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European Central Carbon Bank (ECCB)

Introducing the ECCB as the new institution to manage the future EU carbon market

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Acknowledgments

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Table of Contents

Acknowledgments 2
Executive Summary 4
1. The policy challenge facing the EU ETS 5
2. Proposed institutional solution: the European Central Carbon Bank (ECCB) 7
3. ECCB functions 9
4. Conclusion and strategic policy recommendations 11
5. References 12

Executive Summary

As the EU ETS becomes the cornerstone of Europe's climate policy, it faces growing structural and political challenges: persistent scarcity of allowances, expansion to new sectors (ETS2), inclusion of carbon removals and international offsets, and rising expectations for transparency and fairness. The system's current institutional design - tailored for surplus management and low political salience - is no longer fit for purpose.

This policy brief proposes the establishment of a **European Central Carbon Bank (ECCB)**: an independent institution modelled after a central bank, empowered to manage the supply of EUAs, carbon dioxide removals (CDRs), and high-integrity international offsets. The ECCB would act as a stabilising force - maintaining market liquidity, managing volatility, and coordinating carbon pricing signals across policy instruments.

The policy brief outlines the rationale for the ECCB, its core functions, legal and institutional pathways for implementation, and key recommendations for EU decision-makers - most notably, the inclusion of the ECCB in the 2026 EU ETS review. In a more complex and politically visible carbon market, the ECCB can serve as a cornerstone of a future-proof, transparent, and resilient carbon governance system.

A credible, forward-looking institutional solution is needed now - not in reaction to crisis, but in anticipation of future complexity. The time to lay the foundations for the European Central Carbon Bank is before volatility undermines trust, and before the system's credibility is put at risk.

1. The policy challenge facing the EU ETS

The EU ETS is entering a critical transition period. With the next comprehensive review scheduled for 2026, the EU faces a unique opportunity to modernize the governance of its carbon market in line with its 2040 and 2050 climate goals. At the same time, the system is facing growing structural strain: from supply scarcity and market volatility to the integration of new sectors, instruments and jurisdictions.

The EU ETS has long been a key policy in the EU's climate agenda. Since its launch in 2005, it has achieved a reduction in emissions of almost 50% in the sectors covered by the scheme, while the EU's economy has grown by more than 30%. This remarkable decoupling of emissions and economic activity demonstrates the effectiveness of well-designed market instruments. However, the conditions under which the system was created – higher surplus of EUA allowances, limited sectoral scope and moderate climate ambition - have changed profoundly. Even the tool that helped the system recover from early crises - such as the Market Stability Reserve (MSR) - were calibrated for a different set of challenges: oversupply, low prices, and limited political visibility.

The EU ETS is now evolving in the opposite direction as it has to meet the EU's net-zero and net-negative emissions targets. Allowance volumes are shrinking. Market dynamics are shifting toward scarcity, not abundance. Morever the system is undergoing significant changes: the introduction of the CBAM, extension to new, socially sensitive sectors through ETS2, expected inclusion of carbon removals into ETS1 and potential expansion to the waste, agriculture sectors, or new countries like Ukraine or those in the Western Balkans, and the integration of international offsets. Today, the EU ETS is expected to deliver far more under radically different circumstances.

The key question is whether the current architecture of the EU ETS is robust enough to handle what lies ahead. The fundamental challenge is this: can the EU ETS, operating under its existing institutional framework, remain effective, credible, and socially legitimate through 2040 and beyond? Increasingly, the answer appears to be "no". The system's original institutional design is no longer sufficient to support the scale, complexity, and political salience of the climate goals now assigned to it. What the ETS needs is not just stronger rules - but stronger institutions capable of actively managing its transformation.

In short: *failing to evolve the EU ETS system's institutional foundations may compromise the very effectiveness of Europe's flagship climate tool.*

The ECCB is not a luxury – it is a necessity for maintaining credibility, predictability, and investment confidence through 2040 and beyond.

Without structural innovation, the system risks being destabilized by rising volatility, declining liquidity, and weakening market confidence. The prospect of EUA shortages in the 2030s and the potential depletion of the MSR around 2040 only heighten these concerns. In a future of permanent scarcity, the existing governance tools - designed to mop up excess - will struggle to keep the system on course.

Liquidity is fundamental to the efficient functioning of any carbon trading system. It ensures that compliance participants can buy EUA allowances with confidence, facilitates stable and transparent price discovery, and supports long-term investment in low-carbon technologies. Without sufficient liquidity, trading volumes decline, bid-ask spreads widen and market signals become unreliable - all

of which undermine confidence in the system. These effects are expected to intensify as the supply of EUA's shrinks and market players potentially hoard allowances in anticipation of future scarcity.

In order to respond to these mounting pressures, the EU must transition from ad hoc solutions to institutional foresight. This is where governance becomes paramount. Such a complex system, with its far-reaching political and economic effects, requires an institution that can maintain confidence, coordinate transitions and manage risk in a transparent and rules-based manner.

In response, we propose to establish the European Central Carbon Bank (ECCB): a dedicated, independent institution with the power to govern, stabilize, and strategically steer the development of the EU carbon market in the post-2030 landscape. While the ECCB would not replace the market's core logic, it would enhance it by providing the institutional capacity required to maintain stability, protect environmental integrity, and deliver social legitimacy.

Without structural innovation, the EU ETS risks drifting into a state of reactive crisis management. In a future of permanent scarcity and increasing political expectations, ad hoc interventions may no longer suffice. The consequences could include excessive EUA price volatility, speculative behaviour, and eroding public trust.

2. Proposed institutional solution: the European Central Carbon Bank (ECCB)

In response to the growing risks of market instability, liquidity shortages and insufficient governance, we propose the creation of the European Central Carbon Bank (ECCB). This institution would provide a long-term governance framework to support the functioning and evolution of the EU ETS beyond 2030, ensuring that it remains both environmentally effective and economically stable.

The ECCB would act as an independent authority responsible for managing the supply of carbon units - including EUAs, certified removals (CDRs) and potentially high quality international offsets. It would operate much like a traditional central bank, acting as a stabilising force to prevent excessive volatility and speculative distortions in the European CO_2 market. By dynamically adjusting supply, the ECCB could mitigate extreme price fluctuations, prevent hoarding and maintain the credibility of carbon price signals, which is essential for investment in low-carbon technologies.

In doing so, the ECCB could gradually replace or complement existing mechanisms such as the Market Stability Reserve (MSR) and the Article 29a price control mechanism, providing a more coherent and forward-looking set of market regulation tools.

Demand for ECCB-regulated units would come from several sources: ETS1, ETS2, the Effort Sharing Regulation (ESR) and, eventually, corporate actors complying with frameworks such as the Corporate Sustainability Reporting Directive (CSRD) or the Green Claims Directive. By coordinating supply across these different streams, the ECCB would provide a coherent architecture for market development.

Given the uncertainty surrounding long-term abatement costs and technological progress, setting static price targets is risky. Instead, the ECCB would conduct regular economic assessments and adjust intervention thresholds based on transparent criteria and expert input. This would allow the carbon price to evolve gradually and credibly - ensuring that the EU ETS remains both economically efficient and effective.

Box 1. How ECCB manages supply and stabilisation across carbon markets

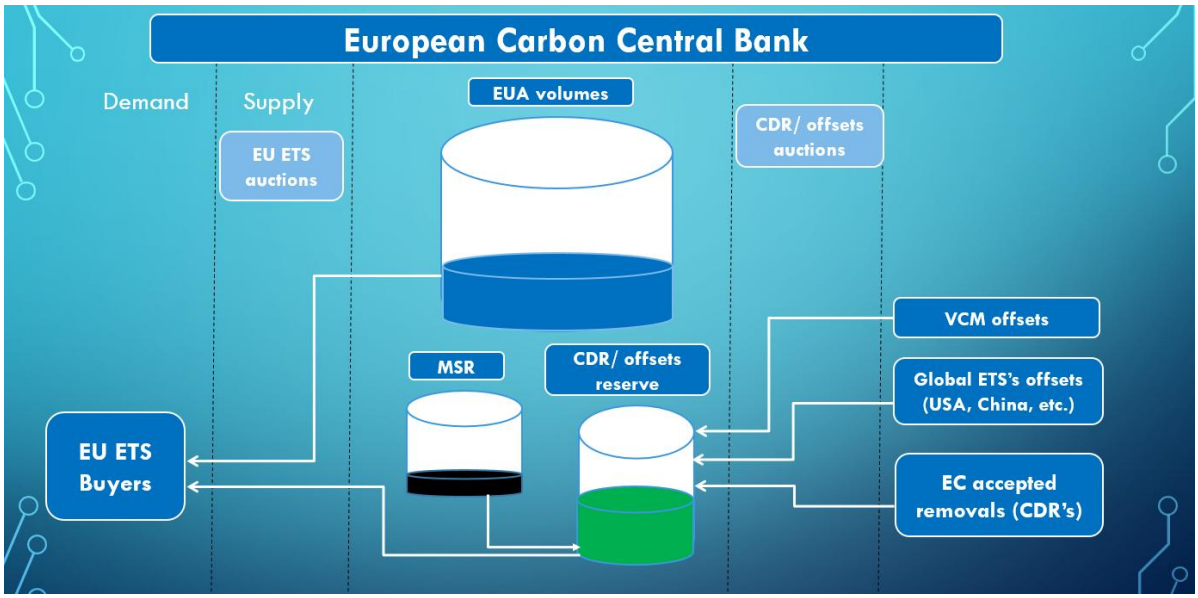
The ECCB acts as a central coordinator of supply in the EU carbon market by balancing EUA volumes (from EU ETS auctions) with certified removals (CDRs) and high-quality offsets.

- A dedicated reserve holds removals and offsets, releasing them gradually to prevent price shocks and maintain liquidity.
- Market Stability Reserve (MSR) and ECCB coordination ensures strategic release or withdrawal of units based on evolving market conditions.
- The system accommodates certified units from voluntary carbon markets (VCM), global ETSs (e.g., USA, China), and EC-approved CDRs under strict integrity criteria.

This governance model facilitates a transition from passive market correction to the active, rule-based management of scarcity and credibility in carbon pricing, as illustrated in Fig. 1.

Finally, the ECCB could also support the EU's external climate policy objectives. By coordinating the purchase of offsets and channelling finance towards verified mitigation outcomes in developing countries, it would help align EU market mechanisms with global equity and climate finance objectives.

Figure 1. ECCB supply-demand governance model for EUA and removal/offset units



Source: CAKE/KOBiZE.

Implementing the ECCB will require a targeted package of EU legal reforms. Key changes will include amending the EU ETS Directive to enable the ECCB to manage the supply of EUAs directly, oversee the inclusion of removals and offsets, and take operational responsibility for stabilisation mechanisms currently housed in the Market Stability Reserve (MSR). At the same time, the European Climate Law should be revised to formally recognise the ECCB's role in supporting the EU's net-zero pathway and climate governance architecture.

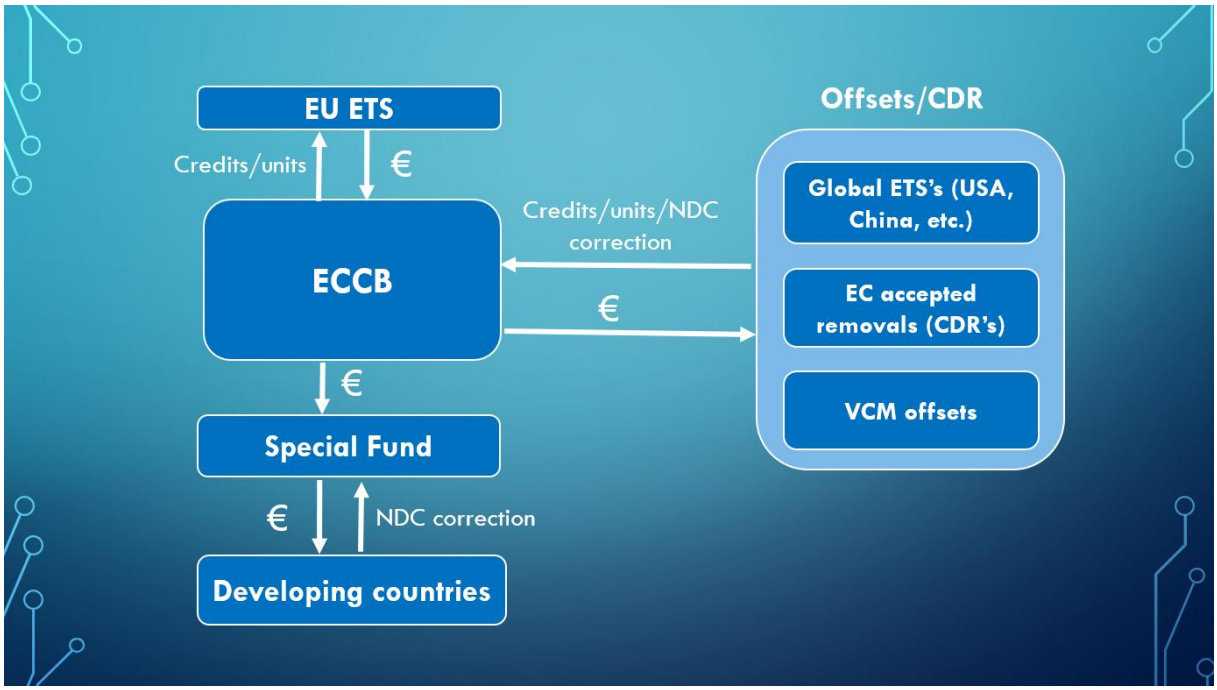
Furthermore, new regulatory provisions will be required to define the ECCB's intervention powers, both price-based and volume-based, and to establish the appropriate accountability structures to ensure democratic oversight while safeguarding the Bank's operational independence.

3. ECCB functions

To effectively fulfil its stabilisation and governance role in an increasingly complex and integrated EU carbon market, the ECCB needs to be equipped with a clear institutional mandate and operational toolkit. Following the logic of central banking in monetary systems, the ECCB would actively manage supply, stabilise prices, support international cooperation and ensure transparency. Its core functions would include:

- **Management of supply units in EU ETS** - replacing existing mechanisms such as the MSR and Article 29a of the EU ETS Directive, the ECCB would regulate the volume of EUAs, certified removals (CDRs) and selected international offsets circulating in the EU ETS. Removals and offsets would be stored in a dedicated reserve and released gradually to help manage supply and demand imbalances and avoid sharp price fluctuations. The ECCB would act like a central bank that can both release units to the market and buy them back in response to prevent market shocks. Removals could be priced according to their environmental durability, with industrial removals generally commanding higher prices than nature-based solutions.
- **Market stabilisation** - ECCB would intervene as necessary to prevent extreme market volatility, maintain liquidity and promote credible price signals. By adjusting supply in response to market conditions, it would help reduce the risk of hoarding, enable long-term planning and support environmental objectives and investment in zero-emission technologies..
- **Revenue allocation and distribution of climate finance** - revenues would be generated by the ECCB through the strategic purchase of lower-cost offset units outside the EU ETS (e.g. on international markets or under Article 6 of the Paris Agreement) and their subsequent release for sale at a higher price within the EU ETS. These proceeds could then be channelled into strategic funding priorities, such as supporting the energy transition in EU Member States, reinforcing EU climate instruments such as the Modernisation Fund, or contributing to international climate finance - in particular for developing countries promoting sustainable energy and low-carbon technologies.
- **International offset integration and incentives -** the ECCB would coordinate the inclusion of offsets from other emissions trading systems and voluntary carbon markets, provided they are consistent with Article 6 of the Paris Agreement or meet high integrity standards. To encourage cooperation, the ECCB could offer financial incentives above local market prices, facilitating greater alignment between EU climate policy and external schemes.
- **Transparency and market oversight** - to ensure trust and accountability, the ECCB would report regularly to the European Parliament and the Council on market conditions, interventions and outcomes. It could also work closely with ESMA to align with broader financial market regulation and transparency standards.

Figure 2. ECCB financial flows and offset integration with international climate finance



Source: CAKE/KOBiZE.

Box 1. The ECCB as financial intermediary and link to global mitigation efforts

The ECCB manages the supply of carbon units and facilitates the financial flows tied to their transactions and climate finance.

- EU ETS participants purchase credits from the ECCB, generating revenues that are reinvested via a **Special Fund (Green Investment Fund)**.
- The ECCB uses these revenues to purchase offsets and removals from **external sources, such as** international ETSs, EC-approved removals, and the voluntary market.
- A share of these funds is allocated to **developing countries** through results-based financing and NDC (Nationally Determined Contribution) adjustment, thereby strengthening alignment with Article 6 of the Paris Agreement.

Thus, the ECCB serves as both a **market stabiliser** and a **climate finance channel**, linking the EU's internal carbon pricing architecture with **external decarbonisation support**.

4. Conclusion and strategic policy recommendations

The EU ETS is entering a critical transition period. With the next comprehensive review scheduled for 2026, the EU faces a unique opportunity to modernize the governance of its carbon market in line with its already awaited 2040 and 2050 climate goals. At the same time, the system is facing growing structural strain: from supply scarcity and market volatility to the integration of new sectors, instruments and jurisdictions.

As the EU ETS enters a new phase of structural and market evaluation, a proactive governance body is needed to ensure its long-term stability, credibility and alignment with the EU's climate change objectives. The European Central Carbon Bank (ECCB) offers a strategic response to the expected challenges of market liquidity, price volatility and integration of carbon removals and international offsets.

We recommend that EU policymakers begin to lay the groundwork for the ECCB in the context of the upcoming 2026 review of the EU ETS. To this end, we suggest the following steps:

- **Formally include the ECCB concept in the agenda for the 2026 EU ETS review**, recognising its potential to replace and enhance existing market intervention mechanisms such as the MSR and Article 29a.
- **Launch a preparatory impact assessment and governance feasibility study** exploring legal, institutional and operational pathways for the establishment of the ECCB.
- **Engage with relevant stakeholders**, including Member States, industry, academia and civil society, to refine the mandate, structure and institutional design of the ECCB.
- **Explore interim institutional options**, such as a pilot entity or mandate extension within an existing EU body (e.g. the European Investment Bank or the European Climate Change Governance Framework), as a bridge to the full establishment of the ECCB.
- **Launch the legal and institutional framework for the formal establishment of the ECCB** so that it can be operational by the early 2030s, in parallel with the deepening of the EU ETS and the integration of removals.

The ECCB should not be seen as a marginal technical fix, but as a central pillar of the EU's future carbon market governance - ensuring that the transition to net zero is not only environmentally ambitious, but also economically efficient and institutionally resilient.

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