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World's First International Emissions Trading System: EU ETS

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Know More!

Watch Video abstract here

1 The Need for EU ETS

EU ETS was established as a Carbon Trading Mechanism to reduce GHG Emissions in compliance with Kyoto Protocol and Paris Climate Agreement.

Main Principles behind the financial instrument:

- Enforce Polluter Pays Principle
- Counter Free Riding Phenomena
- Club EU for Climate Change Targets
- Ensure Investment in & transition towards carbon offsetting technologies

GHG **Primary Target:**

Reduce GHGs by 20% below 1990 levels, by 2020

2 Cap & Trade Principle

CAP sets a limit to total GHG emsissions volume per year. The limited allowances are distributed among firms.

1 EU Emission Allowance (EUA) = 1t CO_2 equivalent

Figure.1 Explanation

Scenario 1
Creates Demand

If a facility **exceeds** its EUAs, it can:

- Reduce emissions
- Buy allowances (offset credits)
- **Obtain allowance offset** – invest in reducing emissions at another source
- Pay a penalty

Scenario 2
Creates Supply

If a facilty has **unused** EUAs, it can trade those to firms in Exceedance of their EUAs

Supply & Demand of limited allowances creates EU ETS Market

EU ETS Mechanism

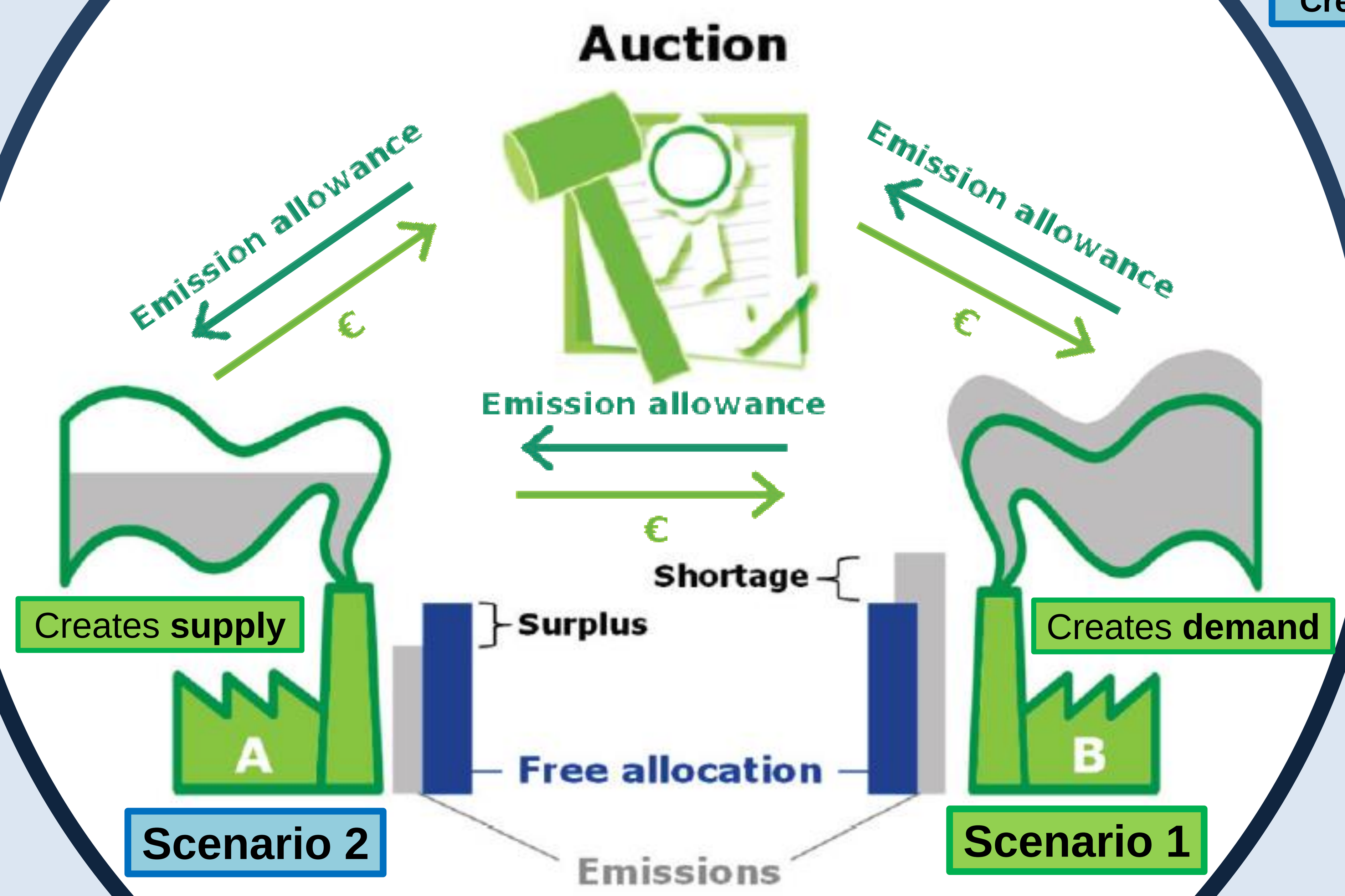

Figure 1. EU ETS mechanism. Allowances are given for free or can be aquired by auction or bought from another emitter. modified from 1)

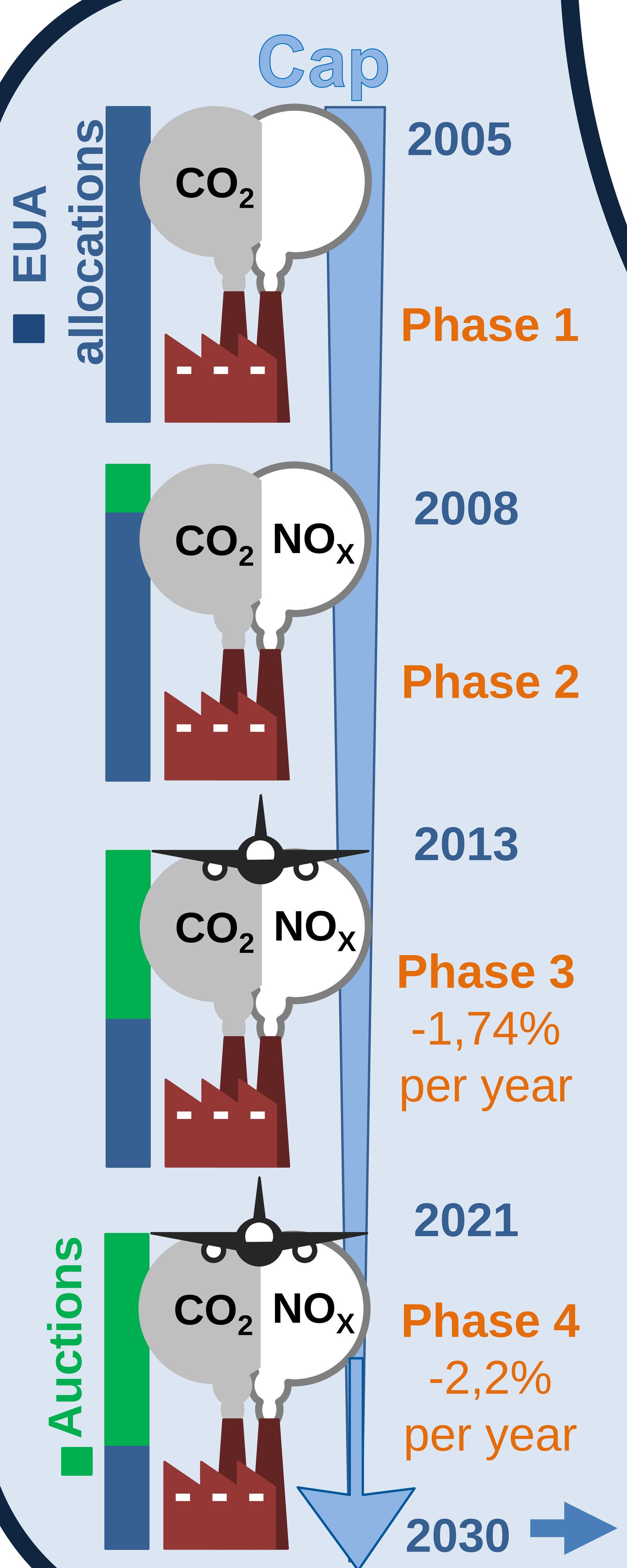

Figure 2. data from 2.

3 EU ETS Journey

- **Phase 1-** Pilot: All EUAs were free allocated and cap was estimated.
- **Phase 2**: Nitrogen Oxides included
- **Phase 3:** Aviation sector included

-43% reduction of allowances cap w.r.t 2005 case

4 Market Vulnerability

Supply, Demand & Price for EUAs is heavily influenced by external factors and therefore needs a mechanism to stabalize the market.

→ Market Stability Reserve (MSR)

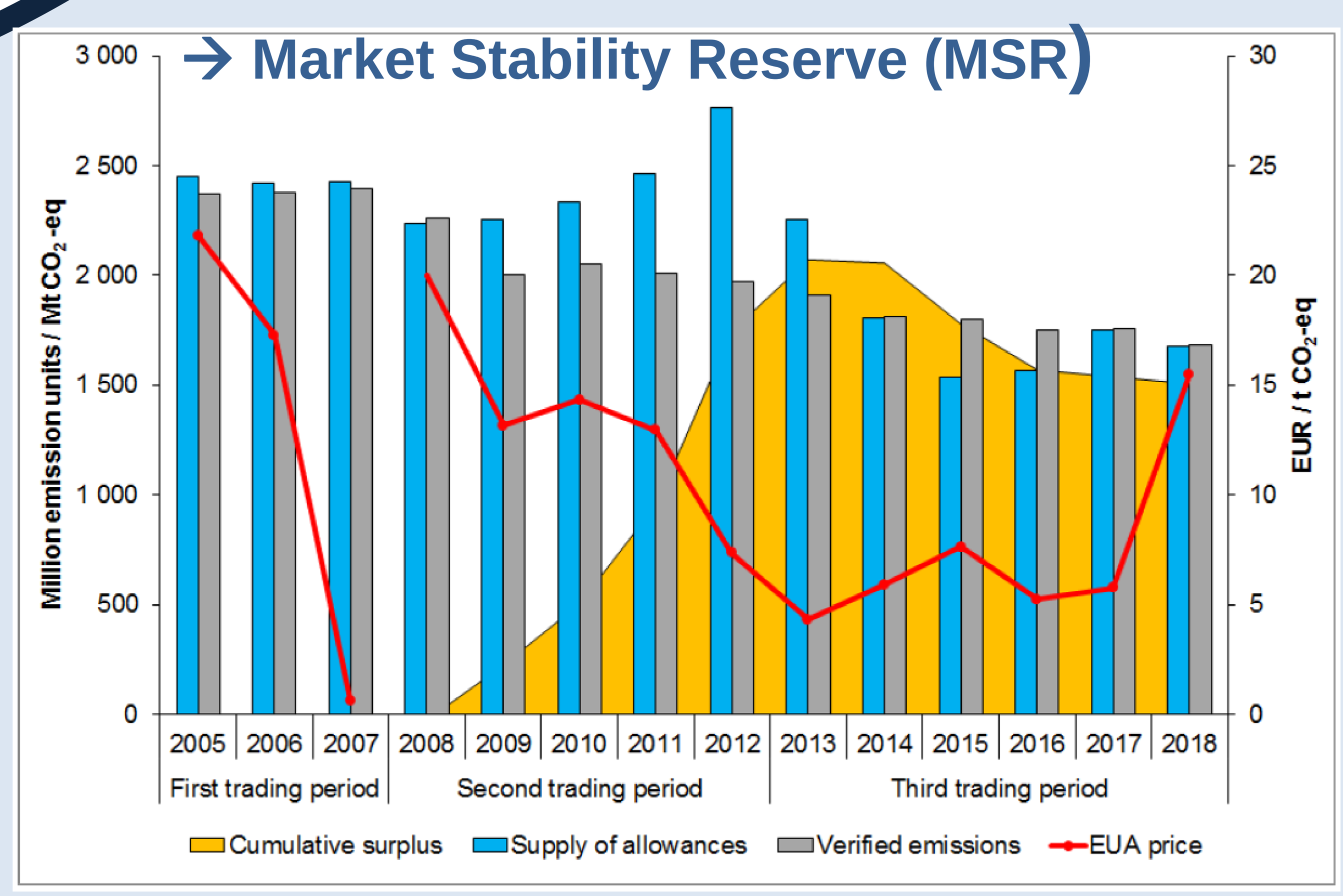

Figure 3. In **Phase 1,** supply of EUAs exceeded the emissions and led to collapse of EUA price. Global finance crisis of 2008 reduced emission due to reduced production. Again, circulating allowances exceeded emissions and EUA price decreased. **Low EUA prices result in weaker incentive to reduce emissions.** To address surplus of allowances and improve the system's resilience to major shocks, MSR was started in January 2019 as a long-term solution. Data modified from 3. (learn more in abstract video)

References:

1) EU ETS Handbook, European Union (2015)
2) Report From The Commission To The European Parliament and The Council, Brussels, COM(2020) 740 final (2020)
3) Trends and projections in the EU ETS in 2019, Sean Healy, Verena Graichen, Jakob Graichen, Christian Nissen, Sabine Gores, Anne Siemons, European Topic Centre on Climate change mitigation and energy (2019)