CCSA Technical Forum Minutes

30 September 2025

14:00 – 16:00 GMT/15:00 – 17:00 CEST
Microsoft Teams Meeting
Link to Meeting Recording Here: https://vimeo.com/1123574771/500eeeb89e?share=copy
Chair: Suzanne Ferguson, Wood

No.	Item	Action

1	**Introductions and CCSA competition law policy notice**
	Suzanne Ferguson (Co-chair)
	• New members introduction:
	  ○ Chris Dimopoulos, NPL
	  ○ Blair Fraser, Wood
	• Technica Forum co-chair nomination process was covered: Current co-chairs' terms have ended so the CCSA is looking for up to four new co-chairs to be nominated for a two-year term starting at the end of this year. Nominations are now open; current co-chairs may renominate. Nominations (name, company, role) should be submitted by **14 October**. If more than four nominations are received, a voting/election process will be held. Further details and process updates will be shared in the follow-up meeting materials
		Action: Submit your co-chair nominations (*name, company and role*) to despoina.tsimprikidou@ccsassociation.org by **14 October.**

2	**Presentation:** Carbon Intensity Standards *Jonathan Dredge (Exxon Mobil)* *Refer to slides and recording for presentations details.* Q&A **Industry alignment:** • Goal is to ensure initiative is **cross-industry**. • Coalition is expanding membership carefully to maintain **diverse representation** across sectors (chemicals, heavy industry, supply chains, services). • Interest shown from major upstream and integrated companies. **Carbon pricing interaction:** • Question raised on how global carbon pricing could interact with carbon intensity standards. • Coalition recognises this is a **critical but complex issue**. • Need to assess how product standards interact with existing policy frameworks (e.g., carbon pricing, ETS). • Possibility that standards could **work in parallel** with or even **replace certain policies** in top-emitting sectors. • Approach must be tailored to jurisdictions (US, Europe, China), each with differing policy landscapes. • Special attention to China's evolving policies, partly in response to CBAM.	**Action:** Please contact jonathan.dredge@exxonmobil.com with any further questions.

	• Remaining questions on carbon accounting were noted, with the option to continue discussion in the chat.	
3	**Metrology Update:** Gas Quality & Emissions *Chris Dimopoulos (NPL)* *Refer to slides and recording for presentations details.*	**Action:** Please contact manohara.gudiyor@npl.co.uk and chris.dimopoulos@npl.co.uk with any questions.
4	**External Presentation:** Solid-based materials for CO_2 capture and current Spanish situation in CCUS technologies *Javier Ibañez Castellano (AIMPLAS)* *Refer to slides and recording for presentations details.* Q&A **VPSA technology and compression load** • VPSA prototype under testing operates at very low pressure (~a few millibars). • Some CO_2 may remain after first cycle, but material stability allows for repeated cycles without significant degradation. • Compared to thermal desorption methods, VPSA maintains material stability as it does not alter chemical properties. • While there may be operational barriers, the technology shows **promising potential for cost reduction and efficiency improvements** in the future. **Absorption capacity of MOFs (Metal–Organic Frameworks)** • Current MOFs used show ~50–55% CO_2 absorption capacity. Goal is higher efficiency (~95%+), but limitations depend on material properties and operating conditions. • Potential to achieve higher capacity by developing or using different types of MOFs. • Research is ongoing; progress depends on **further material development and optimisation**. **Geological storage in Spain** • Spain has **very limited geological storage capacity** for CO_2. • Only one identified project exists for CO_2 injection underwater.	

	• National legislation currently restricts exploration of additional underground CO_2 storage options, as much of the ground is legally protected.	
5	**Discussion: CO_2 Odourisation Update** *Andy Brown (Progressive Energy)* *Refer to slides and recording for presentations details.* <u>Q&A</u> **Context:** • France raised the idea of **odourising CO_2 transmission networks**, similar to natural gas networks, to improve safety at the CEN Committee (European standardisation body). • The topic will be formally discussed at the **upcoming CEN meeting (16 October, Paris)**. The CCSA, holding observer status at CEN, will be present at this meeting. • UK prepared a position paper circulated widely ahead of the meeting. **Key considerations:** • **Limited relevance to natural gas analogy:** o CO_2 pipelines are not designed for domestic distribution (unlike natural gas). o Hazards differ: natural gas leaks pose flammability/explosion risks; CO_2 leaks mainly pose asphyxiation risks. • **Technical challenges:** o Traditional odorants (e.g., mercaptans) conflict with CO_2 purity requirements (sulfur must be removed for CCUS processes). o Adding odorants could **compromise CO_2 quality** and downstream applications. o Confusion risk: public might misinterpret odors (gas vs. CO_2 leak). • **Practical issues:** o Public education would be required to recognize a new odor. o Reinforcement/reminders would be challenging, unlike natural gas where people regularly smell it via domestic use. o Some individuals (e.g., post-COVID) have reduced ability to smell mercaptans. o Additional commissioning and operational liabilities may arise. **Overall conclusion from discussion:** • **No clear safety benefits** identified for odorising CO_2 pipelines in a transmission network. Different parameters exist for natural gas precedent	**Action:** CCSA to consider drafting position paper on CO2 Odourisation following October CEN meeting.

	because of its use within distribution/domestic networks, however this would not be the case for CO_2 networks. • Potential downsides (technical, safety confusion, public communication, purity concerns) outweigh possible advantages. • Similar considerations would also apply to alternative options such as CO_2 colourisation to address any safety concerns. **Next steps:** • Await discussion and positions from other countries at the **CEN meeting (16 October)**. CCSA will then consider whether further action/advocacy should occur. • Consider implications for **future cross-border CO_2 networks and standardisation.**	
6	**Conclusions and AOB** • Next Meeting: **8 December 2025** • CCSA Conference will be taking place in London, on 14 & 15 October. Please book your member discounted tickets here.	

Action	Who	Deadline	Progress
Submit your Technical Forum co-chair nominations (name, company and role) to Despoina.tsimprikidou@ccsassociation.org **by 14 October.**		14 October 2025	
Contact jonathan.dredge@exxonmobil.com with any further questions on carbon intensity standards.	Members	n/a	
Contact manohara.gudiyor@npl.co.uk and chris.dimopoulos@npl.co.uk with any questions on CCUS metrology and gas quality.	Members	n/a	
CCSA to consider drafting position paper on CO2 Odourisation following October CEN meeting.	CCSA	November 2025	
We welcome agenda recommendations for the Technical Forum. Please share any recommendations for agenda items to Despoina.tsimprikidou@ccsassociation.org and alberto.sanchez@ccsassociation.org	Members	October 2025	