Carbon price in the EU in 2030



arbon price significantly impacts on investment plans of companies, so forecasting CO₂ prices becomes important part in development of companies' strategies. Existing forecast approaches for CO₂ prices can be divided into following types:



Simulation of EU ETS and market stability reserve (MSR) imitates supply and demand for carbon allowances depending on different

parameters (for example, economic activity, policies, behavior of market participants etc.).

Considering abatement cost curves means understanding the CO₂ price required to incentivize certain technologies for the lowcarbon transition in economy.

Energy optimization models connect forecast of CO₂ price to country energy balances and operation of country energy systems.

• Expert surveys aggregate price opinions of different persons.

Forecasting CO₂ prices requires consideration of following factors: policy parameters, abatement costs, decarbonization of power sector, hedging and speculation strategies of market participants. Depending on forecast approach, different drivers play major role.



CO₂ reduction target / trajectory of emission cap

Policy parameters

- MSR activity
- CBAM
- Decreasing benchmarks for free allocations

 Fuel costs, in particularly gas price and renewables costs

CAPEX and OPEX of low-carbon technologies

of power sector

Renewable targets

- Fossil (esp. coal) phase-out policies
- CAPEX and OPEX of new low-carbon capacities
- Investment activity of pension funds and asset managers
- Trading activity of carbon emitters



Policy parameters mainly aimed at reducing supply of carbon allowances through different instruments:

- decreasing emission cap according to Fit for 55 targets;
- activity of MSR, which absorbs surplus allowances from the market;
- regular decrease of benchmarks for free allocations;
- gradual decreasing free allocations due to CBAM implementation since 2026. In 2034 free allowances for sectors under CBAM regulation will be cancelled.

Abatement costs reflect expenses associated with introduction and use of low-carbon technologies. Appropriate CO₂ price can increase competitiveness of "green" technologies incentivizing companies to commission new lowcarbon facilities. So, CO₂ price and abatement costs are interconnected.

Power sector is the largest purchaser of carbon allowances as it generates about 50% of carbon emissions in the EU ETS and does not receive free allocation. On the other side, power sector has available possibilities to decrease carbon emissions through fuel switching and phase-out of coal capacities. The ETS cap trajectory requires fast and deep decarbonization of electricity generation, so situation in power sector will significantly impact on CO₂ prices.

Hedging and speculation unite trade strategies of different market participants, which can be divided into two groups:

- compliance traders emitters, which participate in EU ETS;
- non-compliance traders financial intermediaries.

Compliance traders can hold carbon allowances on accounts for future periods. Non-compliance traders can purchase carbon allowances with long-term investment purposes. Both strategies will lead to decreasing market supply of carbon allowances, pushing prices up.

TOP-5 CO_2 price drivers, by % of respondents who marked price driver as large important



Data source: Refinitiv carbon market survey 2022.

CO_2 price forecasts by organization, ϵ/t

Organization	2030	Month when forecast was announced
CRU	167	May 2023
PwC	100	July 2022
Potsdam Institute for Climate Impact Research (PIK)	120	December 2022
Bloomberg NEF	147	December 2022
Independent Commodity Intelligence Services (ICIS)	140	May 2023
Centre for Climate and Energy Analyses (CAKE/KOBiZE)	149	December 2022
Enerdata	160	December 2022
Refinitiv (Reuters)	160	October 2023
VanEck	133	December 2022
GMK Center consensus forecast	147	October 2023

Data source: Potsdam Institute for Climate Impact Research, mass-media, calculations of GMK Center.



EU ETS & MSR

simulation is the most detailed approach, taking into account a lot of factors. At the same time predictability of these factors can not be high, which reduces the quality of the CO₂ price forecast.

Abatement cost

curves can define objective price stimulus for decarbonization. Although companies in some sectors can pass through carbon costs to customers and in such case abatement cost curve will not work. **Energy optimization** models rely only on performance of one economic sector, although there are more carbon emitters in economy. By 2030 decreasing free allocations will significantly change carbon market balance as more emitters will need to by carbon allowances. So, more sectors will influence CO₂ price.

Expert surveys reflect

market sentiment. This approach unites different opinions, making the most reasonable forecast. GMK Center using expert survey calculated consensus forecast at 147 € per t CO₂ in 2030.

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