

ERCST

European Roundtable on
Climate Change and
Sustainable Transition



State of the EU ETS 2019

State of the EU ETS 2019 – Outline

- **Seven Chapters**

1. Background
2. Introduction – EU ETS fit for purpose
3. Changes in regulatory environment and implications for the EU ETS
4. Environmental delivery
5. Economic efficiency
6. Market functioning
7. Policy issues to monitor in the future

Background

- Independent contribution to the policy debate on the EU ETS
- Focus of the report: identifying issues and making assessments, providing a *snapshot*
- The “State of EU ETS” as a well-established project, which has been ongoing in different formats since 2015

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EU ETS 'fit for purpose'

What do we expect the EU ETS to deliver?

3 key deliveries

1. **Environmental delivery.** Does it deliver against absolute environmental targets?
2. **Economic delivery.** Does it deliver macro-economic efficiency and function as a driver for cost-effective decarbonization, taking carbon leakage concerns into account?
3. **Market functioning.** It is worth having a market only if it functions well and leads to good price discovery

EU ETS 'fit for purpose'

What do we expect the EU ETS to deliver?

2 additional deliveries:

1. A long-term (competitive) advantage for Europe?

- Generate sufficient investments to accelerate the transition
- Create the premises for a low-carbon product market, incentivising behavioural and system change
- Helping to address social impacts associated with the transition to a low-GHG economy, following the principles of a 'just transition'

2. A role for the EU ETS in being a pioneer and promoting carbon markets as a tool for addressing climate change

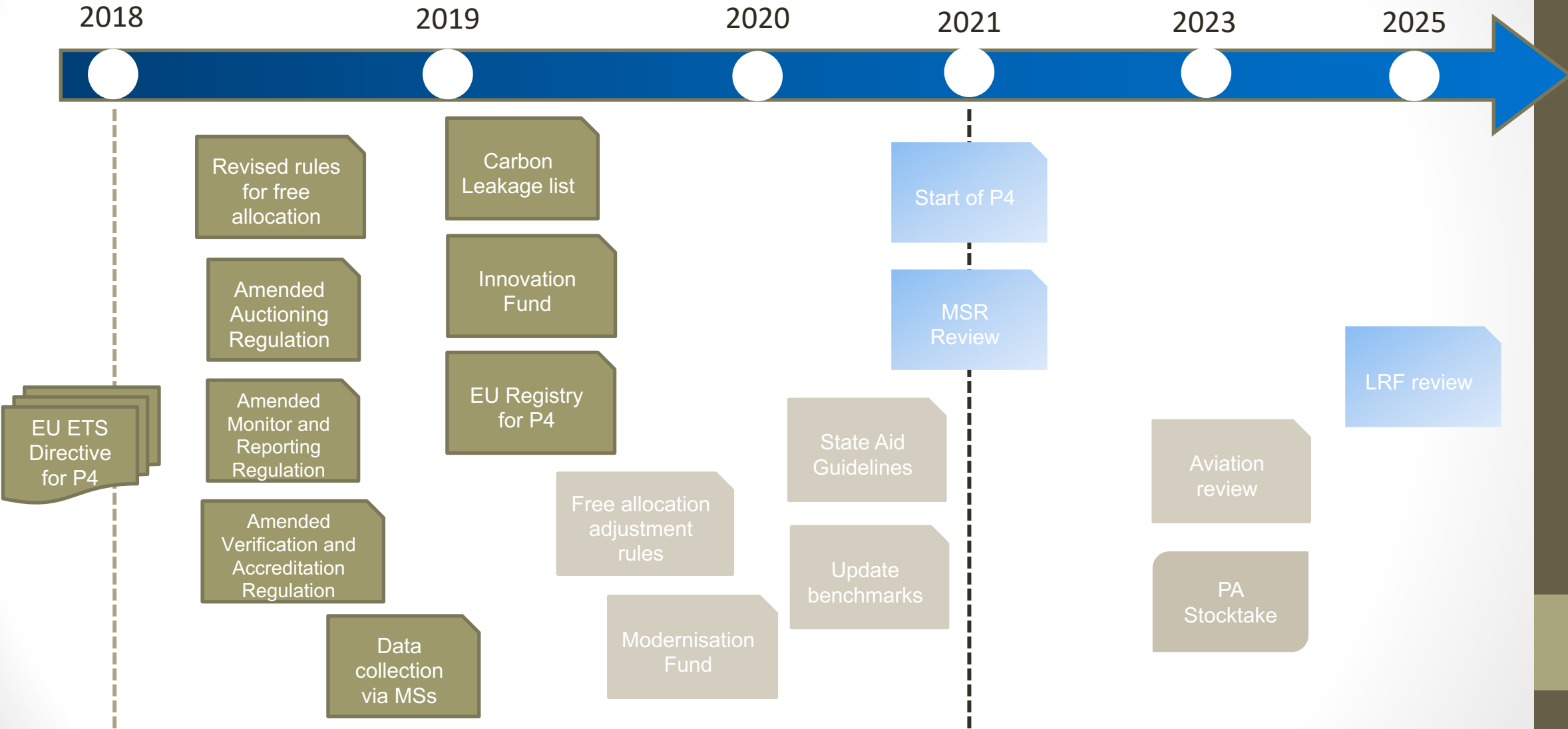
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Relevant evolution in policy and governance issues

1. Evolution of the secondary legislation related to the EU ETS
2. Aviation and CORSIA
3. Clean Energy for All Europeans package
4. Member States policies: coal phase-outs
5. Brexit
6. EU Long-term Climate Strategy
7. International climate change policy

1 – Evolution of the secondary legislation related to the EU ETS



1 – Evolution of the secondary legislation related to the EU ETS

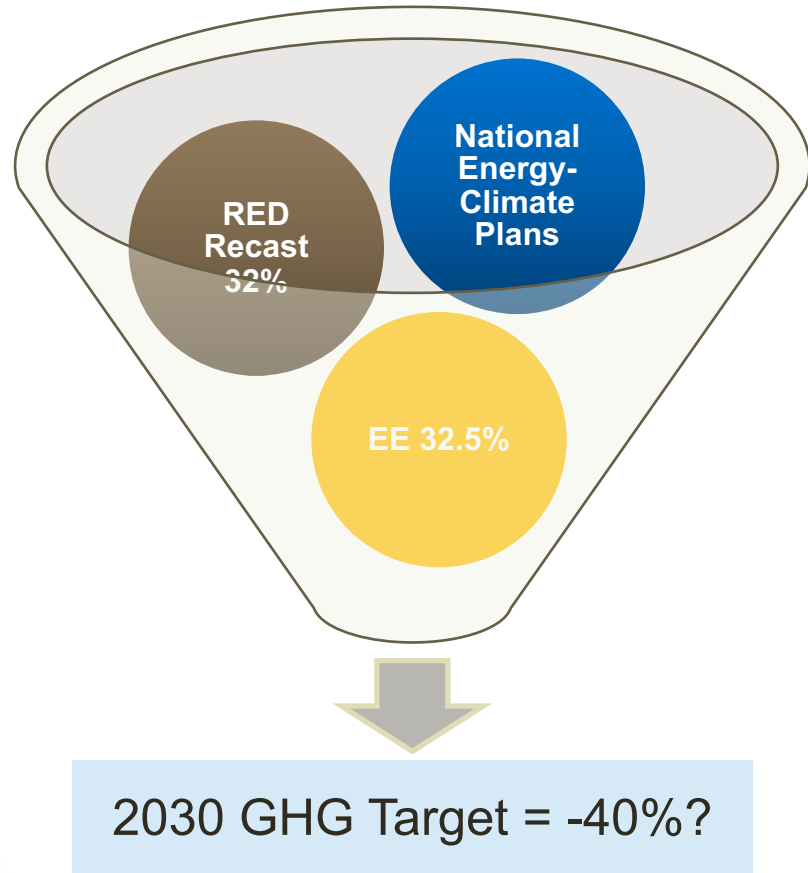
Main takeaways from 2018

- The revision of the Free Allocation rules for 2021-2030 was adopted, aiming to create a closer link between production levels and free allocation compared with Phase 3
- The Carbon Leakage List for Phase 4 was published. Many sectors were excluded from the list compared with Phase 3 (from 165 to 63), however this is likely to not reduce the amount of free allocation given (94% of emissions are expected to be covered, down by only 4% compared to the 2015-2020 CLL)
- The Innovation Fund was established, which will invest up to 11 billion € to support innovation in low-carbon technologies and processes over the course of Phase 4

2 – Aviation and CORSIA

- **Since 2014, the scope of EU ETS has been limited to flights within the European Economic Area (EEA),** in order to *‘provide continued momentum to the international process of establishing a global scheme to curb aviation emissions’*
- **In 2016, the ICAO Assembly agreed on a resolution on the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).** The goal of this scheme is twofold:
 1. to cap aviation emissions at the average level of CO₂ emissions from international flights between 2019 and 2020;
 2. to establish a global market-based system mechanism (MBM) to offset CO₂ emissions exceeding that average through international credits, from 2021 onwards.
- Aviation emissions are increasing rapidly: **intra-EEA flights airlines’ emissions covered under the EU ETS grew by 5.7% in 2018** (Refinitiv, 2019)
- **Success or failure of CORSIA, and more broadly the future of the aviation sector under the EU ETS will have significant implications for the EU climate change policy**

3 – Clean Energy for All Europeans package



8 legislative texts

2030 Targets

- The new 2030 EU Renewables target is 32%
- The new 2030 Energy Efficiency target is 32,5%
- Each Member State has to submit an Energy&Climate Plan by the end of 2019 including national measures aimed at reaching the PA target

Is this in line with the overall 2030 GHG target of 40%?

If not, what are the implications on the EU ETS?

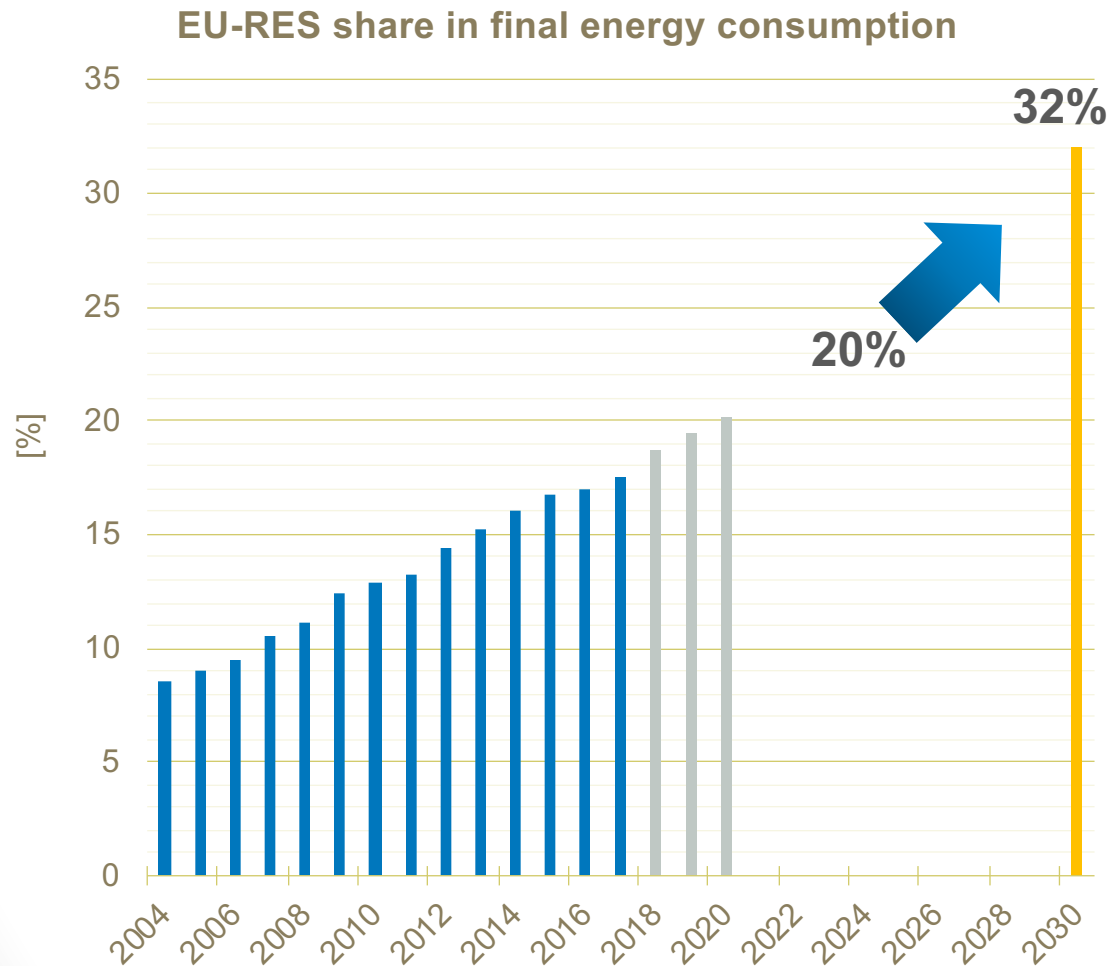
- **MS long-term strategies** with minimum 30 years perspective to be submitted by Jan. 2020 (Art.15, Governance of the Energy Union)

3 – National Energy and Climate Plans (NECPs)

- The new Regulation on the Governance of the Energy Union requires MS to submit NECPs for the period 2021-2030
- Draft plans were to be submitted by the end of 2018
- The EC will assess the draft plans between January-June 2019
- Final, integrated NECPs to be submitted by MS by the end of 2019

- **Potential impact on EU ETS for those MS who might take additional actions in sectors covered by the EU ETS**

3 – Renewable energy targets for 2030



Source: ICIS elaboration on data from the European Commission

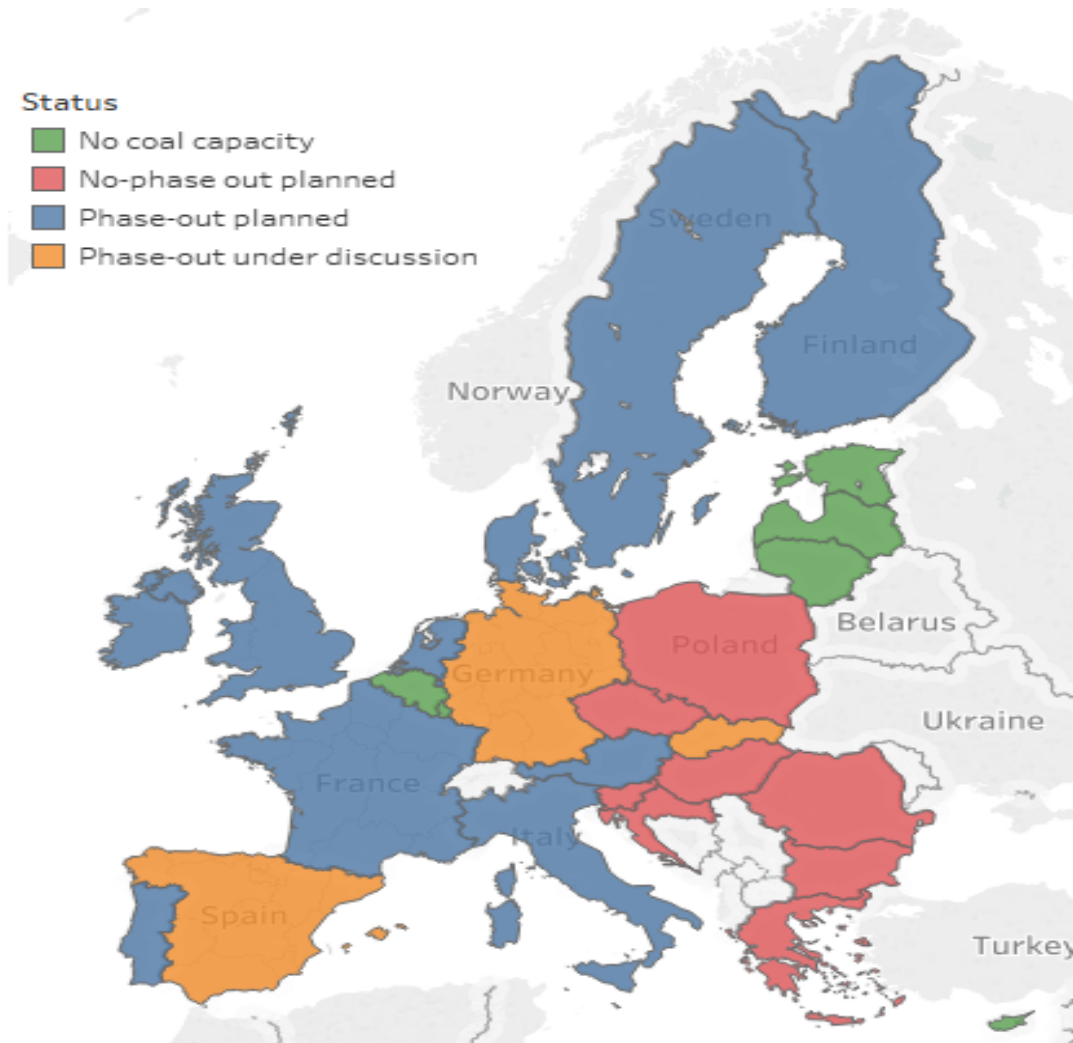
- The RES target is likely to be the most impacting for the EU ETS in Phase 4
- Modelling of emission reductions expected to 2030 as a consequence of a higher share of RES on electricity consumption (e.g. 50%)
- RES deployment speed will have an impact on ETS during Phase 4

4 – Member State policies: Coal Phase-Outs

- Coal Phase-Outs gained momentum in 2018
- Germany, Spain and Hungary started to discuss plans to exit coal, joining 10 other MS who had already announced phase-out strategies
- Coal still 37% of ETS emissions in 2018 (Sandbag & Agora): potential for significant oversupply if coal gets replaced by other energy sources
- In absence of voluntary cancellation, MSR severely put to the test
- Changes in coal consumption might also lead to new hedging strategies

- **Should the MSR key parameters be re-adjusted to this new landscape?**

4 – Coal Phase-Outs: Overview of EU ETS countries

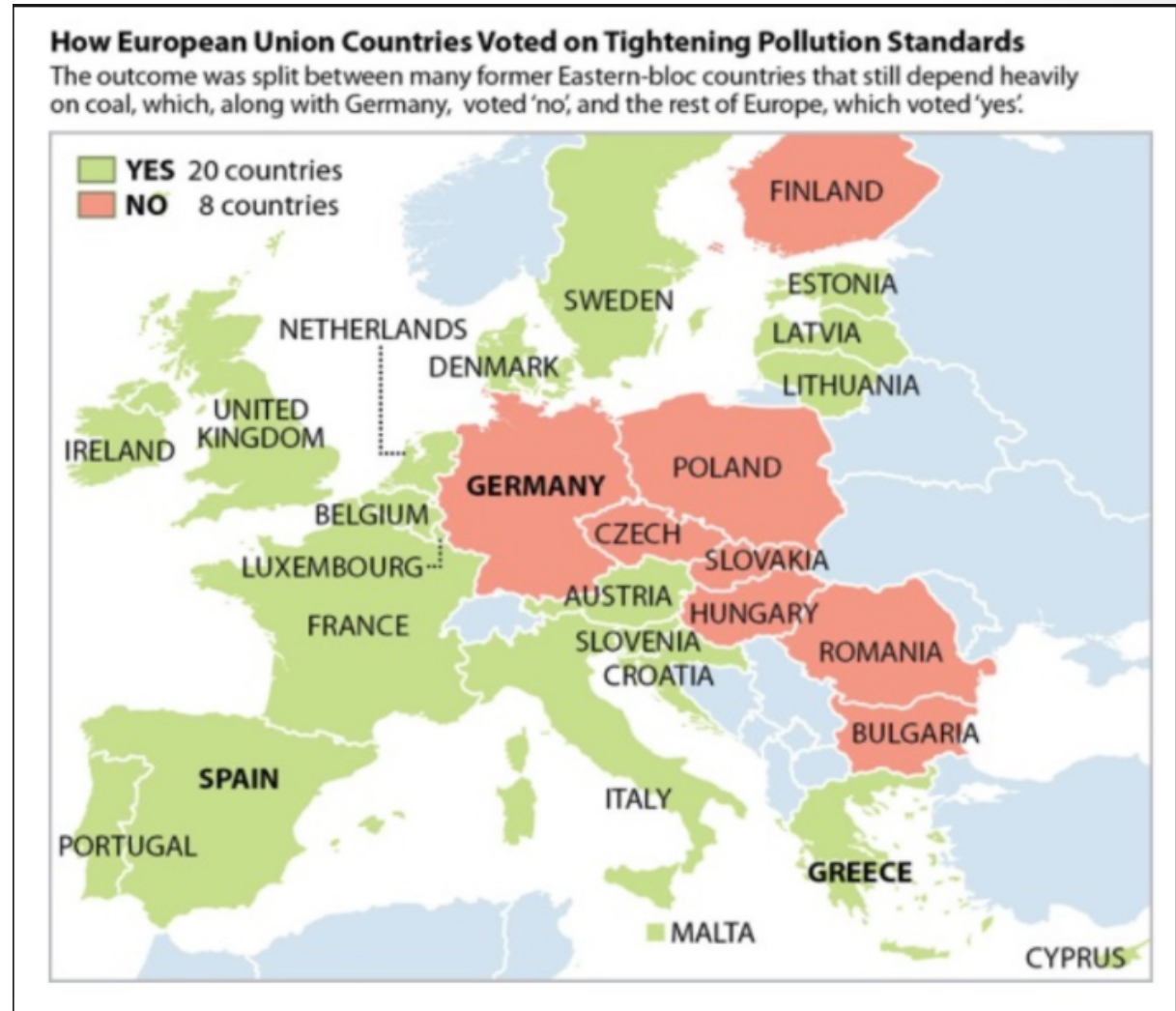


Country	Capacity* (MW)	Phase-out date
UK	11,160	2025
Italy	7,806	2025
Netherlands	4,692	2030
Denmark	2,776	2030
France	2,335	2021
Finland	1,693	2029
Portugal	1,677	2030
Ireland	855	2025
Austria	644	2025
Sweden	130	2022
Germany	42,409	2038
Spain	9,486	-

*Capacity refers to 2018

4 – BREF limits

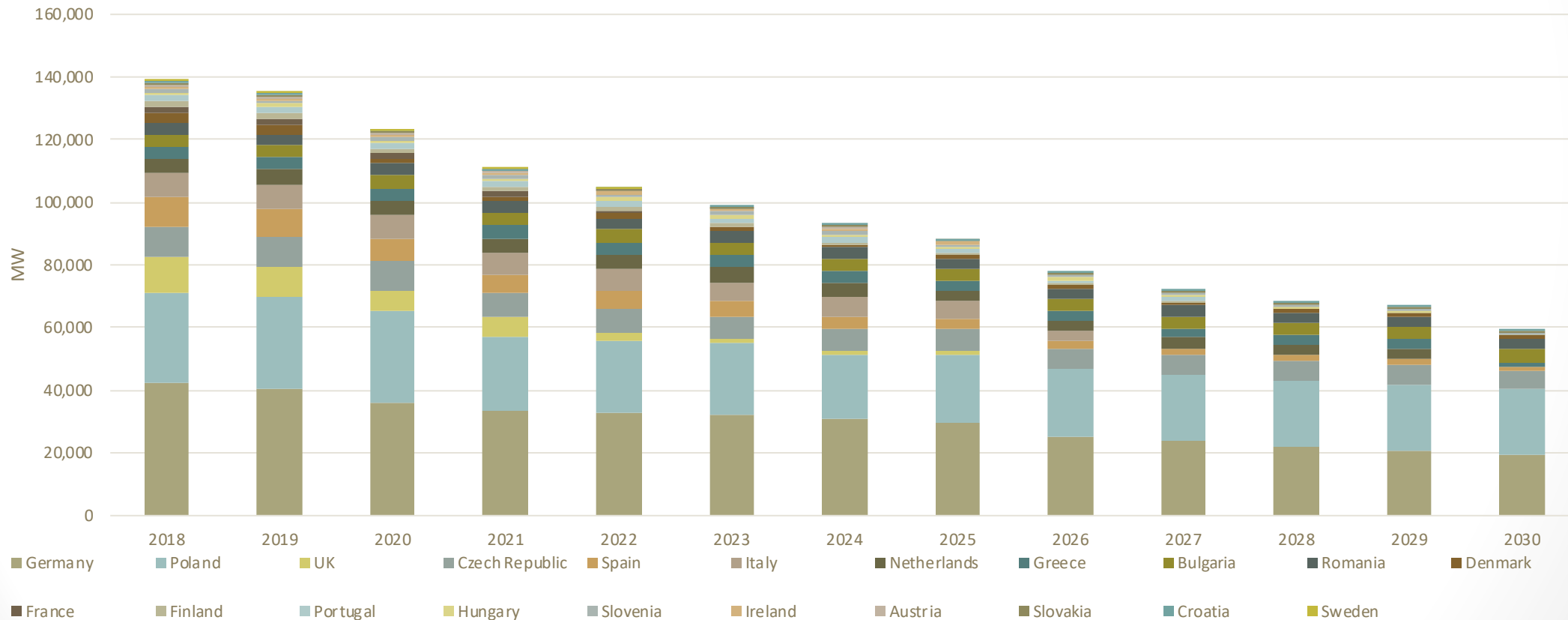
- Put restrictions on the NO_x and SO₂ emissions from plants
- Plants will have to abide by regulations from 2021 or close
- Estimates that up to a third of Europe's coal-fired capacity affected
- Will countries be able to obtain derogations?



4 – Announced Coal Phase-Outs and BREF limits: EU Coal/lignite capacity forecast 2018-2030

- Coal/lignite capacity expected to decline from 139GW in 2018 to 88GW in 2025 and 58GW in 2030

EU coal & lignite capacity by country 2018-2030 (MW)



5 – Brexit

- The UK is scheduled to leave the EU on 31 October 2019
- In October 2018, the British government issued a technical note on the implications of Brexit on the EU ETS: in a no-deal scenario, the UK is set to leave the EU ETS
- All UK installations would drop out of the system, and no flight landing or departing from the UK will be covered by the ETS
- Facing this outlook, the EC presented a Contingency Action Plan suspending the free allocation and auctioning of emissions allowances in the UK during Q1 2019
- **All potential scenarios for the EU ETS post-Brexit are still on the table: UK staying in the EU ETS; UK setting its own carbon price; UK starting an independent UK ETS (linked or standalone)**
- The UK government has declared that a UK ETS linked to the EU ETS would be the preferred option (May, 2019)

6 – 2050 Long-term Climate Strategy

Long Term Strategy Options								
	Electrification (ELEC)	Hydrogen (H2)	Power-to-X (P2X)	Energy Efficiency (EE)	Circular Economy (CIRC)	Combination (COMBO)	1.5°C Technical (1.5TECH)	1.5°C Sustainable Lifestyles (1.5LIFE)
Main Drivers	Electrification in all sectors	Hydrogen in industry, transport and buildings	E-fuels in industry, transport and buildings	Pursuing deep energy efficiency in all sectors	Increased resource and material efficiency	Cost-efficient combination of options from 2°C scenarios	Based on COMBO with more BECCS, CCS	Based on COMBO and CIRC with lifestyle changes
GHG target in 2050	-80% GHG (excluding sinks) [“well below 2°C” ambition]					-90% GHG (incl. sinks)	-100% GHG (incl. sinks) [“1.5°C” ambition]	

- In November 2018, the Commission presented its strategic long-term vision towards 2050
- **8 scenarios presented, 2 leading to net-zero carbon emissions**
- The EC’s strategic vision is meant to pave the way for the EU to adopt an ambitious long-term strategy by 2020, as referred to in Art.4 (19) of the Paris Agreement
- The two net-zero scenarios will definitely require **additional efforts from ETS sectors**

7 – International climate change policy

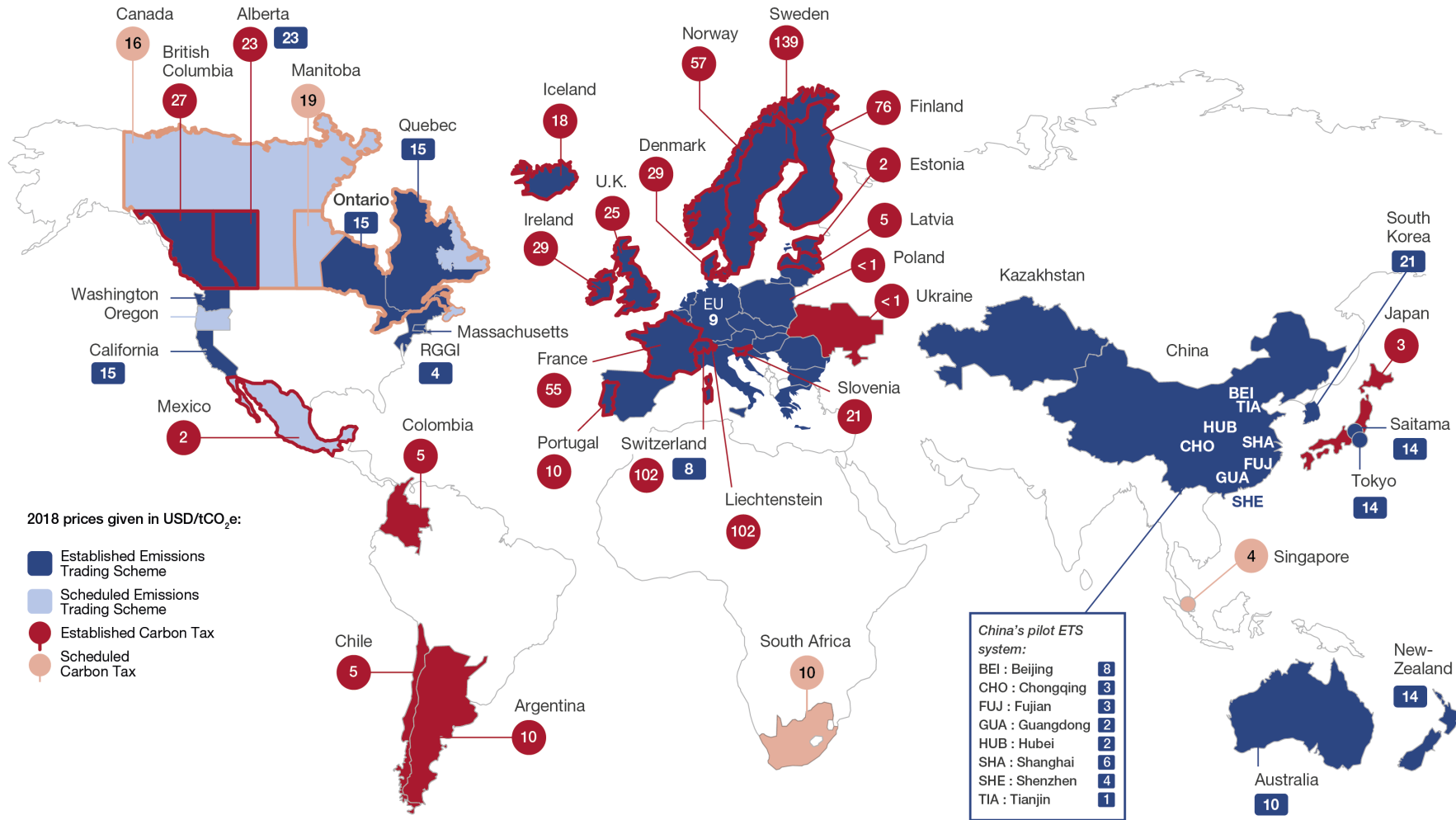
- The IPCC special report on the impact of global warming of 1.5 °C above pre-industrial levels was released in October 2018
 - It has reinforced conclusions of IPCC FAR, highlighting the need for negative emissions and portraying again a sense of urgency, arguing that there is still time to act but this time is short
- Katowice COP-24 has achieved its work on the PA Rulebook and completed the political side of the Talanoa Dialogue. The module on Article 6 is still to be approved
- The UN Secretary General called for a Climate Summit to take place in New York on 23 September 2019 – *UN 2019 Climate Summit “A Race We Can Win”*

7 – International climate change policy

- **Pressure on the EU to increase its climate ambition.** This global push might influence the EU to submit its second NDC, leading to a potential increase in the GHG reductions targets from ETS sectors
- **Possible increase in international ambition could impact carbon leakage concerns in the EU**
- **However, the PA and IPCC 1.5°C S.R. still need to be translated into domestic policies before they can impact price expectations.** More clarity waited from the EU long-term decarbonisation strategy put forward in November 2018 and the new MS energy plans

7 – Coverage of ETS globally - map of explicit carbon prices

The EU ETS no longer alone in the world



Source: I4CE – Institute for Climate Economics with data from ICAP, World Bank, government officials and public information, April 2018

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'Sentiment' Market Survey

- Short survey, 7 statements on EU ETS, its functioning and outlook
- Sent out to selected stakeholders and experts working on the EU ETS
 1. EU Member States
 2. NGO, Industry and business representatives
 3. Analysts and researchers
 4. ...
- Comparison with 2018 results

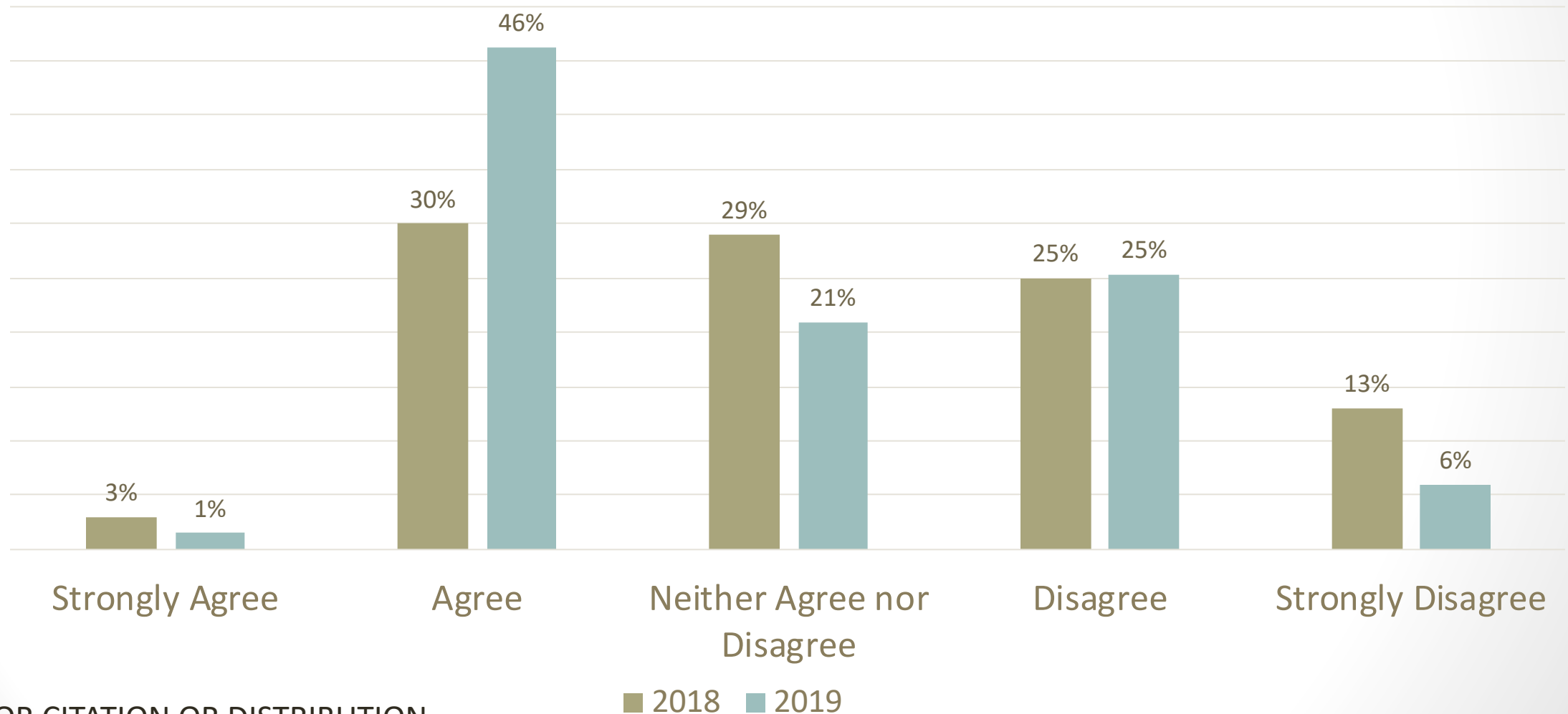
'Sentiment' Market Survey

Survey Questions 2019

- **In its current architecture, including changes for P4**
 1. The EU ETS governance will provide a stable and predictable framework for an investment signal
 2. The EU ETS Phase 4 parameters will lead to price patterns in 2020-2030 which are commensurate with investment trajectory necessary for 80-95% reduction by 2050
 3. The EU ETS will provide a first mover advantage for the EU business community
 4. The EU ETS will require significant changes to the MSR after the 2021 review
 5. The mechanisms in place in the EU ETS can address the impacts of MS policies that will overlap with the EU ETS
 6. The new mid-century EU decarbonisation strategy will strongly impact the EU ETS
 7. The EU ETS should continue to play the same role in the EU climate change policy post 2030

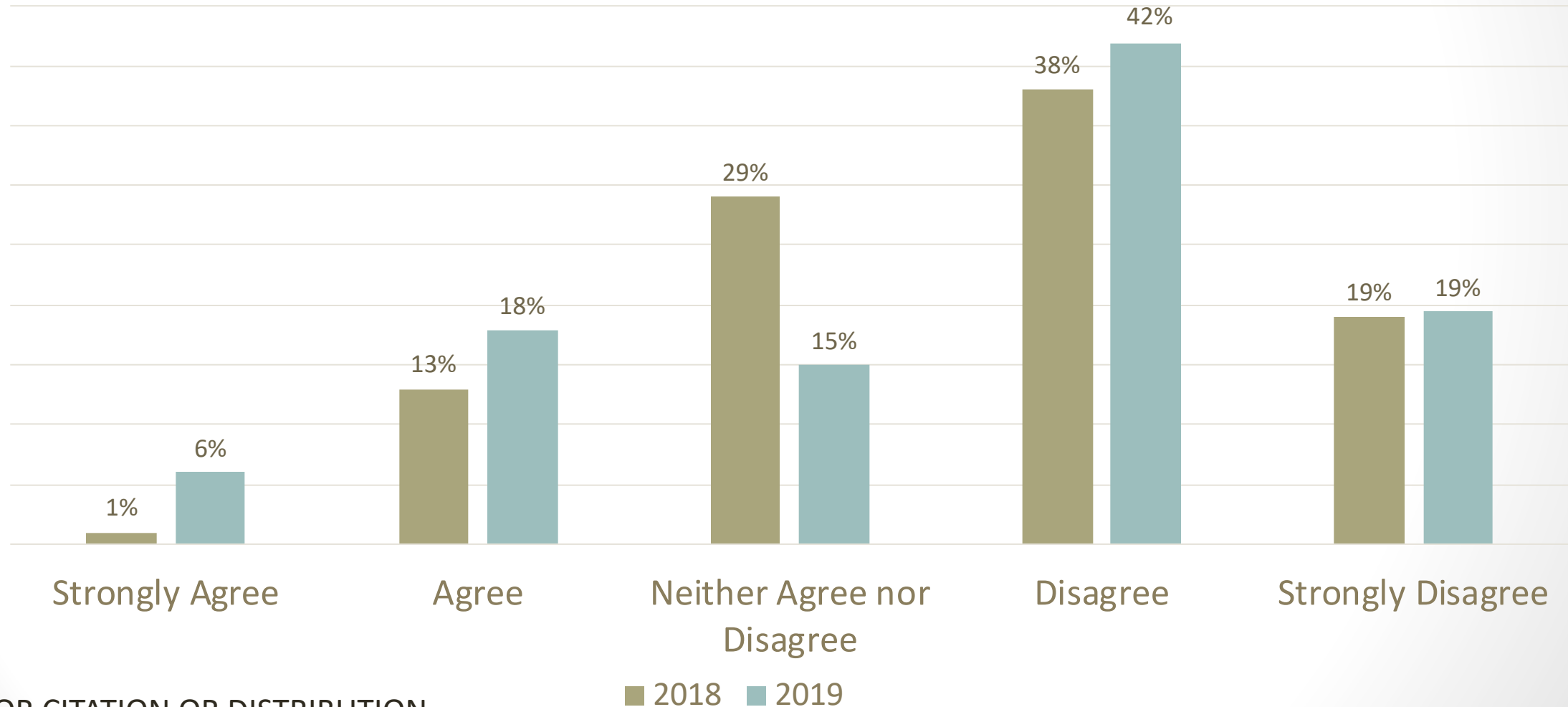
'Sentiment' Market Survey

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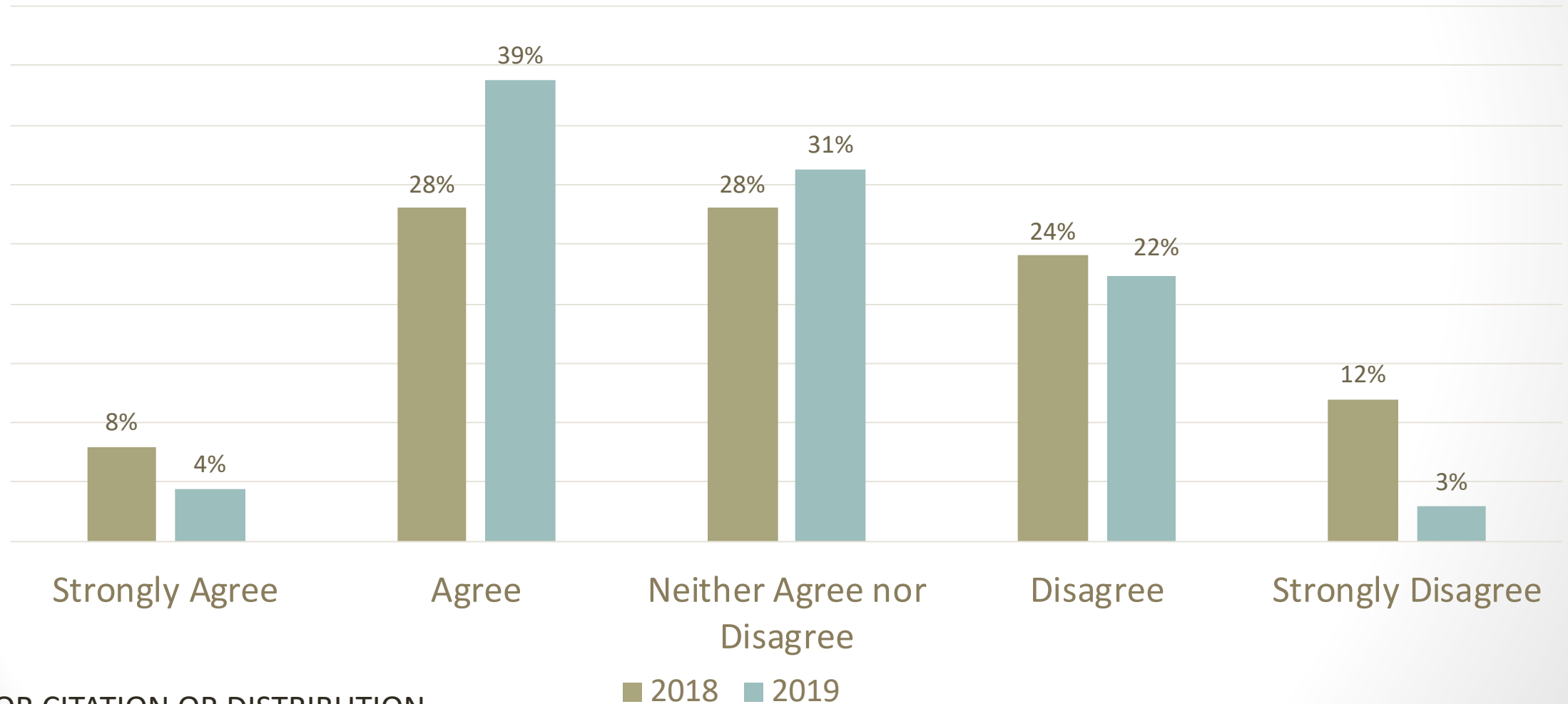
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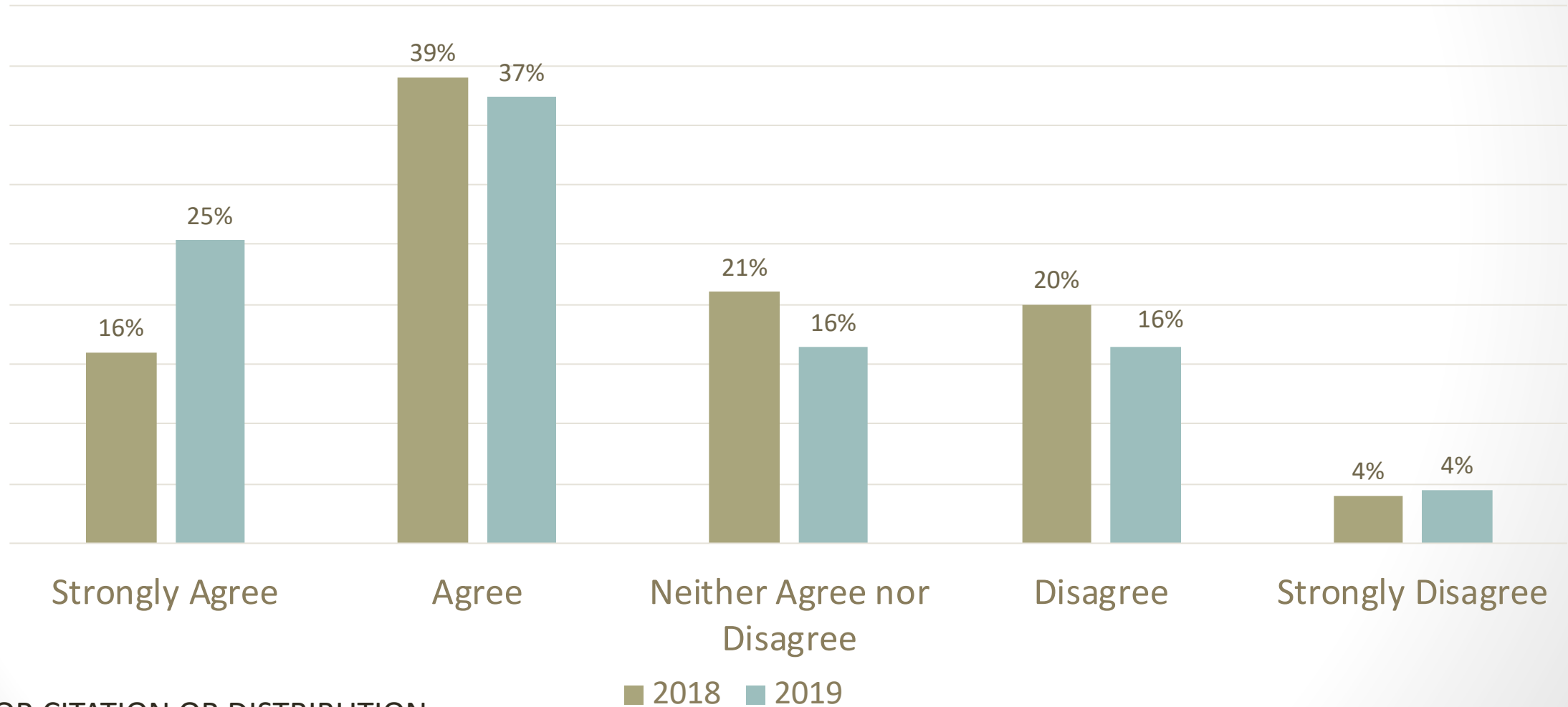
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3. The EU ETS will provide a first mover advantage for the EU business community.



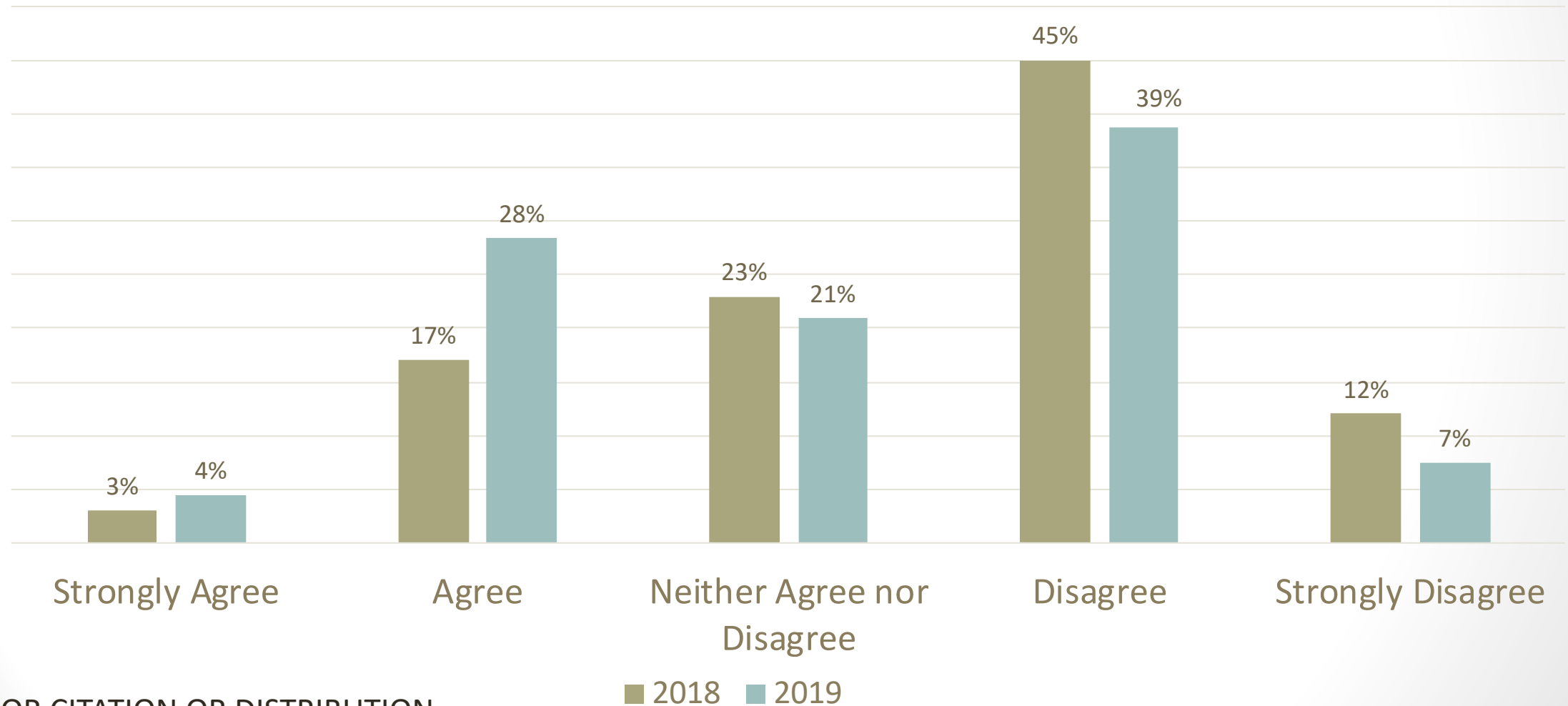
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4. The EU ETS will require significant changes to the MSR after the 2021 review.



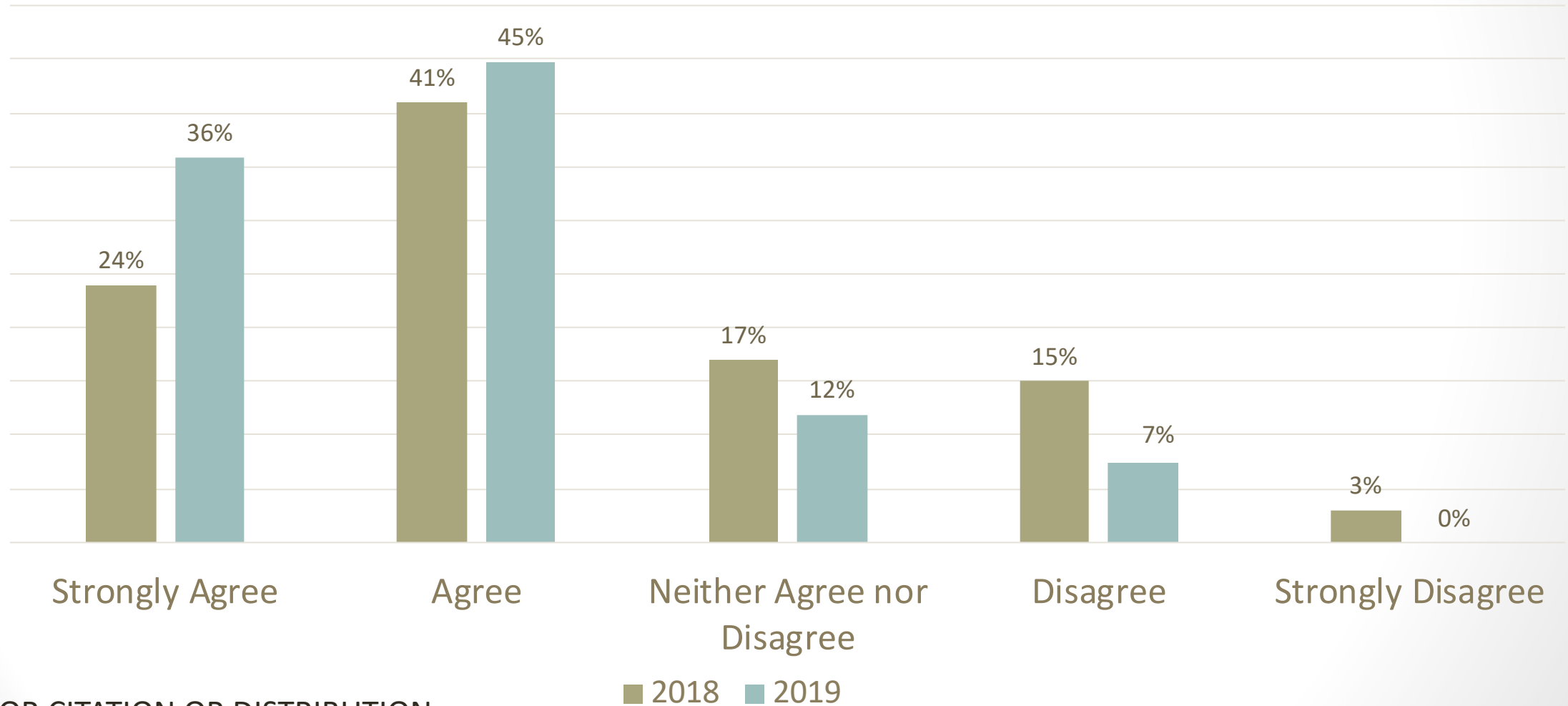
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5. The mechanisms in place in the EU ETS are able to address the impacts of Member State policies that will overlap with the EU ETS.



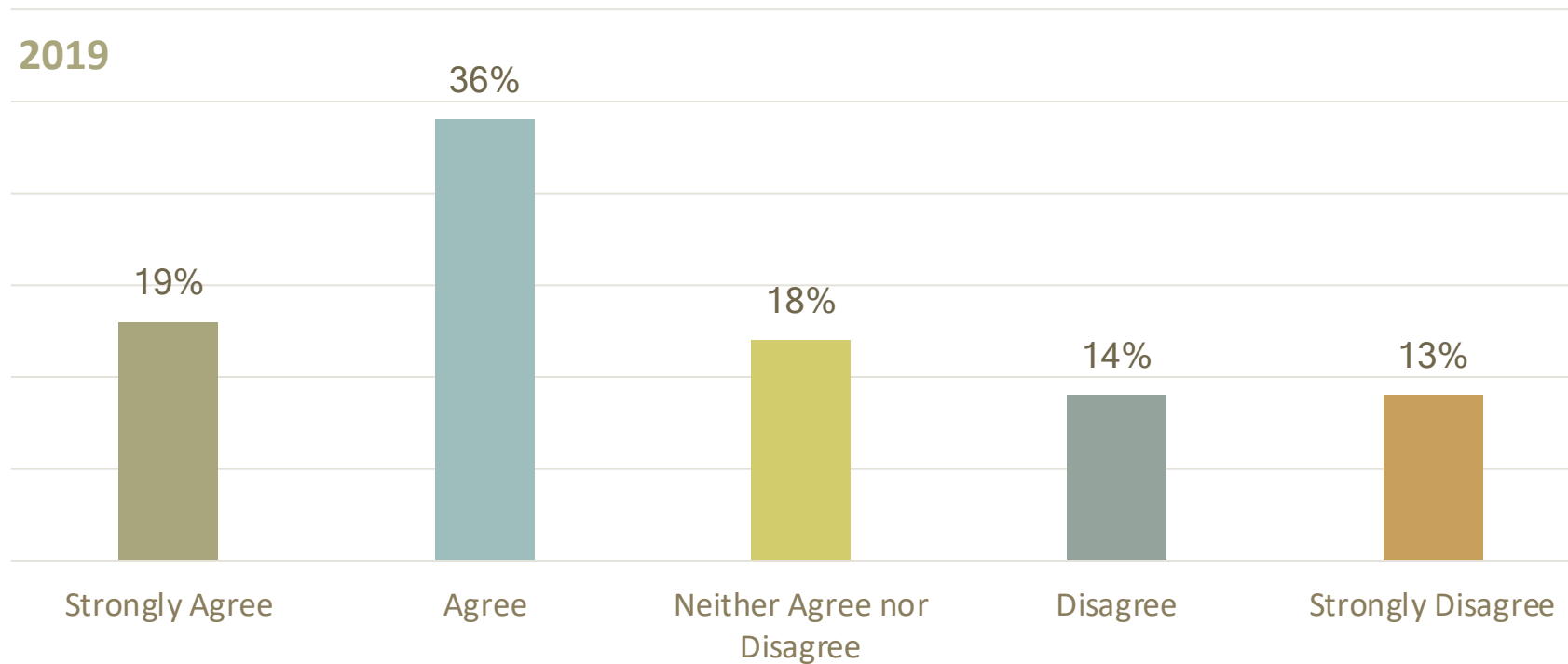
'Sentiment' Market Survey

6. The new mid-century EU decarbonisation strategy will strongly impact the EU ETS.



'Sentiment' Market Survey

7. The EU ETS should continue to play the same role in the EU climate change policy post 2030.



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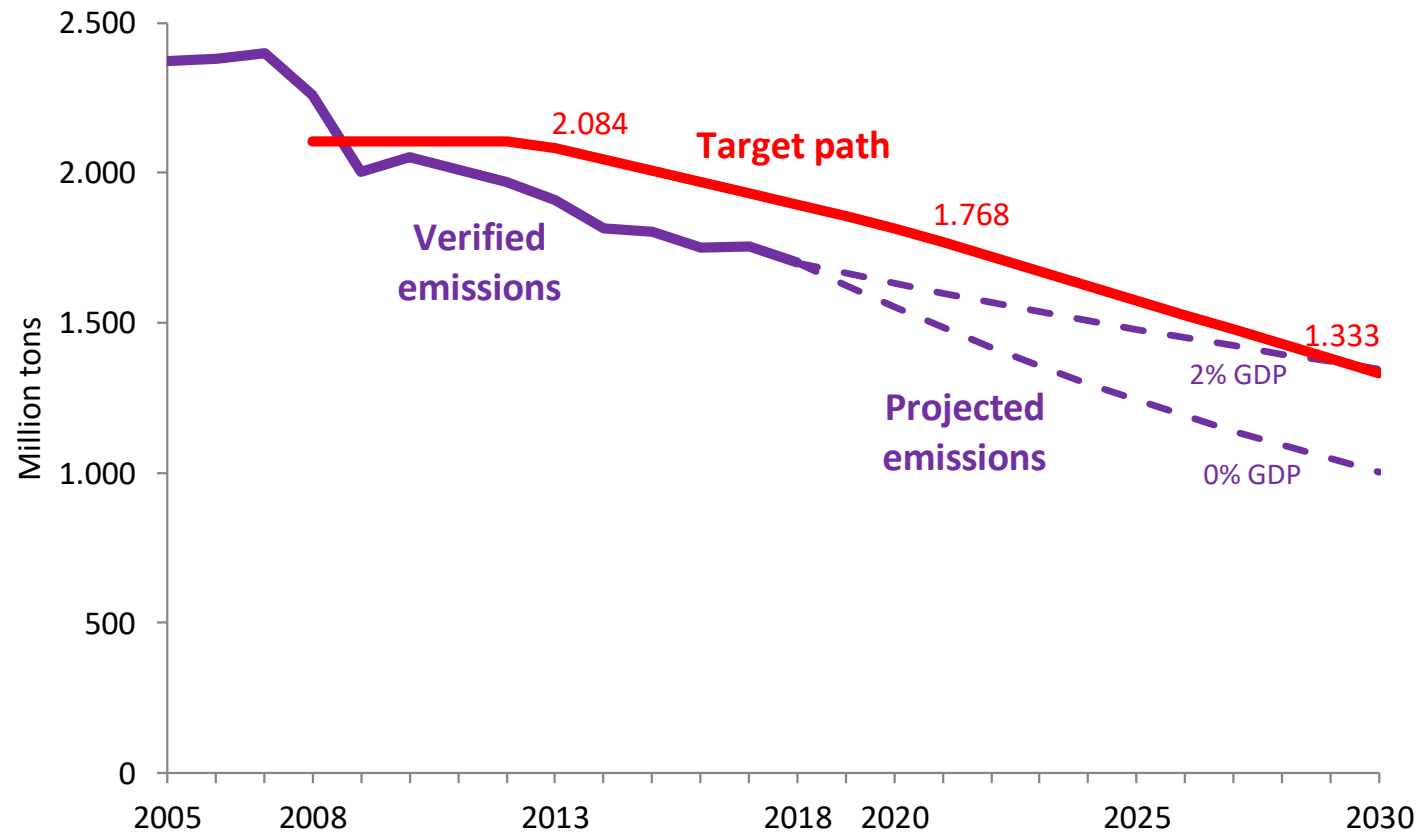
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Environmental Delivery

1. Delivery against the trading period target
2. Emission and decarbonisation trends
3. Delivery against EU long term domestic climate objectives
4. Lessons learned and issues to understand better

Delivery against the trading period

Comparison of emissions against the target cap



Source: Wegener Center elaborations on EEA, 2018 and EU TL, 2018

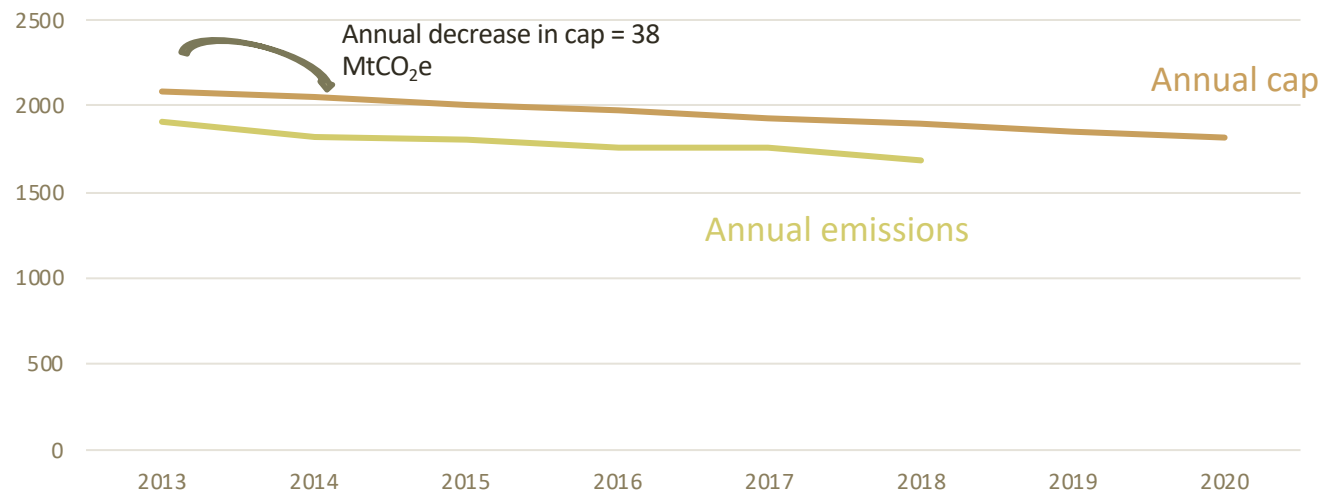
*2018 is an estimate based on preliminary data

- Overall emissions so far were well below the cap of the target path.
- According to the currently observed dynamics, emissions will hit the target path only in the case of sustained high economic growth and disruptions in the ongoing decline of emission intensities

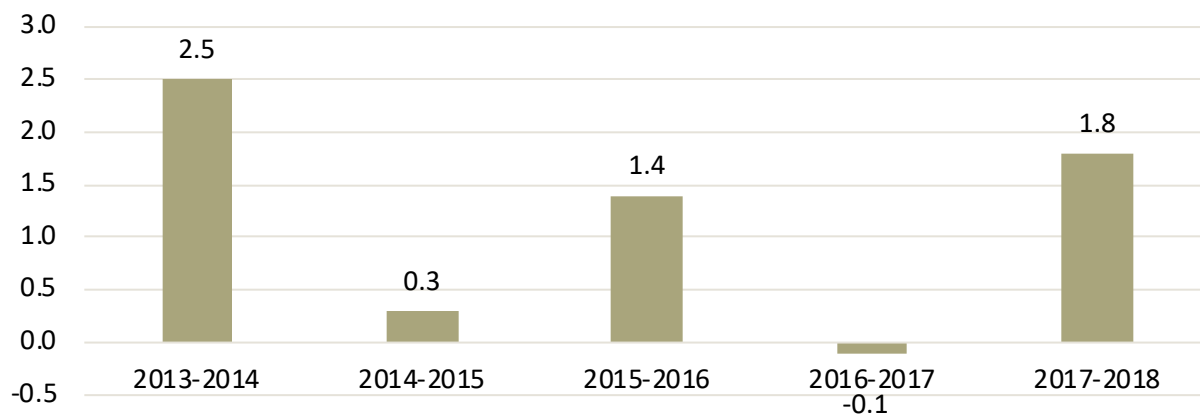
Delivery against the trading period

Comparison of the rate of decarbonisation with the decrease of the EU ETS cap

EU ETS cap and emissions in Phase III



Ratio of the annual variation in emissions to the annual variation in the cap



Between 2017 and 2018, emissions decreased **1.8 times** faster than the cap

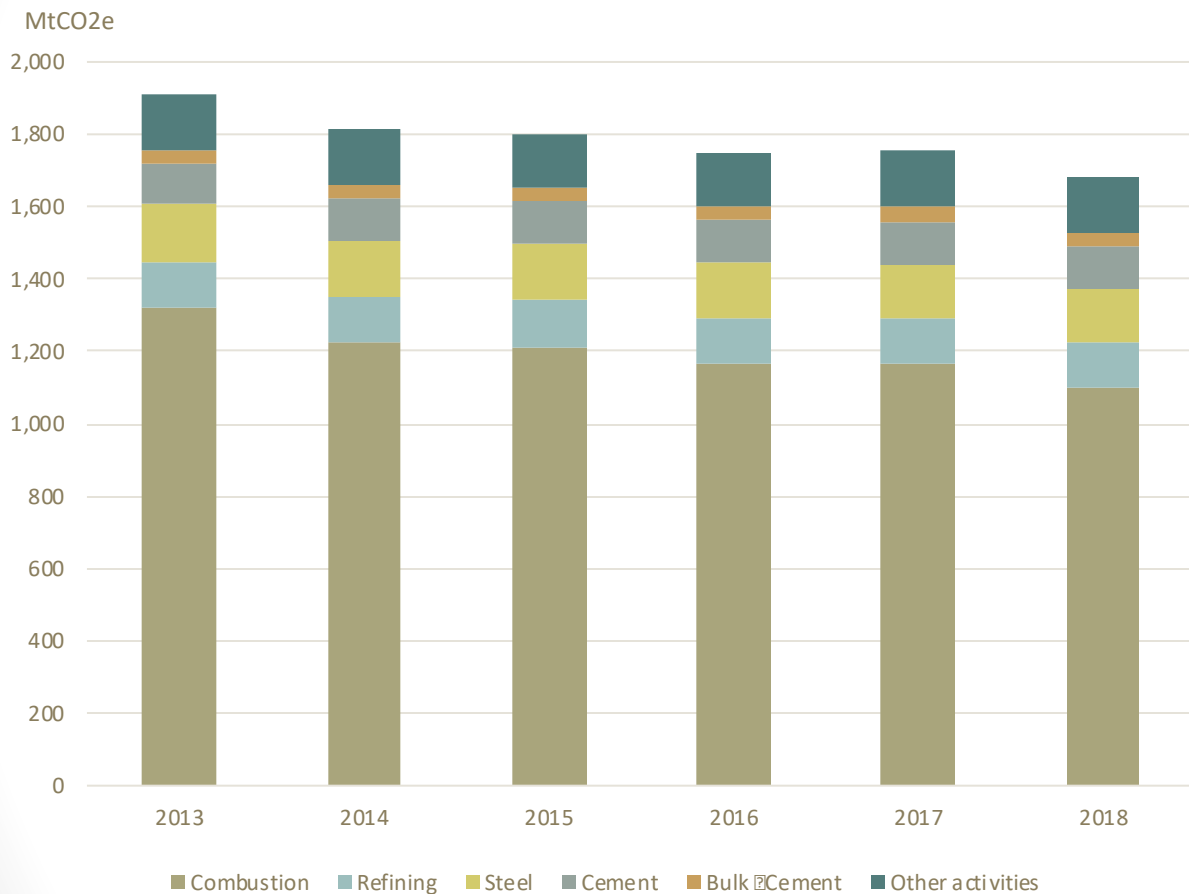
Interpretation of the graph: between 2013 and 2014, the decrease in emissions was equivalent to 2.5 the decrease in the cap

Source : I4CE, with data from the EEA

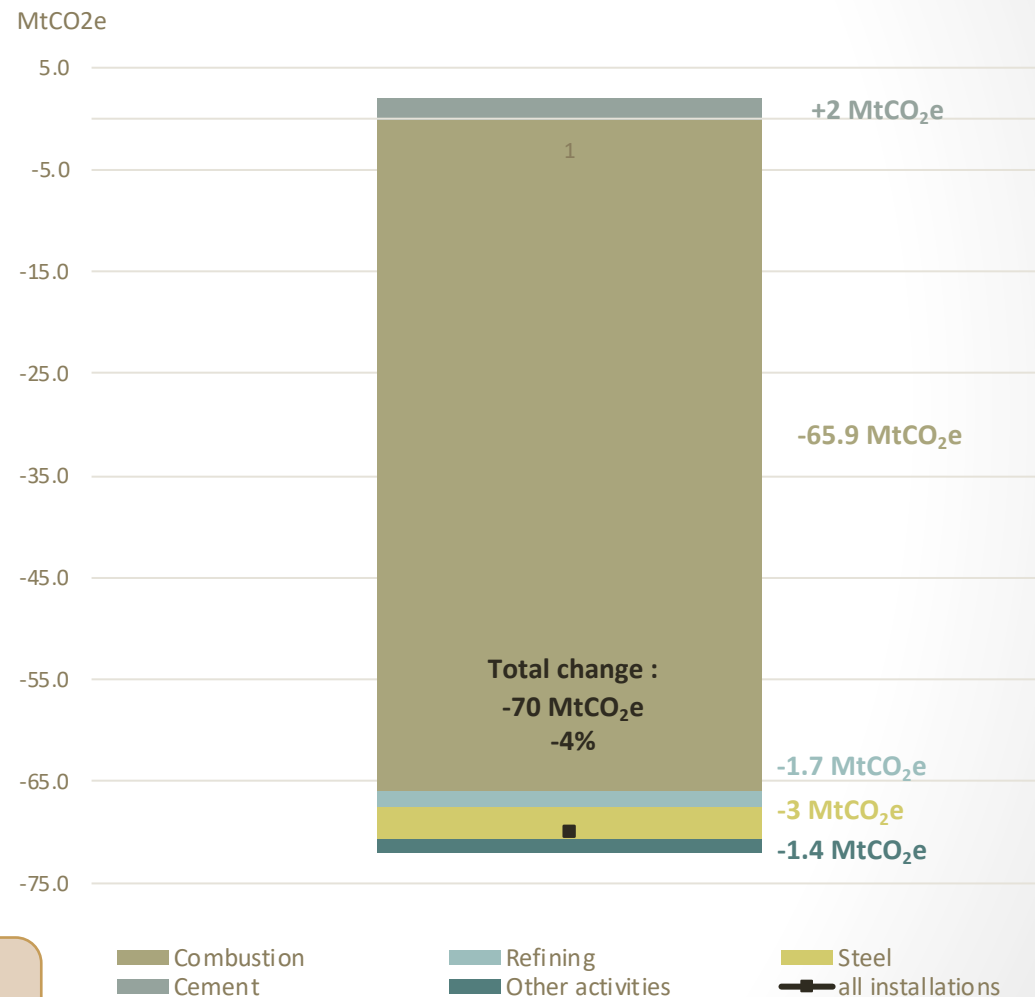
Emission and decarbonisation trends

Annual variation in EU ETS emissions by sector

Sectorial GHG emissions under the EU ETS in Phase III



Annual change in emissions between 2017 and 2018

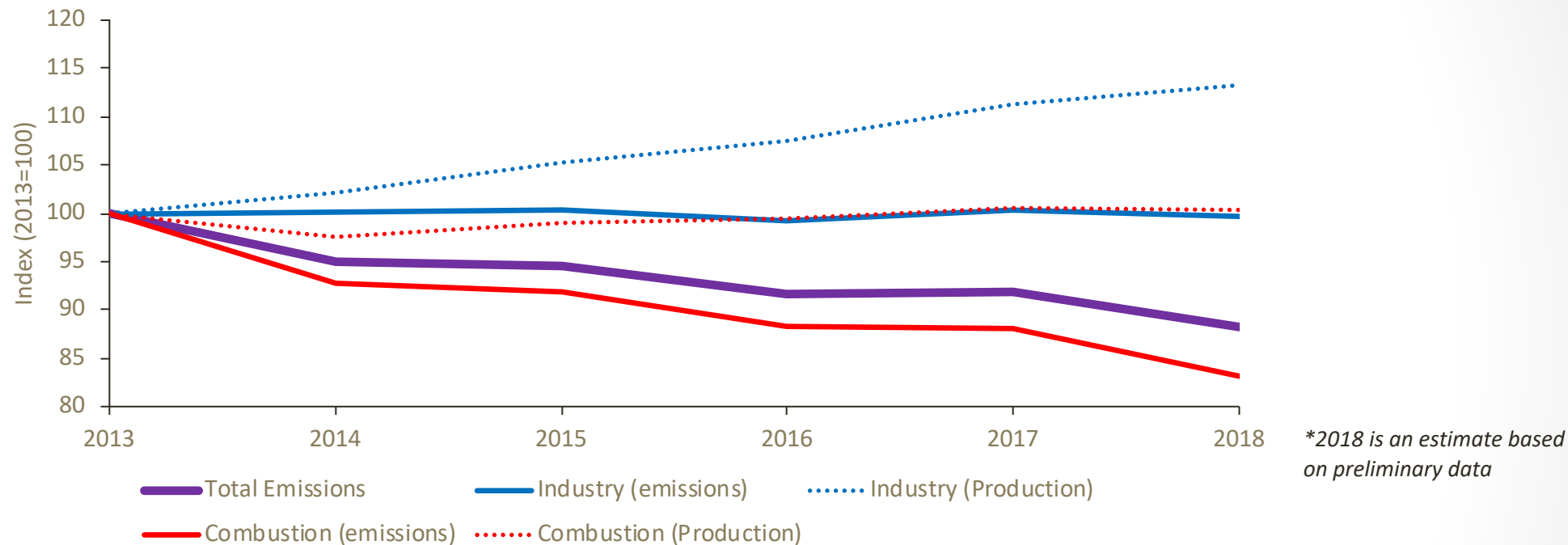


Annual variation in EU ETS emissions between 2017 and 2018 : **- 4%**

Emission and decarbonisation trends

Combustion and Industry

Index of emissions and index of volumes of production

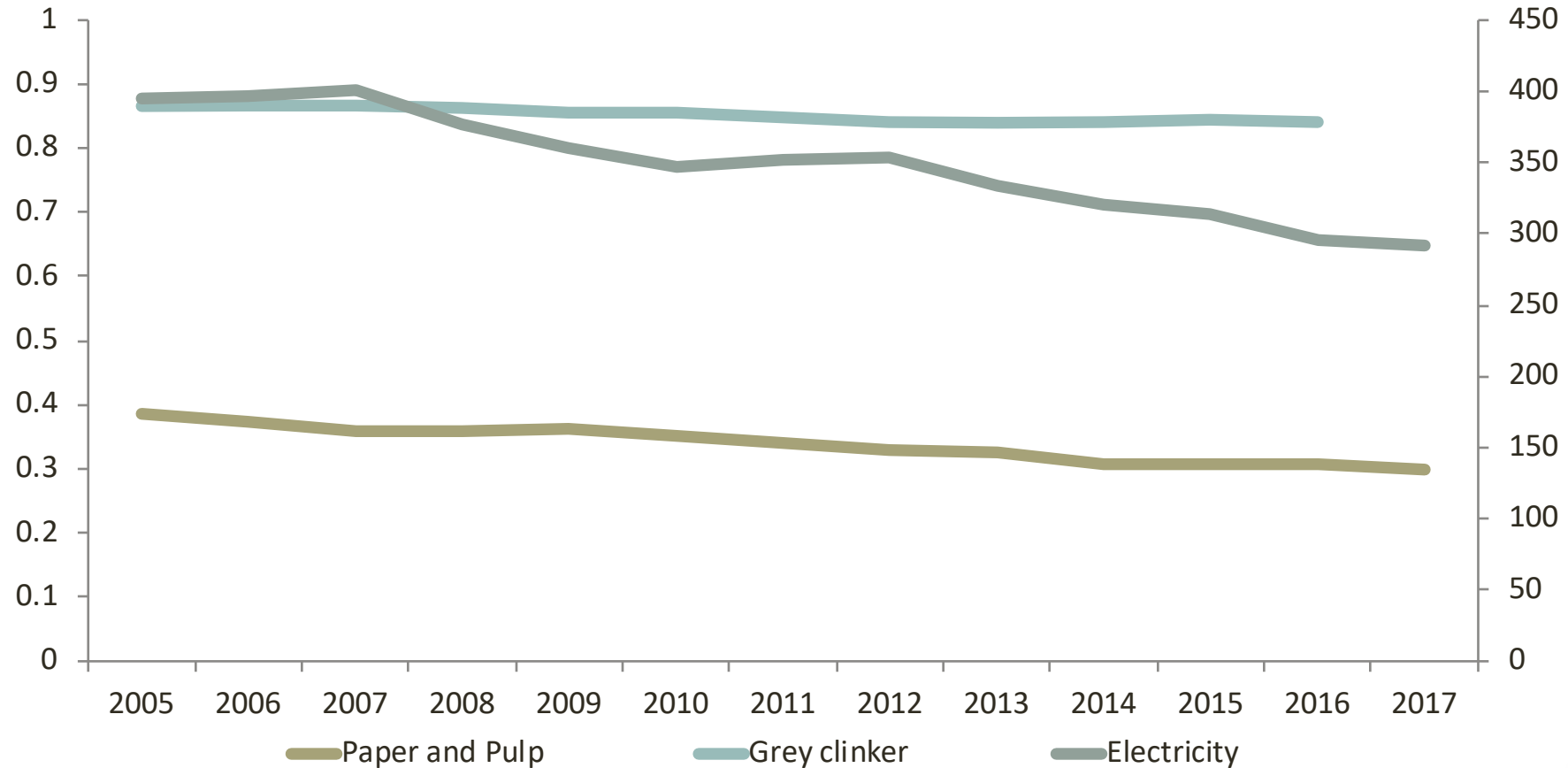


Source: Wegener Center and ERCST elaborations on EEA, 2019, EU TL, 2019, Sandbag & Agora, 2019 and Eurostat, 2019

- Overall emissions declined since 2013 until 2018 by about 10%
- Emissions are being decoupled from activity levels
- The combustion sector reduced emissions by about 15%, while the industry sector was flat

Emission and decarbonisation trends

Emission intensity data



Paper and pulp (left axis): ton of CO₂/ton of product. *Source: CEPI*

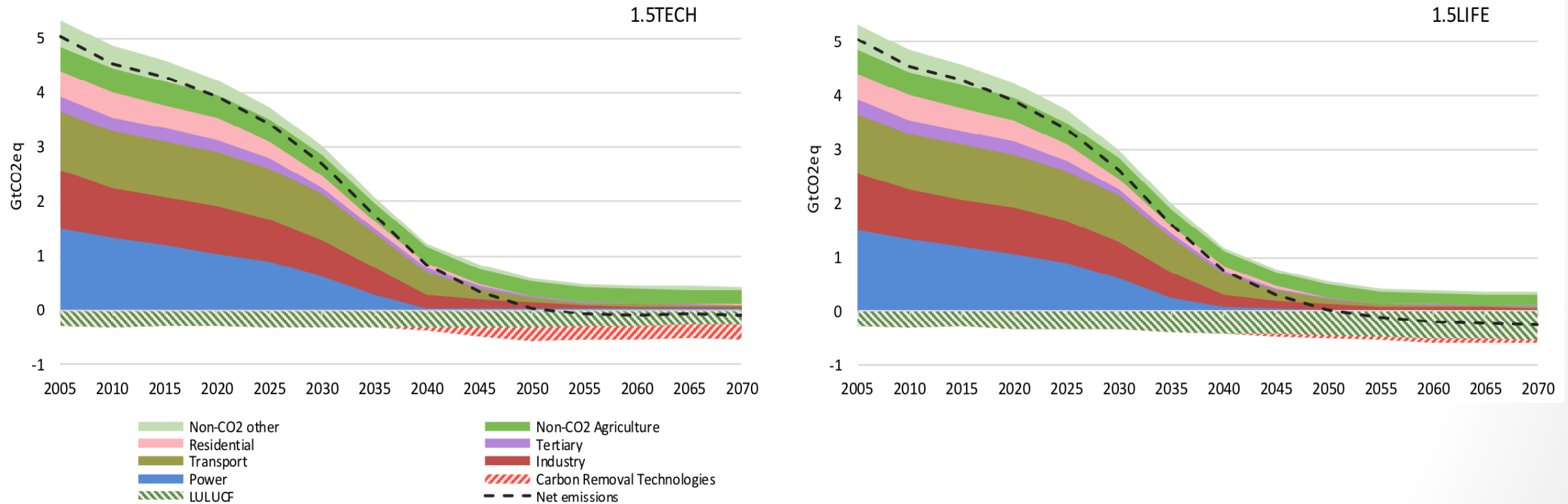
Grey clinker (left axis): ton of CO₂/ton of grey clinker. Excludes on site power generation *Source: GNR*

Electricity (right hand axis): gCO₂/kWh ratio of CO₂ emissions from public electricity production (as share of CO₂ emissions from public electricity and heat production related to electricity production), and gross electricity production. *Source: EEA*

Delivery against EU long term domestic climate objectives

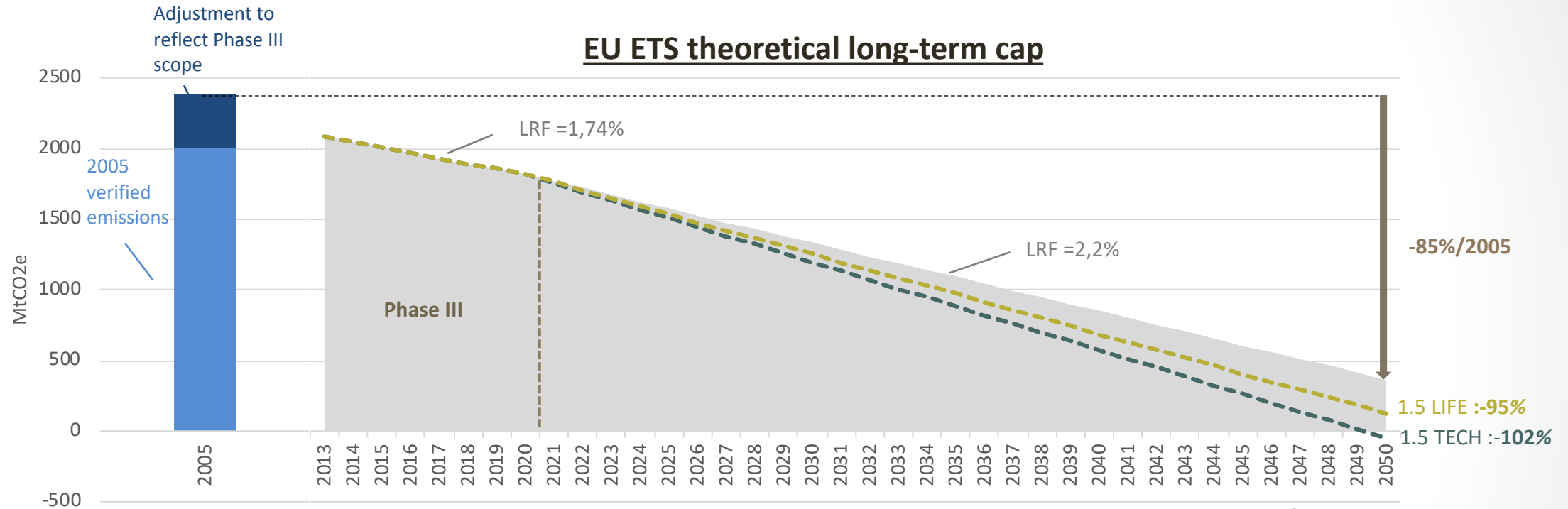
Two ways to reach net zero GHG emissions: 1.5 TECH; 1.5 LIFE

Power goes to zero emissions by 2040; sharp decrease also for industry



Delivery against EU long term domestic climate objectives

Reaching net zero emissions requires a drastic decrease in EU ETS emissions



Source: I4CE with data from the Commission

- Keeping a LRF of 2.2% until 2050 would result in a 85% decrease in EU ETS cap compared to 2005 emissions.
- 1.5 scenarios prepared by the Commission in its long-term strategy – 1.5 LIFE and 1.5 TECH- respectively achieve a **reduction of 95% and 102% in EU ETS emissions** in 2050 compared to 2005.
- If the EU ETS cap were to decrease linearly to these levels, it would respectively require increasing the LRF to **2.83%** and **2.57%** from 2021.

Environmental delivery

Conclusion

EU ETS is delivering against trading period target

- Emissions are under target path since 2009
- Emissions decreased again in 2018 after a minor increase in 2017, down by 4% in 2018 compared to 2017
- Decarbonisation trends vary significantly in the different sectors
- The EC proposed a strategic long-term vision towards 2050 and presented 8 scenarios, which would have different impacts on the EU ETS
 - All require a drastic departure from the past

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Economic efficiency

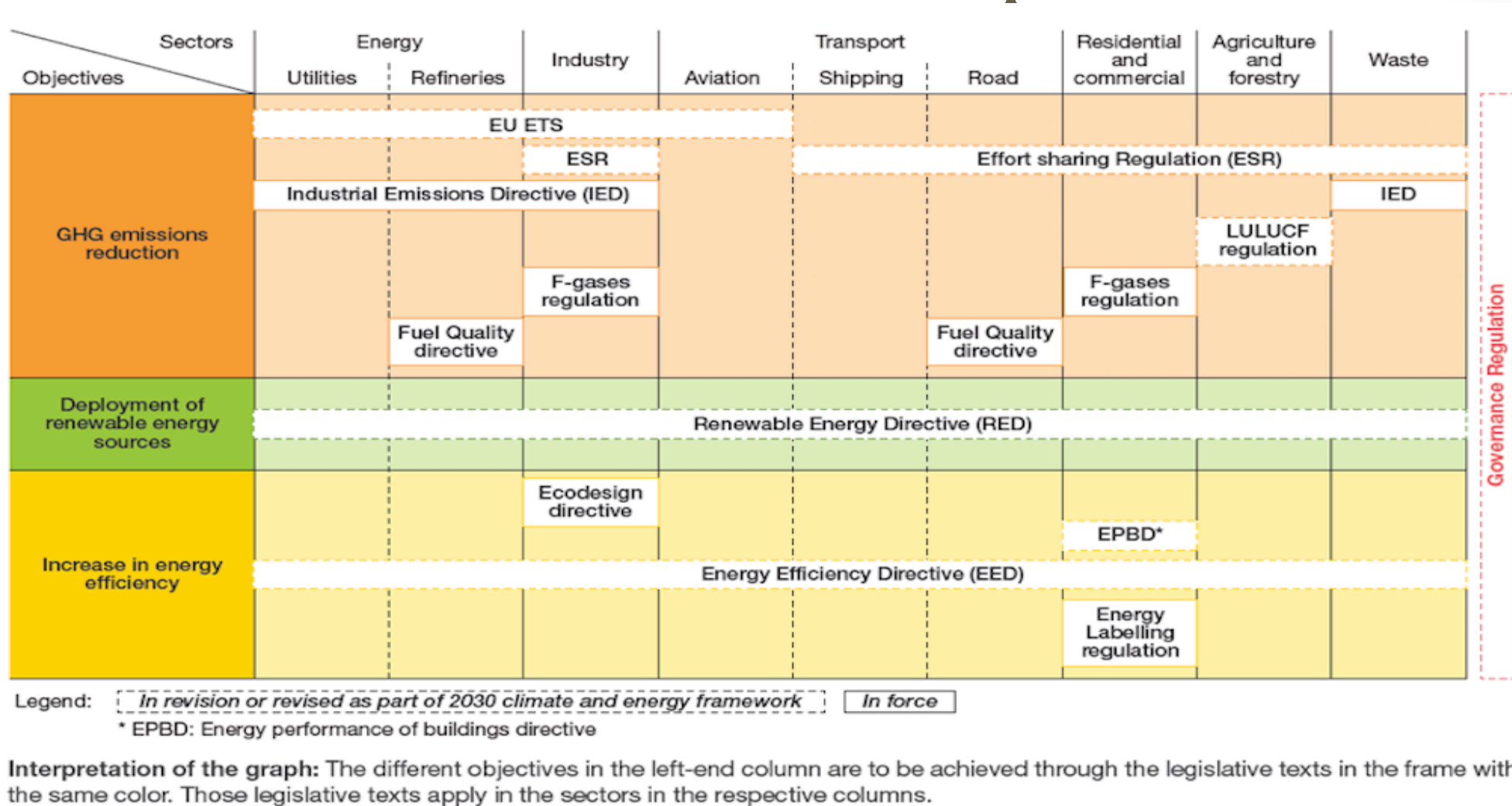
1. Is the EU ETS a driver for change?
 - I. Interaction with other policies;
 - II. Decarbonization in the power sector;
 - III. Deployment of new low-carbon technologies;
 - IV. Use of auction revenues.

2. Monetary impacts and carbon leakage
 - I. Direct costs
 - II. Indirect costs

Interaction with other policies

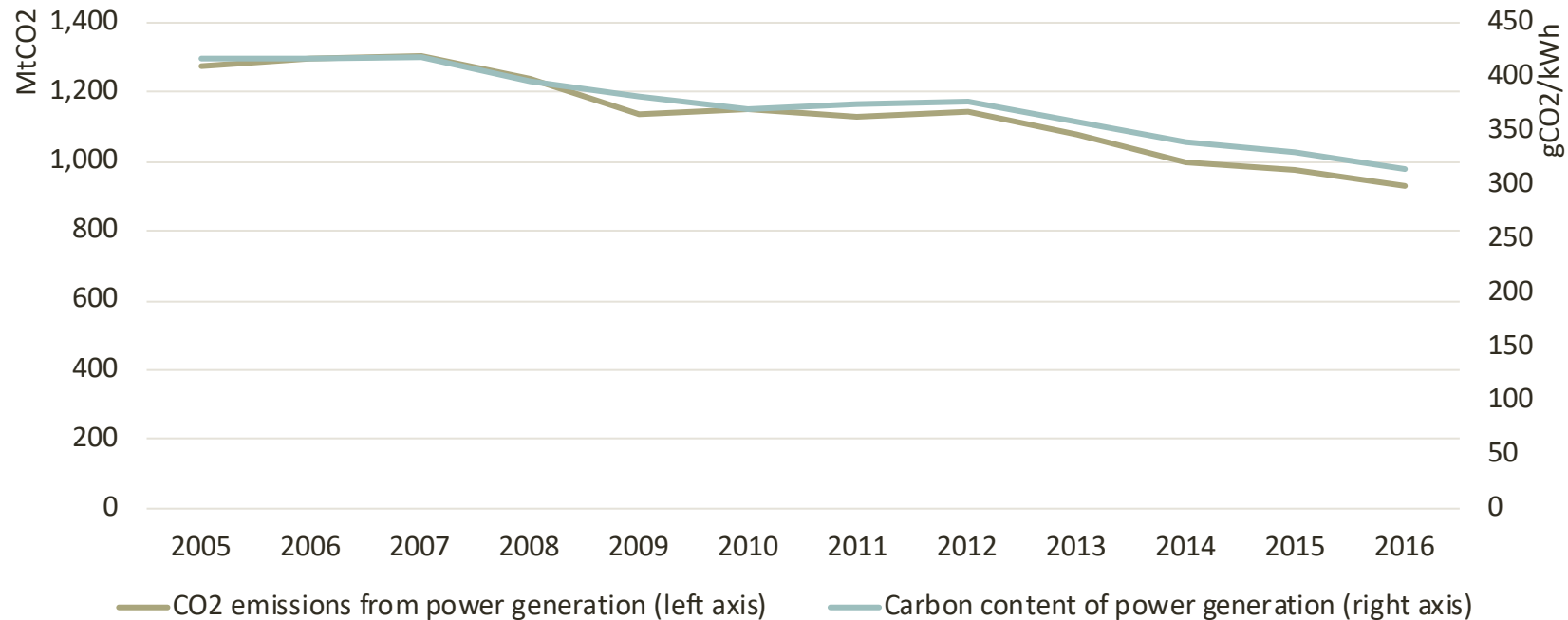
- The effects of policy overlap create negative impacts on the economic efficiency of EU ETS
- RES/EE targets set at the EU level have implications on the decarbonisation of EU ETS sectors. The EU ETS also interacts with the effort sharing regulation (ESR) and other EU policies for GHG emissions reduction
- Similar implications stemming from national policies, as in the case of coal-phase outs
- The MSR was put in place to partially reconcile the effects of policy overlaps and the EU ETS – *deeper analysis included in Chapter 6*

Interaction with EU-level policies



Decarbonisation in the power sector

CO₂ emissions from the power sector and carbon content of power generation (2005-2016)

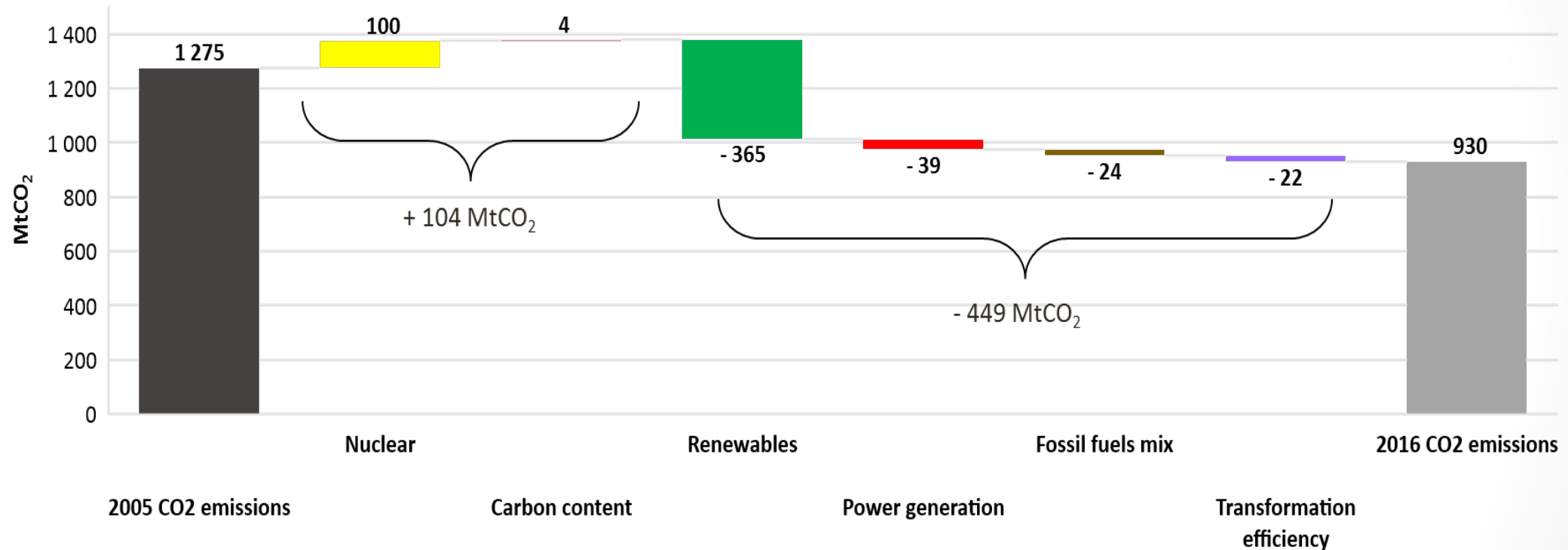


Source : I4CE based on data from Eurostat and the IPCC

- Between 2005 and 2016, CO₂ emissions from the power sector decreased by almost **350 MtCO₂ (27%)**.
- In the same period, the carbon content of power generation decreased by **24%**.

Decarbonisation in the power sector

Drivers of emissions variations in the power sector in the EU (2005-2016)

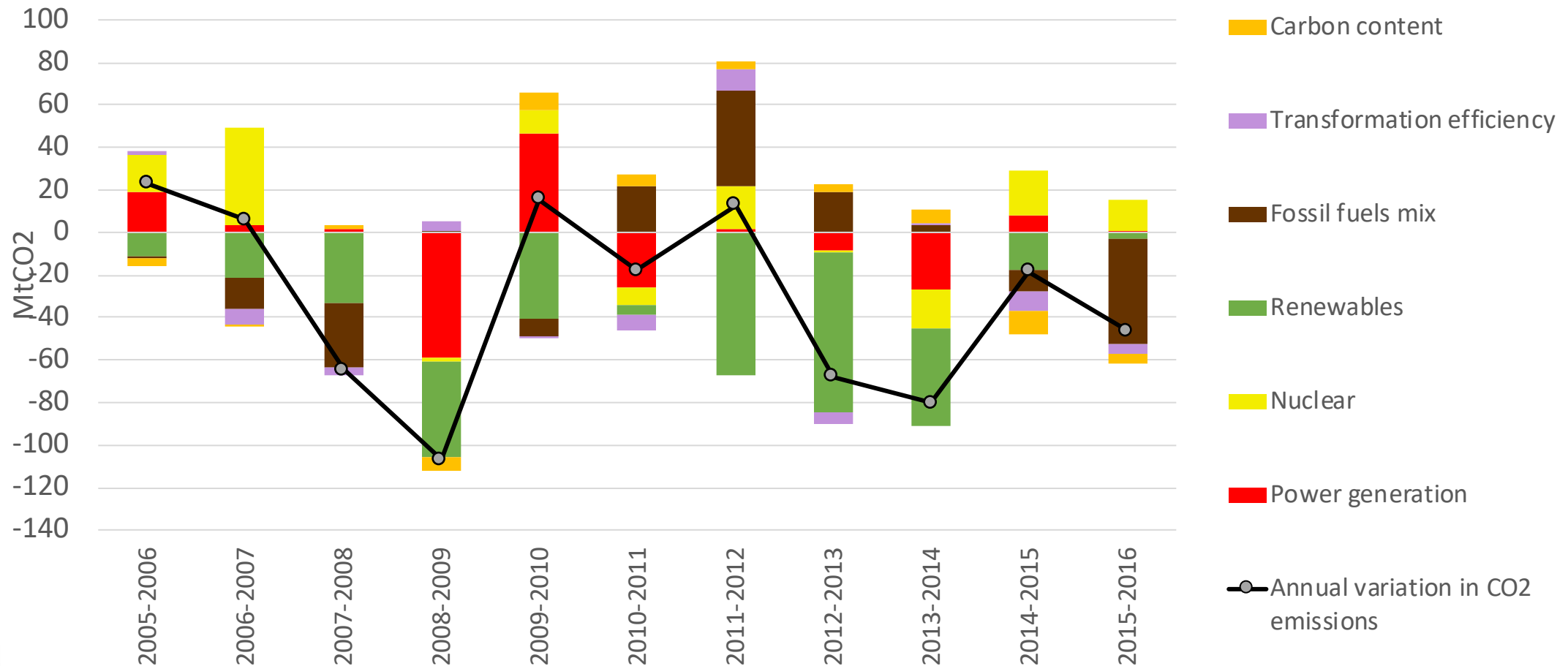


Source : I4CE based on data from Eurostat and the IPCC

- The **deployment of renewable sources of energy** was the most important driver in decreasing CO₂ emissions in the power sector over 2005-2016: **-365 MtCO₂e** over the period

Decarbonisation in the power sector

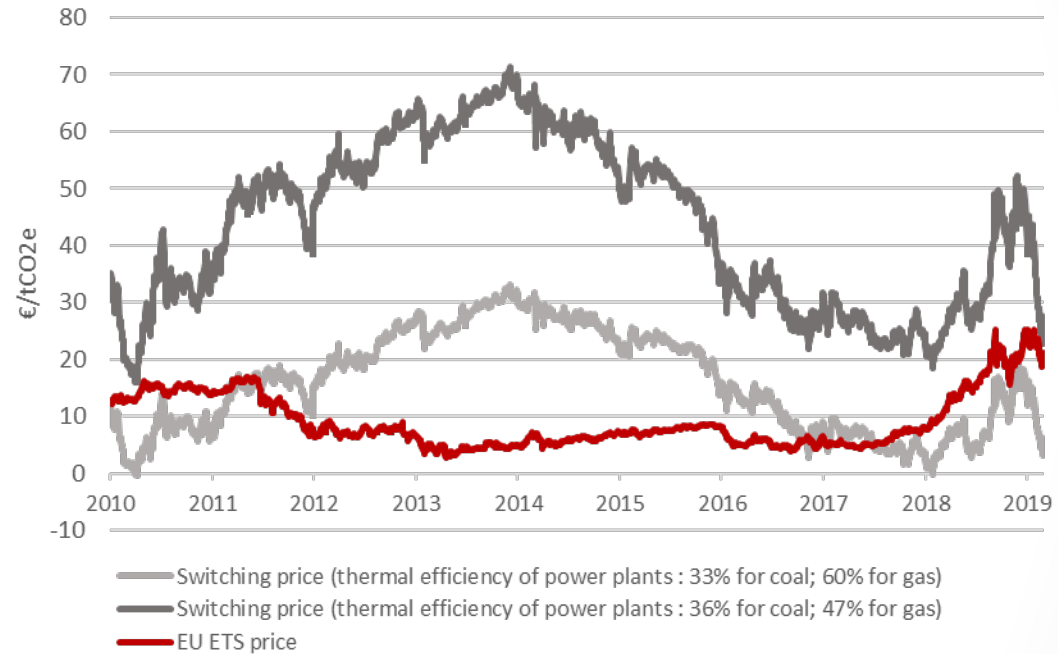
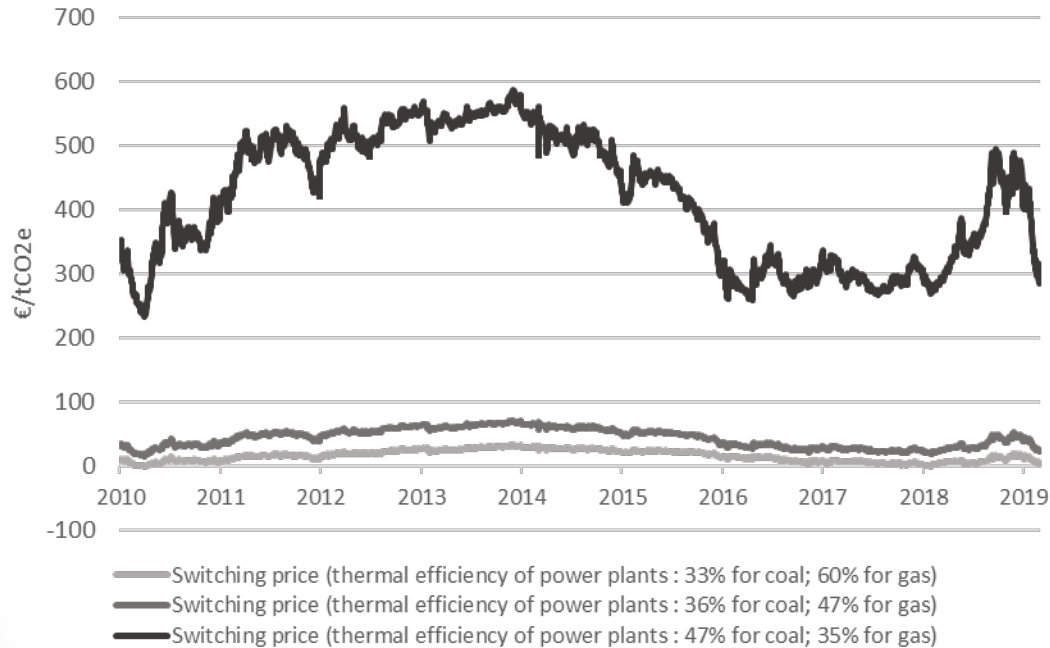
Annual drivers of emissions variations in the power sector in the EU (2005-2016)



Is the EU ETS a driver for change?

Comparison of EU ETS price with CO₂ switching price in the power sector

CO₂ switching price for different coal and gas power plants efficiencies, in comparison with EU ETS price



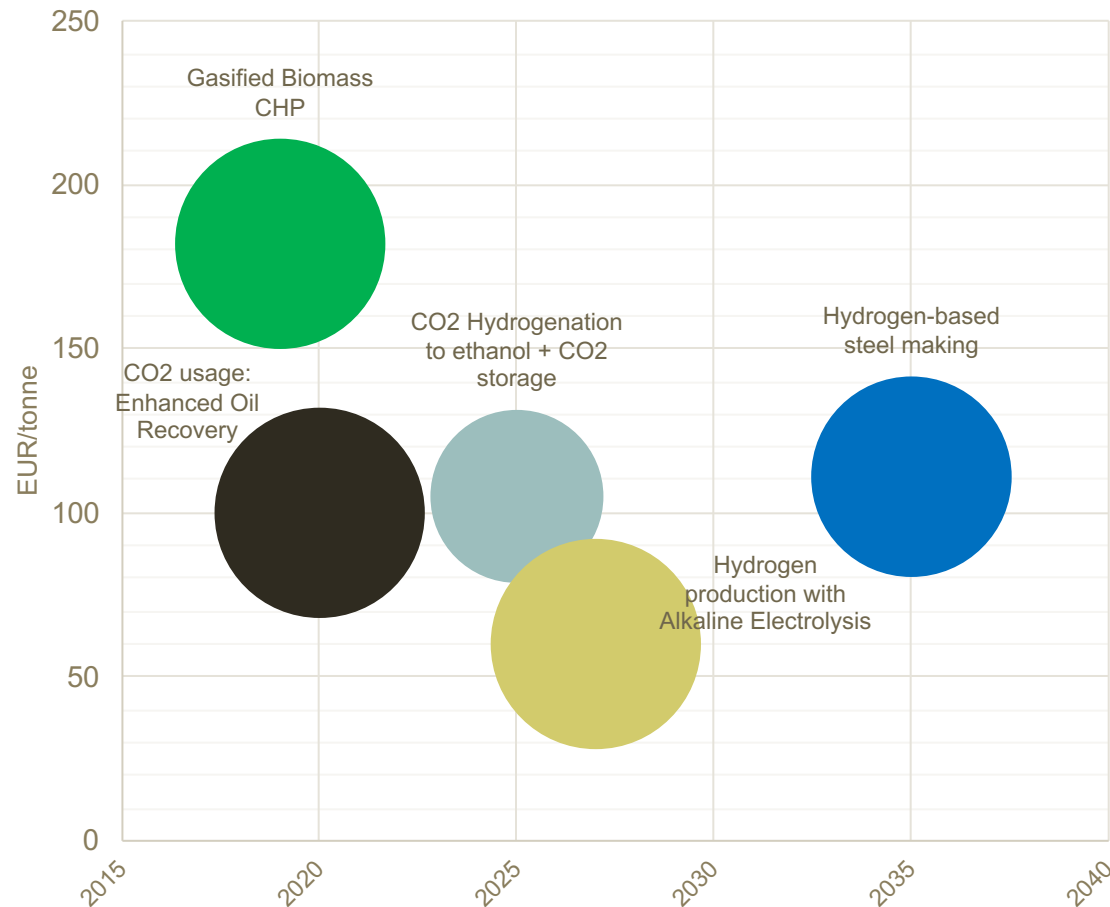
In 2018, the EU ETS price was above minimum switching price levels **100%** of the time*

In 2017 and 2016, this proportion was respectively **53%** and **5%**

Source : I4CE, with data provided by ICIS (EU ETS prices, CIF ARA API2 prices, and TTF prices). Other data sources are : Banque de France for the conversion dollars/euros, IPCC Guidelines and Eurostat for the CO₂ content of gas and coal used for power generation in the EU. Average efficiencies of power plants are based on WEC database of energy efficiency indicators, minimum and maximum values on JRC study.

* Calculated over working days

Deployment of new technologies

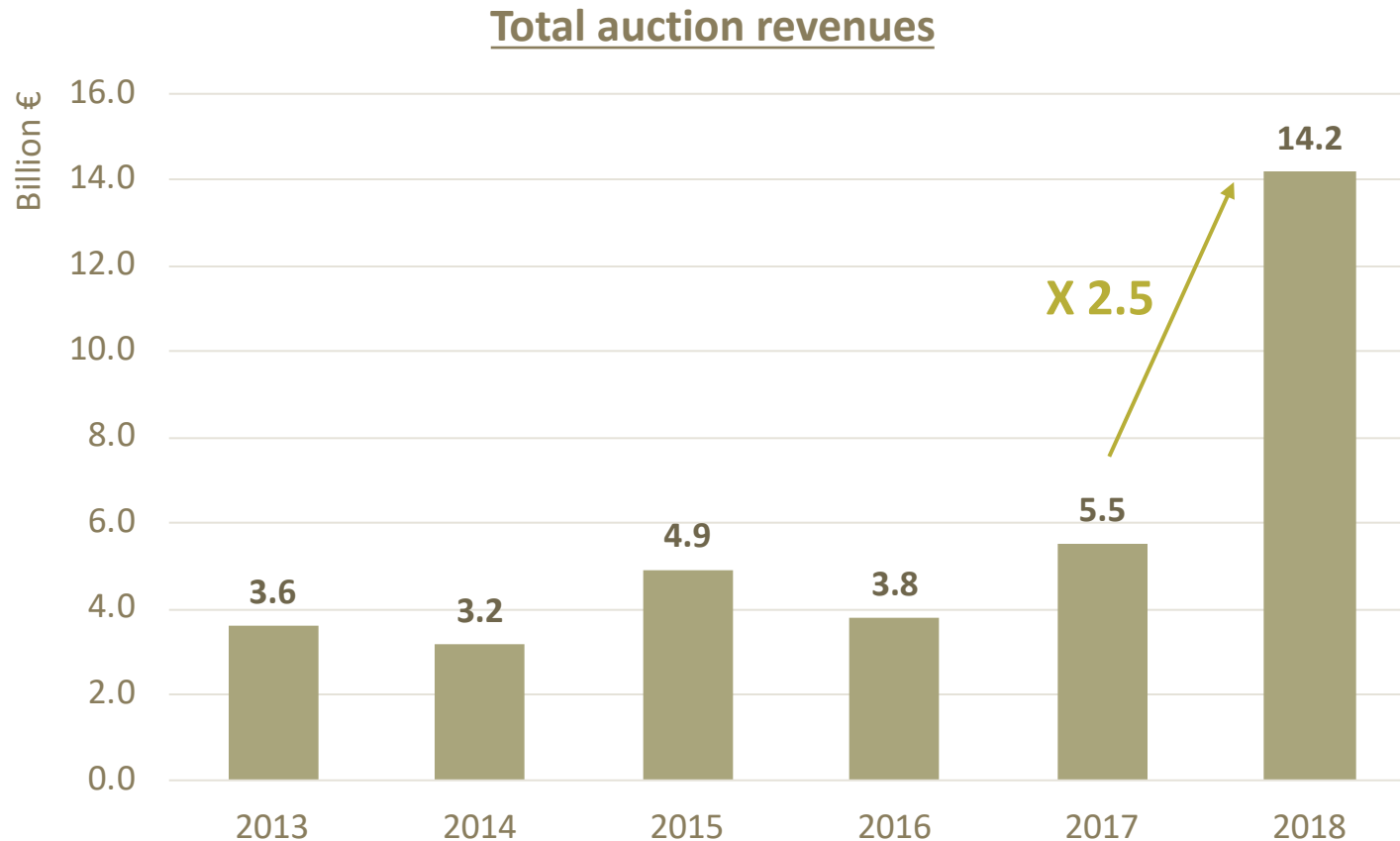


Source: ICIS (2019)

- Great part of the new technologies in industrial sectors are still at an early stage of their developments
- Their availability will come at a later stage
- Carbon prices will hardly be the main driver in supporting the mass deployment of these technologies

Is the EU ETS a driver for change?

More revenues from auctions = more money for climate action?



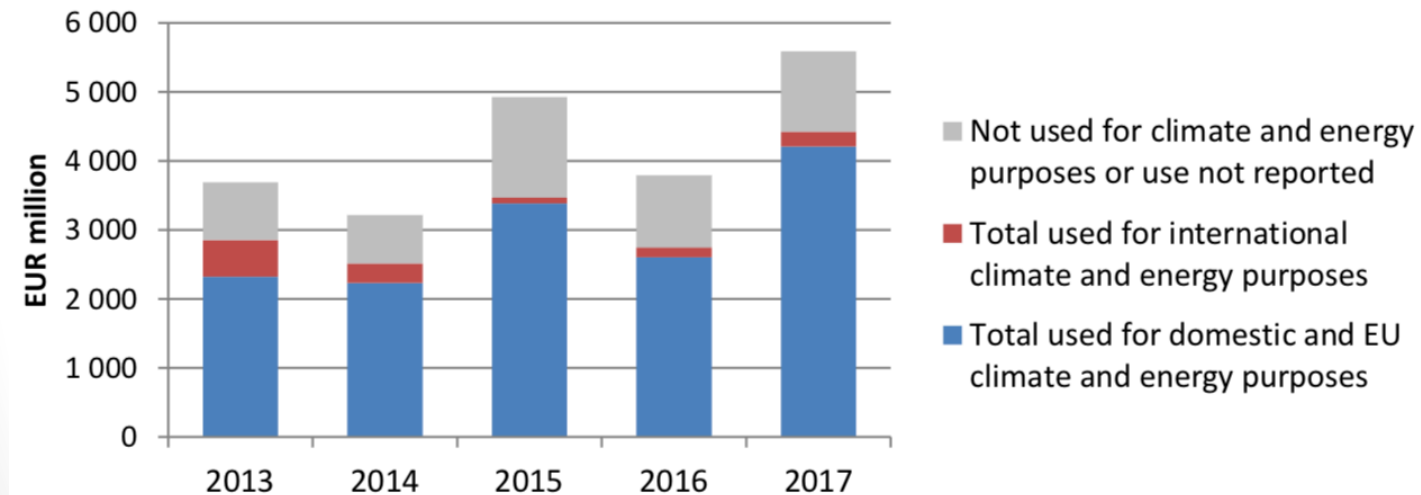
Source: I4CE, with data from EEX and ICE

- In 2018, total revenues from the auctioning of allowances reached **14.2 billion €**
- It represents **an increase of more than 150 %** compared to the previous year
- Over 2013-2017, **around 80% of auction revenues** were spent for climate and energy purposes, mainly in the EU

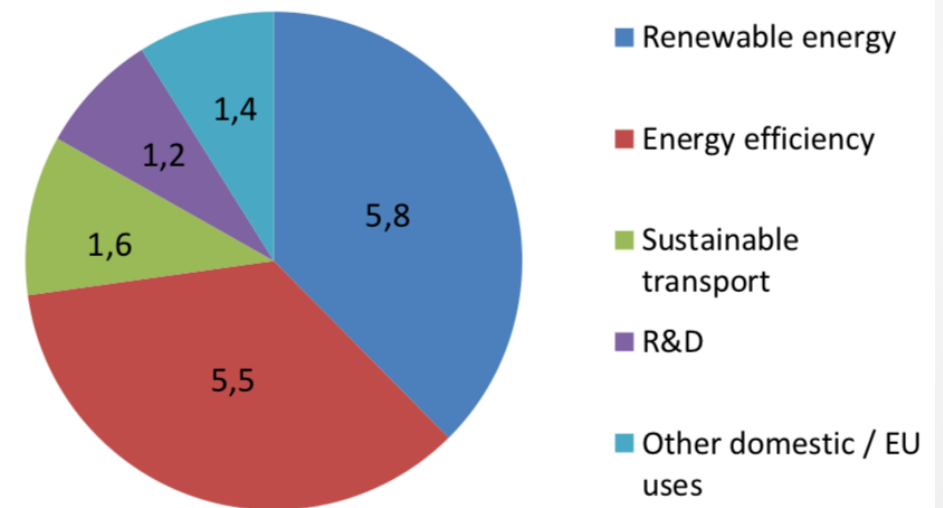
Is the EU ETS a driver for change?

More revenues from auctions = more money for climate action?

Revenues from the auctioning of EU ETS allowances



Use of revenues for domestic climate and energy purposes from auctioning of ETS allowances, 2013-2017 (EUR billion)

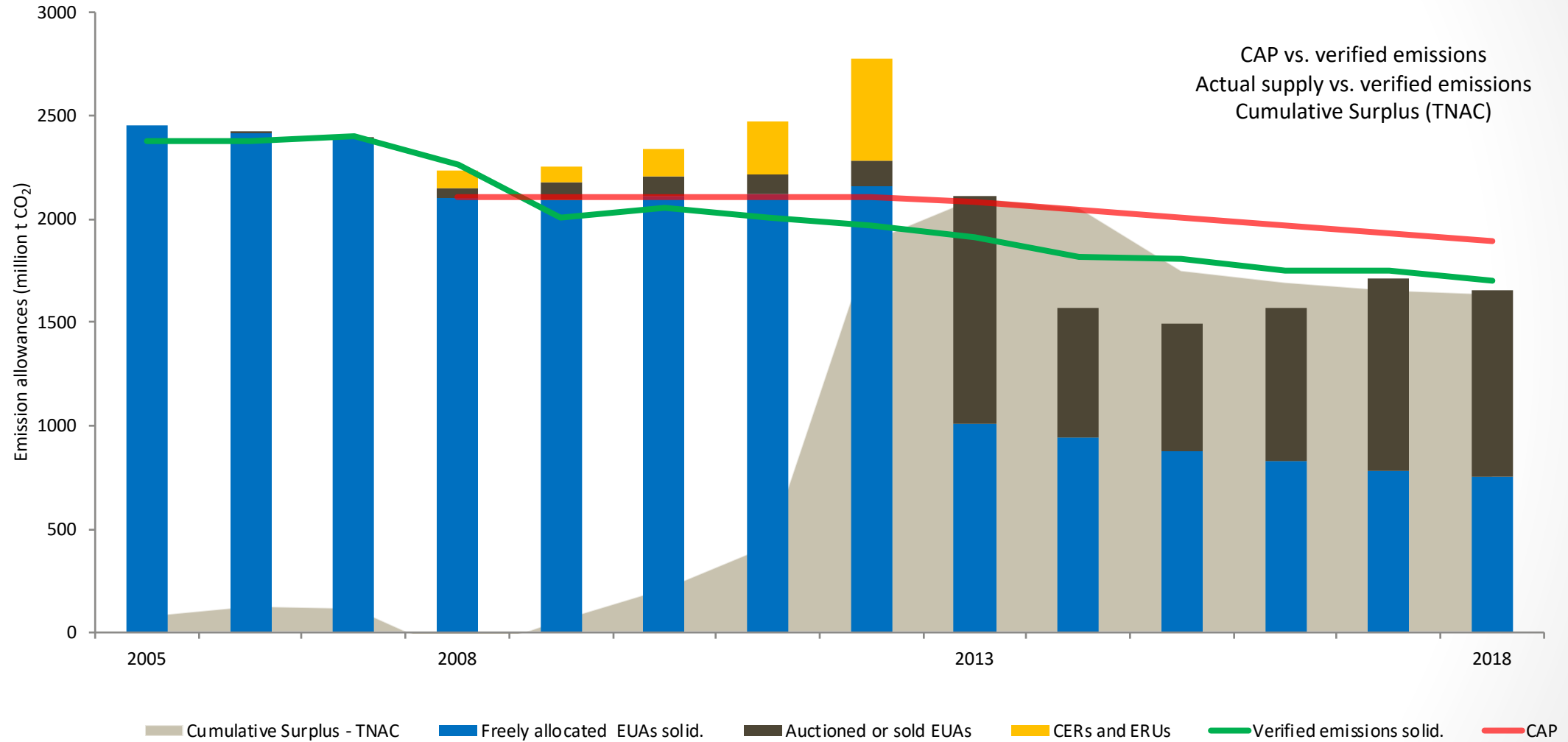


Source: Report From The Commission To The European Parliament And The Council {SWD(2018) 453 final}

Monetary impacts and carbon leakage

- **Direct costs**
- Indirect costs

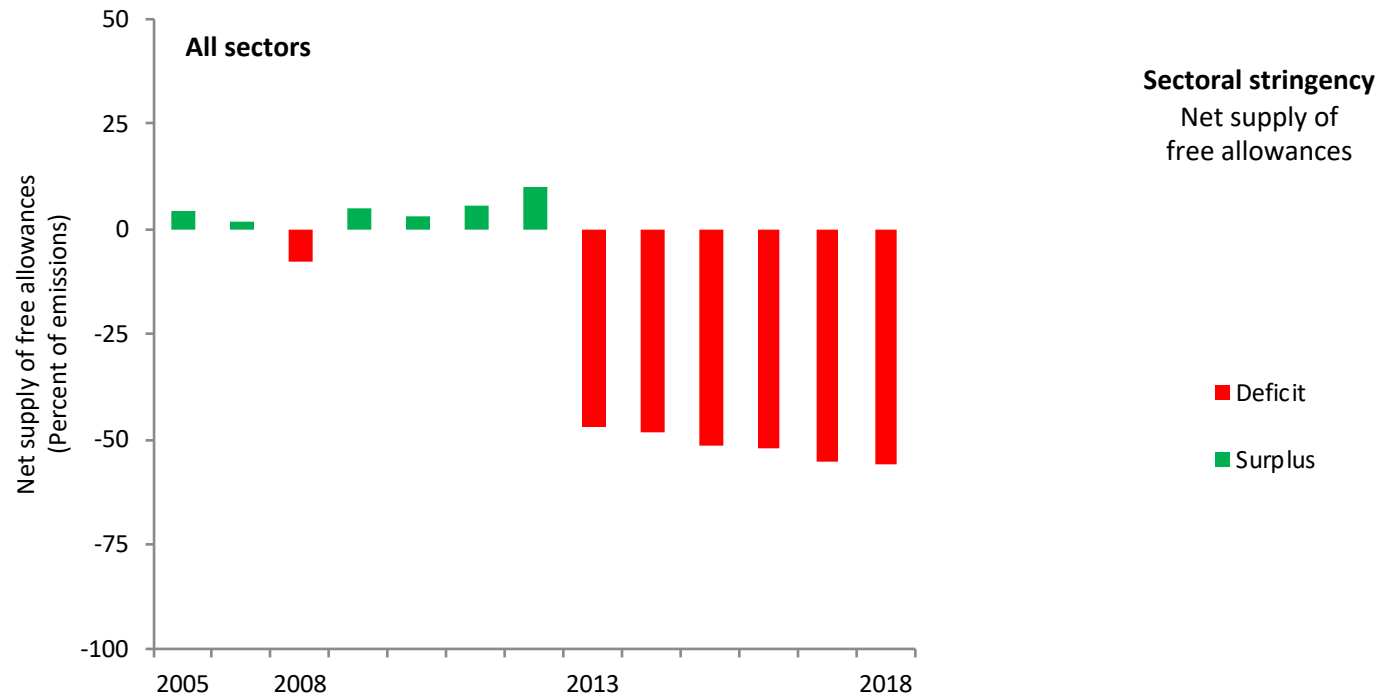
Market balance in EU ETS



Source: Wegener Center (2019)

*2018 is an estimate based on preliminary data

Overall free allocation vs emissions in EU ETS

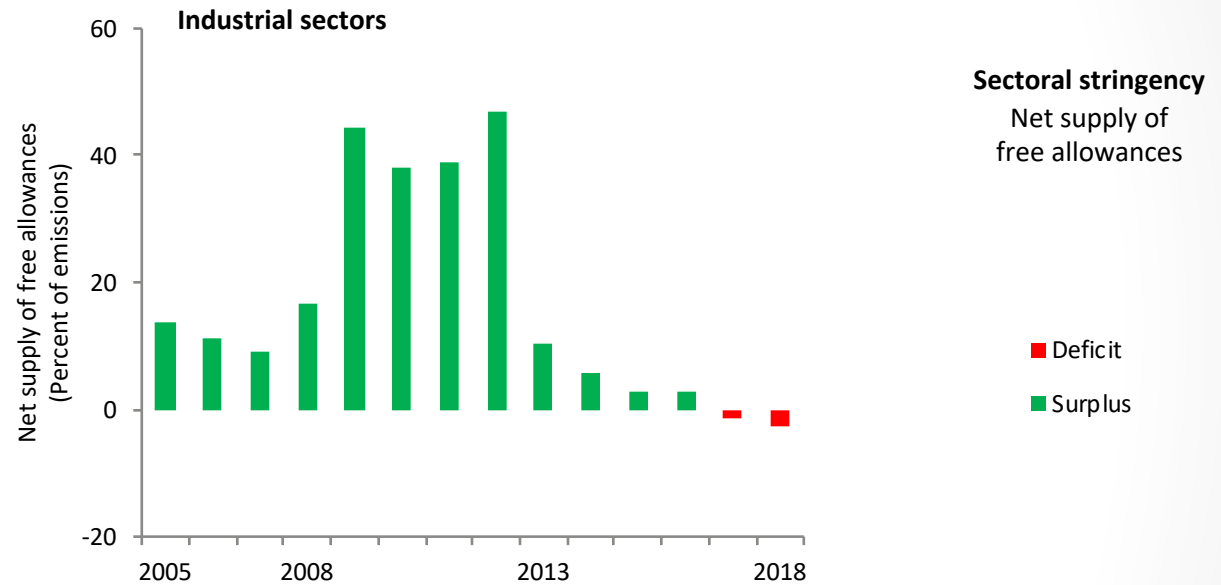
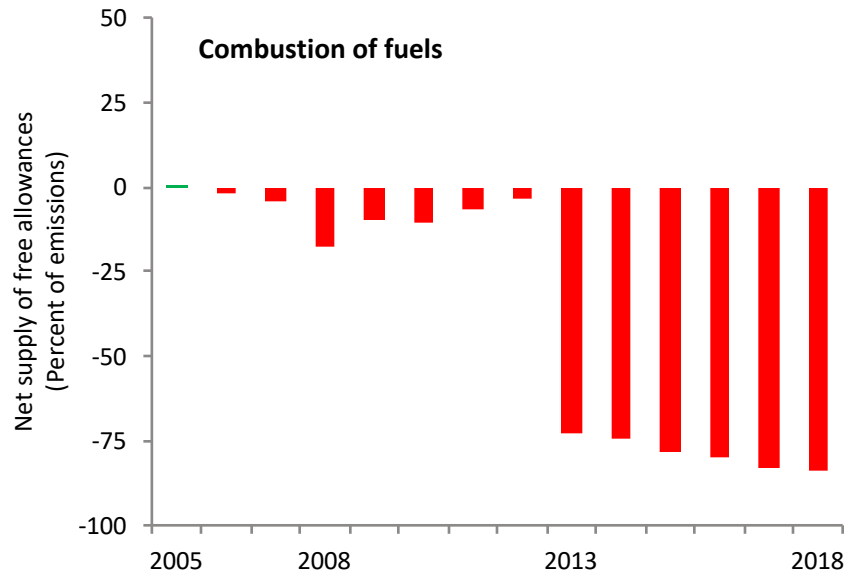


Source: Wegener Center elaborations on EEA, 2018 and EU TL, 2019

*2018 is an estimate based on preliminary data

- Net supply of free allowances, defined as $(\text{free allowances}/\text{emissions} - 1) * 100$ measures the stringency of sectors and installations

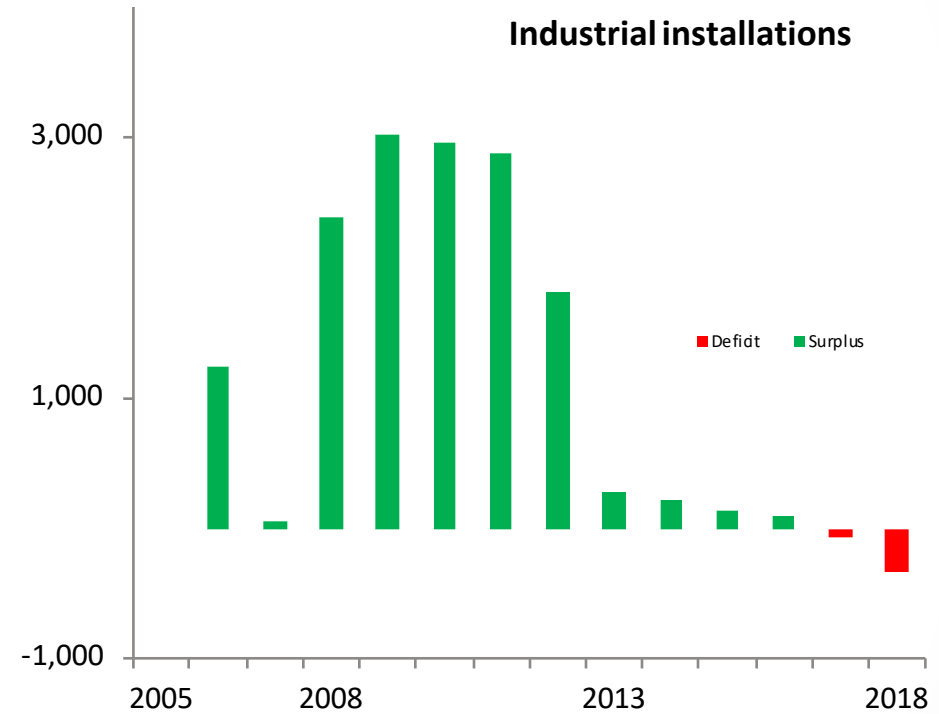
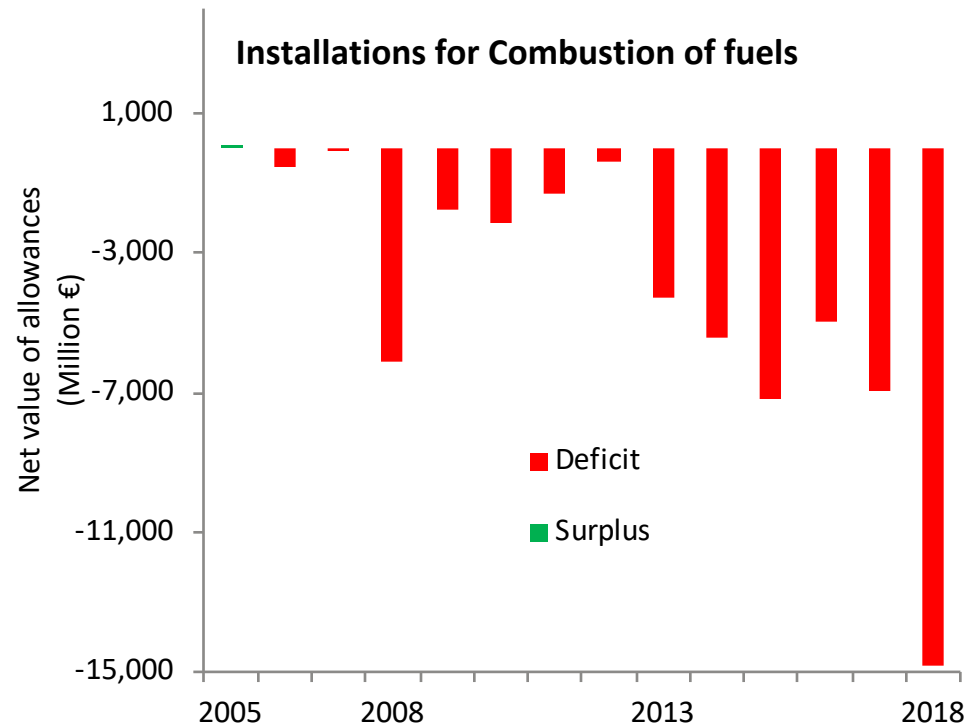
Stringency in EU ETS: combustion and industry



Source: Wegener Center elaborations on EEA, 2018 and EU TL, 2019

*2018 is an estimate based on preliminary data

Net costs of allowances: combustion and industry

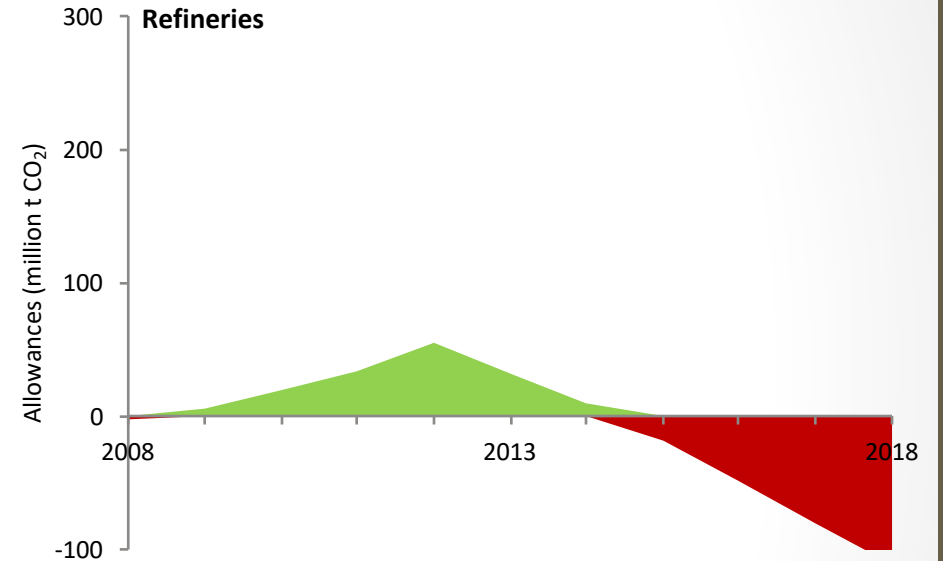
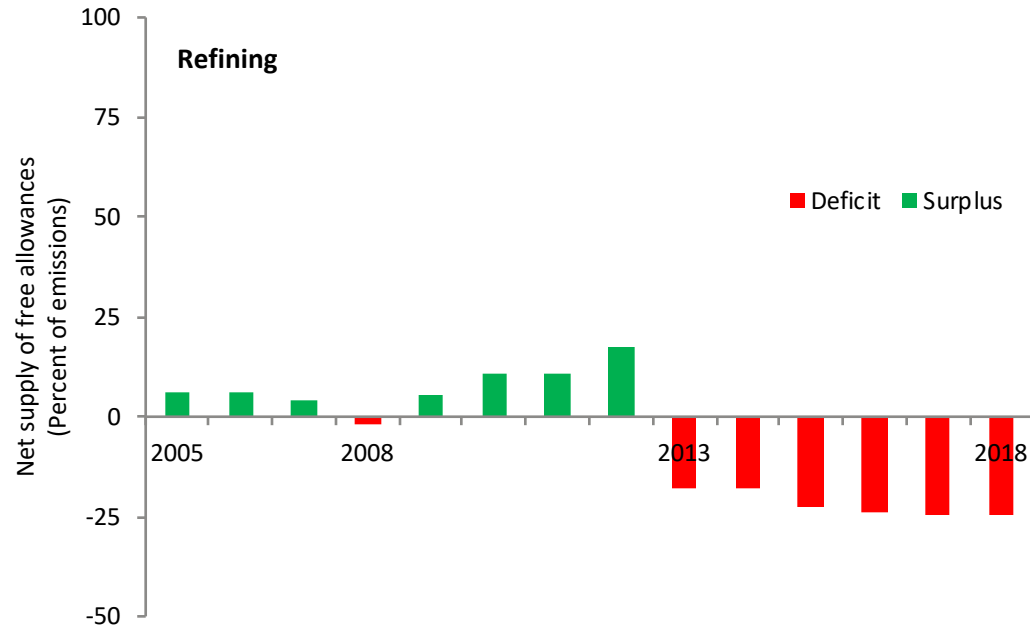


Source: Wegener Center elaborations on EEA, 2018 and EU TL, 2019

*2018 is an estimate based on preliminary data

Sectoral stringency: refining of mineral oil

- Activity 21



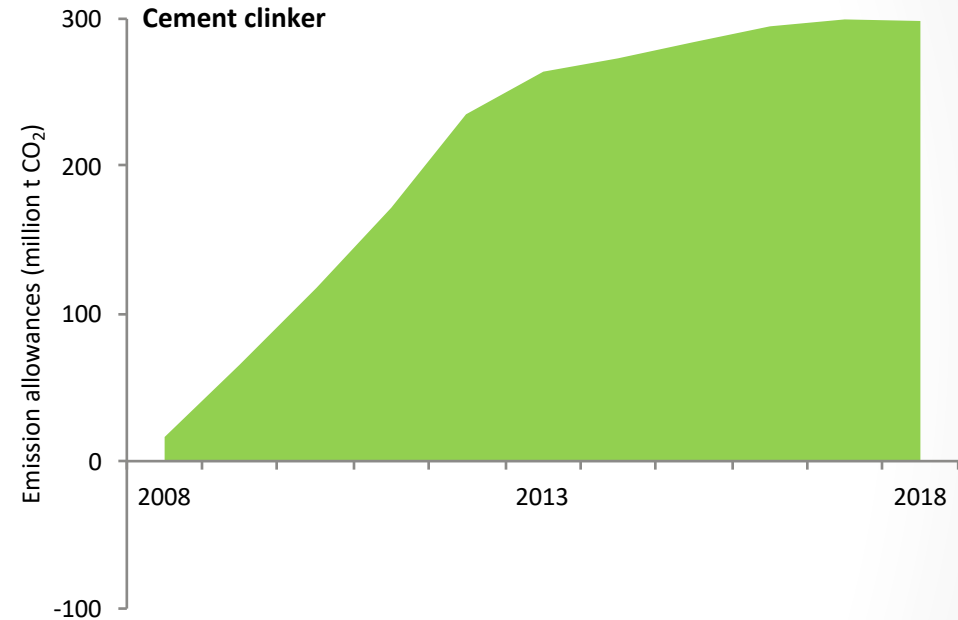
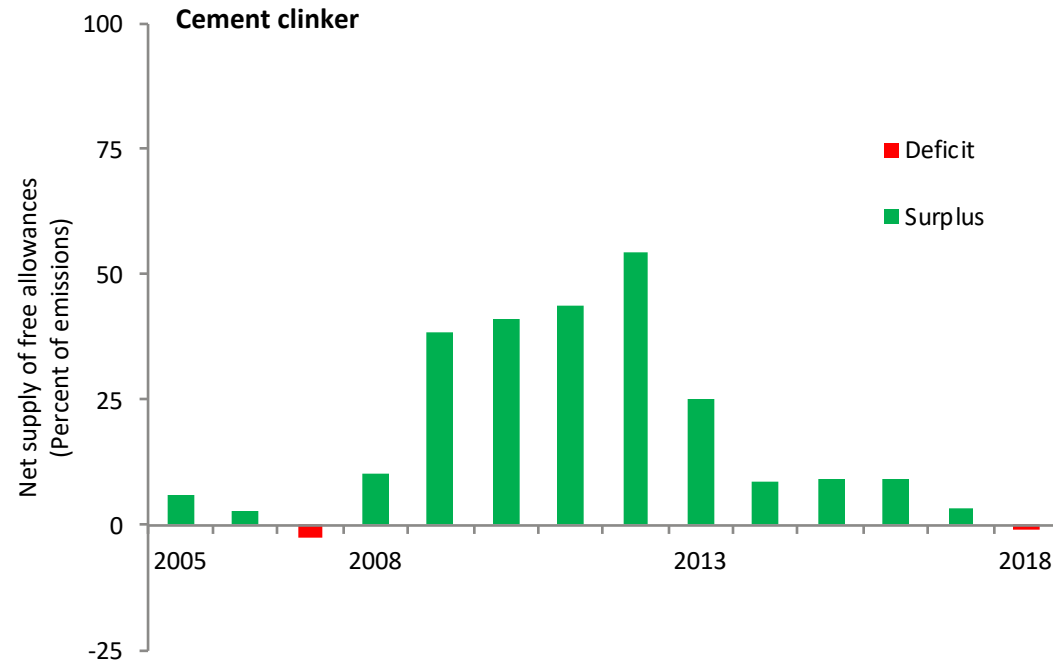
Source: Wegener Center elaborations on EEA, 2018 and EU TL, 2019

*2018 is an estimate based on preliminary data

- For refineries, the net surpluses cumulated in P2 were quickly used up by net deficits during P3

Sectoral stringency: cement clinker

- Activity 29



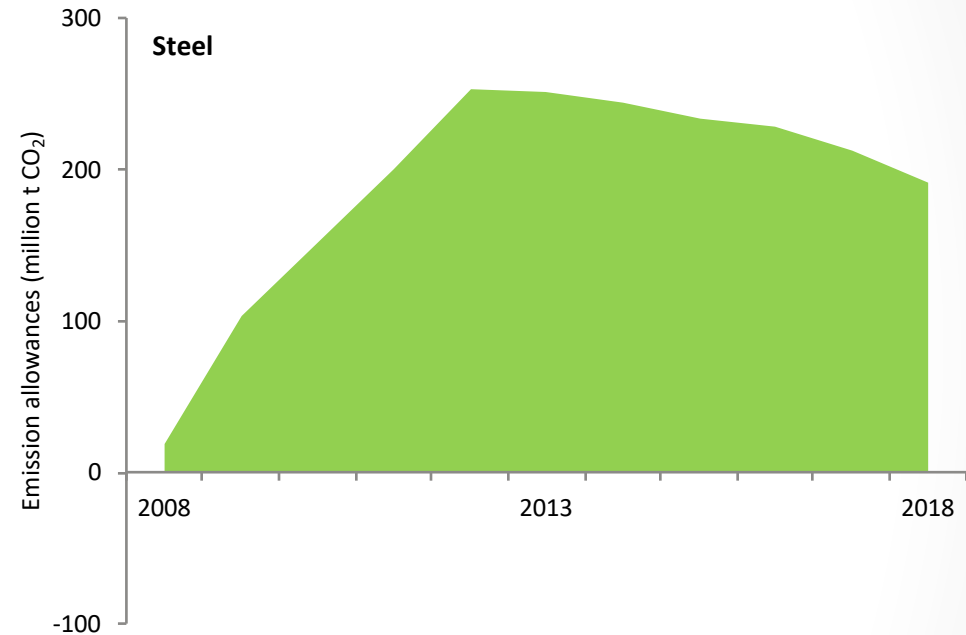
Source: Wegener Center elaborations on EEA, 2018 and EU TL, 2019

*2018 is an estimate based on preliminary data

- The cement industry still holds about 270 million tons of CO₂.

Sectoral stringency: steel

- Activity 22, 23, 24, 25 and flue gas



Source: Wegener Center elaborations on EEA, 2018 and EU TL, 2019

*2018 is an estimate based on preliminary data

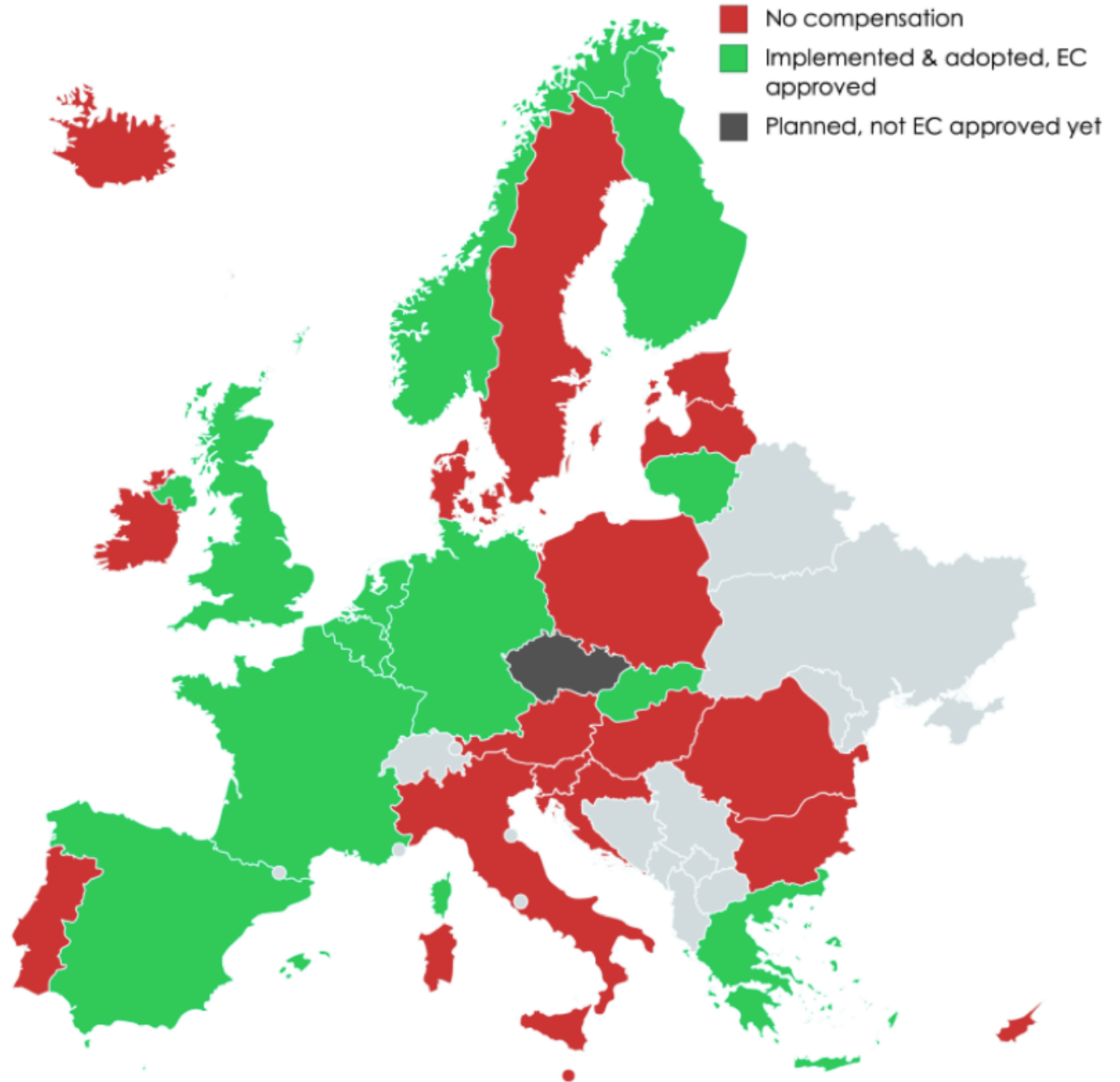
- For steel, the considerable net surplus of free allowances in P2 is still sufficient to compensate for the net deficits in the allocation of free allowances in P3.

Monetary impacts and carbon leakage

- Direct costs
- **Indirect costs**

Indirect Costs

- No harmonized approach approach
 - only a third of Member States provide compensation, creating a distortion across Europe
- Compensation schemes of Luxembourg and Wallonia were approved in 2018
- State aid guidelines up for revision for Phase 4 → how might it change? Implications?



Indirect Costs

Member State	Compensation paid for 2016 (€ million)	Auction revenues 2016 (€ million)	Percentage	Compensation paid for 2017 (€ million)	Auction revenues 2017 (€ million)	Percentage
Flanders	46.75	56.92	82.14%	31.72	76.14	41.67%
Netherlands	53.59	142.61	37.58%	36.9	190.71	19.35%
Germany	288.72	850.39	33.95%	202.21	1,146.82	17.63%
UK	19	424.33	4.48%	17.16	566.48	3.03%
Spain	71.44	369.46	19.34%	66.64*	493.55	13.50%
France	135.15	234.68	57.59%	98.73	313.40	31.50%
Slovakia	10	65.05	15.37%	10	87.06	11.49%
Finland	37.91	71.22	53.22%	26.75	95.26	28.08%
Latvia	1.04	11.5	8.70%	0.24	15.39	1.54%
Greece	12.4	148.05	8.38%	12.44	198.03	6.28%

Source: Member States reports on indirect costs compensation

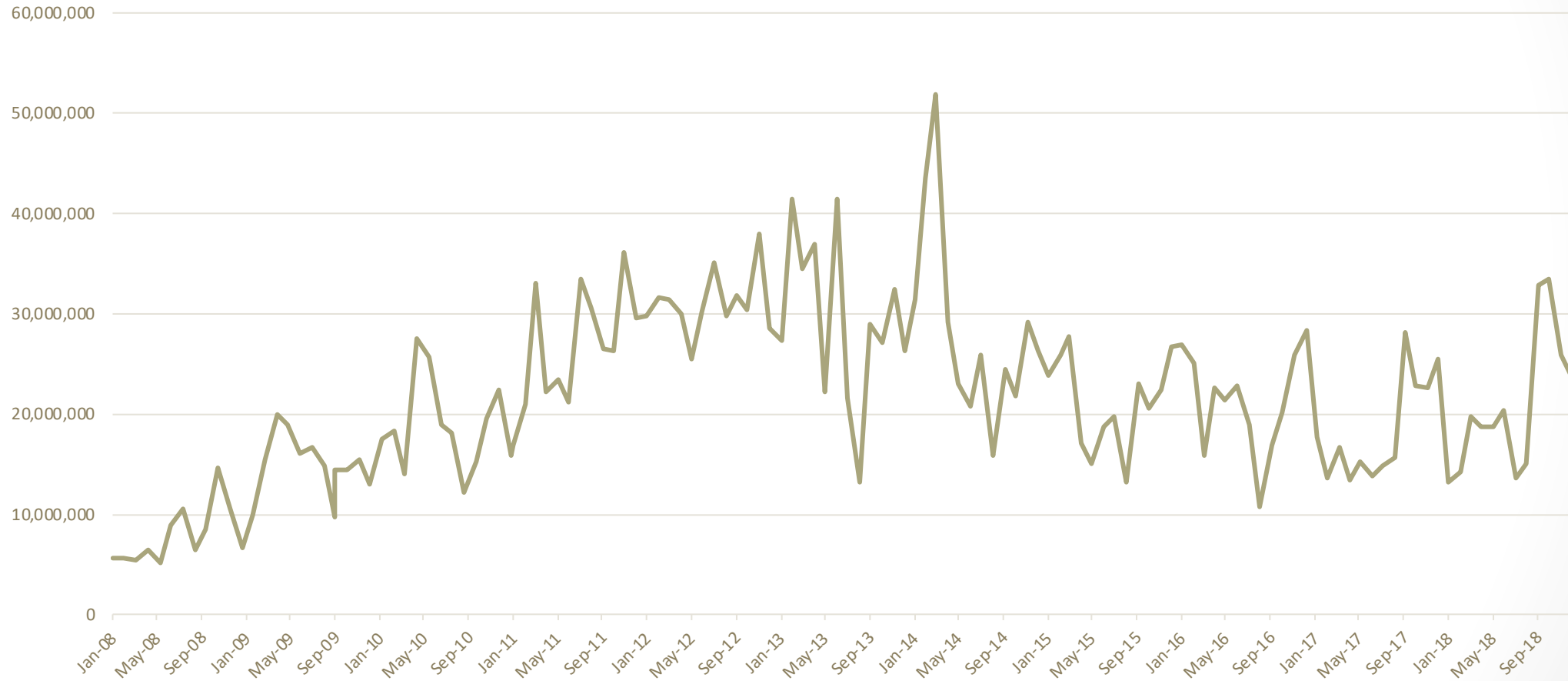
*Note: For Spain only the preliminary data is available, the final amount is expected to be slightly higher

State of the EU ETS 2019 – Outline

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 1. Background
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 - 6. Market functioning**
 - i. 9 Indicators**
 - ii. Price forecasts scenarios
 - iii. MSR functioning
 7. Policy issues to monitor in the future

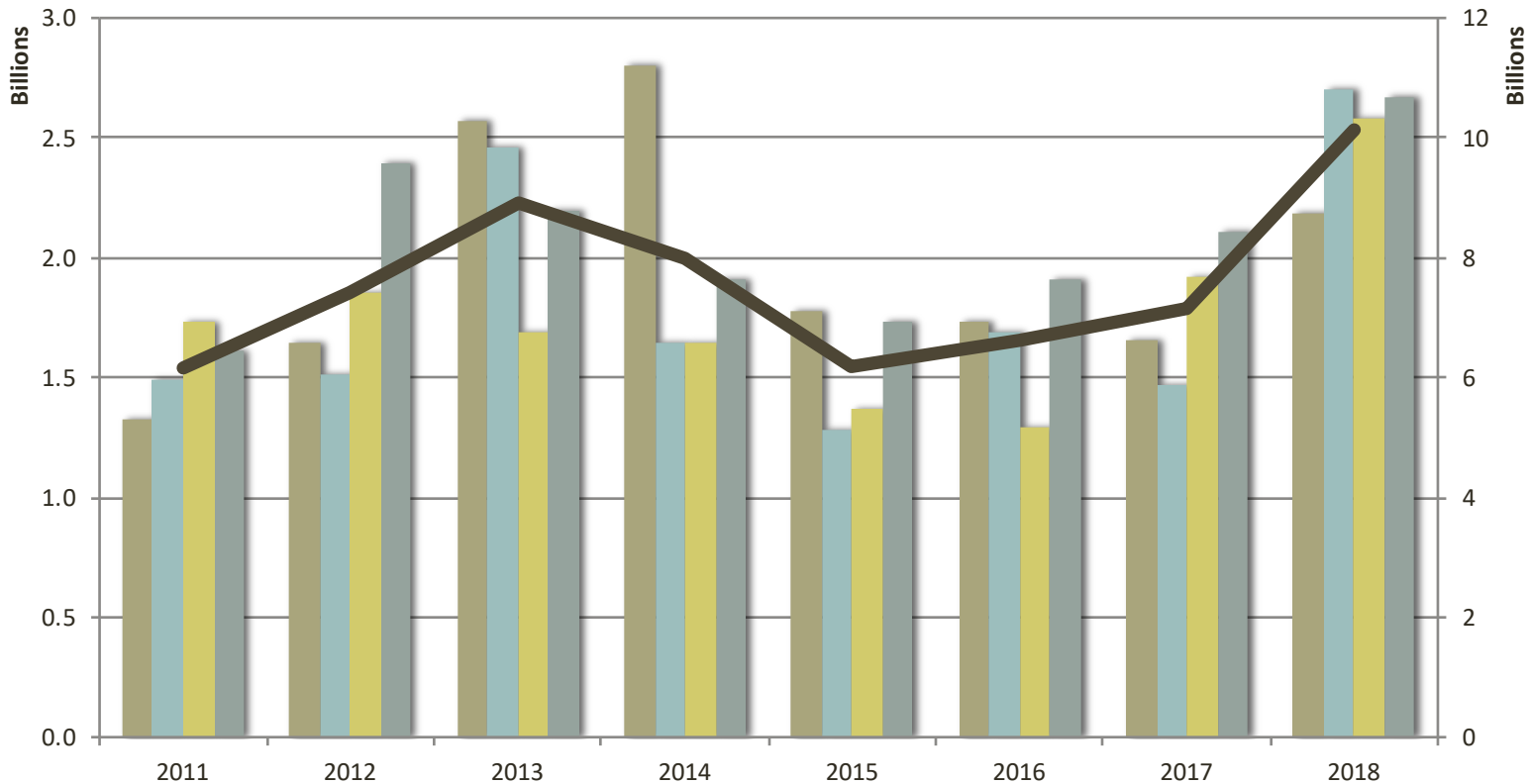
Volumes

Daily average



Volumes

quarterly and annual

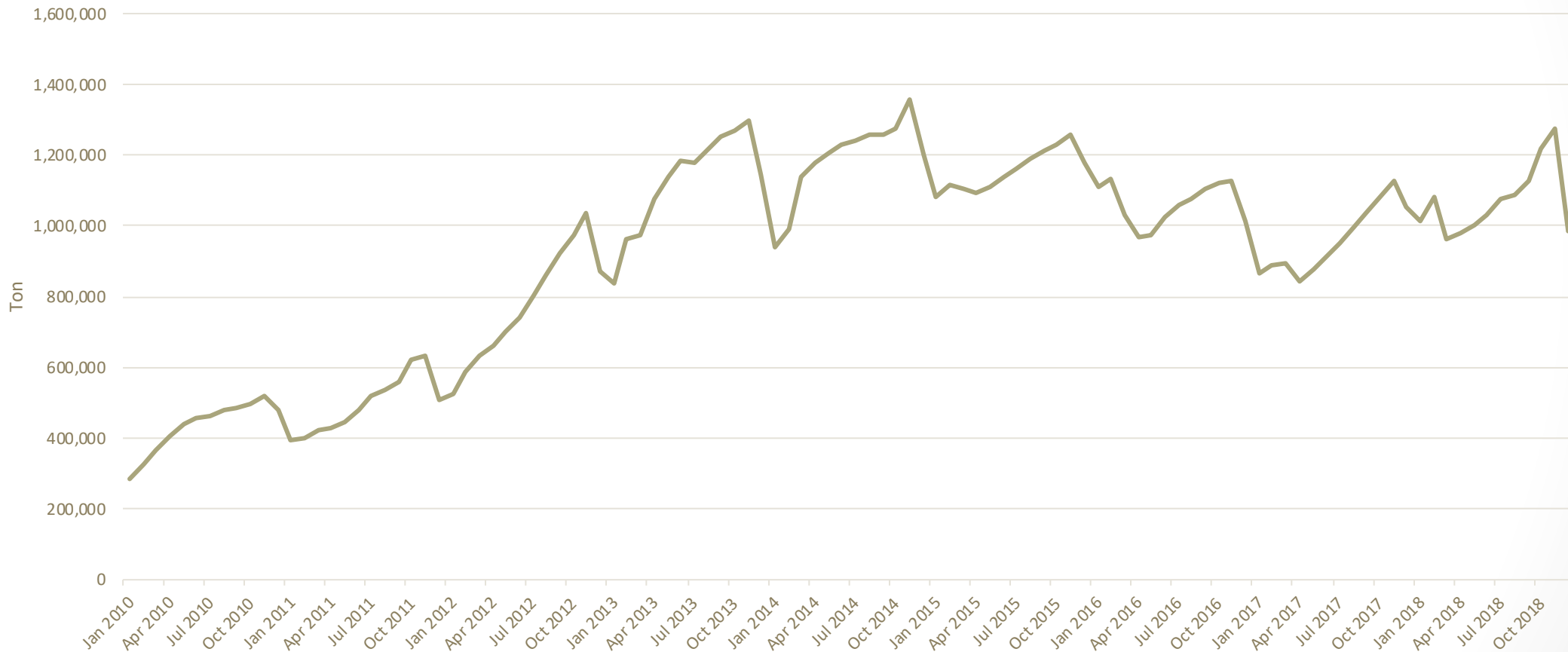


Quarterly (bars): left hand axis

Annual (line): right hand axis

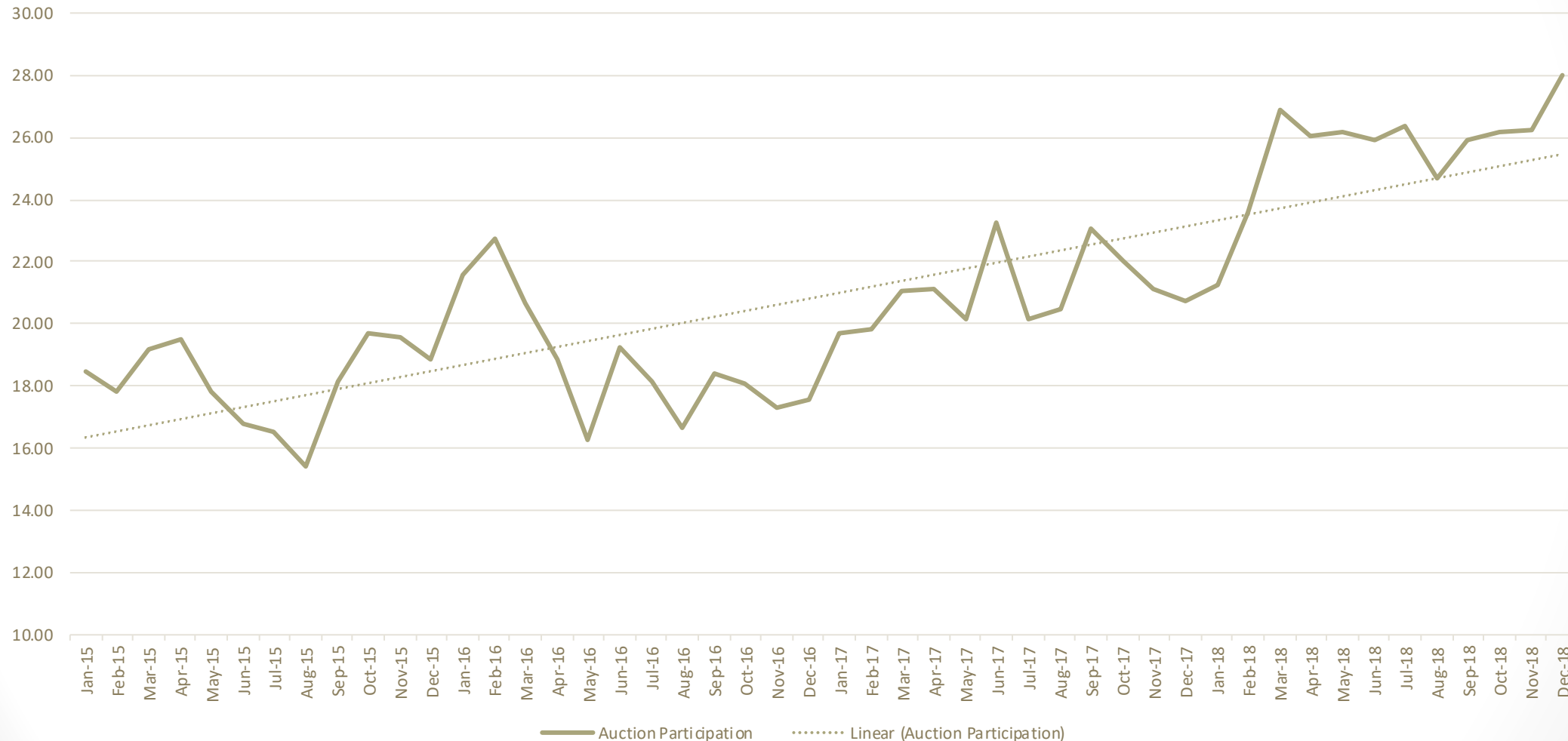
Volumes include: EEX and ICE executed, broker bilateral, broker cleared

Open interest contracts (prev. day)



Auction participation (EEX)

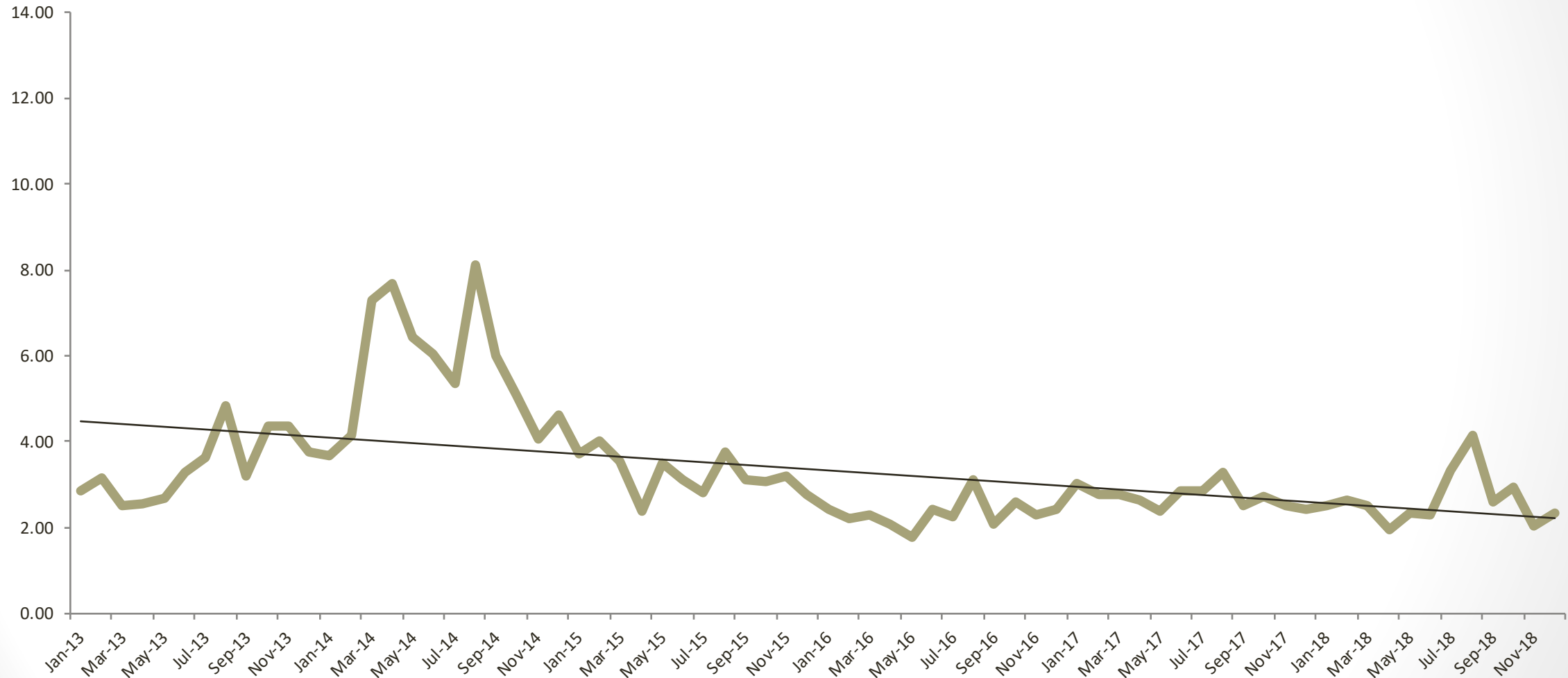
Monthly average auction participation



Auction coverage (EEX)

Monthly auction coverage

Monthly average auction coverage

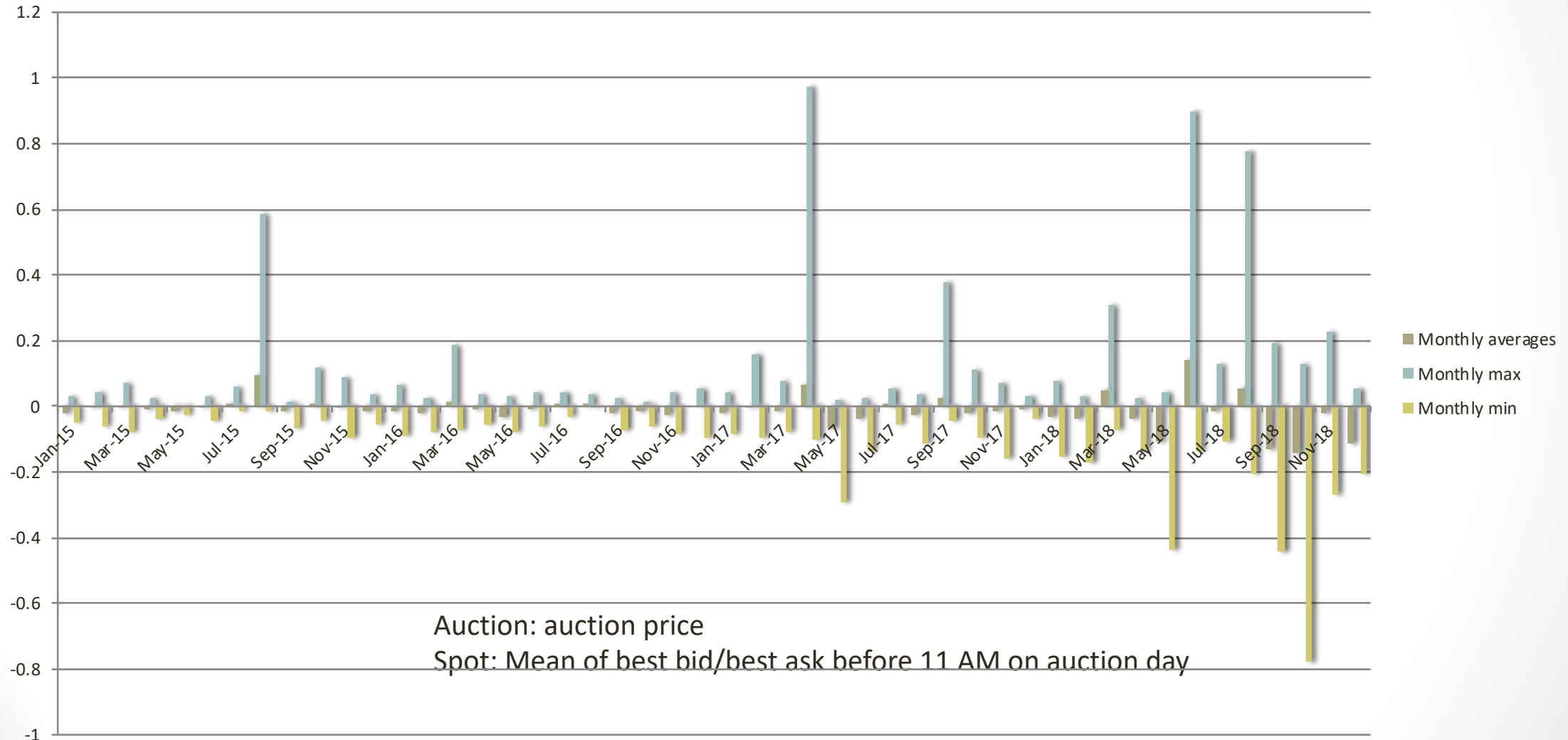


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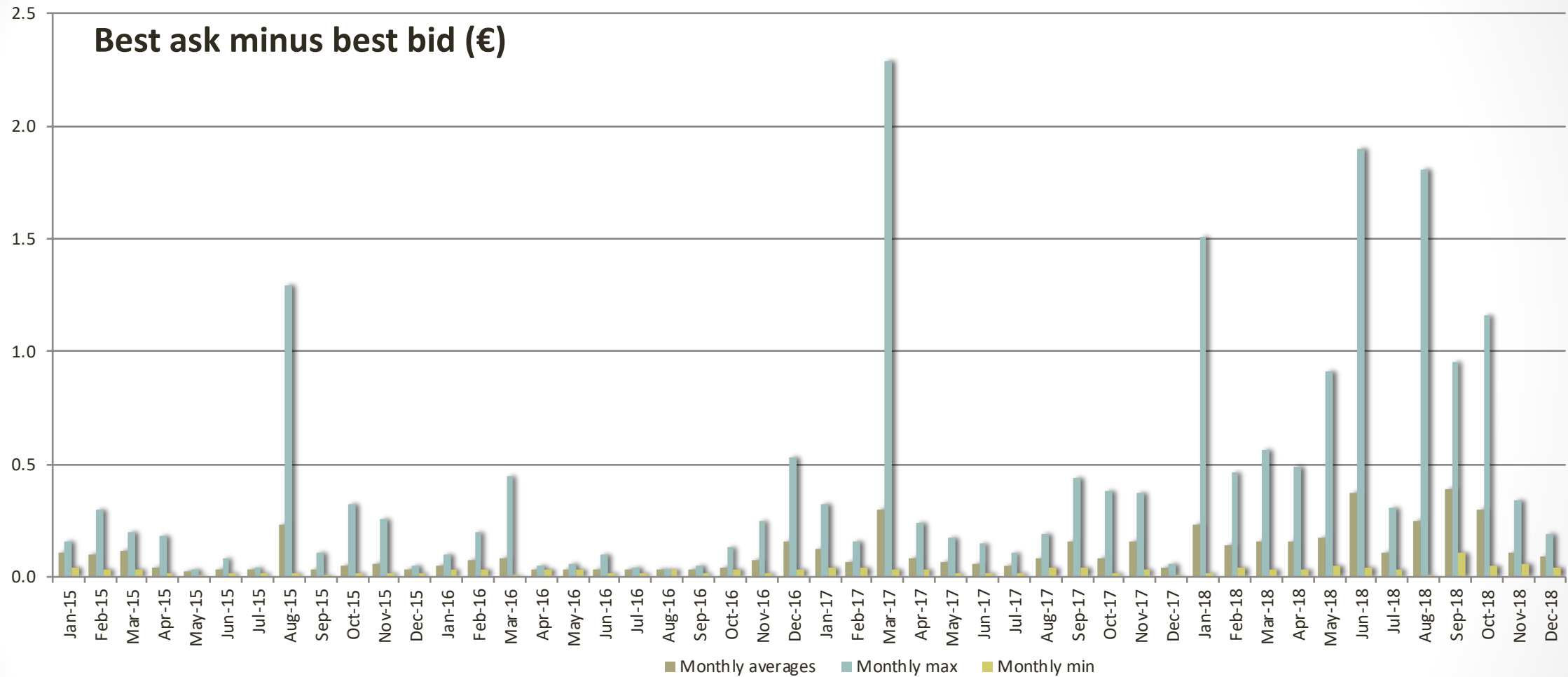
Source: EEX, 2019

Auction vs. Spot spread (EEX)

Auction price minus secondary market price (€)



Ask-Bid spread



Bid: best bid at secondary market before 11 AM
 Ask: best ask at secondary market before 11 AM

Source: EEX, 2019

Cost of Carry

5year-front year spread



NOT FOR CITATION OR DISTRIBUTION

Source: ICE, 2019

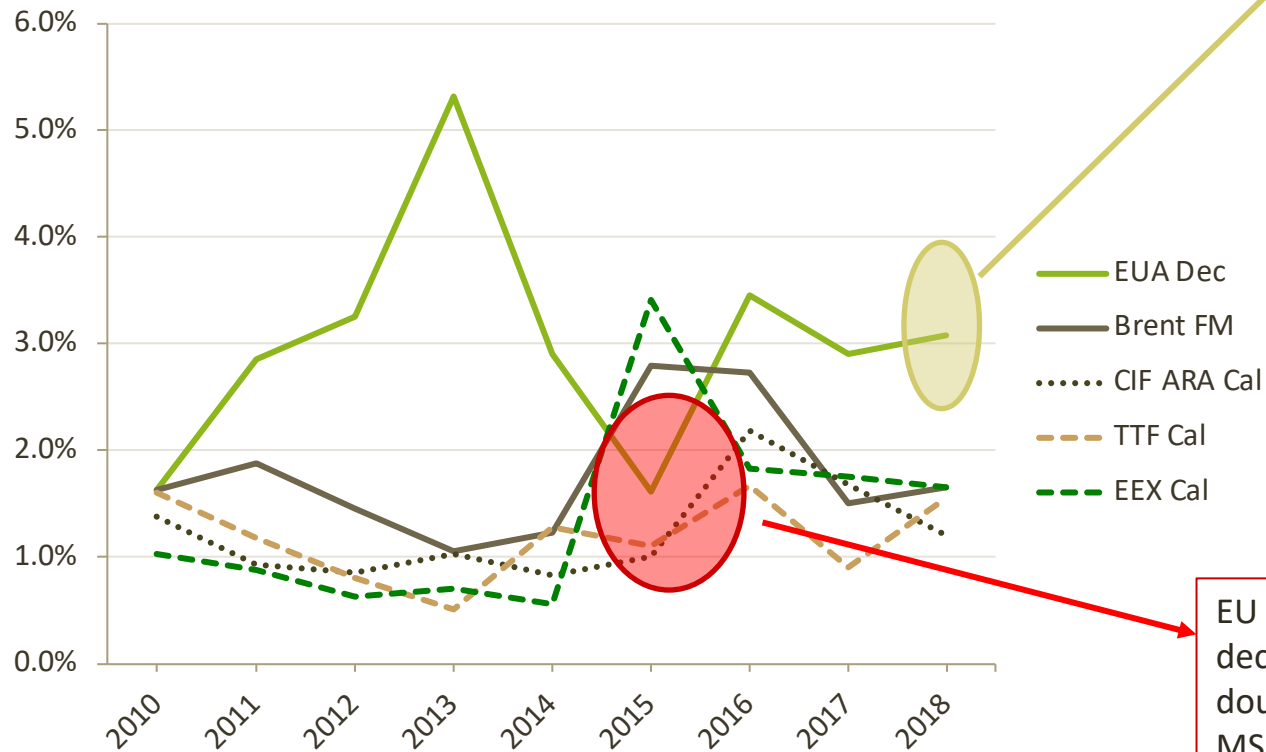
Cost of Carry

EUA vs AAA 5year-EU Bonds



Impact of volatility on economic efficiency

Day-to-day volatility



EUA's day-to-day volatility remains above all other energy commodities

EU ETS Day-to-day volatility decreased in correspondence of the double overhaul (backloading + MSR) while the other energy commodities experienced an opposite trend

Market functioning tracker

Indicator	2017/2016	2018/2017
Volumes		
Open Interest		
Auction participation		
Auction coverage		
Auction vs Spot spread		
Bid-ask spread		
Cost of carry		
Volatility		

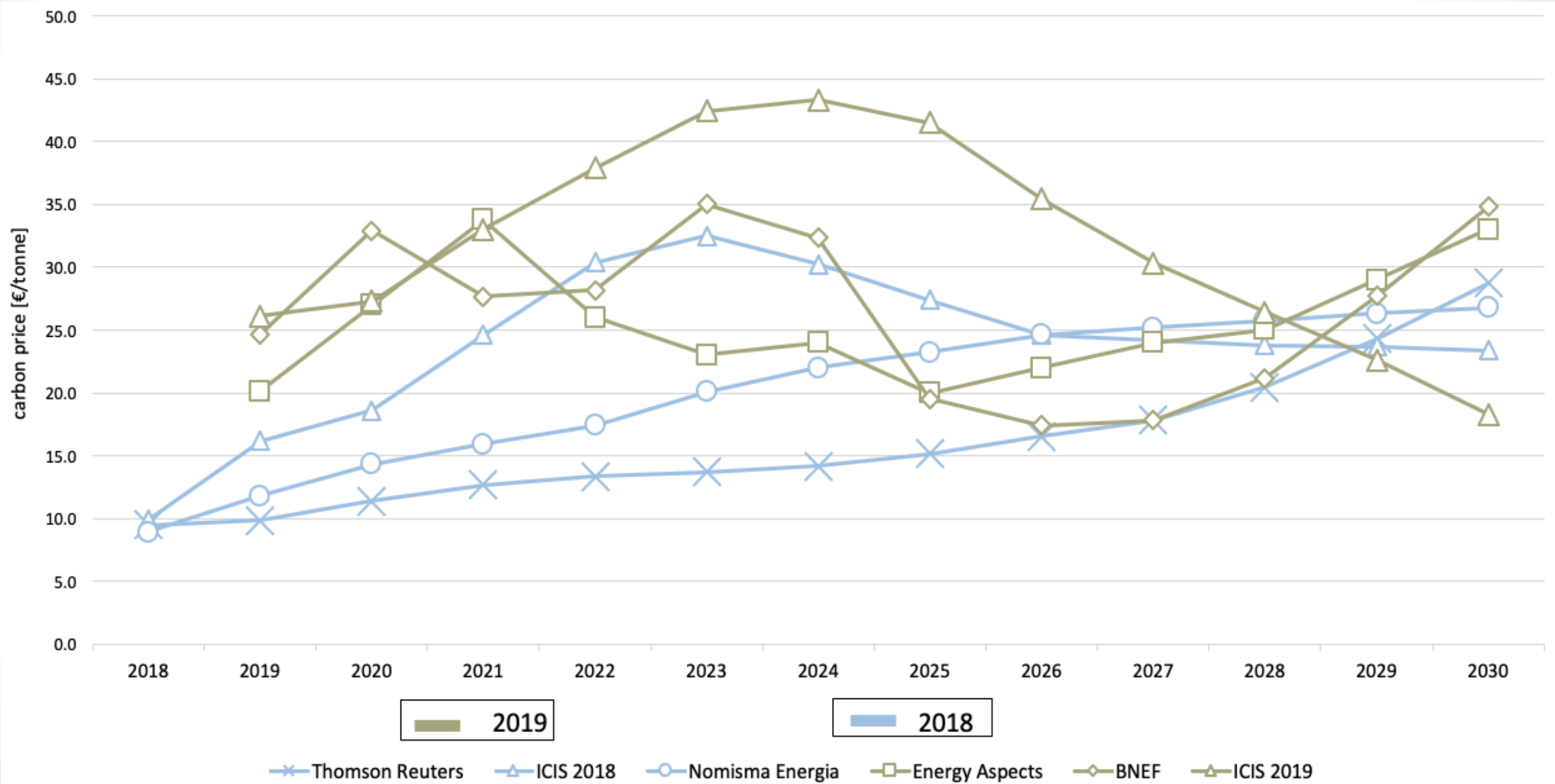
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Price forecasts scenarios

- 2018 forecasts:
 - Thomson Reuters
 - ICIS
 - Nomisma Energia
- 2019 forecast:
 - Energy Aspects
 - Bloomberg New Energy Finance
 - ICIS

Price forecasts scenarios



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Overview of the MSR

The total number of allowances in circulation (TNAC) drives the MSR mechanism: **TNAC = Supply – (Demand + allowances in the MSR)**

- **If TNAC > 833 mt:**
To MSR 24% (12% after 2023) subtracted from auctioning
- **If TNAC < 400 mt:**
From MSR 100 mt added to auctioning
- **From 2023, yearly invalidation of allowances** above the number of allowances auctioned the year before, to cancel part of the cumulative surplus of EUAs held in the MSR

Assessing the performance of the MSR

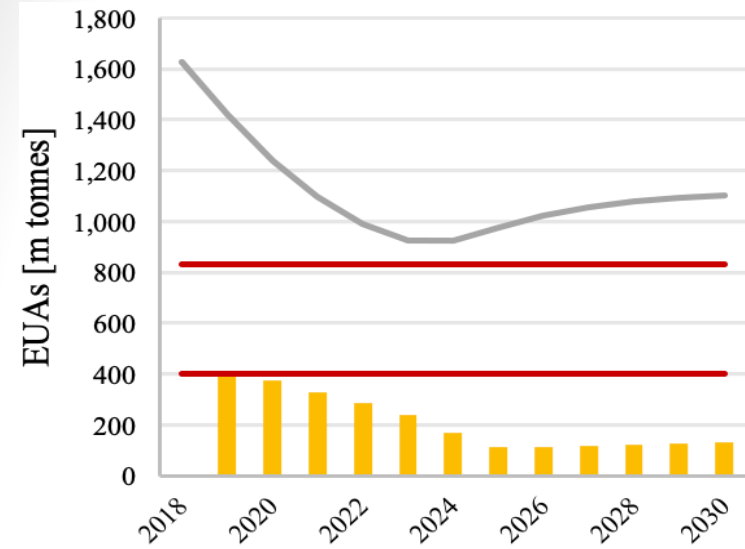
Potential sources of market imbalance?

- MS policies (e.g. coal phase-outs without voluntary cancellation);
- New 2030 RES/EE targets;
- Economic shocks

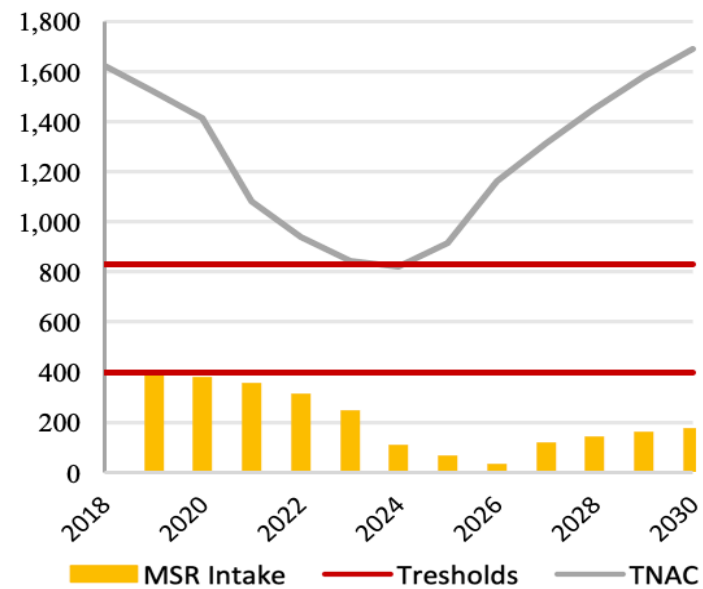
Ability of the MSR to cope with excessive market imbalance

- ERCST elaborations on EC data – Wegener center modeling
- ICIS
- Sandbag

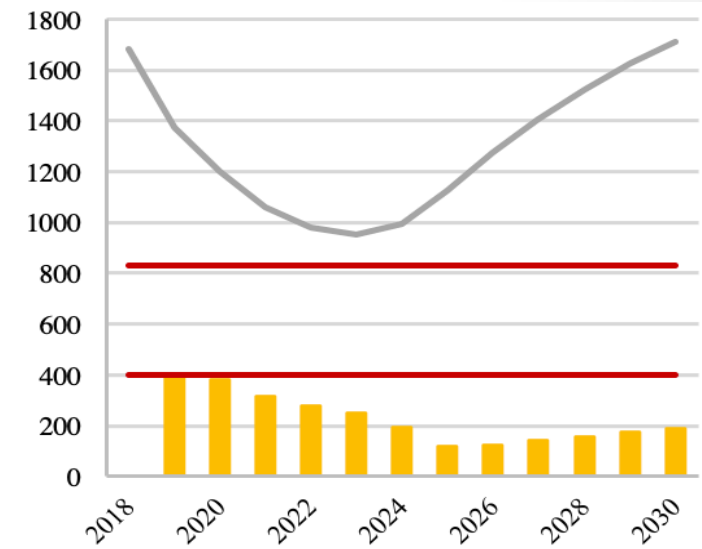
Assessing the performance of the MSR - 3 models



Source: ERCST elaborations on the European Commission, 2018; and modelling by the Wegener Center, 2019



Source: ICIS, 2019



Source: ERCST assumptions and Sandbag modelling, 2019

Ability of the MSR to cope with excessive market imbalance?

- TNAC shows upward trajectory towards the end of Phase 4
- MSR is expected to fall short of fulfilling its long-term goal of making the EU ETS more resilient to future sources of imbalance.

State of the EU ETS 2019 – Outline

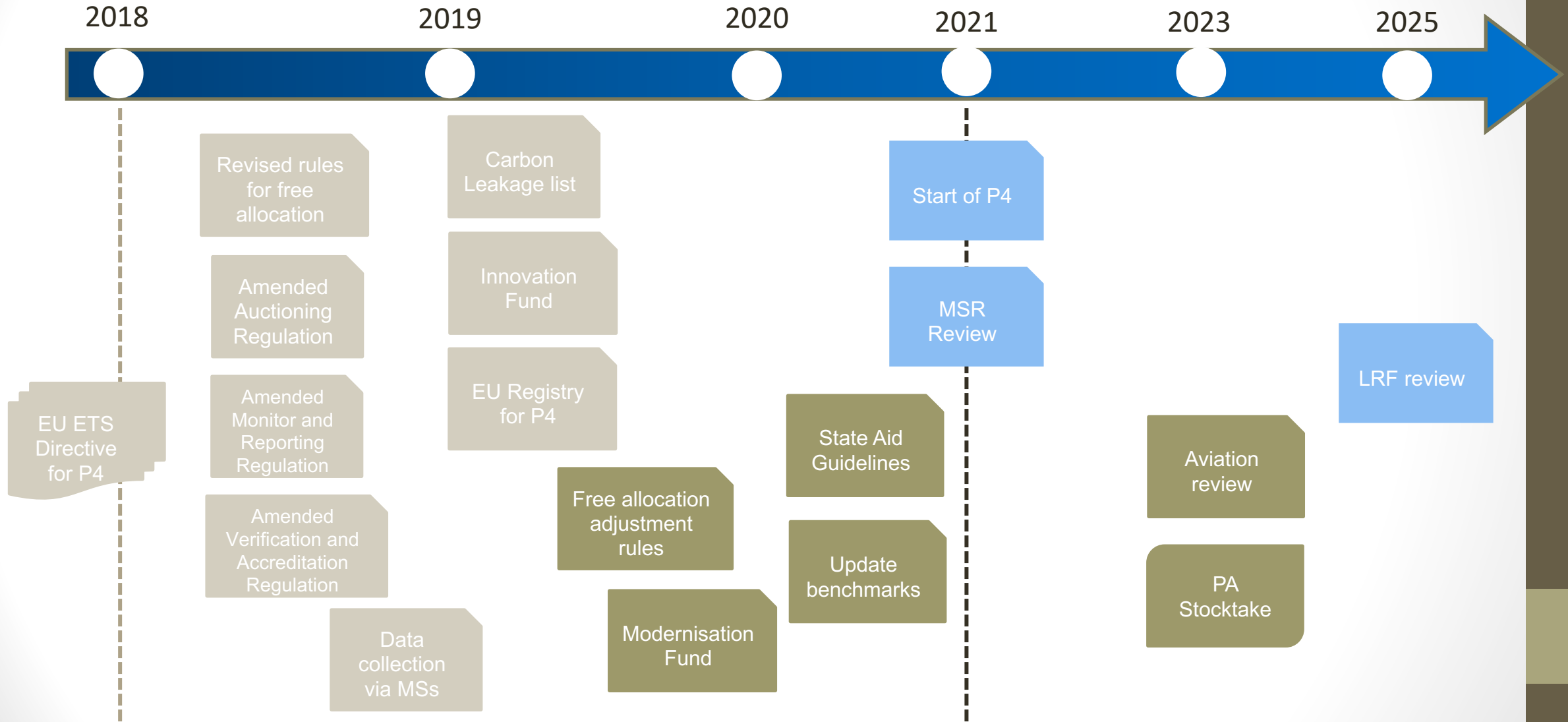
- Six Chapters

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Outline of chapter 7

- *This chapter will discuss a number of issues that need to be monitored in the coming years to ensure that the EU ETS is 'fit for purpose' and is prepared for future reviews and challenges*
 1. Implementation of secondary legislation related to the EU ETS
 2. Implications of EU elections on climate change policy
 3. Brexit
 4. Future of the aviation sector under EU ETS – CORSIA
 5. Preparing the MSR review
 6. Cancellation of allowances in the event of closure of electricity generation capacity
 7. Operationalising Article 30 of the EU ETS Directive
 8. The role of market mechanisms in achieving negative emissions

1. Mid-term EU ETS regulatory evolution



2. Implications of EU elections on climate change policy

- Climate change policy issues and legislation, including EU ETS provisions, will be managed by a new European Parliament (EP) and Commission
- A breakthrough by more nationalist and non-establishment Parties will have significant policy impacts, as they generally give less priority to climate change ambition
- The ongoing work on the EU ETS Directive implementation for its Phase 4, and more broadly on the climate change actions, will be suspended until the Autumn, pending the inauguration of the new EP and the nomination of the new EU Commission

2. Brexit

- Brexit creates uncertainties regarding its impacts on the EU ETS.
- The UK is scheduled to leave the EU on 31 October 2019
- Implications on the EU ETS will be different according to the final decision:
 - Scenario 1 : **no deal-Brexit** : If the UK leaves the EU without a deal, the UK will replace the EU ETS with a domestic carbon tax.
 - Scenario 2 : **with Deal** :
 1. New UK ETS (linked or standalone)
 2. UK exits the EU ETS and replace it with a UK carbon tax

2. Brexit

- Impacts of Brexit?
 - Adjustment of EU ETS cap?
 - Recalculation of benchmarks?
 - Impact on the Innovation and Modernisation Funds?
- If the ambition of the EU ETS without the UK remains similar to the current 2030 target, then Brexit will have a moderate impact on the EU ETS market balance
- Even though a disorderly Brexit would result in high price volatility, the absolute effect on prices would only be moderately bearish as the MSR counteracts the effect (ICIS, 2017)
- The overlap of Brexit-related supply and MSR operation should trigger a discussion whether the MSR thresholds should be adjusted.

4. Future of the aviation sector under EU ETS – CORSIA

- Aviation under ETS subject to review - the LRF could be applied to the aviation sector from 2021 onwards (European Union, 2017).
- In the absence of a new amendment, the EU ETS would revert back to its original full scope from 2024
- **Within 12 months of the adoption by the ICAO, the EU Council requested that the Commission presents a report on the adequacy, ambition and environmental integrity of CORSIA + any needed legislative amendment**

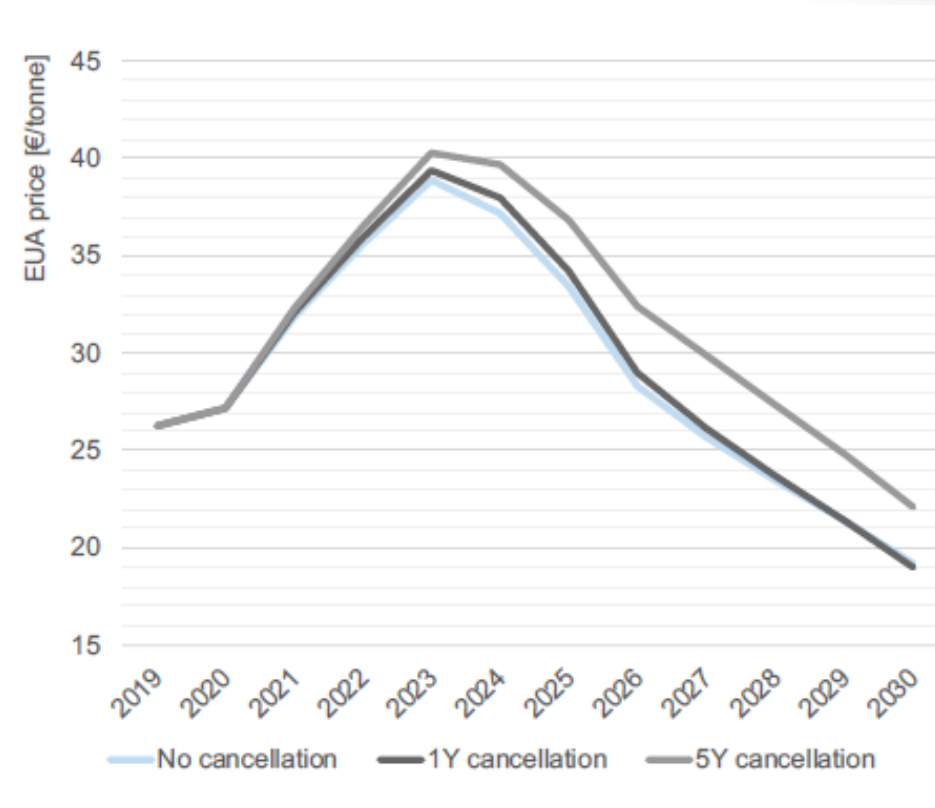
5. Preparing the MSR review

- Two reviews scheduled in 2021 and 2026.
- The forecasts of the MSR functioning
 - The number of allowances put in reserve over Phase 4
 - The total number of allowances in circulation (TNAC)
- Potential changes around its functioning over Phase 4 :
 - Demand of hedging from the power sector
 - The 2030 RES and EE targets and its impacts on the EU ETS demand
 - The Brexit-related supply and demand
 - Member States policies (with and without voluntary cancellation)
 - Economic crisis
- Key question : whether or not to change the parameters, and if so, how ?
 - 3 parameters : thresholds (400 mt and 833 mt); intake rate (24% until 2023 then 12%); cancellation mechanisms
 - Objectives : How to get a more resilient EU ETS or a more aligned EU ETS with the EU long-term climate strategy ?
 - Results of ERCST Paper on the review of the MSR

6. Managing policy overlaps with auction cancellation by MS

- “In the event of closure of electricity generation capacity”, Article 12.4 of the EU ETS Directive foresees the cancellation of allowances to be auctioned as a voluntary decision by MS.
- Clarifications about the amount and timing of cancellation decided by MS will be needed to estimate the potential impact on the EU ETS.
 - In the case of the German coal phase-out, the EU ETS impact will depend on whether and how much the effect gets compensated (ICIS, 2019) :
 - None or very limited cancellations of the coal phase-out effect would have a impact on EUA prices with a decrease of €3-5/tonne
 - A scenario assuming a five year cancellation have a more limited impact on EUA prices.

Scenarios around the German coal phase-out – cancellation



Source: ICIS, 2019

7. Operationalising Article 30 of the EU ETS Directive

- Article 30 of the EU ETS Directive states that the Directive:

*“shall be kept under review in the light of international developments and efforts undertaken to achieve the long-term objectives of the Paris Agreement”
and “in light of climate policy measures in other major economies”*

- This Article has not been operationalized. However, it could become increasingly important given:
 - the **pressure to increase EU ambition** to meet the goals of the Paris Agreement
 - the **impact** that this may have **on competitiveness**, as well as on the **level of ambition of other Parties** to the Paris Agreement

8. The role of market mechanisms in achieving negative emissions

- One of the key objectives in the Paris Agreement is achieving net carbon neutrality by the second half of the century
- This is translated in two of the EC's "strategic long-term vision" scenarios (1.5 LIFE and 1.5 TECH), which make it clear that there will be a **need for technologies that have negative emissions**
- Their development needs to start now, if they are to be available by the second half of Phase 4: **possible interactions with the EU ETS?**
- Ideas for the creation of a new tradable asset class specific to CCS