







Clean Energy Ministerial CCUS Initiative Update

CSLF Technical Group meeting | 27 June 2022

Stig Svenningsen, CEM CCUS Initiative Co-Lead, Norway



Agenda

- 1. Membership news
- 2. Key activity during 1st half of 2022
- 3. CEM-13 Pittsburgh

Clean Energy Ministerial CCUS Initiative

Fourteen Member Countries:

Lead countries









Participating CEM Members





Canada







China

EU Commission

Japan











United Arab Emirates

Other countries and Partners:

Links to further countries: Bahrain, Denmark, Germany, India, Indonesia, Ireland, Malaysia, Poland, Singapore 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)



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Accelerating CCUS in cement – collaboration with GCCA (1/2)

Background:

- "Concrete Future": the Global Concrete and Cement Association (GCCA)
 Roadmap to achieving net-zero concrete by 2050
- CCUS holds a vital position in the portfolio of technologies and actions to achieve net-zero: GCCA Roadmap projects a share of 36% for CCUS
- GCCA commitment to deploy 10 industrial-scale CCUS projects in the cement sector by 2030

Objective:

- Collaborate to help industry deliver 10 large-scale CCUS plants by 2030
- Includes CEM "Industry Deep Decarbonisation Initiative" (IDDI)
- → Collaboration declaration between CEM CCUS and GCCA → to be published at CEM-13

Accelerating CCUS in cement – collaboration with GCCA (2/2)

Excerpt from draft joint declaration:

- 4. The CEM CCUS Initiative and the GCCA have agreed to collaborate in the following areas:
 - a. Share ideas and collaborate to **communicate the role CCUS has** in safely and effectively delivering a net-zero world;
 - b. Facilitate the **identification and mapping of candidate cement-sector CCUS projects** (e.g. in collaboration with partners such as OGCI and others), as well as foster project partnerships and acceleration also in developing economies;
 - c. Discuss and facilitate the creation of the **needed CO₂ transport and storage infrastructure** and identify opportunities to integrate cement CCUS projects into strategic CCUS transport and storage **hubs**;
 - d. Discuss and explore **incentive and other policy frameworks**, as well as finance solutions, that can enable the implementation of industrial-scale CCUS projects in the cement sector during the ongoing decade;
 - e. Share thinking on issues enabling **long-term CCUS deployment**, post-2030, via both policy and technology development.
 - f. Support further development and share experience with regards to **CO₂ use through mineralisation** in building materials.



Other collaboration activities

OGCI:

- Paris Agreement Article 6: dialogue on potential mechanisms to facilitate CCUS
- CEM CCUS OGCI meeting 7 July

Finance Sector:

- Finance Sector Lead Group for CCUS: currently 30 banks in the network
- Last meeting 9 June: CCUS in ESG reporting
- Asian Development Bank: Asia Clean Energy Forum side-event 14 June, on financing CCUS in Asia

UNECE:

Joint meeting on CCUS in Kazakhstan, 4 May

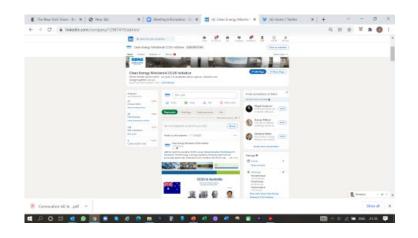


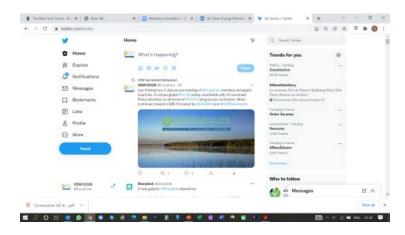
Events, webinars and communication

Events and webinars

- 25 January: OGCI Gulf Countries' CCUS strategy workshop
- 3 March: "MDB's role in accelerating CCUS"
- 13 April: G20 CCUS workshop "Making CCUS affordable"
- 23 June: GCCSI CEM CCUS KAPSARC webinar on ESG and CCUS

Continued presence on LinkedIn, Twitter, newsletter etc.







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CEM-13 / MI-7, 21-23 September, Pittsburgh



- 1st "Global Clean Energy Action Forum"
- Hosted by US Department of Energy
- Combined 13th Clean Energy Ministerial and 7th Mission Innovation Ministerial
- Large event with dozens of side-events etc.

Agenda CEM13 and MI-7 The Year of Implementation

Wednesday 21 Sep

Opening evening for Ministers, VIPs, and other invited guests

- Registration Open for Ministers and VIPs
- Off-site Visits to Pittsburgh clean energy landmarks - Ministers
- Opening Ceremony
- Private Minister and VIP dinner

Thursday 22 Sep

Minister work-day and community-wide convention center opening

- CEO-Minister Roundtables (am)
- State of the Transition Report launch (am)
- Off-site Visits to Pittsburgh clean energy landmarks (am)
- General registration open from midday
- Side events (starting mid-day through closing ceremony)
- Clean Energy Technology Showcase (starting mid-day through closing ceremony)
- Youth Forum (starting mid-day through closing ceremony)
- Joint CEM/MI Private Plenary focused on institutional business (pm)
- Joint CEM/MI Public Plenary,
 Announcements and Awards Event (pm)

Friday 23 Sep

Community-wide dialogues, partner events, and side events

- Mainstage events with Ministers, philanthropies, CEOs, and other VIPs (all day)
- Closing Ceremony
- Press Conference

US-led CEO – minister roundtables

- Different from past years, these will NOT be specific to CEM or MI workstreams, rather focusing on bringing together ministers and CEOs to tackle key challenges within sectors.
- Selected sectors for the US led CEO-Minister Roundtables are:
 - Power
 - Hydrogen
 - Nuclear
- **→**
- Industrial Decarbonization
- Carbon Management
- Buildings/Energy Efficiency
- Bioenergy
- Transportation
- Communities and the Energy Transition
- US DOE will hold the pen on drafting concept notes and all logistics for these sessions.
- Separate from these US led roundtables, all CEM workstreams are encouraged to also submit side event applications for their own CEO-Minister roundtables on any topic they choose.
- Questions? Contact CEM13MI7USA@hq.doe.gov



CCUS side-event proposals by CCUS Initiative (1/2)

1. <u>Unlocking 10 industrial-scale CCUS</u> projects in the cement sector

- Co-organised by CEM CCUS, IDDI and GCCA
- Presentation of decarbonisation challenge by GCCA
- Panel discussion on enabling factors to deploy 10
 CCUS projects by 2030
- Announcing CEM CCUS GCCA collaboration declaration

2. Engineered carbon dioxide removals for a net-zero future: BECCS and DAC

- Co-organised by CEM CCUS, IRENA, IEAGHG,CSLF TG?
- Panel discussion on 1) status of the various CDR technologies today, 2) the key technology and systemic challenges, and 3) how policy-makers can help accelerate CDR technologies?

- 60-minute panel discussions
- Acceptance 11 July



CCUS side-event proposals by CCUS Initiative (2/2)

3. Financing carbon capture projects

- Co-organised by CEM CCUS and GCCSI
- Panel discussion with experts from commercial finance institutions on 1) CCUS project financing attractiveness, 2) ESG issues, 3) policy recommendations for governments to enable and facilitate finance sector participation.

4. Getting the Global South Ready to Embrace CCUS

- Co-organised by CATF, IEAGHG, GCCSI, CEM CCUS (submitted by CATF)
- Panel discussion on 1) status of CCUS in some key emerging economies, 2) Roles that MDBs can play in helping countries accelerate, 3) status of current MDB trust funds and 4) recommendations going forward
- Inviting WB, ADB, plus governments such as Nigeria, Indonesia, South Africa etc.

- 60-minute panel discussions
- Acceptance 11 July





GLOBAL CLEAN ENERGY ACTION FORUM PITTSBURGH, PENNSYLVANIA USA | SEPTEMBER 21-23, 2022



This document provides guidance for organizers who seek to participate in the Clean Energy Technology Showcase of the Global Clean Energy Action Forum (GCEAF) – a joint convening of the 13th Clean Energy Ministerial and the 7th Mission Innovation Ministerial. As part of this premier global clean energy event of the year, the Clean Energy Technology Showcase provides your technology with the platform to reach a global audience.

APPLICATION DEADLINE: 30 JUNE!!



CCUS Initiative annual meeting 2022

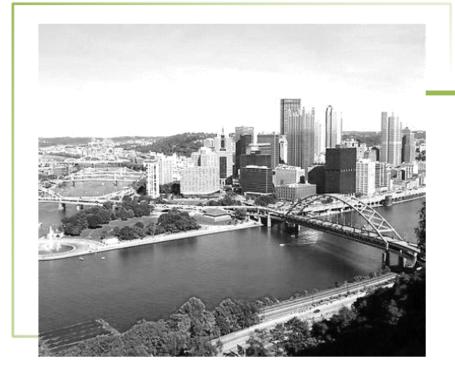
- Target date 21 September, Pittsburgh
- Key agenda items:
 - Global CCUS policy round table: CEM CCUS members and invited guests
 - CCUS in cement: collaboration with GCCA and UNECE
 - CSLF: TG report and any PG issues
 - CCUS Initiative activity planning
- In-person attendance, with virtual option for participation
- More detail to follow during July



Questions? Comments?

Close of meeting





CEM13 *Key information*

- Date and Venue: 21-23 September 2022, David L. Lawrence Convention Center, Pittsburgh, United States
- Host: US Department of Energy (DOE)
- · Theme: 'Year of Implementation'
- Subthemes: Jobs and Community, Technology Transformation, Unprecedented Deployment
- Attendees: Wide variety of high-level attendees, incl. energy ministers from 29+ governments, plus global media, industry, civil society groups, and academia
- Key stakeholder groups:
 - CEM and MI member countries, partner organisations/groups
 - US Government
 - Philanthropies
 - Private sector CEOs and VIPs
 - Sub-national (state, regional and local) entities

Election of Policy Group Officers





- On September 29, the CSLF Secretariat sent a call to all CSLF members for nominations
- On October 17, Australia nominated the existing countries, Chair (United States) and Vice Chairs (China, Saudi Arabia, United Kingdom), to continue serving as Policy Group Officers

CSLF Policy Group Officers – elections 7 December 2021

Carbon Sequestration leadership forum

www.c/lforum.org

DRAFT AGENDA

CSLF Policy Group Virtual Meeting Hosted by the CEM CCUS Initiative

Tuesday, 07 December 2021

Meeting platform (Zoom) opens at 12:15pm CET Meeting starts at 12:30pm CET and ends at 12:45pm CET

- 1. Meeting Welcome and Meeting Protocols (5 minutes) Adam Wong, United States
- 2. Election of Policy Group Officers (5 minutes) Stephanie Hutson, CSLF Secretariat (presiding)
- 3. Closing Statement / Adjourn (5 minutes) Stephanie Hutson, CSLF Secretariat

4. CSLF Policy Group meeting

Stephanie Hutson of US DOE led this agenda item.

1. Welcome and Opening Statement

Adam Wong, Policy Group Chair, United States, called the meeting to order and thanked the CEM CCUS Initiative for hosting. Mr. Wong noted recent high-level events and achievements in carbon capture, utilization, and storage (CCUS). He thanked all participants for their contributions and commitments to the goals of the CSLF.

2. Election of Policy Group Officers

Stephanie Hutson, CSLF Secretariat, presided over the election of Policy Group Officers. As stated in Section 3.3 (a) of CSLF Terms of Reference and Procedures, CSLF Chairs and Vice Chairs elected every three years. Ms. Hutson reviewed the procedures for the election and announced the nominations for the Policy Group Officers. The Policy Group elected the Chair (United States) and Vice Chairs (China, Saudi Arabia, United Kingdom) to continue serving as Policy Group Officers for a three-year term through the end of 2024.

3. Summary of Meeting

Adam Wong, Policy Group Chair, United States, provided short closing statements.

4. Closing Remarks / Adjourn

Stephanie Hutson, CSLF Secretariat, closed the meeting.







AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL