Carbon Capture, Utilization & Storage in the Clean Energy Ministerial
Increased attention on CCUS in 2017: Ministerial events

8th Clean Energy Ministerial (CEM8) in Beijing in June 2017

IEA CCUS Summit in Paris in November 2017

7th CSLF Ministerial Meeting in December 2017
Participating countries account for 75% of global greenhouse gas emissions and 90% of global clean energy investment.
CEM: A COALITION OF THE WILLING

- Distributed and shared leadership
- Voluntary and collaborative
- No negotiated communiques
- Collaboration with multilateral institutions and private sector
Recognized the important role of industrial sector in meeting energy and climate goals

- All-inclusive technology approach
- Value of public-private partnerships
- Support for launch of two new CEM initiatives: CCUS and Nuclear Innovation: Clean Energy Future (NICE)

PUBLIC-PRIVATE ROUNDTABLE:

INNOVATIVE SOLUTIONS TO MANAGING ENERGY USE AND EMISSIONS FROM INDUSTRY
Official Launch of New CCUS Initiative

- Official CEM CCUS Side Event
- Energy ministers, industry executives and IEA Executive Director
- Discussed the role of governments, industry and the financial community in accelerating CCUS deployment.
KEY OBJECTIVES OF CEM CCUS INITIATIVE

1. Expand the spectrum of clean energy technologies actively considered under CEM to include CCUS

2. Create a sustained platform for the private sector, governments, and the investment community to engage and accelerate CCUS deployment

3. Facilitate identification of both near and longer-term investment opportunities to improve the business case for CCUS

4. Disseminate emerging CCUS policy, regulatory, and investment best practices as part of integrated clean energy systems
Initiative Member Governments

Saudi Arabia
United States
South Africa
Norway
Japan
United Kingdom
United Arab Emirates
China
Canada
Mexico

CCUS Initiative
CEM LEVERAGES CSLF

CSLF - 26 Members
- Czech Republic
- Greece
- New Zealand
- Poland
- Romania
- Serbia

CEM – 26 Members
- Chile
- Denmark
- Finland
- Indonesia
- Spain
- Sweden

Australia
Brazil
Canada
China
European Commission
France
Germany
India
Italy
Japan
Korea
Mexico
Netherlands
Norway
Russia
Saudi Arabia
South Africa
United Arab Emirates
United Kingdom
United States
TOTAL: 20
CCUS INITIATIVE: MEMBERS AND LINKAGES

- Lead countries: Norway, Saudi Arabia, and the United States
- Participating CEM members: Canada, China, Japan, Mexico, South Africa, United Arab Emirates, and United Kingdom
- Industry, including the oil and gas community
- Financial institutions, including multilateral development banks (MDBs)
- Organizations: Carbon Sequestration Leadership Forum (CSLF), International Energy Agency (IEA), IEA Greenhouse Gas R&D Programme (IEAGHG), Mission Innovation (MI), Global CCS Institute (GCCSI), and Oil and Gas Climate Initiative (OGCI)
- Other CEM initiatives: 21st Century Power Partnership, Power System Flexibility, Investment and Finance Initiative, Long-term scenario campaign, Clean Energy Solutions Center, etc.
KEY ACTIONS

• Engage in dialogue with the Financial sector to discuss opportunities for CCUS investment

• Provide expert assistance and sharing of best practices to support in-country work
  – CEM Clean Energy Solutions Center “Ask an Expert” service
  – CEM and Clean Energy Solutions Center websites

• Establish an industry advisory body to provide a regular dialogue with key energy ministers on CCUS progress and priorities

• Conduct workshops with industry and policymakers to identify promising CCUS opportunities

• Support feasibility studies and assessments

• Webinar series
1ST CEM CCUS INITIATIVE WEBINAR: FRAMEWORK FOR CCUS IN THE CLEAN ENERGY MINISTERIAL

Khalid Abuleif
Chief Negotiator for Climate Agreements

Jarad Daniels
Director, Office of Strategic Planning, Analysis and Engagement, Office of Fossil Energy
Department of Energy, United States

OUTREACH
Clicked Link: 326
Registered: 191
Attended: 95
2ND CEM CCUS INITIATIVE WEBINAR: CCUS IN MEXICO FOR A LOW-CARBON ECONOMY

Leonardo Beltrán
Deputy Secretary for Planning and Energy Transition, Secretariat of Energy (SENER), Mexico

Diego Arjona
Executive Director of the Mexican CCUS Center and Director General of the National Institute for Electricity and Clean Energy (INEEL)

Guillermo Herández
Energy Specialist, World Bank

Peter Warren
Senior Policy Advisor and Senior Climate Finance Investment Lead, Business, Energy & Industrial Strategy, United Kingdom

OUTREACH
Clicked Link: 660
Registered: 312
Attended: 186
Carbon Capture, Utilization, and Storage

- Policies
- Road maps
- Financing
- Feasibility and Case Studies
- Infrastructure
- Regulations
- Stakeholder Engagement
- Standards, Best Practices, and Guidelines
MOVING FORWARD...
CURRENT CSLF ORGANIZATION

• CSLF Charter signed by all 26 members, commenced in 2003 and renewed indefinitely in 2011
• The Terms of Reference and Procedures (TOR) provide the overall framework to implement the Charter
• Charter may be modified in writing at any time by unanimous consent of all Members.
• The CSLF Policy Group governs the overall framework and policies of the CSLF.
• The CSLF Technical Group reviews the progress of collaborative projects and makes recommendations to the Policy Group on any needed actions.
• The CSLF Secretariat organizes CSLF meetings, coordinates communications among CSLF members, and acts as a clearinghouse of information.
KEY POINTS FROM THE CSLF CHARTER

• CSLF operates in a transparent manner and meetings are open to stakeholders who register for the meeting.
• The Policy Group should meet at least once a year, at times and places to be determined by its appointed representatives. All decisions of the Group will be made by consensus of the Members.
• The Technical Group reports to the Policy Group. The Technical Group meets as often as necessary to review the progress of collaborative projects, identify promising directions for the research, and make recommendations to the Policy Group on needed actions.
• The U.S. Department of Energy acts as the CSLF Secretariat unless otherwise decided by consensus of the Members.
• Unless otherwise determined by the Members, any costs arising from the activities contemplated by this Charter are to be borne by the Member that incurs them.
KEY POINTS FROM THE CSLF TERMS OF REFERENCE

• Ministerial meetings will normally be held approximately every other year. Ministerial meetings will review the overall progress of CSLF collaboration, findings, and accomplishments on major carbon capture and storage issues and provide overall direction on priorities for future work.

• The Technical Group will meet as often as necessary and at least once each year at a considered time interval prior to the meeting of the Policy Group.

• The Policy Group and the Technical Group will each have a Chair and up to three Vice Chairs. The Chairs of the Policy and Technical Groups will be elected every three years.
ITEMS TO DISCUSS TODAY

Future of the CSLF, including:
• CSLF Technical Group efforts
• CSLF Policy Group efforts
• Future CSLF Meetings and Frequency
• CSLF Ministerial Meetings
• CSLF Leadership
BACKUP AND OVERFLOW...
• CEM8 side event with energy ministers and IEA Executive Director

• Discussed factors that attract CCUS investments and highlighted importance to accelerate further CCUS investments

• Discussed the need to place CCUS firmly in the context of broader clean energy strategies

• U.S. Secretary Perry recommended development of new CEM initiatives on CCUS and civil nuclear energy
IEA CCUS Summit
Paris | November 2017

• Hosted by IEA and co-chaired by IEA Executive Director Fatih Birol and U.S. Secretary Perry

• Engaged energy ministers and chief executives of major energy companies

• Pushed for collaboration and accelerated investment in CCUS

• Industry representatives included CEOs and senior executives from ExxonMobil, Royal Dutch Shell, BP, Statoil, Chevron, Total Glencore, Suncor Energy, GE Power, Dow Chemical, Mitsubishi Heavy Industries, and Port of Rotterdam
Hosted by Minister Suhail Al Mazrouei, Minister of Energy and Industry (UAE)

Meeting focused on advancing the business case for CCUS

Ministerial Communique key points:

- Support inclusion of CCUS as part of suite of clean energy technologies
- Leverage success of operational CCUS projects and emphasize the need for greater project development
- Encourage development of regional strategies to support CCUS deployment
- Explore utilization options beyond CO2-EOR
- Support collaborative research and development on innovative CCUS technologies
- Expand stakeholder engagement and strengthen links with other clean energy efforts
- Increase global shared learnings on CCUS through best practices and lessons learned
- Continue engagement with the public on CCUS