IDEAS
INSTITUTE FOR DEMOCRACY AND ECONOMIC AFFAIRS

Executive Summary

Carbon Pricing for the Malaysian Steel Industry: Incentivising Sustainable Growth

Malaysia's steel production is becoming more carbon emissions intensive despite Malaysia — and the world — facing an urgent need to decarbonise. A previous study published by IDEAS in 2024 highlighted how recent foreign investments in carbon intensive blast furnace production are taking Malaysia's steel sector backwards environmentally and in terms of value added. In the space of a decade, Malaysia shifted from being a low to above global average producer of steel emissions. Steel now accounts for a disproportionate and rising share of Malaysia's emissions, placing the country's net zero target at risk.

With the Malaysian government intending to introduce a carbon price for the iron and steel sector, this paper builds on the preceding study by examining the role of carbon pricing as a policy tool. It explores implementation options and identifies the specific carbon pricing that could meaningfully influence production decisions — including technology choices — and sector emissions.

The Key Discussion Points Are:

- **Malaysia's steel sector has shifted from a low to a high emissions profile.** Between 2014 and 2022, production moved from 100% electric arc furnace (EAF) to 70% blast furnace (BF), increasing Malaysia's weighted emissions intensity from approximately 0.4 to 1.7 tonnes of CO_2 per tonne of steel. Rising steel emissions are placing Malaysia's net zero aspirations at risk.

- **A carbon price of RM200 per tonne of CO_2 by 2030 is identified as the tipping point at which low-carbon steel production becomes commercially viable.** At this price, domestic steel production costs for BF producers would increase by about 11%—with the construction sector most affected, with a potential 3.5-4.6% increase in cost—though with other sectors, which use higher value-added steel, experiencing cost increases of around 1%.

- **Evolving trade dynamics make action necessary.** The imminent introduction of the EU's Carbon Border Adjustment Mechanism (CBAM) could trigger similar policies by other trade partners, and could erode the competitiveness of Malaysian steel exports. Without intervention, Malaysian steel risks becoming uncompetitive abroad because of its high emissions.

- **Policy design matters and will determine both feasibility and effectiveness.** A carbon tax may face greater political barriers, particularly given Malaysia's challenging environment for levying taxes. An emissions trading system (ETS) offers greater

flexibility, provides clearer long-term signals for investment, and allows the private sector to adapt within a stable, rules-based framework.

- **Revenue recycling could help to balance economic and environmental goals.** At RM200 per tonne, a price that could be reached within 4 to 5 years, carbon pricing could raise around RM3 billion annually. Rather than relying on free permits, which risk weakening incentives and creating trade distortions, revenue could be collected and potentially recycled through targeted rebates for low-carbon steel and investment support for decarbonisation technologies. This approach helps firms adapt while maintaining fair treatment between domestic and imported products according to international trade practices.

- In conclusion, this paper **recommends a phased but rapid introduction of carbon pricing, targeting RM200 per tonne by 2030, implemented through an ETS framework designed around Malaysia's sectoral needs.** Without intervention, the emissions trajectory of Malaysia's steel sector will remain misaligned with national goals and expose the sector to growing risks.