



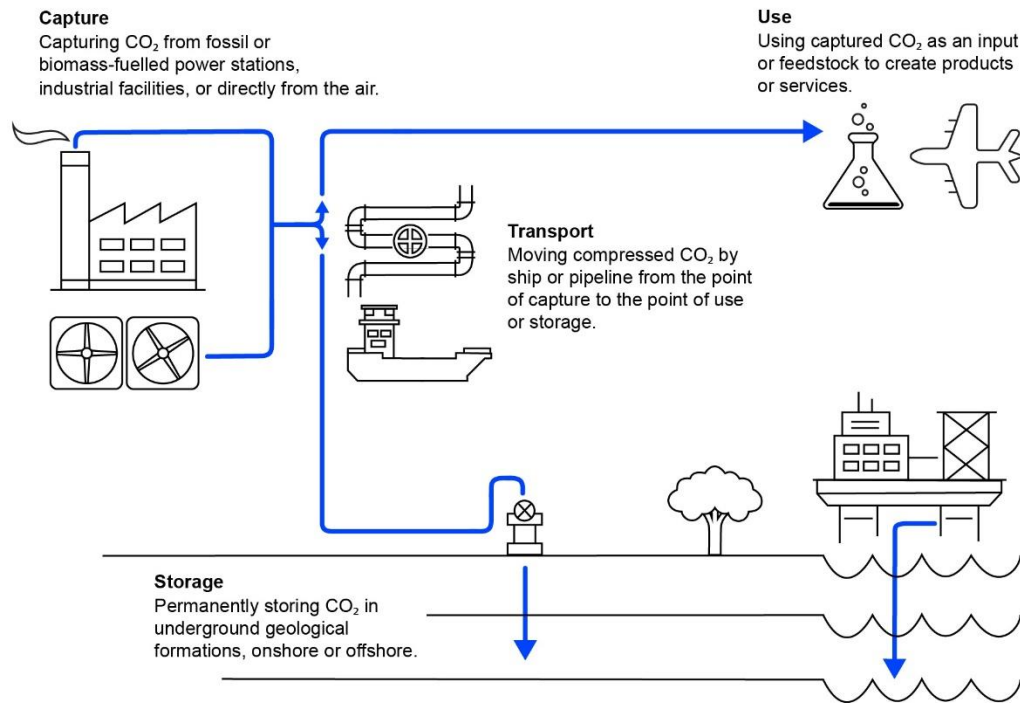
Accelerating Carbon Capture Together: Clean Energy Ministerial CCUS Initiative

Juho Lipponen, CEM CCUS Initiative Coordinator

ETN Global AGM, 16 March 2021

CCUS – where do we stand today?

The CCUS technology chain is well known.



Source: IEA 2020

20 large-scale projects in operation across the globe.

40+ further projects under development



Source: Global CCS Institute

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

EMERGING POLICY and AMBITIONS

- 30+ countries with “net-zero” ambitions by ~2050
- China: 2060 net zero target
- EU: 2050 net-zero target; CEF, Innovation Fund etc.
- NOR: Gov. investment in Longship & Northern Lights
- UK: GBP1bn fund & business models
- NL: SDE++ and EUR100m EU support
- US: 45Q tax credits
- JP: 2050 net-zero; commercialise CCUS by 2030
- UAE: ADNOC to ramp up CCUS by 500% by 2030
- ...

RESETTING STRATEGIC NARRATIVE

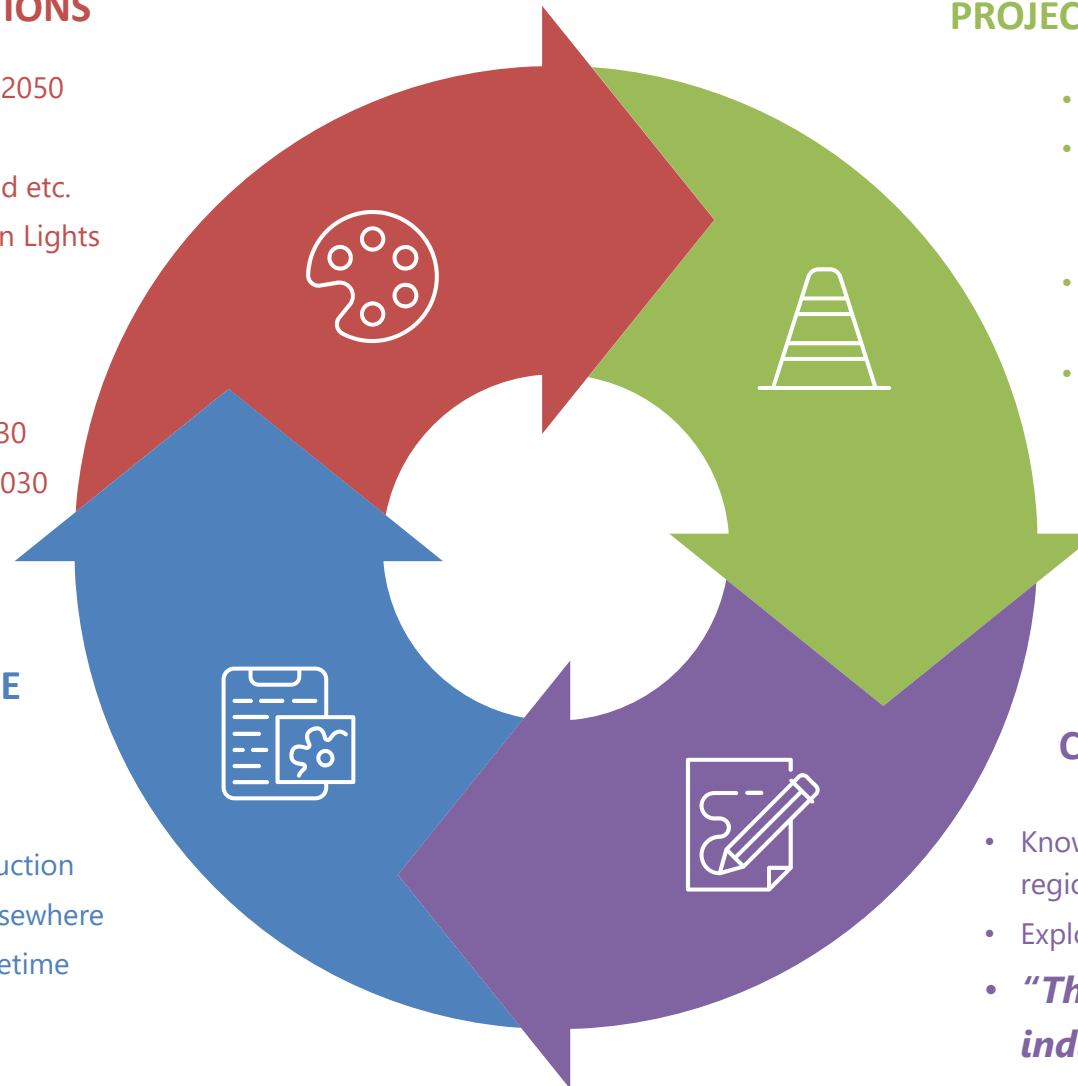
- From “burden” to “opportunity”
- Decarbonise hard-to-abate industry sectors
- CCUS as partner in low-carbon hydrogen production
- CO2 removal & CCUS as offset for emissions elsewhere
- Decarbonise existing power assets with long lifetime

PROJECT DEVELOPMENT SPEEDS UP

- 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**



The Clean Energy Ministerial (CEM) is a global process



27 CEM
Members

90%

Clean energy
investments

75%

Global CO₂
emissions

■ Clean Energy Ministerial participant

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)

CEM CCUS Initiative: accelerating CCUS together by:



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



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



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



Disseminating **best practice** in CCUS policy, regulation and investment.



Collaboration with industry

1. **Accelerating current projects:** actively connecting all current eight OGCI “Kickstarter” projects and corresponding CEM governments to share experience and keep projects advancing

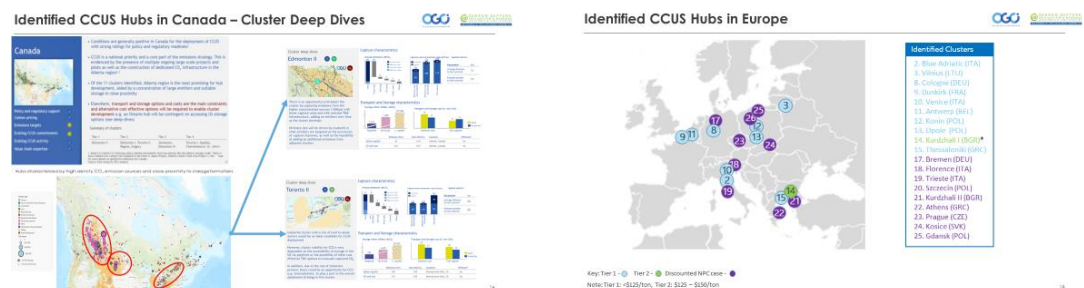


COLLABORATION STATEMENT WITH



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

2. **Identifying new projects:** working with OGCI to identify new investment opportunities, based on a hubs approach



3. **Connecting with other key industries:** active dialogue with cement and steel sectors



Finance Sector Lead Group → Key Financing Principles for CCUS

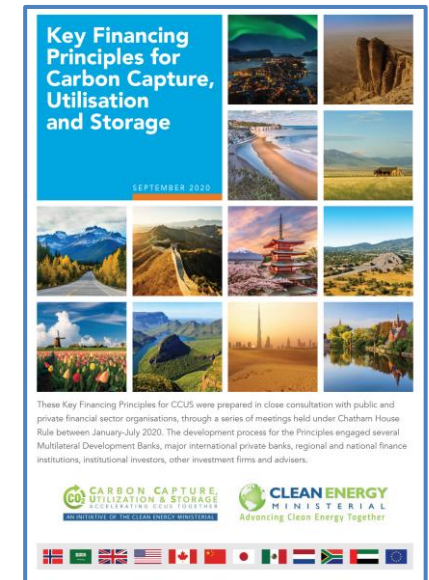
FINANCE SECTOR LEAD GROUP FOR CCUS

- 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 to date:

World Bank	Société Générale
Asian Development Bank	Citi
Islamic Development Bank	ING
EIB	Bank of America
EBRD	ABN Amro
Apicorp	Credit Suisse
Japan Bank for Int'l Cooperation	HSBC
Legal and General	Mitsubishi UFG
Aviva Investors	
Zero-Carbon Partners	Linklaters
	KPMG

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
- **Implementation** and dissemination is vital → the “next big task” for 2021-2022 and onwards

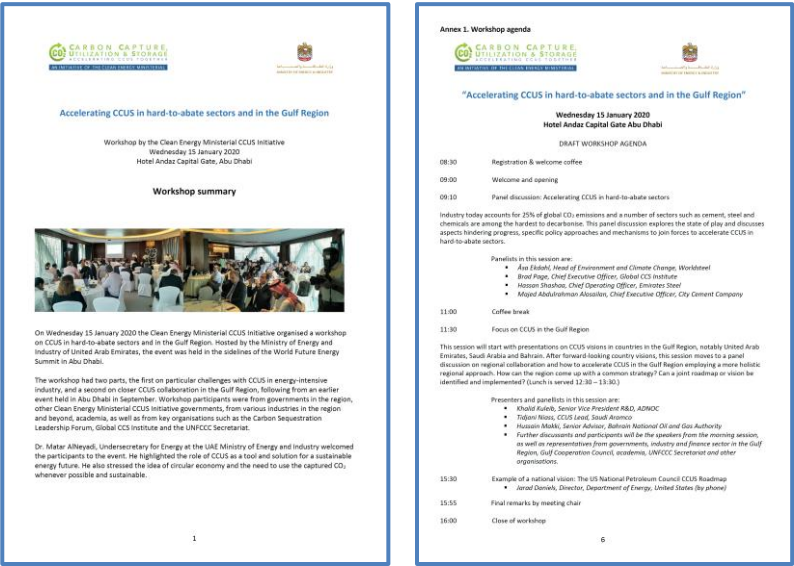


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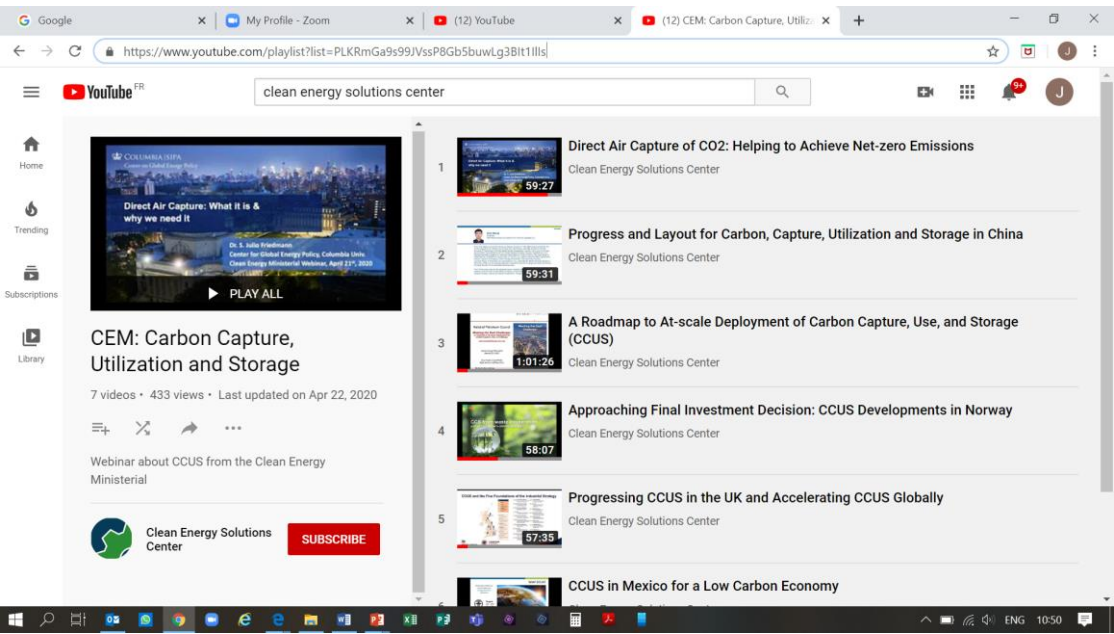
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Disseminating country experience and facilitating dialogue

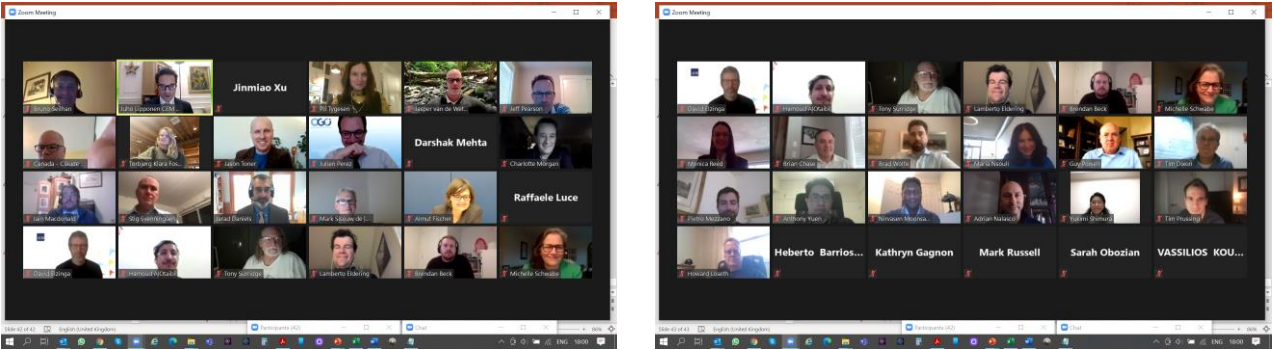
REGIONAL STRATEGY WORKSHOPS



WEBINARS TO DISSEMINATE EXPERIENCE



CEM CCUS – OGCI – FINANCE SECTOR CONVENTION



<https://www.youtube.com/playlist?list=PLKRmGa9s99JVssP8Gb5buwLg3BIt1lls>

Initiative strategy 2021-2022: headline work items



1.1. ACCELERATING PROJECTS

Continue and accelerate OGCI collaboration; expand to energy-intensive industry.

1.2. ACCELERATING FINANCE SOLUTIONS FOR CCUS

Implement Key Financing Principles; continue active finance group meetings; focus on work with MDBs to catalyse CCUS in emerging economies (e.g. in S-E Asia).

1.3. ACTIVATING CCUS POLICY

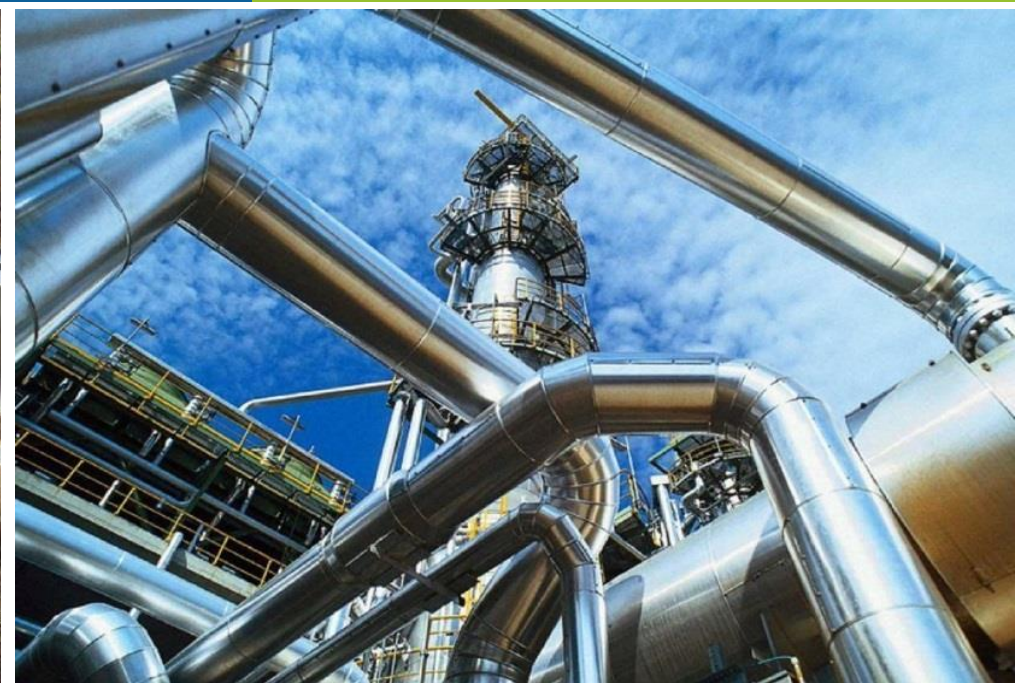
Work towards a ministerial statement on CCUS for CEM-12; accelerate knowledge exchange.

1.4. USE REGIONAL APPROACHES

Build on Gulf Region model to accelerate regional work streams.

2. and 3. ACTIVE MEMBERSHIP AND EFFECTIVE COMMUNICATIONS & EVENTS

Activate current Members and gain new ones; take advantage of partnerships; ensure active communications.



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



@ccuscem



<https://www.youtube.com/user/cleanenergypolicy/playlists>



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