



Chile – EU exchange

The EU Emission Trading System (ETS)

Myths and solutions on addressing economic impacts

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Agenda

The EU ETS – Context and highlights

Myth 1: ETS is just a another carbon tax → *The climate target matters*

Addressing economic impacts

Myth 2: The market is unpredictable → *How to enable a balanced carbon price*

Myth 3: A carbon price is bad for growth → *How to address competitiveness*

Deep dive: ETS 2 and Social Climate Fund (SCF)

Myth 4: Society pays the price → *How to address a just transition*

What is the EU doing to achieve climate neutrality?

The European Climate Law sets binding targets for the EU to reduce net GHG emissions by at least 55% by 2030 compared to 1990 levels, 90% by 2040, and reach net zero emissions by 2050.



EU Emission Trading System - Highlights

Video: [What is the EU ETS? - European Commission](#)

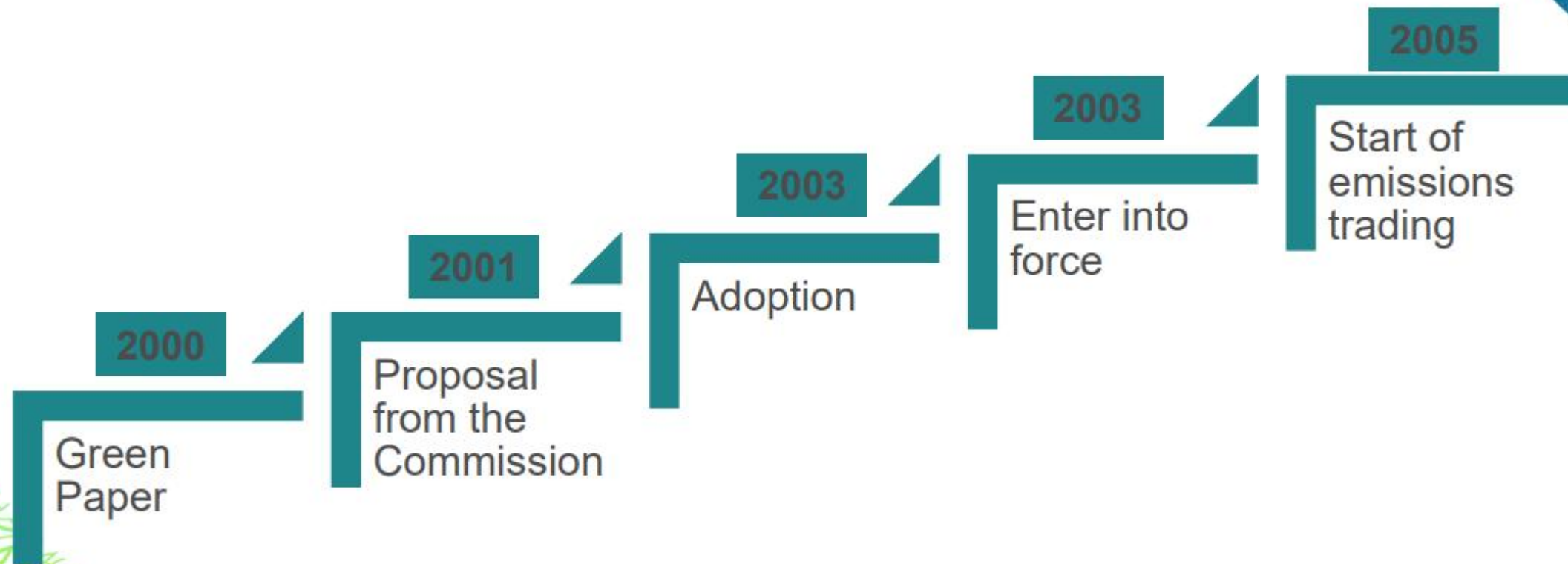
- Started in **2005**, oldest & largest ETS in the world in terms of trading volume,
- Operating in **30** countries (all 27 EU countries plus Iceland, Liechtenstein and Norway, linking agreement with Switzerland).
- Applies to emissions from the **electricity and heat generation, industrial manufacturing** and **aviation** within Europe (~**400** aircraft operators).
- Covers ~**40%** of the EU's GHG emissions (~75% with ETS 2) from ~**9000** stationary installations, ~**350** aircraft operators, and ~**3200 shipping companies**
- Operates in phases, currently in **phase 4 (2021-30)**.

Impact

- Current carbon price ~ **70 EUR/tCO₂**.
- **Achieved -50% emission reductions** compared to 2005 from stationary installations.
- Raised **over 200 EUR billion in auction revenues** since 2023.



Legislative history of the EU ETS



The phases and cap revision in 2023

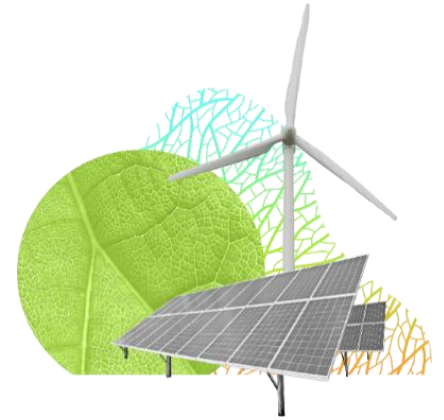
Emission reductions in the ETS by 2030: **from -43% to -62% by 2030 (compared to 2005)**

- Increased linear reduction factor
- And two major reductions of the cap in 2024 and in 2026



NB: Cap and linear reduction factor need to take into account ETS extension to **maritime**.
Market Stability Reserve reinforced.

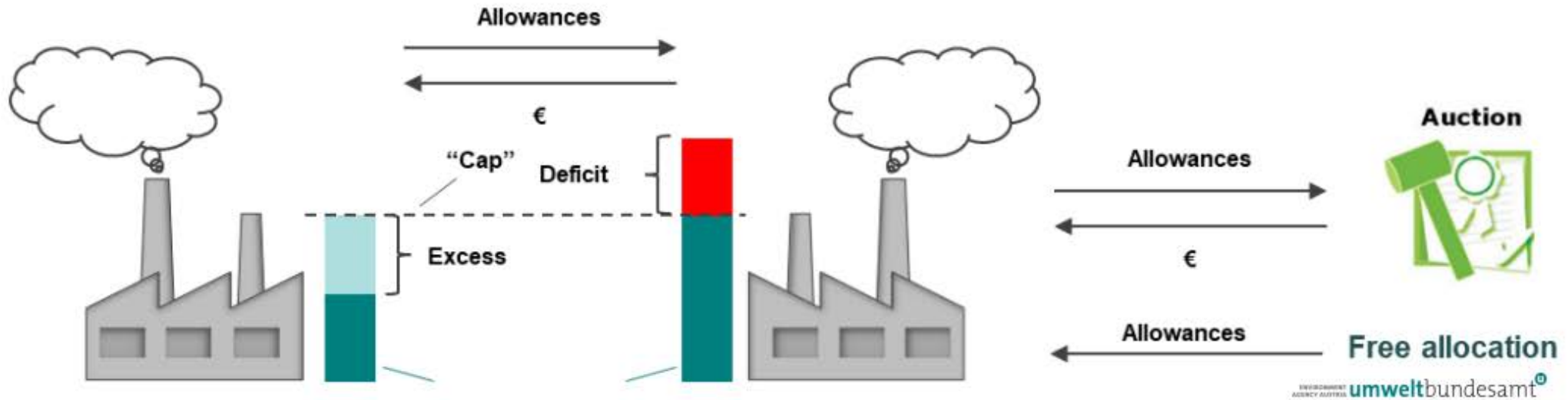
Review processes for balance and efficiency



- Reviews and revisions across phases are normal for an ETS to **align with EU climate targets, ensure efficiency**, and ensure a balance between **competitiveness and price stability**.
- The **2023 revision** extended the scope of ETS to cover GHG emissions from maritime and introduced **the new separate upstream ETS 2 for the buildings and road transport sectors** scheduled to start full compliance in 2028.
- The **2026 review** of the EU ETS planned for 15 July will shape the ETS period 2031 - 2040 to align with the new 2040 climate target.
- It will address relation to international credits, integration of permanent EU carbon removals, scope expansion (CCU, waste), and strengthen competitiveness by providing clear, stable long-term signals.

Myth 1:
ETS is just another carbon tax
→ *The climate target matters*

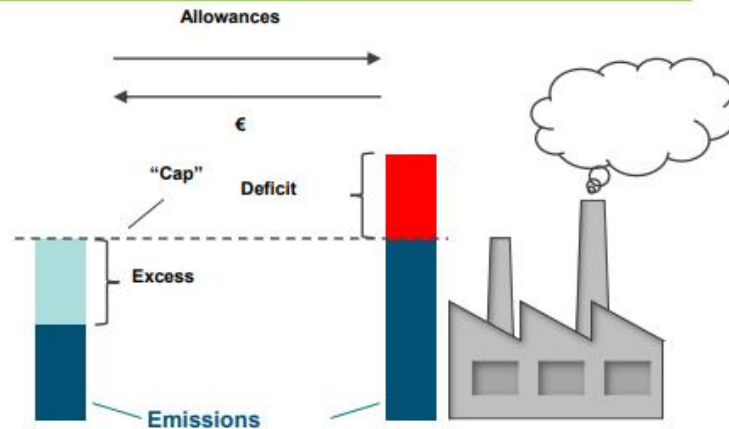
How does the EU ETS work?



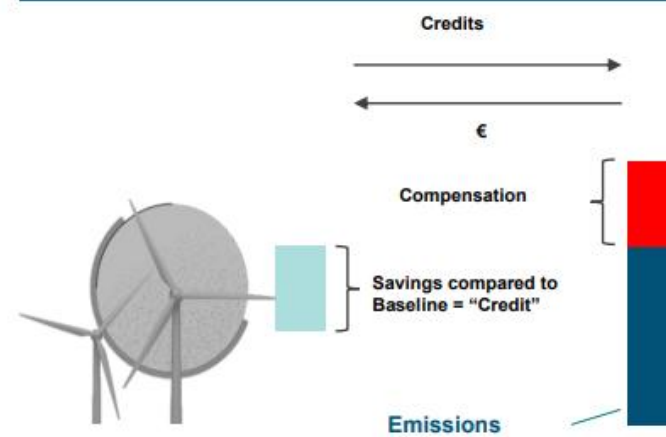
- Total amount of allowances ("the cap"): Emission reduction target will be reached **collectively**
- The **cap** is split **into allowances given for free** and **allowances auctioned**
- **No individual emission limit per entity** (= installation)
- Theory similar to carbon taxes, but here **the reduction target is set** (in legislation), while in a tax the **carbon price is set**, but **the outcome not known**

ETS: cap & trade vs. baseline & credit trade

Cap & Trade (e.g. EU ETS)



Baseline & Credit (e.g. voluntary "offsetting")

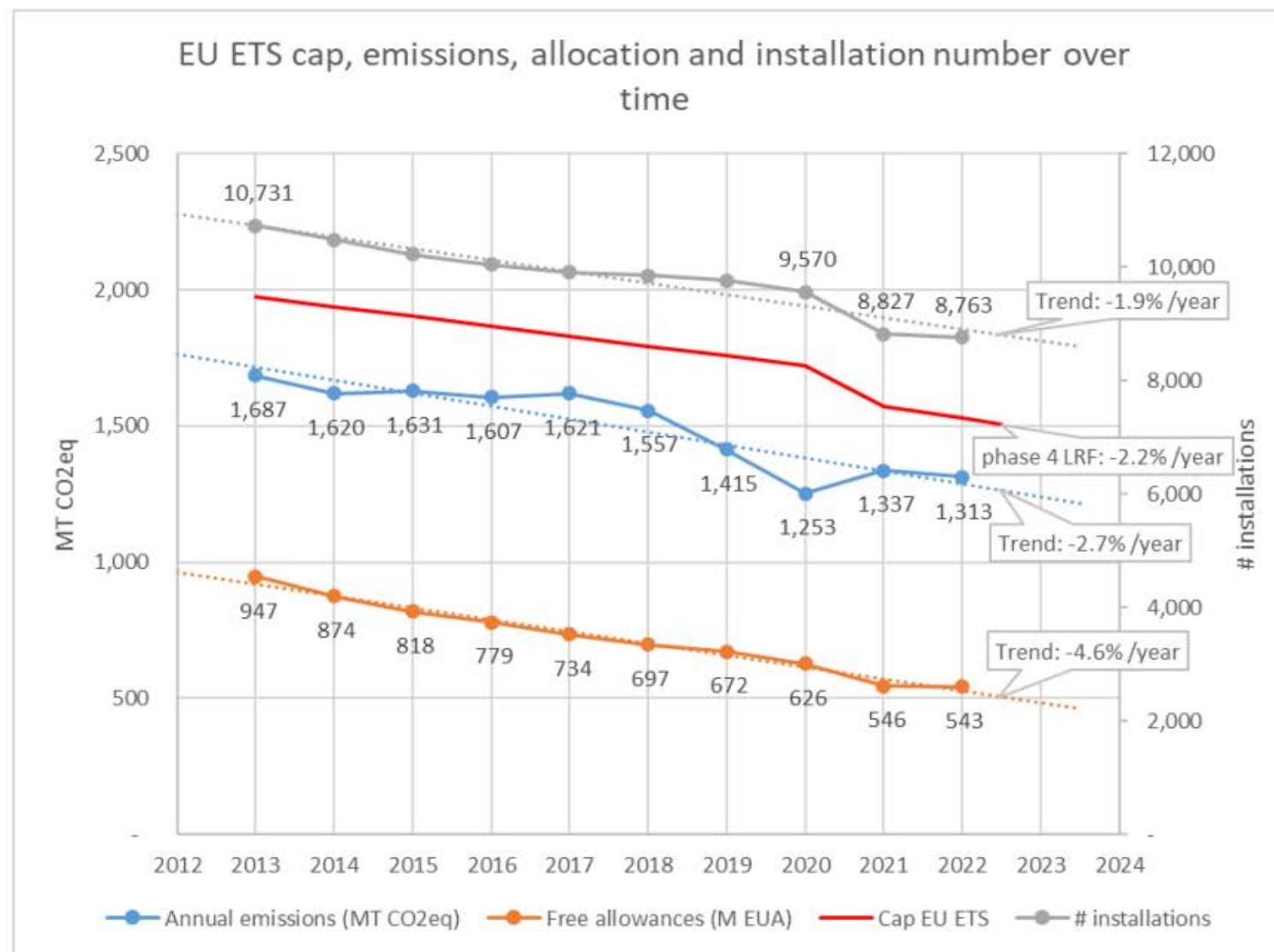


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- Cap = can be absolute or sectoral, declines in line with climate target
- Can expand across sectors towards absolute cap over phases
- Free allowances: (usually) ex-ante based on grandfathering or performance benchmark
- Principles across different methodologies can play a central role (comparability, coherent target)
- Baseline = facility level or sectoral, environmental outcome may depend on the stringency of standards
- Can function similar to declining cap pending factor (e.g. Australia 4.9% annual decline rate for sector baselines)
- Surplus credit: ex-post based on meeting grandfathering or performance baseline

Stationary installations:
total
emissions,
allocation and
installation
number trends
since phase 3
of the EU ETS.

Source: EUTL,
extracted on
25/08/2023



The cap through the phases

Parameter	Phase 1	Phase 2	Phase 3	Phase 4
Cap	Bottom-up (NAPs)		Top-down -1.74% p.a. From 2010-2020 2005-2020: -21%	Top-down -2.2% p.a. from 2021-2024 -4.3% p.a. from 2025-2027 -4.4% p.a. from 2028-2030
Allocation	Free allocation (Grandfathering)		Majority auctioned Free allocation to industry and heating (Benchmarking)	

Cap estimation

- The MS submitted National Allocation Plans (NAPs) to EU Commission for approval, based on NDCs and energy policies.
- In principle the cap should be fixed for long term signals and predictability, but can be adjusted e.g. if new sectors are included, financial crisis
- Cap decreasing since 2010: a Linear Reduction Factor is set in the Directive from phase 3
- Free allocation: fully-harmonised rules based on benchmarks, set at product level

Myth 2:

The market is unpredictable

→ *How to enable a balanced carbon price*

Enabling a balanced long term carbon price signal

- A long term price signal is part of the goal: changes in price are desirable to transmit information on the cost of carbon, increasing over time to reflect the climate target.
- Unplanned price changes can occur (e.g. driven by economic cycles, energy demand, regulatory changes), but excessive price volatility (high or low) undermine predictability needs for long-term signals, investment in low carbon technology, or social impacts.
- **Measures that can address price uncertainty:**
 - Price floors / ceilings,
 - banking / borrowing,
 - Backloading,
 - Market Stability Reserve

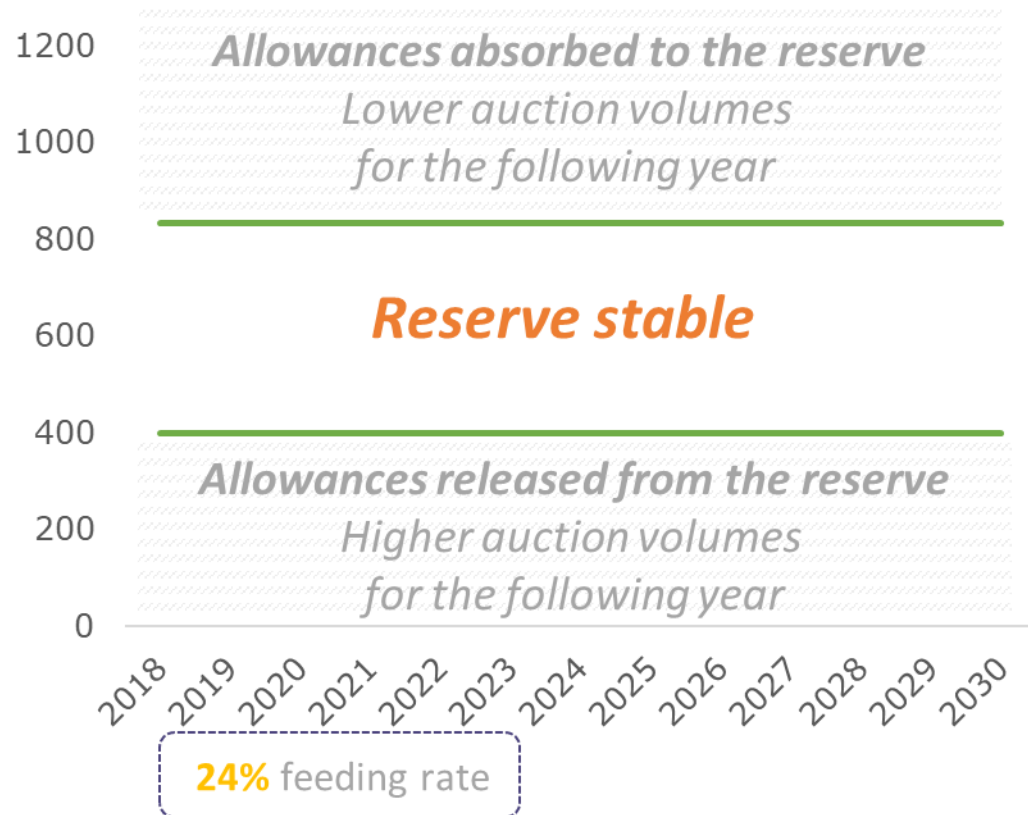


Development of the ETS carbon price

- **Prices have remained low for a long time** due to the surplus of accumulated allowances (financial crisis) and a high influx of international compensation.
- From 2013 -2020 **backloading** of allowances delayed auctioning of 900 million surplus allowances until 2019-2020.
- In 2018, the agreement on the **Market Stability Reserve** (absorbing the surplus over time) pushed prices up.
- In December 2021, agreement on the European Green Deal **target of -55% by 2030** led to a further increase.
- **Prices have been relatively stable since the beginning of 2022** (80-90 EUR), with the exception of the Russian invasion

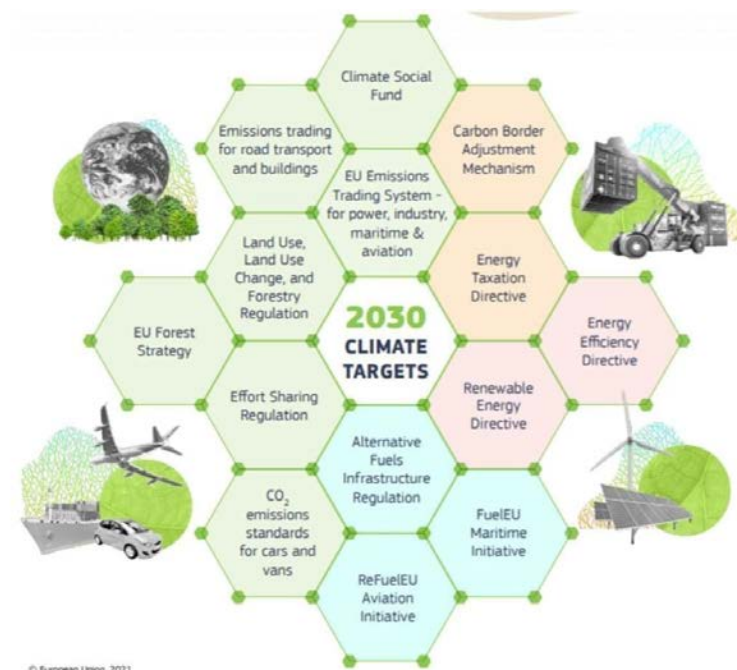
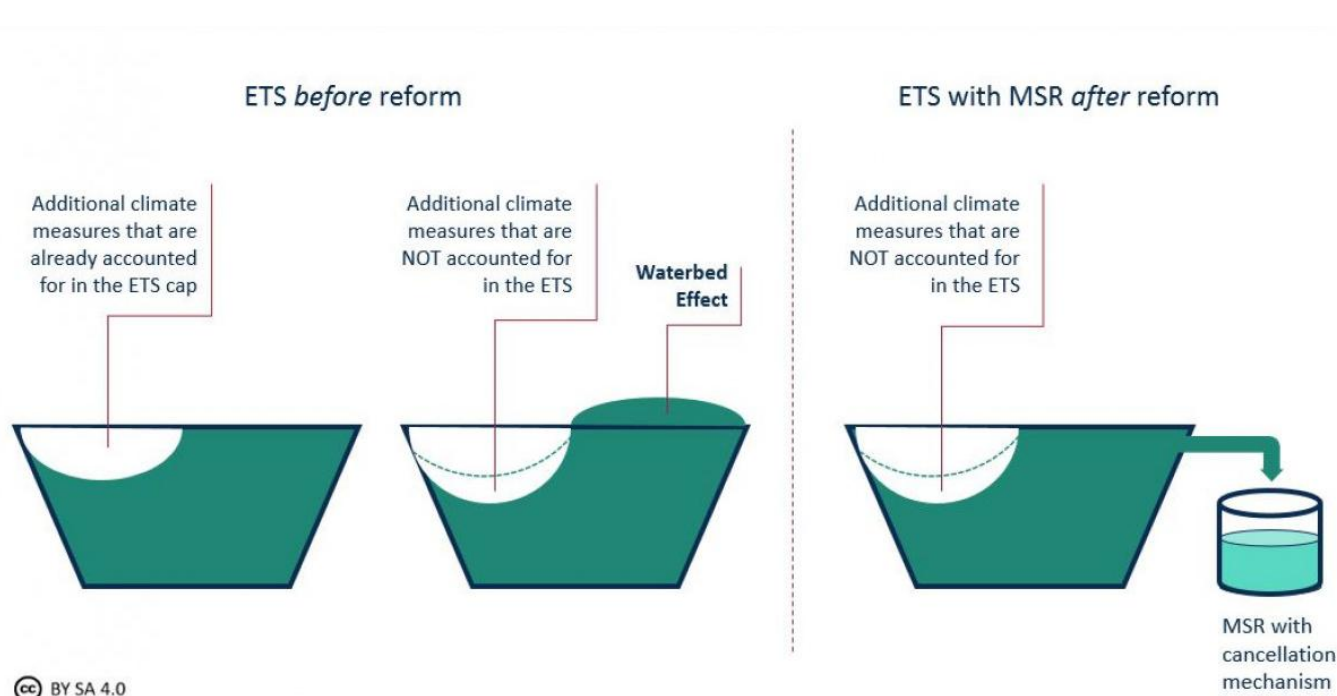


Market Stability Reserve (MSR)



- To **balance supply and demand** of emission allowances, restore market balance and foster resilience to future shocks.
- It operates according to pre-defined rules - no discretion to the Commission or Member States.
- Allowances **absorbed at feeding rate or released** based on the surplus: pre-defined thresholds.
 - **Above 833 million allowances**
 - **Below 400 million allowances**
- Since 2024, special rules between 833 million allowances and 1.096 million apply (**threshold effect**).
- Surplus in 2023: 1.11billion
- **Flexibility is key to stability:**
 - From 2023, allowances in the MSR above a certain threshold were **invalidated annually** to address surplus impact on market imbalance.
 - In 2026, the invalidation was discontinued as a **safety net to balance out market shocks** or extreme price volatility in the future.

ETS in the policy mix: Overlapping policies create a waterbed effect; the Market Stability Reserve punctures the waterbed



Source: Clean Energy Wire

Example: voluntary cancellation

- Article 12(4) ETS Directive:

*In the event of **closure of electricity generation capacity** in their territory due to **additional national measures**, **Member States may cancel allowances**, and are strongly encouraged to do so, from the total quantity of allowances to be auctioned by them referred to in Article 10(2) up to an amount corresponding to the average verified emissions of the installation concerned over a period of five years preceding the closure.*

- Germany notified its intention to cancel allowances as a result of its coal phase out. Volumes of allowances cancelled depend on the MSR operation.

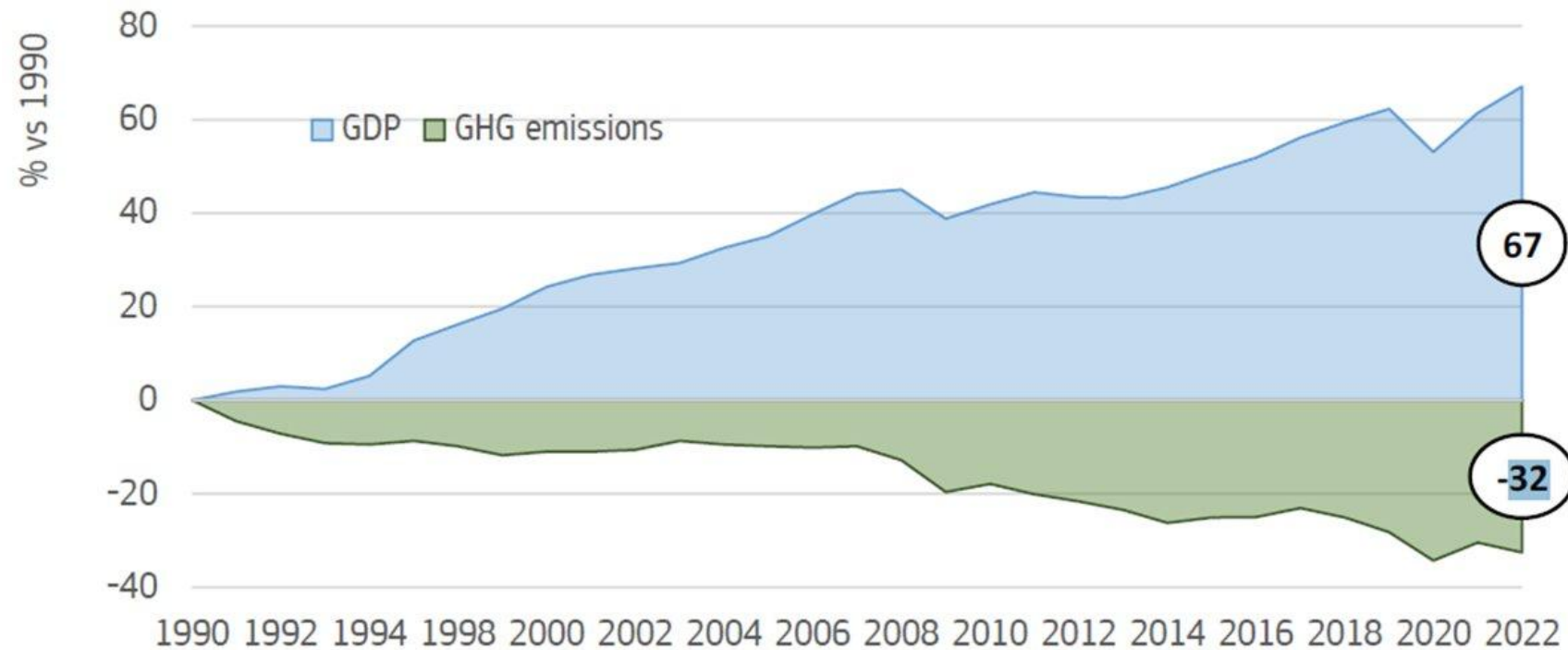
Myth 3:

A carbon price is bad for growth

→ *How to address competitiveness*

20 Years of the EU ETS: proven, cost-effective climate action

Cutting Emissions, Driving Innovation, Funding the Green Transition



Decoupling emissions from economic growth

How to address economic impact & competitiveness

A **lack of level playing field** between countries with (high) carbon price vs. without represents risks

- especially for energy-intensive and trade exposed (EITE) industries
- for carbon leakage (the relocation of production due to climate policy)
- and export challenges

The EU ETS address these with

- benchmarked free allocation of allowances to EITE sectors
- the introduction of the Carbon Border Adjustment Mechanism (CBAM)
- reinvestment of auctioning revenues into the clean and just transition

- ✓ Empirical evidence across G20 shows only **small short term effect of competitiveness risk**. EU ETS data shows allowance price has only a limited impact on electricity prices and industry costs in terms of retail price.
- ✓ Many **investors rely on the ETS** for their long-term plans as driver of company investment.
- ✓ Industry **has been a net beneficiary of the ETS**, support received through ETS revenue use at least **4 times higher** than the industry's carbon costs paid since 2021.

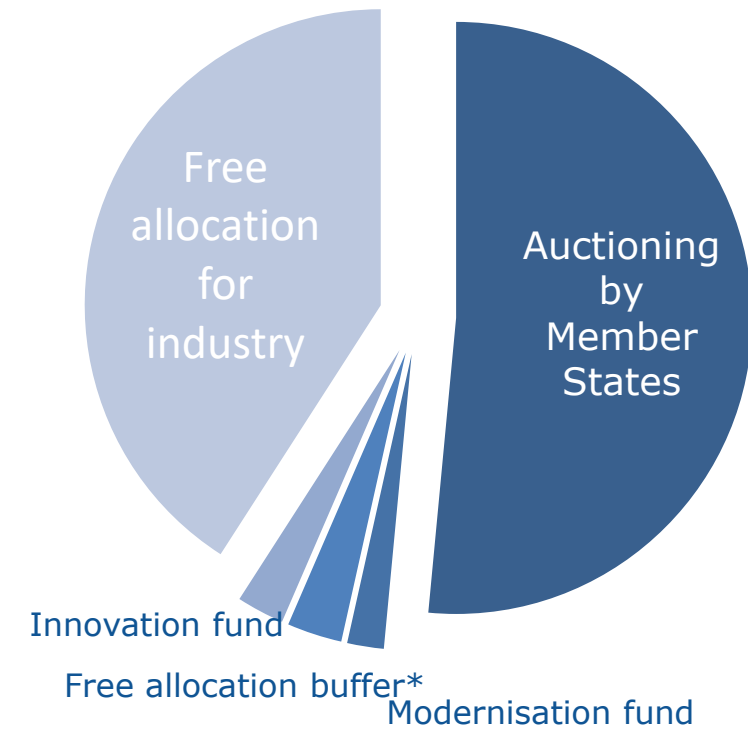
Allowances: auctioning and free allocation

Auctioning: 57% of the cap

- Power sector important buyer – they receive no free allocation
- Robust market oversight provisions, also on the secondary market

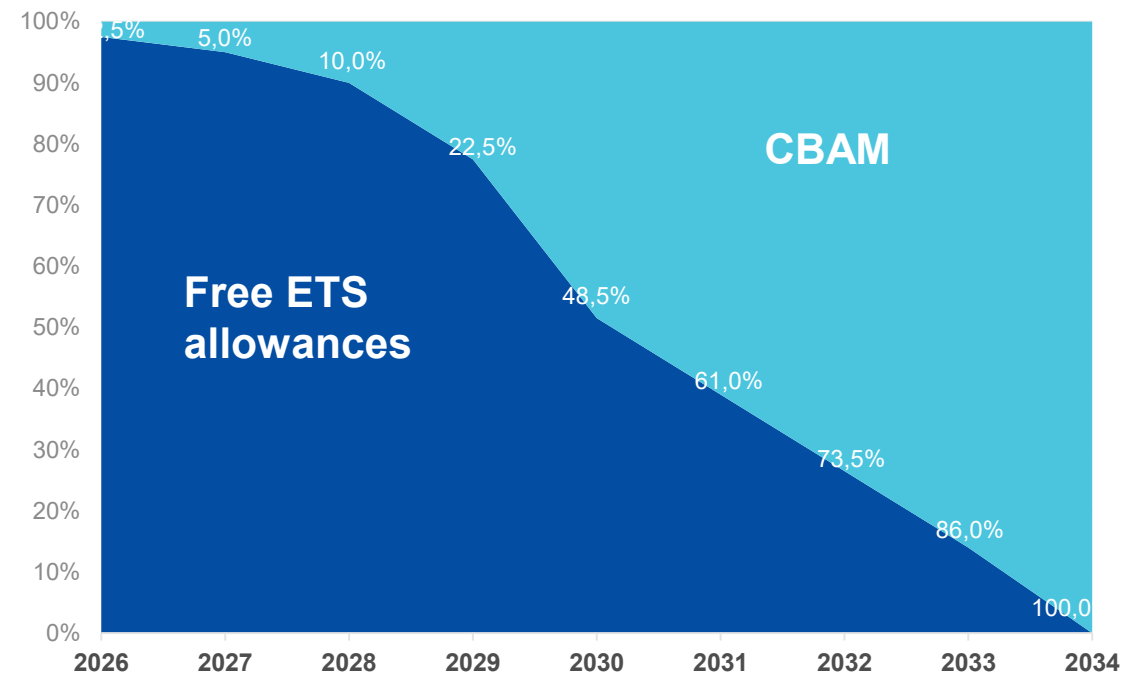
Free allocation: 43% of the cap (including a buffer for new entrants and adjustments)

- Why? To protect against the risk of carbon leakage
- Around 550 million allowances per year (2021-2025), cover about 80% of industrial emissions
- **Based on 'benchmarking' per product group:** derived from the performance of the 10% most efficient installations in the EU → **this still sets and incentive for lowering emissions**
- Benchmarks reduce every 5 years to reflect technological progress, updates for 2021-2025 in the range of -3% to -24% compared to 2013-2020.



Link with CBAM: Free allocation is phased out as CBAM is phased in

- **The Carbon Border Adjustment Mechanism (CBAM) applies to specific industry sectors:** iron & steel, cement, fertilisers, aluminium and hydrogen; they represent around 54% of the total free allocation in the period 2021–25
- **Free allocation under the ETS and the proposed CBAM are interlinked:** To ensure compatibility with the EU's international obligations, and maintain incentives to decarbonise, **free allocation will be phased out as CBAM is phased in.**
- **Free allocation will be phased out.** Free allocation no longer provided to these sectors will be auctioned and the **revenues accrue to the Innovation Fund.**



Revenues from the EU ETS are re-invested into the clean transition

- ETS revenues generated **since 2005** amount to **over EUR 200 billion**.
- Since June 2023, Member States have been **obliged to use 100% of EU ETS revenue to support climate action and energy transformation** purposes.

ETS Innovation Fund:

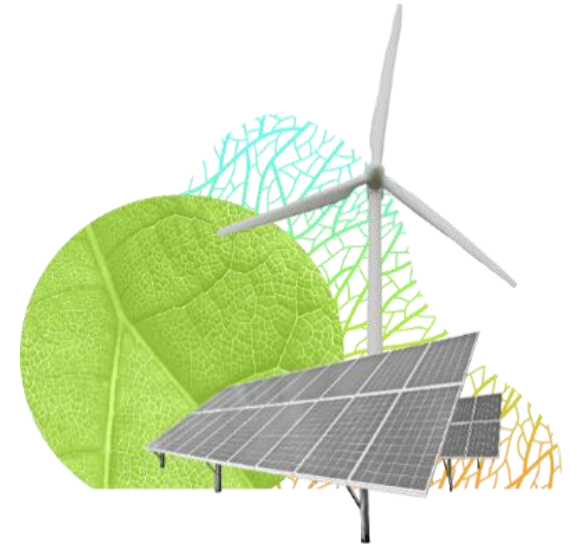
One of the world largest funds supporting low-carbon **innovation and breakthrough technologies** in the ETS sectors.

Size: 530 million allowances equaling **~EUR 40bn** (with EUR 75 carbon price) in 2020-2030.

ETS Modernisation Fund:

Supporting modernisation of **energy systems** and just transition in **10 lower income Member States**

Size: 2% of the cap, equaling **~EUR 62 bn** (with EUR 85 carbon price).



- The new **Industrial Decarbonisation Bank (IDB)** and an ‘**investment booster**’ financed by 400 million ETS allowances reward industries willing to decarbonise.

Innovation Fund project examples

- **eMETHANOLxWSolution:** low carbon e-methanol production for the maritime sector €2.8M
- **Ecoplanta:** Recycling non-recyclable waste into advanced biofuels €106 M
- **EAVORLOOP:** Geothermal energy production in Germany €92 M



Myth 4:

Society pays the price

→ *How to address a just transition*



Deep dive on the Social Climate Fund: addressing ETS2 social impacts

Why a new ETS2 for buildings, road transport and small industry?



- **Current policies insufficient** to reach EU's climate targets
 - ✓ stagnant emissions in recent years
 - ✓ explicit carbon price incentivises emission reductions (successful example of EU ETS)
- **Reduce reliance on imported fossil fuels**
- **Level playing field** within the sectors: existing EU ETS already covers i) around 30% of building heating emissions (i.e., large district heating), ii) electric vehicles and iii) large part of industry fuel emissions
- Alternative measures would have similar distributional impacts, but without the **benefit of raising revenues**

Key features of ETS2



- **Sectoral scope:** CO2 emissions from fuel combustion in road transport, buildings and small industry not covered by the existing ETS1
- Separate '**cap and trade**' system becoming fully operational in **2028**
- **Upstream system** regulating **the fuel supplier**, not the end customer
- All emission allowances will be **auctioned (no free allocation) and will generate revenues**
 - ✓ **National auction revenues** to be spent in their entirety on selected **climate, energy and social purposes**
 - ✓ Financing of the **Social Climate Fund** which will **address the social impacts** on vulnerable groups

Social Climate Fund



- **Purpose:** address the social impacts arising from ETS2 **on vulnerable groups**
- **Targeted at vulnerable groups**
 - ✓ Vulnerable *households*: in energy poverty or significantly affected by ETS2
 - ✓ Vulnerable *transport users*: in transport poverty or significantly affected by ETS2
 - ✓ Vulnerable *micro-enterprises*: significantly affected by ETS2 price impacts
- **Period:** 2026-2032
- **Size: EUR 86.7 billion**
 - ✓ EUR 65 billion (mainly) ETS2 revenues + national contributions from Member States of minimum 25% of the total estimated costs



What does the SCF support?



Investments in energy efficiency, renewable energy, clean heating & cooling

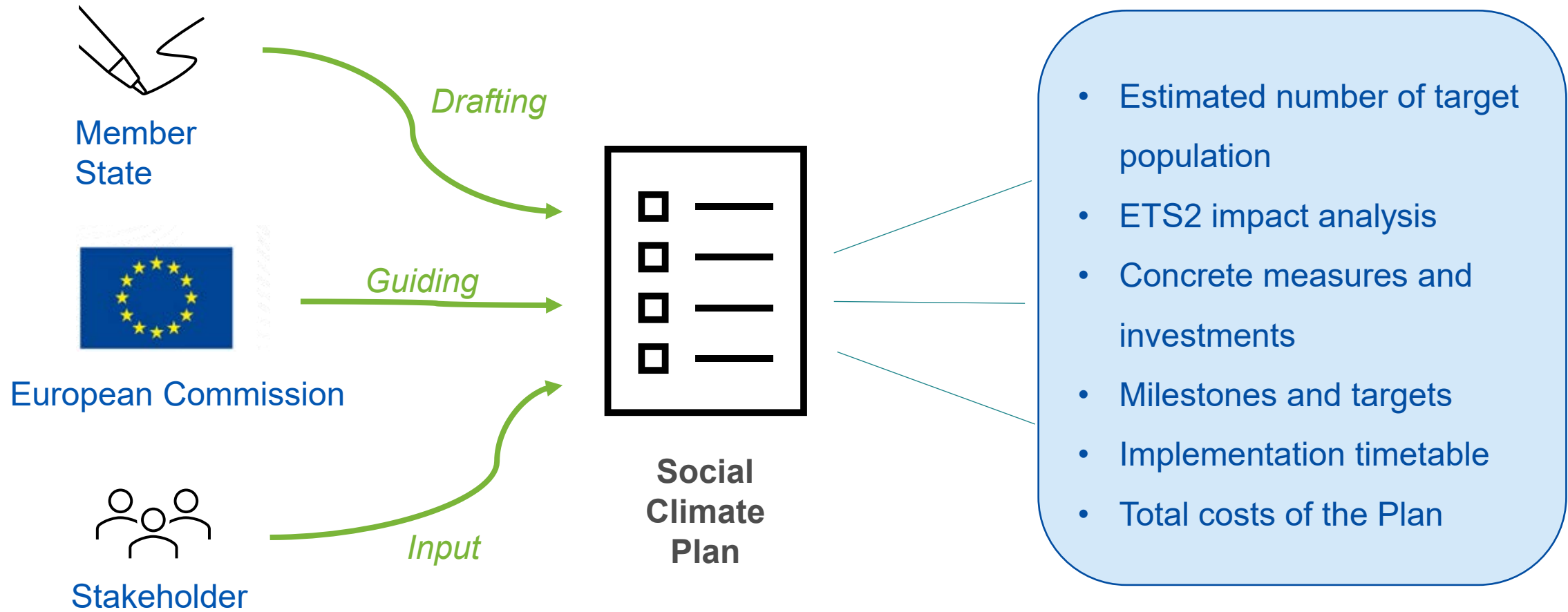


Finance zero- & low-emission mobility & transport, including public transport



Optional: limited, targeted & temporary direct income support

Plan-based Fund



Public consultation

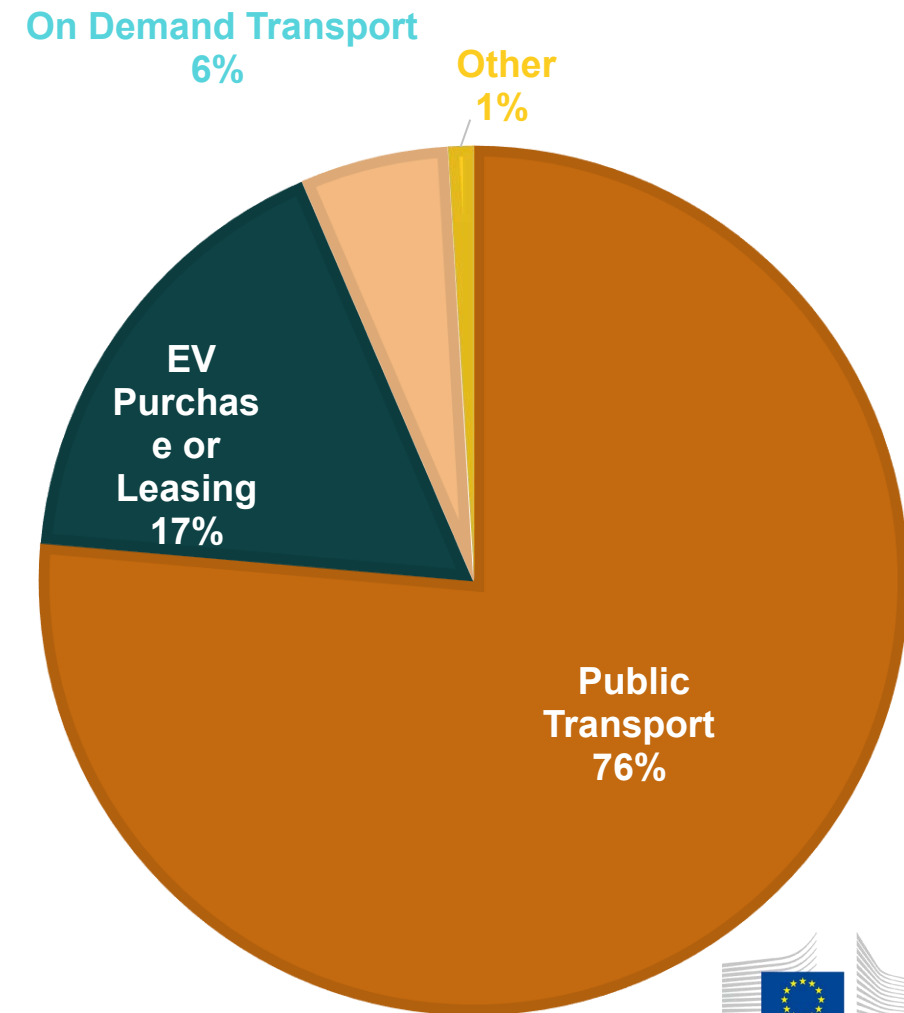
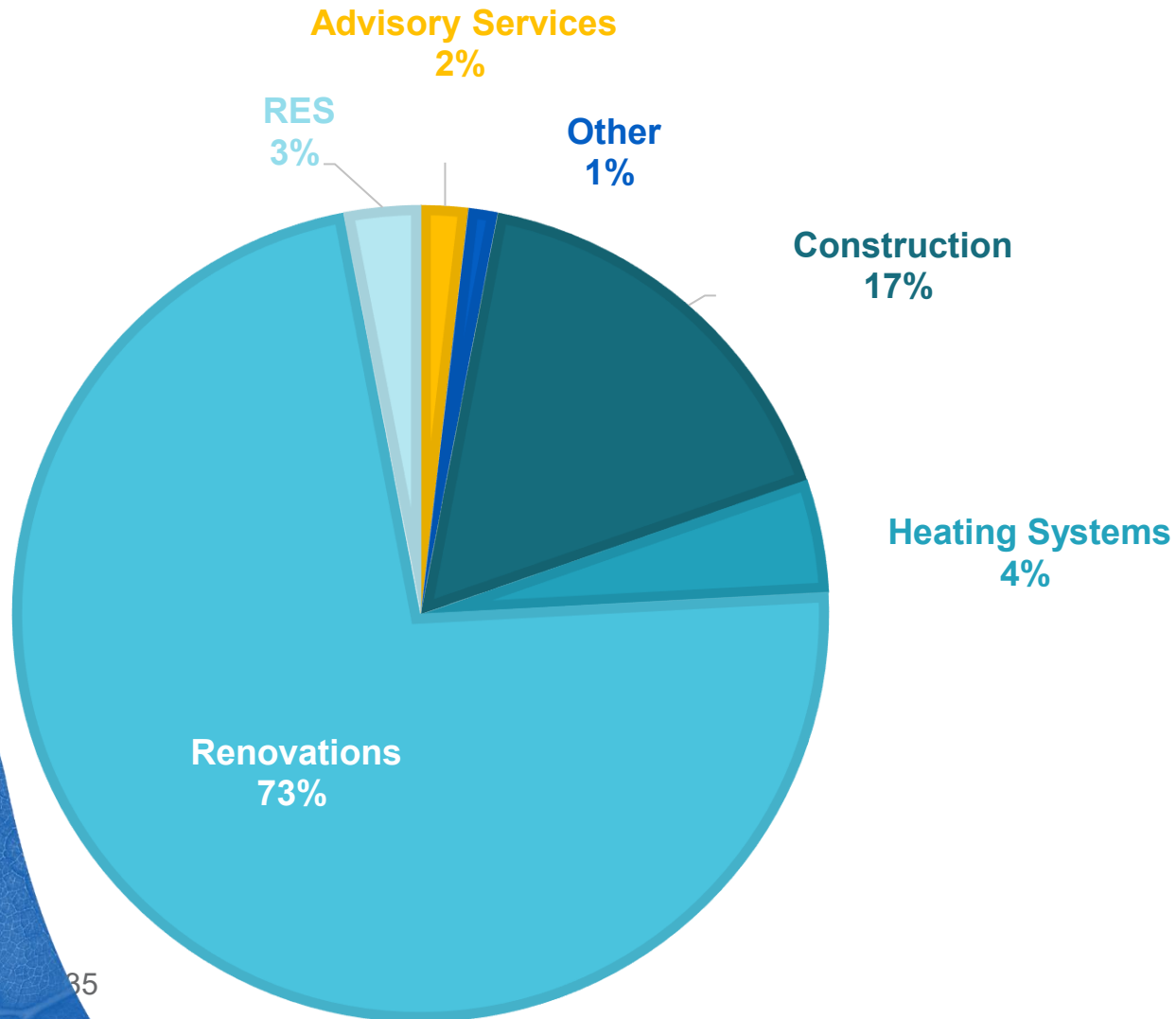
- Public consultation is **mandatory** across a broad range of **stakeholders** (local and regional authorities, representatives of economic and social partners, relevant civil society organisations, youth organisations, and other).
- The SCP must contain:
 - **Summary** of the consultation,
 - **Explanation** of how the input of stakeholders is reflected
- **Stakeholders directly involved in the implementation:** SCF Regulation allows for regional and local measures, and for measures to be implemented through “intermediaries” if sufficient guarantees are in place.
- Commission published a **Note on Good Practices** for public consultation, dialogue with MS continues in the context of SCF CCEG.

State of play



- **2** Plans adopted (SE and LT), (additional) **5** Plans officially submitted, (additional) **16** draft Plans received
- Preliminary estimations suggest that measures will reach **25%** of energy/transport vulnerable households
- Current budget split between sectors: **45% buildings; 40% transport; 13% DIS**

Investments by category



Concluding thoughts



- Energy/Transport poverty are broad and complex, SCF is **no silver bullet**
- **SCF uniqueness:**
 - climate and social dimensions brought together
 - advanced the policy framework and the analytical tools available for addressing transport/energy poverty, breaking silos in MS
- **Stakeholders** are key for successful implementation
- Revenues: **investment opportunities** for clean tech, competitiveness and cheap energy.



Thank you!

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CLIMA B5 – Social Climate Fund and ETS2 Implementation