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Trading Towards Tomorrow: The Design Metrics of a UAE Carbon Market

Dr Justin Dargin

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About the Author

Dr. Justin Dargin

is an international expert in global energy and climate governance, advising sovereign governments, multinational corporations, and multilateral institutions on transition architecture, carbon finance, and macroeconomic climate risk.

His scholarship focuses on the intersection of geopolitics, energy markets, and sovereign decarbonization across the Middle East and North Africa. He serves as Chairman of Tangelic, an initiative focused on clean energy deployment and sustainable development across the Global South, and is a Senior Visiting Fellow at the Middle East Council on Global Affairs.

Dr. Dargin has held senior research and academic appointments at Harvard Kennedy School and the University of Oxford, and previously advised the OPEC Secretariat.

He is the author of *The Gulf's Climate Reckoning: Decarbonization, Development, and the Future of the Petro-States* (Cambridge University Press, 2025).

Summary

- This insight explores the potential for development of a national trading mechanism in the UAE as part of its effort towards diversifying and decarbonasing the economy. The UAE's proactive stance, commitment to transparency, and role as a regional financial hub position it as a potential leader in the global shift toward a low-carbon future.
- Significant investments in renewable energy projects are underway, alongside efforts to reduce gas flaring and methane leakage, with a zero-tolerance policy for gas flaring targeted for this decade. A robust regulatory framework, which is being modernised, exists at both federal and emirate levels that can support and enforce deeper carbon emissions reduction initiatives.
- In this insight the cap-and-trade model for the UAE is discussed and presented. This aligns with the UAE's aim to reduce the direct economic burden on its population and industrial sector that would arise from a carbon taxation regime. By utilising a market-based framework, this approach offers greater flexibility in managing the financial challenges linked to such a taxation system, particularly during a period of subsidy reform and upward revisions in energy and power sector pricing.
- It concludes that by capitalising on robust enabling factors such as a strong state administrative infrastructure, well-developed financial markets, and a highly skilled workforce, the UAE is well-positioned to establish an effective and successful national carbon market within the next seven years.
- Finally, the following policy recommendations are offered:
  - The UAE should strategically implement its national carbon market through a carefully sequenced, seven-year multi-phase approach that also includes continuous evaluation and improvement as a final step.
  - The UAE should strategically balance and thoughtfully calibrate its emissions reduction goals with the need to maintain economic competitiveness on the global stage.
  - In addition to the carbon market, the UAE should actively promote complementary policies to accelerate its decarbonisation efforts.
  - The UAE should consider establishing a National Climate Action Registry with the aim of documenting and highlighting voluntary private sector climate initiatives, including emissions reductions and climate finance contributions.

The Issue

The Gulf's pursuit of decarbonisation represents a profound transition, transforming once-peripheral, resource-extraction economies into influential global players that are not only actively managing their resources but also proactively engaging in international climate negotiations. While the Gulf states share certain social, cultural, and economic commonalities, a closer look reveals distinct approaches to climate change mitigation and economic diversification. Examining the UAE's climate strategy, particularly its proactive pivot away from oil dependence towards a diversified economy, offers invaluable insights into the Gulf's evolving role in the global energy and climate change action landscape.

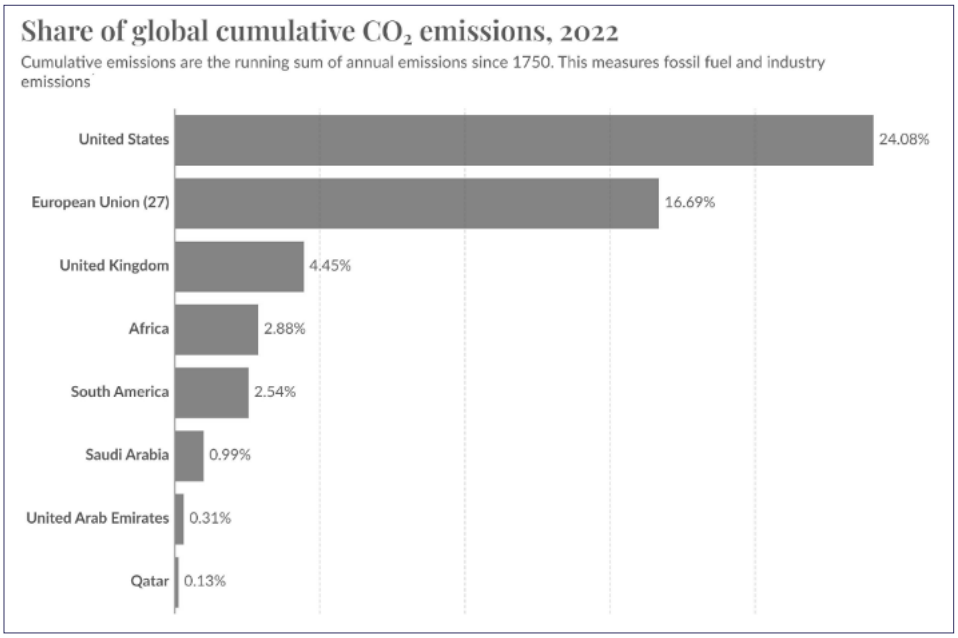
The UAE's deliberate macroeconomic strategy involves a multi-pronged approach, encompassing the expansion of its industrial base, the elevation of tourism to a global level, and the strengthening of its financial services sector. Through this strategic economic diversification, the UAE sets a compelling precedent for other countries in the region, demonstrating how proactive policies can foster economic growth amidst the global energy transition. By implementing targeted multisectoral investments, assuming leadership in renewable energy, and enacting financial sector reforms, the UAE is carving a path toward a sustainable and diversified future in the impending post-oil era. Notably, its financial reforms have bolstered its global standing, serving as a model for other Gulf nations seeking stability beyond the volatility of oil markets and striving for enhanced economic resilience.

Critically, the UAE is not pursuing these reforms and investments in isolation. A key aspect of its strategy is fostering backward and forward linkages throughout the national economy. This interconnectedness ensures growth in one sector and reinforces others, unlike the prevalent rentier model where hydrocarbon sales fuelled a comprehensive redistributive system with high dependence on a single source of income. To put in perspective how rapidly the UAE was able to modernise, the UK's industrial revolution spanned over 150 years, and the USA witnessed its industrial expansion in approximately 80 years. In stark contrast, the UAE has transformed from a desert expanse into an international hub for business, tourism, and alternative energy within a mere three decades since its independence in 1971. However, alongside this growth, the UAE and the broader Gulf region have recognised the strategic imperative of embracing decarbonisation to transcend the historical reliance on resource extraction and cultivate a stable, low-carbon and multifaceted economy for future generations.

Rising Temperatures, Rising Ambitions: The UAE's Climate Awakening

It is necessary to situate the Gulf countries' role within the broader context of global climate change. Although frequently occupying a central, and often vilified, position in multilateral negotiations, their cumulative contribution to global carbon emissions remains comparatively modest, representing less than 2 percent of the total (Figure 1). This disparity exists despite their high per capita emission rates and the extensive industrialisation and urbanisation that have taken place since the influx of hydrocarbon revenue in the wake of the 1973 oil embargo. Acknowledging this multifaceted perspective is paramount when evaluating climate change mitigation strategies, assessing the Gulf's specific role in international climate negotiations, and determining their overall responsibility within the broader climate change discourse.

Figure 1: Global Share of Cumulative CO_2 Emissions as of 2022



Source: Our World in Data, 2023.

Yet, despite their minor contribution to global carbon emissions, Gulf states, including the UAE, have embraced international climate action, investing billions of dollars in mega renewable energy projects. However, as of the early to mid-2020s, the UAE still lacks a comprehensive national carbon regulatory framework, hindering its decarbonisation efforts. While the UAE has environmental agencies with implementation and monitoring capacity, a unified national regulatory and strategic framework is essential to streamline these initiatives and maximise their impact.

The ambitious net-zero emissions targets unveiled by the UAE (2050) and Saudi Arabia (2060) in 2021 marked a significant volte-face in the climate policy landscape for these major oil-producing economies. However, the initial scepticism regarding the feasibility of these commitments, given the lack of detailed implementation plans and the inherent complexities of transitioning from fossil fuel dependence, was somewhat mitigated by the UAE's release of a comprehensive net-zero strategy in 2023.[1] This strategy provided a clear roadmap for the nation›s decarbonisation efforts. In contrast, Saudi Arabia, while actively pursuing various decarbonisation initiatives, has yet of the early to mid-2020s to release a plan with comparable detail or integration across sectors.

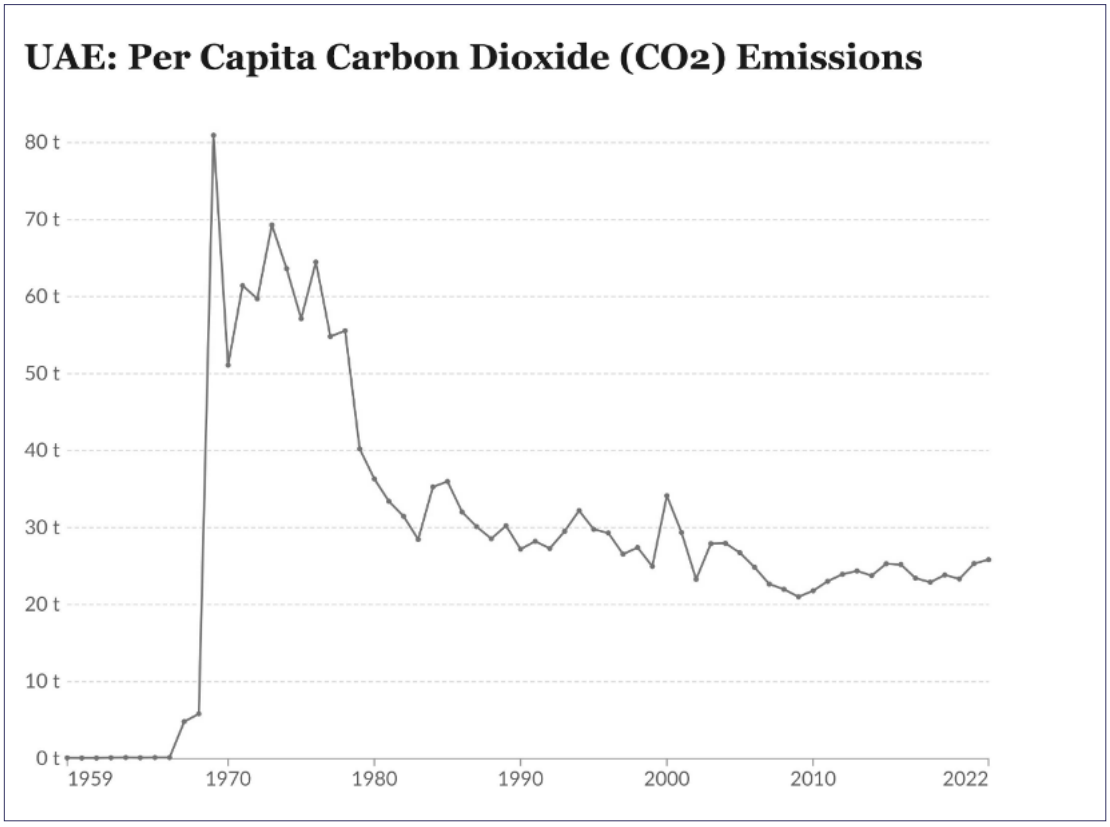
Yet, the road to decarbonisation will not be simple. The UAE's rapid industrialisation has propelled its economic growth, but also contributed to its position as the world's sixth-largest per capita carbon emitter. However, despite accelerated industrialisation, per capita emissions have declined from their 1969 peak of 81 MMT per person to 25.8 MMT per person in 2022 (Figure 2).

Several factors have influenced the decline in per capita emissions:

- **Energy Efficiency Measures:** Early success in implementing energy efficiency across sectors contributed to the decline in per capita emissions.

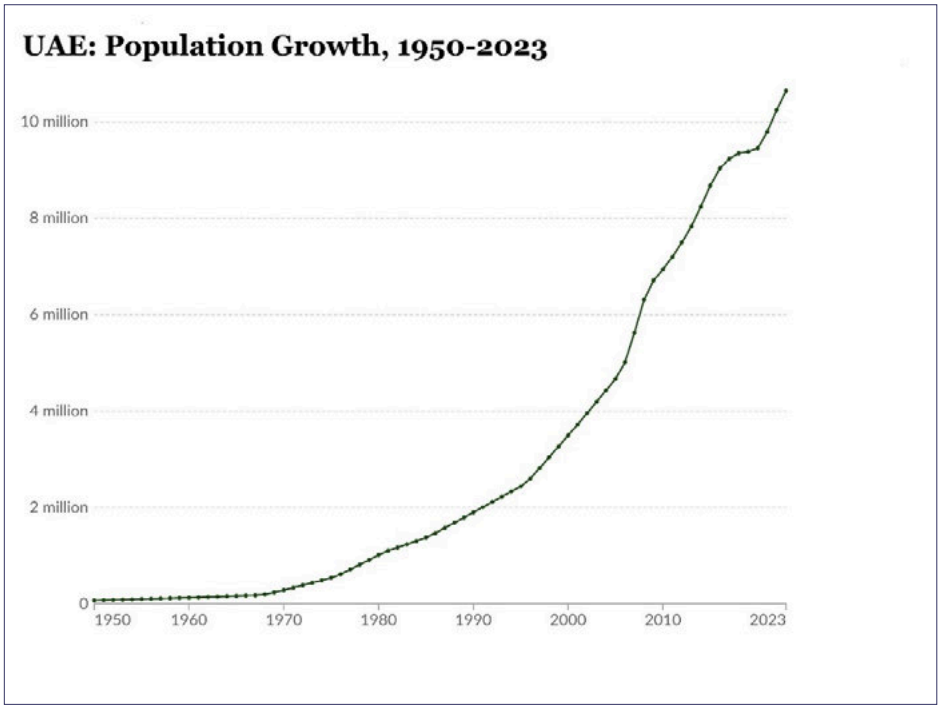
- **Pricing Reforms:** Reforms in the power and natural gas sectors played a crucial role.
- **Renewable Energy Growth:** Expansion of renewable energy sources helped reduce carbon emissions.
- **Population Growth:** Rapid population growth, starting in 1970 with the onset of industrialisation, and accelerating between 1995 and 2022, contributed to lower per capita emissions figures (Figure 3).

Figure 2: Historical Trajectory of Per Capita Carbon Dioxide (CO2) Emissions in the United Arab Emirates (1959-2022) in Million Metric Tons



Source: Our World in Data, 2022[2]

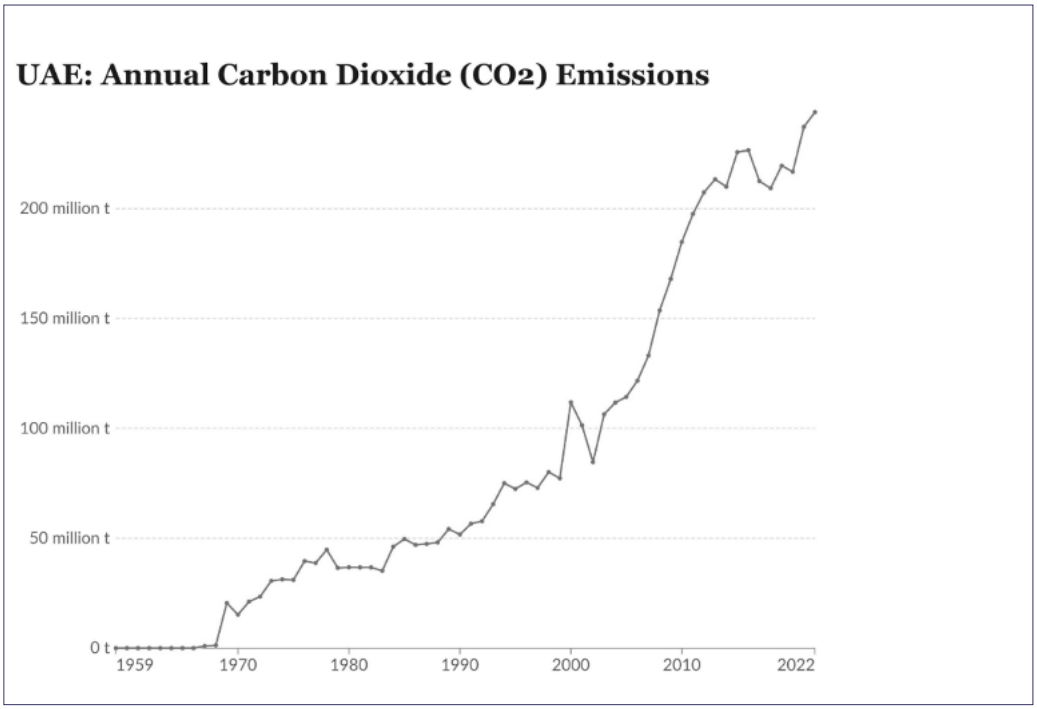
Figure 3: Emirati Population Growth from 1950-2023



Source: Our World in Data, 2023.

However, it is important to note that despite these positive per carbon emissions reduction trends, the UAE's aggregate carbon emissions have continued to rise (excluding a temporary pandemic-related dip), due in large part to extensive infrastructure projects, as well as the demographic expansion. In 2022, aggregate emissions reached approximately 244 MMT (Figure 4). While the UAE ranks lower and constitutes a lower share of total global emissions when compared to larger nations, the difference between its decline and stabilisation of per capita emissions and its increasing aggregate emissions reveals a complex picture. It is essential to recognise that while per capita emissions metrics are important and can indicate meaningful progress, they must be evaluated alongside aggregate emissions and population growth metrics. This approach offers a complete view of whether progress is impactful and allows for a comparison of historical or current responsibilities relative to other countries.

Figure 4: The UAE's Annual Aggregate Carbon Dioxide Emissions in Million Metric Tons



Source: Our World in Data, 2022

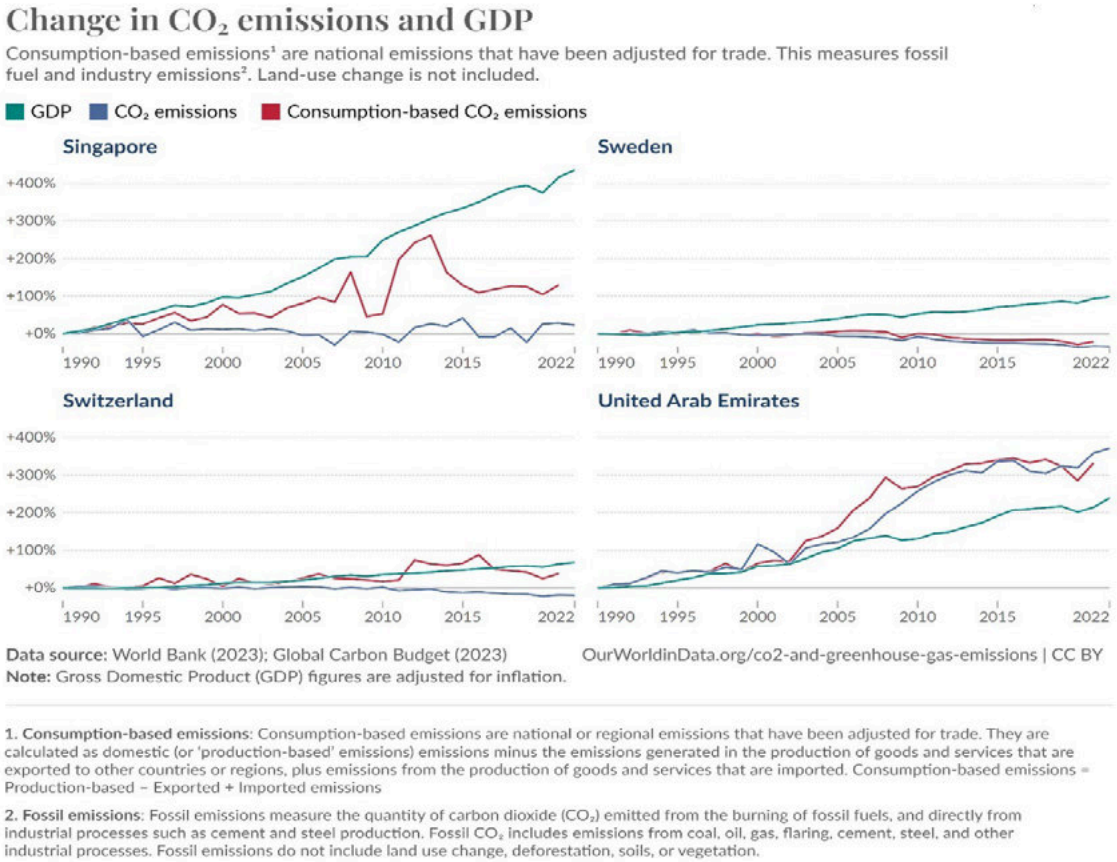
The Emirati economy is still energy- and carbon-intensive, even when compared to the relatively elevated levels in the overall MENA region and is approximately three times higher than European economies with a comparable GDP per capita.[3]

Additionally, in 2023, the UAE's announced plan to expand oil and gas production, alongside its stated climate goals, which drew international attention. This followed the announcement of the UAE as host of the COP28 conference, sparking debate about its climate commitment.[4]

In 2023, the UAE revisited its decarbonisation efforts by significantly revising its nationally determined contribution (NDC) under the Paris Agreement. The revised pledge committed to a 31 percent reduction in GHG emissions by 2030 compared to baseline levels, demonstrating a substantial increase over the previous target of 23.5 percent.[5] While the UAE has demonstrated notable progress in renewable energy investments, establishing itself as a regional leader in rapid implementation, a significant correlation, if not causation, persists between its economic growth and carbon emissions.

Additionally, the government's ambitious goal of achieving accelerated multisectoral growth, aiming to double GDP to over USD 800 billion by 2030, suggests that under a business-as-usual scenario, carbon emissions will likely continue rising (Figure 5). Figure 1.5 also illustrates how economies somewhat comparable to the UAE have, to varying degrees, managed to decouple aggregate carbon emissions from GDP and consumption-based emissions. However, it is important to note that these countries are not heavily reliant on hydrocarbons, for either exportation or domestic industrialisation, placing the UAE in a unique position among its global peers. This projection demonstrates the critical challenge of decoupling economic growth from carbon emissions as the UAE pursues sustainable development.

Figure 5: Comparative Growth of CO2 Emissions and GDP in the United Arab Emirates, Singapore, Sweden, and Switzerland (1990-2022)



Source: Our World in Data, 2023[6]

The UAE's Green Agenda: A Focus on Carbon Reduction Initiatives

The UAE demonstrated early leadership in climate action, surpassing even some major nations like the United States, which signed the Kyoto Protocol but withdrew from it in 2001 citing concerns over potential economic impacts. The UAE's early accession to the UNFCCC in 1996 and ratification of the Kyoto Protocol in 2005, along with the implementation of numerous Clean Development Mechanism (CDM) projects, demonstrated an emerging commitment to addressing climate change. By 2020, the UAE's efforts resulted in the generation of approximately 6.4 million Certified Emissions Reductions (CERs), which reflects a substantial contribution to the achievement of global climate goals.[7]

The UAE's initial foray into carbon markets commenced in 2007, when the state-run Dubai Multi Commodities Centre (DMCC) collaborated with London-based Ecosecurities to establish Dubai as a regional carbon trading hub. This strategic partnership marked a nascent exploration of market-based climate policy instruments within the UAE. However, the global financial crisis of 2008-2009 temporarily curtailed this momentum as the Emirati government prioritised economic stabilisation. Subsequently, progress resumed in 2013 with the establishment of a strategic alliance between Capital Alternatives Group (CAG) and the Dubai Carbon Centre of Excellence (Dubai Carbon), aimed at providing CERs credits to local businesses. While this early foray was limited in scope, it illustrated that deploying a carbon market could be viable in the UAE.[8]

Furthermore, in anticipation of COP28, the Dubai Financial Market (DFM) initiated a pilot carbon credit trading program. This program, launched during COP28, sought to evaluate the efficacy of carbon trading in supporting the UAE's net-zero target by 2050.[9] It offered an integrated platform for trading and utilising carbon credits, allowing companies to offset unavoidable emissions while pursuing direct decarbonisation strategies. However, participation was limited to institutional investors, and the pilot encompassed both the buying and selling of credits within a defined timeframe. The substantial engagement from over 17 major UAE companies signalled an initial positive reception by the corporate sector to this market-based approach of emissions reduction.[10]

In 2022, Abu Dhabi made a significant step in the advancement of carbon markets when the Emirate established its AirCarbon Exchange (ACX). Functioning within the Abu Dhabi Global Market (ADGM) framework, this Singapore-based initiative swiftly emerged as a key player in the regional voluntary carbon credit trading arena upon commencing operations in 2023. The collaboration between ACX and ADGM proved pivotal, culminating in the establishment of the world's inaugural regulated carbon credit exchange within Abu Dhabi. This groundbreaking partnership not only conferred regulatory authority upon ADGM over carbon credits and offsets but also expanded its purview to encompass the licensing of trading platforms for both spot and derivative market operations. In the same year, ADGM became a global first mover when it took the step of classifying voluntary carbon credits as financial instruments under its Environmental Instrument designation. This move established a regulatory framework for exchanges and clearinghouses, aimed at enhancing the credibility and operational integrity of the carbon trading market.

Furthermore, at the national level, in early 2023, the UAE's Securities and Commodities Authority (SCA), alongside the Ministry of Climate Change and Environment (MOCCAE) and other stakeholders, began discussions on establishing a national Emirati carbon trading mechanism.[12] This initiative aims to incentivise regulated entities to adopt sustainable practices and signals a potential nationwide carbon trading scheme. While traditionally relying on command-and-control regulations, these initiatives demonstrate an embrace of market-based tools to achieve Emirati environmental goals and reflect a recognition of the potential economic benefits and increased efficiency offered by carbon markets in facilitating the transition to a low-carbon economy. In summary, the UAE has strategically laid the groundwork for a successful launch of a national compliance carbon market when ready. With careful implementation, this future market could have the potential to not only facilitate the attainment of the UAE's decarbonisation objectives but also serve as a catalyst for future economic growth and diversification.

A Roadmap to a National Emirati Carbon Market: Benefits, Strategies, and Implementation

The deployment of a cap-and-trade (CaT) scheme in the UAE constitutes a strategic imperative, yielding substantial benefits that would synergistically augment ongoing macroeconomic diversification strategies. This reorientation towards market-based environmental mechanisms not only facilitates direct emissions reductions but also catalyses a comprehensive overhaul of various sectors, especially the energy and power industries. By incentivising investment, bolstering competitiveness, and diversifying economies, CaT schemes offer a viable pathway to reduce reliance on crude oil extraction and processing.

Among various approaches to emissions reduction, a national CaT system offers distinct advantages within the UAE's specific economic and political landscape. The CaT model aligns with the UAE's desire to minimise the direct economic burden on its population and industrial sector that would occur with taxation during a period of comprehensive subsidy reform. Unlike a carbon tax, which imposes a fixed price on emissions, the CaT system approach fosters flexibility and cost-effectiveness for businesses while encouraging emissions reduction.

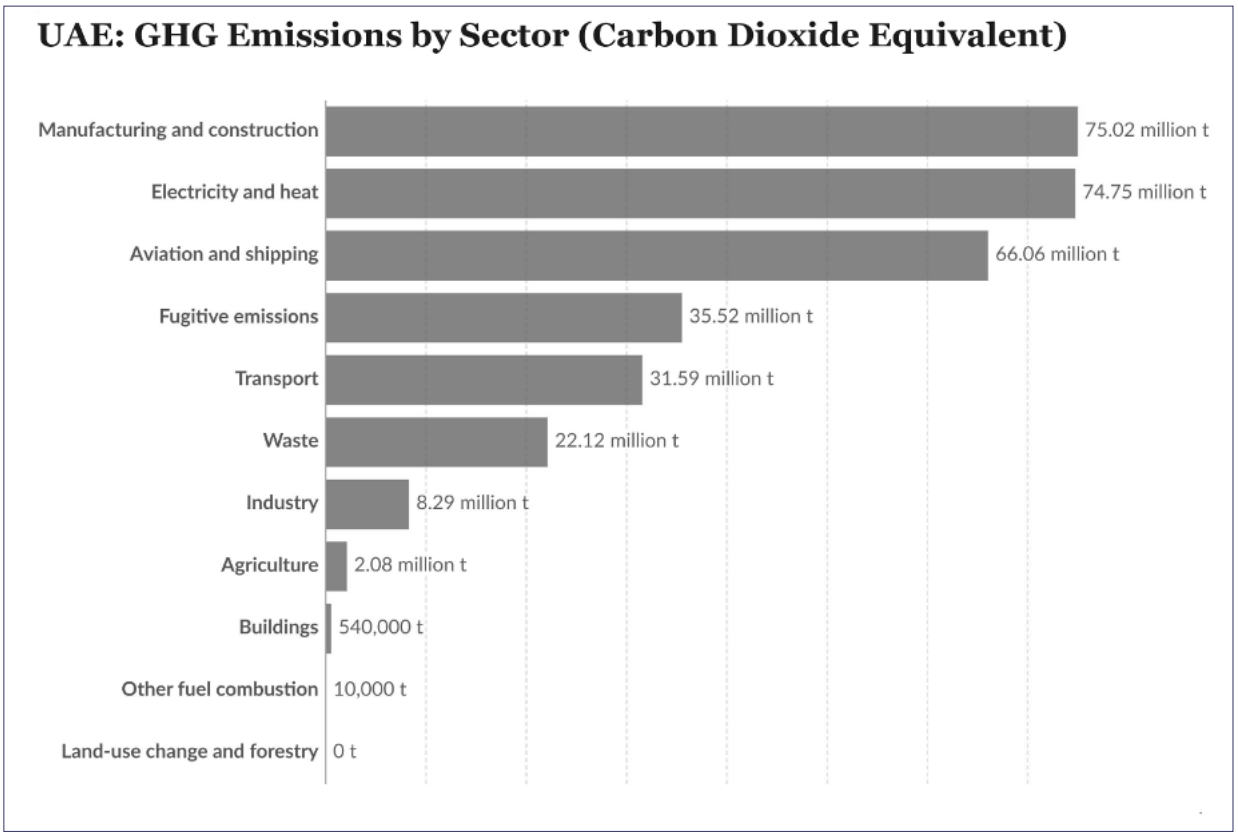
Moreover, CaT schemes have the potential to foster the emergence of a sophisticated financial ecosystem within the Gulf region. The embedded linkages between these schemes and a robust financial sector can spur the creation of diverse financial instruments specifically tailored to carbon emissions trading, thereby enhancing the region›s economic resilience, and positioning it as a leader in the global transition towards a low-carbon future. Central to this market are tradable carbon credits. Implementing a carbon market would enable the UAE to strategically position itself as a leading global trading hub for these credits. This would generate substantial transaction fees, attract a vast network of international buyers and sellers, and firmly establish its financial institutions at the epicentre of the burgeoning global carbon market.

Furthermore, the development of derivatives markets linked to carbon credits can offer opportunities for risk management and investment, by potentially attracting international financial institutions and further solidifying the UAE's position as a sophisticated global financial hub. The establishment of well-structured carbon trading schemes can also serve as a catalyst for attracting foreign direct investment from companies specialising in carbon trading and emissions reduction technologies. This influx of expertise and capital can further contribute to economic diversification, enhance the UAE's standing within the global financial system, and help the country tackle its carbon emissions. Particularly on the UAE's advancement of developed financial markets and regulatory experience, which can be readily adapted to manage a sophisticated carbon trading system. The UAE's existing command-and-control regulatory and financial market experience provides a foundation for gradually transitioning towards a fully functioning market-based CaT system. This would allow the integration of environmental goals with a familiar regulatory structure, enhancing the political feasibility of such a shift.

A strategic implementation of a national carbon market in the UAE should prioritise sectors demonstrating high potential for emissions reductions with minimal adverse impact on economic growth. The electricity sector and fugitive emissions are major contributors to the UAE's total GHG emissions (Figure 6) and emerge as prime candidates for this initial phase. A phased rollout targeting these sectors offers compelling synergistic advantages. Addressing fugitive emissions from extraction, processing, and delivery of fossil fuels for instance, could yield a twofold benefit: environmental enhancement through reduced emissions and economic gain through increased natural gas availability.

This holds equally true for the power sector, given that the majority of Emirati power generation is derived from natural gas, thus amplifying the potential positive impact on both environmental sustainability and economic prosperity. This surplus gas could be leveraged for profit maximisation through export, capitalising on the prevailing global demand for natural gas as a transitional energy source. Furthermore, allocating this gas to downstream industries would not only bolster foreign revenue generation but also strategically align with the UAE's broader plans for industrial diversification and economic development. As detailed below, such a system, with robust political will, could be established within a seven-year timeframe.

Figure 6: Distribution of Greenhouse Gas Emissions by Economic Sector in the UAE (Carbon Dioxide Equivalent, 2020)



Source: Our World in Data, 2022[13]

Phase One: Emirate-Level Foundations and Data Collection (Three Years)

The UAE's phased implementation of an Emirati CaT system could begin with a «learning by doing» approach, focused on localised legislation and robust data collection at the emirate level. This initial phase lays the essential groundwork for the subsequent mandatory rollout of a national carbon market.

Each emirate would enact legislation mandating monitoring, evaluation, reporting, and verification (MERV) of GHG emissions for entities within the power sector surpassing a predefined emissions threshold. While Abu Dhabi and Dubai have existing GHG inventories, the remaining emirates could establish their emissions baselines and update their inventories accordingly. This emirate-level data, even in areas lacking substantial industrial concentration, is critical for informing the design and parameters of a comprehensive national market in Phase Two.

National Standardisation and Capacity Building: To ensure cross-emirate consistency and data integrity, MOCCAE as the principal governmental agency tasked with national climate change policy, would play an integral role in standardising GHG assessment methodologies and establishing data-sharing protocols. The implementation of rigorous reporting formats, such as the Common Reporting Framework (CRF) tables and detailed National Inventory Reports (NIRs), would ensure transparent tracking of emissions data and methodologies, facilitating future comparisons and analysis.

Data-Driven Market Foundations: The emirate-level legislation should clearly outline nationally standardised MERV protocols for covered industries. This initial three-year phase would focus not only on data collection but also on capacity-building programs to ensure accurate and uniform reporting practices across the country. Robust MERV systems within each emirate should provide the essential foundation for setting future emissions reduction caps and facilitate cross-sectoral coordination, optimising the effectiveness of the future carbon market.

Compliance and Oversight: Emirate-level authorities could conduct audits to ensure compliance with emissions reporting requirements, enforcing penalties for non-compliance. This should adhere to standardised federal protocols, and third-party verification would enhance the system's integrity. Laws, coupled with clear ethical guidelines and transparency measures, are likely to address corruption concerns within the carbon market.

Phase Two: Establishing a Robust National Emissions Trading Scheme (Three Years)

Phase Two would mark a pivotal stage in the UAE's CaT system implementation, transitioning from the emirate-level foundation established in Phase One to a fully operational national carbon market. This phase entails several critical steps and focuses on the electricity and industrial sector, as well as on the reduction of reducing fugitive emissions.

Setting National Emissions Caps: The Council for Climate Change and the Environment, acting at the federal level, could establish a mandatory emissions cap for the entire country. This cap would be further disaggregated and allocated to individual emirates, setting a defined limit on their overall emissions levels. Determining this cap should involve rigorous scientific analysis, considering the UAE's national emissions reduction targets and economic growth projections.

Initial Allowance Allocation: Following the foundational work undertaken in Phase One, Phase Two focuses on establishing the core mechanisms of functional CaT within the UAE. A critical objective during this phase is to incentivise broad participation, particularly from major emitters within the power sector. To achieve this, the MOCCAE may consider a strategic allocation approach for emissions allowances.

One option is a partial gratis allocation during the market's initial stages. This offers several advantages such as reducing upfront costs for early participants (especially large emitters in the power sector) and facilitating market learning by allowing companies to gain experience with emissions trading processes before full market operation commences. However, it is acknowledged that a solely gratis approach could create barriers to entry for future market participants who might need to purchase allowances at potentially higher prices due to established market dynamics.

The MOCCAE could therefore adopt a hybrid approach, by combining free allowances for existing emitters with auctions to promote price discovery and generate revenue for clean energy initiatives. Additionally, a reserve pool for future entrants would ensure fairness and encourage long-term market participation, fostering a robust and well-functioning national carbon trading system.

Market Facilitation and Trading Platforms: The financial sector and various financial institutions are expected to play an important role in facilitating carbon trading activities within the UAE. Companies would likely engage in allowance trading through a combination of approaches. While some large emitters may choose to participate directly in a designated carbon exchange, many companies are likely to leverage the expertise of financial intermediaries, who can provide guidance and support in navigating the complexities of the market.

Phase Three: Expanding Market Coverage (One Year)

Building upon the successes of Phases One and Two, Phase Three would mark a significant expansion of the UAE's carbon market, encompassing all major industrial sectors. This includes the power sector, oil and gas industry, manufacturing, downstream natural gas industries, chemicals, building materials, steel, nonferrous metals, and heavy industry. To ensure a smooth transition, Phase Three›s emissions threshold should initially be set at 10,000 MMT of carbon annually, capturing the largest emitters within these sectors.

Strategic Considerations for Industry Protection: Phase Three of the UAE's carbon market implementation should recognise the importance of heavy industries in the economy. It proposes a nuanced approach to mitigate potential economic impacts while ensuring alignment with emissions reduction goals. This includes gradually tightening emissions caps and potentially offering preferential allowance allocations to strategic, economically vital industries, by providing a buffer during their transition. These measures should be accompanied by clear expectations and timelines for alignment with broader decarbonisation efforts. By balancing short-term economic considerations with long-term environmental objectives, the UAE can achieve a sustainable and equitable transition in its carbon market.

Market-Driven Decarbonisation: As Phase Three unfolds, strongly set emissions caps would incentivise industries to integrate carbon costs into their operations, fostering a market-driven decarbonisation cycle. Companies would be motivated to invest in energy efficiency and low-carbon technologies to remain competitive. Early adopters, benefiting from cost reductions and displaying the feasibility of low-emission pathways, would inspire wider adoption, driving systemic change towards a decarbonised economy.

Furthermore, the success of early adopters would create a ripple effect, promoting sustainable practices across industries and encouraging broader decarbonisation. Additionally, investor preference for low-carbon assets would further reinforce the market's transformative potential, by incentivising clean technology investments. In essence, Phase Three leverages market forces to stimulate innovation and achieve the UAE's emissions reduction goals, promising transformative decarbonisation across the industrial sector.

Enhanced Reporting and Transparency: Phase Three would further solidify the UAE's commitment to robust emissions reporting and transparency through refined reporting mechanisms. The transition from Biennial Update Reports (BURs) to Biennial Transparency Reports (BTRs) under the Paris Agreement's Enhanced Transparency Framework (ETF) would enable the UAE to provide more detailed and standardised information on its climate mitigation progress.

The BTRs, as successors to the BURs, would offer a comprehensive assessment of the nation's climate actions. This includes granular data on national GHG emissions inventories, disaggregated by sector and gas type, crucial for tracking progress and identifying areas for further mitigation efforts. Furthermore, these reports should comprehensively detail specific mitigation strategies, policy measures, and technological interventions, such as the expansion of renewable energy infrastructure, various incentive programs designed to encourage sustainable practices, and the implementation of smart grids and energy-efficient equipment. This commitment to transparency and accountability in climate reporting not only would enhance the credibility of the UAE's actions but also foster greater trust and collaboration within the international climate community.

To further enhance transparency and bolster the credibility of its climate reporting, the UAE could consider implementing third-party verification of the emissions data reported in its future BTRs. This additional layer of quality assurance would increase confidence in the accuracy of the UAE's reporting and serve as a testimony to its commitment to transparency.

Lastly, the establishment of a centralised, publicly accessible National Climate Action Registry would provide a valuable platform to showcase voluntary private sector initiatives, documenting emissions reductions, decarbonisation plans, and climate finance contributions. This transparency would illustrate private sector leadership and offer a more comprehensive understanding of the UAE's collective climate action. Complementing this, a centralised emissions monitoring platform integrating real-time data from major emitters would facilitate rapid analysis, targeted policy interventions, and proactive identification of mitigation opportunities, thus significantly enhancing the UAE's capacity to address emissions challenges effectively.

Recommendations: How can the UAE extend its leadership in climate action?

The establishment of a national carbon trading system could represent a transformative moment in the UAE's pursuit of sustainable development, marking a strategic to a cohesive framework that comprehensively integrates climate action with economic progress. A robust national carbon market, characterised by clear emissions caps, monitoring and enforcement mechanisms, and a hybrid allowance allocation system that fosters both participation and revenue generation for clean energy initiatives, could play a leading role in achieving the UAE's climate commitments. This market-based approach, anchored in transparency and regulatory oversight, not only would stimulate emissions reductions and innovation but also accelerate the transition towards a diversified, low-carbon economy. The subsequent policy recommendations offer a strategic roadmap to achieve these ambitious goals, paving the way for a successful and integrated national decarbonisation strategy.

- **Adopt a Phased Implementation:** The UAE should strategically implement its national carbon market through a carefully sequenced, multi-phase approach.
  - **Phase One (Years 1-3):** Establish a robust foundation by prioritising comprehensive emissions data collection, capacity building within relevant government agencies and industries, and standardisation of emissions reporting methodologies.
  - **Phase Two (Years 4-6):** Initiate the carbon market by incorporating sectors with high emissions potential but minimal economic disruption, such as the power sector and fugitive emissions. This phase serves as a crucial learning and adjustment period before expanding to other sectors.
  - **Phase Three (Year 7):** Gradually expand the market's coverage to encompass all major industrial sectors, progressively lowering emissions thresholds to include a wider range of entities over time. Implement support mechanisms, such as phased emissions caps or preferential allowance allocations, to facilitate the adaptation of strategic industries while safeguarding their competitiveness.
  - **Continuous Evaluation and Improvement:** Maintain an ongoing process of market evaluation and refinement to ensure its effectiveness in achieving emissions reduction targets and supporting economic growth.
- **Balance Emissions Reduction with Economic Competitiveness:** The UAE should strategically balance and thoughtfully calibrate its emissions reduction goals with the need to maintain economic competitiveness on the global stage.
- **Promote Complementary Policies:** In addition to the carbon market, the UAE should actively promote complementary policies to accelerate its decarbonisation efforts. Encouraging Emirati firms to prioritise energy efficiency measures would not only directly reduce emissions but also bolster their operational efficiency and

competitiveness in a global market increasingly focused on sustainability. Furthermore, continuing natural gas pricing reforms and strengthening energy efficiency standards across various sectors would create additional incentives for emissions reductions, thereby amplifying the effectiveness of the carbon market and contributing to a more rapid and comprehensive transition towards a low-carbon economy.

- **Establish a National Climate Action Registry:** The creation of a centralised, publicly accessible registry to document and highlight voluntary private sector climate initiatives, including emissions reductions and climate finance contributions, would help enhance the UAE's position as a climate leader and encourage greater private sector participation in decarbonisation efforts.

In conclusion, the successful implementation of a national carbon market offers the UAE a transformative path towards macroeconomic growth. By incentivising decarbonisation, fostering innovation, and establishing itself as a leader in renewable energy, the UAE can effectively achieve its ambitious emissions reduction targets while maintaining economic competitiveness. This comprehensive approach, coupled with transparency and international collaboration, would align with the UAE's determination to navigate the complexities of climate change, and foster a more resilient and environmentally sustainable global paradigm.

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Centre for Climate Diplomacy

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أدنوك ADNOC

Email: CCD@agda.ac.ae

www.agda.ac.ae

@agdauae

Anwar Gargash Diplomatic Academy