Expected impact of EU CBAM on 'GB to EU' power trading

Executive summary

- The UK has, similar to the EU, a very ambitious climate/net-zero strategy and has set very high renewable/CO2 reduction targets.
- GB also has an emission trading system (ETS) in place and the current carbon cost for power generation is materially higher than its EU equivalent.
- GB is highly interconnected to the EU via electricity interconnectors and given its massive renewable buildout/potential GB is expected to become a net power exporter to the EU.
- Due to the current CBAM drafting most power flows from GB* would by default, with regard to the level of emissions they would be deemed to contain, get considered as if they originated from thermal power (gas) plants.
- Due to the currently foreseen implementation and the way power is traded (e.g. via exchanges) it will also be very hard to physically evidence the carbon cost that was already paid in GB so it will be difficult to offset this cost upon import into the EU.
- As a result of the above there is a high probability that a double and/or unnecessary carbon taxation would apply to power flows from GB.
- Due to this additional carbon taxation it is expected that it would most of the time no longer make economic sense to import power from GB into the EU.
- This new trade barrier is expected to increase power prices in the EU, increase CO2 emissions overall, increase curtailment of RES and negatively impact a further buildout of (Multi Purpose) Interconnectors and RES.
- Given the very advanced stage of the institutional CBAM negotiations at the EU side it is key that there is sufficient room left and time given to allow adapting the EU CBAM towards the future to address the currently identified issues (e.g. via article 30 on the review clause and the implementing acts).
- The most optimal would be for the UK to be added over time to the EU CBAM Exemption list with respect to the import of power.
- GB could consider implementing a similar CBAM mechanism for power imports into GB which would aggravate things.

**Note distinction between references to UK and GB since Northern Ireland is part of the UK but not GB and still participates in the Internal Energy Market.*

EU CBAM and its current status

- EU CBAM aims to address the risk of 'carbon leakage'. It seeks to ensure that an equivalent carbon pricing is applied for imports and domestic goods.
- In the coming months, inter-institutional negotiations (also known as trilogues) take place with a view to reach an aligned agreement between the three co-legislators (EC, EP and Council).
- It was initially foreseen to be implemented administratively as from 2023 as part of a transition period and financially as well as from 2026.

Overview of current Power Trading between GB and the EU Internal Energy Market

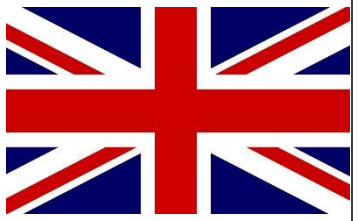
Electricity interconnectors between GB and Internal Energy Market

- **Operational Interconnectors**: Belgium: 1GW (Nemo Link), France: 4GW (IFA, IFA2, Eleclink), Netherlands: 1GW (BritNed), Republic of Ireland: 0.5GW (EWIC), (Northern Ireland: 0.5GW (Moyle)), (Norway: 1.4GW (NSL))
- **Interconnectors in construction:** Germany: 1.4GW (Neuconnect), Republic of Ireland: 0.5GW (Greenlink)
- **Interconnectors in development:** Multiple (Multi Purpose) Interconnectors in development (e.g. Nautilus to Belgium)
- **Key benefits of the electricity interconnectors: lower prices overall, facilitate RES integration, Security of Supply**

How does power get traded between GB and Internal Energy Market

- Power will in general flow from the low-priced area to the high-priced area.
- After Brexit GB left the Internal Energy Market which had an impact on prior trading arrangements.
- Currently market parties will buy capacity on most of the interconnectors via Explicit Auctions (on Long-Term, Day-Ahead and Intraday stage). When it is economic, they will nominate that capacity and buy/sell power in both markets (Power Exchanges, OTC…) accordingly. Note: GB-SEM trading is via implicit intraday coupling.
- The objective, as part of the Trade and Cooperation agreement, is to go back to a more efficient implicit market coupling mechanism. Market participants will in that case just bid in one of the local Power Exchanges. A central algorithm will take into account available cross-border capacity and the order books of the power exchanges to determine the interconnector power flows that will optimize overall socioeconomic welfare. In such a scenario cross border capacity allocation and power price determination happens at the same time.
- No tariffs currently apply on the trade of power between GB and the EU.

Renewable targets of UK and EU



- Energy Security Strategy: 95% low-carbon electricity mix by 2030
- 100% low-carbon mix by 2035 + cut carbon emissions by 78% by 2035
- Net zero by 2050
- Offshore wind: 50GW by 2030 and 100GW by 2050
- UK ETS in place

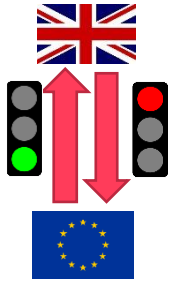
- Fit for 55: reduce greenhouse gas emission by 55% by 2030
- RES target of 40% by 2030*
- Net zero by 2050
- Offshore wind: 60GW by 2030 and 300GW by 2050
- EU ETS in place and being strengthened

*The target could still be subject to change in the context of ongoing legislative negotiations

Key issues with the current EU CBAM drafting on electricity import

Basic principles	• EU power Importers would be required to purchase CBAM certificates, at the cost of the EU ETS price, proportionate to the carbon content of energy imported from the non-EU country. • There is a possibility to offset (part of) the cost if the importer can demonstrate that a carbon price was already paid in the exporting country. (Art.9) • Countries can be exempted from CBAM on electricity import but strict conditions apply: GB is currently not in the exemption list.
Calculation of Embedded Emissions	• Given the drafting and the way power is being traded it will be very difficult to use the actual embedded emissions option for a given import. (conditions under Annex III point. 5) • Emissions will mainly be determined based on default values irrespective of the actual carbon content of the imported power. • Based upon the current drafting the default will be based upon the emission factor of price-setting sources (this will be a thermal (gas) plant in general for GB). • The reasoning behind is that domestic demand in the exporting (third) country will first be fulfilled (based on the merit order) before power gets exported. • As a result, with regard to the level of emissions they would be deemed to contain (and the related Carbon "CBAM" cost to be applied), **almost all power imports into the EU from GB would currently be considered as if they originated from a gas plant.** • Note: In general, GB power carbon intensity is expected to be frequently lower compared to the EU when importing power into the EU.
Offsetting of the already paid carbon price	• Given the current drafting and the way power is being traded **it will be very difficult to evidence that a carbon price was paid for a specific import of power**. (Art.9) • Even if GB ETS is higher compared to the EU ETS, **it is most likely that an additional EU ETS based charge is required on most imported power from GB**. • To the extent a reduction of carbon price could be carried out and proven, power produced from renewables sources (but nonetheless subject to a similar carbon cost than grey electricity) could not benefit from such reduction as no carbon price would have been paid in the country of origin (GB) for such "Green" electricity. Grey electricity on the contrary could claim such reduction.
Explicit versus implicit trading	• The current CBAM principles only seem to work for power that is traded via an explicit trading mechanism where you can identify the power importer. Note: The GB-SEM trading is currently done via implicit intraday coupling. • The target model as part of the Trade and Cooperation Agreement is to move back to an implicit coupling mechanism at Day-Ahead stage which does not seem compatible with the current CBAM principles. • **In general: the current detailed drafting does not consider very well how power is being/will be traded between GB and the EU**.

Expected negative impacts of the current EU CBAM drafting on ‘GB to EU’ power trade



‘GB to EU’ Power trade and flows	• There is a high likelihood of a **double and/or unnecessary carbon taxation** on GB power imported into the EU. • Most power flows from GB to the EU are expected to get an additional material CBAM charge. Due to this GB to EU power trades would very often no longer make economic sense and **flows towards the EU would frequently stop**. • Market liquidity will get negatively impacted due to the additional **administrative and financial barriers** for market parties. • Due to the reduced power price visibility and incorrect temporal power price signals **power trade is expected to become less efficient**. • **Trade of grey power appears to be favored as only grey power could theoretically claim a reduction of the carbon price in the country of origin.** • **Long-Term power hedging** options between GB and EU markets are expected to get **negatively impacted**.
 Power prices	• Reduced power flows from GB to the EU **are expected to increase EU power prices** as it will result in a less efficient and less economic power plant dispatch at EU side.
 CO2 emissions	• The reduced power flows from GB will as a result most likely increase the output and dispatch of less efficient thermal power plants on the EU side which will lead to **increased CO2 emissions** overall.
 RES production	• As GB to EU exports are most likely to be driven by a higher temporal RES output in GB compared to the EU it **could lead to increased RES curtailment in GB**. • The reduced ability to export RES from GB towards the EU could **negatively impact RES buildout** in GB.
 Transmission investment	• The business case and expected socioeconomic welfare generation of new GB-EU interconnectors and MPIs are negatively impacted which could **negatively impact a further buildout of transmission infrastructure**. • The income of the current regulated interconnectors are expected to be materially impacted which increases the **likelihood of a need for additional consumer support** via tariffs.
 Gas	• As a result of a higher expected dispatch of gas plants at the EU side there will be a **higher need for (imported) gas at the EU side**. • Note: Currently power imports from GB, that is better supplied with gas (Norway, LNG), lead to a reduced gas usage in the EU.

What can/should be done to address the CBAM issues and when?

Exempt UK

- **Adding, over time, UK to the CBAM exemption list for power imports would be the most optimal and logical**. Note: Switzerland and Norway are currently on that list.
- There are two pathways to exemption from application of CBAM to electricity imports:
  - ✓ Participate in the EU ETS or have an emission trading system linked to the EU ETS
  - ✓ Have as a country an electricity market which is integrated with the EU's internal market for electricity through market coupling, follow the relevant EU energy law and be committed to climate neutrality by 2050
- UK is not currently eligible for an exemption under either pathway. However, as part of the UK EU Trade and Cooperation Agreement relinking the ETS systems is an option that is to be explored.
- Reentry of GB into the IEM is over the long term the most desirable solution as that would lead to most benefits (Welfare generation, CO2 reduction, MPI/RES buildout…).

Amend the CBAM drafting

- Amending the current CBAM methodologies that lead to the current issues should be considered if the exemption route is not an option.
- Some minor wording changes on Article 9 that deals with the determination of the Carbon price paid in the country of origin would already be very beneficial.
- Given the advanced stages of the CBAM negotiations, and to keep open the possibility for further (needed) changes/clarifications , it is important that the proposed review clause (Art.30) is sufficiently broad so as to allow such/clarifications changes to EU CBAM Regulation well-before its targeted financial implementation
- Note: Improving the current drafting would most likely still create trade and administrative barriers that are not desirable.

Timing/urgency

- Clarity is required for the market on the short/mid-term as cross-border power trading and interconnector capacity sales can take place up to years in advance. It is currently expected that CBAM will have a material impact on price formation and the ability of the market to hedge.
- Clarity is also key as the current issues might negatively impact/delay future investments in (multi-purpose) interconnectors and renewables.
- **As it is envisaged the CBAM Regulation is to be adopted in the months to come, timing is of the essence and co-legislators should be made aware and pay attention to the points laid out here above in the context of the trilogues.**

Some proposed wording changes*
Art.9 – Carbon price paid in a country of origin

2. The authorised CBAM declarant shall keep records of the documentation required to demonstrate that the declared embedded emissions were subject to a carbon price in the country of origin of the goods that has been effectively paid as referred to in paragraph 1. The authorised CBAM declarant shall in particular keep evidence related to available rebates or any other form of compensation, in particular references to the relevant legislation of that country. This documentation shall be certified by a person independent from the authorised CBAM declarant and independent from the authorities of the country of origin**.** ***Unless otherwise foreseen in the rules and processes regarding required evidence established by the Commission in application of paragraph 4***, ~~T~~*t*he authorized CBAM declarant shall also keep evidence of the actual payment of the carbon price*.*

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4. The Commission ***shall*** ~~is empowered to~~ adopt implementing acts…[…], the evidence required of the actual payment of the carbon price, examples of relevant rebates or other forms of compensation referred to in paragraph 1, and the qualifications of the independent person referred to in paragraph 2 and conditions to ascertain independence. ***It shall also specify how to deal with those cases when the proof of the effective and actual payment of the carbon price in the country of origin is not feasible to deliver or would lead to disproportionate burdens for the CBAM declarant***. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 29(2).

* This wording proposal takes as a starting point the Council proposal in its General Approach. This suggested wording is if needed still subject to amendments/improvements.

Some proposed wording changes*
Art.30 – Review and reporting by the Commission

1. The Commission shall collect, ***also among and from relevant stakeholders***, the information necessary with a view

(i) to the extension of the scope of this Regulation, to indirect emissions as soon as possible, and to goods further down the value chain, and goods other than those listed in Annex I.

(ii) to develop and draft its report under §2 and if appropriate make legislative proposals to amend the CBAM regulation where needed.

2. ~~***Before 1 January 2026,***~~ ***At the latest within 18 months from the 1st of January 2023,*** the Commission shall present a report to the European Parliament and the Council on the application of this Regulation. The report shall in particular address the issue of the further extension of the scope of embedded emissions to indirect emissions, goods further down the value chain, and other goods at risk of carbon leakage than those already covered by this Regulation. The report shall also assess progress made in international discussions regarding climate action. The report shall contain an assessment of the impact of the mechanism on carbon leakage, including in relation to exports. The report shall contain an assessment of the possibilities to further extend the scope to embedded emissions of transportation services and services that may be subject to a risk of carbon leakage. The report shall also contain an assessment of the governance system, including administrative costs, of circumvention practices, of the application of Article 2(2a) ***and 9 of this Regulation and related practical consequences***, ~~***and***~~ of the impact of the mechanism on the sectors covered ~~***and***~~, on downstream sectors using their goods as inputs, ***on economic and territorial impact throughout the EU, on inflation and the price of commodities, on the internal market,*** on international trade, including resource shuffling, and on least developed countries. It shall also contain an assessment of the possibility to develop methods of calculating embedded emissions based on environmental footprint methods ***and/or improve the already applicable methods for calculating embedded emissions***.

3. The report referred to in paragraph 2 shall, if appropriate, be accompanied by a legislative proposal, in particular with a view ***to***

(i) amend the CBAM regulation where needed;

(ii) *extend~~ing~~ the scope of this Regulation, to indirect emissions as soon as possible, and to goods further down the value chain, also taking into account progress made in international discussions regarding climate action.*

4. ~~***Before the 1 January 2028,***~~ ***At the latest within 18 months following the end of the transitional period determined under Article 32,*** and every two years thereafter, the Commission shall present a report to the European Parliament and the Council on the application of this Regulation. The report shall contain an assessment of the impact of the mechanism on carbon leakage, including in relation to exports, on the sectors covered, and if appropriate on downstream sectors using their goods as inputs, on the internal market, economic and territorial impact throughout the EU, inflation and the price of commodities, on international trade, including resource shuffling, and on least developed countries. The report shall also contain an assessment of the governance system and of the scope of the Regulation ***as well as on the need to review the methods for calculating embedded emissions***. The report shall also contain an assessment of circumvention practices, of the application of Article 2(2a) of this Regulation, results of investigations and penalties applied. The report shall also contain aggregated information on the emission intensity per country of origin for the different products listed in Annex I. Those reports shall, if appropriate, be accompanied by a legislative proposal.

* This wording proposal takes as a starting point the Council proposal in its General Approach. This suggested wording is if needed still subject to amendments/improvements.