



SECOND-HALF 2026 OUTLOOK
VOL. 03 / IRON & STEEL

IRON & STEEL / MID-YEAR OUTLOOK

Decarbonizing *Iron & Steel* with C3

Green steel is not a technology problem. The furnace already works, and the plants that can make near-zero carbon steel exist and run. What is missing is the final investment decision, because the green premium has no buyer to underwrite it. This report looks at what H2 2026 brings, and at how Carbon3 (C3) helps bridge that gap by aggregating demand and underwriting part of the green premium.

EXECUTIVE SUMMARY

The furnace works: *the final investment decisions are not being made.*

By mid-2026, the problem with green steel is not the technology. The furnace that makes near-zero carbon steel already works, and the first plants are being built. The trouble comes at the moment of decision: green steel costs more to make, and too few buyers have committed to pay for it, so most projects stall before they break ground. The missing piece is financial. Carbon3 (C3) is the allocation platform that pools what companies already spend on cutting emissions into the long-term contracts steelmakers need to start building.

PART I

WHERE DOES STEEL DECARBONISATION ACTUALLY SIT?

A sector priced, mandated *and frozen at FID.*

The state entering H2 2026: size and emissions, the three production routes, the rising compliance bill, and the financing constraint six 2026 trackers each name in their own way.

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PART II

WHERE DOES C3 FIT?

Carbon3 is the way *to break the logjam.*

How Carbon3 helps mills pool buyer demand, allocate each verified reduction to one named buyer, and retire it once, while verification stays with accredited third-party auditors using ResponsibleSteel, ISO and ISCC frameworks.

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PART III

WHAT DOES IT LOOK LIKE IN PRACTICE?

Two illustrative deals.

Two worked examples: a Stegra H₂-DRI inset allocated to auto OEMs in Europe, and a trans-Pacific green-iron book-and-claim with CBAM passthrough.

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PART I / THE STATE OF PLAY

I Where iron & steel decarbonisation *actually sits* entering H2 2026.

Steel is priced and mandated, proven in the furnace, and frozen at the investment decision. This part walks the sector one constraint at a time, drawing on the major 2026 trackers, then connects them.

THE SECTOR AT A GLANCE

A 1.9-billion-tonne industry at 7–9% of energy CO₂, and the one route that cleans it *is stuck at FID*.

The world cannot build without steel, and demand keeps rising toward 2050 even as the sector has to reach near-zero. Only one way of making new steel gets there at scale, hydrogen-based DRI, and it already works. The catch is that it costs more, and almost none of it has been given the go-ahead to build. The gap is not the furnace; it is the financing.

1.89

BT CRUDE STEEL • 2024

world output, climbing toward ~2.2 Bt by 2050 as demand keeps growing.

World Steel Association, World Steel in Figures 2025.

2.6

GT CO₂ / YR (DIRECT)

is what iron & steel emits, about 7–9% of energy CO₂, the largest industrial emitter after cement.

IEA, Iron & Steel.

70%

OF OUTPUT IS APAC

is produced in Asia-Pacific; China alone is 53%, the centre of gravity for production and policy.

World Steel Association, Top producers 2024.

50–70%

GREEN PREMIUM • 2030

more to make near-zero carbon steel, a premium driven mainly by green-hydrogen cost.

BloombergNEF, Green Steel Outlook 2025.



THE ROUTES

Three routes make the steel, *and they reach near-zero in different ways.*

A steel deck that lumps "steel" into one number hides where the abatement has to happen. Hydrogen-DRI/SAF is the primary pathway for near-zero *primary* steel at scale, while renewable-powered scrap-EAF is the lowest-emission *secondary* route. Each carries a different intensity, cost and lever.

Integrated BF-BOF

~71% OF OUTPUT

Coke, sinter, blast furnace, basic-oxygen furnace, on 25-year campaigns. The incumbent route, and the hardest and most capital-intensive to abate.

1.9–2.3

tCO₂ / TCS

1.34 Bt

2024 OUTPUT

Scrap-EAF

~28% OF OUTPUT

Mini-mills remelting scrap in an electric-arc furnace; on renewable power, already among the lowest-emission steel made. The cheapest abatement, capped by how much scrap exists.

0.4–0.7

tCO₂ / TCS

530 Mt

2024 OUTPUT

DRI-EAF · NG → H₂

<8%, RISING

Direct-reduced iron in a shaft furnace, then EAF. Natural gas today; on ≥90% green hydrogen it reaches near-zero. The primary route to near-zero at scale, and the one every first-of-a-kind plant is building.

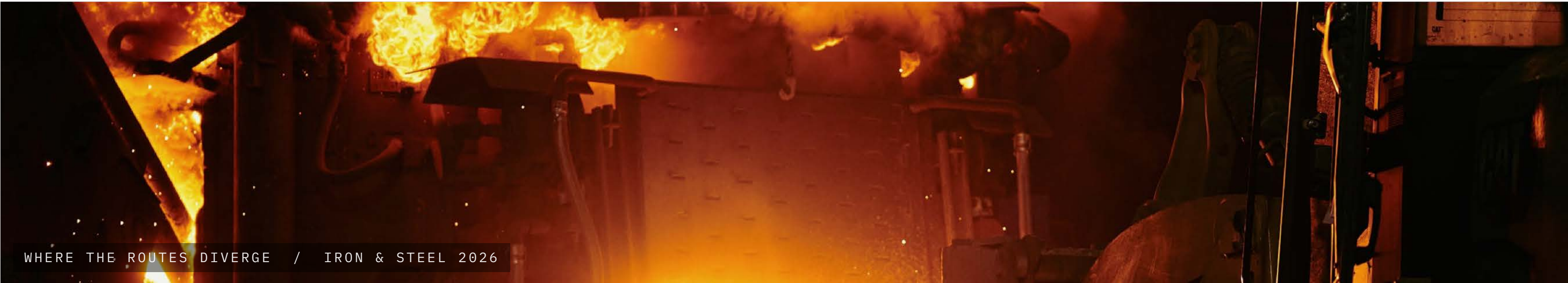
0.05–1.4

tCO₂ / TCS

~3 Mt

H₂-DRI FOAK 2026

→ Molten-oxide electrolysis (Boston Metal, ArcelorMittal Siderwin) is the post-2030 leapfrog: direct electrolytic iron, <0.1 tCO₂/tcs on clean power, still pre-FID.



WHERE THE ROUTES DIVERGE / IRON & STEEL 2026

CARBON IS NOW A DATED, PRICED LINE ITEM

From 1 January 2026, the carbon bill on EU steel *roughly sextuples by 2034*.

THE 2026 COMPLIANCE MAP FOR STEEL

INSTRUMENT	2026 STATUS	CARBON-EQUIVALENT COST, 2026
EU ETS Phase 4 Dir. (EU) 2023/959	Free allocation –2.5%/yr from 2026, back-loaded to 100% removal by 2034	EUR 85–105 / t
EU CBAM Reg. (EU) 2023/956	Definitive period live 1 Jan 2026; Scope-2 in scope for steel	ETS-linked
China national ETS MEE, 2025-03-26	Steel included; first compliance surrender mid-2026	~CNY 95 / t (USD 13)
India CCTS BEE, S.O. 2825(E)	First compliance FY2025-26; 282 steel installations	intensity-based
Korea K-ETS Phase 4 ME ROK	Auction share 10%→15%; benchmark tightened –5.5%	market
Japan GX-ETS METI	Mandatory phase begins 2026	market

Sources: Dir. (EU) 2023/959; Reg. (EU) 2023/956; China MEE Notice 2025-03-26; BEE CCTS Rules 2024; ME ROK K-ETS Phase 4 Plan 2025; METI GX Plan 2025; BloombergNEF EU Carbon Outlook H2 2025.

EU STEEL CARBON COST AS FREE ALLOCATION PHASES OUT (EUR / TONNE CRUDE STEEL, MILL AT 2.0 TCO₂/TCS)



Today most of an EU mill's emissions are still covered by free allowances, so the carbon bill is small. Those allowances are taken away step by step and reach zero in 2034, and the chart shows the bill climbing as they go. Carbon has turned from a future risk into a fixed, rising cost, and from 1 January 2026 the same price hits importers at the EU border under CBAM.

INTERNATIONAL ENERGY AGENCY

"high-emission projects make up around **two-thirds** of all announced projects worldwide."

– IEA, IRON & STEEL (TECHNOLOGY TRACKING, 2025) · [IEA.ORG](https://www.iea.org)

WHAT IT MEANS

The IEA tracks every new ironmaking and steelmaking project announced around the world. Its finding is stark: even counting all the clean projects on the books, the industry is nowhere near a net-zero path, and roughly two-thirds of what is actually being announced is still the old, coal-based kind.

This is not because the clean technology is missing. Hydrogen-based plants already work. It is that, when a company decides what to build next, the conventional blast furnace is still the cheaper, safer bet, because nothing yet rewards it for building clean.

In plain terms: the world keeps adding the wrong kind of capacity. Until a buyer is willing to pay extra for low-carbon steel, the maths at the boardroom table keeps pointing back to coal.

→ The pipeline exists, but it is still pointed the wrong way. The trackers that follow quantify the gap.

AGORA INDUSTRY

Committed projects deliver ~45–62 Mt of near-zero DRI by 2030, still well below the ~100 Mt required for a 1.5 °C-aligned pathway.

– AGORA INDUSTRY, GLOBAL STEEL TRANSFORMATION TRACKER, 2025 · [AGORA-INDUSTRY.ORG](https://www.agora-industry.org)

WHAT IT MEANS

Agora adds up every clean-iron project that has actually been given the green light to build. By 2030 that comes to roughly 45 million tonnes a year, rising to about 62 million if the projects expected to be approved by mid-2027 go ahead. A path that holds warming to 1.5 °C needs around 100 million tonnes.

So even on a generous count, firmly committed clean capacity is barely half of what this decade requires. The shortfall is not a lack of ideas or announcements, which are plentiful.

What it means: the gap sits at the decision to build. Plenty of projects are talked about; far too few are signed, financed and under construction. Closing that gap is the whole game.

→ Half the capacity the path needs has no investment decision behind it.

GLOBAL ENERGY MONITOR

"India is now the **bellwether** of global steel decarbonisation. If the country does not increase its plans for green steel production, the entire sector will miss an important milestone."

— GLOBAL ENERGY MONITOR, PEDAL TO THE METAL 2025, MAY 2025 · [GLOBALENERGYMONITOR.ORG](https://globalenergymonitor.org)

WHAT IT MEANS

Global Energy Monitor's tracker shows the world's progress now rests on a few countries, and above all on India, which is building more new coal-based steel capacity than anywhere else. Of everything India has announced, only about **8% is being built as low-emission**; the rest is conventional.

What it means: a handful of decisions, mostly in Asia, will set the global trajectory, and right now they lean toward coal. Demand and finance have to reach those markets, not just Europe, to change the outcome.

ORE QUALITY, NOT CHEMISTRY

The question isn't whether hydrogen can reduce iron ore; it can. It is whether enough high-quality ore exists today to make hydrogen-based steel at scale, economically. Most ore needs upgrading first, and only about **4% is already high-grade (DR-grade)**.

→ A few countries decide the curve, and the biggest is still building blast furnaces.

BLOOMBERGNEF

Green steel may cost roughly **50–70% more** to produce by 2030, a premium "mainly driven by the cost of green hydrogen," and "offtake agreements are crucial to scaling the industry."

– BLOOMBERGNEF, GREEN STEEL OUTLOOK 2025 (FIGURES PARAPHRASED) • [ABOUT.BNEF.COM](https://about.bnef.com)

WHAT IT MEANS

BloombergNEF finds that interest in buying green steel is growing faster than the industry can make it, but the thing holding production back is cost. By 2030, clean steel is still expected to cost roughly 50–70% more to produce than ordinary steel, depending on hydrogen and renewable-power prices, and that gap is the biggest reason projects stall.

BNEF's conclusion is blunt: firm, signed purchase agreements are what actually scale the industry. A company saying it would like to buy green steel is not the same as a contract a bank will lend against.

What it means: enthusiasm does not build plants; contracts do. The missing ingredient is a buyer willing to commit, in writing and for years, to cover the extra cost.

→ Interest is not a signed contract, and only the contract underwrites the premium.

STEELWATCH

"Not a single steelmaker has scored **above 50 out of 100**, and even the highest performers still have major gaps to address before they can claim to be acting responsibly on climate change."

– STEELWATCH, CORPORATE SCORECARD 2026: THE TRANSITION READINESS GAP • [STEELWATCH.ORG](https://steelwatch.org)

WHAT IT MEANS

SteelWatch scored the world's biggest steelmakers on how ready they are to make the switch. Not one scored even half marks. On the measure that matters most, actually investing in clean ironmaking, the average was **below 1 point out of 25**, meaning almost no real money is going in yet.

Put simply, no producer is out in front. None has built enough of a clean business for others to follow, and each is waiting for the economics to make sense before it commits.

What it means: if no steelmaker will move first on its own, the push has to come from the other side, from buyers. A credible, paid commitment from customers is what gives one producer the confidence, and the cash, to go first.

→ No producer is transition-ready, so the demand signal has to lead.

EUROFER & ARCELORMITTAL

"we have to bear energy costs that are **2–3 times higher** than those of our main competitors in the US and China."

– AXEL EGGERT, DIRECTOR-GENERAL, EUROFER (ECONOMIC & STEEL MARKET OUTLOOK 2025–26) · [EUROFER.EU](https://eurofer.eu)

WHAT IT MEANS

In Europe there is a second blocker on top of cost: competitiveness. European steelmakers pay far more for energy than rivals in the US and China, and with weak demand and cheap imports as well, the money for clean upgrades is at risk before a single furnace is converted.

The proof came in 2024–25. **ArcelorMittal put its European hydrogen-steel plans on hold across four sites and turned down a €1.3 billion German subsidy** rather than build, saying power costs were too high and green hydrogen was not yet a workable fuel.

What it means: even free government money was not enough to make the numbers work. The piece still missing is a buyer prepared to pay the premium, which is the gap Carbon3 helps bridge, by aggregating demand and underwriting part of the cost.

→ Six trackers, one diagnosis: the furnace is proven; the FID is not, because the premium isn't recovered. Part II shows how Carbon3 helps bridge it.

THE DIVERGENCE

Same technology. *Opposite decisions.*

The clearest evidence that steel's blocker is largely financial, not technical: the same proven H₂-DRI route is being built and frozen at the same time. The difference between the two columns is not the furnace; it is largely whether the green premium could be recovered before the investment decision.

PROCEEDING

60% built

Stegra, Boden (Sweden): 2.5 Mtpa H₂-DRI plus a 700 MW electrolyser on captive hydropower, first steel H2 2026. SSAB/HYBRIT's demo and Salzgitter's SALCOS follow the same year. Each locked in offtake from Mercedes-Benz, Volvo, BMW, VW and IKEA, and clean-power economics, *before* sanctioning the plant.

PAUSED / SLIPPED

€1.3bn walked away

ArcelorMittal froze Bremen, Eisenhüttenstadt, Gijón and Sestao and forfeited a €1.3 bn German subsidy (2024–25); **thyssenkrupp Duisburg** slipped to 2027–28; **ArcelorMittal Dunkerque** stays under review. Same proven H₂-DRI, but the premium stayed hard to recover, and broader competitiveness concerns (power costs, hydrogen availability, weak demand, import pressure) kept projects below investment thresholds.

→ The difference is not technology. It is largely whether the green premium could be recovered before FID, which is where Carbon3 helps.



THE PLANTS THAT GET BUILT, AND THE ONES THAT DON'T / IRON & STEEL 2026

PART II / THE ALLOCATION LAYER

How *C3* helps break the FID logjam.

II

Carbon3 lets companies pay to cut emissions inside the steel they actually buy, instead of buying offsets elsewhere. When a mill makes cleaner steel, the verified saving becomes an environmental attribute that goes to one named buyer and is counted only once, so the buyer can allocate it toward its own supply-chain emissions as market-based accounting rules develop. Verification is performed by accredited third-party auditors, using recognised frameworks (ResponsibleSteel, ISO 14064/14067, ISCC). What the market lacked was a place to turn that corporate spending into firm orders a steelmaker can finance. Carbon3 is that allocation platform.

WHAT CARBON3 IS

An allocation platform that turns corporate climate spend *into committed green-steel offtake.*

Carbon3 is the allocation platform for steel **insetting**: paying to cut emissions inside the steel supply chain instead of buying offsets outside it. When a mill makes steel cleaner than its normal benchmark, the verified saving becomes an environmental attribute. Carbon3 helps mills **gather** demand for those attributes from carmakers, appliance and equipment makers and builders, **allocate** each one to a named buyer, and **retire** it once.

The attributes are designed to align with the main corporate carbon-reporting frameworks, such as CSRD and SBTi, as market-based accounting for steel develops, so a buyer can work toward putting the saving in its own disclosures. What the market lacked was not another standard or auditor. It was the layer that turns scattered corporate spending into firm orders a steelmaker can take to a bank.

WHAT C3 DOES

- Aggregates above-baseline green-steel demand
- Allocates each verified tonne to one buyer
- Retires it once, on the registry
- Supports buyer Scope 3 reporting as rules develop

WHAT C3 IS NOT

- Not a verifier; that is accredited third-party auditors
- Not an offset broker
- Not a steelmaker or OEM
- Not a substitute for primary abatement

One verified tonne in. *One buyer. Retired once.*

→ Not a new idea. The same allocation model already runs elsewhere: aviation (SAF book-and-claim), low-carbon aluminium (ELYSIS), renewable electricity (RECs), maritime insetting and hydrogen guarantees of origin. Carbon3 extends a proven model to steel.



THE GAP AND THE LEVER

Where steel is stuck, *and how Carbon3 can help unblock it.*

CHALLENGE

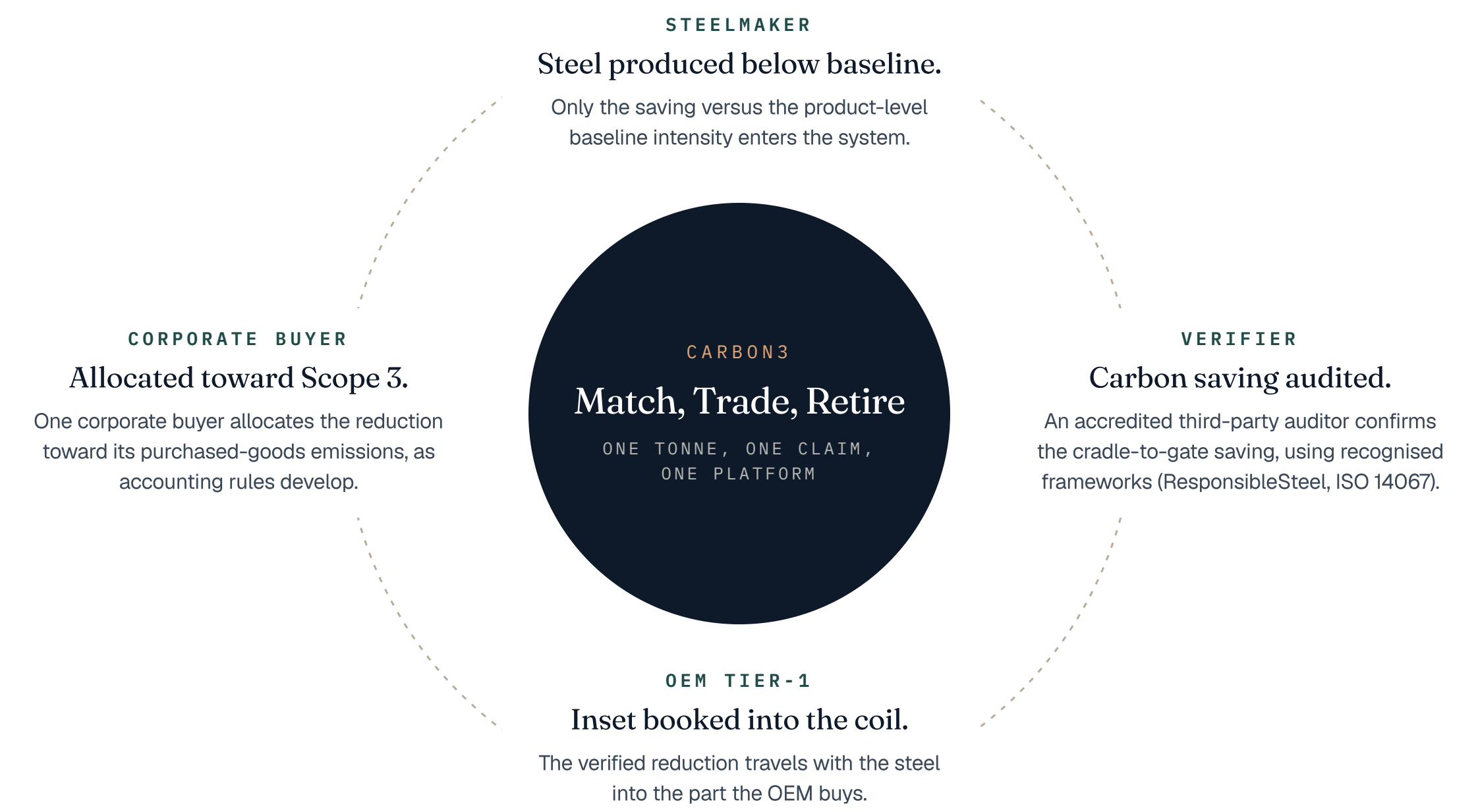
IEA · 2025	Two-thirds of the announced pipeline is still high-emission.
AGORA · 2025	Committed DRI ~45–62 Mt vs ~100 Mt needed by 2030.
GEM · MAY 2025	India is the swing vote; only ~8% of its pipeline is building.
BLOOMBERGNEF · 2025	~50–70% green premium, hydrogen-driven; offtake is crucial.
STEELWATCH · 2026	No steelmaker scores above 50/100 on readiness.
EUROFER / ARCELORMITTAL · 2024–25	Power cost 2–3× rivals; FIDs frozen even with subsidy.

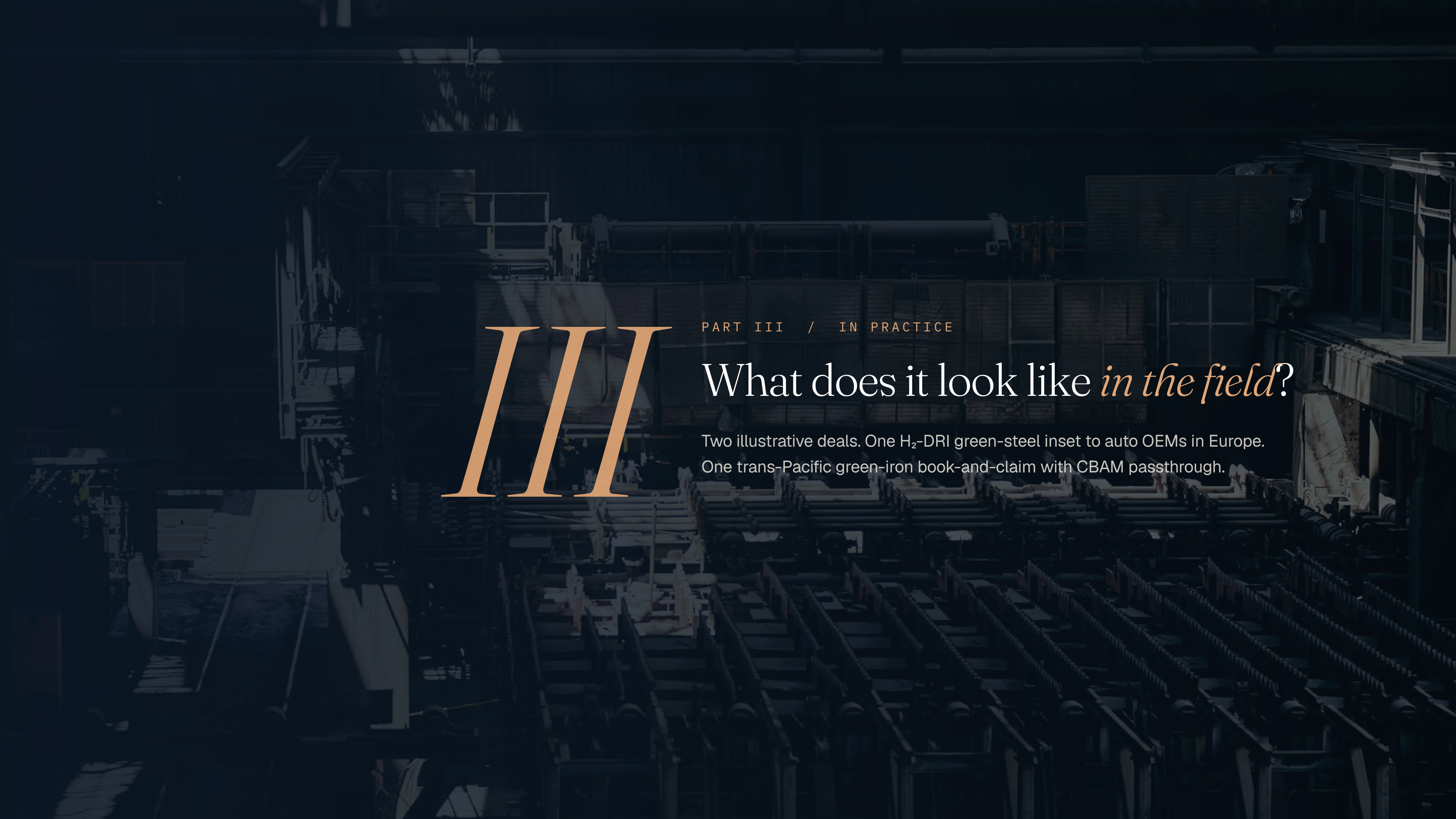
THE MOVE THROUGH CARBON3 → THE EFFECT

Commit to above-baseline green steel before the plant is sanctioned. The near-zero project, not the blast furnace, becomes the one with demand in hand.
Sign a multi-year forward offtake at today's voluntary price. It covers a third to a half of the green premium, enough to move a project to FID.
Route a Scope 3 budget into APAC green-iron supply. Pooled corporate demand on one side, emerging-market producers on the other, matched in one place.
Pay the premium for the harder tonnes. It covers most of the extra cost and pulls H ₂ -DRI from announced into built.
Let demand lead with a paid, credible commitment. A signed buyer gives one producer the cover and the cash to move first.
Use CBAM emissions reporting as one reference point for baselines. The same verified data can serve both the regulator and the buyer, cutting duplicate MRV.

ONE TONNE. COUNTED ONCE.

From steelmaker to corporate buyer, *through a single ledger.*





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PART III / IN PRACTICE

What does it look like *in the field*?

Two illustrative deals. One H₂-DRI green-steel inset to auto OEMs in Europe.
One trans-Pacific green-iron book-and-claim with CBAM passthrough.

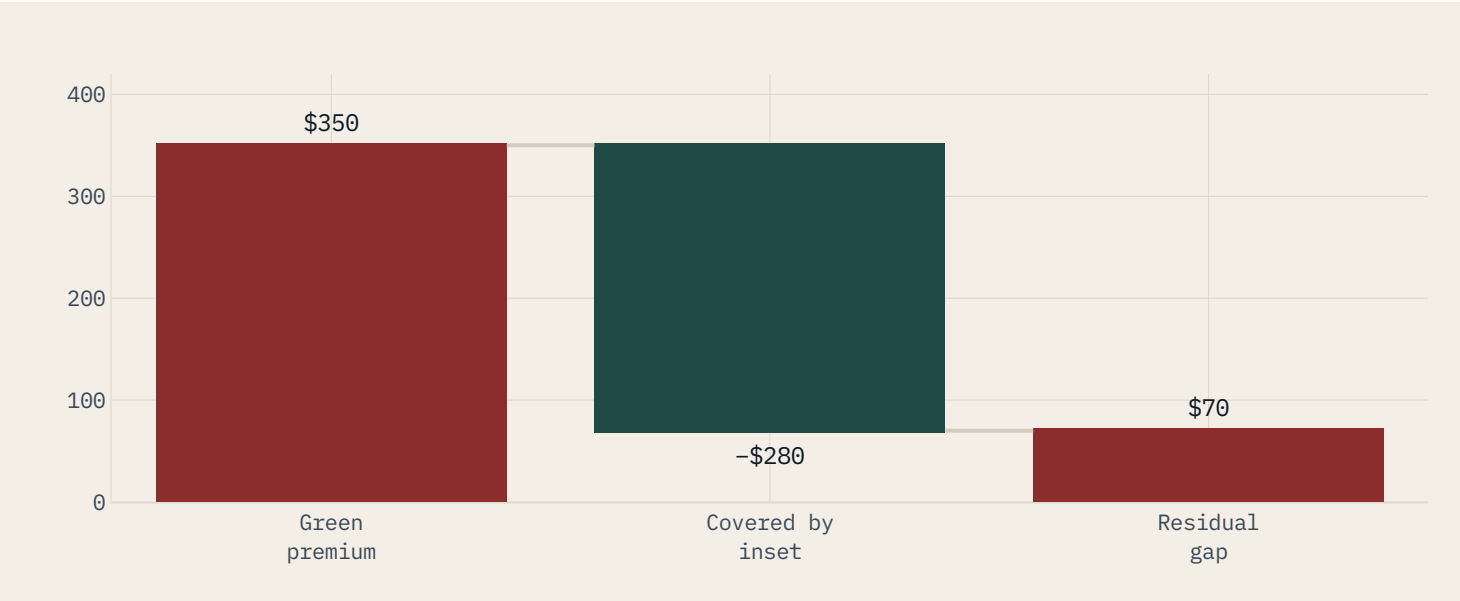
ILLUSTRATIVE DEAL · H₂-DRI GREEN STEEL

A green-steel deal: *Stegra* → *Mercedes-Benz / Volvo*.

Stegra's Boden plant makes steel on green hydrogen, with a small fraction of the emissions of a blast furnace. An **accredited third-party auditor** confirms how much carbon was saved, using recognised frameworks (ResponsibleSteel, ISO 14064). Carbon3 then splits that verified saving between the buyers who signed up early, Mercedes-Benz and Volvo, each taking a share in line with how much steel it uses for car bodies.

Each buyer counts **only its own share, once**, toward the emissions of the goods it buys, and the attribute is retired so it cannot be sold again. Every tonne of this steel avoids almost **two tonnes of CO₂** versus the blast-furnace route. Making it costs roughly US\$350 a tonne more; the question is how much of that gap the voluntary market covers.

CLOSING THE GREEN-STEEL PREMIUM (USD / TONNE CRUDE STEEL)



2026 INSET PRICE · FOAK H₂-DRI

US\$100–200 / tCO₂e

Where this number comes from: the going cost of cutting a tonne of CO₂ with early hydrogen-steel plants in 2026 (Wood Mackenzie, BloombergNEF). At about US\$145 per tonne of CO₂, roughly US\$280 on each tonne of steel, the buyer covers around 80% of the extra cost, enough to help fund the next plant.

01 · THE HEAT

ABOVE-BASELINE STEEL, AUDITED

One H₂-DRI heat below the product-level baseline; the saving is verified by an accredited auditor under ResponsibleSteel / ISO 14064-2. Conventional-baseline tonnage is excluded, so only the abatement counts.

02 · THE SPLIT

ALLOCATED TO THE OFFTAKERS

Verified tonnes are shared between Mercedes-Benz and Volvo Group by their body-in-white steel volume. No single buyer claims the whole heat.

03 · THE CLAIM

ALLOCATED TO SCOPE 3, RETIRED ONCE

Each buyer allocates its share toward purchased-goods emissions as market-based accounting develops; the registry retires the unit, and the same data can inform CBAM reporting.

Illustrative structure. Sources: Stegra disclosure 2025-Q4 · SSAB CMD 2025-09 · Mercedes-Benz & Volvo Group offtake announcements · ResponsibleSteel v2.1 · Wood Mackenzie / BloombergNEF MAC 2025.

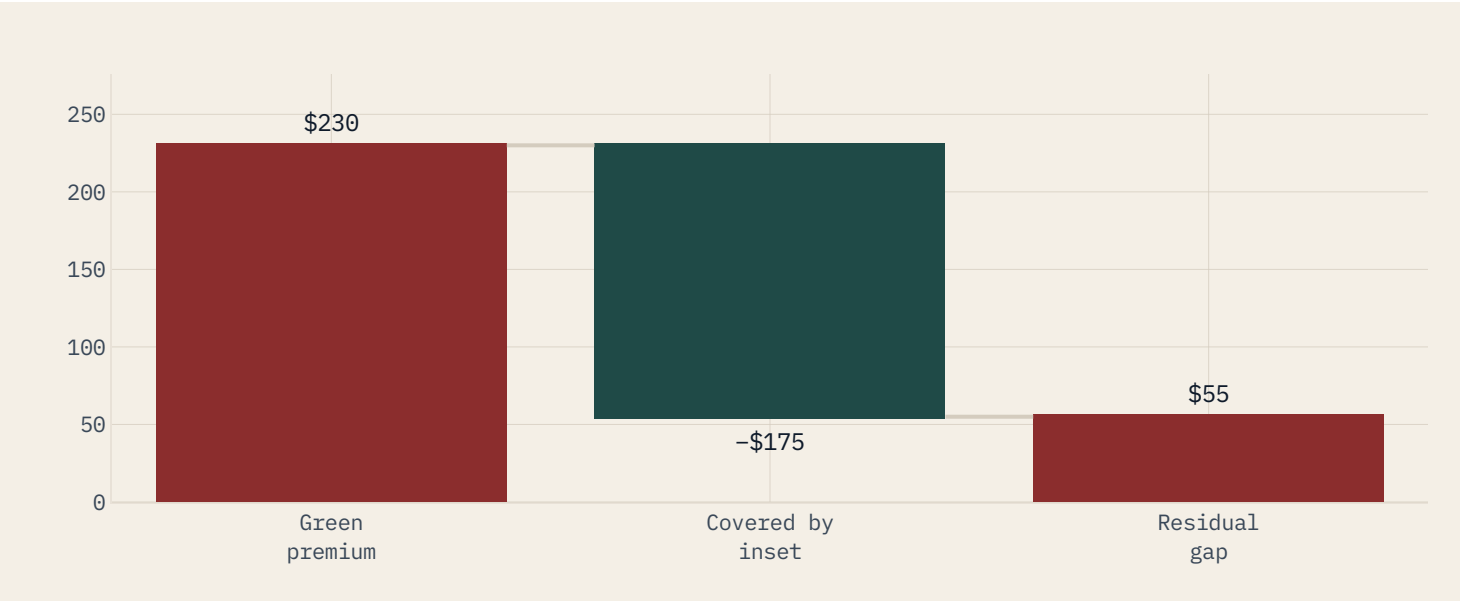
ILLUSTRATIVE DEAL • GREEN-IRON BOOK-AND-CLAIM

A green-iron *book-and-claim* across the Pacific.

Clean iron made on renewable power in Australia and the Middle East (FMG's Christmas Creek, the Rio–BHP–BlueScope NeoSmelt furnace, Emirates Steel on Masdar hydrogen) carries far less carbon than the high-emission feed it replaces. The iron itself ships to mills in Japan and Korea, while the verified carbon saving is tracked and sold **separately**, under independent chain-of-custody rules.

Carbon3 assigns that saving to a European carmaker, which can count it toward the emissions of the steel it buys, and the same record can inform its CBAM reporting at the EU border. Because the saving is tracked on paper, the buyer can fund the cleanest iron **without rerouting a single ship**. The attribute, not the cargo, moves to where the demand is.

CLOSING THE GREEN-IRON PREMIUM (USD / TONNE CRUDE STEEL)



2026 INSET PRICE • GREEN IRON / DRI

US\$110–180 / tCO₂e

Where this number comes from: the price range for clean-iron attributes, lower for emerging-market supply and higher where it also answers EU border rules (C3 modelling against IEA cost data). The buyer covers most of the extra cost, and the EU border levy sets a floor, since the same record can also inform that reporting.

01 • THE IRON

GREEN DRI/HBI, AUDITED AT SOURCE

Renewable-powered DRI from Australia or the Middle East; cradle-to-gate intensity verified by an accredited auditor (ISCC / ResponsibleSteel frameworks) against the displaced high-CO₂ feed.

02 • THE ALLOCATION

BOOK-AND-CLAIM, PER OFFTAKE

The verified saving is allocated to each buyer's offtake share under ISCC / RSB chain-of-custody, with no physical re-routing of the cargo.

03 • THE CLAIM

ALLOCATED TO SCOPE 3 + CBAM, RETIRED ONCE

The OEM allocates its share toward purchased-goods emissions as rules develop; the same data can inform CBAM reporting; the registry retires the unit once.

Illustrative structure. Sources: FMG Q3 2026 Operations Report • Rio Tinto–BHP–BlueScope NeoSmelt JV • ADNOC / Emirates Steel–Masdar MoU 2024 • DR-grade ore (mining service) • ISCC PLUS / RSB chain-of-custody • IEA Cost of Green Steel in Emerging Economies 2025.

THE POSITION

2026 sets the first time-bound business case *for green-steel offtake at scale.*

By 2026, every major steel market puts a price on carbon. The EU border levy is live and its free allowances start to fall away; China's carbon market covers steel for the first time; India's scheme runs its first compliance year.

Science and policy are no longer the open questions, and the furnace is proven. **What remains open is commercial. Who pays the extra cost of clean steel, and who captures the value as the sector cleans up?**

A steelmaker that sells its cleaner output as a product, not just a cost, can help pay for its first hydrogen plant from customer orders rather than its own balance sheet. A carmaker that locks in those savings at today's prices protects itself against a much bigger carbon and border-tax bill later this decade.

C3 · THE POSITION

The allocation, marketplace and reporting layer above the verifiers.

Carbon3 sits one layer above the existing accredited standards. Accredited third-party auditors do the verification work, under frameworks like ResponsibleSteel, ISO and ISCC. Carbon3 routes each verified reduction to one corporate buyer's supply-chain ledger and retires it once.



WHERE THE VALUE IS CAPTURED / IRON & STEEL 2026

THE POSITION

Iron & steel will decarbonise *inside its own supply chain*.
Carbon3 is the market infrastructure for it.

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"The challenge in steel decarbonisation is not the furnace, but financing it: fairly distributing the green premium across the value chain."

– CARBON3, 2026 IRON & STEEL OUTLOOK

STAY IN TOUCH

carbon3.net

linkedin.com/company/c3org

WHAT THIS BRIEF IS BUILT ON

Reports cited, *plus the standards layer*.

Each Part I quote is taken verbatim from a public 2025–26 report with the source URL alongside it; the Agora and BloombergNEF figures are paraphrased and marked as such. The standards in the right-hand column are referenced throughout the deck but are not themselves the subject of the brief.

REPORTS CITED

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EUROFER & ArcelorMittal — Economic & Steel Market Outlook 2025–26; EU decarbonisation update 2024–25.
[EUROFER.EU](https://eurofer.eu) · [ARCELORMITTAL.COM](https://arcelormittal.com)

Methodology · each Part I quote is verbatim from the report's primary URL; the Agora capacity figures and the BloombergNEF cost figures are paraphrased and marked on-slide. Quantitative claims in Parts I and III trace to industries/steel.md with inline citations. Carbon-intensity verification is performed by accredited third-party auditors, not by Carbon3.

STANDARDS, REGISTRIES AND SUPPORTING DATA

Verification standards (third party) — ResponsibleSteel International Standard v2.1; ISO 14064-2 / 14064-3; ISO 14067; ISO 20915; ISCC PLUS; RSB.

Allocation and reporting standards — GHG Protocol Corporate Value Chain (Scope 3); SBTi Corporate Net-Zero Standard; CSRD ESRS E1; ISSB IFRS S2; SteelZero; First Movers Coalition; IEA near-zero definition (<0.4 tCO₂/tcs).

Regulators referenced — European Commission (Reg. (EU) 2023/956 CBAM; Dir. (EU) 2023/959 ETS); China MEE (national ETS notice 2025-03-26); India BEE (CCTS Rules 2024); Korea ME (K-ETS Phase 4); METI Japan (GX-ETS); Australia DCCEEW (Safeguard Mechanism).

Market & cost data referenced — Wood Mackenzie Iron & Steel Cost Service Q1 2026; BloombergNEF EU Carbon Outlook H2 2025; S&P Global Steel Cost Curve / DR-Pellet Outlook; Argus Green Steel Premium Tracker April 2026; worldsteel World Steel in Figures 2025.

Producers / disclosures referenced — Stegra; SSAB / HYBRIT; thyssenkrupp; Salzgitter SALCOS; ArcelorMittal; Mercedes-Benz, Volvo Group, BMW offtakes; FMG; Rio Tinto–BHP–BlueScope NeoSmelt; Emirates Steel / Masdar.