EUROFER
THE EUROPEAN STEEL ASSOCIATION

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Cost impact of the EU ETS on the steel industry in phase 4 – with and without CBAM

The following calculations are based on the model Guidehouse Carbon Cost Calculator (formerly Ecofys/Navigant) and the assumption of annual EU steel production of 162 million tonnes.[1]

Without the necessary investment in decarbonisation projects, the EU steel will emit approximately

- 200 Mt direct CO2 emissions p.a., or 2 billion t CO2 in the period 2021-2030
- 33 Mt indirect CO2 emissions equivalent p.a., or 330 Mt in the period 2021-2030

Impact of the ETS with 100% free allocation at benchmark level, without CBAM and without cross sectoral correction factor

Without a potential CBAM reduction on free allocation, and without the cross sectoral correction factor, the steel sector would already face in the period 2021-2030 a

- shortage of 426 Mt for direct CO2 emissions
- shortage of 180 Mt for indirect CO2 emissions

This shortage results already under current rules in the period 2021-2030 in total direct and indirect

- costs of 30 billion €, if the carbon price is constant at 50€/t until 2030, or
- costs of 45 billion €, if the carbon price increases linearly from 50€/t in 2021 to 100€/t in 2030 (increasing the annual costs from 2.9 billion € in 2021 to 6.3 billion € in 2030)

The costs per tonne of primary steel would be in the period 2021-2030, on average:

- 24€/t, if the carbon price stays constant at 50€/t until 2030, or
- 36€/t, if the carbon price increases linearly from 50€/t in 2021 to 100€/t by 2030

In comparison, average annual EBIT of EU primary steel in the period 2016-2019 was at around 2%, or 10 €/t steel. [2]

Impact of the ETS with a CBAM and reduced free allocation and indirect costs compensation

If free allocation and indirect costs compensation are further reduced, for example, to 80% of the benchmarks in the period 2023-2030, the steel sector would face a

- shortage of 74 Mt for direct CO2 emissions p.a., and 675 Mt in the whole period 2021-2030
- shortage of 21 Mt for indirect CO2 emissions p.a., and 200 Mt in the whole period 2021-2030

Such shortage would result in the period 2021-2030 in total direct and indirect

- costs of 44 billion €, if the carbon price is constant at 50€/t until 2030, or
- costs of 67 billion € in the period 2021-2030 if the carbon price increases linearly from 50€/t in 2021 to 100€/t in 2030 (increasing from 2.9 billion € in 2021 to 9.7 billion € in 2030)

The costs per tonne of primary steel would be in period 2021-2030, on average:

- 37€/t (increasing to 42€/t in 2030), if the carbon price is constant at 50€/t until 2030, or
- 58 €/t (increasing to 85€/t in 2030), if the carbon price increases linearly from 50€/t in 2021 to 100€/t in 2030

[1] 92 Mt BF/BOF steel, 70 Mt EAF steel in 2021, 86 Mt BF/BOF, 76 Mt EAF steel in 2030.

[2] Reference profitability for primary steel – Source: Commission Implementing Regulation 2021/9 imposing provisional antidumping duties on imports of hot rolled coils from Turkey; Reference period: average 2016-2019; Hot rolled coils prices: ± 500€/t; Profit (Earnings before interest and taxes): ± 2%, i.e. 10,60 €/t

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