

CIGS RESEARCH PAPER

**The Geopolitics of Carbon Border Adjustment Mechanisms:
How Decarbonizing Trade Will Affect Oil-Producers in the Gulf**

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INTRODUCTION

Throughout modern history, energy and geopolitics have formed an enduring nexus, shaping empires and the balance of global power. Soon, our energy systems will undergo a major transition. The repercussions of the transition will not be confined to the energy industry. Policymakers should take heed of this dynamic, and consider which path to net-zero will deliver the most desirable geopolitical landscape.

A nascent trade policy with significant political momentum resides at the intersection of climate and geopolitics. Carbon Border Adjustment Mechanisms (CBAMs) require importers to pay a fee based on the amount of carbon emitted overseas to produce the imported good. Across the globe, different electricity sources and manufacturing methods lead to wide variances in carbon emissions per unit of production. In short, the lifecycle emissions of a commodity vary greatly depending on where it was made (Rorke, 2020).

CBAMs will reward cleaner producers while disadvantaging dirtier ones. For nations in the West who adopt this policy and their trade partners around the world, CBAMs will organize a new trade regime that guides industry to decarbonize at scale.

Many regions will be affected by the rise of CBAMs, but this paper will focus on the implications for energy producers in the Gulf. Since the 1970s, the Middle East has been a key energy supplier, and the region's role in global markets has fueled major geopolitical conflicts. The adoption and development of CBAMs in the West will influence the future geopolitical posture of the Gulf states. Specifically, the Kingdom of Saudi Arabia (KSA) and United Arab Emirates (UAE) may strengthen their alliances with the West if CBAM regimes recognize and reward their low-carbon oil and gas value chain and their recent investments in the hydrogen economy.

While the West favors CBAMs to enhance the competitiveness of domestic industries and to reward investments in green infrastructure, developing nations like India and China contend these measures are unfair. CBAMs, they argue, discriminate against the very economies whose industrialization was stunted by the powerful nations that now impose CBAMs. Ultimately, the climate crisis will force tough choices between speed and fairness. The world after the energy transition will reflect how policymakers reconcile

this difficult tension.

PART I -- THE WEST

CBAM Designs

CBAMs vary in scope and intensity, and these design differences will shape the policy's geopolitical effect. As we forecast how CBAMs will impact the Middle East, we will assume that future CBAMs resemble the EU's current implementation and the leading American proposal for a potential U.S. CBAM.

Carbon leakage -- when companies move production abroad to sidestep domestic environmental regulations -- harms domestic industry and slows the pace of global decarbonization (Pirlot, 2024). For this reason, both the European and American CBAM designs aim to prevent carbon leakage by applying fees to imports based on their carbon footprint. When planned properly, CBAMs ensure fair competition for domestic businesses whose products compete in the domestic market against pollution-heavy foreign alternatives. Meanwhile, CBAMs also incentivize global decarbonization by internalizing the cost of carbon pollution into international supply chains.

Existing CBAMs in the EU and UK account for two types of emissions: direct emissions from production (Scope 1) and emissions from the electricity used (Scope 2) (Reland, 2021). In simple terms, the CBAM fee is based on the carbon pollution created by both the production process and the energy it consumes (Rorke, 2023). In countries where the electric grid is powered by renewables, these "Scope 2" emissions — and the CBAM fees based on them — will be relatively low.

In the long-term, it is not yet certain which classes of imports will be subject to a carbon border adjustment. Although the EU and U.S. already regulate a wide array of imports, the early stages of CBAM designs focus on high-carbon commodities like steel, aluminum, and fertilizers. Looking ahead, the EU and U.S. have both signaled interest in collecting the emissions data for imported oil and gas, indicating that future CBAM designs may also include energy resources.

While Western CBAM regimes do not yet cover energy resources, there are strong indications this will soon change. The U.K. and EU already require emissions reporting for imported energy resources, causing analysts to predict that these governments will

expand their CBAM-covered commodities to include oil and gas. In the U.S., growing support for a CBAM is partly driven by the low carbon-intensity of American oil and gas, which would gain a competitive edge under such a policy.

CBAM Spread

CBAMs are spreading across the West. The EU and U.K. both adopted and are implementing them, and the U.S. appears interested in following suit. Understanding the drivers behind the rising popularity of CBAMs offers insight into how future versions of these policies might develop.

The European Union's CBAM, was implemented as a core component of the European Green Deal. The European CBAM complements and reinforces its domestic Emissions Trading System by creating price alignment across its market and protecting domestic producers from competitors taking advantage of regulatory arbitrage. The provisional agreement to implement the EU's CBAM was described as a political "high point for EU policymakers" as its coalition included populist right-wing politicians who favored protectionist trade policy alongside left-wing politicians aiming to quicken the pace of global decarbonization (Benson, 2023).

A similar dynamic is present in the United States. While Democrats mainly support the measure for its potential to pressure foreign nations to lower carbon emissions, some Republicans also appear interested, drawn to the benefits for American industries under a CBAM regime (Dumain, 2023). Notable supporters of an American CBAM include leaders from oil-producing states like Alaska and Louisiana (Zeitlin, 2024). If this coalition can muster enough support to enact an American CBAM, there will be political pressure to subject imported oil and gas to CBAM fees so that American oil producers enjoy a competitive boost. U.S. President Donald Trump's veto power may not be a problem. While his tone on climate remains dismissive, President Trump is a self-described "tariff man" whose recent campaign embraced a protectionist approach to trade and energy independence. President Trump often expresses concern about American producers losing to China, which suggests the incoming Republican leadership may be receptive to an "America-First" CBAM, especially one that empowers U.S. industry and reduces Chinese imports.

As CBAMs multiply across the globe, there will be increasing pressure on the remaining low-carbon economies to join. Many nations, such as Japan, South Korea, and Brazil, may consider enacting comparable environmental regulations of their own to avoid paying into the foreign coffers of their main trade partners, to protect their domestic industry, and to capitalize on their green-electrification progress.

PART II -- THE GULF STATES

If energy resources are included in Western CBAM regimes, economies of the Gulf will be affected. Prior to the long-term decline in oil demand among advanced economies, energy exports from the Gulf will gain competitive edge in markets like the EU. Furthermore, recent investments made by Gulf states towards decarbonizing domestic electricity and commodity production will also be rewarded if the West implements robust CBAMs.

Efforts to reduce carbon emissions in the Gulf

Despite their historic legacies as oil and gas producers, recent investments in low-carbon technology and infrastructure have put the KSA and UAE on a path towards a cleaner and more resilient economy.

In 2020, the Kingdom introduced its “circular carbon economy” concept to guide its energy transition. The framework prioritizes carbon capture, utilization, and storage (CCUS) by developing new uses for captured carbon, such as feedstock in production of chemicals and fertilizers as well as injecting carbon into active oil and gas fields to increase pressure and support ongoing oil recovery (Seznec et al., 2021). CCUS aims to capture CO₂ before its release into the atmosphere, enabling the burning of fossil fuels while limiting the impact on the climate. With the risk of additional CBAMs in the near future, Saudi Arabia’s investments in CCUS also serve as a means to extend the market viability of their hydrocarbon industry (Almutairi, 2024).

In harmony with CCUS investments, the KSA is poised to become a leader in hydrogen production. Its circular carbon economy investments enable its burgeoning blue hydrogen industry which produces low-carbon hydrogen via natural gas and carbon capture. In this effort, the Kingdom enjoys an abundance of natural and renewable resources, expertise advantages and existing industrial infrastructure (Al-Khelaiwi, 2024). Similarly, the UAE announced in 2024 the construction of a major ammonia production facility in cooperation with Japanese partners (Obayashi, 2024). Indeed, both the KSA and UAE are making significant investments in next-gen energy markets like hydrogen and ammonia, in part due to the anticipated proliferation of CBAMs across the West (Benny, 2024).

Both the KSA and UAE promote the use of renewable energy for domestic electricity. The UAE's state-owned renewable energy company, Masdar, recently initiated renewable energy projects across the region that include the world's largest single-site solar power plant opened near Abu Dhabi (Campbell, 2020). Meanwhile, Saudi Arabia's "Vision 2030" lays out ambitious goals including the aim to produce 50% of its electricity from renewable sources by 2030 (Selim, 2025). Though the Kingdom is not on track to meet this goal, it has increased its share of wind and solar electricity generation in recent years (IRENA, 2024). These efforts to increase domestic renewable energy will enable the KSA and UAE to avoid the opportunity cost of burning fossil fuels at home rather than selling them abroad. Furthermore, as the global market increasingly accounts for the cost of carbon pollution, efforts to reduce emissions in the Gulf will contribute to their sustained dominance in the energy industry for years to come.

The value of low-carbon fossil fuels in the Gulf

In the transition to net-zero, global demand for crude oil will gradually decrease after 2030, especially among advanced economies in the West (IEA, 2024). Given this, the type of oil and gas that remains on the market holds both economic and climate significance. The IEA estimates that the production, transport, and processing of oil and gas is responsible for nearly 15% of global energy-related greenhouse gas emissions (IEA, 2023). Furthermore, the carbon-intensity of oil exploration, extraction and transportation differs widely between oil fields and producers (Masnadi, 2021). As pressure to decarbonize mounts, Gulf producers with high margins and low-carbon production like the KSA and UAE will likely increase their market share.

Already, the KSA and UAE are improving the emissions profiles of their oil and gas operations by reducing flaring, powering facilities with low-carbon electricity, and installing CCUS systems for operational emissions (Mills, 2023; Romsom et al., 2021). Furthermore, the properties of the crude oil extracted in the Gulf generally requires less energy to treat and refine (Garthwaite, 2018). Accordingly, the carbon-intensity of the KSA oil and gas industry is estimated to be significantly lower than the world average

(Rorke, 2022; Hamieh, 2022)¹.

In sum, if CBAMs are applied to oil and gas imports, some Gulf states will enjoy a competitive advantage over their high-carbon competitors. The long-term economic value of crude oil will shift toward those producer states with low-carbon extraction and recovery methods. Furthermore, those who recognize this opportunity early may double down on this advantage -- developing renewables and nuclear to decarbonize their products for export while selling their unused low-carbon oil to markets where CBAMs will help it achieve premium pricing.

¹“With low gas flaring and water-cut per produced barrel of oil, the [carbon intensity] in KSA is around 4.6 gCO₂/MJ, corresponding to 27 kg of CO₂ per one produced barrel of oil, which is significantly lower than the world [carbon intensity] average of 10.3 g CO₂/MJ” (Hamieh, 2022, Section 6). Also see Table G “Mining and extraction of energy producing products” (Rorke, 2022).

PART III -- GEOPOLITICAL OUTLOOK

Trade-Peace theory asserts that as nations increase trade, they become less likely to engage in armed conflict with their trading partners (Hegre, 2010; Polachek 2006). Liberal theorists have identified mechanisms underlying this phenomenon: conflict disrupts profitable trade, nations cultivate influence with trade partners' institutions, and increased trade fosters diplomatic coordination, building trust and reducing conflict risks (Poast, 2019; Echeverri-Gent, 2016).

Beyond preventing war, the development of shared economic interests may cause nations to better appreciate shared geopolitical and security interests as well. The 1948 Marshall Plan and 1949 establishment of NATO laid the groundwork for a longstanding transatlantic alliance which delivered both economic and security collaborations (Latham, 2001). Similarly, the postwar economic assistance provided to Japan by the United States soon enabled shared geopolitical interests — America supplied its troops during the Korean War with products of Japanese manufacturing (Takada, 1999). Of course, this dynamic can cut both ways. When the U.S. blamed Japan for using a “controlled economy” to induce speculative capital to flow from America to Japan, the U.S. Treasury Secretary John Connally threatened that the economic conflict necessitated that America “would have to revise [the U.S.-Japan] mutual security agreements” (Steil, 2013). In short, shared economic interests can support security partnership, and divergent economic interests can cause geopolitical stress.

As carbon pricing spreads across the West, international trade flows will adapt. Low-carbon producers of oil and gas, like the KSA and UAE, will be incentivized to increase their market share in nations that implement oil-inclusive CBAMs. For example, crude oil from the KSA would be levied 30 - 50% less under the EU CBAM than other oil suppliers because the KSA produces oil relatively efficiently (Aylor, 2020). Other low-carbon exports from the Gulf, such as aluminum, hydrogen and ammonia, will also stand to benefit from this advantage (Benny, 2024). In tandem with increased economic interdependence, the UAE and KSA may feel incentivized to cooperate with the West on security interests.

Conversely, the proliferation of CBAMS will force high-carbon oil producers to face a stark choice: invest in low-carbon production capacity or shift exports to markets that

have not yet internalized the cost of carbon pollution (Aylor, 2020). Countries like Algeria, Iraq and Iran may choose to strengthen ties with nations that do not have CBAMs, such as China, India and South Africa (Masnadi, 2015, see fig. 1 describing carbon intensity). In the near term at least, statements by the leaders of those destination markets in the Global South suggest there is little political appetite for the promulgation of their own domestic CBAMs.

Despite the potential for widespread adoption in the West, CBAMs remain a contentious issue in the global arena. In a joint statement, China, South Africa, Brazil and India expressed “grave concern” about the development of an EU CBAM (Munzur, 2021). During a 2021 summit with European leaders, Chinese President Xi Jinping blasted EU plans for a CBAM and warned that climate change should not become a “bargaining chip for geopolitics, targets for attacking other countries, and an excuse for trade barriers” (Mathiesen, 2021; Xinhua News Agency, 2021, translated). China, in particular, faces significant exposure given the EU’s role as one of its biggest trading partners, especially for energy-intensive products like iron, steel, machinery, and vehicles (Munzur, 2021; Eurostat, 2024). If the United States implemented a similar CBAM, China’s control of global supply chains might be undermined (Boocker, 2024).

In sum, geopolitics may shift as stronger trade relations develop between low-carbon producers and Western markets. Correspondingly, producers of high-carbon oil and commodities may increasingly align themselves with markets in the Global South. Ultimately, the geopolitical effects of CBAMs will depend on the details of their policy design. For example, if policymakers in the West follow the WTO model of allowing special treatment for countries with developing nation status, the economic challenge and geopolitical disruption posed by CBAMs may be reduced or eliminated (Busch, 2022).

CONCLUSION

As CBAMs gain traction across the West, the global economy will adapt to this new trade regime. In the Gulf, the KSA and UAE are poised to increase their market-share among CBAM nations, due to their existing advantages in low-carbon oil production and their recent investments in the hydrogen value chain. This enhanced economic relationship may support further geopolitical alignment between the Gulf and the West, especially on climate mitigation measures.

CBAMs also contain the potential to alter global energy geopolitics by creating a divide between low-carbon and high-carbon producers. For Gulf states, CBAMs may not only bolster their standing in Western markets but also stimulate further investments in renewables and carbon capture technologies. This dual approach could position the KSA and UAE as leaders in both the fossil fuel and renewable energy sectors, extending their influence in a decarbonizing world. Meanwhile, nations that rely on high-carbon energy sources may become marginalized from lucrative Western markets, potentially altering global power dynamics as the world meanders towards a low-carbon future. If shared economic interests indeed precipitate security cooperation, CBAMs may also encourage security alignment between the West and its low-carbon Gulf partners.

Soon, CBAMs will drive decarbonization, promote domestic industry, and alter geopolitics. As isolationism brews and climate change intensifies, CBAMs promise progress in a challenging political moment. To meet this moment, policymakers should ensure CBAMs are designed fairly so that their implementation promotes security and global prosperity.

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