



IEA Greenhouse Gas R&D Programme

Update Report from IEAGHG

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IEAGHG**

*CSLF Technical Group, Venice
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Greenhouse Gas R&D TCP



Part of the IEA ETN since 1991



33 Members from 15 countries plus OPEC, EU and CIAB

What We Are:



Members set strategic direction and technical programme



Independent Technical Organisation

- We don't define policy
- We are not advocates

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.
- 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

IEAGHG



- *Flagship activities:*
- *Technical Studies* >320 reports published on all aspects of CCS
- *International Research Networks*
 - Risk Assessment/Management
 - Monitoring
 - Modelling
 - Environmental Research
 - Social Research
 - Oxy-combustion
 - Post-combustion Capture
 - Solid Looping
- *GHGT conferences –*
- *GHGT-14, Melbourne, Australia, 22-26 Oct 2018*
- *PCCC conferences*

IEAGHG



Other activities include:

- International CCS Summer Schools: 550 alumni, 50 countries
- **2018 – 25-29 June, Trondheim, NCCS**



- Peer reviews, eg US DOE, US EPA; CO2CRC
- Active in international regulatory developments – UNFCCC, IPCC, London Convention, ISO TC265
- Collaborations with IEA, CSLF, CCSA, EU ZEP and many others



International Energy Agency



United Nations Framework Convention on Climate Change



CCS Side Events at COP20, COP21, COP-22, **COP-23**

Input to WPF



IEAGHG
Technical reports to CSLF
Technical Group



ISO Technical Committee on CCS, TC-265
4 draft standards, 2 technical reports – **IEAGHG** input



London Convention:
Regular updates on CCS:
ROAD permit assessment;
Offshore workshops



ieaghg





Update on CSLF and IEAGHG Collaboration

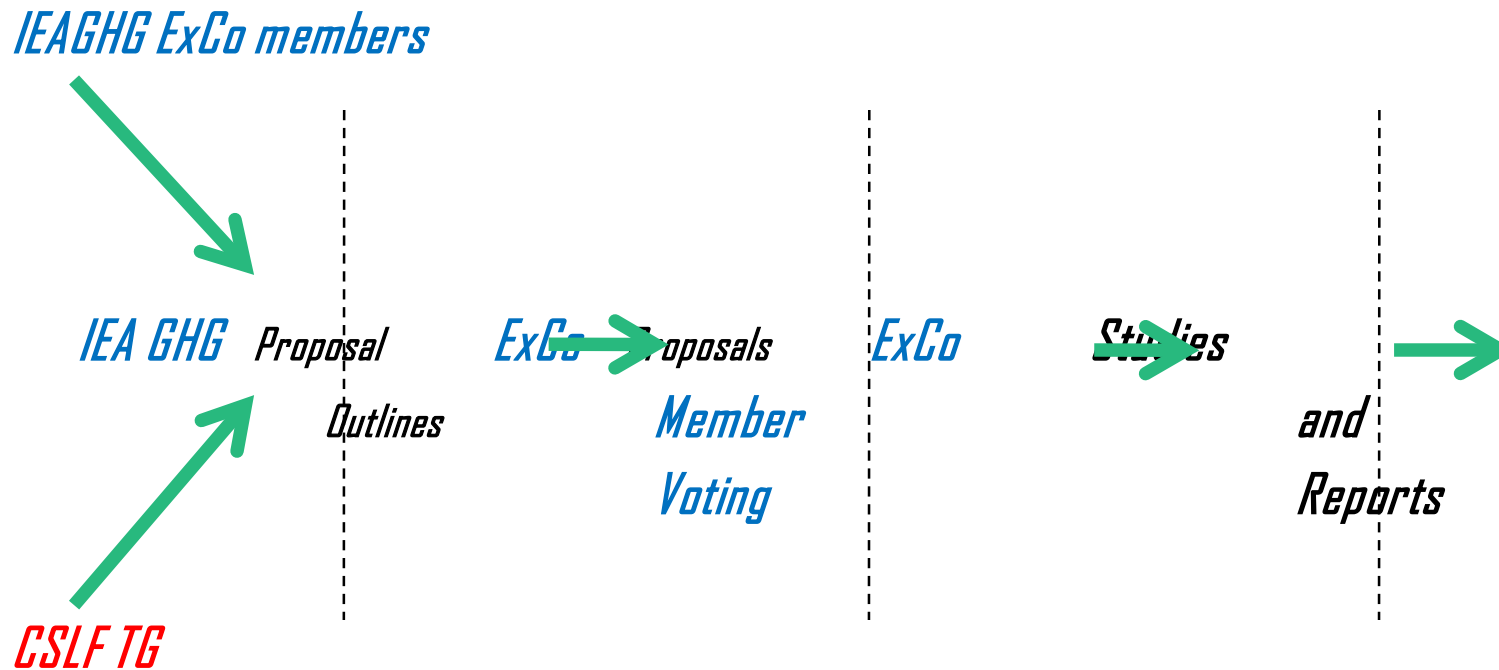
Arrangement between CSLF Technical Group and IEAGHG



- *How CSLF TG/PIRT and IEAGHG will interact for mutual benefit through increased co-operation*
 - Mutual representation of each at CSLF TG and IEAGHG ExCo (no voting)
 - Liaison with PIRT co-chairs to discuss potential activities or projects – two way process
 - Activities would require approval by ExCo or TG
 - Due reference to organisation providing the resource
- *Agreed by IEAGHG ExCo Oct 2007 and CSLF Technical Group Jan 2008*



IEAGHG – Study generation





CSLF proposed/related studies

- 'Development of Storage Coefficients for CO₂ Storage in Deep Saline Formations'. IEAGHG Report 2009/13. Presentation at CSLF TG Mar 2010
- 'Geological Storage of CO₂ in Basalts', IEAGHG Report 2011/TR2. Presentation at CSLF TG Sep 2011
- Potential Implications of Gas Production from Shales and Coal for CO₂ Geological Storage. ARI. Report published 2013. IEAGHG Report 2013/10. Presentation at CSLF TG Nov 2013
- 'LCA of CCUS – Benchmarking'. Developed as round-table/workshop: 11-12 Nov 2015 London. CSLF on Steering Committee. Report "Workshop on LCA in CCUS", IEAGHG 2016/03, March 2016. Presented to CSLF TG June 2016.
- International Workshop on Offshore Geological CO₂ Storage, 2016-TR2, July 2016. Presented at CSLF TG June 2016
- 2nd International Workshop on Offshore CCS. 2017/TR12. Nov 2017

Additional new study ideas invited from CSLF TG

Outline required by July 2018

Reports recently published (1)



	Contractor	Report number	Publication date
Valuing Flexibility in Power Plants	Imperial College College London London	2017-09	07/12/2017
12th IEAGHG Monitoring Network Meeting	N/A	2017-10	21/11/2017
2nd International Workshop on Offshore Geologic CO₂ Geologic CO₂ Storage	N/A	2017-TR12	21/11/2017
Public Perception of Pipelines	N/A	2017-TR9	09/01/18
Enabling CCS Clusters	Element Energy	2018-01	19/02/2018
CO₂ Storage Efficiency in Deep Saline Formations - Stage 2	EERC / University of University of North North Dakota	2018-02	11/01/2018
Greenhouse Gas Emissions Accounting for CCU Technologies CCU Technologies - Characterising CCU technologies, policy technologies, policy support, regulation and emissions and emissions accounting	Carbon Counts	2018-TR01	16/03/18
CCS Cost Network 2017 Workshop	N/A	2018-03	4/4/18

Reports in progress to be published



Title	Contractor	Publication date
Effect of Plant Location on Costs of Capture	AMEC (Italy)	November 2017
Techno-Economic Evaluation of CO ₂ Capture in LNG Process	Costain	May 2018

Studies underway



Title	Contractor	Proposal number	Draft Report date
CO2STCAP (Cutting Capture Costs in Process Industries)	Consortium led by Tel- by Tel-Tek, funded by funded by CLIMIT CLIMIT		2019
Well Engineering and Interventions	Talib Syed Associates Associates	50-05	Oct 2017
Further Assessment of Emerging Capture Technologies	CSIRO	48-03	June 2018
Review of fuel cell technologies with CO ₂ capture	Doosan	51-01	May 2018
Re-use of O&G facilities for CO ₂ Transport and Storage	Pale Blue Dot	51-09	March 2018
Understanding the Cost of Reducing Water Usage in Coal Water Usage in Coal and Gas Fired Power Plants with CCS	CSIRO	48-12	Phase 1 October 2018 October 2018 tbc tbc

Studies out to tender



Title	Expected start	Proposal number
Refineries and Electricity Production	Q1 2018	48-04
Beyond LCDE - Value of CCS in different generation and grid generation and grid scenarios	Q1 2018	51-04
Gas-and coal-fired power plant with CO ₂ capture capture	Q1 2018	51-03

Studies awaiting start



Title	Expected start	Proposal number
Role of CCS in the power sector and incentives for flexible for flexible generation	Q1 2019	52-01
Value of emerging and enabling technologies in reducing the costs, reducing the costs, risks and timescales for CCS CCS	Q1 2018	52-12
Techno-economic potential of biorefineries with CCS	Q1 2019	52-06
State of the Art Review of Current and Emerging Storage Storage Technologies and their Benefits (Stage I)	Q4 2018	52-09

Webinar series



- Established June 2015
- 14 webinars to date

Webinar title	Date	Presenter	No. attendees	No. YouTube views to views to date
Reflections on UNFCCC COP-23 - Negotiating the wide range of details of implementing the Paris Agreement	12/12/17	Arthur Lee / Tim Dixon Dixon	56	39
Enabling industrial CCS Clusters	26/3/18	Jasmin Kemper	119	45

- **To be linked from CSLF website**



Research Networks and other events

2018

- **Risk Network and Modelling Network**, hosted by EERC, 18-22 June 2018, Grand Forks, North Dakota, USA

With IEAGHG involvement and CSLF support:

- **3rd International Workshop on Offshore CCS**, hosted by Norwegian Research Council, Oslo, 3-4 May 2018

For more information and to register:

<https://forskningsradet.pameldingssystem.no/us-norway-bilateral-meeting>

2019

- **PCCC5** – 17-20 Sep 2019, hosted by RITE, Kyoto



ghgt-14

1077 Abstracts from 43 countries!

Technical Programme available early May 2018

355 Oral Presentations, 500+ Poster presentations.

Authors notified early May 2018

Registration open. Early bird rate ends 13 June 2018



www.ghgt.info

MELBOURNE, AUSTRALIA, OCTOBER 21-26, 2018