

CASE STUDY

A South Korean Steel Producer Confronts CBAM

How the CBAM Scenario Planner can help you address uncertainty

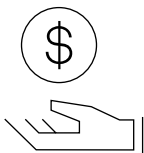


A leading South Korean steel producer manufactures hot rolled coil (HRC), a foundational input for Europe’s automotive, construction, and clean technology sectors. For years, exports to the EU have represented a critical share of revenues.

Since the EU’s Carbon Border Adjustment Mechanism (CBAM) entered its definitive phase in 2026, steel imports will face carbon costs equal to those of domestic production. Importers are demanding facility level, verified disclosures and clear visibility on future CBAM costs.

For this Korean steel producer, the carbon emissions generated at its facility now have a direct impact on its products’ competitiveness.

The **CBAM Scenario Planner**, a powerful tool available as part of the carbon market offering from S&P Global Energy Horizons, can help this producer quantify exposure, benchmark itself globally, and anticipate how CBAM costs may evolve over time.



Challenge 1: “What CBAM Cost will our Steel Actually Incur?”

CBAM is conceptually simple: imported steel pays a carbon price equivalent to EU producers. In practice, CBAM cost depends on multiple evolving factors including product emissions intensity, EU carbon prices, third country carbon prices, EU benchmarks, default mark ups, and the CBAM phase-in schedule.

For the Korean producer, the first question is basic but urgent:

What is the expected CBAM cost per ton of our HRC exported to the EU, and how is it calculated?



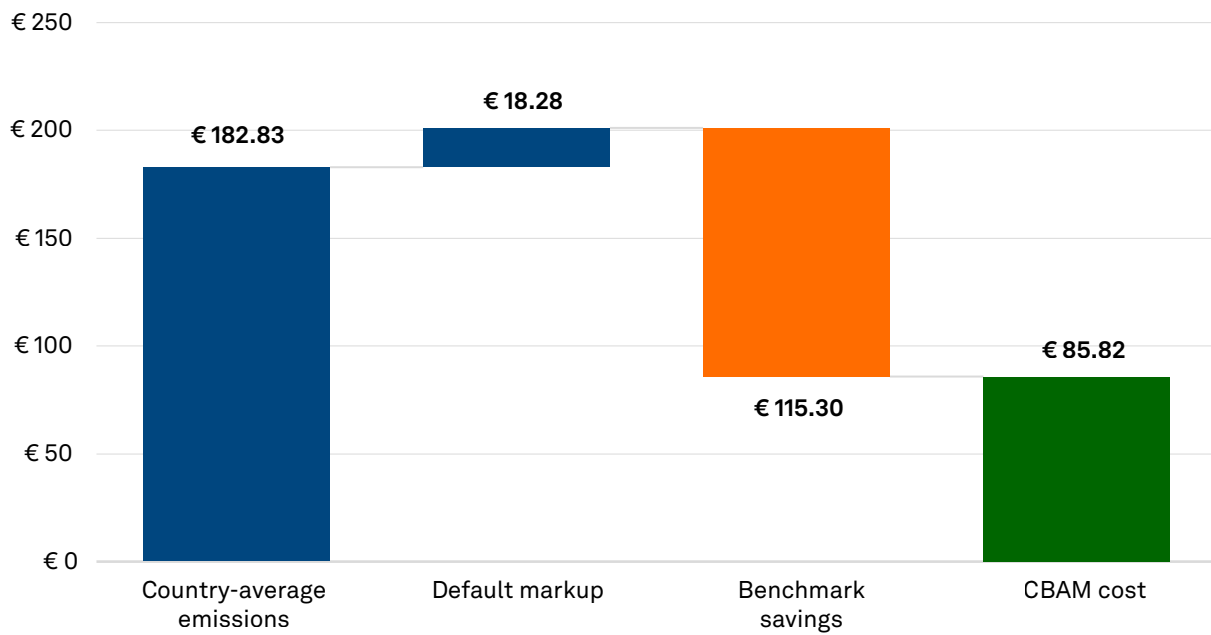
Insight: Breaking Down the CBAM Charge

The “CBAM cost estimator” dashboard presents the cost for any CBAM product over time, based on the chosen production route, origin country, emissions intensity, and economic scenario. Under the hood, the tool accounts for default mark-ups and the gap between embedded emissions and EU benchmarks. The chart below shows how these inputs determine the CBAM cost for South Korean HRC in 2026.

Starting from South Korea’s blast furnace based average emissions intensity, the model applies the EU ETS carbon price, generating a gross carbon liability. A regulatory default markup of 10% applies in 2026, while savings based on the EU benchmark reduce the liability. Benchmark-derived savings will decline each year, phasing out entirely by 2034.

The result: for South Korean HRC reported using default emissions values, CBAM costs in 2026 are estimated at around €86 per metric ton under the S&P Global Energy Horizons Base Case forecast (2025 vintage).

CBAM cost drivers for default South Korean HRC steel, 2026 (real 2024 EUR / mt goods)

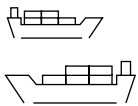


As of Mar. 6, 2026.

Source: European Commission; CBAM Scenario Planner, S&P Global Energy Horizons.

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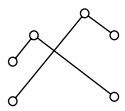
What was previously an opaque regulatory obligation becomes quantifiable commercial exposure. The producer can now explain CBAM costs internally, communicate them credibly to EU buyers, and assess whether reporting verified facility level emissions could reduce that burden.



Challenge 2: “How Do We Stack Up Against Other Exporters?”

Understanding absolute CBAM cost is only half the story. Steel is traded globally, and CBAM reshapes competitive dynamics between exporting countries.

The next question the producer faces is strategic: *Under CBAM, do we gain or lose competitiveness relative to other major suppliers to Europe?*

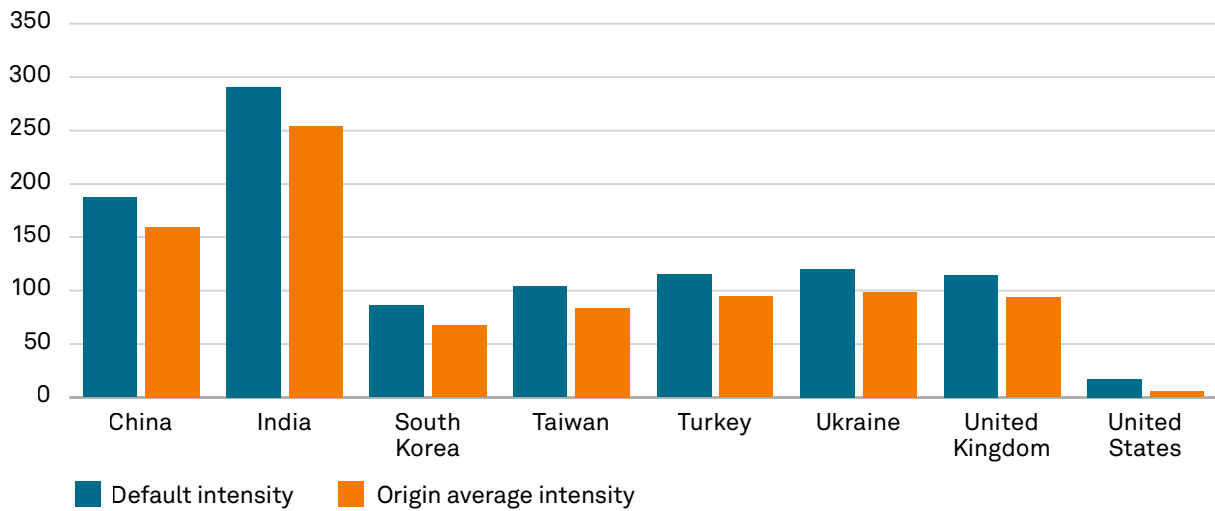


Insight: Benchmarking Across Countries

Using data from the “Origin explorer” dashboard, the chart below compares CBAM costs for HRC exports from major EU trading partners in 2026, showing costs when reporting either EU-defined default values or actual emissions from a facility operating at the origin-country average.

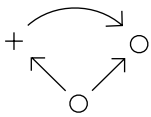
CBAM costs for average South Korean product are far lower than that of average Indian and Chinese product, but greater than that of average American product. These differences reflect differences in average emissions performance in each place of origin, as determined by the European Commission.

CBAM cost for HRC steel by origin, 2026 (real 2024 EUR/mt goods)



As of Mar. 6, 2026.
 Source: European Commission, S&P Global Energy CBAM Scenario Planner.
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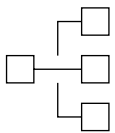
CBAM potentially reshuffles the competitive order. In terms of carbon costs, the South Korean producer gains a relative advantage versus the average Indian producer but could lose ground to US suppliers. The chart also highlights a widening opportunity: the average South Korean product saves €18 per metric ton in 2026 when it is reported with verified, facility-level emissions data instead of relying on EU default values. These savings will only grow as default markups triple by 2028.



Challenge 3: “How Does This Change Over Time?”

CBAM is not static. Default markups increase, benchmark credits erode, and carbon prices evolve under different policy pathways.

The final question answered by the CBAM Scenario Planner is forward looking: *How could CBAM costs change over the coming years?*



Insight: Planning Across Scenarios

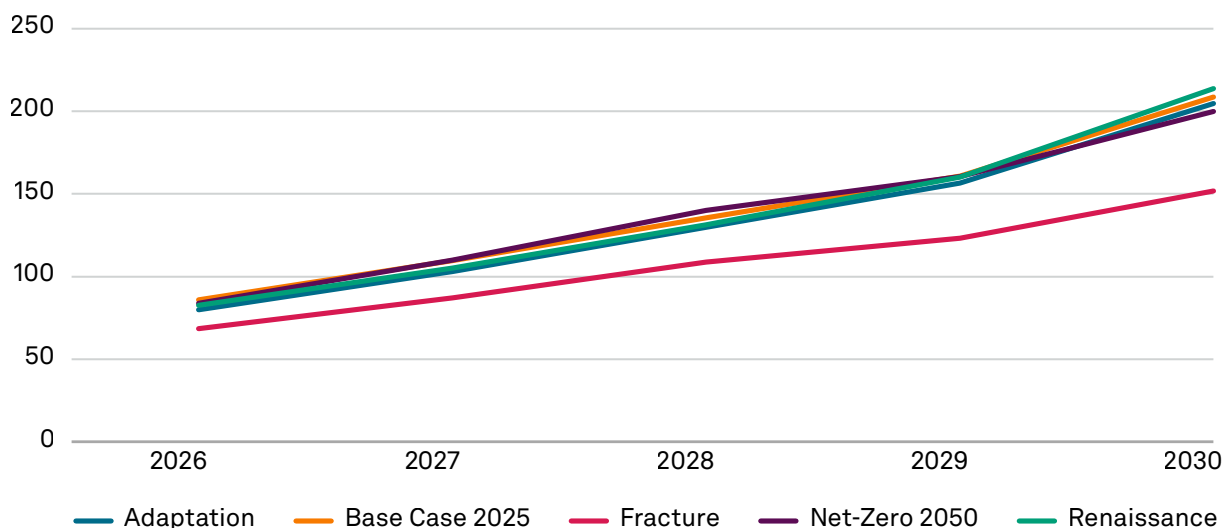
The “Scenario dynamics” dashboard allows the user to model CBAM costs out as far as 2060. Using data from this tool, the chart below shows CBAM costs for South Korean HRC from 2026 to 2030 across multiple S&P Global Energy Horizons pathways.

Across all scenarios CBAM costs rise materially over time, driven by higher EU carbon prices and the built-in tightening of the regulatory mechanism.

However, the pace of the price change differs by scenario. In a more fragmented policy world (the SPGE “Fracture” scenario), costs increase less than in more coordinated transition pathways like the Base Case.

With this knowledge, the producer can move from reactive compliance to proactive planning. Scenario analysis supports investment decisions, contract negotiations with EU buyers, and the business case for emissions reductions or enhanced data transparency.

CBAM costs for default South Korean HRC by scenario (real 2024 EUR / mt goods)



As of Mar. 6, 2026.

Source: European Commission, S&P Global Energy CBAM Scenario Planner.

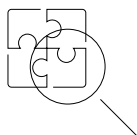
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From Compliance Risk to Strategic Advantage

CBAM is often framed as a regulatory burden. For this South Korean steel producer, the CBAM Scenario Planner reframes it as a strategic planning problem with actionable insights.

By clarifying today's costs, benchmarking global competitiveness, and mapping plausible futures, the tool helps the producer move beyond uncertainty and engage EU customers with confidence in a carbon accounted market.



Explore Integrated Carbon Market Solutions

At S&P Global Energy, we help customers create value while supporting their goals for a low-carbon future. We offer a comprehensive suite of solutions that empowers customers to navigate the carbon markets and manage emissions with confidence:

- Robust emissions data sets and methodologies
- Pricing, outlooks and analysis of the carbon and environmental markets
- Registry infrastructure to manage carbon and environmental programs
- Integrated long-term energy scenarios to help organizations navigate uncertainty and volatility and understand how the energy system may evolve across plausible futures, and make resilient investment decisions.

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