



Update on Activities of GHG TCP

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72nd WPF

28th – 29th June 2017

Tokyo, Japan

Publications since last WPF



- Annual Review 2016
- Technical Study Overview Book
 - Both available on WPF members web site
- Technical Briefs – April 2017
 - GHG Mitigation
 - [http://www.ieaghg.org/docs/General_Docs/Publications/Information_Papers/GHG Mitigation Brief April 2017.pdf](http://www.ieaghg.org/docs/General_Docs/Publications/Information_Papers/GHG_Mitigation_Brief_April_2017.pdf)
 - CCS Technical status
 - [http://www.ieaghg.org/docs/General_Docs/Publications/Information_Papers/CCS Technical Status Brief April 2017.pdf](http://www.ieaghg.org/docs/General_Docs/Publications/Information_Papers/CCS_Technical_Status_Brief_April_2017.pdf)
- GHGT-13 Summary Report
 - <http://www.ghgt.info/images/GHGT13/GHGT-13%20Summary%20Brochure.pdf>

Technical Studies Published since Last WPPF



	Contractor	Report number	Publication date
Techno-Economic Evaluation of Retrofitting CCS in a Market Pulp Mill and an Integrated Pulp and Board Mill"	ÅF Consult Oy VTT Technical Research Centre of Finland	2016-10	22/02/2017
Case Studies of CO ₂ Storage in Depleted Oil and Gas Fields	British Geological Survey and the Gulf Coast Carbon Centre	2017-01	17/01/2017
Techno-Economic Evaluation of SMR Based Standalone (Merchant) Plant with CCS",	AMEC Foster Wheeler and IEAGHG	2017-02	13/03/2017
Techno-Economic Evaluation of Hyco Plant Integrated to Ammonia / Urea or Methanol Production with CCS"	AMEC Foster Wheeler and IEAGHG	2017-03	13/03/2017
CO ₂ capture in natural gas production by adsorption processes for CO ₂ storage, EOR and EGR	Hyungwoong Ahn, University of Edinburgh Gelein de Koeijer, Statoil	2017-04	17/03/2017
Techno-Economic Evaluation of CO ₂ Capture in LNG Process	Costain	April 2017	
Feasibility Study for Ship Based Transport of Ethane to Europe and Back Hauling of CO ₂ to the USA	Fern Oil	2017-TR1	01/03/2017
Review of CO ₂ Storage Basalts	IEAGHG - Review	2017-TR2	30/01/2017

Technical studies to be published/underway



Title	Contractor	Publication date
Value of Flexibility in CCS Power Plants	Imperial College (UK)	May 2017
Effect of Plant Location on Costs of Capture	AMEC (Italy)	June 2017
CO ₂ Migration in the Overburden	BGS (UK)	July 2017
CO ₂ Storage Efficiency – Stage 2	EERC (USA)	August 2017
Commercial and Economic Arrangements of Industry CCS Clusters	Element Energy (UK)	August 2017
CCS in Climate Scenarios	University of Cork/Imperial College	September 2017
Understanding the Cost of Retrofitting CO ₂ Capture in Oil Refineries	Consortium led by SINTEF, co-funded by CLIMIT (Norway)	September 2017
CO ₂ STCAP (Cutting Capture Costs in Process Industries)	Consortium led by Tel-Tek, funded by CLIMIT	2019

Other publications underway



- Reports on Learnings from key CCS demonstration projects with USDOE
 - Boundary Dam 3 in 2016
 - Air Products & Quest reports in preparation
- CCU Accounting/QJ Science, Japan
 - Builds on earlier GHG accounting work on BioCCS and CO₂-EOR
 - Using range of CCU case studies as references
 - CO₂ mineralisation, CO₂ to fuels, CO₂ to chemicals
 - Frame how you would qualify CCU options as mitigation options.

Research Networks and other events



2017

- **Monitoring Network**, hosted by Battelle in Traverse City, Michigan, USA, 13-15 June.
- **High Temperature Solid Looping Network**, SWEREA MEFOS, Sweden, 4-5 September.
- **PCCC 4**. Hosted by NCCC, Birmingham, Alabama, USA, 5-8 September
- **Costs Network**. Imperial College, London, 13-14 September.
- **International Interdisciplinary CCS Summer School**. The 10th school is hosted by the BHP Billiton and SaskPower Knowledge Centre in Regina, Canada, 18-22 July.

Also with IEAGHG involvement:

- **2nd International Workshop on Offshore CCS**, BEG, Beaumont, Texas, 19-20 June.

Webinar series



- Established June 2015
- 10 webinars to date

Webinar title	Date	Presenter	No. attendees	No. YouTube views to date
Impressions and discussion of COP22 Marrakech	08/12/2016	Arthur Lee	41	43
CCS in the Pulp and Paper Industry	25/01/17	Petteri Kangas/ Kristin Onarheim	55	153
The Economics of Deploying CCS in a SMR Standalone H2 Plant using NG as Feeds	16/02/17	Stanley Santos	89	113
1.5°C Challenge	26/04/17	Jasmin Kemper	65	126

Collaboration with IEA/TCP's



- IEA WEO/ETP Team – meeting held on industry build out rates – input to <1.5C modelling work
- IEA CCS unit – joint report on CCS in industry in planning
- ETSAP – update of CCS data set for modelling community reference
 - Current reference criteria 7 years old
- IEA Bioenergy – on going participation in Task Force on BioCCS

External Activities



- ISO TC 265, Carbon Dioxide Capture Transportation and Storage
 - Participating in 3 working groups
 - Drawing in GHG member expertise
- CSLF Technical Group
 - Direct participation in 4 working groups
 - Abu Dhabi conference in May 2017
 - Offshore storage workshop – co-organisers
 - Joint report on CO2 Capture technology status 2016
 - Two year update underway – TRL 4/5 and above (co-ordinating with BEIS)
- IPCC 1.5 Special Report
 - Inputting relevant TCP research to secretariat
 - Acting as reviewers
- Mission Innovation (TRL's 1-3)
 - Technical Committee
 - Inputting to capture, storage and CCU work streams
 - Planning group for September workshop



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<https://twitter.com/IEAGHG>

www.facebook.com/pages/IEA-Greenhouse-Gas-RD-Programme/112541615461568?ref=hl