National Centre for Emissions Management
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## The National Centre for Emission Management (KOBiZE), Poland

# Feedback on EU ETS directive

*(EU Public consultation)*
*01/07/2025*

## 1) Policy recommendation by KOBiZE - Summary

- It is widely observed by various stakeholders that policy instruments currently in place are unlikely to deliver the Union's emission reduction targets on their own, without any flexibilities. The EU ETS is undergoing profound changes and in this evolving landscape, with new measures being put in place, it is expected that **market liquidity and stability will be deeply affected**, potentially causing price fluctuations and volatility as supply and demand adjust.

- The **planned reform of the EU ETS and other climate policy measures must focus on strengthening the competitiveness and resilience of EU industry** in line with climate policy objectives. That is why it is so important to implement legal solutions that, on the one hand, will highlight the different situations in which Member States are, on the other hand, will be understandable and acceptable to the Union society and thus strengthen joint action within the Union.

- Actions to protect the competitiveness of EU industry and address **carbon leakage should be based on existing mechanisms**. **The phase-out of free allocation should be postponed**, and 100% allocation should be implemented for goods at risk of carbon leakage, alongside **CBAM reform and simplifications**. This approach will reduce the financial pressure on industry, which invests in reduction measures and is obliged to purchase missing allowances to cover current emissions.

- We recognize the need to **account for residual emissions and ensure environmental integrity**. The integration of carbon dioxide removals (CDR), under strict and transparent criteria, may contribute to that aim, provided it supplements and does not replace essential emissions reductions.

- **The inclusion of municipal waste incineration plants** in the ETS should be carried out **in such a way as to create incentives for investors to use this technology**. The key issue is the **level of free allocation**. If incinerators are to be included, they should have a CL of 80-100% to compete with heat produced from fossil fuels.

- **Linking the EU ETS to other global schemes or integrating offsets could bring significant economic and environmental benefits**. This would be possible **if the design and governance met the highest standards**. Such measures could reduce compliance costs. They could also stabilise carbon prices. Furthermore, they could enhance international cooperation on climate change. While linking promotes a more balanced global market for emission allowances, offsetting scenarios provide additional flexibility, making carbon neutrality targets more achievable for the EU and its partners.

- One possible solution to **incorporate removals into the EU ETS and revise MSR mechanism** is the establishment of a **European Carbon Central Bank (ECCB)**. The European Carbon Central Bank (ECCB) could be a dedicated, independent institution mandated 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.

- Directive established a **pecuniary fine for failure to surrender an appropriate number of emission allowances** by the operator, aircraft operator and shipping company on time (Article 16(3) and (3a)). In order to mitigate the punitive nature of this fine, while not impairing the effective functioning of the EU ETS, it is worth considering some changes in this respect in the event of incidental difficulties with timely performance of this obligation.

## 2) Carbon leakage

- Actions to protect the competitiveness of Union industry and tackle carbon leakage **should build on existing mechanisms.**

- The implementation of a new tool, e.g. export rebates, compensations, etc., will increase the administrative costs for both operators and Member State administrations, and the funds that would be spent on creating a new tool will be better spent on decarbonising industry. The introduction of the new tool will further complicate the operation of the EU ETS, which is already complex and multi-threaded. The coming years will be crucial for the implementation of EU climate policy as well as for building a competitive industry resilient to the actions of third countries. **That is why we are proposing a reform of the CBAM and the related EU ETS.**

### Carbon leakage

- **A key element in safeguarding the competitiveness of industry at a time of intensive investment in decarbonisation is the provision of free allocation of allowances during the transitional period until 2035, which will allow for faster return of investment costs and stabilisation of installations.**

- To this end, **the phase-out of free allocation should be postponed and the 100% allocation for goods at risk of carbon leakage**. This approach will reduce the financial pressure on the industry, which both invests in reduction measures and is obliged to purchase the missing allowances to settle current emissions. Extending the free allocation of allowances would allow the industry sector to realise investments in decarbonisation and provide stability and legal certainty over at least 10 year horizon, which would be important for running business in a zero-carbon economy by 2050.

### CBAM reform

- It should be noted that the allocation is based on a benchmark determined on the basis of the 10% most efficient installations, which results in installations that are not in operation of the 10% most efficient installations having to bear the cost of purchasing emission allowances in addition to the investment costs. The CBAM factor (gradual reduction of allocation) adopted in the current legislation increases the need for such installations to purchase allowances, which results in the product they produce being more expensive and uncompetitive in export.

- The same principle should apply in the CBAM, if an installation from a third country proves by submitting an emission report that its product is produced based on a benchmark such as that set out in the EU ETS or lower, meaning that it will have invested in the decarbonisation of the installation, it will not have to purchase certificates to account for embedded emissions. However, each tonne of emission, in addition, the benchmark will require settlement using the purchase of a certificate. This approach will, firstly, promote installations that have invested in emission reductions and have borne the cost of decarbonisation in the same way as installations in the EU and, secondly, influence the policies of third countries to become more involved in climate policy.

- In addition, it will simplify the CBAM system and prevent its circumvention, only installations that submit an emissions report and demonstrate on the same basis as in the EU ETS that their benchmark is the same as in the EU ETS will be exempted from accounting for embedded emissions. Installations that show a higher benchmark or use default benchmarks will have to account for embedded emissions per tonne emitted above the EU ETS benchmark as in the system (free allocation + purchase of missing allowances).

- Such a reform of the should be **complemented by programmes funded to decarbonise industries** most vulnerable to carbon leakage or most vulnerable to protectionism from third countries, such as the steel and aluminium sectors, which are subject to a 50% US tariff. This approach will build an industry that is resilient to the actions of the these countries, making it independent of the purchase of imported fuels and raw materials, and will help develop new technologies. Moreover, a product produced in the Union will become competitive on the internal market as well as on the external market.

- As part of the LIFE ENSPIRE project, CAKE/KOBiZE is analysing the fiscal and economic implications of i.e. extending the Carbon Border Adjustment Mechanism (CBAM)[1]. The initial assessment focuses on projected revenues for the EU and Poland in 2030–2035 under both the current and extended CBAM scope. Under the reference scenario, EU revenues could reach €9.4 billion in 2030 and €22.5 billion in 2035. For Poland, projections are €0.8 billion and €1.9 billion, respectively. The extended scenario , which includes additional industrial and agricultural products from 2030 onwards, shows significantly higher potential — up to €60.7 billion for the EU and €4.4 billion for Poland by 2035.

## 3) Carbon removals

- We recognize the need to **account for hard-to-abate emissions and ensure environmental integrity**. The integration of carbon dioxide removals (CDR), under strict and transparent criteria, may contribute to that aim, provided it supplements and does not replace essential emissions reductions.

### Integration of Removals

- We support examining the possibility of including permanent carbon removals (e.g. BECCS, DACCS, Biochar) in the EU ETS as a supplementary flexibility instrument in fulfilling the obligation by operators. Any inclusion should meet the following conditions:

  - **Qualitative conditions**: High permanence, additionality, and rigid MRV standards: only carbon removals with proven long-term storage (e.g. geological or durable product-based sequestration) should be eligible. Furthermore, their compatibility with the EU Carbon Removal Certification Framework (CRCF) must be guaranteed, as the CRCF should serve as a tool to certify eligible units in alignment with its methodologies, reinforcing compliance and credibility in carbon markets.

  - **Quantitative restrictions and environmental safeguards:** units must not undermine the decarbonization signal of the . Their use should be capped and subject to a conservative limit to prevent oversupply or price suppression.

[1] More: https://climatecake.ios.edu.pl/life-enspire-project/life-enspire-webinar-17th-june-2025/?lang=en.
This is the first analytical exercise under LIFE ENSPIRE. We recommend following the project website for updates on upcoming modelling work. Key insight: CBAM is already complex and its impact extends beyond non-EU countries — it also affects EU Member States. It must be assessed across multiple scenarios to fully understand its implications.

- **Separate accounting**: CDRs must not be fungible with EUAs without strict oversight; accounting and surrender must be done in a clearly defined and traceable manner that ensures transparency by making the data behind every credit traceable from issuance to retirement, backed by rigorous scientific protocols.

### Voluntary Carbon Removals Framework (CRCF) as an EU-Internal Source of Units

- The development of the CRCF provides an opportunity to introduce a limited and well-regulated supply of domestic, high-quality removal credits. We recommend a phased approach: beginning with a first phase using only permanent removals, later assessing potential inclusion of carbon farming and durable product storage with evolving MRV methodologies and depending on supply and demand of permanent removals and quality of credits.

### Governance and Environmental Integrity Safeguards

- Inclusion of carbon dioxide removals must be accompanied by robust governance, clear environmental criteria, and transparent oversight. In this regard, a well-structured **the European Carbon Central Bank (ECCB)**[2] could act not only as a market stabiliser but also as a systemic guarantor of environmental integrity, ensuring that any removals or units introduced into the system meet stringent standards, including: permanence, additionality and MRV compliance (e.g. through CRCF-certified units).

- Additionally, the ECCB could facilitate exchange between the EU ETS and other emerging carbon markets, including international schemes or VCMs, while maintaining full oversight on quality, volume and policy alignment.

- By serving as a centralized entity with authority over allowance and removal unit flows, the ECCB could enhance transparency, predictability and confidence within the EU, ensuring effective delivery of the climate neutrality goal by 2050.

### Analytical background

- According the CAKE analysis: VIIEW on EU ETS 2050: Exploring synergies between the EU ETS and other EU climate policy measures - carbon removal, hydrogen, and sectoral transport policy[3] new elements in the political debate on the future of EU climate and energy policy, such as carbon dioxide removal, will be important element in the emission reduction pathways for 2050.

- The main goal of this analysis is the identification of current and potential future instruments, including removals, which could affect the functioning of the EU ETS and non-ETS sectors post 2030. Policy scenarios included in the analysis reflect an action plan within the framework of the EU climate policy, **incorporating innovative approaches to carbon dioxide removals - bioenergy with carbon capture and storage (BECCS) removals into the existing EU ETS and agricultural removals into non-ETS**. Within this group of scenarios, various levels of support for removal technologies are proposed based on carbon price in the EU ETS and non-ETS.

[2] Jeszke R., Lizak S., Rosłaniec M., Pyrka M., (2025) European Carbon Central Bank (ECCB) - Introducing the ECCB as the new institution to manage the future EU carbon market, Institute of Environmental Protection - National Research Institute / National Centre for Emissions Management (KOBiZE), Warsaw, SBN 978-83-972509-7-0

[3] Pyrka M., Jeszke R., Boratyński J., Witajewski-Baltvilks J., Antosiewicz M., Tatarewicz I., Rabiega W., Wąs A., Lewarski M., Skwierz S., Rosłaniec M., Lizak S., Zborowska I., Chodor M., Kobus P., Cygler M., Gorzałczyński A., Tylka A., Lewarska I., Mzyk P., Sekuła M. (2024). VIIEW on EU ETS 2050: Exploring synergies between the EU ETS and other EU climate policy measures - carbon removal, hydrogen, and sectoral transport policy, Institute of Environmental Protection - National Research Institute / National Centre for Emissions Management (KOBiZE), Warsaw.

- According the results the impact of pricing removals[4] and their large-scale deployment is positive in all dimensions: it leads to a significant reduction in carbon prices, higher GDP and consumption. Systemic integration of removal technologies into climate policy can increase the number of carbon allowances, allowing sectors with high abatement costs to purchase additional allowances/ units instead of investing resources in costly decarbonisation options. This releases resources in the economy that can be used in the same or other sectors to increase production. At the macroeconomic level, pricing removals **increases EU consumption by 0.9% in 2040 and 1.9% in 2050**. The simulations also show a positive impact on **GDP (by 0.6% in 2040 and 2050)**. Pricing negative emissions from BECCS lowers the price in the EU ETS and pricing emissions from afforestation lowers the cost of carbon in non-ETS sectors. Both measures contribute to consumption gains, but at the EU level the contribution of pricing BECCS is much larger than that of pricing afforestation. Pricing afforestation is more important in Poland than in other countries.

- Setting a price for removal units, generated from afforestation of arable land, helps reduce the financial burden of climate policy on EU agriculture.

## 4) Municipal waste incineration

### Polish perspective

- It should be borne in mind that the main purpose of municipal waste incineration plants is to dispose of waste and prevent landfilling. Including municipal waste incinerators in the EU ETS will not lead to a reduction in emissions or waste volumes.

- Thermal Waste Transformation is one of the elements of waste management, in Poland at the moment there are 8 municipal waste incineration plants that have been covered by the EU ETS, in terms of monitoring and reporting emissions, without the obligation to account for emissions and free allocation of allowances. The incomplete coverage of this type of system installation was intended to assess the potential of this sector.

- In Poland, it is planned to build about 30 municipal waste incineration plants. The shortage of incinerators is mainly due to the high construction costs associated, among other things, with high standards of air pollution.

- The second factor in the small number of incinerators is the fact that incineration is built by local government units, which, according to them, is municipal waste management. Despite preferential loans or subsidies, the cost of building such installations is high and sometimes difficult to bear for the budget of cities. **The fear of making municipal waste incineration plants subject to the obligation to account for emissions under the EU ETS also worries local and regional authorities. The crucial issue is the limit of free allocation.**

- Therefore, from Poland's prospectus, **the inclusion of municipal waste incineration plants in the EU ETS should be attractive in order to interest industry in their construction.** First of all, one should not forget about the main goal to be met by incineration plants in waste management. Full coverage of municipal waste incineration by the EU ETS should promote and support its construction and lead to the incineration of waste instead of landfilling.

[4] "Pricing removals" refers to introducing a market price for each unit of carbon dioxide removed (CDR – Carbon Dioxide Removal), ensuring that facilities performing $CO_2$ removal are financially compensated for every unit of emissions they effectively eliminate.

### Municipal waste incineration in EU ETS

- The heat obtained from municipal waste incineration could partly replace heat produced from fossil fuels. However, in order for such installations to be created within the district heating system, it is necessary to allocate free emission allowances at a higher level than 30%, as we have in the case of district heating networks. Therefore, **it would be necessary to determine a higher CL rate for heat generated in municipal waste incineration plants, e.g. at the level of 80%-100%.**

- Such an approach would, on the one hand, combine decarbonisation measures in the heating sector with the creation of a circular economy, and, on the other hand, encourage the emergence of modern municipal waste incineration plants in less affluent municipalities and cities, and encourage industry to assume the cost of constructing these installations.

- **Extending the coverage of the EU ETS to other elements of waste management, e.g. landfills, should take place in subsequent steps and only after 2030**, this is due to the development and adoption of implementing acts on monitoring and reporting. Examine the reduction potential of this measure and include it in the functioning of the EU ETS. The unilateral inclusion of landfills in the system will only increase costs for the citizen, which will further complicate the implementation of the Union's climate policy. Therefore, municipal waste incineration should be introduced as a matter of priority, taking into account its main objective of how it performs in waste management, and only after this extension will it assess and possibly introduce another element of waste management into the EU ETS.

## 5) Thermal input thresholds

- **The reduction of the threshold set for the inclusion of fuel combustion installations in the EU ETS from 20 MW to 10 MW should take place before 2028 and not only in 2031.** This is due to the fact that the current regulations include installations in which fuel combustion units below 20 MW are installed in the ETS2, which means that industry and households will be under the umbrella of one ETS2, which will result in price pressure on allowances in this system.

- In Poland, the implementation of ETS2 is difficult and costly due to the mix of fuel used for heating and domestic water production, as well as in industry for the production of the product. The price of the allowance calculated in the purchase price of fuel for industry will result in an increase in the prices of manufactured products and for households will directly burden their budget and worsen their situation.

- As the consumption of ETS2 fuels is already monitored and the emission limits corresponding to the use of fuels in other activities covered by ETS2 can be transferred to ETS1 before 2027, which would allow installations below 20 MW to be covered by the scheme, free allocation under the rules set out in Article 10a of Directive 2003/87 for the period 2028-2030 without significant financial effort to administer the extension of the scheme. **There will be no need to adopt implementing acts on monitoring and reporting, only the principle of free allocation of emission allowances will need to be modified, which, with a limited period of time for the extension of the ETS1 until 2028, would be implementable.**

- The introduction of combustion installations into ETS1 from 20 MW to 10 MW only from 2031 will result in a feeling of injustice for people who will be indirectly covered by ETS2 through the purchase of fuels for transport and heating and will compete with industry, which will pass on the higher costs of purchasing fuels in the price of the product produced, which will again affect consumers, i.e. citizens.

- There are already tools in the ETS1 to mitigate the inclusion of small installations that a Member State can use, i.e. Articles 27 and 27a. Another argument for the inclusion of fuel combustion installations with a nominal capacity of 10MW is the bonus of free allowances for production using zero-emission technologies, which should prompt small industry to accelerate efforts in decarbonisation.

- In addition, such an approach has streamlined the expectations and obligations addressed to small installations resulting from the RES Directive or energy efficiency, which has facilitated their implementation and will result in the achievement of the assumed goals.

- Another argument for introducing such changes in the period 2026-2030 is the creation of dedicated financial programs from share revenues for investment activities in the field of decarbonisation, which will allow competent authorities to monitor the change in the carbon intensity of product production and to react on an ongoing basis and improve assumptions regarding the spending of auction funds so that investments bring the Union closer to climate neutrality in 2050. Such actions will underpin building a resilient, innovative and competitive Union industry based on local small business.

## 6) Linking with other carbon markets

### Use of carbon credits

- As the EU advances towards its 2040 climate goals and net-zero by 2050, **the introduction of carbon credits into the EU system can play a key supporting role** — if designed and governed with the highest standards.

- The use of offset credits in the EU ETS could reduce compliance costs and address emissions from sectors with limited decarbonisation options. Credits generated by mitigation projects used in emissions trading systems allow emitters to compensate for their emissions by investing in projects that reduce emissions elsewhere. To ensure that back-up measures are in place it is necessary to consider some options for reopening carbon markets, including the EU ETS, to offset credits to allow the industry to compensate for the remaining emissions that cannot be reduced.

- Concrete options allowing for the integration of credits into the EU ETS could elaborate on the following considerations:

  - **Qualitative conditions** – establishing which credits would be allowed for use, from which types of mitigation activities, adhering to which high integrity criteria;

  - **Quantitative limitations** – defining maximum acceptable levels of credit use for compliance purposes – as was historically the case, the use of international credits should be limited in terms of volume to prevent disrupting EUA prices and the incentives for domestic decarbonisation;

  - **Mechanism for integration** – establishing a concrete vehicle for use of credits in the EU ETS e.g. through a centralized infrastructure or system such as a proposed European Central Carbon Bank (ECCB) or purchasing programmes that could be managed by ECCB;

  - **Stages of integration** – potentially having a piloting phase for the integration of credits, alongside with a gradual increase in quantity of credit use.

- In broad terms, offset credits could stem from two categories:
  - Domestic offsets – credits generated within the EU, for example from Carbon Dioxide Removals (CDR) activities hosted by EU countries, including those originating from the EU's CRCF;
  - International offsets – credits generated outside the EU's borders originating from established systems, such as the Paris Agreement Crediting Mechanism (PACM) under the auspices of Article 6.4 of the Paris Agreement.

### Domestic offsets

- Considering the role of domestic offsets within EU ETS, one potential source could be the EU's Carbon Removals and Carbon Farming Certification system, currently under deployment in the EU. The CRCF Regulation covers: permanent CDR, carbon farming and storage in products. The Frameworks is meant as a tool to support EU's 2050 climate neutrality goals. The most suitable types of credits from CRCF to be integrated into the EU ETS would be those originating from permanent removals.

### International offsets

- Since the complete operationalisation of the PACM based on the COP 29 decisions, the mechanism can now be considered as the prime source of international credits to be integrated into the EU ETS. The detailed guidance adopted at the Baku summit in 2024, both in scope of further methodological standards and standards pertaining to activities involving removals pave the way for a high quality UN-backed crediting mechanism that has all the ability to become a benchmark setter for baseline and crediting systems globally. Advancements made in its detailed implementation in 2025, through the adoption of ambitious standards for additionality testing and setting of baselines only add to that confidence.

- In case the potential of the PACM to supply the desirable amounts of quality credits is limited, another possibility would be to consider those crediting schemes operating in the so called Voluntary Carbon Markets (VCM), which adhere to third party approved quality criteria, such as the ones developed under the Integrity Council for Voluntary Carbon Markets (IC VCM) i.e. the Core Carbon Principles (CCP).

### Qualitative conditions

- It would be up to the EU to scrutinize which types of credits would be acceptable within the system. The EU could elaborate a subset of qualitative criteria for credits generated under the PACM. The purchase of quality credits could also be managed through a more structurally defined centralized infrastructure or system (e.g. a centralized bank – see the section below – an alternative could also be an EU-wide purchasing programme).

- Through setting specific criteria delineating what credits could be used within the EU ETS, the EU would actively be shaping the international carbon market, thus also effectively influencing the choices of project developers, but also those in charge of administering various crediting schemes. In this way, setting specific preconditions in terms of quality of credits, would allow the EU to have a decisive impact on how different carbon crediting programs and other standard-setting bodies act.

### Quantitative limitations

- A scenario in which carbon credits are once again introduced into the EU architecture could envisage potential quantitative levels of credit use. This would be particularly pertinent in the context of the 2040 target discussion, where a set percentage of the total allocation would constitute the level of credit use.

- On a global level it is proposed that a maximum 5% of the 2040 EU target would be allowed to be delivered through use of carbon credits. Additional consideration would be a phased approach – where an initial stage of credit inclusion would assume a smaller portion (%) that could increase over time.

### Mechanism for integration

- A favoured solution would be a structurally defined modality of integration of carbon credits into the EU ETS, which has already been put forward by a few stakeholders, namely in proposals regarding **the European Carbon Central Bank (ECCB)**. The ECCB's functions would be broader in scope of the EU ETS, but would have a specific role in integrating credits into the EU ETS. It would include managing the influx of prescribed amounts credits onto the EU market, thus stimulating the credits market as well. In this concept the ECCB would be the institution buying the international credits (creating demand), channelling them into a dedicated reserve and steadily releasing them into the EU market, when specific conditions are met (e.g. stabilizing prices). The proceeds from the sale of such sourced credits could further augment the energy transformation both in the EU, as in third countries.

- There are a number of detailed considerations to further elaborate the use of ECCB as a vehicle for integration of credits into the EU ETS. Aside from the ones mentioned above would be ones relating to the price of credits to be purchased. The credits could be bought at a price level determined on the basis of the various word-wide emissions trading systems or carbon price initiatives. The ECCB could also add an extra margin above the purchase price to incentivize offset credits sellers (to sell credits to EU rather than using them within their own frameworks). This would help finance low-carbon initiatives, creating a pathway for these nations to engage in the global carbon market effectively. A sufficiently clear price signal originating from the EU would also encourage the development of mitigation projects and help international carbon markets develop.

### Stages of integration

- If the ECCB option for integration of credits into the EU architecture was to be followed, a piloting stage could be considered. The very initial first stages of credits use in the piloting stage could be solely dedicated to climate finance, rather than for purpose of compensating emissions. Such a piloting stage would allow to test the infrastructure, while still contributing to mitigation efforts outside the EU. Upon finishing the piloting stage the full roll out of the system would envisage use of credits only with corresponding adjustments in line with rules for international markets elaborated under the UNFCCC, to ensure that emission reductions are only counted once, avoiding "double counting" between countries involved in the trade. Additionally, as mentioned above, specific stages of use could also be considered, with increasing volumes of credits, but still capped at the level of the global limit.

## Analytical background

- Based on the analysis by CAKE: "VIIEW on EU ETS 2050: Linking EU ETS with other carbon pricing mechanisms"[5], KOBiZE is on the position, that **linking ETSs across regions increases market liquidity, leading to more competitive carbon pricing, technology transfer and lower overall compliance costs**. **Linking offers considerable cost savings** by allowing emissions reductions to take place where they are most economically efficient.

- A global computable general equilibrium (CGE) model CREAM has been used to quantitatively assess the macroeconomic impacts of (a) linking the EU ETS (comprising of ETS1 and ETS2) with counterpart systems in the UK, Mexico, USA, Canada, Korea and China, and (b) utilizing emission offsets from countries of the Global South. These potential policies have been assumed to be implemented in 2035, while simulation horizon extending to 2050.

- **The global welfare gain** from ETS linking, approximated by increase in real household consumption, is estimated to range from **around 25 billion EUR in 2035 to 40 billion EUR in 2050**. These gains reflect a more efficient distribution of emission reduction efforts among countries participating in the shared carbon market. Most countries experience consumption gains across most years, although GDP may decline at the same time in countries where carbon prices increase following the linkage. An exception is South Korea, where welfare losses due to deteriorating terms of trade outweigh the efficiency gains from reduced abatement costs.

- ETS linking lowers carbon prices in high price regions such as the EU. Under a linked system, as considered in the report, the EU would likely purchase a notable amount of allowances from other regions, particularly China.

- Changes in the **GDP** are primarily influenced by shifts in exports resulting from carbon price adjustments. In the EU, GDP consistently increases, compared to baseline, throughout the simulation period by approximately **0.2-0.3% (50 billion EUR)**. In contrast, in most non-EU countries GDP generally decreases compared to baseline.

- The impact on production of selected individual sectors is much stronger than the aggregate GDP outcome. In the EU, output of ferrous metals, air transport and water transport sectors increase from 2% to nearly 4% in some periods. In Mexico, decreases in output of energy-intensive industries (ferrous and non-ferrous metals, non-metallic minerals) are of the order of 15%-20% in 2050. In China, most industries in most years' experience output reductions between 0.2% and 0.4%, with the exception of ferrous metals, air transport and water transport, where these reductions are deeper. Changes in sectoral output are mostly driven by adjustments of exports.

- The use of offsets in the EU ETS could reduce compliance costs and address emissions from sectors with limited decarbonisation options. Offsets generated by projects (voluntary, CDM or Article 6 of the Paris Agreement) can also be used in emissions trading systems, allowing emitters to compensate for their emissions by investing in projects that reduce emissions elsewhere (e.g. reforestation, renewable energy or removals projects) and obtain cheaper carbon credits to meet adopted targets.

- According to the results of the analysis of using offsets in the EU ETS the consumption gain in the EU is accompanied by **GDP** increase of **0.15-0.20% (30-45 billion EUR per year**). Whereas in Global

[5] Boratyński J., Rosłaniec M., Pyrka M., Jeszke R., Chodor M., Zborowska I., Lizak S., Gmyrek G., Mazanek K., Antosiewicz M., Lewarska I., Tylka A., Lewarski M., Różańska Z., Sekuła M. (2024). VIIEW on EU ETS 2050: Linking EU ETS with other carbon pricing mechanisms, Institute of Environmental Protection - National Research Institute / National Centre for Emissions Management (KOBiZE), Warsaw.

South countries the GDP decreases by around 0.05% (10 billion EUR per year), driven primarily by exports contraction. Both parties of the offset mechanism experience slight increases in household consumption, by a little more than 0.1% (between 10 and 20 billion EUR per year) in the EU in the years 2040-50, and around 0.05% in Global South countries (around 6-7 billion EUR per year) in the same period.

- More on linking with neighbouring countries will be developed and analysed under LIFE ENSPIRE project. The LIFE ENSPIRE project focuses on strengthening analytical capacity to support effective climate and energy policy in Poland. One of its key areas of work is the analysis of carbon pricing mechanisms and the potential for linking with neighbouring countries. As part of the project, CAKE/KOBiZE will explore how linking Emissions Trading Systems (ETS) or coordinating carbon pricing across borders can improve efficiency, reduce market distortions, and support climate goals. These issues are especially relevant for Poland, given its position at the EU's external border and growing interest in regional cooperation on climate policy. This topic will be addressed through economic modelling and stakeholder dialogue, helping to assess policy options and their implications. More detailed analysis and results will be published as the project progresses. We invite you to follow updates at climatecake.pl.

## 7) MSR

- The European Union's Emissions Trading System (EU ETS) is undergoing profound changes to support the transition to net-zero and eventually net-negative emissions. The landscape of the system is changing with the introduction of the CBAM and **the expected running out of EUAs around 2040 (MSR will remain empty) in ETS1**. Zero allowances around 2040 in ETS1 (the so-called "end game") is expected to impact market liquidity and stability into the 2030s, potentially causing price fluctuations and volatility as supply and demand adjust.

- The **European Central Carbon Bank (ECCB)**[6] could manage supply and demand in the carbon market, acting as a stabilising force to ensure the system's effectiveness. This option could potentially replace existing mechanisms within the EU ETS, such as the Market Stability Reserve (MSR) and a "safety valve" mechanism in Article 29a of the EU ETS Directive.

- Similar to the role of central banks in monetary policy, the ECCB could influence the dynamics of the CO2 market. Acting as a regulator, it would control basically the supply of EUA allowances and removal units, and intervene to stabilise EUA prices if necessary. In the future, the ECCB would be able to control the distribution of other units originating from ETS systems in other regions linked with the EU ETS or/and offsets from voluntary carbon markets (VCM). Such a mechanism could limited potential market speculation and sudden price fluctuation, ensuring a stable and credible market environment. The decisions of the ECCB could be taken collectively by the Council of Member States, reflecting the principles of central bank governance, thereby enhancing the transparency of the decision-making process.

- The European Central Carbon Bank could have mechanisms in place to regularly review and adjust price targets based on data and market conditions, thereby mitigating the risk of price distortions. The role of the ECCB would be to control the market and safeguard situations where technological progress fails to deliver fast enough reductions, leading to soaring carbon prices. At the same time, cheaper options could arise from sectors not covered by the ETS through sinks and removals.

[6] Boratyński J., Rosłaniec M., Pyrka M., Jeszke R., Chodor M., Zborowska I., Lizak S., Gmyrek G., Mazanek K., Antosiewicz M., Lewarska I., Tylka A., Lewarski M., Różańska Z., Sekuła M. (2024). VIIEW on EU ETS 2050: Linking EU ETS with other carbon pricing mechanisms, Institute of Environmental Protection - National Research Institute / National Centre for Emissions Management (KOBiZE), Warsaw.

Smoothing out price development behaviour would provide EU ETS participants and Member States with greater stability and room for necessary long-term investments.

- 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- and volume-based, and to establish the appropriate accountability structures to ensure democratic oversight while safeguarding the Bank's operational independence.

- The proposed European Carbon Central Bank offers a strategic solution for managing the EU carbon market as it transitions to more ambitious climate targets. By centralizing control over allowances, removals, and offsets, the ECCB would foster a stable and reliable carbon market environment that supports the EU's climate objectives and contributes to global emissions reduction efforts. This model not only reinforces the EU ETS's role in achieving climate neutrality by 2050 but also positions the EU as a leader in carbon market governance, setting a precedent for other regions to follow.

- If MSR is still consider to remain on the market, several operational parameters and assumptions of the MSR need revision to ensure the mechanism remains fit-for-purpose in a changing ETS environment. Fundamental flaws in TNAC calculation:

    - Incomplete coverage of emissions: TNAC uses verified emissions published as of April 1, which is missing around 10% of total compliance obligations under the EU ETS. This made the reported TNAC higher.

  Weaknesses of current MSR operation:

    - Lack of transparency on allowance ownership: it remains unclear who holds the surplus — EU ETS installations, financial institutions, or others. If many EU ETS participants have already sold their surplus to financial actors, the MSR might be acting on outdated assumptions about who controls market supply.

    - One-sided and asymmetric function: So far, the MSR only absorbs allowances from the market. It is heavily asymmetric, it removes more allowances than it releases, and the release rate is fixed (previously 100 million, now 200 million to 2030), regardless of the level of market tightness.

    - Delayed response: The MSR reacts with a 1–2 year delay due to the way TNAC is calculated and used. This lag undermines its ability to respond to fast-changing market conditions or external shocks.

    - Invalidation mechanism: Invalidation results in a permanent cancellation of allowances above the 400 million. This effectively increases the ETS reduction target without political debate or transparency. It also risks depleting the reserve by 2040, leaving the MSR unable to act in times of future market stress — when allowances might be needed most.

  What may remain unchanged:

- Upper MSR treshold (1,096 million): This upper buffer, which phases in allowance withdrawals gradually as TNAC moves between 833 and 1,096 million, is useful. It reduces the risk of overly rigid MSR actions and smooths the transition from low to high withdrawal rates.

## 8) Other topics related to ETS directive

- Directive 2003/87 established a **pecuniary fine for failure to surrender an appropriate number of emission allowances by the operator, aircraft operator and shipping company on time** (Article 16(3) and (3a)). The only exception to the imposition of this penalty concerns the occurrence of force majeure, as confirmed by the Court of Justice of the European Union in its judgment of 17.10.2013 in the case *Billerud Karlsborg and Billerud Skärblacka* C-203/12, par. 31 (ECLI:EU:C:2013:664). In order to **mitigate the punitive nature of the fine, while not impairing the effective functioning of the EU ETS, it is worth considering the following solutions**:

    1) **remove the indexation of the fine rate**, which increases every year due to the inclusion of the HICP index - for example, for 2024, instead of EUR 100, it actually amounts to as much as EUR 129.67.

    2) **establish a mandatory derogation from imposing a fine**, and mandatory cancel the fine already imposed if, before the deadline for cancelling emission allowances concerning the following year, the emissions concerning the previous year (related to the fine) and also the emissions concerning the following year have been settled in full and simultaneously there are no arrears (debts) in the cancellation of emission allowances from previous years.

- Operators who honestly fulfill the obligation to account for emissions each year should be able to avoid being charged a fine in the event of incidental difficulties with its timely performance, if, before the deadline for the next emission account, they have covered the debt and surrendered allowances for the following year in full. In other words, the previous debt has been covered and no new debt has arisen in respect of the surrendering of emission allowances. Thanks to this, the fulfillment of the obligation to surrender emission allowances will remain the priority, which will enhance the functioning of the EU ETS and, at the same time, the repressiveness of the fine towards EU ETS participants will be clearly limited.