



Project Name: Future of Emissions Trading in the EU

Report N° 2: Role Emissions Trading in EU Climate Policy

Launch Event

Thursday December 12, 2024

11 :00 – 13 :00 CET, Rue Archimède 61, Brussels, Belgium

1. Emissions Trading in the EU

Why was the EU ETS built, initial objectives and how it was presented

- Kyoto protocol. In 2005, the EU created the EU ETS to help meet its Kyoto Protocol commitments [2].
- Cap and trade vs taxation. The USA SO₂ trading programme provided the inspiration, and opting for the EU ETS was largely driven by political feasibility due to EU governance - it was the second-best solution, but the right choice.
- Being the full driver for decarbonization was the original promise. The EU ETS was "sold" as the main EU climate instrument, with an expectation that carbon pricing will drive decarbonization for power and industry.
- The EU ETS was also seen as delivering on other important issues:
 - To drive decarbonisation in the most efficient and effective manner.
 - To allow a carbon price signal that drives asset allocation and be an arbitrage between different energy sources.
 - To hedge carbon risks by using financial instruments.
 - To induce innovation in low carbon technologies, and investments.
 - A start towards a global carbon price – which would also deal with competitiveness and carbon leakage
 - To position the EU international leadership in climate diplomacy.

2. Evolution of Emissions Trading in the EU

2.1. Objective and evolution

- Art 1 of the EU ETS Directive established the main objective of the EU ETS:
 - Initial objective (2003)
 - To reduce GHG emissions in a cost-effective and economically efficient manner.
 - Current objectives (2023)
 - To reduce GHG emissions in a cost-effective and economically efficient manner.
 - To contribute to the reductions considered scientifically necessary, aligned to the European Climate Law.
 - Stricter reduction commitment if international agreement on climate change.
- The EU ETS has evolved in time. Also, EU climate policy evolved in unexpected ways, especially with respect to the international response to climate change.
- EU climate policy is not aligned with Art 2 of the UNFCCC which refers to controlling the concentration of GHG in the atmosphere and is not technologically neutral as the use of ETS as an instrument would normally indicate.
- Since its creation in 2005, the EU ETS underwent changes in different trading periods. The changes focused on architecture, governance, addressing specific objectives such as carbon leakage protection, etc

2. Evolution of Emissions Trading in the EU

2.1. Objective and evolution

Phases of EU ETS:

- Phase 1 (2005–2007): Learning phase; carbon price crash due to EUA overallocation and data inaccuracies.
- Phase 2 (2008–2012): Expanded to Iceland, Liechtenstein and Norway; recession reduced emissions, but supply remained static; international credits introduced under the Kyoto Protocol; price drops due to overlapping policies and design flaws.
- Phase 3 (2013–2020): Initial low prices ($<€10/tCO_2e$); structural reforms (backloading, MSR, MIFID II); post-2018, prices consolidated with sector expansions and funding mechanisms (Innovation & Modernisation Funds).
- Phase 4 (2021–2030): Higher prices (exceeding $€100/tCO_2e$ by 2023), free allocation reduction, CBAM introduction, and inclusion of maritime transport. Sub-phases focus on innovation funding and increasing market stringency.

The EU ETS has evolved into a more stringent and effective system, with visible carbon price increases and cost adjustments through reduced free allocation. While it remains a critical tool, it is part of a broader policy toolbox necessary for comprehensive decarbonization.

2. Evolution of Emissions Trading in the EU

2.2. Reasons for introducing national or EU-wide complementary policies

- **Timing issues:** Carbon pricing alone takes time to push decarbonization and, when price signals do not fully represent the value of scarcity. They require years to drive technological transitions and meaningful changes.
- **Acceptability of price signal and cost challenges:** The EU ETS can deliver a visible carbon price up to a certain point after which it becomes socially and politically challenging, and economically difficult.
- **Concurrent decarbonisation of all sectors:** Through the ETS price, the aim was to move up the MAC curve and to prioritise the least expensive abatement. The EU seeks to decarbonize higher MAC sectors, such as transport, at the same time as sectors with lower MAC.
- **Industry decarbonisation and carbon leakage:** The main drivers were subsidies. The current phase is focused on industrial decarbonization, and industry needs complementary measures. Competitiveness was initially brushed aside through grandfathering, then free allocation, and currently CBAM, but CBAM is currently seen as imperfect.
- **Revenues for decarbonisation:** The EU ETS has become an important source of revenues, but not sufficient to meet all investment needs. KOBIZE [3] estimates EU ETS revenues over the period 2031-2050, representing only 11% of the total investment needs of the energy sector alone⁴. The achievement of the EU decarbonisation agenda is part of a bigger picture.

3. EU ETS landscape to 2030, and beyond

- The period leading up to 2030 will require the system to adapt to unprecedented market and technological dynamics, while the path beyond will see even more fundamental shifts as the EU transitions to net zero and eventually net negative emissions economy.
- As the EU ETS evolves to meet the challenges of decarbonization by mid-century, several key elements shape its surrounding landscape and will impact it. These critical aspects include:
 - Net Zero Commitments (to Net Negative): Meeting economy-wide net-zero emissions targets will require integrating innovative technologies like CDR and expanding the ETS's scope to cover other sectors.
 - Market tightening: A shrinking emissions cap will lead to decreasing liquidity, higher carbon prices and heightened price volatility, reshaping market dynamics and compliance strategies.
 - Balancing carbon prices: high prices drive emissions reductions but risk economic strain and public backlash, while low prices hinder innovation in transformative technologies. A stable and balanced price signal is needed to promote innovation, ensure competitiveness, and protect consumers.
 - Competitive and international pressures: Global disparities in climate policy and market mechanisms, coupled with the evolving implementation of CBAM, will influence the EU ETS's competitiveness and international linkages.
 - Societal impacts: Rising carbon prices and new technologies like CCS and CDR will face public scrutiny as CBAM enables ETS1 cost passthrough to society (on top of ETS2), with social acceptability and equitable financial frameworks becoming pivotal concerns.

4. Role of Emissions Trading in the EU

- The elements discussed raise several issues with regard to an EU ETS fit for purpose beyond 2030:
 - What kind of price signal do we expect post 2035?
 - Can it provide a good price discovery with low liquidity? Is it still a viable instrument?
 - How will it function in a net negative world?
 - Can its life be extended by adding liquidity (new sectors)?
 - Is a different governance model needed?
 - What other instruments are needed leading to post-2030?
 - Are CCfDs - new funding instruments, needed?
 - Is ETS1, as is, a viable instrument post 2030?
 - What changes are required?
- Emissions Trading may not be sufficient on its own to drive remaining decarbonisation post-2035. However, it is here to stay as a central piece in the toolbox. The EU has invested too much into this approach and it is unlikely that it would not consider it when it runs out of carbon permits.

4. Role of Emissions Trading in the EU

- To be fit for purpose towards net zero, Emissions Trading needs to look at issues that need to be addressed and measures put in place. They will fall into two categories:
 - Measures/policies to adapt the EU ETS to a new environment: These will be changes to the EU ETS, such as governance and architecture, and can address issues such as:
 - Carbon market liquidity,
 - Functioning in a net zero world,
 - Functioning in a net negative,
 - Market behaviour such as volatility and addressing different types of market surplus
 - Complementary measures: Those measures existing outside of the direct scope of Emissions Trading but strongly interacting with it. The introduction of complementary measures may address issues such as:
 - Need for a high price for investments
 - Competitiveness and carbon leakage

4. Role of Emissions Trading in the EU

4.1 Measures/policies to adapt the EU ETS to a new environment

- **Addressing liquidity:** CDR, international credits, geographical expansion, new sectors, linking.
- **Addressing net zero/net negative targets:** CDR, international CDR.
- **Addressing market behaviour:** Distinction between "good surplus" versus "bad surplus" of EUAs:
 - A good surplus: generated from abatement efforts which need to be rewarded. Eliminating such surplus through mechanisms such as MSR cancellation is unjustifiable and goes against the principle of the EU ETS.
 - A bad surplus: that stems from economic cycles and deindustrialization. This was seen in the Kyoto Protocol in the form of what was called "hot air". While in some ways understandable from an EU perspective, the insistence on such terms in the end hurt the very existence of the Kyoto Protocol.
 - The concepts of good and bad surplus should not be mixed, and the upcoming revision of the MSR should provide a good opportunity to address the right definition of market surplus.
- Volatility will increase as we approach the mid-30s and may cause real disruptions in the market. It will be driven by the scarcity, liquidity and the approach of net zero, which is desirable, but no one has ever dealt with.

4. Role of Emissions Trading in the EU

- There is a need to look at the governance of the EU ETS, which can have two fundamental approaches:
 - Rule based: based on rules such as MSR claw back, which relies on automatic quantitative triggers, with no human intervention.
 - To change the parameters of these rules, the EU needs to go through a complicated and time-consuming co-decision process.
 - Can the current rule-based governance handle an environment marked by an increase in competitiveness, decreasing liquidity and price volatility, as well as the introduction of CDRs, which as outlined above, are a necessary condition for net-zero?
 - Alternative governance: more flexible governance, where there are guidelines but the final decision rests with human intervention and judgement.
 - Not a matter of institutional arrangements, especially given the allergy to new institutions when a Carbon Central Bank is mentioned.
 - What needs to be ensured is that the functions that are needed can be fulfilled. Those who argue against examining such arrangements should examine their confidence in the strength of EU.
- In the end, achieving cost-effectiveness and economic efficiency will require a mixed approach balance.

4. Role of Emissions Trading in the EU

4.2. Complementary measures

- The EU ETS has so far not functioned on its own. Other measures including subsidies were put in place. Complementary measures were necessary then and are even more necessary now to:

4.2.1 Support the price signal for investments/hedging carbon price risk and long-term uncertainty,

- Derisking investments through CfDs & CCfDs.
- Development of EU state aid and common guidelines for the design of CfD and CCfD by MSs could enable faster “clearance” and implementation; minimise market distortions or over-subsidisation; ease competition to attract investments among Member States that have schemes of diverse designs.
- Envisage EU-wide or regional CfD and CCfD schemes in the future. To avoid a race for subsidies and unlevel playing field across MSs.

4.2.2 Address competitiveness/ carbon leakage issues

- There are significant changes on how to address carbon leakage, the most revolutionary being the move from free allocation to CBAM. To have a CBAM fit for purpose we need export and anticircumvention provisions, careful consideration of specific sector characteristics, as well as value chain complexities and implications.
- In case, for WTO compliance reasons, CBAM is not able to fix competitiveness and carbon leakage, a “do nothing” solution is not acceptable.

4. Role of Emissions Trading in the EU

4.2.3 Foster demand for low-carbon products

- Comprehensive decarbonisation policy strategies need to encompass measures that address both supply and demand.
- This requires the development of lead markets ⁽¹⁾ to ensure demand for low carbon products, through:
 - Public procurement;
 - Mandates such as sustainable fuel blending quotas that can provide a framework to foster demand. The success of ETS2 will be determined by such demand-side complementary measures already before 2030.
 - Minimum GHG intensity standards for basic materials can promote lead markets development ⁽¹⁾.
- This is in particular relevant for markets where the potential demand for climate-friendly products is currently limited and for those parts of the economy that would have otherwise been untouched by Emissions Trading in the short to medium term (i.e. sectors with high MAC).
- Similarly, when it comes to CfDs, policy makers could consider the need for a downstream mechanism to derisk the consumer side, and whether and how the fee/revenue structure for schemes like CfDs could become a tool for competitiveness.

4. Role of Emissions Trading in the EU

- The balance between carbon pricing signal and (the funds needed for) complementary measures is a political choice.
 - The question that needs to be squarely faced is “who pays the bill”. In some countries it has been largely the consumer, with industry in many cases shielded.
- Governments would need to consider a combination of policy instruments and their impacts: a focus on subsidies for low-carbon generation investments reduces the need for carbon price surges and results in lower inflation, while production subsidies boost investment and GDP with little impact on inflation⁽¹⁾.
- The mere choice of relying more on complementary measures implicitly means more of the costs socialized rather than borne by EU ETS covered entities who might see a reduction in carbon prices.
- There are choices to be made between consumption and investment, and this is also a political decision.
- Complementary measures are generally seen as focusing on CapEx. However, we live in the real world and compete against those that see the need for intervention not only for CapEx but also for OpEx. The EU needs to accept this.
- As ERCST, the talk about increasing state intervention is not our first stop. In state driven transformation, we need to live with the reality of state intervention and not in an academic world.

5. Take aways

- This report focuses on the role the Emissions Trading System plays within the overall EU climate policy beyond carbon pricing. Considering the overall climate picture is important as Emissions Trading does not operate in isolation. Instead, it has become part of a complex policy mix. Can Emissions Trading alone be compatible with a net zero economy?
- Achieving climate neutrality by 2050 would require very high prices, and that is not viable from an economic nor a social point of view. If we allow the price signal to work, it takes a long time to deliver full decarbonisation unless it is very high, and that's very heavy on compliant entities. Free allocation has helped to temporarily alleviate the problem of carbon leakage up to a certain extent, but now is CBAM to take over.
- The reality is that the EU ETS did not and does not provide a full price signal - the ETS was never really allowed to deliver an entire price. There were complementary measures that muted the real price and cost of carbon. A full price signal coupled with effective carbon leakage risk mitigation is important to trigger low carbon investments and to incentivise a changing behaviour aligned with net zero.

5. Take aways

- Emissions Trading needs to be adapted and complemented.
 - It needs to be adapted because there is an upcoming liquidity problem. To address liquidity, we see CDR, governance, international credits, geographic expansion, and new sectors linking.
 - It needs to be complemented to provide an adequate price signal for investments, through temporary instruments such as CCfDs, ultimately the creation of a market for low carbon products, and a fit for competitiveness carbon leakage package, i.e. one that covers both domestic and international markets.
- Emissions trading in the EU faces fundamental challenges transcending design. Its success requires careful calibration of both core adaptations and complementary measures. An adapted and complemented real price discovery should lead to an economic rational allocation of assets and ‘good decarbonisation’.

Supporters of the initiative

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Disclaimer

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