2 September 2025

CEM-16 / MI-10
Ministerial roundtable on "Accelerating Carbon Management"
26 August 2025

Summary

On Tuesday 26 August 2025, at the 16th Clean Energy Ministerial and 10th Mission Innovation ministerial meeting in Busan, Republic of Korea, the Clean Energy Ministerial CCUS Initiative and Mission Innovation CDR Mission co-hosted a ministerial roundtable on "Accelerating Carbon Management" under their joint "Gigatonne by 2030" campaign.

The objective of the roundtable was to draw key lessons from the first phase of CCUS and CDR deployment and to reflect on how the lessons can inform today's and future carbon management policy development, as the community aims to accelerate to gigatonne scale by 2030.

Opening intervention: "Key lessons from early deployment"

In a short opening intervention, Mr. Jarad Daniels, CEO of Global CCS Institute, offered six key lessons from the early deployment of carbon management projects:

1. Commercial deployment requires **durable government policies** and geologic storage regulations. These take time and expertise to develop. Knowledge sharing platforms can help support and accelerate policy and regulatory development. Human capital is vital: you need skilled regulators to develop and implement regulations.
2. Adequately characterizing and understanding the **subsurface** takes time and money. Start now.
3. In many jurisdictions, **local community support** can make or break a project. Start early, and work with trusted partners already well regarded in the local community. Prove that you care about the local community and earn their trust.
4. CCUS **hubs and shared common infrastructures** have great merit, but add complexity. Government leadership and public-private partnerships in building transport and storage infrastructure should be strongly considered, especially for national infrastructure networks that could be optimized across point sources, CDR opportunities, and good storage resources.
5. **State-owned enterprises** can move the needle at scale. CCUS is now financeable in some jurisdictions and financial sector interest is growing.
6. The **next generation of experts** will be required. Academic programs on CCUS are needed.

Government interventions – summary of key recurring messages

- There is a strong recognition of the need for carbon management, both CCUS and CDR, by all governments around the table. Carbon management is a vital element of decarbonisation, and a key enabler of net-zero emission goals that many governments are pursuing.
- Role of government is vital to continue to drive deployment. Governments gathered around the table outlined several areas in which their role is important, and where they will continue to pursue their efforts, building on the lessons from early deployment.
    - Enacting broad carbon management **strategies** and roadmaps: Several governments either recently have, or are now in the process of devising a carbon management strategy and an associated roadmap, for both CCUS and CDR, recognizing their different roles.
    - Facilitating **R&D and innovation** investment: Governments play a key role in funding and directing investment into carbon management innovation across many technologies and sectors.
    - Putting in place right **policy frameworks and laws**: all governments around the table are in the process of making sure that 1) laws and regulations exist to ensure safety and integrity of long-term CO_2 storage, 2) incentives exists for the private sector to invest in carbon management projects and 3) recognizing the role of CCUS and CDR in relevant economy-wide decarbonisation mechanisms (e.g. emissions trading).

    - Many also stressed the importance of looking beyond the current, highly government budget driven, incentive mechanisms into creating a **market-driven** carbon management sector as soon as possible.
    - Facilitating **industrial ecosystems** and **cross-chain risk management**: In addition to purely legislative activity, governments play a key role in facilitating risk-sharing, and connecting different players to create carbon management ecosystems.
    - Working on **cross-border issues**: many governments recognize the need to collaborate with other countries as regards long-term geological storage of CO_2. This often requires international transport infrastructure planning, as well as ensuring that adequate legislative and contractual arrangements be in place for cross-border shipments of CO_2 to happen.
    - **International knowledge sharing**: sharing experience from earlier and ongoing policy programmes is vital so that best practice is available and governments can build confidence in their programmes. CEM & MI, the Carbon Management Challenge and other groups remain vital tools for such sharing.
- Two governments announced they will join the common CEM and MI efforts:
    - **India** joins CEM CCUS Initiative,
    - The **Netherlands** joins MI CDR Mission.

Industry interventions – summary of recurring messages

- There was a broad recognition that CCUS and CDR are vital technologies and that they play a different role for different industries. The cement manufacturing as a case in point. In 2022 the sector made a commitment to ten industrial-scale carbon management projects; today over 70 carbon management projects are under development in the sector across the world.
- Industry participants stress the need for clear carbon management strategies and frameworks enacted by governments. These should include:
    - Strong overall policy support and incentives to ensure that investment can take place,
    - Risk-sharing across the carbon management chain that often includes several actors,
    - Recognizing the opportunity of different approaches, including also permanent storage of CO_2 in products.
- Industry representatives also highlighted the *capability* of governments to enact and regulate carbon management: having skilled officials, smooth processes and faster licensing and approvals is vital for projects to go ahead.
- Many also stressed the importance of cost reductions, which can come about via R&D and innovation, but equally through replication of large-scale projects.
- There was also an overall sentiment that carbon management cannot be government-subsidised for very long. The mid-term goal should be to create a self-sustaining carbon management sector, with market-driven incentives.
- There were also calls for governments to lead on coordinating the building of transport and storage infrastructure. Many user industries will have no economic interest nor expertise to build and operate such installations. This also includes potential international transport of CO_2 and the required legal and contractual mechanisms to enable cross-border transfers.

- It was also pointed out that the CDR sector would benefit from an international institutional structure, to boost the development of the sector.

Going forward

- CEM and MI Members note that the "Gigatonne by 2030" campaign is a useful platform to highlight the importance of carbon management within the CEM and MI context and beyond. Members warmly welcome both India and Netherlands to the campaign, via their membership in both CEM CCUS and MI CDR.
- The Gigatonne by 2030 campaign launched three new deliverables:
    - A slide deck to outline carbon management policy programmes of CEM CCUS and MI CDR member countries;
    - A new Terminology Glossary explaining several terms used in the carbon management space;
    - A new Carbon Management Project Recognition process, which will recognise new real-life industrial carbon management projects, with the aim of inspiring further projects to come on stream.
- CEM CCUS and MI CDR will aim to continue high-level dialogue on carbon management at next year's CEM17 – MI11, hosted by Kingdom of Saudi Arabia in October 2026.

Annex 1: Roundtable participants

Governments

1. Republic of Korea: Sungh-Tae Suh, Director, Ministry of Trade, Industry and Energy
2. Australia: David Higgins, First Assistant Secretary, Department for Climate Change, Energy, the Environment and Water
3. Canada: Cynthia Handler, Director-General, Natural Resources Canada
4. China: Yongtao Zhang, Deputy Director-General, ACCA21, Ministry of Science and Technology
5. Germany: Stefan Rouenhoff, Parliamentary State Secretary, Ministry of Economic Affairs and Energy
6. India: Arijit Sengupta, Ministry of Power
7. Japan: Shinichi Kihara, Director-General, Ministry of the Economy, Trade and Industry
8. Saudi Arabia: Faisal Almusa, Director-General, Ministry of Energy
9. Netherlands: Lisanne Brummelhuis, Senior Policy Adviser, Ministry of Climate Policy and Green Growth
10. Norway: Henriette Nesheim, Deputy Director-General, Ministry of Energy
11. United Kingdom: Damitha Adikaari, Director, Science and Innovation, Department for Energy Security and Net Zero
12. United States: Adam Wong, Director, Department of Energy

Industry and international organisations

13. Global CCS Institute: Jarad Daniels, CEO
14. Global Cement and Concrete Association: Paul Adeleke, Director
15. Clearpath: Nick Lombardo, Director
16. Carbon Capture and Storage Association: Mark Sommerfeld, UK Director
17. POSCO: Dohyun Goh, Head of Group
18. Ssangyong Cement: Dae-Young Choo, Executive Director
19. Oil and Gas Climate Initiative: Julien Perez, Managing Director
20. Equinor: Bjorn Inge Braathen, Korea Managing Director
21. HSBC: Kash Burchett, Global Head of CDR
22. State of CDR: Nico Fairbairn, Director for Partnerships
23. MCi Carbon: Sophia Hamblin-Wang, Chief Operating Officer
24. CCS Brasil: Nathália Weber, Co-Founder and Director
25. Louise MacMorran, Head of Strategic Engagement, UK DESNZ (Moderator)
26. Juho Lipponen, Coordinator, CEM CCUS and MI CDR (Moderator)

JL 2 September 2025