BQ PRIME
Powered by Bloomberg

Is India Inc. Ready For Carbon Border Tax? — BQ Explains

From Oct. 1, steel and aluminium exporters to the EU must measure carbon intensity and provide statem

Indian companies will soon need to factor in the European Carbon Border Adjustment Mechanism in their export calculations, presenting a significant challenge for these businesses.

In the past, India's expressed concerns over **climate justice** and unfair treatment towards emerging economies, at international fora. However the European Union is likely to proceed with this measure to cut its emissions. As a result, India might **face stiff competition** from other countries, particularly those in ASEAN.

While India's domestic industries have already begun investing in methods to reduce their carbon footprint during production, it remains uncertain how quickly India Inc. can make the transition to greener methods of metal production.

The Ticking Clock

Starting from Oct. 1, companies exporting steel and aluminium to the EU will be required to implement mechanisms to measure the carbon intensity of their production process and provide statements on it. While industries like cement, fertiliser and electricity are also included, they are not major exports from India to the EU.

In 2022, the EU received 27% of India's total exports of iron, steel, and aluminium products, amounting to a value of $8.2 billion, as reported by the Press Trust of India. According to the Commerce Ministry, the carbon tax approved by the EU would impact 1.8% of India's total exports.

According to Santosh Sarangi, director general for foreign trade, among the commodities subject to carbon tariffs, steel and aluminium are the two areas that would impact Indian exporters. The exact monetary impact is still being assessed, he said.

" ...the EU has prescribed different mechanisms of imposing carbon tax for commodities. For example, for steel manufacturing through electric arc furnace and blast furnace route, the carbon tax will be different," Sarangi said.

"...the extent to which it can be mitigated and our industries can adapt, and the extent to which mutual recognition of the testing and certification can happen, are areas on which the interministerial group is coordinating," Sarangi said.

Sanjay Budhia, chairperson at the Confederation of Indian Industry's National Committee on Exports and Imports, said that the current production processes of steel and aluminium sectors have high emission intensity and would attract high taxes.

"The estimated tax for steel made from the blast furnace route is 39.6%, and using an electric arc furnace is 19.8%. The tax is zero if steel is made using green hydrogen as fuel and a reducing agent. Tax for iron ore pellet is 52.7 % and aluminium is 20.3%," he said.

Where Does India Inc. Stand?

Ritabrata Ghosh, vice president and sector head for corporate ratings at ICRA, told BQ Prime that the majority of Indian companies in the steel industry are positioned within the fourth quartile of the global carbon dioxide emission curve.

"At present, the domestic primary steel producers have an average CO2 emission intensity of 2.6 MT (million tonnes) CO2 per MT crude steel (this is an average of Tata Steel Ltd., JSW Steel Ltd., SAIL Ltd., JSPL Ltd. and RINL Ltd.), which is higher by 26% over the global average of 1.9 MT CO2/MT crude steel, putting Indian mills at a disadvantage as far as carbon footprint is concerned," Ghosh said.

A sizeable share of the production to EU is through the scrap-based electric arc furnace route, which has an even lower average emission intensity than the global average, at 1.15 MT CO2/MT crude steel, he said.

According to Ghosh, Indian domestic aluminium manufacturers have one of the highest levels of carbon intensity, with approximately 17-20 tonnes of CO2 emissions (tCO2e) per tonne of aluminium. This is primarily attributed to the predominant use of coal for generating captive power. It is significantly higher as compared to Europe's average of 7 tCO2e per tonne of aluminium.

Also, for the sectors covered by CBAM, the EU Emissions Trading System Directive stipulates a phaseout of free allowances from 2026 to 2034.

How Is India Inc. Preparing?

The level of preparedness among Indian exporters in the aluminium and steel sector also depends on the scale of the operations, according to Budhia.

Medium and small-scale enterprises need increased awareness of sustainability standards and the adoption of low carbon emissions practices in their production processes, he said.

Vijay Kalantri, chairman at the World Trade Centre in Mumbai, said that large Indian steel exporters have already begun taking measures to address their carbon footprint. These measures include the adoption of carbon capture technology, utilisation of recycled steel and leveraging renewable energy sources.

Medium and small-scale steel and aluminum producers are gradually adopting the Perform Achieve and Trade, or PAT, scheme initiated by the Indian government to reduce energy consumption, he said.

"Indian steel producers are also gradually adopting best available technologies such as hot stove waste heat recovery in blast furnace, top pressure recovery turbine, and direct rolling process to reduce carbon emissions," he said.

The government has set a target to reduce the average CO2 emission intensity of the steel industry from 2.64 tonne per tonne of crude steel in 2020 to 2.4 tonne per tonne of crude steel by 2030.

However, this target will fall short of the current EU specifications.

Who Can Capture India's Market Share?

India's market position could be at risk as it faces competition from other developing nations such as China, Brazil and the ASEAN (Association of Southeast Asian Nations).

Data from the IMF climate change dashboard revealed that India holds the second highest CO2 emission intensity per $1 million of output for base metals worldwide. In contrast, countries such as Brazil, China, and ASEAN countries perform much better than India in terms of sustainability in the metal industry.

Highlighting the discrepancy, Kalantri said that Brazil emits 59% less CO2 than India, while China emits 63% less CO2 than India for the same value of output.

"Among the ASEAN nations, Vietnam may benefit from EU's carbon tax on Indian metal exporters. Vietnamese base metal exporters already have a substantial presence in the EU and these exporters report 76% less CO2 emission intensity compared to India," Kalantri said.

Looking at suppliers to Europe specifically, ICRA's Ghosh said large steel exporters to Europe are mainly from Turkey, Russia, Ukraine, and South Korea.

The greenhouse gas intensity of South Korean producers is 1.64 MT CO2/MT crude steel, which is significantly lower than India's 2.6 MT Co2/MT crude steel.

"Two third of Turkey's crude steel production is manufactured through the electrical route using scrap, which has a much lower GHG footprint of 1 MT CO2/MT crude steel," Ghosh said.

Starting Jan. 1, 2026, the EU has made a decision requiring companies exporting to it to purchase CBAM certificates. These certificates aim to bridge the gap between the carbon price paid in the country of production and the cost of carbon allowances in the EU Emissions Trading Scheme.

"With Indian steel mills already at the fourth quartile of the emission curve, unless domestic steelmakers are able to bring down their GHG intensities at a much faster pace than what has been envisioned in the EU-ETS regime, the carbon cost disadvantage for Indian producers can widen further over time," Ghosh said.

In terms of aluminum, Ghosh said that some of the large aluminium exporters to EU are Norway, United Arab Emirates and Iceland.

In 2021, Norway alone accounted for 40% of the European Union's total imports. The major operating entity in Norway is Norsk Hydro, with a much lower carbon intensity of 4.5 tCO2e per tonne of aluminium, Ghosh said.

The carbon intensity of Emirates Global Aluminium, a large player from U.A.E., is 8 tCO2e/tonne of aluminium, he said.

Therefore, the EU carbon tax will be a "cost disadvantage to Indian players" as compared with some other large suppliers to the EU. The Netherlands, Italy, Belgium and Greece are the major aluminium export destinations, Ghosh said.

The decision regarding the EU's importance as a market will likely shape India's transition towards incorporating renewable energy sources, which offer more cost effective fuel rates for blast furnaces as well as complete elimination of coal utilisation in smelters.