

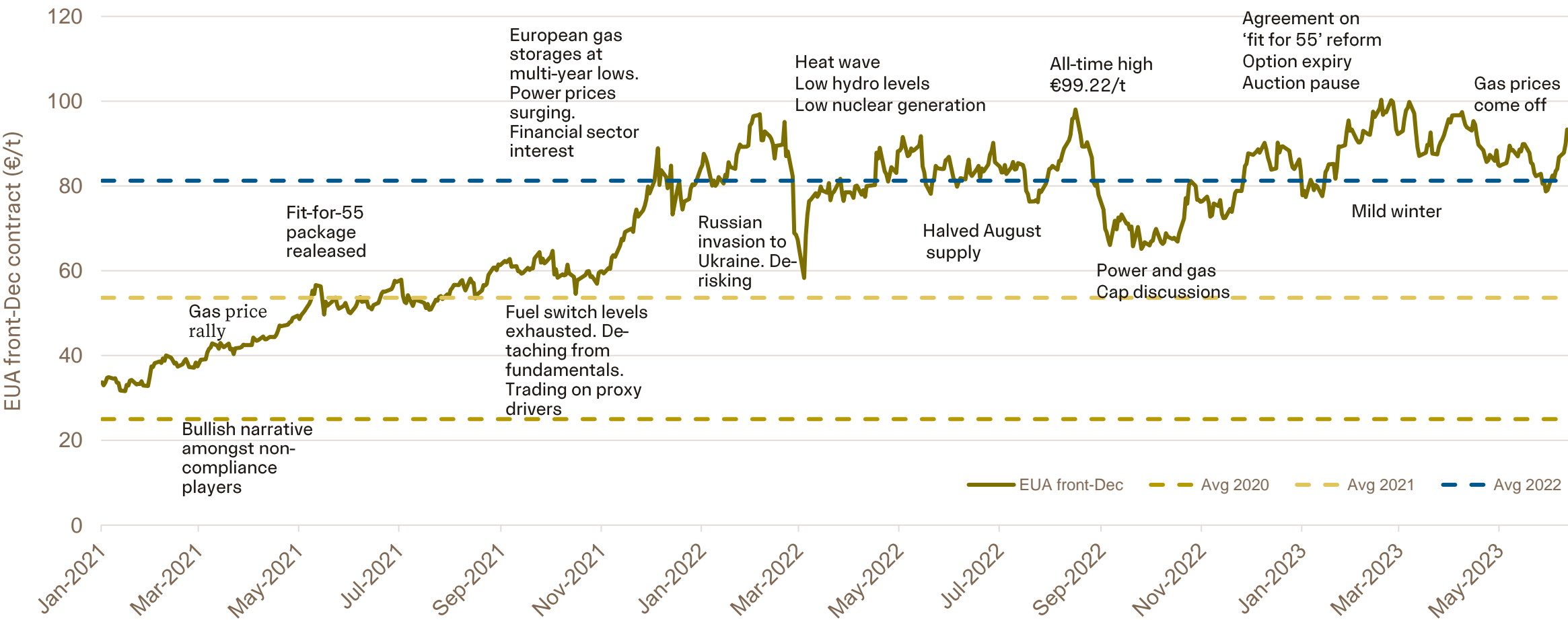
EU ETS – Market outlook

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Helsinki 15 June 2023



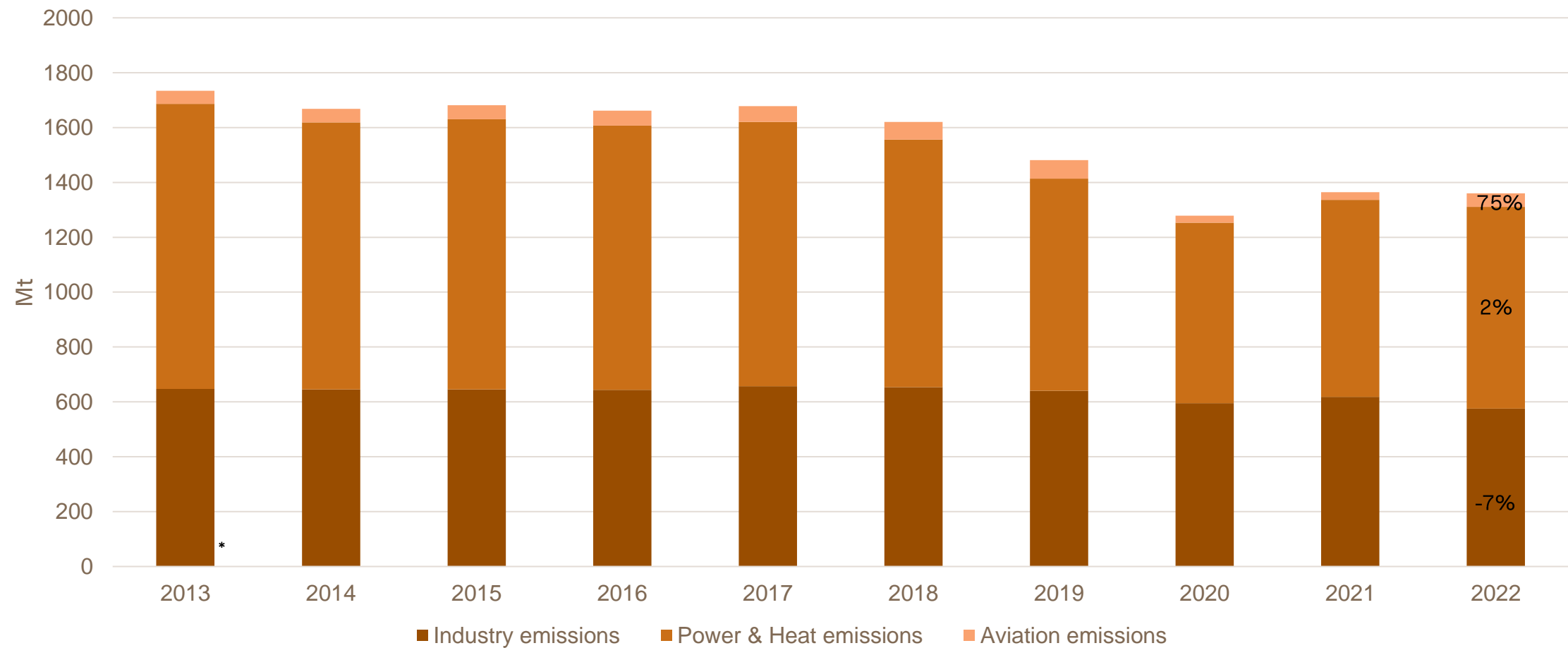
The EUA front-Dec price is adjusting to a myriad of factors

A solid climb – time for correction?



Industrial sector decline outweighed power and aviation sectors increase

2022 EU ETS emissions flat from 2021



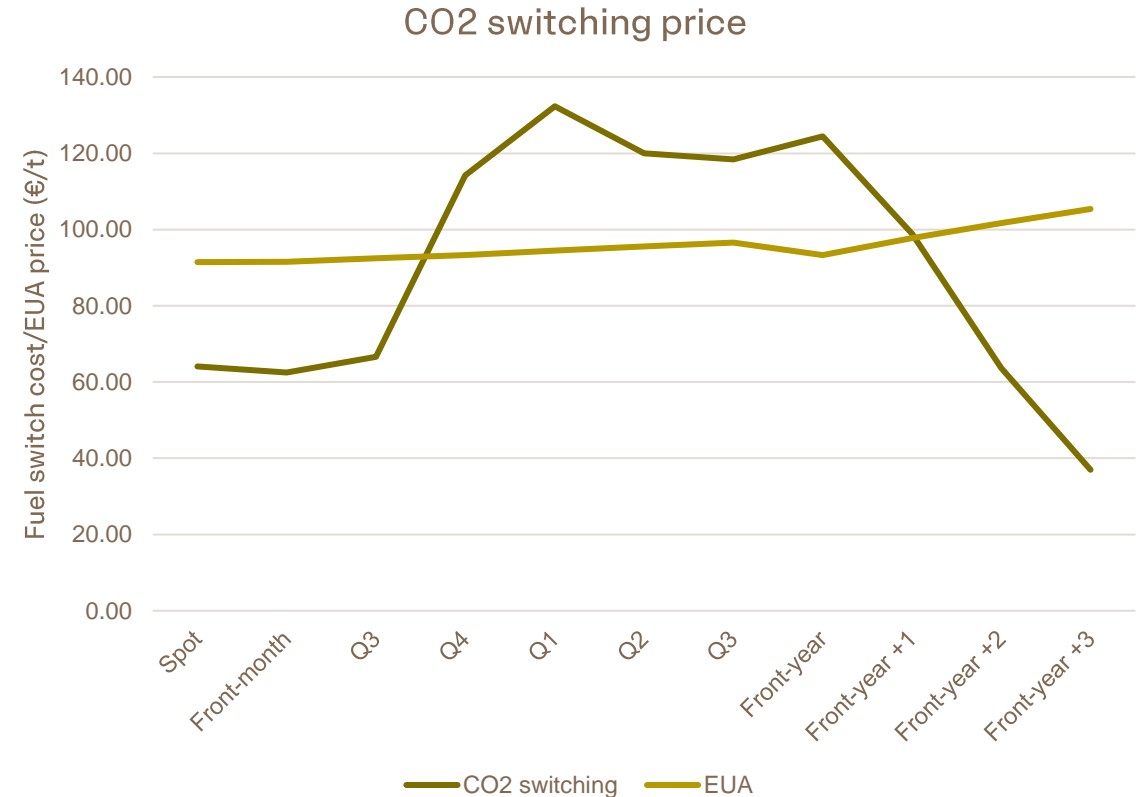
EUA prices are gaining the upper hand near-term and FY3

The return of the fuel switch

Fuel switch levels are correcting due to lower gas prices

- With current gas and EUA prices, fuel switch relevant again
- However, the recent movements of gas prices has not changed the gas usage considerably, as there has fuel switching has been running full speed for some time now
- The gas and power price in the winter season still reflects expectations on a tighter gas situation where coal power plants are favored over gas plants.
- For more coal to exit the power stack in this year, it will require prices to come off for the winter.

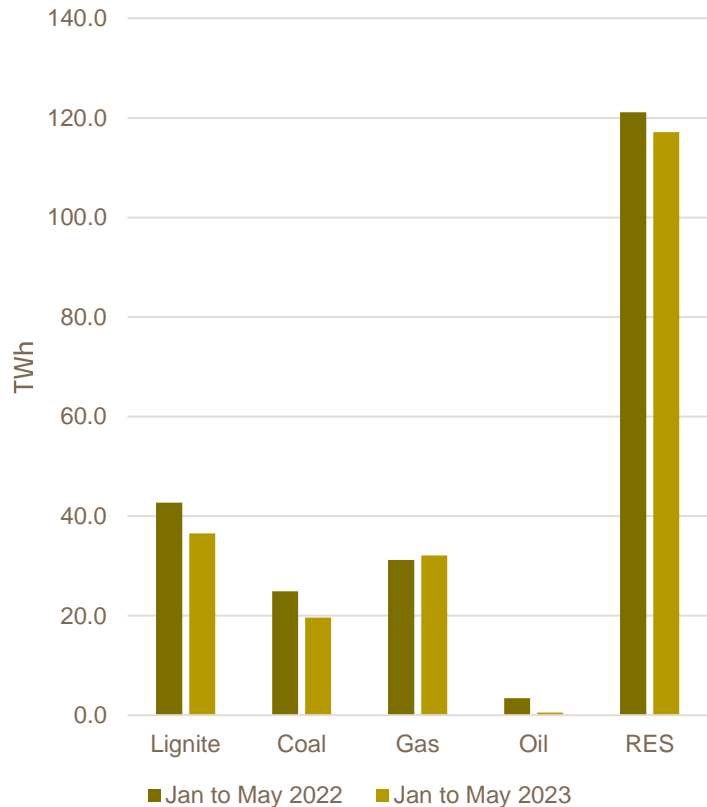
Near-term indicates gas is deep in the money



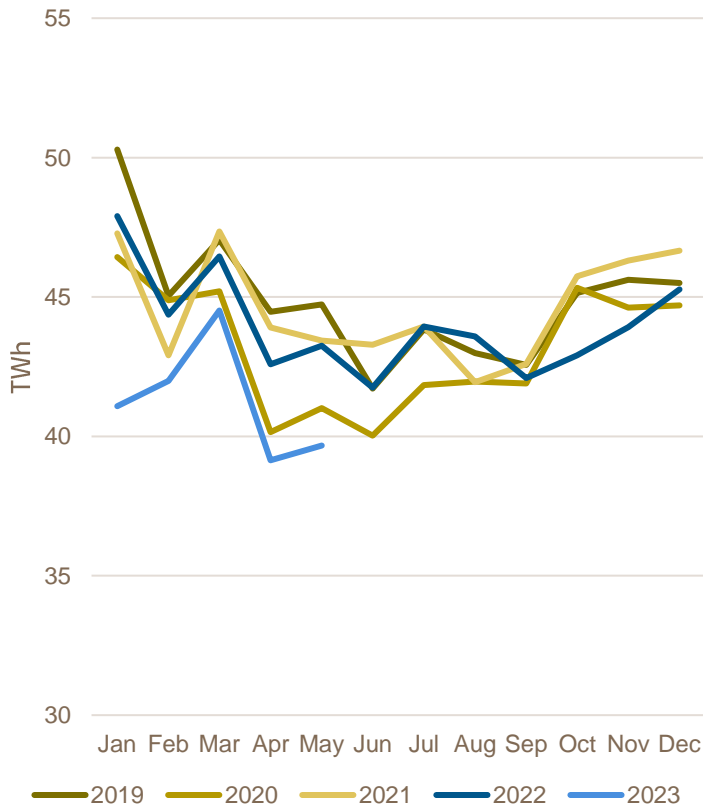
Low demand, renewables and fuel switching

Power sector emissions expected lower for 2023

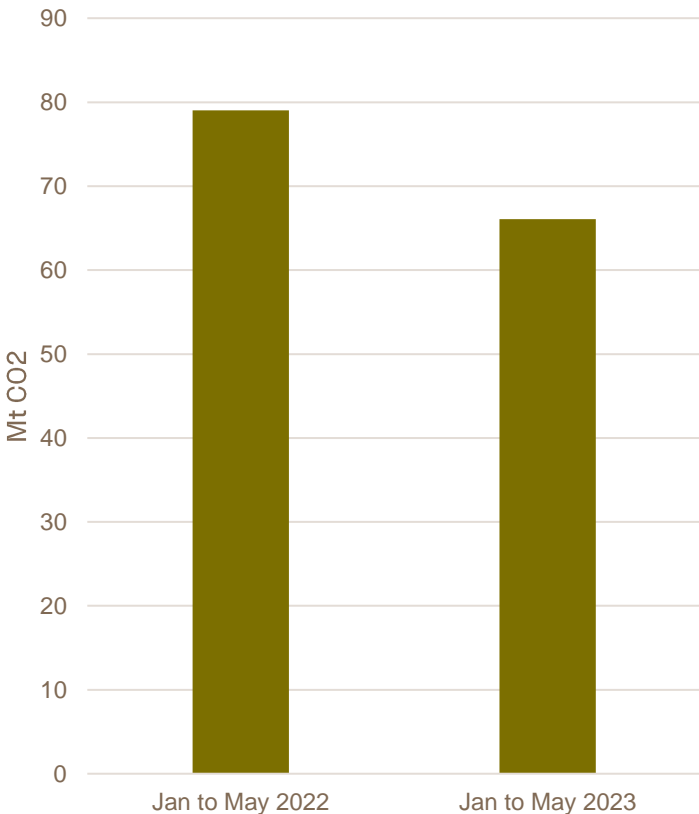
German power prod less emission intensive



German power demand below 2020 levels

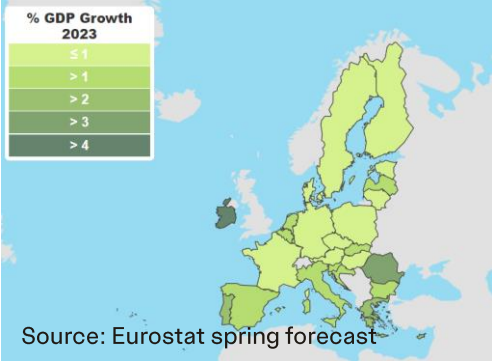
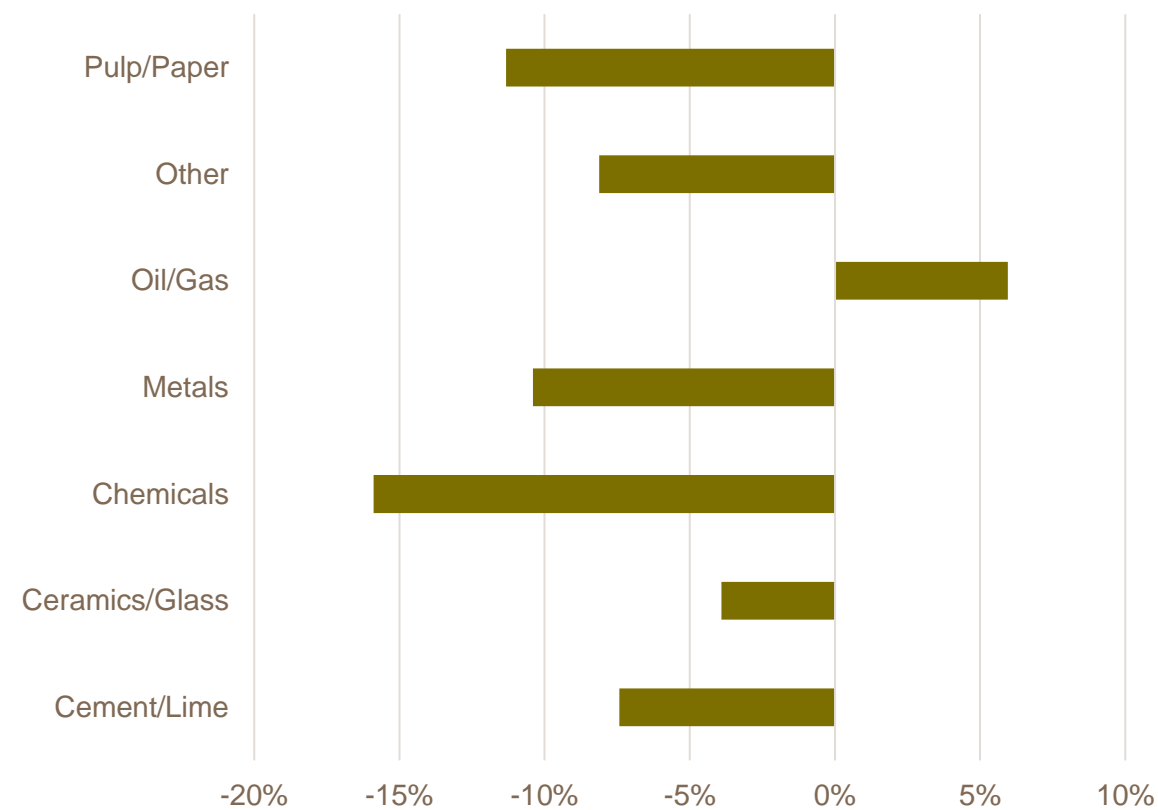


German power sector emissions decrease

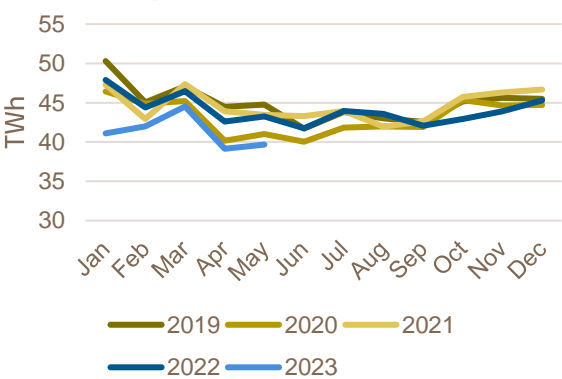


Industry: Slow recovery, but no strong increase in industrial activity

Overall 7% decrease in 2022 y-o-y, large variety within sectors



German power demand



Source: Ember

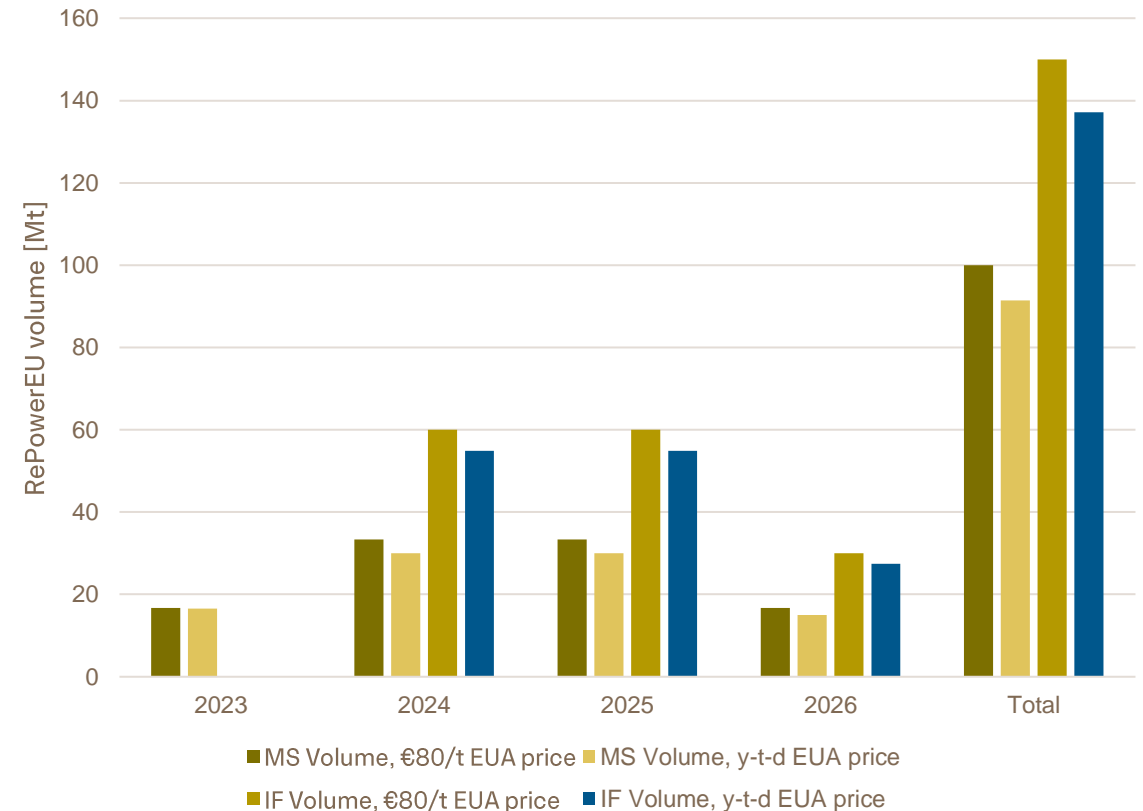
March 2023 compared with February 2023
Industrial production down by 4.1% in the euro area and by 3.6% in the EU
Down by 1.4% in the euro area and by 1.3% in the EU compared with March 2022

Source: Eurostat

RePowerEU can alter the market balance

- €20 billion to be monetised by selling EUAs until August 2026
 - 60% will be sourced from the Innovation Fund
 - 40% from volumes originally earmarked for the member states' auctions in the years 2027-2030
- Exact volume to be sold will depend on how prices develop over the coming year
- 16.5 m EUAs (auction) are to be front-loaded between July and December this year
- For Innovation Fund, Auction Regulation needs amendment. No extra volume in 2023, redirecting of IF proceeds

Depending on the base price, RePowerEU volume will change

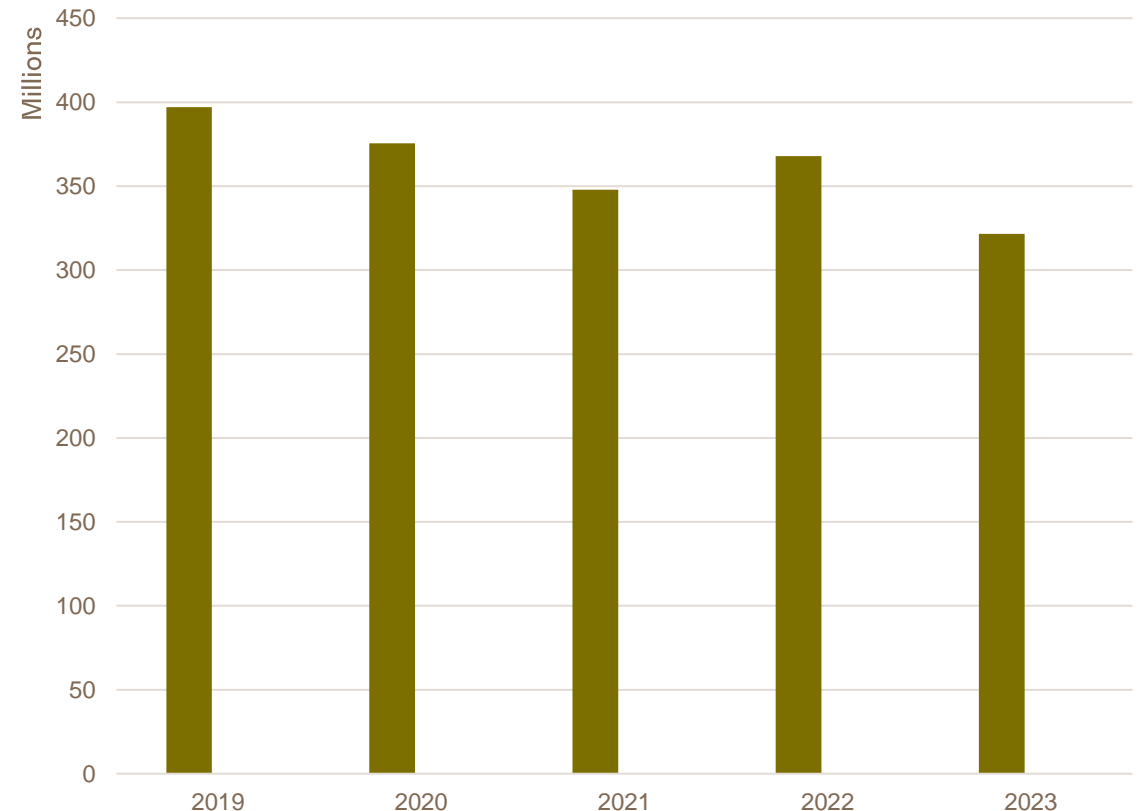


Focus on supply 2023

Daily auctions are increasing from mid-July

- REPowerEU: 16.5 million front-loaded EUAs added to the auction calendar (tentatively from July)
- Market Stability Reserve (MSR) intake from 1 September 2023 – 31 August 2024 is 272 million vs 348 million Sep 22 – Aug 23
- Halved auctions in August and no auctions in end December

Lower MSR intake = Historic oversupply is shrinking

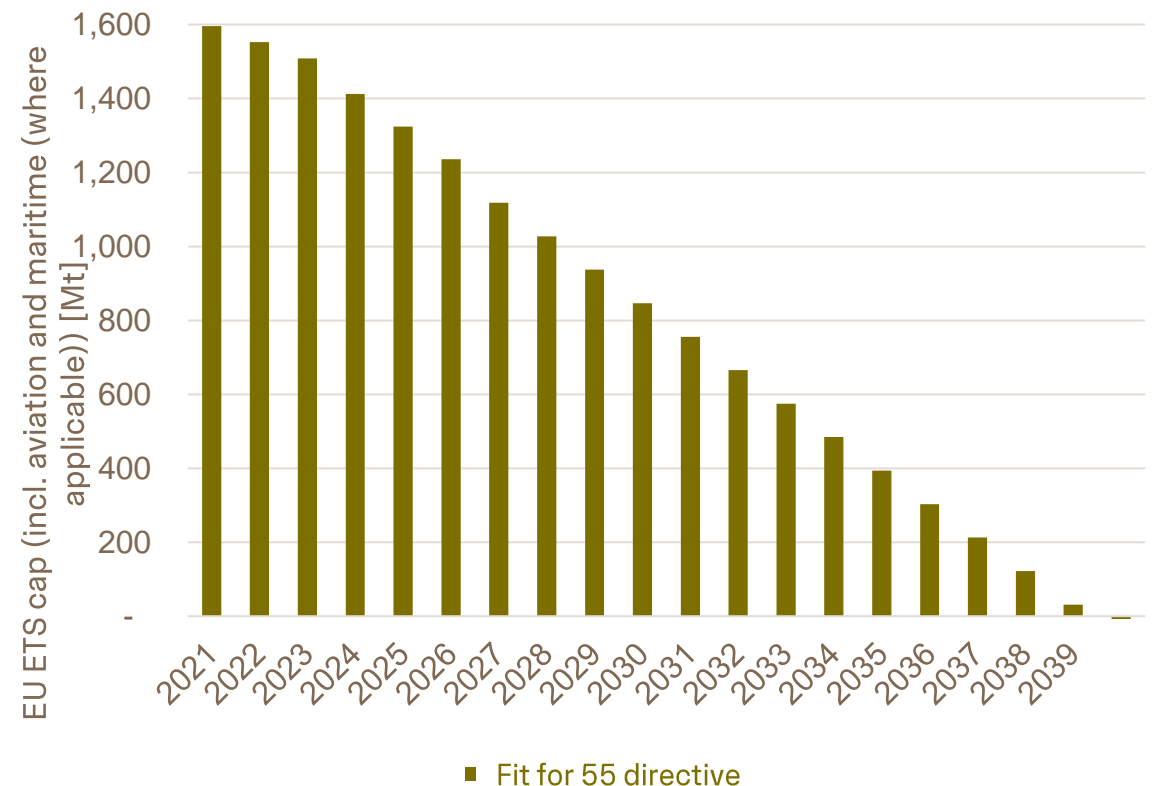


2024: Start of 'fit for 55'

First touch of tighter future, but REPowerEU

- First one-off rebasing - 90 Mt
- New Linear Reduction Factor reduces cap yearly by 84 Mt, from 43 Mt in 2023
- 40% of shipping sector emissions covered (70% 2025, 100% 2026)
- Market Stability Reserve will change to a buffer MSR and reduce less if oversupply (TNAC) is below 1096 Mt
- Additional EUAs, from Innovation Fund and member states, to be sold for REPowerEU (up to ~90 Mt)

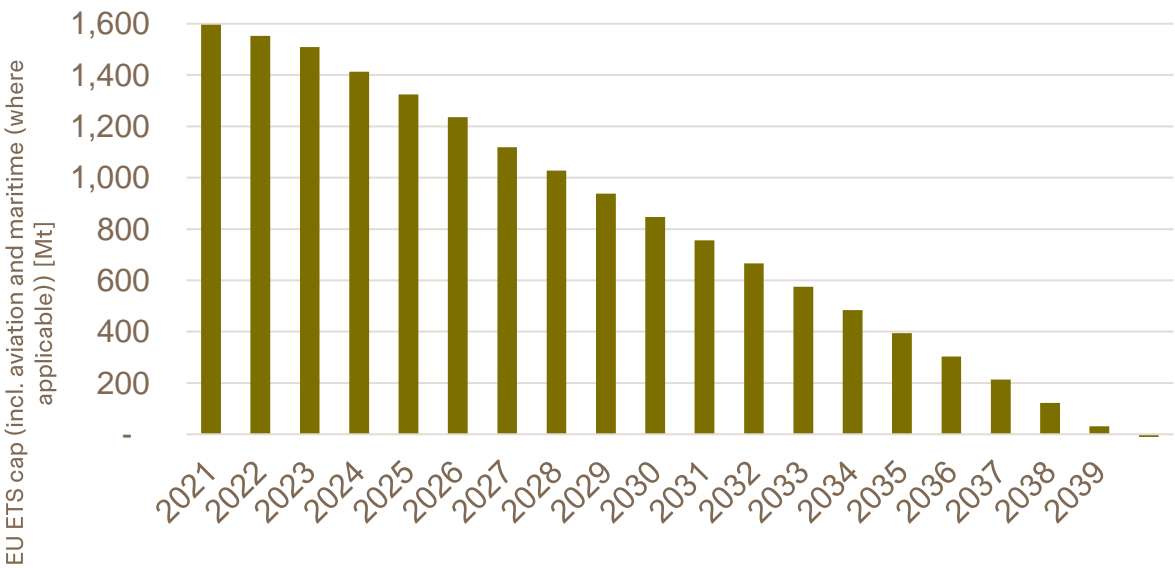
Higher ambition tightens the market



Outlook: Anticipation of future shortage outweighs short-term bearishness

- Power sector emissions set to see a large decrease in 2023
- Industrial sector emissions likely to remain muted
- More auction supply in H2
- RePowerEU volumes unknown
- Start of ‘fit for 55’ legislation and future tightness is supportive

Q3	Q4	Avg 2023
€90/t	€94/t	€91/t



What moves carbon prices these days?

Energy prices/gas/fuel switch	Role of investors	Fit-for-55/ policy	Source of abatement is key	Carbon seen as a risk-hedging and investment tool not only by compliance players
<ul style="list-style-type: none"> ▪ Continuously weak short-term gas prices are pushing coal out of the fuel mix ▪ Fuel-switch levels below EUA prices again, gas runs ahead of coal 	<ul style="list-style-type: none"> ▪ Market access not to be limited to compliance entities and intermediaries ▪ Speculative participants activity has picked up 	<ul style="list-style-type: none"> ▪ Lowered policy risk as legislative process concluded. ▪ Implementation of reformed EU ETS from 2024 ▪ Modalities around sale of EUAs for REPowerEU funding become clearer but need further details 	<ul style="list-style-type: none"> ▪ Running out of fuel switch, industry needs to speed up ▪ Russian invasion set to speed up greening of Europe's energy sector ▪ Many industries have seen demand destruction ▪ Role of hydrogen 	<ul style="list-style-type: none"> ▪ Legislative process likely to bring additional "buy-and-hold" investors to market ▪ Carbon allowances used to protect larger portfolios

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