







Accelerating Carbon Capture Together: Clean Energy Ministerial CCUS Initiative

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Baltic Carbon Forum | 14 October 2020



The Clean Energy Ministerial (CEM) is a global process



90%

75%

Clean energy investments

Global CO₂ emissions



The CEM CCUS Initiative



Lead countries: Norway, Saudi Arabia, the United States and United Kingdom

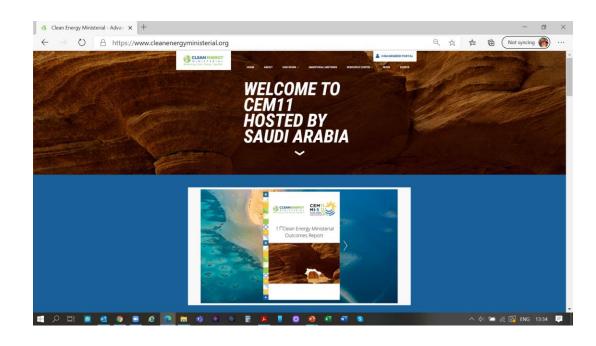
Participating CEM members: Canada, China, Japan, Mexico, Netherlands, South Africa and United Arab Emirates; in addition, the European Commission is an observer Industry: oil and gas, cement, steel, ...

Financial institutions: private banks, investment firms, multilateral 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)

11th Clean Energy Ministerial 15 – 22 September 2020

Clean Energy Ministerial website



https://www.cleanenergyministerial.org

CEM-11 Youtube channel:



https://www.youtube.com/channel/UCxJe7euEishjxJgl PvlgrCg



CCUS: positive energy - but we must keep the wheel turning!

EMERGING POLICY and AMBITIONS

• 30+ countries with "net-zero" ambitions by ~2050!

• EU: 2050 net-zero target; CEF, Innovation Fund etc.

• NOR: Gov. investment in Longship & Northern Lights

• UK: GBP800m fund & business models

• NL: SDE++ and EUR100m EU support

• US: 45Q tax credits

• China: 2060 net zero target

• JP: Commercialise CCUS by 2030

• UAE: ADNOC to ramp up CCUS by 500% by 2030

• ...

RESETTING STRATEGIC NARRATIVE

- From "burden" to "opportunity"
- Decarbonise hard-to-abate industry sectors
- CCUS as partner in low-carbon hydrogen production
- CO2 removal & CCUS as offset for emissions elsewhere.
- Decarbonise existing power assets with long lifetime



- 20 projects today
- 30 new projects announced since 2017: US, Europe, Middle East, Korea, China, Australia, New Zealand etc.
- 16 projects closest to implementation (FID in 12 months) represent USD27bn in investment
- Joint infrastructure → hubs are the way forward, with common transport and storage infra for a multitude of capture facilities

COLLABORATION REMAINS CRITICAL

- Knowledge-sharing between projects, countries and regions
- Exploiting regional synergies, strategies and investment
- "Three-legged stool": government, industry, finance sector all have their role to play



CEM CCUS Initiative: accelerating CCUS together by:

1 (000)

Actively including CCUS within Clean Energy Ministerial agenda and global clean energy discussions.



2 = 50

Bringing **together** governments, the private sector and the investment community.

3



Facilitating identification of both near and longer-term investment opportunities.

4



Disseminating best practice in CCUS policy, regulation and investment.

"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 participated to date:

World Bank

Asian Development Bank

Islamic Development Bank

EIB

EBRD

Apicorp

Japan Bank for Int'l Cooperation

Legal and General

Aviva Investors

Zero-Carbon Partners

Société Générale

Citi

ABN Amro

Bank of America

Credit Suisse

ING

Linklaters

KPMG

Expressed interest / contacts taken:

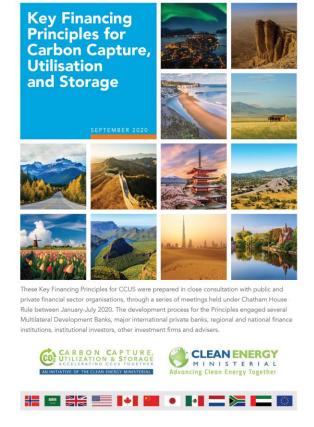
HSBC

Macquarie



Key Financing Principles for CCUS

- 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;
- Developed in close consultation with public and private financial sector organisations.



DOCUMENT AVAILABLE AT: https://www.cleanenergyministerial.org/initiatives



Key Financing Principles for CCUS (1)

1 Industry, governments and the financial sector should communicate the *importance of CCUS*.



Government policies should establish a *revenue*stream for CCUS to facilitate private sector investment.



The financial sector, industry and government should work together to facilitate CCUS investment and help *mitigate the risks* of CCUS deployment.

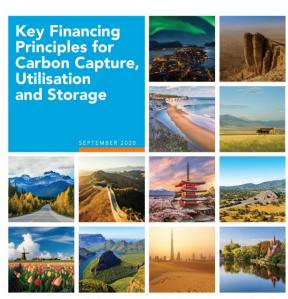


Industry, the financial sector and governments should work together to establish a *pipeline of CCUS projects*.



The financial sector should ensure CCUS is part of their *climate change strategies* and is eligible for sustainable finance.





These Key Financing Principles for CCUS were prepared in close consultation with public and private financial sector organisations, through a series of meetings held under Chatham House Rule between January-July 2020. The development process for the Principles engaged several Multilateral Development Banks, major international private banks, regional and national finance institutions, institutional investors, other investment firms and advisers.







Key Financing Principles for CCUS (2)

The financial sector should strive to accelerate the development of *novel financing approaches* to CCUS



Governments should consider CCUS as part of their *Nationally Determined Contributions* (NDC) under the Paris Agreement.



Governments should utilize existing development and climate institutions to advance CCUS in *developing countries*.



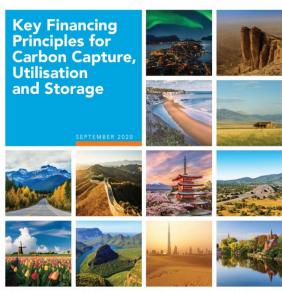
Governments should consider CCUS investment as a means of creating and preserving sustainable jobs and providing a *low-carbon stimulus* to the economy.



Industry, governments and the financial sector should consider CCUS investment as a means of driving *innovation* and supporting broader *industrial development*.

10





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11th Clean Energy Ministerial pre-event 15 September



Key Financing Principles for CCUS



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Ms. Natalia Kulichenko-Lotz

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Ministry of Energy



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Executive Director, International Energy Agency



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Mr. Mark Sisouw de Zilwa Managing Director, Energy - Head Technical team, **ING Bank**



Group Carbon Relations Manager, Oil and Gas, Climate Initiative.



Mr. Anthony Yuen Managing Director & Head of Energy Strategy, Citi



Office of Strategic Planning, Analysis, and Engagement, United States, Department of Energy



CEM-11 Youtube channel:







Collaboration with industry

- Accelerating current projects: actively connecting all current five OGCI "Kickstarter" projects and corresponding CEM governments to share experience and keep projects advancing
- Identifying new projects: working with OGCI to identify new investment opportunities, based on a hubs approach
- Connecting with other key industries: active dialogue with cement and steel sectors

COLLABORATION STATEMENT WITH







Monday 23 September 2019

Joint declaration on accelerating the CCUS industry

- Carbon capture, utilization and storage (CCUS) is an essential part of a broad set of solutions needed to
 create more sustainable low-carbon energy and industrial systems in support of the Paris Agreement
 climate goals. It can reduce emissions on a significant scale in both the industrial and power sectors, and
 support the emergence of key technologies, such as clean hydrogen, direct air capture and biomass with
 CCUS, cruical to meet net zero ambitions.
- Investment in CCUS must be scaled-up urgently to support achieving global climate and energy goals. Accelerating CCUS will require governments and industry as well as other stakeholders to work collaboratively to develop and deploy investable business models and supportive policies.
- 3. The Clean Energy Ministerial Carbon Capture, Utilization and Storage Initiative (CEM CCUS Initiative) countries² and the Oil and Gas Climate Initiative (GCI) member companies² support the global development of an economically viable, environmentally responsible and safe CCUS industry, and recognise the need for storage public private co-operation in this respect. At the Tenth Clean Energy Ministerial (CEM 10) in Vancouver on 29 May 2019, CEM CCUS Initiative countries and OGCI agreed to explore ways to collaborate to accelerate CCUS.
- 4. Today, we crystallise our intent to work together to drive strategic CCUS deployment forward as a step in the development of an economically viable, environmentally responsible and safe CCUS industry. The collaboration between the CEM CCUS initiative and OGCI aims to catalyse and facilitate commercial-scale CCUS opportunities worldwide.
- 5. EEM CCUS Initiative countries and OGCI member companies intend to explore opportunities to support the commercial development of CCUS through the various stages of development. This will notably include sustained dialogue on policy and regulatory frameworks, aiming for commerciality of identified hubs and projects. This could also condider, as appropriate, mechanisms for risk management at each operational phase, knowledge sharing, storage appraisal activities, corporate and project finance and engagement with rivid conient.
- 6. This collaboration represents a unique opportunity to bring governments and industries together to help create viable market conditions to advance CULS and to progress potential CULS high and projects in ECM CCUS initiative countries and others identified by OGCI members, as well as exploring opportunities in developing countries as appropriate. To this end, CEM CCUS initiative countries and industry members within OGCI intend to bring their respective expertise and support to advance CCUS development and
- 7. This collaboration is designed to be flexible, and is non-binding and voluntary. CEM CCUS initiative countries and OGC imember companies recognise that collaboration will take different forms in different jurisdictions. Various public-private collaboration models exist and CEM CCUS initiative countries and OGC member companies will discuss their metrix. In different circumstances and work together to create

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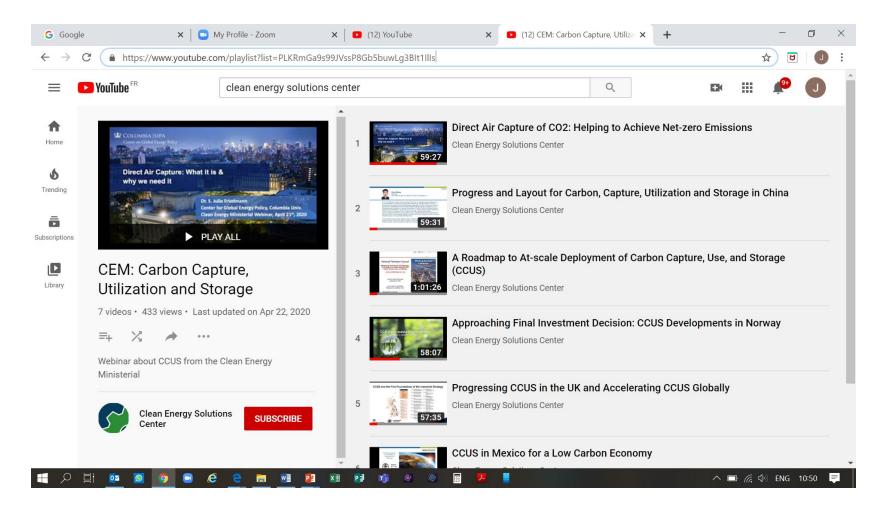
* https://www.cleanenergyministerial.org/news-clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial/clean-energy-ministerial-clean-energy-ministeri

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Webinars to disseminate country experience



https://www.youtube.com/playlist?list=PLKRmGa9s99JVssP8Gb5buwLg3Blt1llls









https://www.linkedin.com/company/clean-energy-ministerial-ccus-initiative/



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