



Clean Energy Ministerial CCUS Initiative - update

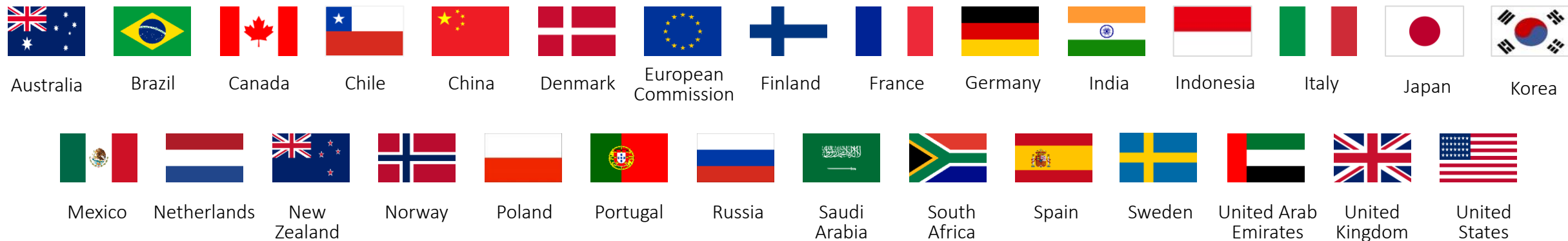
CSLF Technical Group meeting | Tuesday 13 June 2023

Agenda 13 June 2023

1. Clean Energy Ministerial overview
2. 14th Clean Energy Ministerial meeting, Goa, India, 19-22 July
3. CEM CCUS Initiative: main activities
4. Discussion & questions



CEM'S 29 MEMBERS



26 PARTICIPANTS



KEY PARTNERS





HOW DOES THE CEM WORK?

The CEM builds **Global Action Coalitions** to achieve clean energy goals and advance their transitions. The CEM operates through **three key pillars**:

- **CEM Ministerial:** An annual meeting of its ministers, partners and community.
- **CEM Work Programme:** A combination of international campaigns and initiatives spanning the clean energy spectrum.
- **CEM Secretariat:** a small, flexible team that serves the ministerial, all workstreams and members.

CEM MINISTERIAL



CEM10 – 2019
Vancouver, Canada



CEM1 – 2010
Washington DC,
United States



CEM7 – 2016
San Francisco,
United States

CEM13 – 2022
United States



CEM6 – 2015
Mérida, Mexico



CEM12 – 2021
Chile



CEM9 – 2018
Copenhagen,
EC & Nordic countries



CEM3 – 2012
London,
United Kingdom

CEM2 – 2011
Abu Dhabi, UAE



CEM11 – 2020
Saudi Arabia



CEM8 – 2017
Beijing, China



CEM4 – 2013
New Delhi, India



CEM14 – 2023
India

CEM5 – 2014
Seoul, South Korea

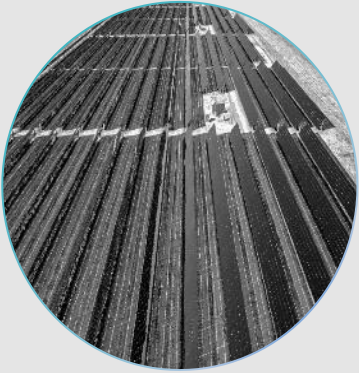


NEXT MINISTERIAL MEETING

19-22 July 2023 - CEM14-MI8 will take place in Goa, India.
Learn more at www.cem-mi-india.org



CEM WORKSTREAMS



POWER

- 21st Century Power Partnership
- Nuclear Innovation
- International Smart Grid Action Network
- Regional & Global Interconnection
- Transforming Solar
- RISE³



TRANSPORT

- Electric Vehicles Initiative
- EV30@30 Campaign
- Commercial Vehicles Drive to Zero Campaign
- Clean Energy Marine Hubs



INDUSTRY

- **Carbon Capture, Utilization, & Storage**
- Industrial Deep Decarbonisation
- Green Public Procurement Campaign



BUILDINGS

- Super-Efficient Appliance & Equipment Deployment



CROSS-SECTORAL

- Hydrogen Initiative
- Biofuture Platform
- Biofuture Campaign



ENABLING ENVIRONMENT

- Empowering People
- Equality In Energy Transitions
- Equal by 30 Campaign
- Long-Term Energy Scenarios
- Investment & Finance
- Clean Energy Solutions Center

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<https://www.cem-mi-india.org>



19 - 22 July, Goa, India



CEM 14 Ministerial in Goa



- *Official Website:* <https://www.cem-mi-india.org/>
- *Date:* 19-22 July 2023 (on margins of G20 Energy Transition Ministerial Meeting (ETMM) & Energy Transition Working Group (ETWG))
- *Venue:* [Grand Hyatt Goa](#), P.O. Goa University, Bambolim, Goa 403 206, India
- *Host:* Government of India
- *Theme of G20 Presidency:* “One Earth, One Family, One Future” (“Vasudhaiva Kutumbakam”)
- *Theme of CEM14/MI8:* “Advancing Clean Energy Together”
- *Logo and Website launch event:* <https://www.youtube.com/watch?v=hTNOS3VjGds>
- *Registration:* (will soon be available via the official website)
- *Key Features:*



Joint Ministerial
Plenary (closed door)

Minister-CEO
Roundtables

Technology and
Cultural Showcase

Announcements/
Launches/Awards

Side-Events

CEM14 in Goa – Emerging workstream deliverables

POWER

- **Battery storage** – *announce* new workstream idea
- **Solar** – policy paper on resilient supply chains
- **21CPP** – *release* of action plans for rapid power sector decarbonization; new signatories
- **Solutions Centre** – policy brief on key cross-sector challenges to clean energy policies
- **ISGAN** – *announce* Awards on use of AI in Smart Grids

INDUSTRY

- **CCUS** – updated 2023 report on key financing principles for CCUS; CCUS deployment report; support for Carbon Management Challenge launch at COP28
- **IDDI/GPP** – new *commitments*, new progress and technical outcomes report
- **CCUS, IDDI and GCCA** – next steps on industrial decarbonization of cement using CCUS

TRANSPORT

- **Clean Energy Marine Hubs** – *Launch* of new initiative
- **EVI** – report from transport ministers to energy ministers; Charging infrastructure roadmap
- **DriveToZero** – vehicle display/demonstration; new *commitments* to the Global MoU

CLEANFUELS

- **Hydrogen** – *launch* of new Hydrogen Trade Forum; CEM-MI Collaboration on H2 corridors and ports
- **Biofuture Platform** – India *announces* the Global Biofuels Alliance; Presenting key messages for policy makers, including for G20 discussions

ENABLING ENVIRONMENT

- **LTES** – new report on investment tools; also seeking new members
- **Equality Initiative** – target of 30 new Ambassadors *announced*
- **Equalby30** – new toolkit, 5-year anniversary, seeking *new signatories*
- **Empowering People** – new toolkit; new funding, *announcement* of new partners

BUILDINGS

- **SEAD** – additional *signatories* for Call to Action on Product Efficiency; support for Cooling Campaign for COP28
- **EMLA** – *announce* winners of Energy Management Leadership Awards

CEM-14: overall schedule

	TUE 18 JUL	WED 19 JUL	THU 20 JUL	FRI 21 JUL	SAT 22 JUL
am	<i>CEM CCUS - OGCI India workshop (tentative)</i>	CEM / MI side-events	CEM / MI side-events	CEM 14 – MI-8 Ministerial + side-events	G20 Energy Ministerial + side-events
pm	<i>CCUS Initiative Annual meeting (tentative)</i>	CEM / MI side-events	CEM / MI side-events	CEM 14 – MI-8 Ministerial + side-events	G20 Energy Ministerial + side-events

Three CCUS side-events – exact timings TBC

1. DECARBONISING CEMENT WITH CCUS

[DATE, TIME]

- Panel discussion, 90 minutes
- Proposal by: CEM CCUS, CEM IDDI, GCCA
- Concept: This panel discussion will bring together ministers and CEOs to discuss how carbon capture can be accelerated in the cement sector, where it is a vital decarbonization lever.
- Expected / potential speakers:
 - Jennifer Granholm, Secretary of Energy, US
 - V.K. Saraswat, Member of NITI Aayog, India
 - Graham Stuart, Minister for Energy Security and Net Zero, United Kingdom
 - Hadi Knani, Carbon Management Director, Ministry of Energy, Saudi Arabia
 - Thomas Guillot, CEO of GCCA**
 - Magali Anderson, Chief Sustainability and Innovation Officer, Holcim*
 - Cathy Shepherd, Global Head of Clean Energy Transition, Citi Bank*



2. FINANCING CCUS

[DATE, TIME]

- Round table, 90 minutes
- Proposal by: CEM CCUS, GCCSI
- Concept: This roundtable session will bring together several representatives of the finance sector, governments and industry, to discuss challenges and ways forward in risk-sharing to accelerate CCUS financing, as well as the role for development finance institutions.
- “20 + 20”
- Expected / potential speakers:
 - Cathy Shepherd, MD, Citi *
 - Lionel Martinez, MD, ING*
 - Yukimi Shimura, MUFG Bank*
 - Raghav Handa, HSBC **
 - Priyantha Wijayatunga, Asian Development Bank*
 - Natalia Kulichenko-Lotz, World Bank**
 - Jacek Podkanski, European Investment Bank*
 - 3-4 industry representatives: OGCI**, GCCA...
 - 3-4 CEM CCUS Initiative government representatives
 - Andrei Marcu, ERCST**

Document update:

“Key Financing Principles for CCUS”



3. CARBON MANAGEMENT CHALLENGE

[DATE, TIME]

- Round table, 90 minutes
- Proposal by: US, NOR, KSA, CEM CCUS
- Concept: At this event, this Carbon Management Challenge concept is presented. At the roundtable discussion, key elements of the challenge, such as quantitative goals, associated policy frameworks and ways to support the challenge, will be discussed.
- “20 + 20”
- Expected / potential speakers: HoDs from:
 - US
 - NOR
 - CA
 - UAE
 - KSA
 - JP
 - UK
 - All interested CEM Member countries
 - IEAGHG
 - IEA
 - CATF
 - GCCSI
 - etc.

Pre-CEM meetings, Tuesday 18 July

AM: INDIA WORKSHOP WITH OGCI

- Presentation by OGCI on their work on India Roadmap, followed by discussion
- Event targeted for Indian industry and some representatives of gov.

PM: INITIATIVE ANNUAL MEETING

- Discussion with India government
- Joint session with partners: OGCI, GCCA, CEM IDDI and H2
- Discussion on COP-28
- Other relevant topics and administrative issues as needed

CCUS events at GCEAF in Pittsburgh, 22-23 Sept 22

Financing CCUS – Thursday 22 September, 12:30 – 1:30, Room 411

Co-organisers: CEM CCUS Initiative and Global CCS Institute

Panelists: Citi, Credit Suisse, New Energy Risk, Energy Futures Finance Forum

Full schedule
available at

<https://gceaf.org>

Accelerating CCUS in developing countries – Thursday 22 September, 12:30 – 1:30, Room 303

Co-organisers: Clean Air Task Force, IEAGHG, Global CCS Institute, CEM CCUS Initiative

Panelists: GCCSI, World Bank, SKK Migas (Indonesia), Nigeria Ministry of Science and Technology, IEAGHG, Clean Air Task Force

Accelerating technology-based carbon dioxide removals – Friday 23 September, 10:15 – 11:15, Room 413

Co-organisers: DAC Coalition, IRENA, IEAGHG, CEM CCUS Initiative

Panelists: Carbon Engineering, IRENA, Climeworks, Negative Emissions Platform, Stripe

Collaborating to scale up CCUS for the cement sector – Friday 23 September, 11:30 – 12:30, Room 407

Co-organisers: GCCA, CEM Industry Deep Decarbonisation Initiative, CEM CCUS Initiative

Panelists: Global Cement and Concrete Association, Lehigh Hanson Cement, OGCI, UNIDO, US Department of Energy, Norwegian Ministry of Petroleum and Energy



GLOBAL
CLEAN ENERGY
ACTION FORUM

CEM13/MI.7 USA 2022



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Clean Energy Ministerial CCUS Initiative

Fourteen Member Countries:

Lead countries



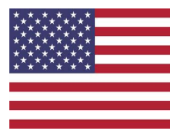
Norway



Saudi Arabia



United Kingdom



United States

Participating CEM Members



Australia



Canada



China



EU Commission



Japan



Mexico



Netherlands



Nigeria



South Africa



United Arab Emirates

Other countries and Partners:

Links to further countries: Denmark, Finland, Germany, India, Indonesia, Singapore, Sweden etc.

Industry: Oil and Gas Climate Initiative, Global Cement and Concrete Association, worldsteel

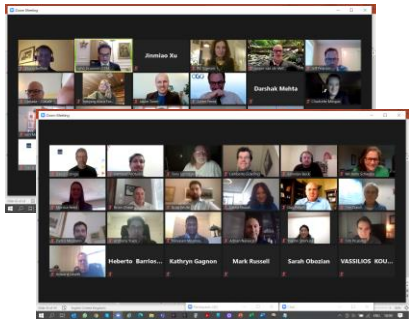
Financial institutions: Multilateral Development Banks, private banks, investment firms

Organizations: Carbon Sequestration Leadership Forum (CSLF), International Energy Agency (IEA), IEA Greenhouse Gas R&D Programme (IEAGHG), Mission Innovation (MI), Global CCS Institute (GCCSI)

Three key areas of activities

1. WORKING WITH INDUSTRY TO ACCELERATE PROJECT DEPLOYMENT

Working with Oil and Gas Climate Initiative to accelerate strategic CCUS hubs and infrastructure.



Working with Global Cement and Concrete Association to materially accelerate CCUS in the cement sector.

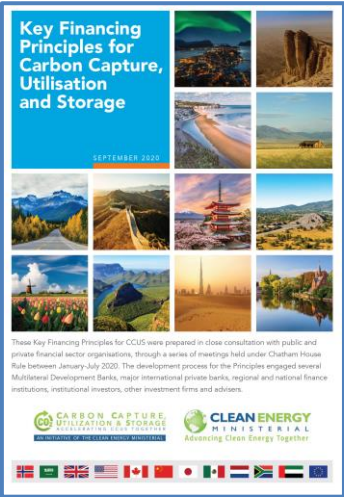


2. LINKING WITH THE FINANCE SECTOR

“Finance Sector Lead Group for CCUS”

- Informal group of banks interested in CCUS: development banks, commercial banks etc.
- Platform to discuss CCUS as investment opportunity and to link with industry
- Opportunity to give advice to governments and ministers

“Key Financing Principles for CCUS” drafted in collaboration with the finance group.



3. DISSEMINATING BEST PRACTICE

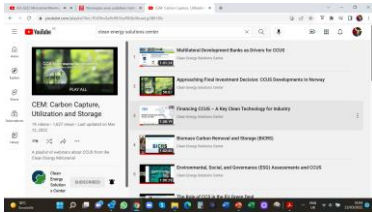
Sharing country developments in monthly meetings.



Sharing best practice in regional workshops and events.



Sharing best practice in webinars.



Accelerating CCUS in the cement sector: Collaboration with GCCA

Workshop 7 March on incentive policy mechanisms

- CCUS key for cement sectors; 10 projects by 2030
- Active CCUS project development by the sector: >100
- Cost of CCUS for cement: +100% / +40% / +2-6%
- Government support required for OPEX and CAPEX; no one single preferred mechanism
- Carbon pricing/markets: predictability and upward trend
- Green public procurement can be a key driver; definitions must be clarified (“green” / “low-carbon” / “clean” etc.)

Next workshop 29 June

- Infrastructure and hubs as enablers for CCUS for cement

20 March 2023



WORKSHOP SUMMARY

CEM CCUS – GCCA internal virtual workshop on
“Incentive policy solutions to accelerate CCUS in the cement sector”

Tuesday 7 March 2023, 13:00 – 15:00 CET

On Tuesday 7 March 2023, members of Clean Energy Ministerial CCUS Initiative (CEM CCUS) and the Global Cement and Concrete Association (GCCA) gathered at the first internal workshop under the collaboration agreement between the two organisations. The meeting was held virtually.

The objective of the workshop was to discuss current incentive policy approaches and share best practice in CCUS policy, to enable rapid acceleration of carbon capture projects in the cement sector. The workshop focused on large-scale deployment incentive frameworks, to accelerate CCUS in cement on industrial scale, as a significant CO₂ reduction mechanism. Policies and programmes for R&D or pilot-scale projects were not discussed in this meeting. Later workshops will cover other vital issues such as CO₂ transport and storage infrastructure and hubs, financing etc.

1. Opening and introduction

- Henriette Nesheim, Assistant Director-General in the Ministry of Petroleum and Energy in Norway, one of the four CEM CCUS Initiative co-leads, gave a brief welcome on behalf of the Initiative. The CEM CCUS Initiative was established in 2018 as a government-led platform to accelerate CCUS deployment.
- Henriette recalled that the cement sector has a particularly challenging decarbonisation pathway, in which many technology levers play a role. In this collaboration, we concentrate on CCUS, on its strategic, large-scale deployment level, and we take the need to deploy CCUS in the cement sector as given.
- CEO Thomas Guillot gave a welcome on behalf of GCCA, a global cement industry association that represents 80% of cement manufacturers outside China. In October 2021 the GCCA published its net-zero roadmap, in which CCUS is an important lever for the cement sector decarbonisation.
- In its roadmap, the cement industry committed to having ten industrial-scale CCUS projects by 2030. There has been great acceleration in project development by industry over the past two years. Today the cement industry has already identified over 100 CCUS projects under development globally.
- Beyond 2030, the industry's CCUS deployment pathway is challenging: roughly one large-scale (1.3-1.5Mtpa) project is needed every week between 2030 and 2050. This requires for the right framework conditions to be created now.
- It is now time to work in partnership. At the CEM meetings in Pittsburgh in September 2022 we launched the CEM CCUS – GCCA collaboration declaration. Under the collaboration we will jointly accelerate CCUS in the cement sector globally, to reach GCCA's goal of ten industrial-scale projects, and hopefully many more, during this decade. Under the declaration, the two groups will:

Work with the finance sector

FINANCE SECTOR LEAD GROUP FOR CCUS

- Informal group of banks interested in CCUS – open to all interested banks!
- Platform to **discuss** CCUS as investment opportunity
- Opportunity to give **advice** to governments and ministers
- Opportunity to take part in work to identify **investment opportunities** with industry
- Banks who have been involved:

World Bank & IFC

Asian Development Bank

Islamic Development Bank

EIB

EBRD

Apicorp

Japan Bank for Int'l Cooperation

CIIB

Franklin Templeton

Legal and General

Aviva Investors

Zero-Carbon Partners

KPMG

Société Générale

Citi

ING

Bank of America

ABN Amro

Credit Suisse

HSBC

Mitsubishi UFG

Sumitomo Mitsui

JP Morgan

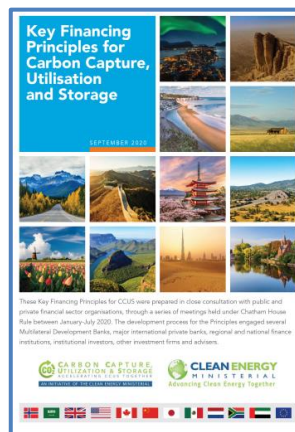
Royal Bank of Canada

SEB

Linklaters

KEY FINANCING PRINCIPLES FOR CCUS

- **Ten high-level principles**
- **Objective:** to support the establishment of a business case for CCUS and to facilitate financing
- **Target groups:** governments, industry and the financing sector who each have a unique and essential role to play
- **Global coverage:** both developed and developing countries, taking into account differences in countries' circumstances



DOCUMENT AVAILABLE AT:

<https://www.cleanenergyministerial.org/initiatives>

FINANCE SECTOR MEETING 20 APRIL

- IFC: work to advance CCUS in Nigeria and Timor Leste
- ING: financial advice for projects in NL and UK

IFC DEPLOYS A BROAD ARRAY OF TOOLS TO CREATE MARKETS.

INVESTMENT	BLENDED FINANCE	ADVISORY / UPSTREAM	MOBILIZATION
Financial products tailored to client needs	De-risking investments to catalyze impact at scale	Innovative solutions using IFC's expertise and tools	Mobilizing and managing capital for investment
• Loans • Equity • Trade and Commodity Finance • Derivatives and Structured Finance	• Loans • Guarantees • Performance-based Incentives	• Help Create New Markets • Unlock Investment Opportunities • Strengthen Clients' Performance and Impact • Improve Environmental, Social, and Corporate Governance	• Syndications • IFC Asset Management Company
Portfolio exposure as of June 2022: \$83 billion	• \$5 billion under management • \$1 of concessional resources from partners mobilizes \$6 of IFC/other party financing	• \$1.4 billion in advisory programming in last five years • 51% committed in IDA countries	• \$26 billion syndicated in last five years • \$51 billion under management at IFC AMC

The Porthos CO₂ transport & storage project in the Netherlands is a great example of how emitters, CCS project company and government came together

Project background

- Porthos Development CV is developing a CO₂ infrastructure system near the port of Rotterdam which, upon completion, will transport and store CO₂ in offshore fields in the North Sea (Porthos or the Project).
- Porthos is a joint venture between that of Rotterdam, "Gazunie" and EBN (the "Sponsors").
- Porthos is a joint venture between that of Rotterdam, "Gazunie" and EBN (the "Sponsors").
- Porthos is the largest planned CCS project in the Netherlands and can therefore be considered of strategic importance for the Dutch government's energy transition.
- Four large industrial companies (Shell, Equinor, Air Products and Air Liquide) signed a joint development agreement with Porthos and successfully applied for the Dutch energy transition & CCS subsidy scheme (DECT).
- The fact that European Parliament has approved the Project's status as a Project of Common Interest further underscores its importance at a European level.

Transaction details

- Porthos is the largest upcoming CCS project in the Netherlands and potentially in Europe.
- Project involved use of multiple elements:
- The Dutch government allocated a EUR 7 billion of DECT in subsidies for the next 15 years based on ETS price of EUR 40/tCO₂.
- Porthos is scheduled to start on annual amount of 2.5 Mt of CO₂ from 2024.


ING's role

- The financial advisory mandate included conducting a feasibility study for Porthos.
- ING advised the sponsors on all project related aspects including but not limited to financing structures and options and key Project Agreements.
- On ING's first mandate we acted as sole Financial Adviser to the sponsors in relation to the overall Project.
- On ING's second mandate we acted as sole Financial Adviser to the Port of Rotterdam in relation to transportation and storage.
- Acting as financial adviser for this project is one of our home markets' is an important milestone and commercial achievement in light of the New Energy Transition Initiative.

ING has been mandated twice as advisor to the Porthos project

CCUS Discussion Materials | March 2023

ING

Japan	
<p>Key climate policy targets</p> <ul style="list-style-type: none"> Advance carbon neutrality in 2050 Reduce GHG emissions by 26% by FY2030 from FY2013 level <p>Current government policies</p> <ul style="list-style-type: none"> Climate Change Strategy FY2022 (long term roadmap) introduced in May 2021 Implement a business transition plan for the FY2023 business year Mid-term Strategy FY2026 (Plan approved by the Cabinet on Dec. 22) Continue to incorporate CO2 into energy policy Introduce ESG in 2030 prioritized on the communication ESG disclosure and governance related <p>ESG related initiatives</p> <ul style="list-style-type: none"> Influence ESG-related functions through an amendment to the JOGIEE law Introduce and implement the green finance system in FY2023 Make an safety-related technologies and ESG-related technology Investigation of adaptation to climate change <p>Other related initiatives</p> <ul style="list-style-type: none"> Launch the working group on preparation for the legislation of domestic law Conduct research and discussion on the impact of climate change on the way to the entire ESG status such as well as support from the Government Support ESG adaptation in the through ESG CSN network Establish Sustainable ESG risk management 	 <p>CURRENT RELATED GOVERNMENT POLICIES</p> <ul style="list-style-type: none"> Renewable CO2 demonstration project (Pilot project) Low-carbon innovation fund Low-carbon CO2 ship transportation demonstration project Feasibility Study on CO2-CC in Osaka Bay (Field in Hokkaido) <p>POTENTIAL RELATED GOVERNMENT POLICIES</p> <ul style="list-style-type: none"> Secure the possible government support for CO2 projects Promote legislation of domestic laws governing CO2 business

Norway

Current government strategies for CCS:

- Cost-effective development of CCS projects
- Facilitate large-scale storage opportunities at NCS
- Expand use of decarbonization of industry and low-carbon H₂
- Establish capture and CCS infrastructure
- Share knowledge and experience

Deployment policies and preparations in place:

- CCS law and the European Trading Scheme
- Applied the guidelines to the London Protocol and deposited a declaration on pre-projected application
- Financial support for the Luleå project

International climate framework:

- Establish a business case for CCS agreements
- Establish bilateral agreements with relevant countries as far as possible under the Uf
- New approach for CCS storage

CURRENT AND FUTURE CCS PROJECTS


- Western (1.1-1.6 Mtpa, from pulp)
- Nahvelin (0.8-1.0 Mtpa, from pulp)

Planned CCS projects

- Full-scale (1.1-1.6 Mtpa) "Longship" (start 2025)
 - Options of a cement plant (Brevik), a waste incinerator (Eidsvoll) and Werra (Werra in the NE)
- The Northern Lights hydrogen and Storage at the NCS

INTERNATIONAL COOPERATION

- Northern Lights 2
- Develop additional CCS projects
- 2 waste incineration projects for CCS storage, mainly in the North Sea and the Baltic Sea (Germany)



Nigeria

- One climate policy targets
- Revised NDC, carbon targets increased and 47% conditional targets by 2030
- New Green Climate Fund (GCF) pledges in 2024
- Long-term Emissions Reduction Path to achieve 50% by 2050 using a climate technology led

Current government strategy for CCS development

- Identify near-term pilots and opportunities for CCS development and deployment that are consistent with national development and emissions targets by 2040
- Conduct an enabling environment through identifying donor resources, mapping existing CCS projects and resources (including CCS) across development, legal and regulatory contexts, performing life-cycle assessment, engaging with stakeholders, and identifying potential CCS projects, and identifying potential CCS projects, and identifying potential CCS projects
- National CCS Centre of Excellence
- Deployment activities and programmes in place
- Emissions Reduction Plan
- Climate Technology Readiness Assessment
- Climate Change Bill
- Houston Green Economy
- Industrial CCS CCS Deployment and Scaling Study
- Legal and Regulatory Assessment & Frameworks
- Infrastructure Capacity Development

CURRENT LARGE SCALE CCS PROJECTS

N/A

POTENTIAL FUTURE PROJECTS

- Carbon dioxide removal
- Hydrogen
- Carbon dioxide removal


United Arab Emirates

Notifications

- UAE National Information Commission (NIC) is the official for the National Data Security 2016
- **UAE Personal Data Protection Law** – 2016 is UAE's first data privacy law aimed at ensuring the protection of personal data of individuals in the UAE
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Some interesting facts

- The UAE is the first country in the Middle East to have a data protection law
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United Arab Emirates

Current Law – which is the largest national data protection law in the region

• **UAE Personal Data Protection Law** – 2016 is UAE's first data privacy law aimed at ensuring the protection of personal data of individuals in the UAE

[illegible][illegible]

Germany



- Significant climate policies
 - Climate Law (KlimSchG) by 2019; Climate Neutrality by 2045 and negative emissions from 2050

Current government priorities for CCS:

- Coalition Agreement:
 - "We acknowledge the need also for technical negative emission and will develop long-term strategies for achieving the greenhouse gas concentration level below 1.5°C."

Prominent projects and programmes in place:

- On land-based side North German pipeline released new CO₂-streams (Brennholz) by Q3-2021.

Pending legislation:

- Evaluating current legal framework in Germany WII of the end of 2022
- Clarify government policy on CCDCs and add a Carbon Management Strategy on federal level accordingly

[illegible]

**CARBON CAPTURE,
UTILIZATION & STORAGE**
ACCELERATING CCUS TOGETHER

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

G20 CCUS seminar, Bengaluru Sunday 5 February

- Key takeaways
 - India clearly stepping up their CCUS knowledge and work
 - Identified CCUS as one of six key technologies under its G20 agenda
 - CCUS to play a pivotal role in India's decarbonization
 - Recognition that technology is not the key issue
- Panel discussion: points for G20 consideration
 - Define strategic role for CCUS in G20 countries
 - Enhance knowledge-sharing
 - Create solid policy frameworks that drive business case
 - Facilitate financing
 - Give due consideration for CO₂ utilization
 - Establish storage atlas
- <https://www.youtube.com/watch?v=MbhPoXy3i-0>



CEM CCUS: activities, events etc.

Events:

- 15 November 2022: ADB event on CCUS, Dhaka, Bangladesh. Initiative Coordinator presented the CEM CCUS activities and developments from various member countries.
- 15 December: webinar on “CCUS Policy for India”, after the publication of a key report commissioned by NITI Aayog and drafted by Dastur Energy. The webinar recording is available here: <https://www.youtube.com/watch?v=ke4chsEzR74>
- 18 January: CCUS event at World Future Energy Summit, Abu Dhabi. Together with GCCSI, CATF and KAPSARC, the Initiative co-hosted a CCUS seminar in the sidelines of the 2023 WFES.
- 16 February: High-Level CCUS dialogue, Riyadh. Several CEM CCUS members, other countries, organisations and industries came together at this event to discuss how to best de-risk CCUS investment. More information is available at: <https://www.ief.org/events/2nd-ief-high-level-roundtable-on-carbon-management-technologies>.
- 4 May: Webinar “CCUS in Denmark, Sweden and Finland”. At this webinar, representatives from energy ministries of three Nordic countries outlined their strategies and activities in CCUS. View recording here: <https://www.youtube.com/playlist?list=PLKRmGa9s99JVssP8Gb5buwLg3BIt1IIIs>

Check out our latest newsletter



Newsletter

March 2023

DEAR COLLEAGUE,

Welcome to the March 2023 edition of the Clean Energy Ministerial CCUS Initiative newsletter. The first quarter of the year has certainly been very active with several key meetings and gatherings, allowing us to build momentum towards the fourteenth Clean Energy Ministerial meeting, hosted by India in July. India is linking its G20 Presidency energy agenda with the CEM, which is a very practical approach allowing important synergies between the two ministerial-level processes. We helped organise a key CCUS event in conjunction with the G20 Energy Transition Working Group in Bengaluru - more below!

The CEM CCUS Initiative has continued its work to serve as a platform for governments, industry and the finance sector to share experience and best practice, both amongst themselves and towards the wider public.

We thank you for your interest in our work and invite you to get in touch if you are interested in knowing more about our activity. Our contact details are at the end of this newsletter.

G20 CCUS WORKSHOP IN BENGALURU, INDIA



India holds the [G20 Presidency](#) and also hosts the Clean Energy Ministerial meeting this year. It is highly commendable that India has sought to combine the CEM and the G20 energy agendas as much as possible. CCUS was selected as one of six key technology areas by India, and earlier in the year the CEM CCUS Initiative was invited to help organise a CCUS event in conjunction of the first G20 Energy Transition Working Group meeting held in Bengaluru, India. India's Ministry of Power, as well as the country's largest power group NTPC Limited hosted a [half-day CCUS seminar](#) on Sunday 5 February.

While the seminar explained and discussed many aspects of carbon capture fully applicable globally, the main emphasis of the talks was on how India itself could rapidly start scaling up carbon capture, from small pilots to megatonne-projects. India is really stepping up its CCUS agenda, moving from highly technical R&D discussions into the [strategy and deployment space](#). Both the G20 and CEM processes can provide a great help, by encouraging countries to set ambitious goals and by facilitating countries and industries to share experience. Building a common understanding on what role CCUS can play and how to enable it is vital.

The final panel discussion outlined six key points for consideration by India and the G20 community: 1) Define a strategic role for CCUS, 2) Maximise knowledge-sharing in order to avoid "reinventing the wheel", 3) Actively seek solutions for CCUS project financing, 4) Collaborate to establish CO₂ storage mapping and infrastructure, 5) Investigate the role that CO₂ utilisation can play and 6) Establish policy frameworks conducive for carbon capture investment.

The Clean Energy Ministerial and the G20 energy ministers' meetings will be held back to back on 21-22 July in Goa, and the CEM CCUS Initiative is working towards ensuring that the above points, and CCUS more widely, are firmly on the ministerial agenda.

CCUS VITAL FOR THE GLOBAL CEMENT INDUSTRY



On Tuesday 7 March 2023, members of Clean Energy Ministerial CCUS Initiative and the [Global Cement and Concrete Association](#) (GCCA) gathered at the first internal workshop under the [collaboration agreement](#) between the two organisations.

The objective of the workshop was to discuss current incentive policy approaches and share best practice in CCUS policy, to enable rapid acceleration of carbon capture projects in the cement sector. The workshop focused on large-scale deployment incentive frameworks, to accelerate CCUS in cement on industrial scale, as a significant CO₂ reduction mechanism. Policies discussed included direct government financial support, carbon markets and green public procurement. Later workshops will cover other vital issues such as CO₂ transport and storage infrastructure and hubs, as well as financing. The two groups will report on their collaboration at the upcoming CEM-14 and other relevant forums.

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<https://mailchi.mp/cemccus/1fw2h94qa9>

Webinar “Japan’s CCS Roadmap” → **NEW DATE Wed 28 June**



18:00 – 19:00 Japan Standard Time

Presentation by:

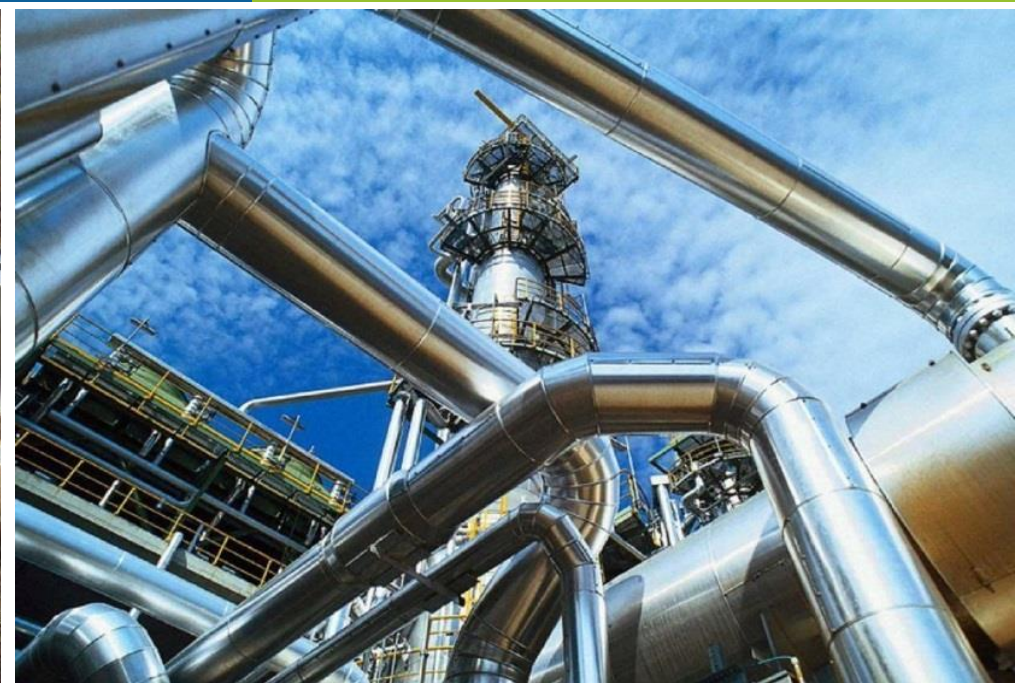
Norihiko Saeki

Director for CCS Policy

Ministry of Economy, Trade and
Industry

Japan

https://us02web.zoom.us/webinar/register/WN_rYtPnOEGQqSrSK_uSNBt7A



Questions?

Discussion