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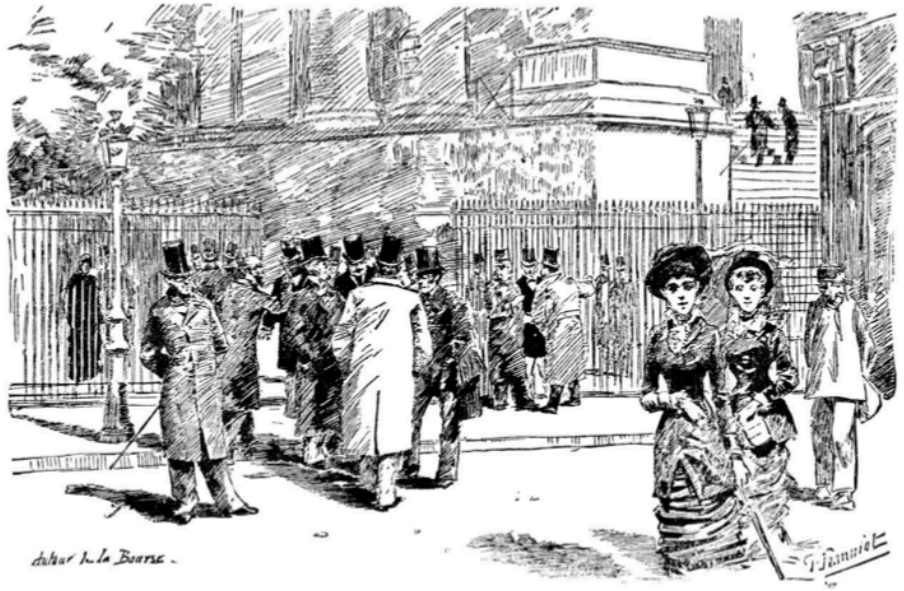
2021 State of the EU ETS Report

April 15 – Launch webinar

2021 State of the EU ETS Report



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Background

- 2021 State of the EU ETS Report is meant to be a **“snapshot”**, providing policymakers and stakeholders with an overview of how the EU ETS is doing by April of each year

- **Context:**
  - Covid-19
  - 2020 eventful year for EU Climate Policy: European Green Deal, EU Climate Law and 2030 Climate Target Plan
  - New 55% 2030 target; ‘fit for 55’ package expected in June 2021
  - ETS review: **Evolution or Revolution**?

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.** Macro-economic efficiency and cost effectiveness for compliance. Does it provide effective, and proportional, protection against the risk of carbon leakage? Is it a driver for change?
3. **Market functioning.** It is worth having a market only if it functions well and leads to good price discovery.

State of the EU ETS 2021– Outline

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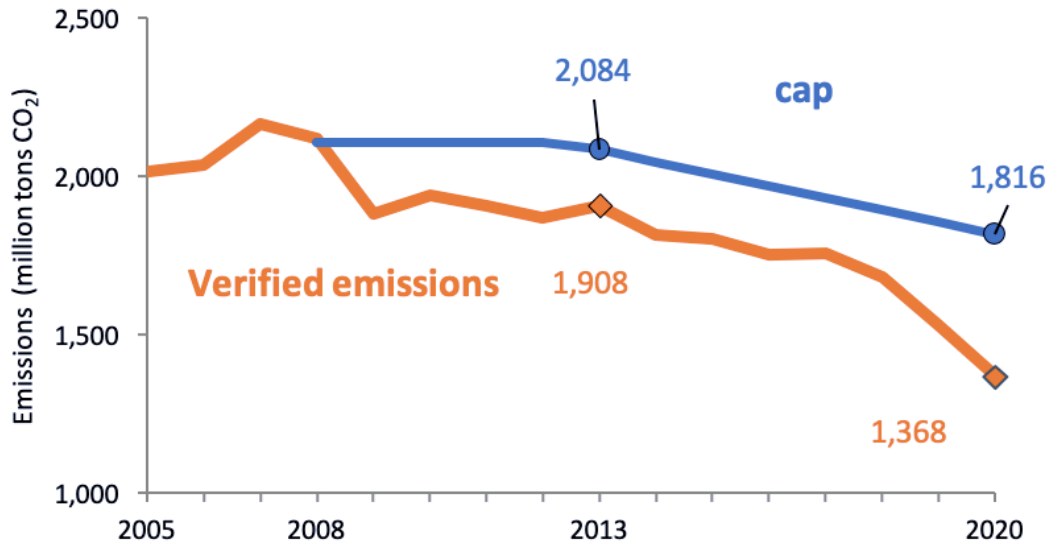
Environmental delivery against phase 3 target (2013-2020)

2020 estimate:

-10.6% Total emissions

Verified emissions and EU ETS cap



Source: Wegener Center elaborations on data from the EEA, 2021 and EUTL, 2021

Phase 3 concluded:

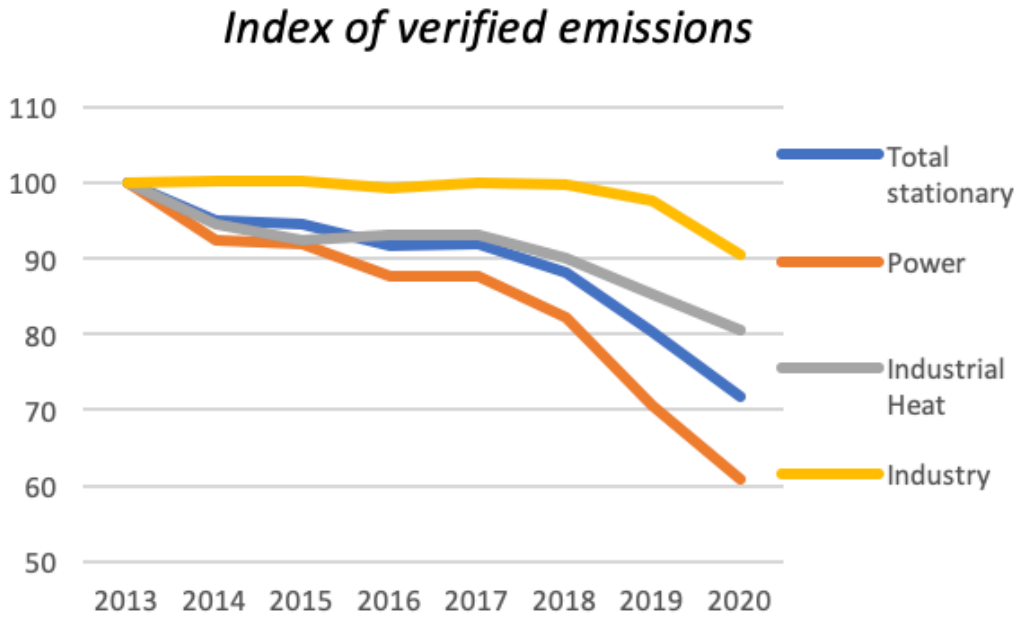
- Verified emissions -42.2% vs. 2005
  - **1 Gigaton** emission reduced since 2005 *(scope corrected)*
- Emissions have dropped more than twice as fast as the cap
- The 'gap' between the cap and verified emissions now amounts to 448mt CO_2

Environmental delivery: Emission and decarbonization trends

Emissions Index

2020 estimates

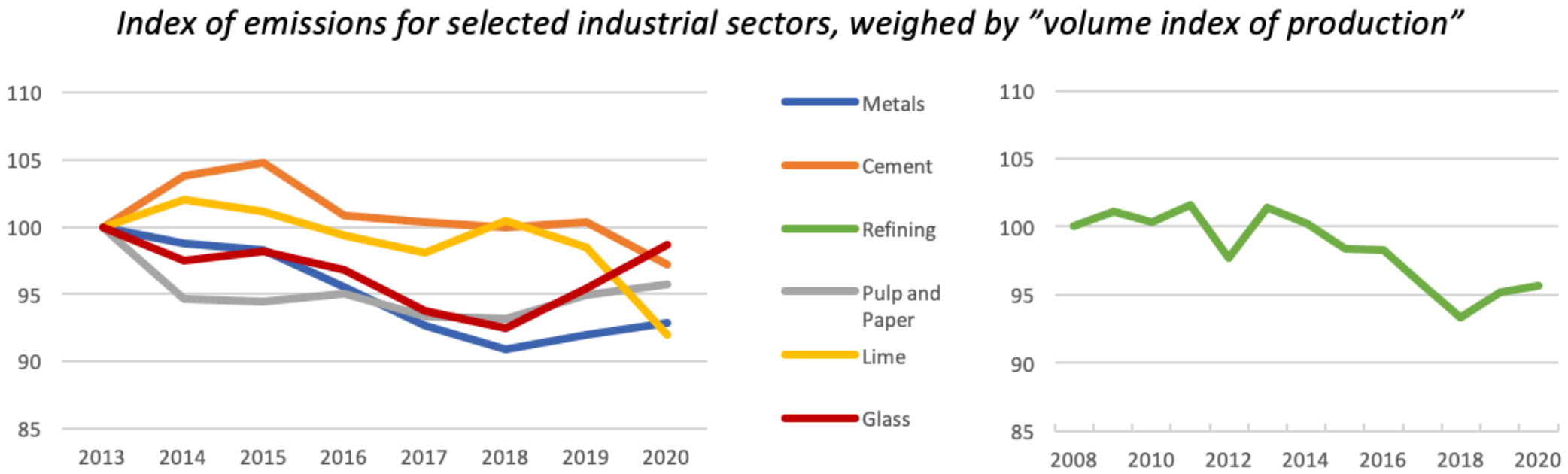
- Power: -13.9%
- Industrial Heat: -5.6%
- Industry: -7.3%



Environmental delivery: Emission and decarbonization trends

Proxy for carbon intensity (2013-2020)

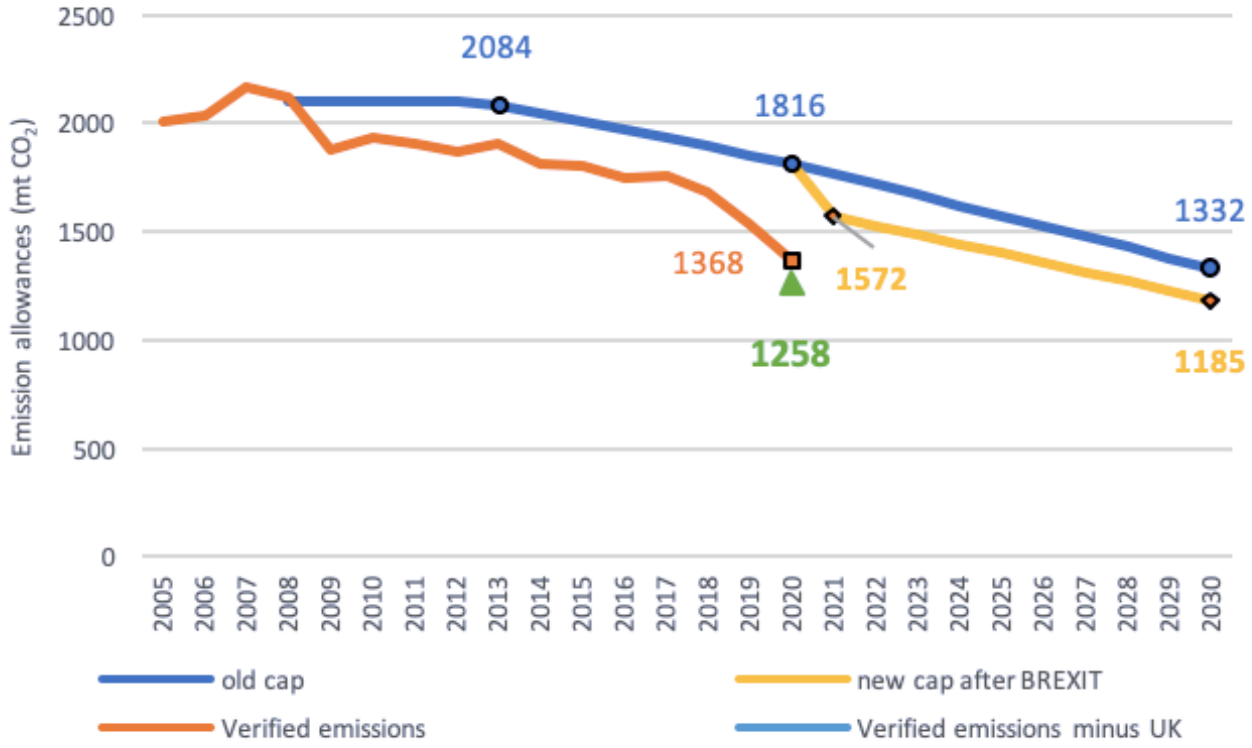
- While intensity data is hard to come by, our proxy indicates modest carbon intensity improvements for most industrial sectors *(2020 to be treated as an anomaly)*



Source: BloombergNEF and ERCST elaborations on EUTL, 2021 and Eurostat, 2021

Environmental delivery: Phase 4 outlook (2021-2030)

Verified emissions, old cap and revised cap following Brexit.



Source: ERCST and Wegener Center elaborations on EEA, 2021; EUTL, 2021; and European Commission, 2020

In 2020, emissions were only 73mt CO_2 above the current 2030 target

Of course, 2030 target will be updated under the European Green Deal

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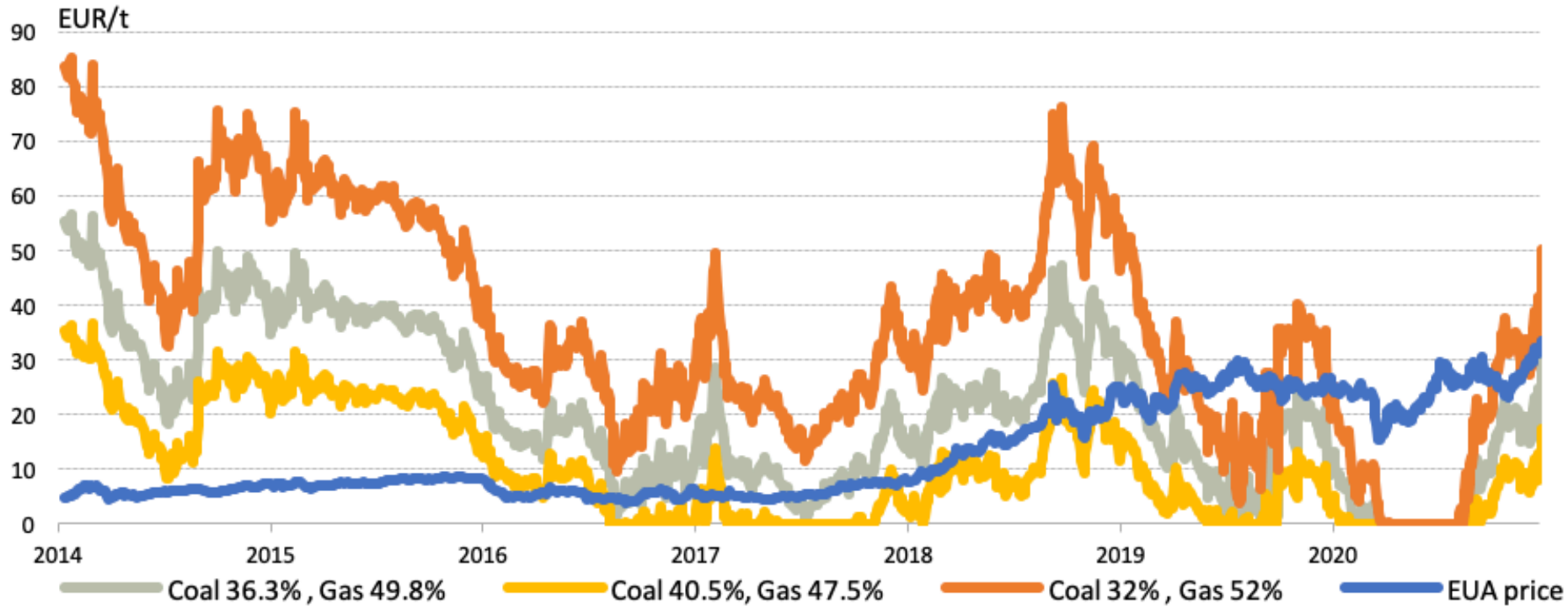
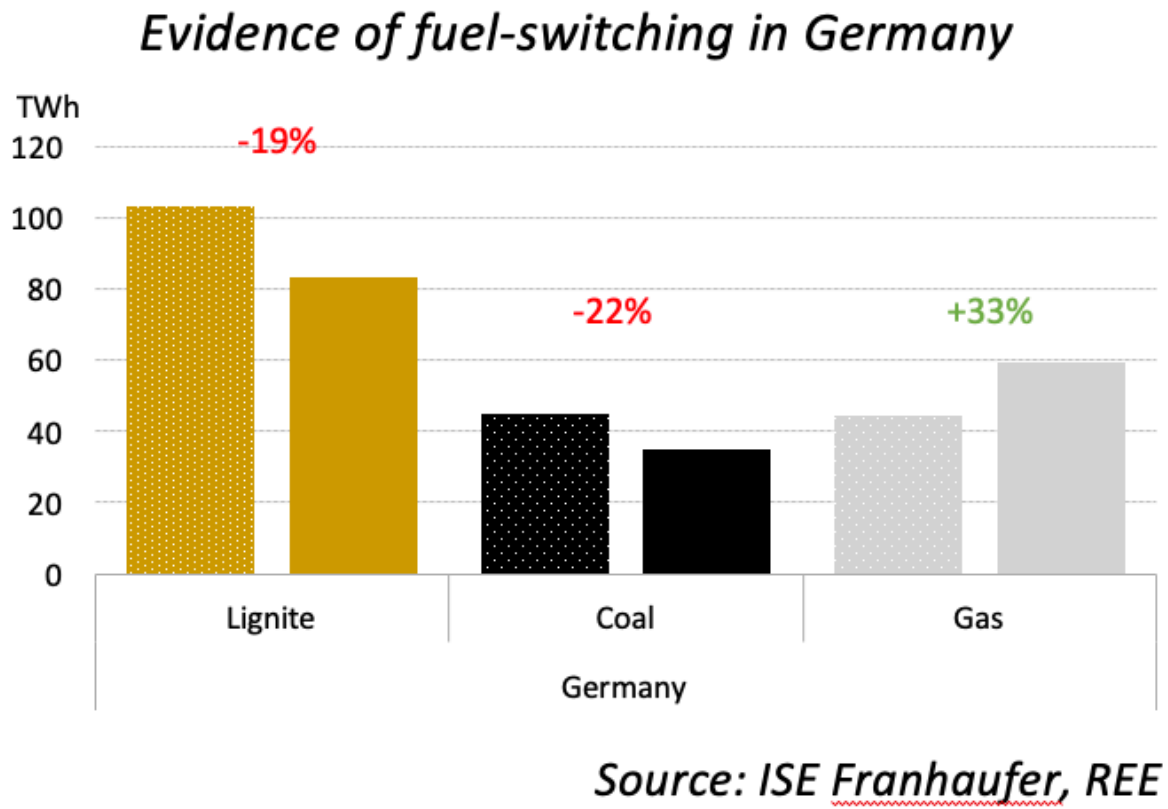
Is the EU ETS a driver for change?
Fuel switching

Switching price for different thermal efficiencies, compared to the EUA price



Source: BloombergLP, BloombergNEF

Is the EU ETS a driver for change? Evidence of fuel-switching



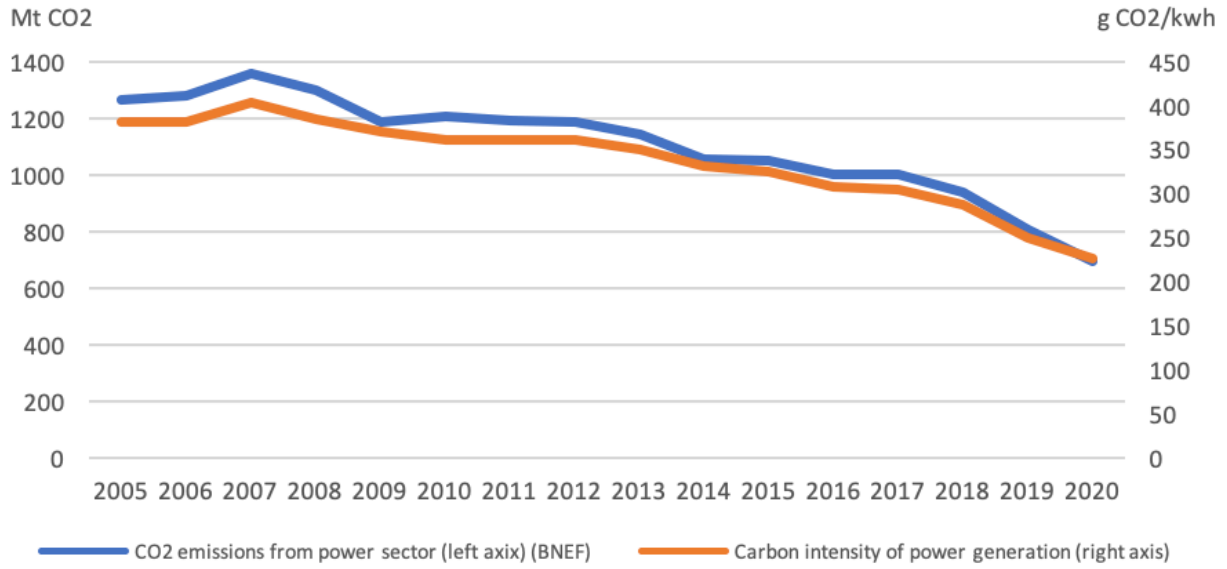
Pattern fill = 2019
Solid fill = 2020

For EU28 as a whole, Agora Energiewende and Ember estimate that power generated by both coal and gas decreased in 2020, by 20% and 6% respectively

Is the EU ETS a driver for change?

- Power sector emissions have decreased by 45.1% since 2005, and intensity by 41.6%.

CO_2 emissions from the power sector and carbon intensity of power generation (2005-2020) in EU28



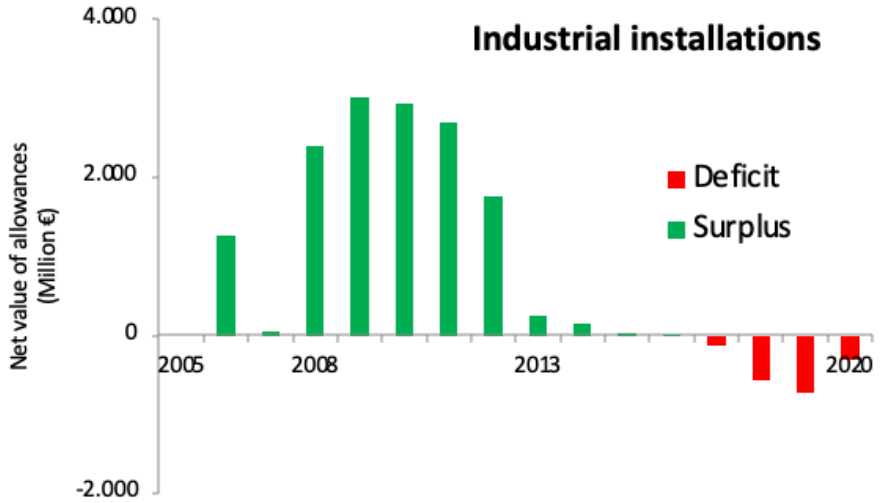
Source: ERCST and BloombergNEF, data from Eurostat,2020, EUTL,2021 and Agora Energiewende and Ember, 2021.

- **2020 conclusion:**
  - Continued fuel switching;
  - A steady continuation of renewable penetration in the EU power mix;
  - Covid-19 resulting in a decrease in overall electricity consumption.

Monetary impacts and carbon leakage

Direct costs

- Industry received up to 966 million free allowances more than their verified emissions since 2008
- This trend has steadily been reversed since 2013 – resulting in a net deficit of 15 million allowances over Phase 3
- **Reasons:**
  - Application of Cross-Sectoral Correction Factor
  - (product) benchmarks
  - Phase-out of free allocation for those industrial sectors not at risk of carbon leakage.



Applicable CSCF Values during phase 3

Year	CSCF value
2013	94.27%
2014	92.63%
2015	90.98%
2016	89.30%
2017	87.71%
2018	85.90%
2019	84.17%
2020	82.44%

Large differences can be observed between sectors and individual installations: free allocation rules and CSCF 'impact' some harder than others:

- Some sectors have an increasing deficit, while others a continued surplus throughout Phase 3

Monetary impacts and carbon leakage
Indirect costs

Compensating for indirect costs is optional for Member States

- No harmonized approach – risk for market distortion due to unequal treatment of companies within the single market
- Subject to ’state aid guidelines’

- Beginning of Phase 3: only a handful of Member States had a scheme in place

- End of Phase 3: 14 schemes in 13 EU Member States + UK + Norway

Monetary impacts and carbon leakage

Indirect costs

Table 2: Indirect costs compensation and total EUA auction revenues – 2018 and 2019

Member State	Compensation paid in 2019 for 2018 (€ million)	Auction revenues 2018 (€ million)	Percentage	Compensation paid in 2020 for 2019 (€ million)	Auction revenues 2019 (€ million)	Percentage
Finland	29.1	249.8	**11.7%**	74.6	217.4	**34.3%**
Flanders (Belgium)	35.9	200.0	**18.0%**	89.9	186.5	**48.2%**
France	102.1	818.4	**12.5%**	266.4	711.6	**37.4%**
Germany	218.5	2565.3	**8.5%**	546.0	3146.1	**17.4%**
Greece	16.8	1291.1	**1.3%**	42.2	503.3	**8.4%**
Lithuania	0.3	80.1	**0.3%**	0.7	83.7	**0.8%**
Luxembourg	4.2	18.1	**23.2%**	**	16.8	**
Netherlands	40.3	500.8	**8.0%**	110.1	435.6	**25.3%**
Poland	/	/	**/**	75.0	2545.9	**2.9%**
Romania	/	/	**/**	**	747.9	**
Slovakia	6	229.7	**0.0%**	4.0	244.5	**1.6%**
Spain	172.2	1291.1	**13.3%**	61.0	1225.2	**5.0%**
UK	22.2	1607.3	**1.4%**	57.8	1326.1*	**4.4%**
Wallonia (Belgium)	7.5***	179.4	**4.2%**	7.5***	167.3	**4.5%**
TOTAL	***655.0***	***9031.2***	***7.3%***	***1 335.3***	***11 558.1***	***11.6%***

*Note: the UK auctioned its 2019 allowances in 2020 due to Brexit arrangements, 2019 revenues show 1/2nd of the 2020 auctioning revenues

**Note: data for Luxembourg and Romania was not yet available at the time of writing

***Note: Wallonia has voluntarily limited its yearly budget to €7.5 million

Source: ERCST elaborations on Member States reports on indirect costs compensation, 2021

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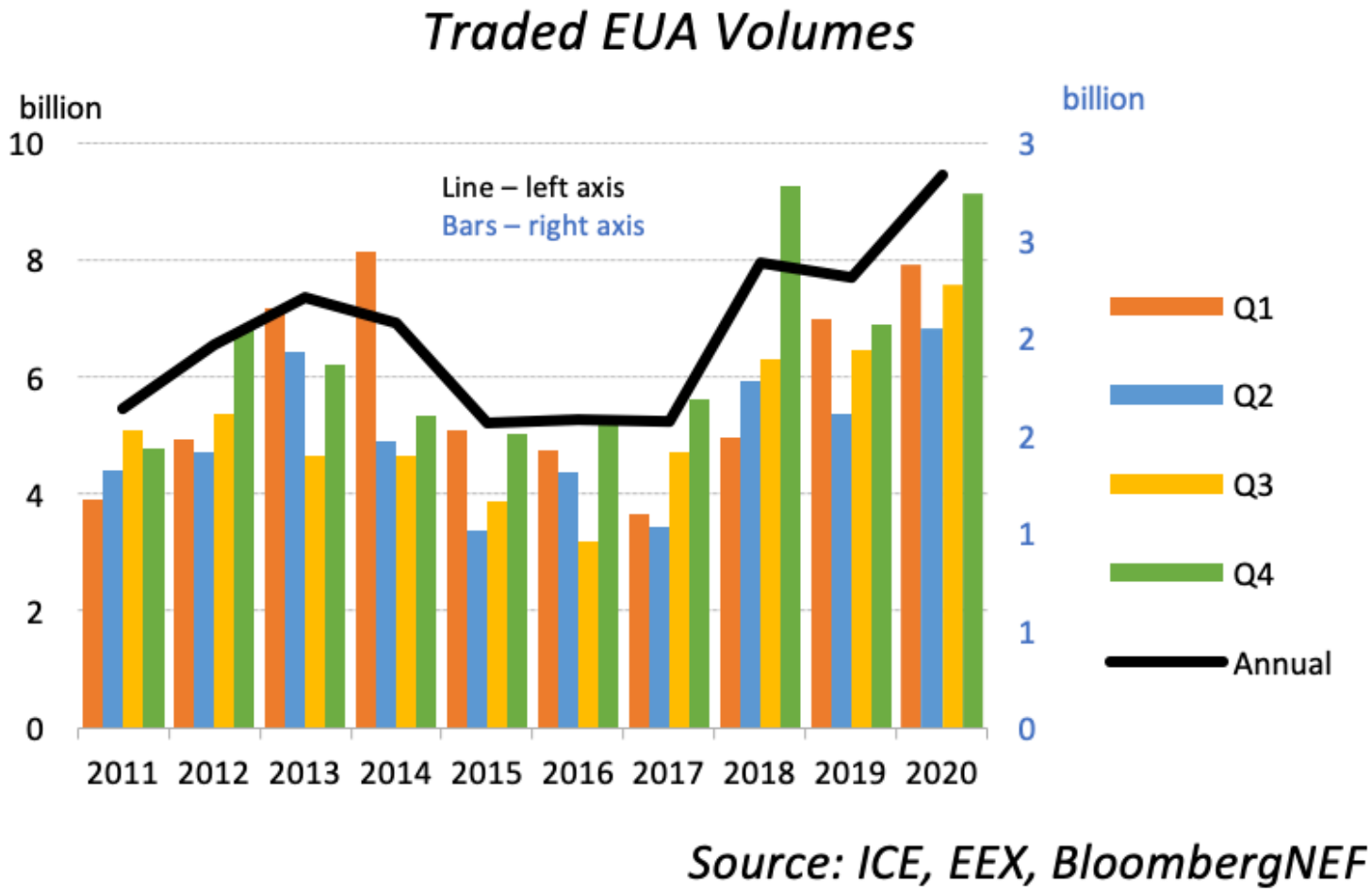
Market Functioning Tracker

Market Functioning Tracker

Indicator	2018/2017	2019/2018	2020/2019
Volumes			
Open interest			
Auction participation			
Auction coverage			
Auction versus spot spread			
Ask-bid spread			
Cost of carry			
Volatility			

Legend	
	Improving
	Stable
	Worsening

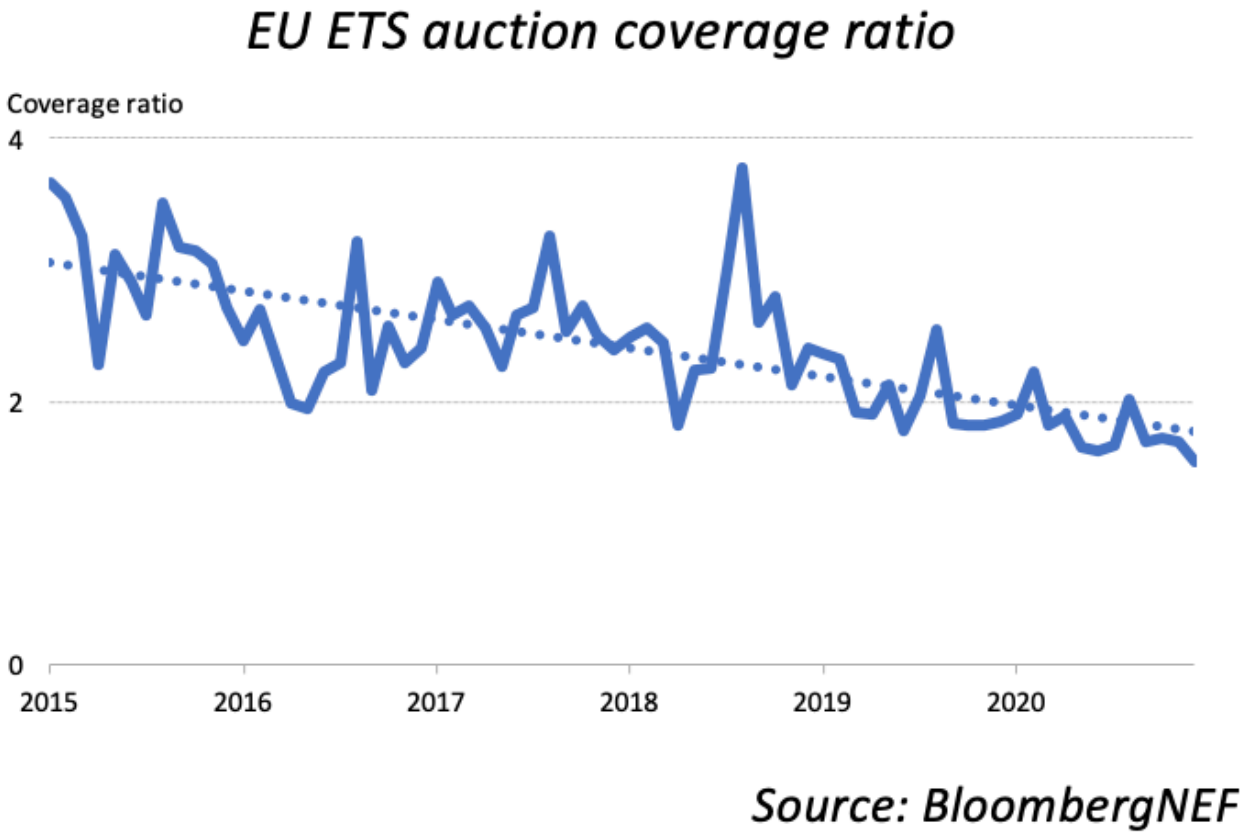
Market Functioning: volumes



Source: ICE, EEX, BloombergNEF

Traded volume up 22% despite lower emissions and higher fuel switching

Market Functioning: Auction coverage ratio



Source: BloombergNEF

Auction cover ratio continues to drop

Possible that this could allow some market participants to exercise market power or game auctions in the future

To be monitored

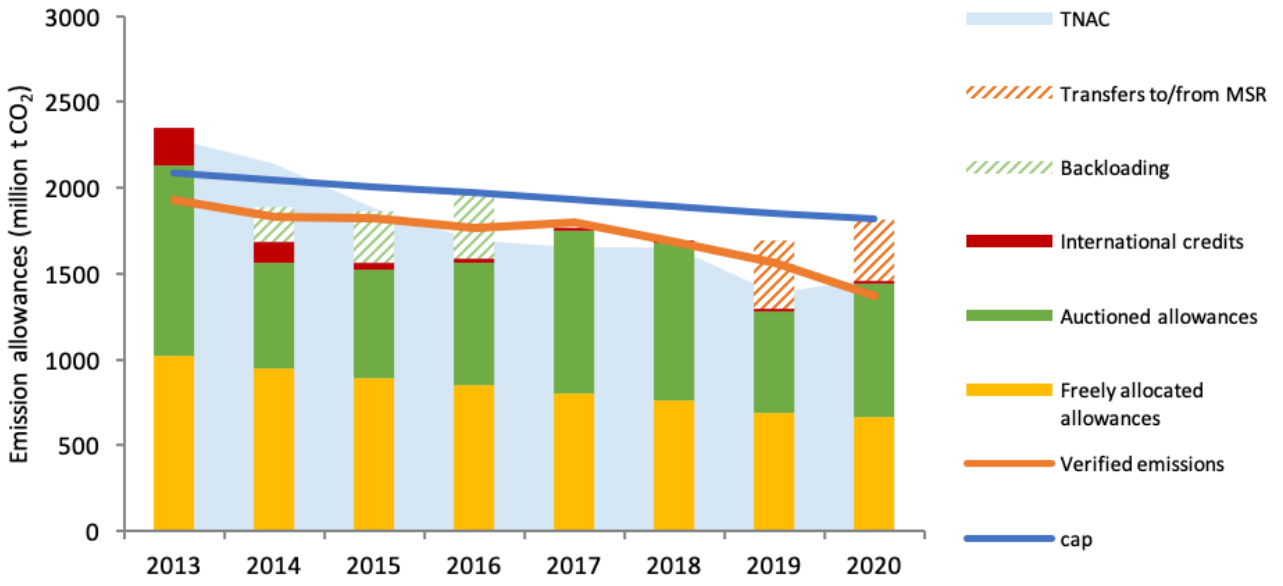
Supply-demand balance and evolution of TNAC

Total Number of Allowances in Circulation (TNAC) has been decreasing over the course of phase 3.

However, supply was again higher than demand in 2020, due to sharp decrease in verified emissions, combined with the UK auctioning 2 years of supply

TNAC rose in 2020 by 92.5 million, to 1 478 million.

Supply and demand of EUAs and TNAC



Source: European Commission, 2020; EEA, 2020; and EU TL, 2021

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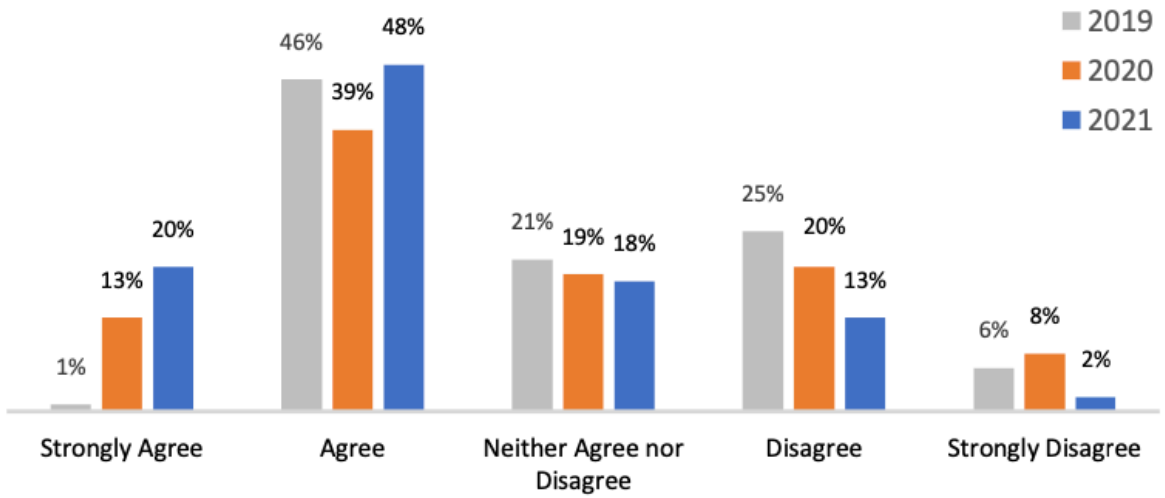
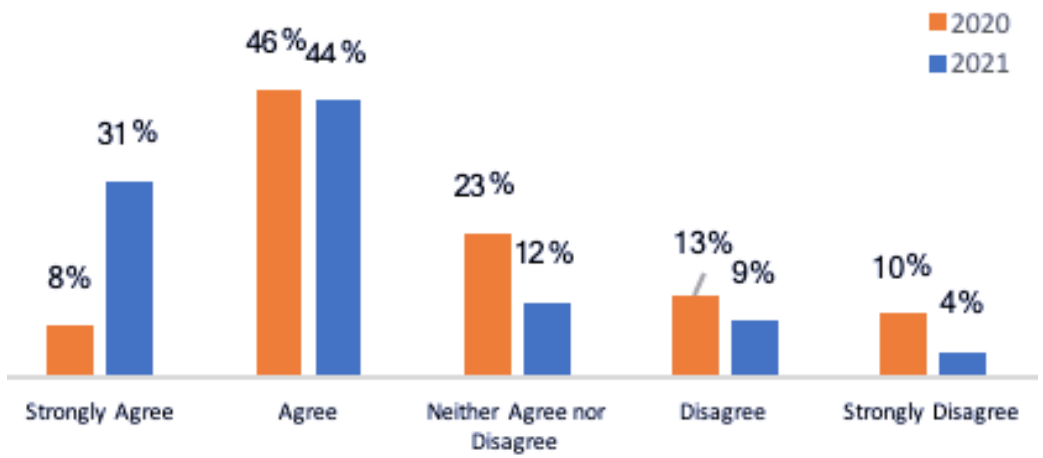
‘Sentiment’ Market Survey *(1)*

1. Confidence seems higher than ever

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



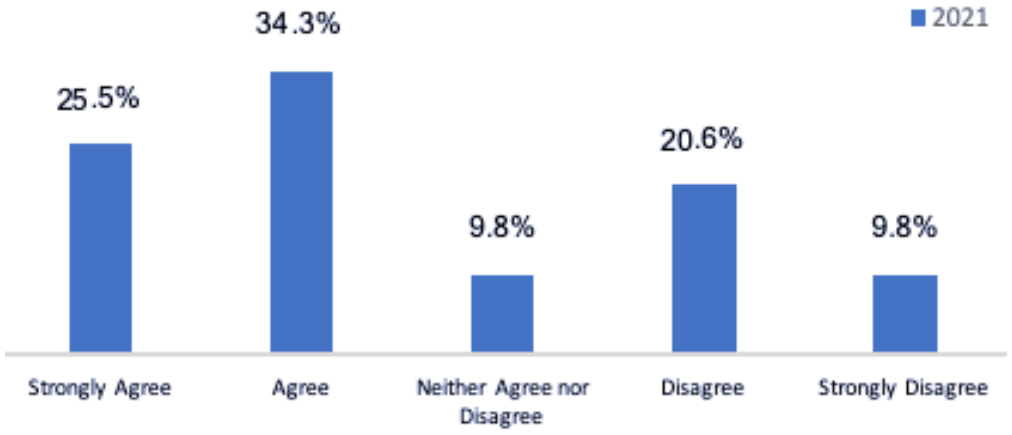
The EU ETS can drive EU decarbonisation post-2030



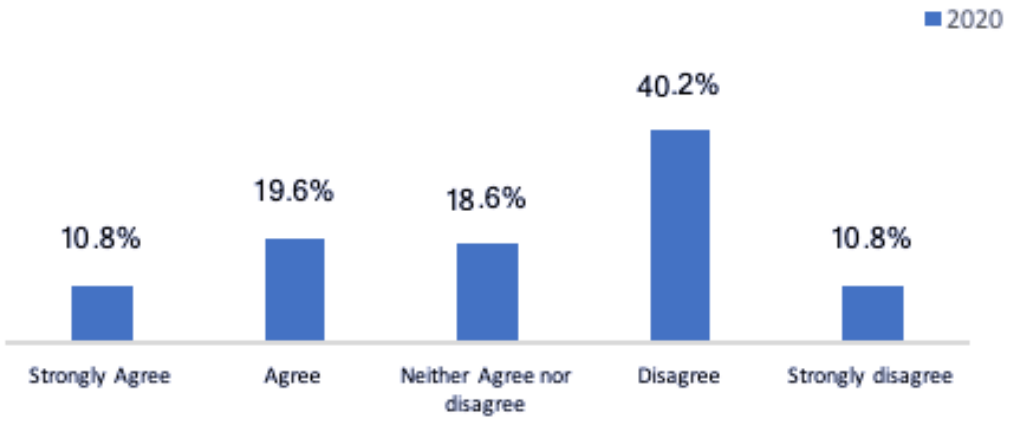
‘Sentiment’ Market Survey *(2)*

2. But (significant) changes are deemed necessary

Significant (revolutionary) changes are needed in the upcoming EU ETS review to make it ‘fit for purpose’



The EU is able to address the issues of carbon leakage and competitiveness without introducing an adjustment at the border



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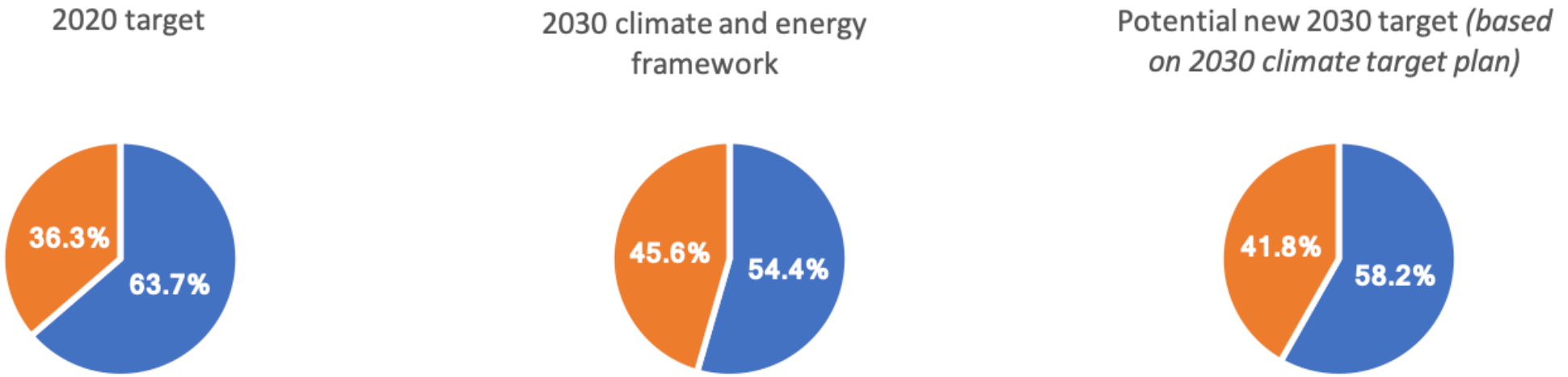
The EU ETS in the European Green deal

ETS relative contribution to total emissions reduction

- **More will be expected from the EU ETS**

- 67.5% of *additional emissions reduction* between the 2030 Climate and Energy Framework and the proposed 2030 Climate Target Plan would come from ETS sectors.

Relative contribution from ETS and ESR sectors in different climate targets (vs. 2005 emissions) – ETS in blue, ESR in orange



Interpretation: for the 2020 target, 63% of the GHG reductions vs. 2005 are to be delivered by the EU ETS

Source: ERCST elaborations on European Commission, 2020

The EU ETS in the European Green deal

Pace of reductions?

- The necessary LRF to reach CTP 2030 ETS target ultimately depends both on its starting year and starting level of the cap

Required LRF to reach an increased 2030 target for different starting years, without or with a one-off reduction of the cap, and year net-zero emissions is reached if LRF continues post-2030

Without one-off reduction of the cap			With a one-off reduction of 200Mt CO_2e		
Year	**LRF**	**Year net-zero is reached if LRF continued**	**Year**	**LRF**	**Year net-zero is reached if LRF continued**
2023	5.12%	2038	**2023**	3.65%	2041
2024	5.53%	2037	**2024**	3.83%	2040
2026	6.78%	2036	**2026**	5.37%	2037

Source: ERCST elaborations on European Commission, 2020

- In every scenario with an LRF compatible with the 2030 ETS objective, the ETS is expected to reach net-zero emissions before 2050 *(if LRF continued)*

- Actual emissions need to decrease at a slower pace towards 2030: 52mt CO_2 per year *(equivalent to an LRF of 2.65%)*

Takeaways (1)

1. Environmental goals have been (over)achieved

- Verified emissions are close to the current 2030 target
- Power sector emissions have been dropping fast

2. ETS price signal played a minor role in the early years of Phase 3

- High deployment of renewables cannot be attributed to the EU ETS
- In recent years, EUA prices combined with low gas prices supported fuel switching from coal to gas

3. Risk of carbon leakage has been mitigated so far, but

- Current rules (e.g. CSCF + inflexibility of free allocation) has hurt some while benefitting others
- The era of overallocation is over for most industrial sectors
- Indirect costs?

4. The market continues to function well

Takeaways (2)

5. EU ETS at the start of a new phase, and not only a new trading phase

- Significantly higher level of ambition
- Decarbonising power → decarbonising industry
- Chronic oversupply on the market → increasing levels of scarcity
- Asymmetry persists between the EU and other trading partners
  - Carbon leakage protection? CBAM?

6. ETS price signal alone will likely not be sufficient to enable the (mass) deployment of low-carbon technologies:

- Well-designed complementary tools are necessary
  - Modernisation and Innovation funds are steps in the right direction
- Increasingly focus on demand-side policies to ensure uptake of low-carbon products

7. Ensure that the transition is sustainable, and that the EU ETS contributes to it

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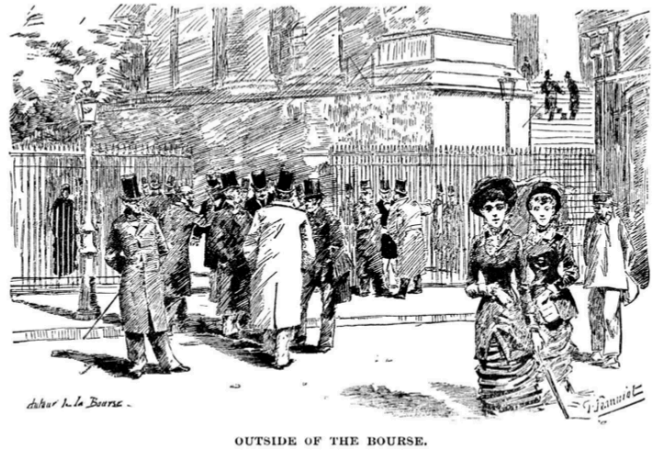

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