

COMMENTARY ON THE GENERAL POLICY ON CARBON CAPTURE IN THE EMIRATE OF ABU DHABI, UNITED ARAB EMIRATES

The Global CCS Institute welcomes the adoption of the General Policy on Carbon Capture in the Emirate of Abu Dhabi, which constitutes a significant milestone to accelerate the deployment of carbon capture, utilisation and storage (CCUS) in the Middle East and Africa region.

Overview

The release of the General Policy on Carbon Capture in the Emirate of Abu Dhabi represents an important milestone as the first of its kind in the evolution of carbon management policy frameworks in the Middle East. This policy, introduced by the Supreme Council for Financial and Economic Affairs (SCFEA), demonstrates a strong strategic understanding of the role of CCUS in enabling industrial decarbonisation while sustaining the economic competitiveness of energy-intensive sectors. It is also one of the few CCUS frameworks designed to address the full value chain within a single coordinated policy.

Policy Architecture and Institutional Framework

This policy backs Abu Dhabi's ambitious decarbonisation targets by establishing a practical institutional, commercial, and regulatory architecture for CCUS deployment. The document clearly recognises CCUS not only as a climate tool, but also as an industrial and economic development mechanism aligned with Abu Dhabi's broader transition strategy and the UAE Net Zero 2050 targets. In addition, it addresses ownership structures, tariff methodologies, transport responsibilities, liability allocation, storage considerations, and post-injection monitoring requirements.

Moreover, the policy recognises the strategic role of SCFEA and ADNOC in coordinating sector development while still enabling participation from foreign investors and the private sector under defined conditions. This balanced approach supports both national strategic interests and international capital participation.

The Abu Dhabi framework currently places greater emphasis on institutional coordination, infrastructure planning and long-term industrial competitiveness than on direct financial incentives. This may prove effective in the Gulf context, particularly given the region's industrial concentration, existing energy infrastructure, and geological storage advantages.

Infrastructure and Transport System Operator Design

The policy emphasises the development of shared CCUS hubs and network infrastructure to improve investment efficiency and achieve economies of scale. This reflects international best practices and aligns closely with the direction being taken by leading CCUS jurisdictions such as the United States, the United Kingdom, Norway, and the Netherlands.

A particularly important institutional design choice is the requirement that the Transport System Operator (TSO) be designated by the SCFEA with the Government of Abu Dhabi holding an ownership of not less than 51%. This provision reflects a clear recognition that CO₂ transport infrastructure carries strategic national significance comparable to electricity and gas transmission networks.

The majority public ownership requirement provides several important benefits. It ensures public accountability and long-term stewardship over critical decarbonisation infrastructure that emitters across multiple sectors will rely upon for decades. It also establishes the institutional credibility needed for the TSO to coordinate planning, tariff-setting, and capacity allocation in an objective and non-discriminatory manner. At the same time, the remaining share of 49% available for private participation creates meaningful space for private capital and international partners to contribute to delivering the network. This approach is broadly consistent with how strategic CO₂ transport infrastructure has been structured in other CCUS jurisdictions, including Norway, where state-owned Equinor leads the Northern Lights project alongside Shell and TotalEnergies, and the United Kingdom, where transport and storage networks are being developed under a state-supervised economic regulatory model.

Commercial Business Models

The policy identifies three business models for how the commercial value chain may be structured. Model 1, with a single Storage Operator serving the hub under a unified storage tariff; Model 2, with multiple competing Storage Operators applying their own tariffs and offering supplier choice of storage facility; and Model 3, with a Purchaser connected directly to the network for industrial use or EOR/EGR. Each carries different commercial implications, with Model 1 favouring simplicity and bankability, Model 2 introducing competition and tariff differentiation, and Model 3 being particularly suited to the Abu Dhabi context, where established EOR and EGR demand provides an immediate commercial channel for captured CO₂ and a near-term pathway for large-scale CCUS deployment. All three models flow through the TSO, reinforcing its role as the commercial clearing house of the system. Both transport and storage tariffs operate within a tariff governance framework approved by the SCFEA, based on cost recovery, reasonable returns, and principles of stability and predictability. Tariff methodologies are reviewed every five years or at the request of stakeholders, ensuring the framework remains responsive to market conditions while maintaining financial discipline.

Liability and Storage Governance

On long-term liability and post-closure responsibility, the framework specifies that the Storage Operator remains responsible during the injection and post-injection monitoring periods, including obligations related to leakage detection, corrective measures, environmental protection, and independent auditing. Notably, the policy clarifies the eventual transfer of liabilities to the Government of Abu Dhabi after the expiry of the concession and post-injection monitoring period, subject to strict conditions being satisfied, including evidence of permanent containment, fulfilment of financial obligations, and secure sealing of the geological storage reservoirs. This approach is broadly aligned with international practice in jurisdictions such as the European Union, where governments ultimately assume long-term stewardship responsibilities after operators demonstrate storage integrity over a defined monitoring period.

The policy also requires that any CO₂ imported from outside the UAE for permanent geological storage receive specific SCFEA approval. This reflects an important recognition that geological storage capacity is not only a commercial asset, but also a strategic national resource with long-term environmental and sovereign implications. As discussions increasingly explore cross-border CO₂ transport and regional storage hubs, Abu Dhabi's approach demonstrates an intention to keep regulatory oversight and strategic control over the utilisation of domestic storage resources.

Carbon Certification, Pricing and Market Integration

Equally important is the establishment of a future carbon certification framework through “Carbon Capture / Recovery / Removal Certificates,” which enables Abu Dhabi to position itself as an early regional leader in creating tradable carbon management instruments and integrating CCUS into broader low-carbon product and carbon market ecosystems. The linkage potential with low-carbon hydrogen, clean energy certification and low-carbon water frameworks is also important and reflects an integrated view of the future low-carbon economy.

While the certification scheme provides an essential foundation for recognising the value of captured and stored CO₂, its commercial impact will ultimately depend on the strength of the underlying demand signal for that value, namely a sufficiently durable and investable carbon price. The policy appropriately does not attempt to set a carbon price, as an economy-wide carbon price is a federal responsibility. The UAE has already begun to build the relevant national architecture through Federal Decree-Law No. 11 of 2024 on the Reduction of Climate Change Effects and the National Register for Carbon Credits. This reflects a practical division of responsibilities: infrastructure, hubs, transport, storage concessions, and certification belong at the emirate level, while the price signal that ultimately determines whether captured tonnes are monetised at scale belongs at the federal level or internationally recognized systems. International experience reinforces the point, as no CCUS framework globally has translated into bankable projects without a credible carbon price signal sitting somewhere in the system, whether through the 45Q tax credit in the United States, the EU Emissions Trading System and Carbon Border Adjustment Mechanism, or Contracts for Difference in the United Kingdom.

Outlook

The successful long-term deployment of such a policy will depend on the speed and clarity of the secondary regulations, licensing frameworks, MRV methodologies, tariff structures, and permitting procedures that follow. Investors and project developers will particularly seek clarity around long-term liability transfer mechanisms, commercial incentives, storage access rules, and integration with international carbon accounting and Article 6 frameworks. Finally, this policy sends a strong signal that Abu Dhabi intends to position itself as a regional and potentially global hub for carbon management and low-carbon industry development. The framework is comprehensive, commercially aware, and strategically aligned with the realities of industrial decarbonisation. If effectively implemented and complemented in due course by progress on carbon pricing and demand-side mechanisms at the federal level, it has the potential to become one of the most advanced and commercially credible CCUS policy models in the region and globally.