

Tuesday May 14<sup>th</sup> 2024

# 2024 State of the EU ETS Report

Public Launch Event

**BloombergNEF**



**COMPASS  
LEXECON**



Wegener Center



**ERCST**

Roundtable on  
Climate Change and  
Sustainable Transition

# 2024 Table of Content (ToC)

## Key Takeaways

### 1. Background

### 2. An EU ETS “fit for purpose”

### 3. Regulatory developments

#### 3.1. EU ETS Review

##### 3.1.1. Secondary legislation

##### 3.1.2. Other EU Policies impacting carbon

#### 3.2. International carbon price developments

##### 3.2.1. Brexit implications for the EU ETS

##### 3.2.2. Linking with other emissions trading systems

##### 3.2.3. Article 6 of the Paris Agreement

### 4. Environmental delivery

#### 4.1. Delivery against Phase 4 target

#### 4.2. Delivery against EU long-term domestic environmental commitments

### 5. Socio-economic delivery

#### 5.1. Is the EU ETS a driver for change?

#### 5.2. Social impacts

#### 5.3. Industrial decarbonisation



BloombergNEF



ERCST

Roundtable on  
Climate Change and  
Sustainable Transition

#### 5.4. Innovation

#### 5.5. Competitiveness and carbon leakage

### 6. Market functioning

#### 6.1. Market functioning trackers

##### 6.1.1. Volume

##### 6.1.2. Open interest

##### 6.1.3. Auction participation

##### 6.1.4. Auction coverage

##### 6.1.5. Auction-spot differential

##### 6.1.6. Cost of carry

##### 6.1.7. Ask-bid spread

##### 6.1.8. Volatility

##### 6.1.9. Article 29, EU ETS Directive

#### 6.2. Supply-demand balance and evolution of TNAC

#### 6.3. Price forecasts

#### 6.4. Market participation

### 7. Market Sentiment Survey

# 1. Background

State of the EU ETS Report is meant to be a “**snapshot**”

- Provides policymakers and stakeholders with an overview of how the EU ETS is doing by each year, based on previous year data. 2024 State of the EU ETS Report is based on 2023 data.
- **2023 Context:**
  - EU ETS Implementation
  - Competitiveness
  - Future of the EU ETS
  - ICAO/IMO
  - EU Political Cycle

## 2. An EU ETS “fit for purpose”

What do we expect the EU ETS to deliver?

3 key deliveries:

1. **Environmental delivery.** Does the EU ETS deliver against **absolute environmental targets?** (Chapter 4)
2. **Socio-economic delivery.** (Chapter 5)
  - Does compliance with the EU ETS deliver **macroeconomic efficiency** and **cost-effectiveness?**
  - Does it provide effective and proportional protection against the risk of **carbon leakage?**
  - Is it a **driver for change** without destroying EU industrial competitiveness?
  - Is providing what regulation consider a **price signal** allowed?
3. **Market functioning.** Is it worth having a market only if it functions well and leads to good **price discovery?**

# 3. Regulatory developments

## 3.1. EU ETS Review

### 3.1.1. Secondary legislation

#### Innovation Fund

- From 450 million to **530 million EUAs**.
- **Competitive binding** (i.e. CCfDs), increased budget, size (small, medium, big projects).
- Adoption: [15 September 2023](#)

#### Free allocation Regulation (FAR)

- **Conditionality**, climate neutrality plans, hydrogen, energy audits.
- Phase out for **CBAM** covered goods.
- Adoption: [30 Jan 2024](#)

#### Auctioning Regulation

- Timing, administration and other aspects of EUAs auctions, including **Repower EU**, etc
- Adoption: [17 October 2023](#)



#### Modernisation Fund

- 13 lower-income EU countries modernise their energy systems and energy efficiency.
- Additional **2.5% of EUAs**.
- Adoption: [22 November 2023](#)

#### Union Registry

- **New sectors**: maritime (2024), road transport, buildings (2027).
- New **compliance** date: from 30 April to **30 September**, 31 May for ETS 2.
  - Adoption: [12 Dec 2023](#).

#### Monitoring and Reporting (MRR), Accreditation and Verification (AVR)

- Extended scope, **maritime** transport and **ETS2**.
- **Chemically bound GHGs**
  - Adoption: Q4 2024

# 3. Regulatory developments

## 3.1.2. Other EU Policies impacting carbon: REPower EU

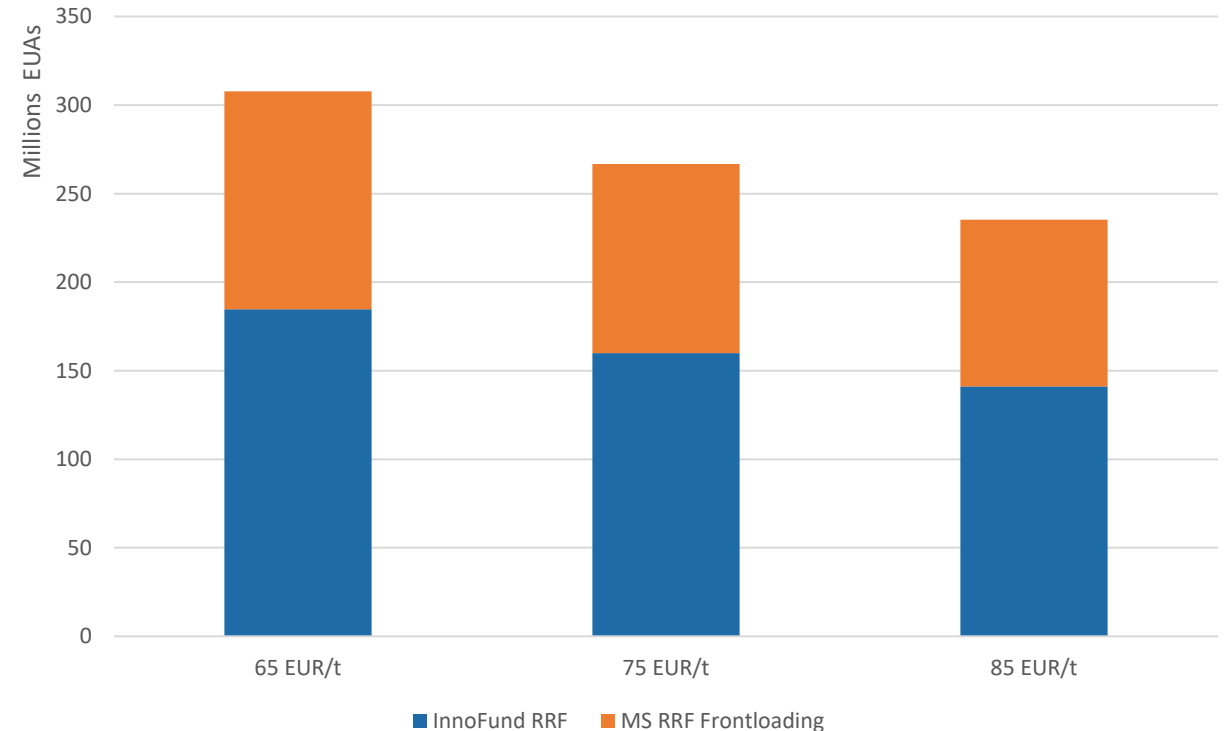
Regulation (EU) 2023-435, EU ETS revenues to finance Recovery and Resilience Facility (RRF) until 31 August 2026.

- **EUAs Innovation Fund:** EUAs to the RRF up to **EUR 12 billion** revenues.
- **EUAs Frontloading** (from 2027-2030) : EUAs to the RRF up to **EUR 8 billion**.

Exact EUAs volumes to finance RRF will depend on carbon price in 2023-2026. See scenarios for 65 €/tonnes, 75 €/tonnes and 85 €/tonnes CO<sub>2</sub>.

Stakeholders' concerns: impact on prices, lack of transparency, and unpredictability of market interventions.

Figure 3.1: Estimated EU ETS volumes (2023 - 2026) to achieve REPower EU Objectives



Source: ERCST, own calculation based on Art 10 (6) Auctioning Regulation and Art 10 (e) EU ETS Directive

# 3. Regulatory developments

## 3.2. International carbon price developments

### 3.2.1. Status of UK ETS

- ❑ June 2023, decision to revise parameters incl. looser free allocation limit, and a 'high' net zero trajectory for the cap.
- ❑ Dec 2023, consultation about further reforms to the UK ETS.
- ❑ Discussions on the possibilities of creation of a UK CBAM, of linkage with EU ETS, and of additional gases to be covered in UK ETS.
- ❑ UK ETS and EU ETS prices started diverging substantially in 2023, due to regulatory changes, but also highlighting that linking is perceived as less likely by market participants.
- ❑ Impact of EU CBAM on UK exporters substantial if price differential persists between UK ETS and EU ETS.

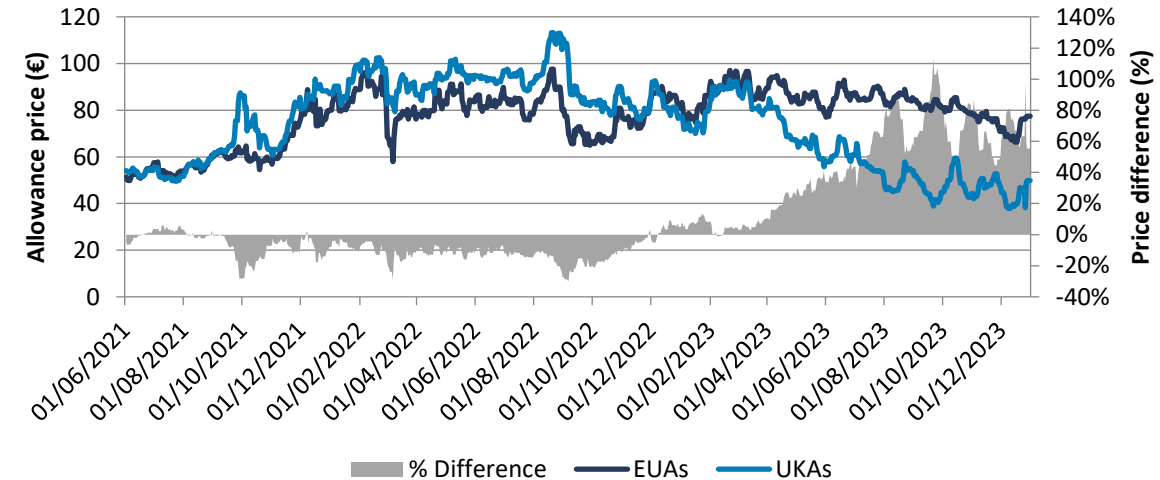
Source : [UK ETS Authority 2023](#); [UK ETS Authority Future Markets 2023](#); [Energy UK](#)

### 3.2.2. Link with other emissions trading systems - Switzerland

- ❑ Given the size of the Swiss ETS, it is not surprising to see that trade is one-way (from EU to Switzerland)
- ❑ Linking is operational, as Swiss installations have been using EU ETS allowances for 2022 compliance, up to
  - 6% for stationary installations and 61% for aviation operators.
- ❑ Aviation operators still use linking flexibility to much greater extent than stationary installations.

Source: [EC report on the functioning of the EU ETS in 2022](#)

Figure 3.2: EU ETS and UK ETS allowance price evolution



Source: Compass Lexecon (2023), based on EnergyMarketPrice data

# 4. Environmental delivery

## 4.1. Delivery against Phase 4 target

KPI 4.2: Verified emissions vs target cap

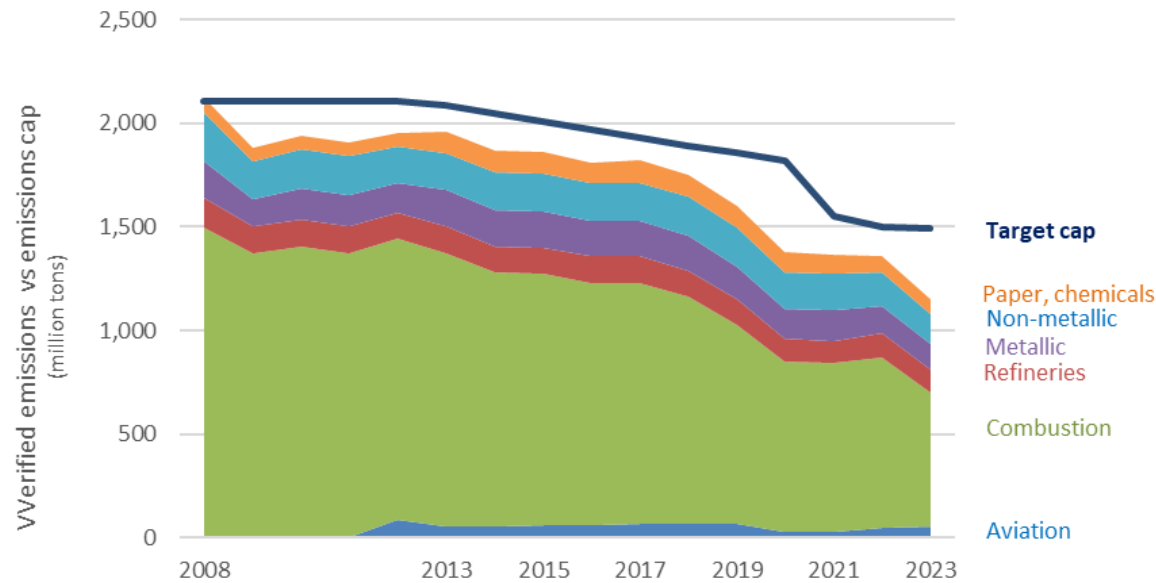
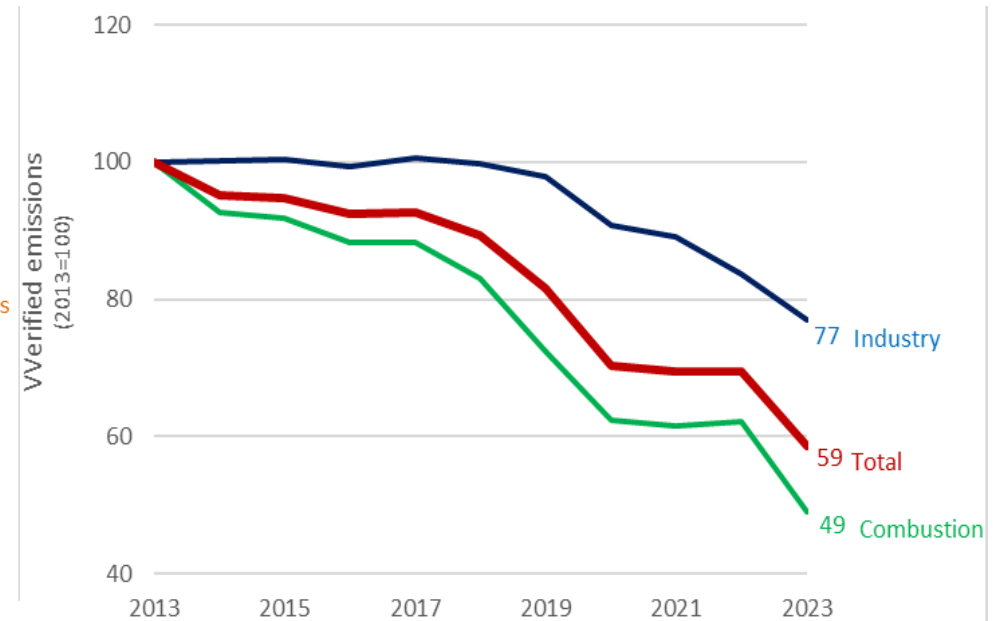


Figure 4.3: Dynamics of emissions in industry and combustion sectors



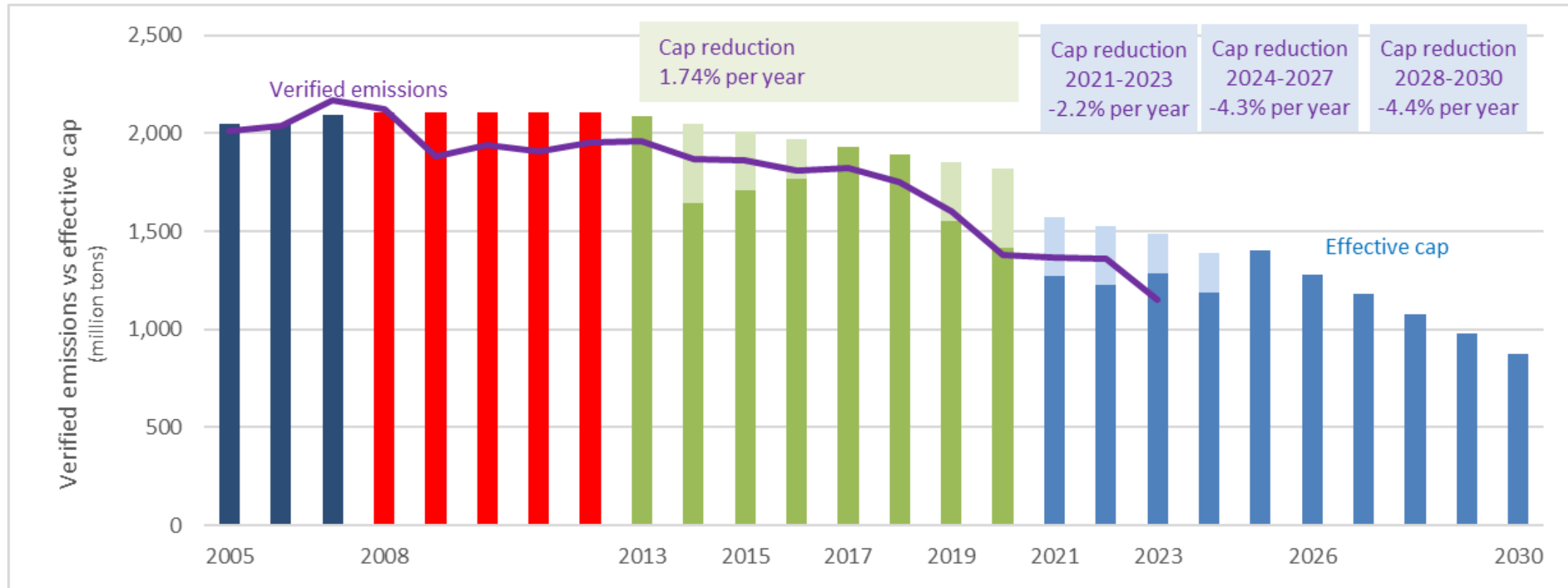
\* Combustion of fuels (EUTL code 20) includes both power sector utilities and combined heat and power (CHP) in industry.



# 4. Environmental delivery

## 4.1. Delivery against Phase 4 target

- **KPI:** Historical emissions vs effective cap

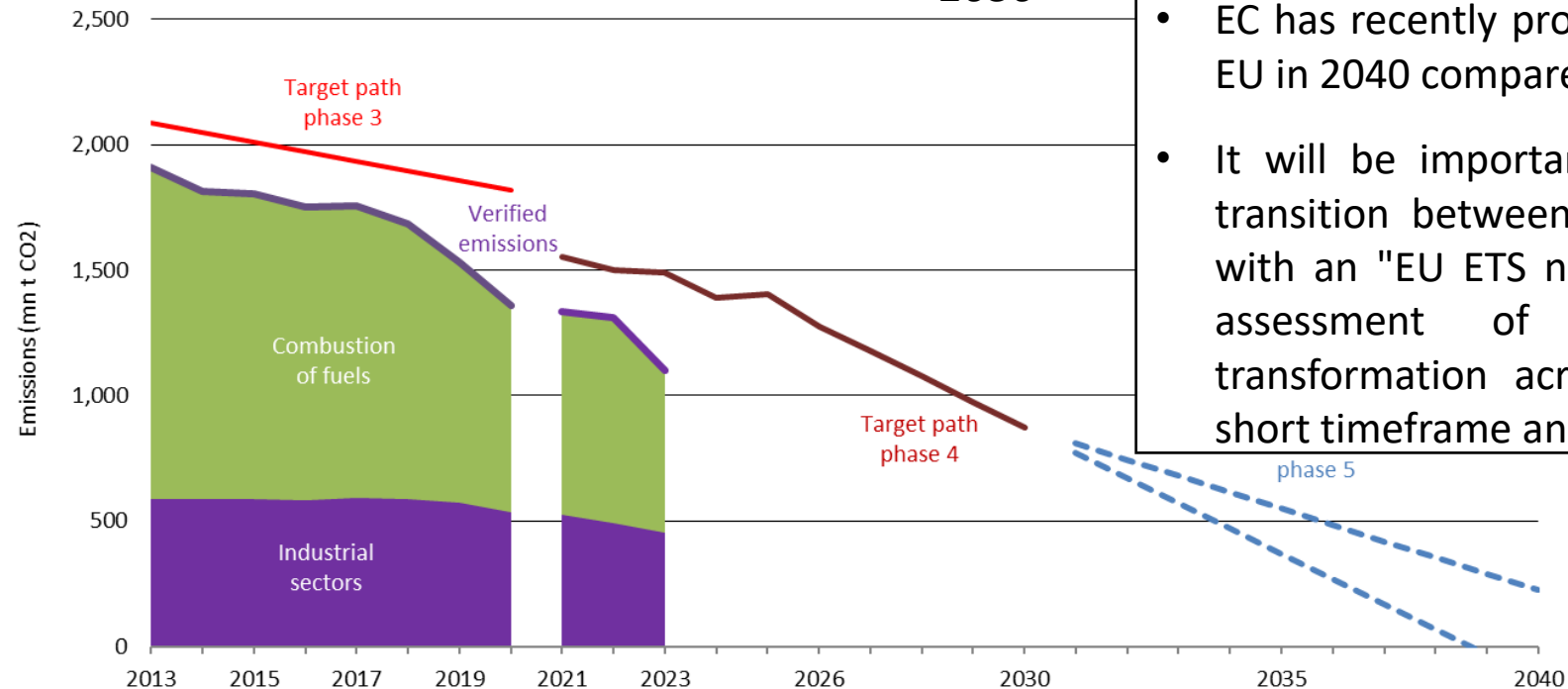


# 4. Environmental delivery

## 4.2. Delivery against EU long-term domestic environmental commitments

- To what extent does the 2021-2030 trading period target contribute to 2030, 2040 and 2050 goals?

KPI 4.6: Possible long-term target paths for EU ETS after 2030

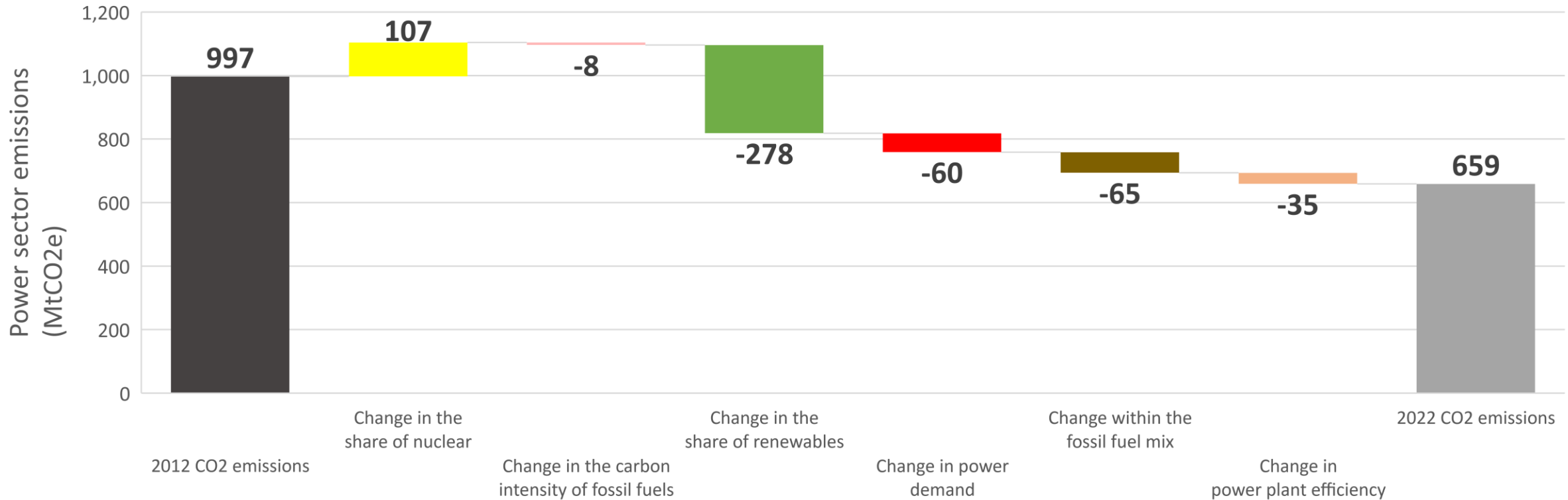


- The EU intends to have net zero emission in 2050. It is not clear what will be the ambition level, and pace of reductions for EU ETS after 2030
- EC has recently proposed a 90% reduction target for whole EU in 2040 compared to 1990.
- It will be important to discuss how to design the right transition between the present "capped EU ETS regime" with an "EU ETS net zero regime". This should include an assessment of the likelihood of technological transformation across industrial sectors, considering the short timeframe and lack of global climate action.

# 5. Socio-economic delivery

## 5.1. Is the EU ETS a driver for change?

Figure 5.1: Drivers of variation in EU power sector GHG emissions (2012-2022)



Note: "Change in the carbon intensity of fossil fuels" refers to the variation in GHG emissions released per kWh of electricity produced using fossil fuels

(improved fuel quality in transformation) while "Change within the fossil fuel mix" infers mainly fuel switching from coal to gas

Source: Eurostat – electricity and heat generation – main activity producer electricity and combined heat and power

[https://ec.europa.eu/eurostat/databrowser/view/nrg\\_bal\\_c\\_custom\\_10236882/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/nrg_bal_c_custom_10236882/default/table?lang=en)

[https://ec.europa.eu/eurostat/databrowser/view/nrg\\_bal\\_peh\\_custom\\_10232145/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/nrg_bal_peh_custom_10232145/default/table?lang=en)

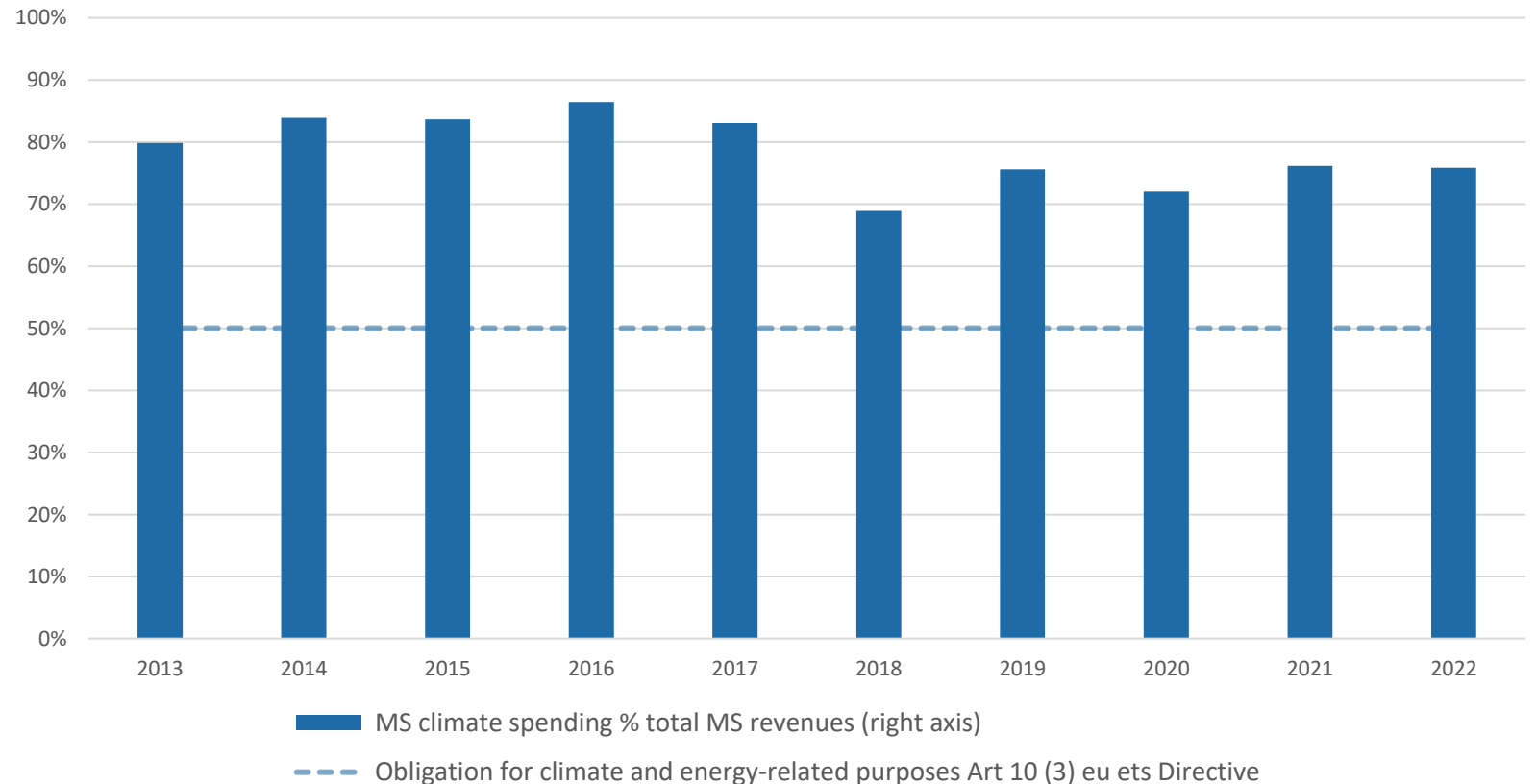
Source: Source: Compass Lexecon based on I4CE and EcoAct's methodology and Eurostat data

# 5. Socio-economic delivery

## 5.2. Social impacts

- Until the last revision of the EU ETS Directive, at least 50% of the auction revenues to climate- and energy-related purposes.
- Member States overperformed on this target. EU 78.5% average.
- Latest revision doubled the target from 50% to a full 100%.
- Use of revenues is likely to evolve to comply with this new requirement.

KPI 5.9: % of total auction revenues spent on climate, renewable energy and energy efficiency (2013-2022)



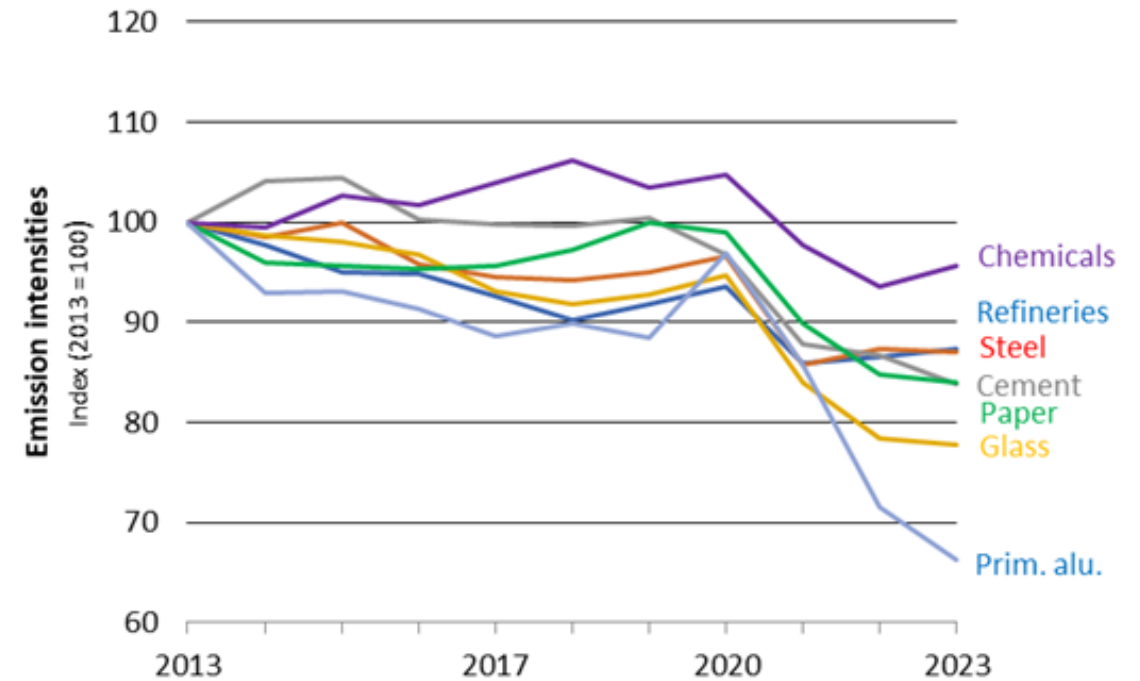
# 5. Socio-economic delivery

## 5.3. Industrial decarbonisation

- The EU ETS has entered a new phase focusing on industrial decarbonisation. However, starting in 2020, emission reductions resulted largely from decreased production and the closure of industrial activities during the energy crisis.
- In addition, remarkable improvements in emission intensities\* have generally become visible over the past five years.
- The rate of decline varies, suggesting differences in sectors\* capabilities to decarbonise. For instance, the cement, paper, and glass sectors show faster reductions, with primary aluminium showing the most significant decline.

\*Emissions intensities, dividing the volume of emissions by the corresponding production activity

KPI 5.10: Emission intensities for selected industry sectors

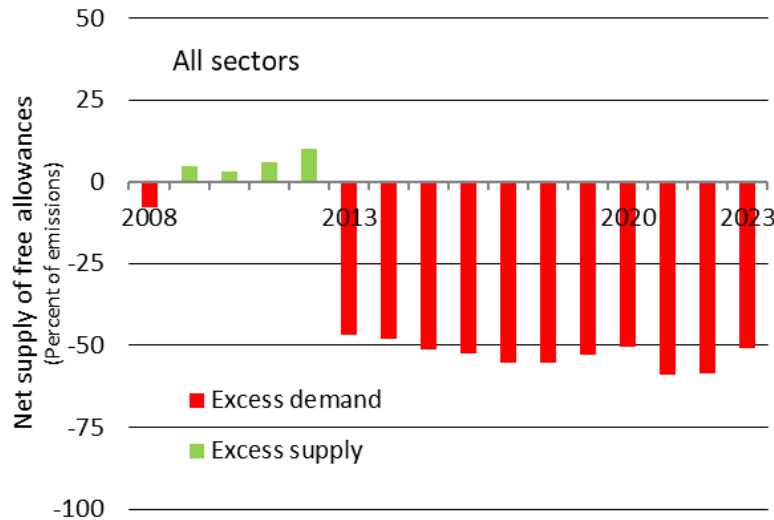


Source: Wegener Center (2024), based on EUROSTAT STS and EUTL

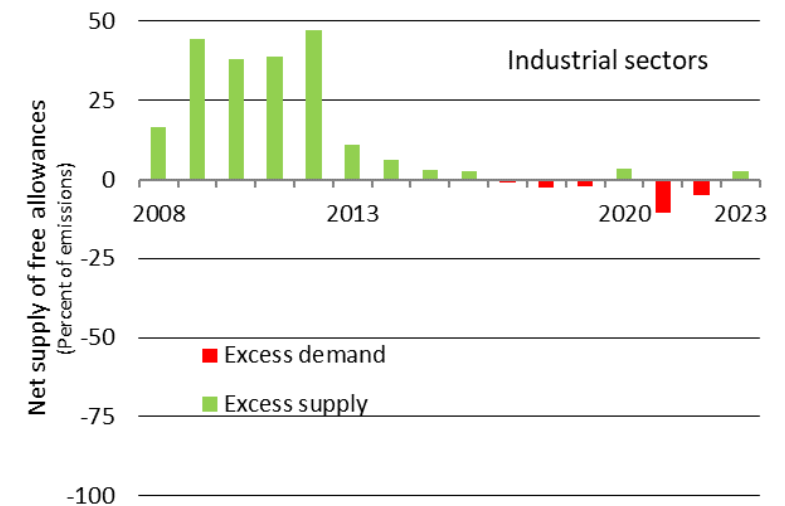
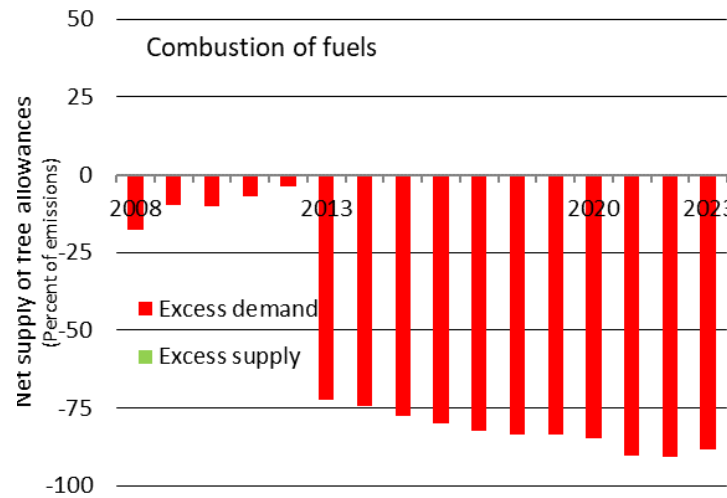
Emission data taken from EU ETL (EU 27). EUROSTAT data were used for index production volumes except for primary aluminium, obtained from European Aluminium. Emission data for alumina, aluminium transformation and recycling were not included because the ETS registry does not allow to specify such activities in the installations reporting templates.

# 5.3. Industrial decarbonisation

KPI 5.11: Net supply volume of free allowances – all stationary installations



KPI 5.12: Net supply volume of free allowances – combustion and industry sectors



\*Net supply of free allowances = (free allowances minus verified emissions) / (verified emissions) \* 100

Source: Wegener Center (2024) based on EUTL

Combustion of fuels has activity type code 20 in the EUTL. The remaining activities correspond to 21-99 'All industrial installations'

- About **90% of emissions are not covered** by free allocations in the **combustion sector**.
- **Industrial** sectors, however, experienced a **surplus** of free allocations during the first trading period, significantly **decreasing** thereafter.
- The deficits in 2021 and 2022 turned into surpluses in **2023** because of the sharp **decrease in emissions** while this may not reflect the output destruction.

# 5. Socio-economic delivery

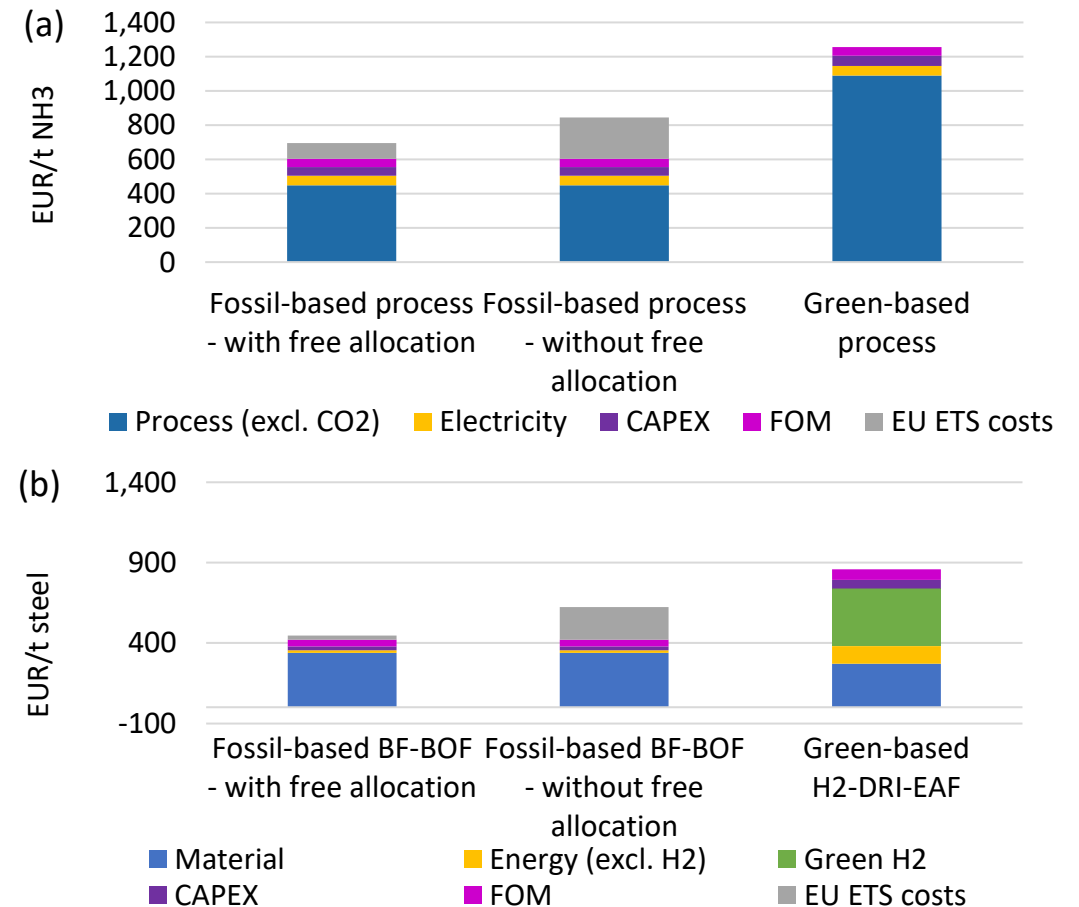
## 5.5. Competitiveness and Carbon Leakage

### Free allocation

- Historically, the EU has used free allocation and indirect cost compensation to limit carbon leakage and insulate EU industries from loss of international competitiveness due to EU ETS costs. CBAM may replace free allocation and indirect cost compensation in selected trade-exposed carbon-intensive industrial sectors.
- Carbon intensive production processes will see competitiveness gap with other jurisdictions increase mainly due to carbon costs. As examples:
  - For Ammonia, free-allocation phase-out combined with a rise in CO2 prices could result in carbon costs being over 40% of production costs in 2030 for the carbon-intensive production process.
  - For Steel, free-allocation phase-out combined with a rise in CO2 prices could result in carbon costs being 40% of production costs in 2030 for the carbon-intensive BF-BOF production process.

Source: Compass Lexecon (2024), based on data from BusinessEurope for ammonia and AgoraEnergiewende for steel

Figure 5.17: Production costs for fossil-based and green (a) ammonia and (b) steel by cost component under different scenarios (2030)



# 5. Socio-economic delivery

## 5.5. Competitiveness and Carbon Leakage

### Exports

- **Exports play a vital economic and environmental role** for goods in the EU covered by the CBAM.
- Because CBAM-covered goods are largely traded in highly competitive global commodity markets, the possibilities to **pass through costs are limited**.
- Failure to find a solution may eventually lead to decisions to **close plants** that are **no longer profitable**.
- The results found that, under certain assumptions, producers of cold-rolled steel would feel only marginal impacts in the early years of EU ETS reform and the phase-out of free allocation. By 2030, cost increases would be enough to translate into **real impact, with premiums of 18% over global prices**.
- **By 2034**, when the CBAM takes full effect, those premiums would be **35%**. At rates of difference like this, there would be **no export markets for those products**. With steel factories having to run at capacity rates over 75% to be economically viable, a **loss of export markets** could push some installations closer or past these limits.
- The same result was found for Calcium Ammonium Nitrate (CAN). Starting with marginal impacts, by 2030 there would be a **cost premium of 27% over global prices**, and **by 2034**, that would **increase to 49%**. As in the iron and steel sector, this translates into essentially an **extinction of global markets** for this product.



# 6. Market functioning

## 6.1 KPI: Market functioning trackers

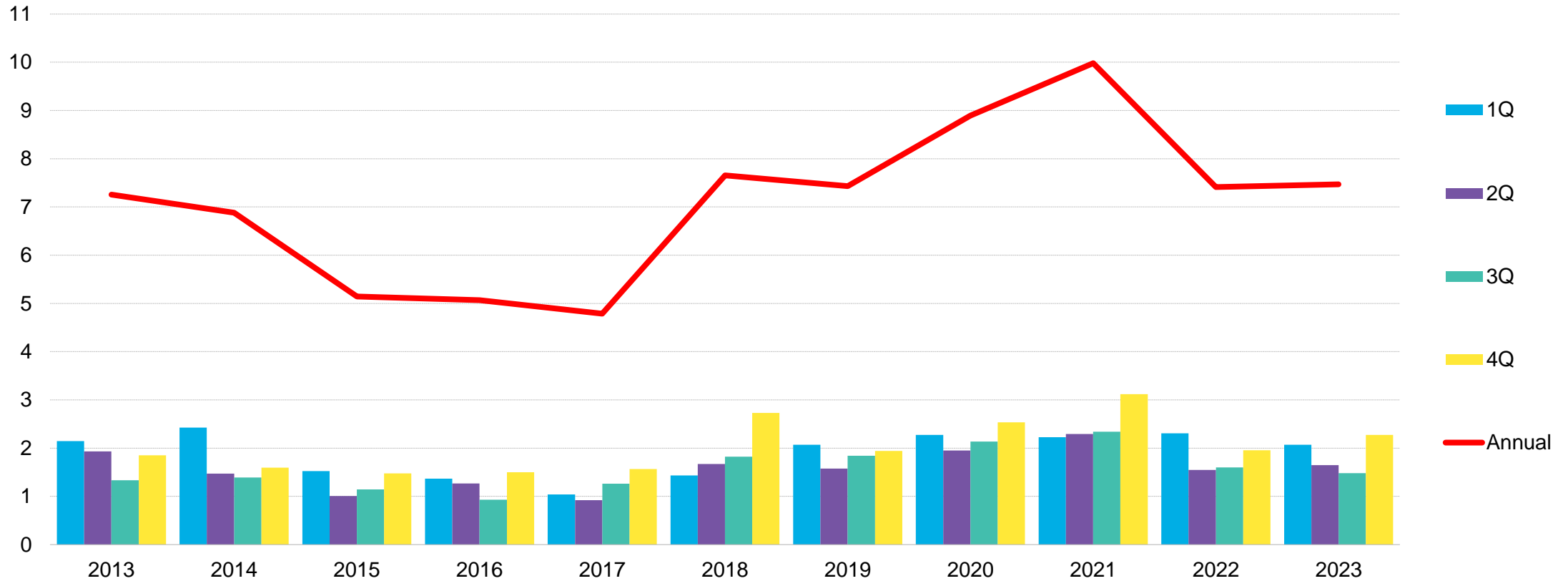
Indicator	2021/2022	2022/2023
Volume	Red	Amber
Open interest	Amber	Red
Auction participation	Amber	Amber
Auction coverage	Green	Amber
Auction versus spot spread	Red	Green
Cost of carry	Green	Amber
Ask-bid spread	Red	Green
Volatility	Red	Green

Source: BloombergNEF. Note: Green indicates improvement, red worsening, amber stable.

# 6. Market functioning

## 6.1.1 KPI: Traded volume

Billion EUAs

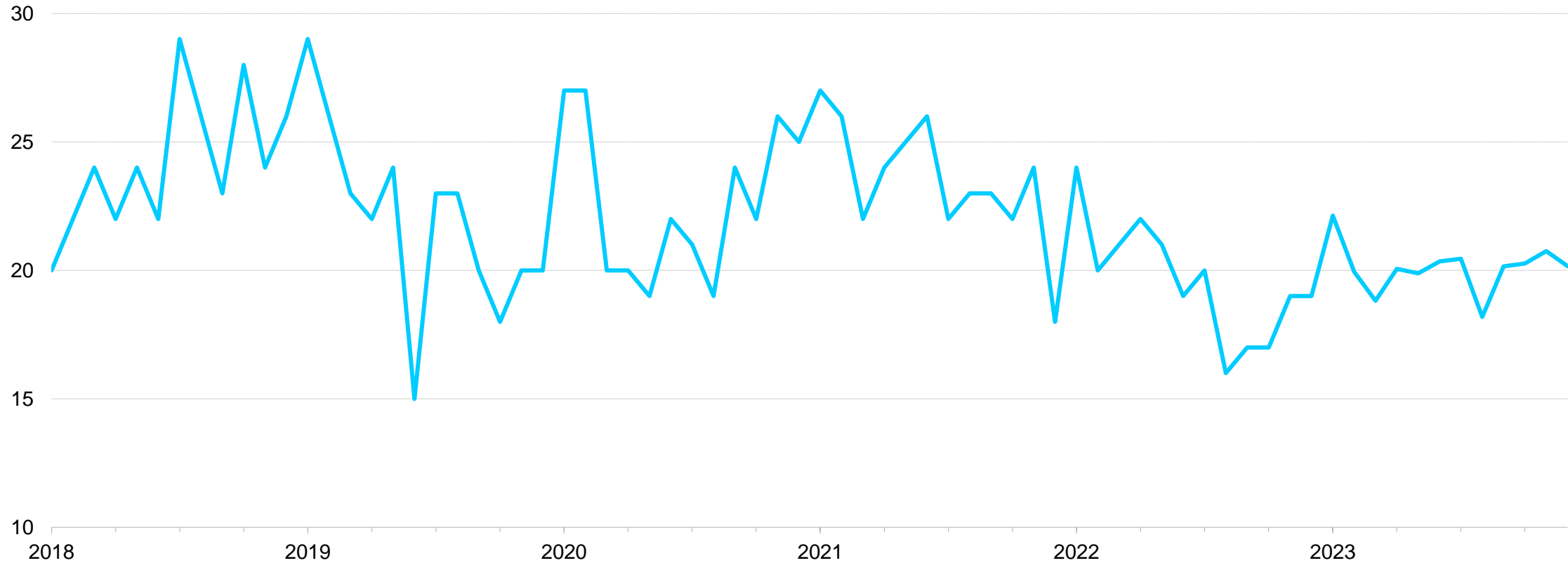


Source: ICE, EEX, BloombergNEF.

# 6. Market functioning

## 6.1.3 KPI: Monthly average auction participation

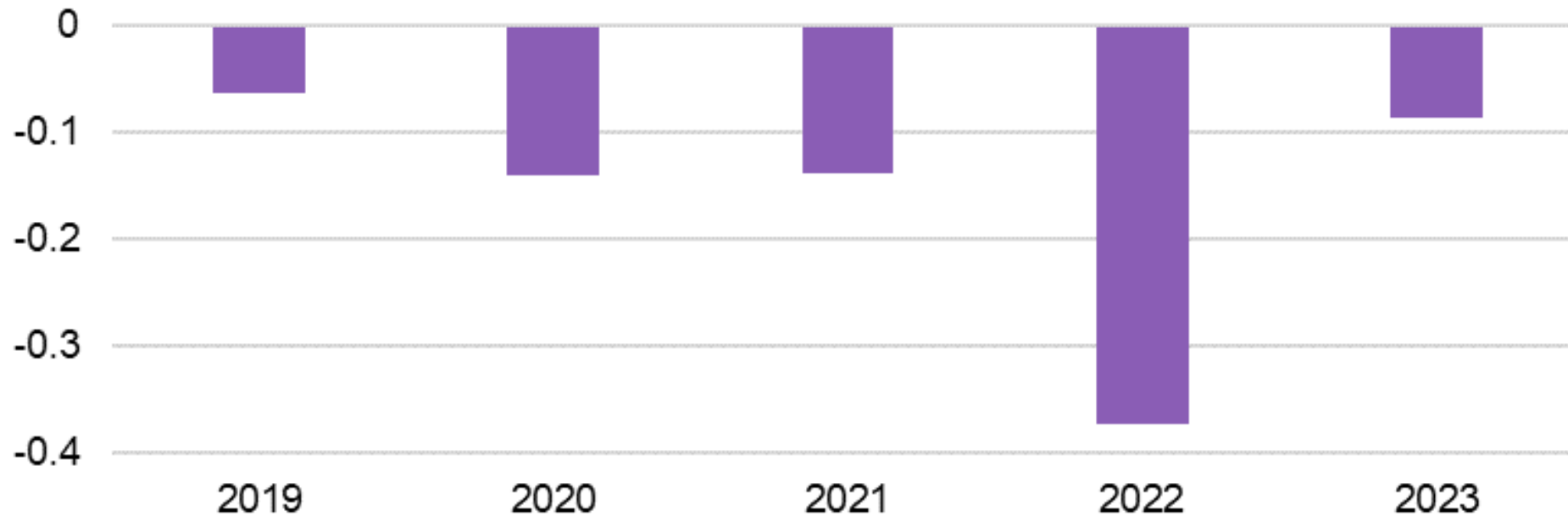
Number of participants



Source: EEX, BloombergNEF.

# 6. Market functioning

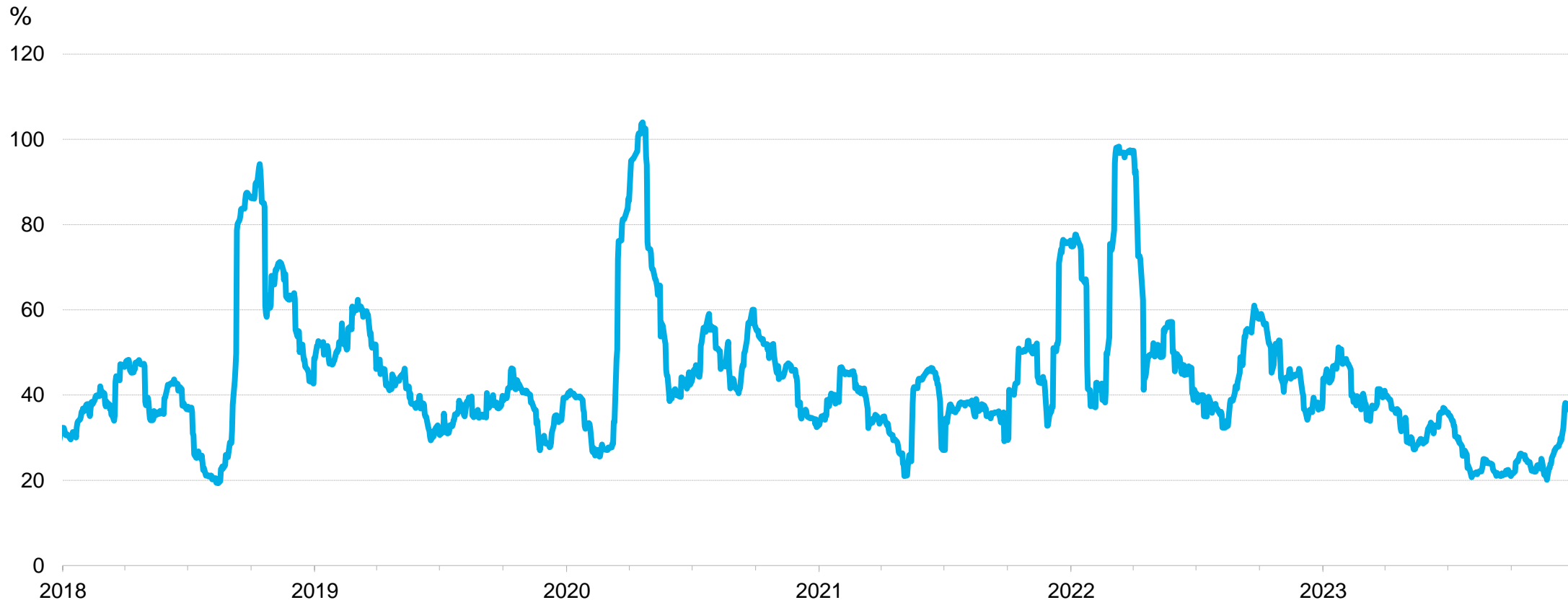
## 6.1.5 KPI: Annual average difference between auction and spot price



Source: EEX, BloombergNEF. Note: The auction-spot differential is the difference in the EUA price between auctions and on the secondary market.

# 6. Market functioning

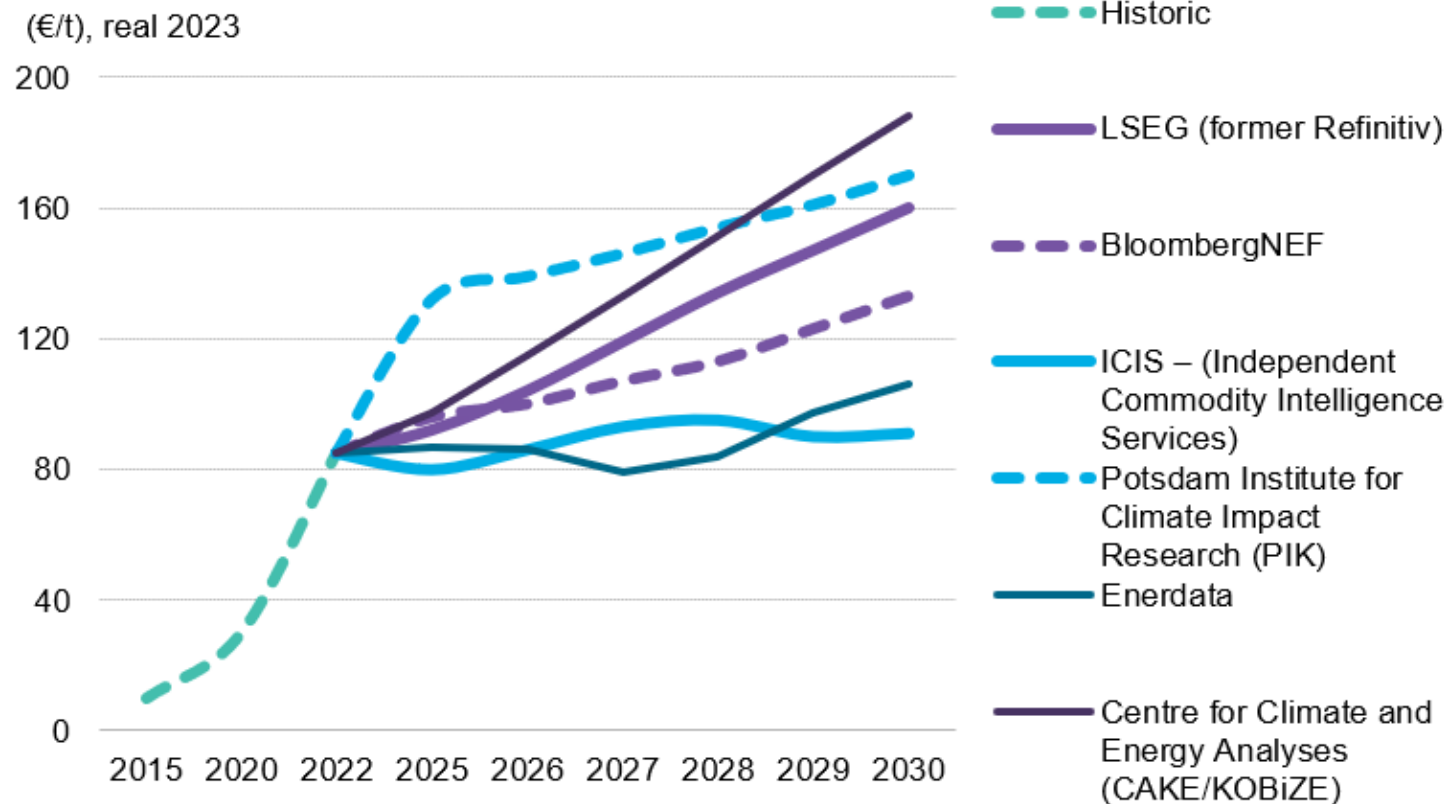
## 6.1.8 KPI: Volatility



Source: ICE, BloombergNEF. Note: Volatility refers to the 30-day price volatility. It equals the annualized standard deviation of the relative price change for the 30 most recent trading days' closing price, expressed as a percentage.

# 6. Market functioning

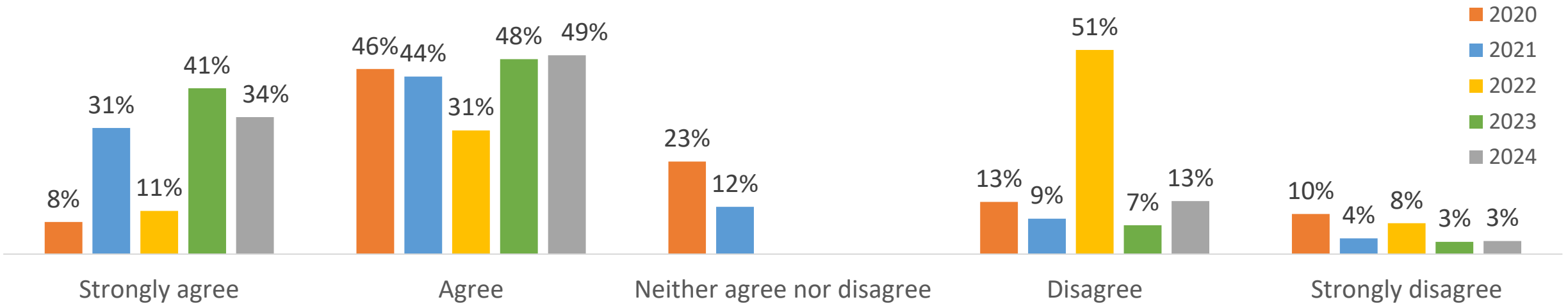
## 6.3 EUA Price forecasts



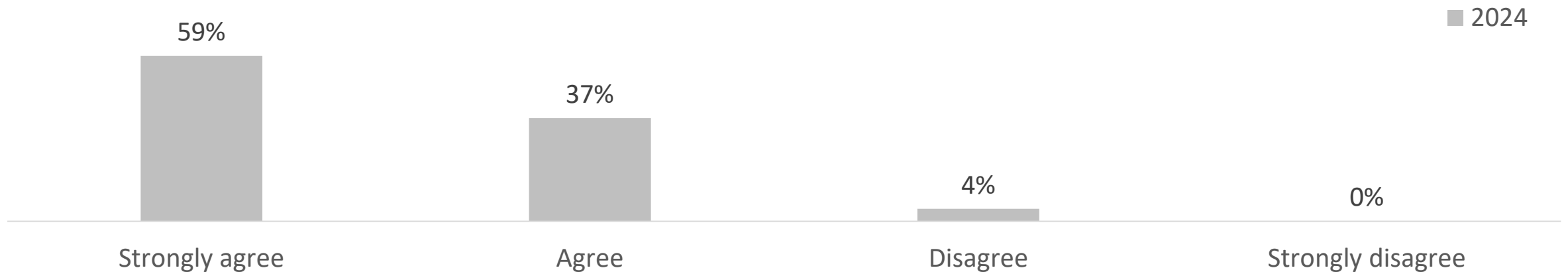
Source: Potsdam-Institut für Klimafolgenforschung (PIK), BloombergNEF, LSEG, Enerdata, ICIS. Note: Prices are in real 2023 € per metric ton. Full report can be found: [https://ariadneprojekt.de/media/2023/12/Ariadne-Documentation\\_ETSWorkshopBruessel\\_December2023.pdf](https://ariadneprojekt.de/media/2023/12/Ariadne-Documentation_ETSWorkshopBruessel_December2023.pdf)

# 7. Market Sentiment Survey

## 7.1 The EU ETS in its current form is providing signals for decarbonisation.



## 7.2 There is a need to examine what will drive decarbonisation of EU ETS sectors post 2030.

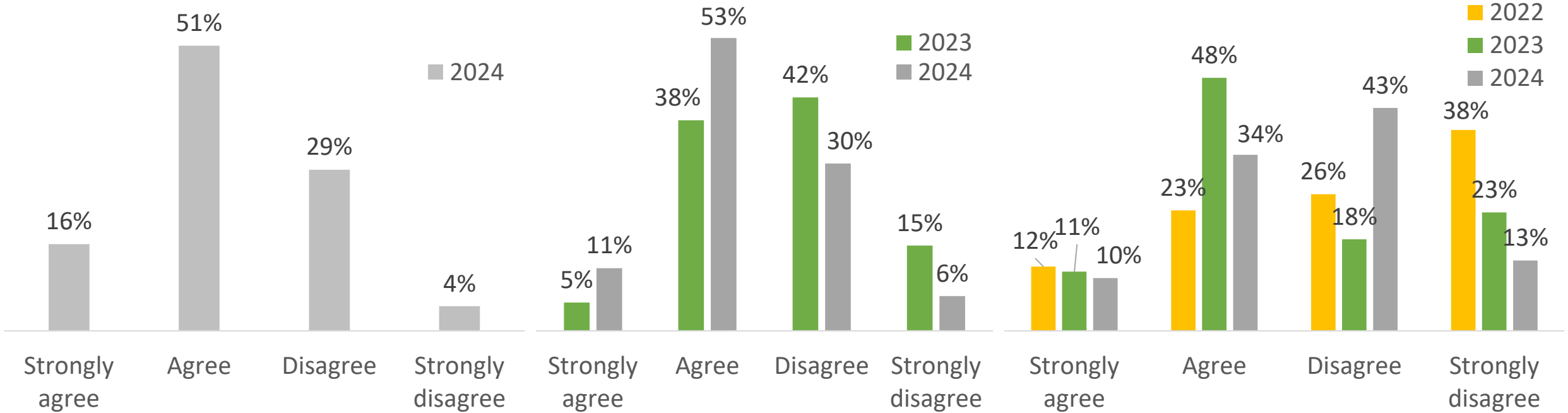


# 7. Market Sentiment Survey

**7.3 Is the EU ETS, in its current shape, a good instrument to incentivise low carbon technologies in covered sectors, contribute to EU decarbonisation post 2030, and spur homing economic activity in the EU?**

**7.4 The electricity market design and the EU ETS work in synergy to reach EU Climate Law objectives.**

**7.5. The combination of EU ETS and current CBAM for the EU will adequately address competitiveness and carbon leakage concerns for the EU industry.**



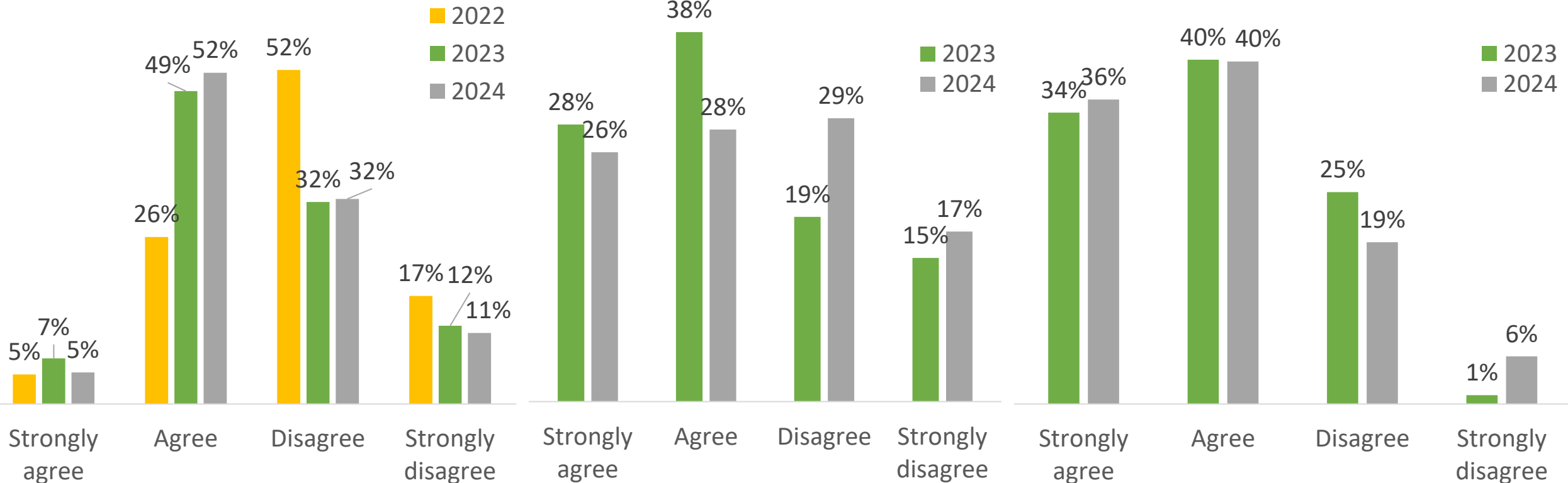


# 7. Market Sentiment Survey

**7.6. The EU ETS post Fit for 55 review address the main concerns raised by stakeholders, especially related to competition.**

**7.7 To reach the goals of the Climate Law, an international link through international credits, including removals, is important.**

**7.8 Early integration of removals in EU regulation, including in the EU ETS, is critical to reach EU climate objectives.**



## 8. Conclusions

- The EU ETS context is shaped by the economic and political landscape. Questions regarding role, architecture, and governance post 2030 are already being raised.
- Some uneasiness resurfaces again with respect to impacts of regulatory interventions, as illustrated by RePowerEU, which is seen as not transparent and unpredictable.
- This year's KPIs evaluate EU ETS achievements against baselines. Present trends indicate that the industrial sectors will face significant challenges to meet the 2040 target.
- It is counter logical to state that EUA prices played only a minor role. This ought to be taken seriously, especially as (trade exposed) industry cannot pass through EU ETS costs.
- The focus is clearly now on industrial decarbonisation, with sectoral emission intensity decreasing rapidly, but unevenly.
- Market Sentiment Survey confirms that stakeholders perceive the EU ETS as providing signals for decarbonisation. Nonetheless, with persistent concerns over competitiveness and CBAM-related exports, alongside support for the integration CDRs.