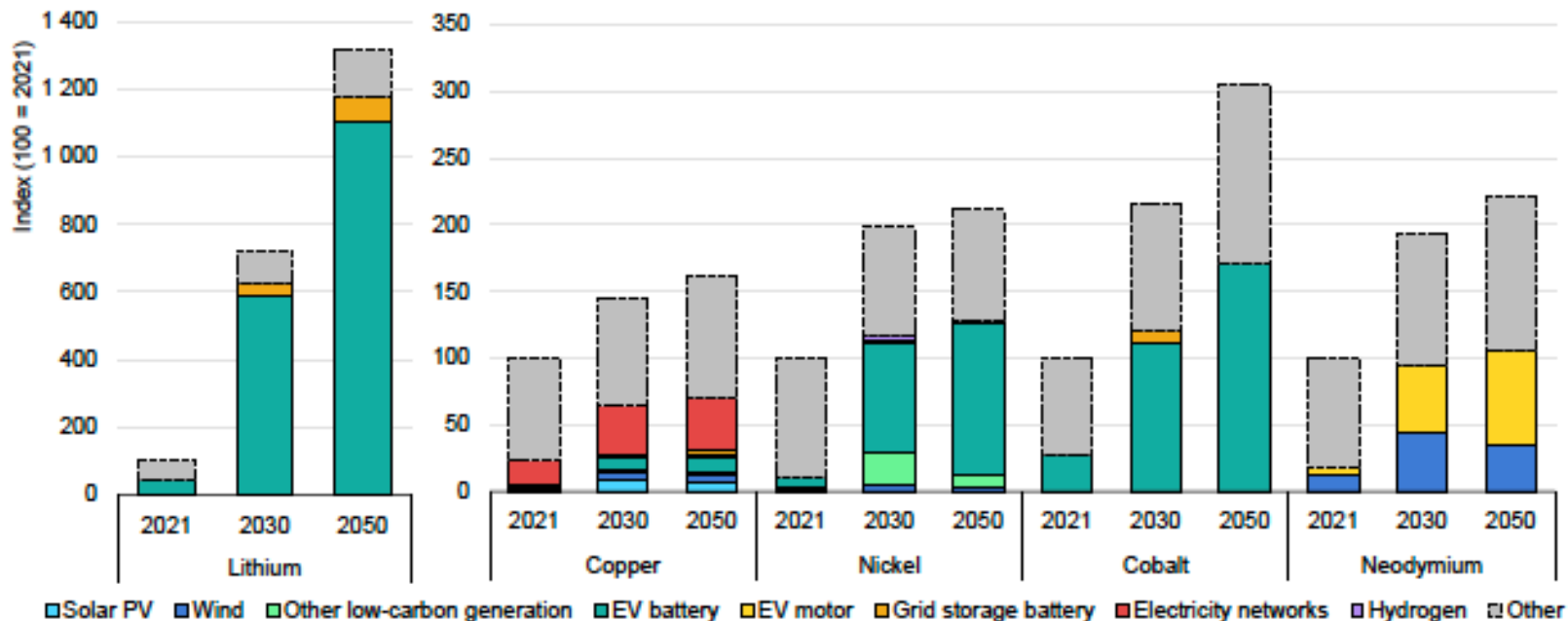


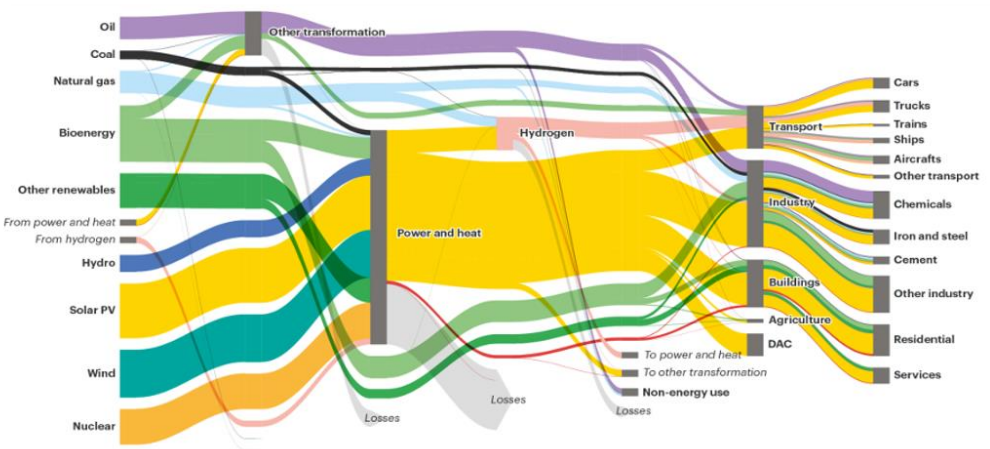
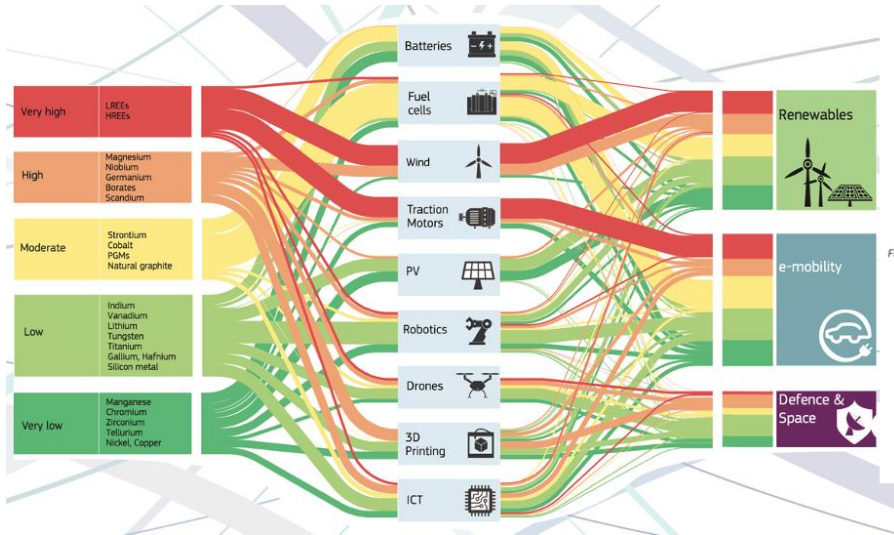
China dominates the world's supply of CRMs (Critical Raw Materials), as well as supplies to Europe. To reduce its dependence, the EU is creating partnerships with some other countries and supporting local extraction and processing projects



Demand for critical materials increases rapidly in the NZE Scenario, driven mainly by clean energy technologies and infrastructure.

Global critical material demand by end use in the NZE Scenario





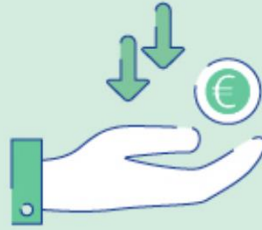
CHALLENGES & OPPORTUNITIES

Market Mechanisms (EU Emissions Trading System)

EU Emissions Trading System



The system sets a carbon price. Every year, entities under the ETS have to buy "allowances" that correspond to their greenhouse gas emissions



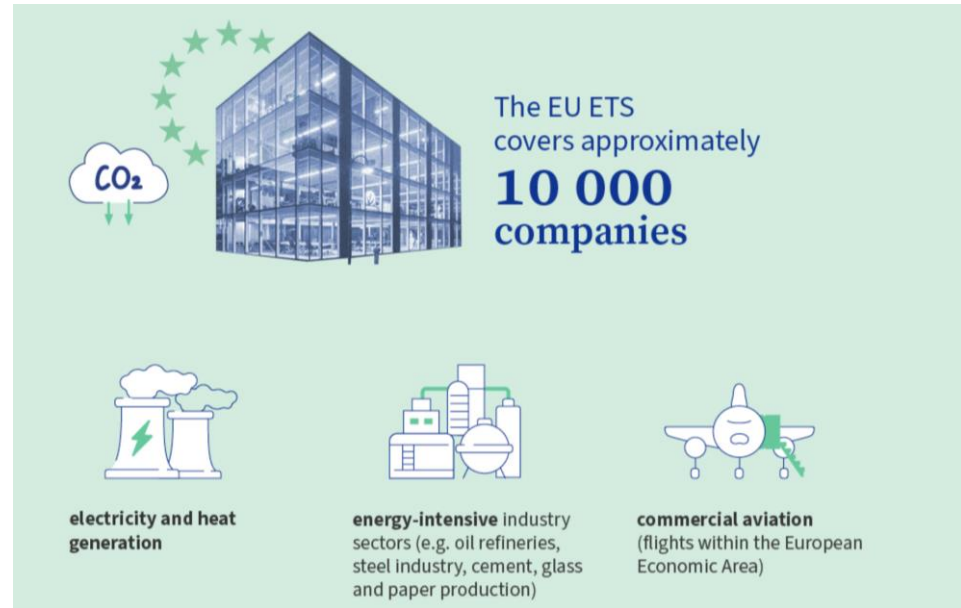
Each year, a cap is set on the number of emission licences issued for that year and each year; this cap is lowered every year. This creates a financial incentive for the company to reduce its emissions



However, certain sectors exposed to carbon leakage obtain free emission allowances to support their activities.

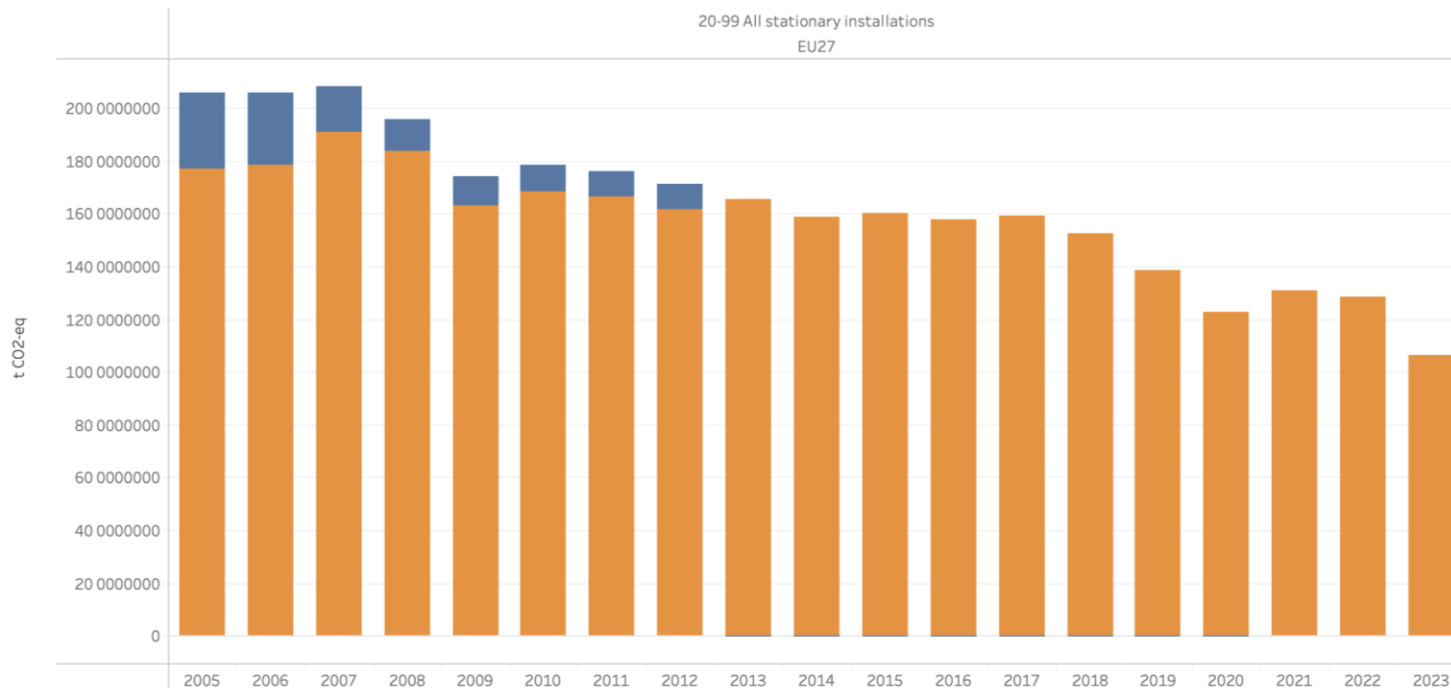
EU Emissions Trading System

Sectors currently included:



New sectors (new ETS): **Buildings**, road transport and fuels (some sectors)

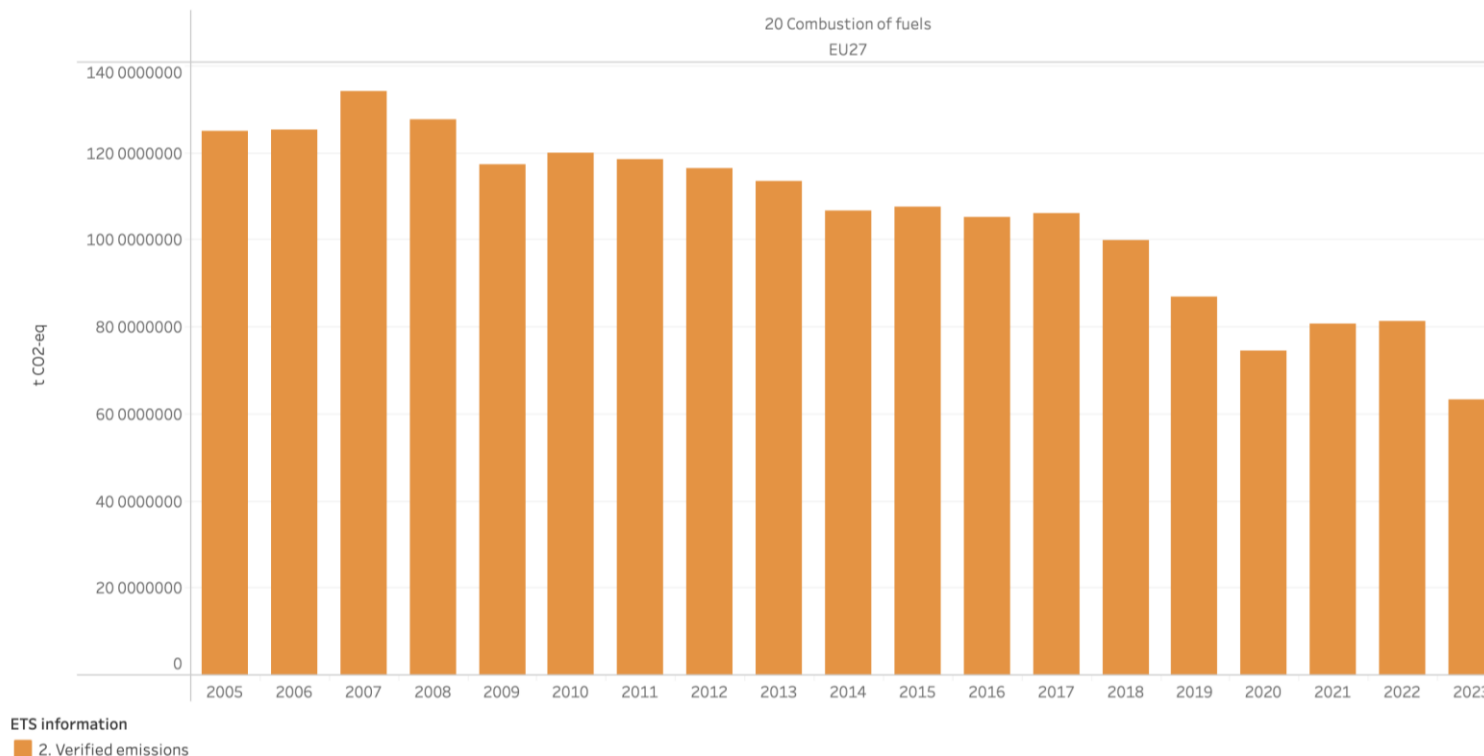
EU Emissions Trading System



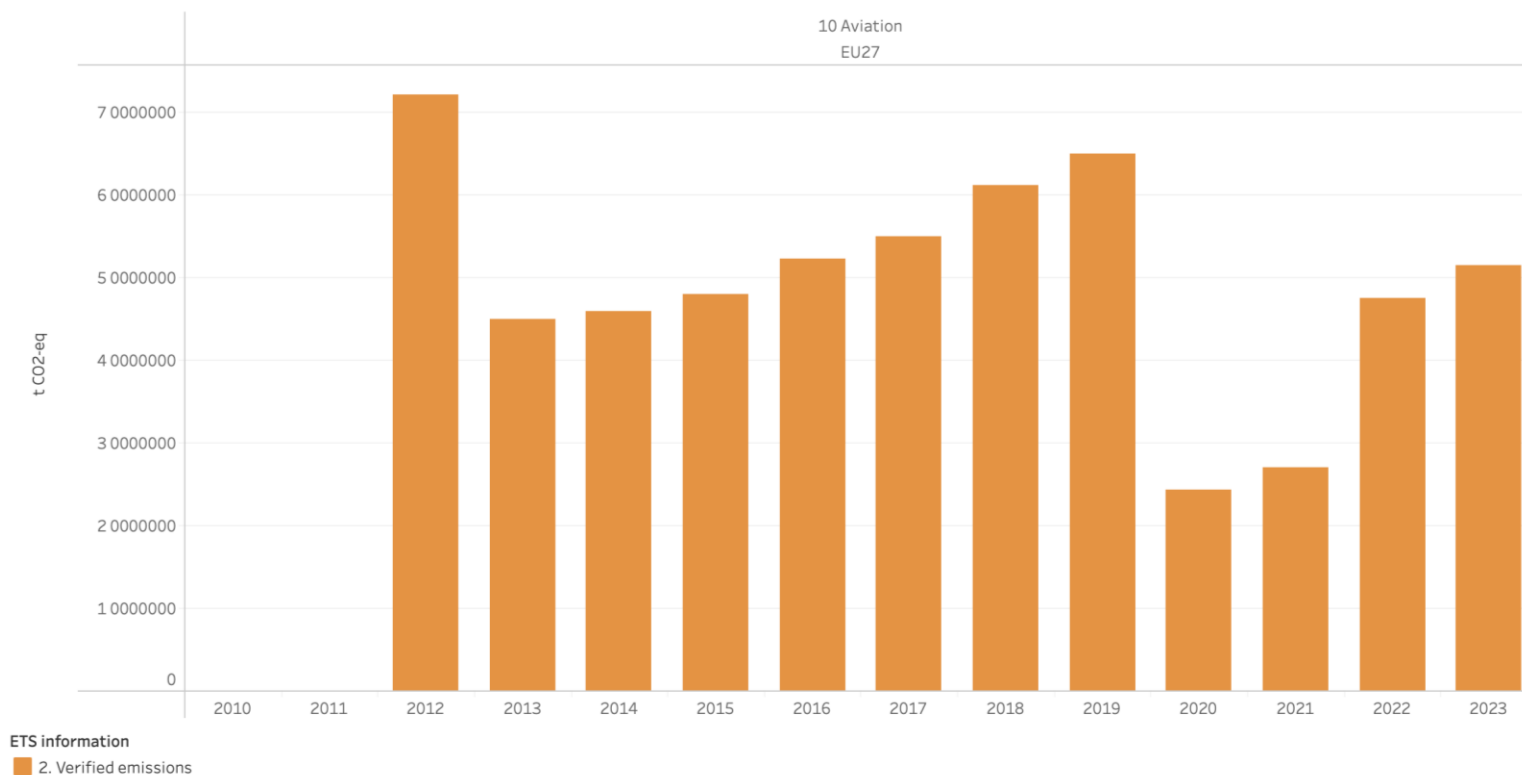
TS information

- 3. Estimate to reflect current ETS scope for allowances and emissions
- 2. Verified emissions

EU Emissions Trading System



EU Emissions Trading System





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THANK YOU!

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