



# Update from IEAGHG

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Technical Programme Manager IEAGHG

CSLF Technical Group Virtual Meeting, hosted by Research Council of Norway  
8<sup>th</sup> December 2021



## Who are we?

Our internationally recognised name is the IEA Greenhouse Gas R&D Programme (IEAGHG). We are a Technology Collaboration Programme (TCP) and are a part of the International Energy Agency's (IEA's) Energy Technology Network.

## Disclaimer

The IEA Greenhouse Gas R&D Programme (IEAGHG) is organised under the auspices of the International Energy Agency (IEA) but is functionally and legally autonomous. Views, findings and publications of the IEA Greenhouse Gas R&D Programme do not necessarily represent the views or policies of the IEA Secretariat or its individual member countries.

# Membership



# IEA Greenhouse Gas R&D Programme (IEAGHG)



- A collaborative international research programme founded in 1991
- Aim: To provide information on the role that technology can play in reducing greenhouse gas emissions from use of fossil fuels and biomass in power and industrial systems.
- Focus is on Carbon Dioxide Capture and Storage (CCS)
- Producing information that is:
  - ✓ Objective, trustworthy, independent
  - ✓ Policy relevant but NOT policy prescriptive
  - ✓ Reviewed by external Expert Reviewers

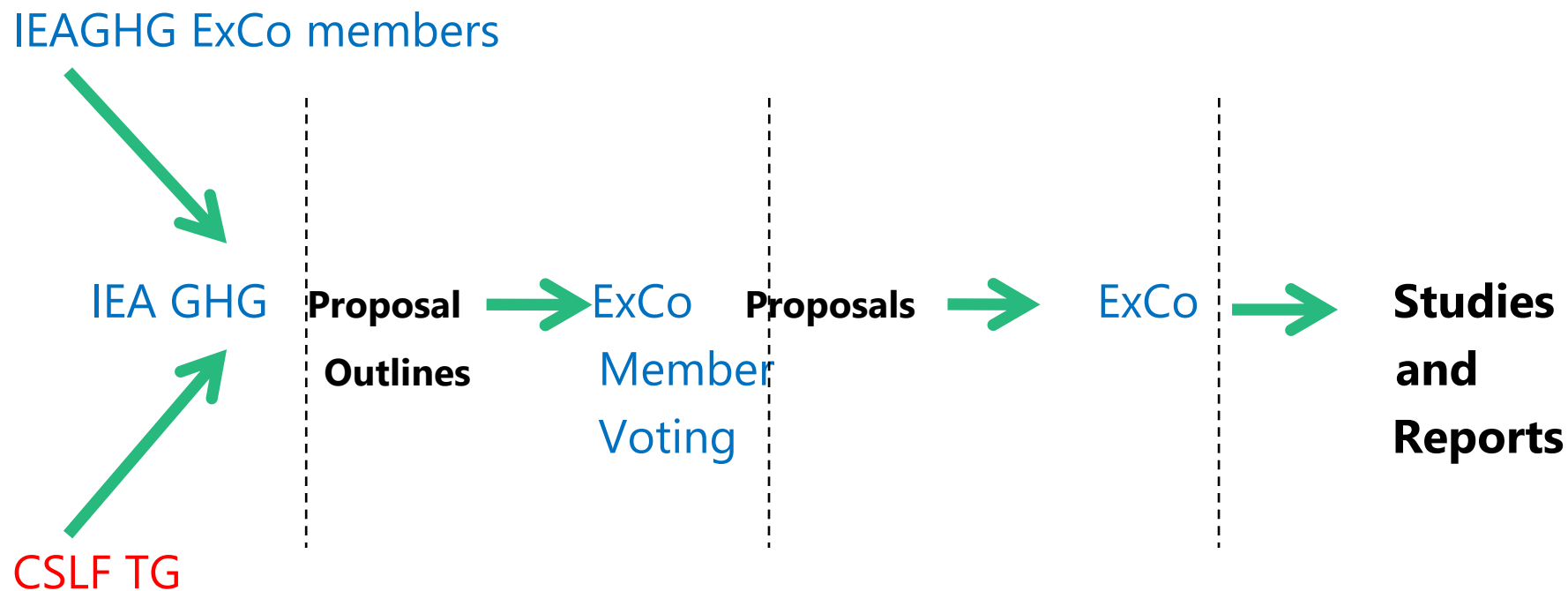
# Arrangement between CSLF Technical Group and IEAGHG



- How CSLF TG/PIRT and IEAGHG will interact for mutual benefit through increased co-operation
- Agreed by IEAGHG ExCo Oct 2007 and CSLF Technical Group Jan 2008



# IEAGHG – Study generation





## CSLF proposed/related studies

Recent reports:

- Hydrogen Production with CCS workshop. 6<sup>th</sup> November 2020, Paris. IEAGHG 2020/TR01
- 4<sup>th</sup> International Workshop on Offshore CCS. IEAGHG Report 2020/TR02

- Additional new study ideas invited from CSLF TG**
- Outline required by 7<sup>th</sup> January 2022**



# IEAGHG

- Flagship activities:
- **Technical Studies** >356 reports published on all aspects of CCS
- **International Expert Networks**
  - Risk Management - Meeting postponed from Jun 2020 to 2022  
- Webinars in Aug 2020, Jan 2021, Jan 2022
  - Monitoring
  - Modelling
  - Environmental Research
  - High Temperature Solid Looping
  - Costs
- **GHGT conferences**
  - GHGT-15, Virtual from UAE, Mar 2021 – papers published on SSRN
  - GHGT16 – 23-27 Oct 2022, Lyon France. Call for abstracts – Closes 14 Jan 2022
- **PCCC conferences**
  - PCCC6, UKCCSRC, virtual, 19-21 Oct 2021
  - **Negative CO<sub>2</sub> Emissions conference** – 14-17 June 2022 Gothenburg





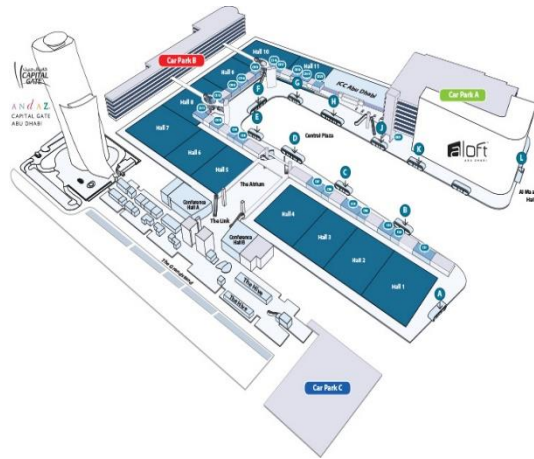


# ghgt-15

**Virtual**  
**15<sup>th</sup> to 21<sup>st</sup> March 2021**



**Hosted by Khalifa University,**  
**Abu Dhabi, UAE**



- Over 500 presentations
- 956 delegates from 41 countries
- Papers on SSRN by end April 2021 and some selected for IJGGC
- GHGT-15 Summary report – published August 2021

# International CCS Summer Schools



- 636 alumni, 58 countries
- 2020 in Bandung, Indonesia, hosted by ITB - **Postponed to 2022**
- **CCS Virtual Course with ITB**
- **for ASEAN students – Nov 2020**
- 82 students
- **CCS Virtual Course with ITB 2021**
- **26 Jul to 6 Aug 2021**



# Recent Reports



Title	Contractor	Report number	Proposed by	Publication date
Biorefineries with CCS	VTT	2021-01	IEAGHG	26/03/21
CO <sub>2</sub> as a Feedstock: Comparison of CCU Pathways	Element Energy	2021-02	France	23/11/21
CO <sub>2</sub> Utilisation: Hydrogenation Pathways	Element Energy	2021-03	Total	16/11/21
IEAGHG Monitoring Network - 'Monitoring Expertise Showcase for Post-Closure Monitoring'		2021-TR03		23/04/21
CCUS in National GHG Inventories		2021-TR04		28/06/21
White Paper: Towards Improved Guidelines for Cost Evaluation of Carbon Capture and Storage		2021-TR05		11/08/2021

# Expert Networks and other events



## 2020 / 2021

- NETL / US DOE Wellbore Integrity Workshops held on 18<sup>th</sup> May, 25<sup>th</sup> May 25<sup>th</sup> and 1<sup>st</sup> June. Now reported.
- ITB Indonesia - IEAGHG CCUS Summer School Virtual Course for Asia-Oceania Region, 26<sup>th</sup> July - 6<sup>th</sup> August 2021.
- NETL / US DOE, CEM, IEAGHG CO<sub>2</sub> Global Storage Capacity virtual workshop 21<sup>st</sup> September 2021.
- COP26 31<sup>st</sup> October – 13<sup>th</sup> November, Glasgow, Scotland
- Webinar on CO<sub>2</sub> DataShare sharing research data sets – February 2022

# COP26 IEAGHG-organised Side-events and activities



IN PARTNERSHIP WITH ITALY



United Nations  
Framework Convention on  
Climate Change



## CCS – Decarbonisation of Industries (UNFCCC Side-event) (IEAGHG and UT, CCSA, International CCS Knowledge Centre, Bellona)

- Tim Dixon, IEAGHG – Moderator and **Scene-setting**
- Dr Jennifer Wilcox, Acting Assistant Secretary, **Office of Fossil Energy and Carbon Management at DOE, US DOE**
- Dr Katherine Romanak, UT – **Demonstrating storage and assistance for developing countries**
- Dr Victor Richard Osu, Nigeria Office of the Vice President – **Nigeria’s strategy on CCUS**
- Eivind Berstad, Bellona – **Need for CCS Infrastructure**
- Beth Valiaho / Niall McDowell, International CCS Knowledge Centre – **Decarbonising Cement**



## CCS in Emerging Economies (IEAGHG and UT, Bellona Pavilion)

- Tim Dixon, IEAGHG – Moderator and **Scene-setting**
- Dr Katherine Romanak, University of Texas – **CCS Technology Transfer**
- Dr Victor Richard Osu, Nigeria Office of the Vice President – **Nigeria’s strategy on CCS**
- Professor Raffie Hosein, University of the West Indies – **CCS progress in Trinidad and Tobago**
- Dr Rachmat Sule, Institute Technology Bandung, Indonesia – **CCS progress in Indonesia**
- Dr Vaibhav Chaturvedi, Council on Energy, Environment and Water, New Delhi – **CCS and India**

Link to recordings on [CCUS-related events at COP26 \(ieaghg.org\)](https://www.ieaghg.org)

Also spoke at:

- Global CCS Institute “Carbon Reduction and Removal Technologies”, EU Pavilion
- IPIECA “Contributing to a Net-Zero Future”, IETA Pavilion
- Global CCS Institute “Reaching Climate Neutrality: CCS in the Green Transition”, IETA Pavilion
- UNFCCC virtual Exhibit on CCUS (with UT, CCSA, International CCS Knowledge Centre) and tracked CCUS-relevant developments in Article 6





# Webinar series

- Established June 2015
- 32 webinars to date

Webinar title	Date	Presenter	No. attendees	No. YouTube views to date
Biorefineries and CCS Webinar	19/08/2021	Jasmin Kemper, IEAGHG Kristian Melin, LUT University	106	18
Carbon capture and storage and the Sustainable Development Goals (SDGs) (IEAGHG & IPIECA)	8/09/2021	Jasmin Kemper, IEAGHG Juliana Monteiro, TNO	200	
COP 26 Outcomes Webinar	2/12/2021	Tim Dixon, IEAGHG Arthur Lee, Chevron	151	

# IEAGHG Information Papers (recent)



Information Paper Title	IP No.	Issue Date	Author
IEA Global Energy Review 2021	2021-IP06	26/04/2021	KB
CONFIDENTIAL 79th Renewable Energy Working Party 20th April 2021	2021-IP07	07/05/2021	JC
New IEA roadmap: Net Zero by 2050 - A Roadmap for the Global Energy Sector	2021-IP08	25/05/2021	AL, TD & JK
CONFIDENTIAL 81st WPFE and RfE	2021-IP09	11/06/2021	TD
The Oxford Principles for Net Zero Aligned Carbon Offsetting	2021-IP10	01/07/2021	SN
IEA Report – ‘Carbon Capture, Utilisation and Storage: The Opportunity in Southeast Asia’	2021-IP11	05/07/2021	SN
UK BAT Guidelines for Post-Combustion Capture on Power-Plants	2021-IP12	12/07/2021	KB
Blue Hydrogen: Fact vs. Fiction	2021-IP13	19/08/2021	AA
IPCC Working Group I report on the Physical Science Basis of Climate Change 2021	2021-IP14	20/08/2021	JK & TD
Carbon Management and Oil and Gas Research Project Review Meeting, August 6 <sup>th</sup> – 11 <sup>th</sup> 2021	2021-IP15	07/09/2021	JC

# IEAGHG Information Papers (recent)



Information Paper Title	IP No.	Issue Date	Author
CSLF 2021 Technology Road Map	2021-IP16	21/09/2021	JC
Nature article on CDR	2021-IP17	11/10/2021	JK
CONFIDENTIAL 82nd meeting of the IEA Working Party on Fossil Energy, 30 September 2021	2021-IP18	12/10/2021	TD
UK Net Zero Strategy: Build Back Greener: Synopsis on hydrogen and CCUS	2021-IP19	29/10/2021	AA
Net Zero Strategy and GGRs	2021-IP20	29/10/2021	JK
IEA Global Hydrogen Review 2021	2021-IP21	02/11/2021	AA
IEA: An Energy Sector Roadmap to Carbon Neutrality in China	2021-IP22	05/11/2021	KB
The Global Methane Pledge	2021-IP23	05/11/2021	SN
Net zero electricity in G7	2021-IP24	05/11/2021	KB
Next Generation Capture Technologies	2021-IP25	22/11/2021	AA
NETL Well Integrity Workshop: Identifying Well Integrity Research Needs for Subsurface Energy Infrastructure	2021-IP26	29/11/2021	JC





Input to WPFE



United Nations  
Framework Convention on  
Climate Change

CCS Side Events at COP20, COP21,  
COP22, COP23, COP24, COP25, COP26



CSLF Technical Group  
IEAGHG inputs



CCUS Initiative  
IEAGHG inputs

## Knowledge Transfer



Expert Reviewers,  
Accredited Observer  
**AR6 reviews**  
AR6 – 98 comments  
provided



London Convention:  
Regular updates on CCS:  
ROAD permit assessment, Offshore workshops  
**CO<sub>2</sub> Export Resolution 2019**

ISO TC-265  
IEAGHG inputs

