Credit the Price Signal, Not the Payment

Carbon price recognition and scrap shuffling under the EU's CBAM

The EU's border charge measures carbon plant by plant and credits only carbon prices paid. Exporters can route clean steel to Europe, and a feebate earns nothing. Measure by country and sector, and credit the exporting country's price signal.

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The EU now charges steel imports hundreds of euros a tonne for their carbon

€445

per tonne of hot-rolled steel from India (default 4.28 tCO_2/t plus 30% mark-up)

€331

per tonne from China (default 3.19 tCO_2/t)

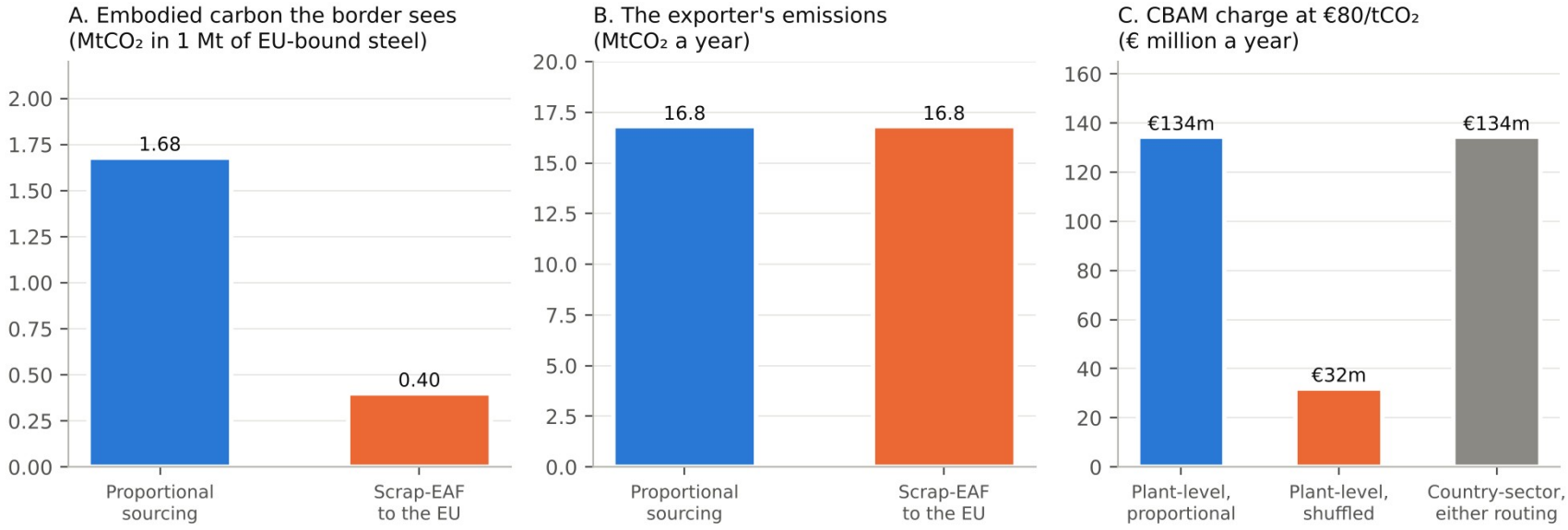
€252

per tonne from Türkiye (default 2.43 tCO_2/t)

At €80 per tonne of CO_2 and full phase-in. The charge falls only by a carbon price "effectively paid" abroad, net of "any rebate or other form of compensation" (Art. 9(1)).

Source: Implementing Regulation (EU) 2025/2621 (default values); Regulation (EU) 2025/2083; working paper 1.4, Table 3.

Measuring plant by plant pays exporters to route clean steel to Europe



Stylized exporter: 10 Mt a year, 2 Mt from scrap, 1 Mt sold to the EU at €80/tCO_2. Shipping only scrap-based steel to the EU cuts the carbon the border sees by 76% and the bill by €102m a year; emissions stay at 16.8 $MtCO_2$. Scrap is limited, so the cut is mostly relabeling.

Source: Author's calculation; working paper 1.4, Figure 1; IEA (2020).

Routing is worth almost as much as the charge itself

Hot-rolled steel, € per tonne at €80/tCO_2	Charge, default with mark-up	Gain from routing scrap-based steel
India (4.28 tCO_2/t)	445	310
China (3.19)	331	223
Türkiye (2.43)	252	162
Japan (2.10)	218	136
Brazil (1.62)	168	98

Across thirteen exporters the gain is €98–626 a tonne. None of it is a fall in emissions. The law asks for reports on "resource shuffling" but gives no tool to stop it.

Source: EU default values (Reg. 2025/2621); scrap-based steel at 0.4 tCO_2/t (stylized). Working paper 1.4, Table 3; Reg. 2023/956, Art. 30.

A feebate gives the full carbon price at the margin, yet earns no credit

Price paid versus price signal. A feebate charges above the sector average and rebates below it: every producer faces the full price on each tonne it cuts; the average producer pays nothing.

The draft rules net out the rebate. Emissions "below an emission intensity baseline" count as compensation, so recognition is zero. A tax at the same rate would earn it all.

The default carbon price covers explicit prices only. From 2027, only "where a carbon price was set by the rules"; the method being prepared starts from carbon taxes and trading systems.

Source: Draft implementing regulation Ares(2026)4841230, Art. 8(1)(b)(ii); Reg. 2025/2083, Art. 9(4); Technopolis (2026).

One value per country and sector ends shuffling, but leaves each plant almost no incentive

No plant can choose what the border sees, so routing and picking defaults earn nothing.

But a clean plant lowers the average for everyone. If a tenth of output goes to the EU, the country gains €8 per tonne of CO_2 cut; a mill with a tenth of the country's output keeps €0.80.

A value fixed for years gives no incentive at all. It must be the verified sector average, updated yearly.

Standardized values have the same gap: Neuhoff et al. (2026) note they create no direct incentive abroad.

Source: Working paper 1.4, Proposition 3; Neuhoff et al. (2026).

Crediting the country's price signal restores the incentive on every tonne

The rule: importers pay the EU price less a recognized foreign price, on the country-sector average carbon content. The recognized price is the price paid plus a weight on the unpaid part of the signal.

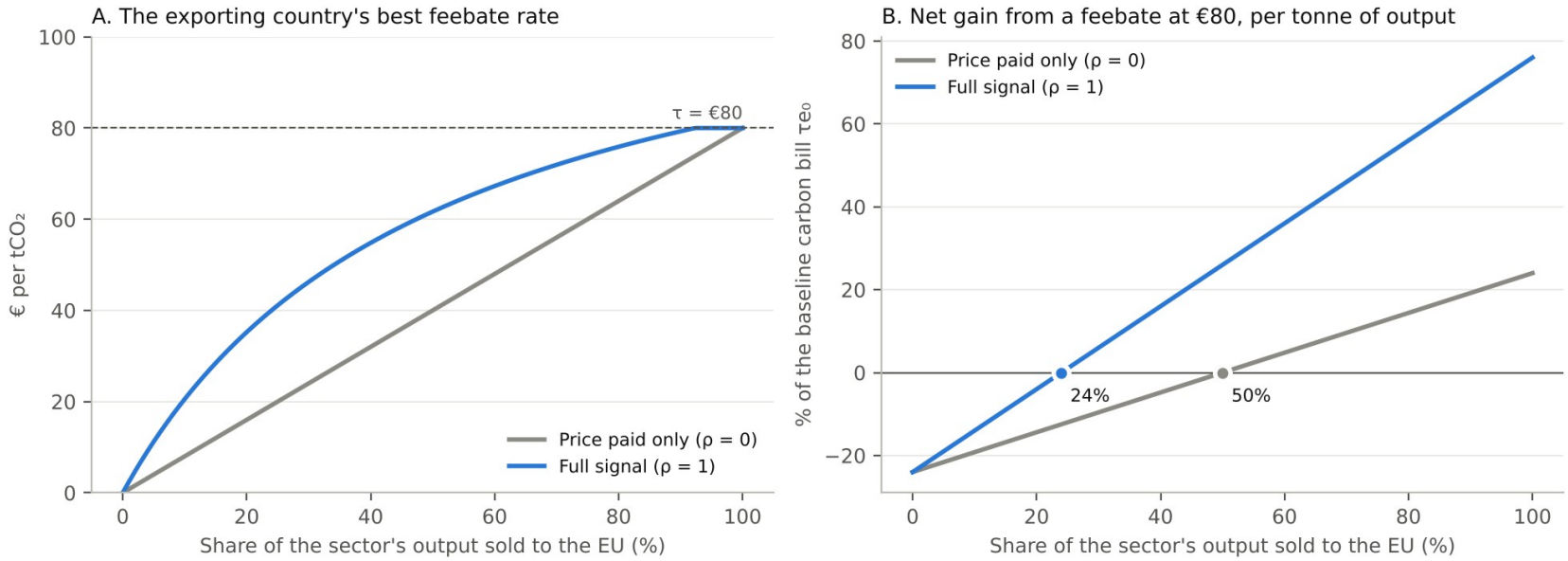
No plant can game it, and a feebate at the EU price stays the exporter's lowest-cost choice.

A feebate at €80 gives every plant €80 a tonne on all its output, not only the tenth sold in Europe.

Any instrument can be scored as a carbon-price equivalent (Brief 6.1): tax, feebate, subsidy reform, standard.

Source: Working paper 1.4, Proposition 5; Mehling and Ritz (2023) for explicit prices only.

With recognition, a feebate at the EU price pays off at a quarter of output sold to the EU, not half



Selling a tenth of output to the EU, a country's own best feebate rises from €8 to €21 with full recognition (A). A feebate at €80 breaks even at 50% of output sold to the EU today, 24% with recognition (B). Stylized abatement costs.

Source: Author's calculation, stylized abatement costs; working paper 1.4, Figure 3.

Phase recognition in with the end of free allocation, and keep verification where there is no signal

The cost: a feebate country's steel could enter without a carbon charge while EU steel pays on all its emissions.

So tie recognition to free allocation: weight = 1 − CBAM factor: 2.5% in 2026, about half in 2030, full from 2034 (or 2038 if extended). Review relocation at each step.

No signal, no country route: firms verify the whole output of all their plants.

Law: mark-up and support test by implementing act; crediting the signal needs Article 9 amended.

Source: Directive (EU) 2023/959, Art. 10a(1a); COM(2026) 616; working paper 1.4, Sections on design and legal pathway.

What to do

What the analysis shows

Shuffling: €98–626 a tonne of steel, no emissions cut.

Recognition: a feebate earns nothing under the draft rules.

Country-sector values: end shuffling, but need a domestic price.

Signal recognition: break-even falls from half to a quarter of output.

Actions

Commission: consult on the default carbon price; cover feebates and non-price policies.

2027 default values: country-sector route without mark-up for signal countries; whole-output verification elsewhere.

Article 9: credit the signal, phased in with free allocation; measure shuffling.

Exporters: a sector-wide feebate.