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## The EU Carbon Border Adjustment Mechanism: Implications for MENA



Energy Research Paper

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The European Union's (EU) Carbon Border Adjustment Mechanism (CBAM) imposes a reporting obligation, and a carbon tax on EU imports of certain goods in order to reduce carbon emissions. The CBAM is meant to secure fair competition for European energy-intensive industries, incentivise countries both inside and outside the EU to cut emissions, and hinder carbon leakage from the EU. With the transitional phase of the CBAM kicking-off in October 2023, importers are now required to report emissions embedded in the goods they import, for a selection of energy/carbon-intensive products, though the tax on those emissions will not be imposed until 2026. What do these developments mean for global and MENA energy producers and other carbon-intensive industries like steel and cement? How can they secure or expand their future export market in the EU?

## ENERGY RESEARCH PAPER

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- The EU's Carbon Border Adjustment Mechanism (CBAM) imposes (a) a reporting obligation, and (b) a carbon tax on EU imports of certain goods in order to reduce carbon emissions.
- The CBAM is meant to secure fair competition for European energy-intensive industries, incentivise countries both inside and outside the EU to cut emissions, and hinder carbon leakage from the EU.
- The products initially covered by the CBAM are cement, electricity, fertilisers (including ammonia), iron and steel, aluminium, and chemicals (only hydrogen is listed in this category for the moment).
- By 2030, the CBAM scope might be extended to all the product groups currently covered by the EU ETS, of which the most energy- and carbon-intensive include crude petroleum, petroleum products, natural gas and LNG, inorganic chemicals, industrial gases, synthetic rubber, non-ferrous metals, aviation, shipping, and others.
- MENA countries or their import partners will have to pay the CBAM levy on any crude industrial product they export to the EU, but not on pipes or automotive parts made out of these materials that they export, which can encourage the scale-up of their domestic manufacturing industry for these final products.
- For MENA producers, the inclusion of high carbon-emitting, energy-intensive industries under the CBAM can be viewed as a potential threat to their strategically important oil and gas sectors. Still, they will be less impacted than other higher carbon-emitting producers of CBAM-covered goods.
- MENA producers will adopt a pragmatic approach to the CBAM by aligning with its current requirements and being on top of monitoring and reporting requirements of their EU trade partners through initiatives on carbon tax compliance.
- They may also expedite the development of their own carbon pricing mechanisms and cap-and-trade systems in anticipation of the CBAM's full implementation.
- Such developments will ensure there is no carbon leakage of local industries, and market access and competitiveness is maintained for them.
- The ability to receive credit for equivalent carbon taxes under the EU CBAM may further incentivise MENA countries to enhance their carbon policies and capture associated economic benefits domestically.



The EU CBAM is a key element of the “Fit for 55” package within the European Green Deal<sup>1</sup>, and has been in force in a transitional phase since October 2023 and will be fully in place starting January 2026. The CBAM imposes (a) a reporting obligation, and (b) a carbon tax on EU imports of certain goods in order to reduce carbon emissions.

The CBAM is meant to secure fair competition for European energy-intensive industries, incentivise countries both inside and outside the EU to cut emissions, and hinder carbon leakage from the EU.

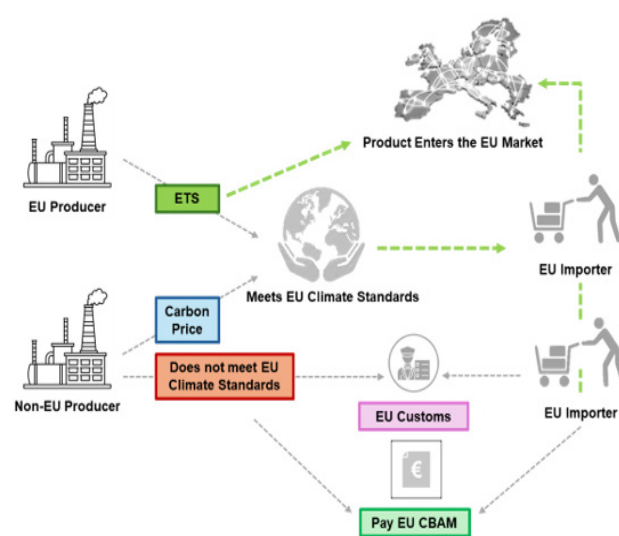
Carbon leakage refers to the situation that may occur if, for reasons of costs related to climate policies, [in this case EU] businesses were to transfer production to third countries with less stringent emission constraints or imports from these countries were to replace equivalent but less GHG-intensive products due to differences in climate stringency<sup>i</sup>.

In other words, the CBAM aims to level the playing field for EU domestic producers, who will be subject to ever more stringent climate regulations, and third-country producers, who might otherwise gain a significant comparative advantage due to laxer environmental regulations abroad.

Note that the CBAM will initially apply to goods considered by the EU as highly exposed to carbon leakage. Since crude oil and natural gas production are considered less susceptible to carbon leakage, they do not fall under this criterion for now. Still, the CBAM scope is expanded to widen twice, once in 2025, and

then in 2030, with the expectation that oil and oil products will be included under it. The fact that the CBAM guidance is also provided in Arabic, Chinese, Hindi, Korean, Ukrainian and Turkish is a clear message as to which exporters to the EU are expected to be most affected.

Figure 1 Illustrative of how the EU CBAM is intended to work<sup>ii</sup>



The CBAM is aimed at adjusting the price of imported goods for carbon emissions linked to those goods, meaning that EU importers will need to buy CBAM certificates. The price of the certificates will be calculated depending on the weekly average auction price of EU Emissions Trading System (ETS) allowances expressed in €/tCO<sub>2</sub> emitted (as per Article 21 of the CBAM), meaning that EU importers will buy CBAM certificates at the carbon price that would have been paid had the goods been produced under the EU ETS. Where the EU importer can prove, based on verified information from the third-country producer that a carbon price has already been paid during the production of the imported good, the corresponding amount can be deducted from the final bill for the certificate.

<sup>1</sup>– The European Green Deal sets out an ambitious goal for the EU to reduce GHG emissions by at least 55% by 2030 compared to 1990 levels. As such, the CBAM helps to achieve the EU’s sustainability goals



So, if the EU were to import a CBAM-covered good from a MENA producer, and that producer verifies that they have paid a carbon price during the production of that good, then the cost of the CBAM certificate for the EU importer goes down, meaning a lower cost impact of the regulation compared to if the producer has paid no carbon price at all.

Although the regulation <sup>iii</sup> does not appear to contemplate this situation, the exporter to the EU would not gain any additional benefit if its domestic carbon price were higher than the EU ETS level.

If the MENA region is to retain or grow its EU market share, it needs to expedite the development of a regional, or at the very least, a domestic carbon market at the national level. If competitors were to establish a similar carbon import mechanism to safeguard their domestic industries, and/or link them to the EU

ETS (although how the exact mechanism would work out for this is still unclear), then it might also lose market share of its exports to them.

The products initially covered by the CBAM are cement, electricity, fertilisers (including ammonia), iron and steel (including some steel items such as pipes, tubes and screws), aluminium, and chemicals (only hydrogen is listed in this category for the moment)<sup>iv</sup>. Many producers in the MENA region export or will export these products to the EU, particularly Egypt and several GCC countries like the UAE and Bahrain, and in many cases appear on the list of the top 30 exporters to the EU<sup>v</sup> (Table 2).

So far in its transitional phase to January 2026, the CBAM only imposes a reporting obligation on EU importers of these products, i.e. there is no financial adjustment to be made by EU importers at this time.

Importers have to report on a quarterly basis through a CBAM Transitional Registry the emissions embedded in its imports, with a failure to do so exposing companies to fines of between €10-50/tCO<sub>2</sub> of unreported emissions<sup>vi</sup>. The data for reporting will be provided by the producer in a specified CBAM communication template for non-EU installations<sup>vii</sup>.

Considering the planned extension of its scope by 2025, the CBAM might become relevant for many more MENA producers, including those of polymers, organic chemicals, petroleum and petroleum products, natural gas and LNG, and other commodities. The scope is currently also being assessed for the possibility of an extension to indirect emissions related to electricity for iron and steel, aluminium, and hydrogen; emissions related to transportation; other products, as just mentioned; and other precursors, such as those used in the plastics industry.

By 2030, the scope might be extended to all the product groups currently covered by the EU ETS, including crude petroleum, petroleum products, inorganic chemicals, industrial gases, synthetic rubber, non-ferrous metals, aviation, shipping, and others.

It should be noted, however, that these extended scope products will be formally integrated into the CBAM gradually between 2026 (for products under the extended scope by 2025) and 2034 (for products under the extended scope by 2030), with all EU imports thereafter subject to the CBAM<sup>viii</sup>. This allows MENA producers of these products at least 10 years to become CBAM-compliant, although the ongoing transition phase should encourage a swifter consolidation. By contrast, indirect emissions refer to emissions from the production of electricity, heating and cooling which is consumed during the

production process of the CBAM goods, irrespective of the location of the production of the consumed electricity.

This is a nod towards the expectation of increased electrification of many production processes of CBAM-covered goods and industries, which will require producers to source electricity from clean energy sources and/or integrate them with emissions mitigation technologies like CCUS.

These emissions will form part of the embedded GHGs in the imported product against which charges will be levied, thus protecting clean EU industry and encouraging producers of imported products to adopt more environmentally-friendly production methods. Or sectors which are currently allocated free allowances, this will phase out between 2026 and 2034, so the CBAM will increase from 2.5% of the EU ETS rate in 2026 to 100% by 2034.



Table 1 The EU CBAM Roll-Out Roadmap <sup>xi</sup>

Phase 1	October 2023	A 27-month transition period starting October 01, 2023. Exporters won't need to pay any tax but will have to share the carbon content details of their CBAM-covered product with EU importers for their reporting obligations
Phase 2	January 2026	Exporters will start paying a carbon border tax on their CBAM-covered products imported by EU companies who will need to buy CBAM certificates to import said products
Phase 3	2026-20234	CBAM will be extended from 2026 to 2034, where new products will be gradually brought under the CBAM ambit
Phase 4	2034 onwards	Starting 2034, <i>all</i> goods and materials imported into the EU will be taxed under the CBAM

Initially only direct GHG emissions from the production of CBAM goods will be assessed. Direct emissions from the production of CBAM goods will be used to determine the amount of CBAM certificates that an importer will have to surrender. Direct emissions, in contrast to indirect emissions, are emissions from the production processes of goods "over which the producer has direct control". These may refer to emissions from:

- Combustion in owned or controlled boilers, furnaces, and vehicles;
- Chemical production owned or controlled process equipment; and
- Production of heating and cooling that is consumed during the production process, irrespective of the location of the production of the heating or cooling

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The EU CBAM in its transition phase focuses on high-emitting industries and their products but not every product in those industries is included. For example, car doors made from aluminium are excluded, but aluminium nuts and bolts and aluminium sheets are included.

This distinction is laid out in the Annexes of the EU CBAM Implementing Regulations, which classify products covered by the CBAM through Combined Nomenclature (CN) and Harmonised System (HS) codes. Both exporters and importers can know the CN and HS codes of their specific product by consulting their installations' compliance and legal departments, or customs, procurement and logistics departments<sup>x</sup>.

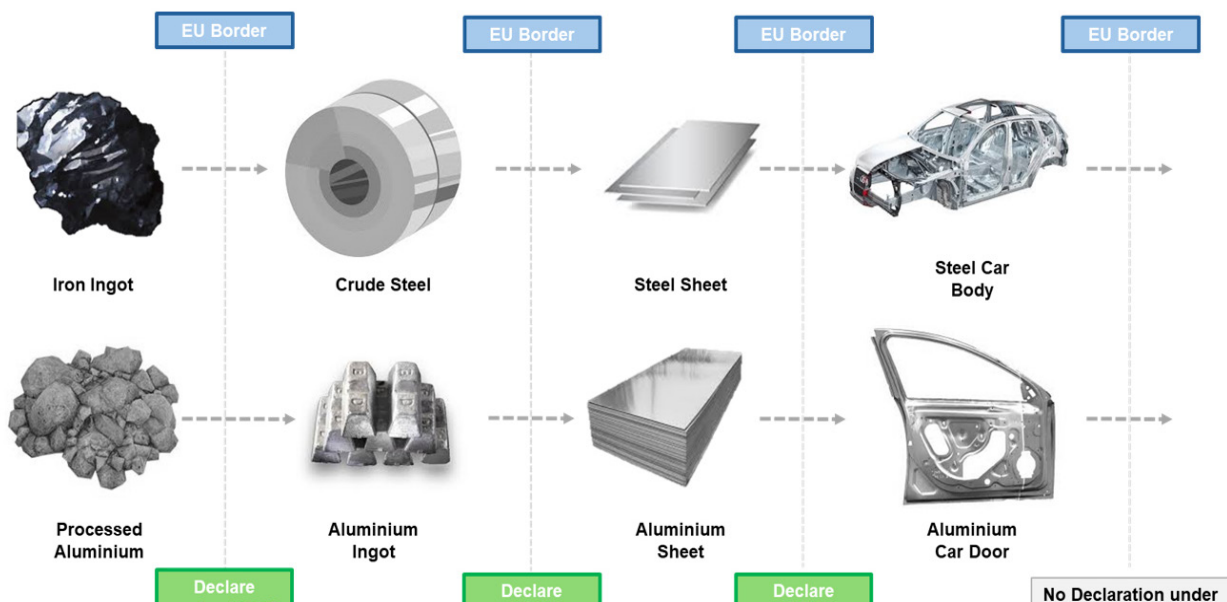
Some products may not have a CBAM-covered CN or HS code but contain other products that do so.

In this case, the CBAM is not applied to these products, since it is only concerned with the final CN code of the good imported into the EU.

To illustrate, and using the same example as before, an aluminium car door will contain CBAM-covered CN products such as sheets, nuts and bolts, but since the final product being imported – i.e. the car door – is not classified as CN or HS, it is not subject to the CBAM. It should be noted that such exempted final products are primarily "simple goods".

CN and HS classifications are mainly reserved for raw materials, ingots, agricultural products, or subsidiary products derived from such materials that can be further processed into or used in the manufacture of a simple good<sup>xi</sup>.

Figure 2 Illustrative example showing steel and aluminium goods included and excluded from the CBAM<sup>xii</sup>



For example, fertiliser products like ammonia have a CN code as they can also be derived from hydrogen, which has a CN code of its own and is subject to the CBAM<sup>xiii</sup>. This also means that crude oil and natural gas products are classified under CN and HS codes and will be subject to the CBAM once included in its scope.

Such a distinction can yield new opportunities for MENA producers of CN and HS-classified CBAM-covered goods by:

- Encouraging innovations in the high carbon-emitting parts of their value chain to lower emissions, and/or convert that part of the value chain into a product that does not require such a classification.
- Diversifying product lines or expanding product ranges.
- Retaining the entire value chain of their product at home, instead of exporting CN and HS-classified goods to Europe, where they will then get converted into a final good; and
- By extension, establishing new manufacturing facilities for export-ready final goods, such as automobiles, vehicle parts, pipes, electrolyzers, turbines, solar panels, and a wide gamut of other products.

For example, GCC countries like the UAE, Saudi Arabia, and Bahrain will have to pay a CBAM carbon tax on any crude steel or aluminium ingots and sheets they export to the EU, but not on pipes or automotive parts made out of these materials that they export, which can encourage the scale-up of their domestic manufacturing industry for these final products. EVs produced by Saudi Arabia at its Lucid Motors facility will therefore not be subject to the CBAM if exported to the EU.



## MENA PRODUCERS WILL ACT PRAGMATICALLY TOWARDS THE CBAM

For MENA producers, the inclusion of high carbon-emitting, energy-intensive industries under the CBAM can be viewed as a potential threat to their strategically important oil and gas sectors. Not all MENA countries have been very welcoming of the CBAM, arguing that the imposition of such a mechanism will be particularly challenging for their developing countries, not least due to the high share of energy-intensive industries in their exports<sup>xiv</sup>.

The main opposition against the CBAM so far is that it is incompatible with WTO fair trade rules. These include the Most-Favoured-Nation (MFN) principle and the National Treatment principle. Critics argue that the CBAM could discriminate against foreign producers by imposing additional costs on their exports, which could be seen as a form of protectionism rather than a legitimate environmental measure. In other words, it would appear the EU is greenwashing climate action by holding third parties responsible for its emissions. Also, the imposition of the CBAM could mean imported products are treated less favourably than domestic ones.

There has been no indication of a retaliatory measure so far from the EU's MENA trade partners. However, the EU's international trade partners, like the UK, Australia, and Turkey, are exploring their own version of the CBAM to protect their industries<sup>xxvi</sup> due to the large volume of carbon-intensive goods they export to the EU. Trade partners like China have taken it upon themselves to raise concerns within WTO, while South Africa insists the mechanism is discriminatory. US is a complicated case because it has no national domestic carbon price and looks unlikely to introduce one. But it does have some regional carbon prices covering several states, and has introduced a large package of subsidies for long-carbon production methods

and technologies, which it will likely argue are equivalent to carbon pricing. Some US politicians have therefore floated the idea of introducing their own CBAM-type measure.

India is reportedly considering retaliatory measures<sup>xxvii</sup> although it is not clear what these would look like. One possible approach could involve targeting European interest groups upon which European policymakers are perceived to rely.

**Table 2 Current Trade Statistics of MENA Countries' CBAM-Covered Products Exported to EU**<sup>xxv</sup>

Aluminium	<ul style="list-style-type: none"> <li>85% of EU imports come from 10 exporters, which include the UAE and Bahrain, each representing 8% and 3% of such imports</li> <li>KSA, Oman, and Qatar all appear on the list of the top 30 exporters to the EU (19<sup>th</sup>, 24<sup>th</sup>, and 28<sup>th</sup> positions respectively)</li> </ul>
Fertilisers	<ul style="list-style-type: none"> <li>85% of imports are accounted for by five countries, which include Egypt and Algeria, each representing 21% and 20% of such imports</li> <li>Libya, Oman, KSA, Tunisia, and Qatar appear on the list of the top 30 exporters to the EU (16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, 21<sup>st</sup>, and 28<sup>th</sup> positions respectively)</li> </ul>
Cement	<ul style="list-style-type: none"> <li>Algeria (6%), Morocco (5%), and Tunisia (3%) are among the top exporters that account for about 80% of the total imports to the EU</li> <li>KSA, Kuwait, Jordan, and the UAE occupy the 12<sup>th</sup>, 25<sup>th</sup>, 28<sup>th</sup>, and 29<sup>th</sup> place on the list of top 30 exporters to the EU, respectively</li> </ul>
Steel	<ul style="list-style-type: none"> <li>Tunisia, Egypt, the UAE, and Saudi Arabia occupy the 17<sup>th</sup>, 21<sup>st</sup>, 23<sup>rd</sup>, 25<sup>th</sup>, and 30<sup>th</sup> place on the list of the top 30 exporters to the EU, respectively</li> </ul>



This strategy mirrors the approach seen during the Trump administration's trade conflict with China, where tariffs imposed on Chinese exports led China to retaliate with tariffs on American agricultural products. Given that India imports machinery and equipment, automotive parts, pharmaceuticals, chemicals, and luxury goods from Europe, these sectors might be considered for potential tariffs as part of India's response.

MENA countries will prefer to engage in dialogue and cooperation with the EU. They will likely engage in dialogue with EU counterparts, as well as with trade partners such as Japan and South Korea, who have established their own emissions trading systems. These nations are using their emissions trading systems as a central point in their discussions with the EU, advocating for exemptions from the CBAM since their high carbon-emitting sectors are already exposed to a domestic carbon price.

Some, such as the UAE, will continue adopting a pragmatic approach by aligning with the current requirements of the CBAM and being on top of monitoring and reporting requirements of their EU trade partners through initiatives on carbon tax compliance with experts like Verofax<sup>xxviii</sup>. Concurrently, they are expediting the development of their own carbon pricing mechanisms and exploring a potential cap-and-trade system in anticipation of the CBAM's full implementation. This strategy also reflects the expectation that other global jurisdictions will pursue similar measures.

A local CBAM could be linked to a domestic cap-and-trade emissions scheme. MENA countries such as the UAE, Saudi Arabia, Qatar, Bahrain, Oman, Kuwait, Egypt, and, to some extent, Iraq, possess significant heavy industrial sectors that contribute substantially to their carbon emissions.

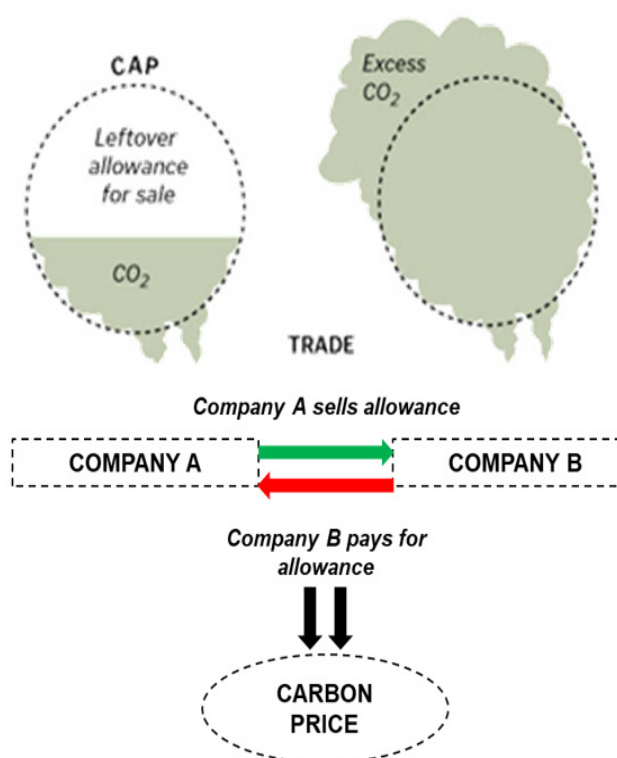
These sectors are also key in their exports to international trade partners, including the EU. By implementing a cap-and-trade scheme linked to a local CBAM, they could:

1. Argue for a reduction or exemption for their exports from the EU CBAM, since these exports already paid a carbon price at the time of production, especially if:
  - a. The carbon price paid is equivalent to the average weekly EU ETS price
  - b. They can establish benchmarks (by working with the EU) that account for the lower carbon intensity of their exports due to novel production methods, or lower-carbon energy sources
    - i. For instance, natural gas is the main feedstock used in MENA industries, and for most MENA countries is much lower in carbon intensity than in other regions.
2. Argue for lower CBAM rates if the carbon price paid at the time of production of their goods is lower than the average weekly EU ETS price, thus reducing the cost burden on their producers
  - a. This could be further based on their differentiated ability compared to the EU in terms of economic impact, development status, and capacity to comply with CBAM requirements

In a cap-and-trade system, the local government would set an annual emissions cap from high emitting sectors and issue a quantity of emissions allowances consistent with that cap. Emitters would have the choice to either reduce emissions or hold/buy allowances for every tonne of their emissions, after which they could sell their allowances,

creating a cap-and-trade market. This market would establish a domestic carbon price, i.e. a single price for the whole economy, and/or all regulated sectors.

Figure 3 Schematic of How a Cap-and-Trade System Could Work in a MENA Country<sup>xix</sup>



Using the GCC as an example, a GCC government could set a bucket of capped emissions for heavy industry (as its industrial products come under the current CBAM scope) decreasing annually towards net-zero. Existing industrial players would be given initial allowances, based on historic emissions or performance benchmarks (which could be developed in consultation with the EU, and/or other similarly placed trade partners), while new entrants would have a reserve. It's likely that the power and water sector would also have to be included, as it supplies electricity and hence indirect emissions to industry.

All industrial players would either reduce their emissions to meet this cap, or buy allowances from players who can more easily cut emissions (for example, steel players can more easily reduce emissions than cement players, and could therefore sell their excess allowances to them). This would result in a cap-and-trade market and a carbon price. Ideally, a price ceiling and floor would be imposed to avoid excessive volatility or making the economy uncompetitive.

Once linked to the GCC country's local CBAM, this system would effectively avoid unfair competition from high-carbon imports, and protect exports going to the EU by reducing or removing carbon taxes to be paid there.

Mandating green standards for CBAM-covered industries is another option MENA producers can explore for establishing benchmarks that account for the lower carbon content of their products. For example, in the steel sector, standards such as Responsible Steel, WRI GHG Protocol, Climate Bonds Standard, World Steel Association Protocol, ISO 14404, ISO 14025 (EPD), AISI, and SBTi can all be applied relatively straightforwardly to steel operations to make them more environmentally friendly.

Key criteria under these standards include accounting for CO<sub>2</sub> and other GHG emissions per tonne (for example, divided between the direct reduced iron (DRI)/furnace and electric arc furnace); having environmentally friendly operating practices (such as having a CCUS capture rate of >70%, low-carbon hydrogen in DRI, scrap usage of >70%); mitigating other pollution; and pursuing other relevant ESG criteria (such as community, labour rights, safety, community engagement, R&D, etc.).

Green procurement policies on the other hand will set a rising procurement standard for green industrial products (green steel, green aluminium, green cement, etc.), for example rising from 10% today to 100% by 2035. These could have a price ceiling calculated as the maximum premium over non-green material, and can be linked to local content programmes, encouraging in-country production of green materials.

Both green standards and green procurement policies can be used together as leverage in negotiations with the EU regarding the CBAM for products produced under these standards.





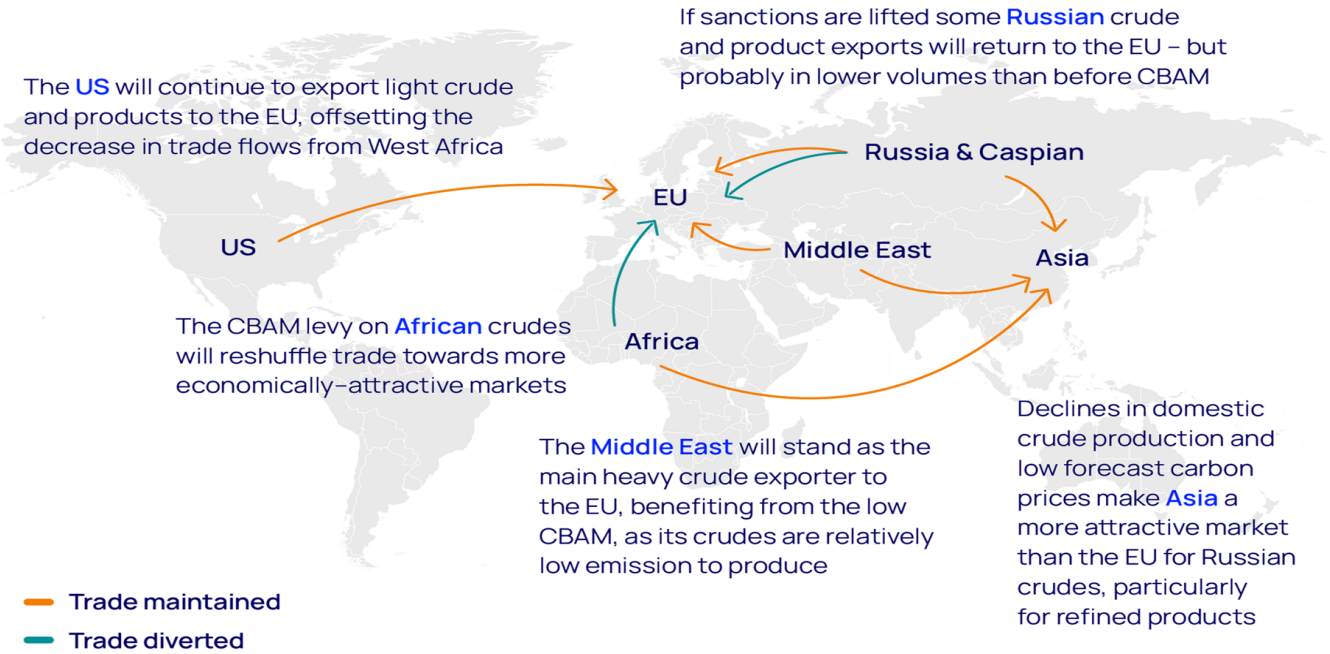
If crude oil, refined products, natural gas and LNG come to pass as part of the expanded CBAM scope by 2030, MENA producers might be at a considerable advantage over other oil and gas producers of the world, thanks to the lower embedded carbon content of their resources. Both markets are highly liquid, so trade patterns will respond swiftly to changes in the cost structure, i.e. higher carbon content oil producers' products will become costlier due to the CBAM, while MENA producers' products will be on the lower end of the cost scale, reinforcing their market leadership. Both Qatar and the UAE are seeking to reduce the carbon footprint of their new LNG facilities, for example by recapturing boil-off gases, limiting upstream methane leakage, running facilities on electric drive with renewable and nuclear power, and using carbon capture and storage.

It's unlikely that total net imports of crude and middle distillates into the EU will be jeopardised by the implementation of the

CBAM, but trade flows will change, depending on carbon intensity and domestic carbon pricing practices of exporting countries. If the MENA countries were to establish a regional carbon market of their own, their oil products could effectively be exported to the EU under the CBAM at very little additional cost (due to the carbon price already paid domestically on the low carbon content of the resource).

Still, cost of doing business in the EU will increase by stacking up carbon charges along the oil value chain. This is a problem for EU refiners, who will face increased feedstock costs if using high carbon content (typically heavy, sour) crude feedstock. European crude production, which typically has lower embedded emissions, is unlikely to increase sufficiently to meet the EU's needs. Moreover, EU refiners will also have to pay the EU ETS for their own emissions.

Figure 4 Global oil trade shifts under the CBAM<sup>xx</sup>



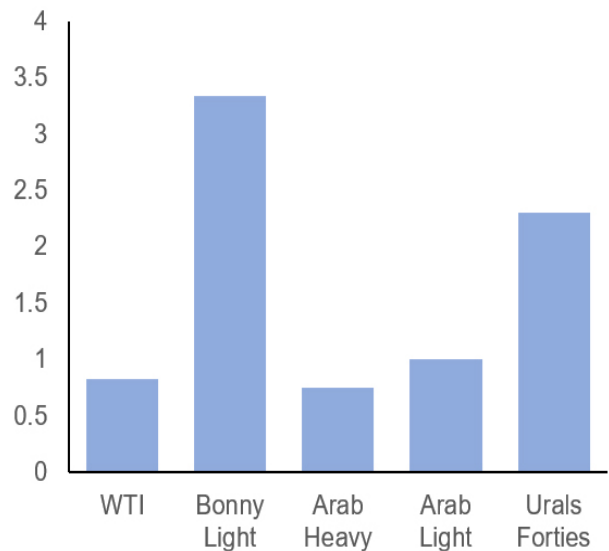
Low emissions-intensity crudes could therefore stand to gain market share in the EU. For example, a Wood Mackenzie analysis shows that the imposition of the CBAM would increase the cost of Middle Eastern (mainly Saudi Arabia) crudes by less than US\$ 1/b, making them extremely competitive against regions with more carbon-intensive production processes, such as West Africa and Russia.

The EU has ambitious hydrogen (H<sub>2</sub>) targets to meet its decarbonisation goals (10 Mt/y produced and 10 Mt/y imported by 2030 under the REPowerEU target), creating a market that will naturally push global H<sub>2</sub> and NH<sub>3</sub> industries to decarbonise. The CBAM will put an additional incentive in place by stimulating imports of low-carbon H<sub>2</sub> and its derivatives.

Grey or carbon-intensive H<sub>2</sub> with low-cost feedstock could still remain competitive in the EU, but MENA producers will find a more sizeable opportunity in converting such H<sub>2</sub> into a lower-carbon form (such as H<sub>2</sub> with CCUS, or

blue H<sub>2</sub>, and in the future electrolysis-based renewable H<sub>2</sub>) and thereby facing only a very minimal impact of the CBAM on costs.

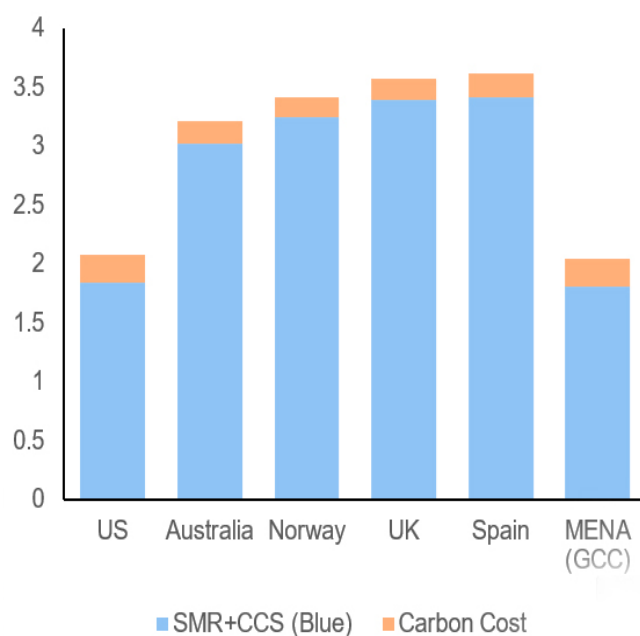
Figure 5 CBAM Impact on Crude Oil imported into the EU, US\$/b<sup>xxi</sup>





They will also enjoy more use by EU off-takers, who will have to pay lower EU ETS costs by using lower-carbon imported H<sub>2</sub> compared to carbon-intensive H<sub>2</sub>, especially as carbon prices rise and free EU ETS allowances are phased out. As a result, grey H<sub>2</sub> will eventually become more expensive in terms of levelised cost of H<sub>2</sub> than low-carbon H<sub>2</sub>.

Figure 6 LCOH of blue H<sub>2</sub> from major producers in 2036, US\$/kgH<sub>2</sub><sup>xxii</sup>





The EU CBAM will advance global decarbonisation efforts. One of its initial impacts may be a significant reorganisation of trade flows over the next decade, driven by higher costs that push exports towards more favourable markets.

From a global perspective, low-carbon H<sub>2</sub> and its derivatives will become more economically viable compared to traditional, carbon-intensive options. MENA producers should continue investing in blue and green H<sub>2</sub> to capture a large share of the expanding EU H<sub>2</sub> market. Specifically, early action to scale up CCUS capacity can position MENA producers to benefit from the rising global demand for this low-carbon feedstock.

MENA producers must innovate in industries currently covered by the CBAM to retain market. For products under the current CBAM scope (such as steel and aluminium), high CBAM costs could see margins reduced when importing into the EU.

For MENA producers, this means more proactively decarbonising their operations to retain access to the EU market.

They could innovate in the high carbon-emitting parts of their value chain to lower emissions. If they can reduce emissions below those of typical competitors, they could even grow market share and/or realise higher margins from European sales. Options include use of the MENA region's natural gas (to compete with coal-dominated countries such as China, India, Indonesia and South Africa), low-cost renewable resources (solar and, in some places, wind), relatively low-cost blue and green hydrogen, and carbon capture and storage combined with the production of materials such as ammonia and direct reduced iron.

Alternatively, they could diversify product lines, or retain the entire value chain of their product at home.

By extension, this would help establish new manufacturing facilities for export-ready final goods (that are not subject to the CBAM), such as automotives, vehicle parts, pipes, electrolyzers, turbines, solar panels, and a wide gamut of other products.

MENA crude exporters with optionality can maximise value by sending low-carbon exports to the EU and carbon-intensive exports to other regions. Refiners, meanwhile, should similarly seek to capture higher value in the EU for lower-emissions products while diverting carbon-intensive products elsewhere. Eventually, the best strategy will be to invest in decarbonisation technologies to capture an attractive high-price market in the EU.

MENA countries have a significant incentive to implement domestic carbon pricing to capture some of the revenue that would otherwise be taken by the CBAM. This could result in higher carbon prices globally, but there will be a limit on how high domestic carbon prices can go to avoid making businesses uncompetitive (for example, by implementing a floor-and-ceiling mechanism).

While domestic carbon prices might not reach the €150/tCO<sub>2</sub>e expected in the EU ETS over the next decade, they should be applied to trade-exposed commodities to remain competitive.

Finally, to be ready for when the EU CBAM fully rolls out in January 2026, MENA producers should consider the establishment of in-country accreditation bodies to verify emissions data covering CBAM-covered products. This could also take a regional form, for example, the GCC could propose establishing a supranational accreditation body based in the GCC to support all GCC exporters.

Such an accreditation body could also help establish country-specific default values, which can be advantageous, since many MENA producers are already engaged in carbon-reduction activities.

It could also provide a streamlined platform where exporters could assess the potential financial impact of the CBAM on their exports (based on various scenarios of carbon prices in the EU and CBAM scope extensions) and encourage fit-for-purpose IT solutions for GHG accounting, process management, and controls.





The implementation of the CBAM will affect both downstream products and finished goods in the EU market. While these changes are theoretically reflected in current EU allowance prices, many third-country producers of CBAM-covered goods do not yet fully understand the opportunities available to them once the CBAM goes into full effect from January 2026.

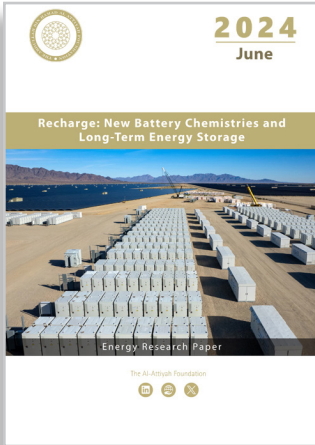
For MENA exporters, there is a lucrative opportunity in being at the forefront of shifting trade patterns, if they manage to develop its own carbon markets and more aggressively pursue optionality with their lower-carbon natural resources. Such a move would result in EU imports favouring lower-emission MENA products to avoid CBAM costs, while high-emission products may find opportunities in markets with less stringent carbon regulations.

To maintain competitive in the EU marketplace will require a concerted drive towards decarbonisation. MENA countries like the UAE, Saudi Arabia, Qatar, Oman, and Egypt already have dedicated decarbonisation plans in the works, with some, like the UAE, also exploring potential for their own CBAM equivalents. Such developments will ensure there is no carbon leakage of local industries, and market access and competitiveness are maintained.

The ability to receive credit for equivalent carbon taxes under the EU CBAM may further incentivise MENA countries to enhance their carbon policies, aiming to capture associated economic benefits domestically.

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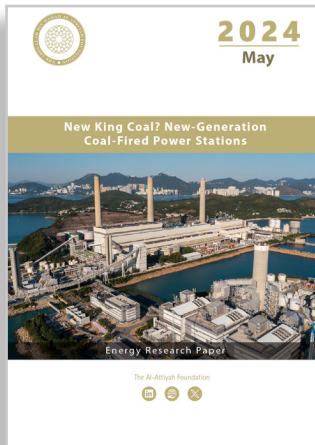
June – 2024

**Recharge: New Battery Chemistries and Long-Term Energy Storage**

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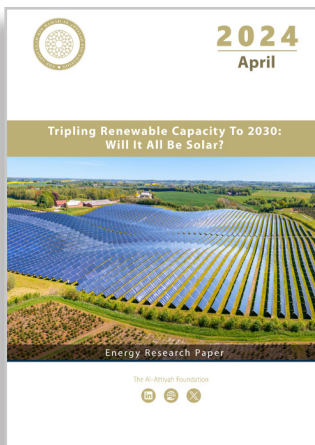
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The prevailing belief is that the use of coal must cease to achieve net-zero emissions. However, new coal power plants, equipped with advanced ultra-supercritical, fuel cells, small supercritical, co-combustion, combined heat and power, and carbon capture, use and storage (CCUS) technologies offer enhanced thermal efficiency, reduced emissions, and increased flexibility in power generation.



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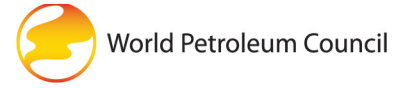
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