



UK Carbon Pricing and Border Adjustment

Carbon and chemicals: why it matters

Over 96% of all manufactured goods are dependent on chemicals for their production, making the chemical industry an essential part of our nation's economy. The net zero transition presents an opportunity to revitalise UK manufacturing and it is the chemicals sector that will provide the advanced materials needed to deploy innovative clean technologies and reach our 2050 target. Our sector has already reduced its scope 1 GHG emissions by 80% since 1990, whilst increasing production by 40%. But our last 11Mt of GHG emissions are hard-to-abate and the sector needs support to overcome the green premium whilst remaining competitive in global markets. The UK's prize for providing that supportive landscape would be a clean and circular chemical industry at the heart of a green growth economy. This briefing document

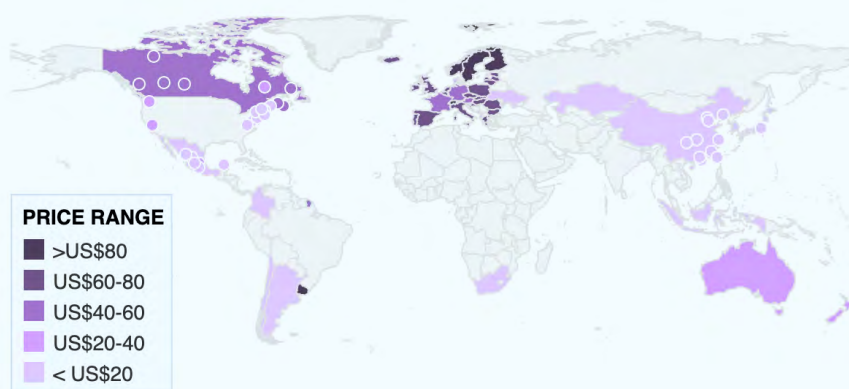
sets out how UK carbon policy could be a driver of net zero investment, helping to secure the UK's position as a global leader in industrial decarbonisation.

How does carbon pricing work in the UK?

In the UK a carbon price is applied to the greenhouse gas emissions released during the production of certain carbon-intensive¹ goods, like chemicals, steel and cement. A UK-based manufacturer of these goods must pay for its emissions by buying emission allowances from the UK carbon market and surrendering them to Government at the end of each year. A similar carbon pricing scheme exists in the EU but many of our other major industrial competitors do not place a comparative price on industrial emissions or place no price on them at all.

Price of carbon around the world, 2024

Heat map shows the level of the main price set by emissions trading systems or Carbon taxes in each jurisdiction (US\$/tCO₂e), subject to any filters applied.



Source: World Bank Group: State and Trends of Carbon Pricing Dashboard

¹ 'Carbon-intensive' refers to the fact that significant amounts of greenhouse gas emissions are released per unit of production. This is usually because of a high heat demand and/or the release of emissions owing to chemical reactions, as in the case of glass, cement and some chemicals.



As a result, UK manufacturers face a higher operational cost than their overseas competitors, whilst at the same time their ability to reduce their emissions is limited by the availability of low carbon fuels like electricity and hydrogen. These two factors together diminish the competitiveness of UK industry and put at risk the loss of

domestic manufacturing capacity in favour of overseas production. Critically, where overseas production is subject to less stringent climate policies there is a risk that the movement of manufacturing overseas will undermine efforts to reduce global emissions, a phenomenon known as ‘carbon leakage’.

The availability of low carbon fuels

Electricity: Like UK households, UK manufacturers typically burn natural gas to raise heat, which they use to drive their processes. As with UK households, natural gas is the default option because it is comparatively much cheaper than electricity, even though using electricity would allow them to reduce their emissions. In the UK, there is also a long wait to connect significant new electricity demand to the grid, an issue which has been much publicised in relation to the connection of new energy generation. Added to this is the fact that UK manufacturing sites are often owned by multinational businesses, who can choose to invest in production in places which have comparatively cheaper electricity and shorter grid connection timelines.

Hydrogen: Some of the most energy-intensive manufacturing processes tend to be sited in industrial clusters, spotted around the UK. These are typically energy-intensive because of the high-temperatures required to drive their process. This is particularly true of the chemical sector. These processes more readily lend themselves to hydrogen, both due to the lack of technologies available to achieve high-temperatures with electricity and due to the clustered location allowing for economies of scale when it comes to the roll-out of infrastructure. Many of these sites are working with their local industrial clusters to progress the infrastructure required to underpin hydrogen-fired manufacturing but deployment is subject to Government support, planning, permitting and construction, so there is no quick fix.

Why is it important to mitigate carbon leakage?

Carbon leakage is the movement of production and associated emissions from one country to another due to different levels of carbon pricing and climate regulation, which undermines the objective of reducing global climate emissions. Carbon leakage can also have an impact on our security and prosperity, as we lose the assets, skills and revenue associated with industrial production.

The UK's current main measure to mitigate carbon leakage risk is the system of free allocation under the UK Emissions Trading Scheme (ETS). This involves the free allocation of emission allowances up to the ‘benchmark’ – i.e. the best-in-class emission standard – for each sector considered at risk of carbon leakage. However, The number of free allowances made available is set to decrease in the years ahead, with the exact pathway for reduction pending a Government decision.

What benefit would a Carbon Border Adjustment Mechanism (CBAM) have?

A CBAM has been proposed in the UK, as a way to level the playing field between UK manufacturers that are subject to a carbon price and overseas manufacturers that face a lower carbon price, or no carbon price at all. If designed well, this would mitigate the risk of carbon leakage for manufacturers whose goods are produced and sold within the UK. However, UK manufacturers who export goods would still be less competitive in overseas markets, owing to the unilateral carbon cost they bear for production in the UK. To provide comprehensive carbon leakage mitigation, a CBAM must also provide an export mechanism (a form of rebate) where products are destined for overseas markets.

At the moment, carbon leakage mitigation in export markets is provided by ‘free allocation’. Free allowances are set to decrease in the years ahead although the exact pathway for reduction is pending a Government



decision, following consultation. If there is no export mechanism designed into a UK CBAM, then free allocation policy must provide effective carbon leakage mitigation until low carbon fuels are available to UK manufacturers, at a price that allows them to compete internationally.

The way in which the UK Government has proposed calculating the CBAM rate to be charged on imported goods takes into account the free allocation of allowances to UK industry, which means that a CBAM could be implemented alongside free allocation without conferring any disadvantage to overseas manufacturers and so staying within the spirit of World Trade Organization (WTO) rules.

How to make a success of a UK CBAM

- Exports must be recognised.** As an export intensive sector, carbon leakage mitigation in export markets is critical to the competitiveness of UK chemicals. Analysis by Frontier Economics shows that in the absence of a CBAM export solution, the effects of emissions pricing in the UK would be to reduce sales of UK ETS-covered exports on global markets.² At the same time, HMT data shows that UK chemical manufacturers are less emission intensive than our overseas competitors;³ Mitigating the impact of carbon leakage on UK exports would mean that UK products with a lower emission intensity are better able to displace higher emission products in third markets, helping to reduce global emissions.

Exports could be recognised through, either: A) an effective free allocation regime; B) the exclusion of exports from carbon pricing under the ETS; or C) through the inclusion of an export mechanism in the UK's CBAM.
- Carbon leakage mitigation policy must be joined-up.** We are concerned that the UK CBAM scheme is being developed in isolation from other UK climate-related policies, particularly the ETS and free allowance policy. The impact of CBAM and ETS policy must be considered together. UK manufacturers need longer-term clarity as we consider significant investments (in hydrogen and electrification) to reduce the embedded emissions of our products; We need to have certainty that those products will be able to compete in both the domestic market (via inclusion in a CBAM) and export market (via receipt of free allocation or via a CBAM export mechanism).
- Related international policy must be considered.** The EU's ETS and CBAM should be explicitly recognised by the respective UK schemes, and the UK Government should also seek recognition for the UK ETS and UK CBAM, within the EU CBAM. This would ensure clarity and certainty for businesses trading across borders.
- CBAM sector scope expansion needs long-term clarity.** As yet, there is no transparency on the criteria, process or timeline for the expansion of the UK CBAM sector scope. In the EU, it is regulated that basic organic chemicals and primary plastics must be considered for priority inclusion, with others to follow by 2030.⁴ To this end, a European Commission report on EU CBAM sector scope expansion is due before their transitional period ends on 31 December 2025. Businesses investing in the UK need the same certainty about the development of a UK scheme, alongside the development of free allocation policy.
- A review process is needed.** HMT should consider in advance, who has responsibility for reviewing the scheme once it has started, and what that process will look like. The European Commission has already been mandated to assess the impact of the withdrawal of free allocation from EU CBAM sectors, and to intervene if necessary. The UK Government must establish criteria for measuring the success of a UK scheme, and provide itself with options for intervention if required.
- Support is needed to overcome the green premium of clean manufacturing:** A UK CBAM would provide a new source of revenue for Government. HMT should use some of their increased total revenue to improve the funding landscape for industrial decarbonisation. The UK ranks worst out of top 5 Western European economies on green spending,⁵ there is currently no support that would make fuel switching to electricity attractive and the Industrial Energy Transformation Fund, the main source of decarbonisation support for industry, is spread thinly over multiple sectors and years.

² Frontier Economics (2024) UK Competitiveness and Carbon Pricing

³ HMT (2023) Addressing carbon leakage risk to support decarbonisation – Annex B, Table 4

⁴ A report on extending the sector scope is requested in Article 30(2) of the EU CBAM Regulation

⁵ IEA (2023) Government Energy Spending Tracker: Policy Database



How to make a success of a UK CBAM (cont)

7. **A transition period would help to troubleshoot issues associated with a complex scheme.** The EU scheme had the benefit of a transitional phase, running from October 2023 until December 2025, in recognition that a CBAM is a complex scheme that would not be smooth to implement. A recent letter from the International Chamber of Commerce to European Commission Director-General for Taxation and Customs Union vindicated this decision, highlighted issues with the complexity of processes and platforms, language and translation, administrative burden, guidance, and data availability. Within the transition phase, the European Commission has been flexible on sanctioning and enforcement, again in appreciation of the fact that compliance will be difficult, at least at first. Although the UK has suggested extending the initial reporting period, no explicit provisions have been on flexibility with regards to enforcement and sanctions.

Manufacturing is the cornerstone of a competitive green economy

A recent report by the IPPR shows that the net zero transition presents a perfect opportunity to revitalise UK manufacturing, highlighting chemicals as a key contributing sector.⁶ Our sector has reduced its scope 1 GHG emissions by 80% since 1990, whilst production increased by 40%. Our last 11Mt of GHG emissions are hard-to-abate and the sector needs support

to overcome the green premium whilst remaining competitive in global markets. The UK's prize for providing that supportive landscape would be a clean and circular chemical industry at the heart of a green growth economy. If we miss the opportunity then clean industry supply chains will take root elsewhere and we will fall behind in the next industrial revolution.

⁶ IPPR (2024) Manufacturing matters: The cornerstone of a competitive green economy

For further information contact:

Simon Marsh, Communications Director, Chemical Industries Association UK
Mob: +44 (0) 7951 389197 Email: MarshS@cia.org.uk

Nishma Patel, Policy Director, Chemical Industries Association UK
Mob: +44 (0) 7885 831742 Email: PatelN@cia.org.uk