

MEETING MINUTES

ZEP 72nd ADVISORY COUNCIL AND IWG9 PLENARY

14 September 2022, 10:30-17:00 CEST

In-person meeting in Brussels (and online)

1. Introduction and welcome

Chair, WC, opens the meeting. Remarks that this meeting is a unique occasion, being the first combined ZEP AC and IWG9 Plenary and also the first physical meeting after the pandemic. Shares Graeme Sweeney's apologies not to be able to join.

Chair asks if there are further items for the meeting agenda – the agenda is adopted. Chair asks AC members for approval of minutes from AC71 in June and ACEC July. All approved.

Chair provides introductory presentation on the latest CCUS developments in Norway. Notes that Longship project deployment is well underway with a financial investment decision sealed. He notes that a second well is being developed for storage, and that several promising projects were announced at the latest ONS conference, demonstrating the strong momentum for CCS deployment in Norway.

POG also welcomes attendants and introduces the ZEP Secretariat: Ana, Charles-Albert, and Murillo, who are invited to say a few words.

2. The new grant and set-up for ZEP and IWG9

POG provides a short update regarding the new grant and notes the European Commission (EC) steer in the call for grant proposals: only one project per sector, decreased budgets for all sectors, and focus on coordination. He notes that the grant is combined ZEP and IWG9 and in line with the two platforms' [2021 guidance document for grant applicants](#), focusing on preserving the strengths and coordinate all activities of the platforms to increase impact, efficiency, and benefits for stakeholders. He describes the aim to keep ZEP and IWG9 as separate entities but to coordinate the two platforms' activities in one combined governance structure.

POG highlights the basis for the new combined IWG9 and ZEP work programme. He notes that after AC/Plenary guidance during today's meeting, the outline programme will be discussed with the Networks, ERG and Government Group, and finally presented for endorsement at the ZEP AC/IWG9 Plenary in December.

POG also gives an update of the ZEP-C financial status, noting higher income, lower expenditure, and increased financial reserves at the end of 2022.

Questions and discussion follow, where the chair reiterates that the platforms will not be merged into one, and POG highlights that this first meeting will contribute to bringing clarity on how the setup will work in practice. *The governance structure is endorsed.*

3. State of play CCUS Implementation Plan/IWG9

Chair introduces the item and the IWG9, highlighting the 10 R&I targets for 2030 and that an update to reflect the strong ambition will be needed to achieve climate neutrality. Chair points at the very useful Roadmap to 2030 report and advises attendants to consult the report which is available on the CCUS SET-Plan website.

LE, MB, JP, AP, and POG describe the state of play of the IWG9 R&I activities, highlighting large-scale CCS projects, CO₂ transport infrastructure, capture, storage, utilisation, and the modelling exercise conducted over the past three years. It is concluded that this work made a significant contribution to the development of European CCUS and is set to continue in the new grant.

VK confirms the positive results of the work. He notes that the SET-Plan revamp aims to improve it and make it more politically visible and mentions that the European Commission (EC) has completed a thorough overview to determine what can be improved. VK highlights the upcoming SET-Plan conference on 9-10 November and an expected communication in Q1 2023 supported by both DGs RTD and ENER.

NR welcomes the expected increase in ambition. He also notes that many other reports also call for up to gigatonne-scale yearly CCS driven reductions by 2050, and that this strong scaling-up will be an important task ahead.

Chair agrees and adds that the SET-Plan needs to follow these strong developments.

4. Updates from the Networks

a. Network Policy & Economics

LSN provides an update, highlighting the outline for the new work programme and the priorities for the coming year: the revision of NECPs, the CCUS Forum, CDR and voluntary carbon markets, and the revision of the Monitoring and Reporting Regulation. LSN adds that the TWG P&F has recommended a proposed draft response to the ICVCM consultation. The draft Article 6 compliance guidance notes by the CCS+ Initiative are expected for early 2023 and the Network will monitor these developments. Finally, LSN highlights the Inflation Reduction Act that was been approved in the US, and the possible lessons from that model will be important to follow. LSN presents the draft response to two consultations that have already been endorsed by the ACEC/ZEP chair:

- 'Development of trans-European transport (TEN-T) network in light of war in Ukraine – amended proposal for guidelines'
- 'Energy – updating EU legislation to make the EU independent from Russian fossil fuels (REPowerEU)'

Chair invites the AC to approve the two draft responses. *The responses are approved.*

AF presents the draft ZEP ICVCM consultation response that is being prepared jointly with the CCSA. The aim is clear guidelines for voluntary carbon markets, and the draft response includes items such as a full life-cycle analysis and alignment, clear differentiation between reductions and removals. The AC is welcome to send comments to the draft by 21 September COB. FN gives input to the draft consultation regarding the post-closure period and its links to the CO₂ storage Directive.

Chair invites the AC to endorse the draft consultation response and to delegate to the ZEP chair the final endorsement, considering further input. Endorsed.

AF gives a short update to the CCS+ Initiative work, noting the work on Article 6 compliance. CAB gives a short overview of the comprehensive EU policy agenda and highlights the most critical items. LSN presents the CCUS Forum work as ZEP co-chairs the WG on CO₂ infrastructure and actively engages with WG vision.

LR also underscores the importance of DACCS for Hydro's decarbonisation strategies.

POG gives a short background to the expert group on carbon removals that the EC will start and the call for experts. He proposes that ZEP applies to join this group represented by Kristin Jordal from SINTEF, who has been actively involved in the ZEP CDR work. He invites KJ, who highlights her work and background.

Chair invites the AC to approve that ZEP applies to the working group and that Kristin Jordal will be the representative. Approved.

b. Network Technology

FN gives an update linked to the outline work programme, highlighting the good work following the report titled 'Experience in developing CO₂ storage under the Directive on the geological storage of carbon dioxide', noting that this work was timely considering the update of the associated Guidance documents and the TWG that produced the report will follow these developments. Further developments are also expected for the TWG CO₂ transport by ship. FN notes the recent work on CDR which aims to support the European Commission's engagement with Mission Innovation. Regarding IWG9, FN notes the importance of this work and that suggestions are welcome for further activities touching upon R&I.

AH gives a short presentation of the main messages in the ZEP report titled 'CCS in a biodiversity and land-use perspective', which has been endorsed by the ACEC in July and is up for approval by the AC.

A discussion ensues, with LR highlighting the current obstacles in national regulations and reiterating the threat posed by climate change. AH agrees and also points at differences in terms of biomass potential between different countries. He points to Scandinavia as a particularly promising region with strong forestry regulations.

Chair invites the AC to approve the report. Approved.

5. Updates from External Relations Group

MS highlights recent communications activities in ZEP and upcoming work coordinated with the Communications group. ERG co-chair JH follows with an update on the recent meeting with DG CLIMA, where the critical need to keep supporting CCS through the Innovation Fund and other activities were highlighted.

6. PCI, Innovation Fund, and projects

DK provides updates from DG CLIMA and the EC, highlighting approved projects under the Innovation Fund and noting the strong presence of CCS and CCU. He mentions that storage projects are much needed, and more applications for storage projects are welcome for future calls. DK describes the specific REPowerEU window with a dedicated budget envelope and highlights that CCS and CCU projects are included. Finally, DK highlights a new pilot-sized window to support technological development of non-commercial projects, and CCS projects are welcome to apply. The next call will be launched in November 2022 with a deadline set to March 2023.

DK gives an update on cross-border CO₂ transport and storage within the EEA, highlighting that the EC considers access to storage sites a commercial matter – where the EC would like to see fair and transparent prices and unbundling between transport and storage services. He notes that the EC views post closure liability as settled in CO₂ storage permits. DK confirms that in the EU and the EEA, the CO₂ storage and ETS directives provide a comprehensive legal framework for exporting/importing CO₂ for storage.

DK updates on the CO₂ storage directive's guidance documents, noting that consultants have been selected under the tender, and that the consultants have received ZEP's 'Experience in developing CO₂ storage' report. The timeline for the review: Q1 2023 will focus on the scope, while Q2-3 will focus on a public workshop. The EC is expected to adopt the revised guidance documents end-2023. EC will organise capacity building workshops for competent authorities and potential storage site operators in Q1-2 2024. The consultant is expected to provide a final report with recommendations outside of the scope of the revised guidance documents in mid-2024.

A discussion follows where the following is mentioned: On questions from SC regarding transport of CO₂ including the UK and Norway, DK responds that the focus area is the EU and the EU ETS area. DK notes that informing IMO will be enough, based on a question from LE on what will be needed regarding the London protocol. DK also notes that there will be no need for Member States to ratify this new interpretation of the CO₂ storage directive regarding bilateral agreements. On a question from TL on what level of innovativeness will be needed for storage projects to qualify for the Innovation Fund, DK notes that applications will be reviewed thoroughly without preconceptions.

7. CCUS Forum

CB from DG ENER provides an update on the CCUS Forum, highlighting that work is well underway for the WGs CO₂ Infrastructure and Vision with over 100 attendants in each of the WGs. He points at the current division with regards to CCS and CCU, and stresses that the work needs to encompass all technologies. CB also highlights the upcoming study on a regulatory framework for CO₂ infrastructure, which is being conducted by TNO, Trinomics, and Fraunhofer.

AFD gives a presentation on the Antwerp@C project, describing the project, aiming to reduce CO₂ emissions in the port area by 2Mtpa by 2025 and by 9Mtpa by 2030. AFD also highlights plans by Fluxys to reconfigure its natural gas network for the transport of CO₂, among other gases.

A discussion follows with JH and AFD highlighting the federal government's support in Belgium for CO₂ infrastructure through EU recovery funds. FN points out the need for CO₂ storage to accommodate the strong volume of capture that is coming up from such projects.

ZK follows to present the timeline for the JRC's ongoing work on matching CO₂ sources with appropriate sinks. ZK acknowledges the ZEP work on transport modalities of CO₂, as well as the ongoing work by the consultant consortium highlighted by CB – these will be accounted for to align approaches and achieve realistic results, also with regards to costs. ZK notes that further ZEP input is welcome to reach these accurate numbers.

8. Horizon Europe work programme

VK gives an update on the Horizon Europe work programme for 2023-24, which is expected in November. He notes that CCS will be included through calls on T&S, CDR, and CCU, and adds that a grant agreement has started on the Clean Energy Transition Partnership (CETP). The input to Mission Innovation CDR is also ongoing ahead of the Ministerial Conference in late September and ZEP has provided strong support.

A discussion follows with FN asking for clarifications regarding the evaluation process of the Horizon Europe grant applications, and NR asks for further information on cooperation with low-income countries. VK highlights the ongoing EU cooperation with Africa and the growing importance of CETP-related cooperation.

9. Carbon Dioxide Removal

FR provides an update on DG CLIMA's work with carbon removals, in particular covering the Sustainable Carbon Cycles communication. He reminds attendants that a report is planned for end of November. A regulatory framework is being developed by the EC, including governance mechanisms for certification, monitoring and verification of removals. The work of the expert group will start at the end of the year.

MA from the US Department of Energy follows with a presentation describing Mission Innovation CDR and the ongoing work. He highlights the critical challenges, such as the need for further data to support life-cycle analyses, and the need to coordinate efforts among Mission members. The Global Clean Energy Action Forum in late September will be a milestone for Mission Innovation and in this occasion several sprint projects will be announced.

10. ZEP and IWG9 actions

Chair and POG recap the actions taken during this first combined meeting:

- The ZEP AC and IWG9 Plenary endorsed the governance structure, and were asked to provide input to the outline ZEP/IWG9 work programme.
- The ZEP AC approved:
 - the consultation response on the TEN-T, and the feedback on the REPowerEU,
 - the ZEP report on CCS in a biodiversity and land use perspective,
 - Kristin Jordal from as the ZEP's applicant for the CDR Expert Group.
- The ZEP AC endorsed the draft ICVCM consultation response and to delegate the final endorsement to the ZEP chair.

JR notes that the combined meeting has proven to add value and welcomes the presence of several stakeholders in the room.

11. Closing remarks and next meeting

Chair thanks all participating, encourages all attendants to continue the discussion and invites more virtual attendants to join physically in the future. As the calendar stands, the next combined AC73 and IWG9 Plenary meeting will be organised on 14 December as physical meeting in Brussels.

Attendants

ZEP AC members		
1	Vicente Cortés	AICIA/University of Sevilla
2	Jonas Helseth	Bellona
3	Shirley Oliveira	BP
4	Isabelle Czernichowski	BRGM
5	Jannicke Bjerkas	Celsio
6	Chris Littlecott (<i>proxy to Jonas Helseth</i>)	E3G
7	Stijn Santen	EBN
8	Salvatore Giammetti	ENI
9	Lamberto Eldering	Equinor
10	Robin Clowes	ExxonMobil
11	Florence Delprat-Jannaud (tentative)	IFPEN
12	Liv Rathe	Norsk Hydro
13	Kim Bye Bruun	Northern Lights
14	Dorus Bakker	Port of Rotterdam
15	Stuart Haszeldine	SCCS
16	Syrie Crouch	Shell
17	Nils Røkke	SINTEF
18	Charles Soothill	Sulzer
19	Ward Goldthorpe	Sustainable Decisions
20	Filip Neele	TNO
21	Emmanuel Karakas	University of Athens

External speakers		
22	Chris Bolesta	European Commission
23	Vassilios Kougionas	European Commission
24	Daniel Kitscha	European Commission
25	Fabien Ramos	European Commission
26	Zoi Kapetaki	Joint Research Centre
27	Anne-Frédérique Demaerel	Port of Antwerp
28	William Christensen	Norwegian Ministry and IWG9 Co-chair
29	Joëlle Rekers	Dutch Ministry and IWG9 Co-chair
30	Marie Bysveen	SINTEF
31	Anastasios Perimenis	CO2 Value Europe
32	Jonathan Pearce	BGS
33	Mark Ackiewicz	US Department of Energy
Physical attendants		
34	Fernando Sanchez Naranjo	Alienor
35	Adrien Berthier	Aluminium Dunkerque
36	Michal Wendolowski	Bellona
37	Luke Warren	BP
38	Eadbhard Pernot	CATF
39	Paola Mazzucchelli	Circe
40	Sebastian Busch	energy4climate
41	Julia Mühleiß	EON
42	Nicolò Cairo	ETN Global
43	Adrian Nicolae	European Commission
44	Isabelle Chaput	European Lime Industry Association
45	Bert de Backker	ExxonMobil
46	Marine Valdois	ExxonMobil
47	Yelda Guven	ExxonMobil
48	Stale Aakenes	Gassnova
49	Melle Sijbrandij	Innovation Quarter

50	Caterina de Matteis	IOGP
51	Greg Archer	LanzaTech
52	Sara Vinklatova	Leitat
53	Virgilijus Petuska	Minoil
54	Thomas Vanhauwaert	Neptune Energy
55	Christian Schwarck	Shell
56	Kristin Jordal	SINTEF
57	Jens Dedeyne	Uni Gent
58	Laszlo Mohai	Veolia
59	Mohammed Nazeer Khan	Vito
Virtual attendants		
60	Angel Gavieiro	AG Strategy
61	Anton Manakhov	Aramco
62	Eric De Coninck	Arcelor Mittal
63	Raphael Wasserbaur	Austrian Environment Agency
64	Lina Nagell	Bellona
65	Michał Wendołowski	Bellona
66	James Todd	BP
67	Michael Evans	Cambridge Carbon Capture
68	Helen Bray	Carbon Engineering
69	Karim Rahmani	Carbon Impact
70	Toby Lockwood	CATF
71	Dave Warne	CCS Instruments
72	Olivia Powis	CCSA
73	Ross Kennedy	CCSA
74	Ruth Herbert	CCSA
75	Andreas Cappelen	Celsio
76	Jan Kjärstad	Chalmers
77	Eve Tamme	Climate Principles

78	Ceri Vincent	CO2GeoNet-BGS
79	Jean-Xavier Morin	CO2-H2
80	Vit Hladik	Czechia Geological Survey
81	Dennis Krämer	Dechema
82	Arjan van Ginkel	Endress
83	Giovanni Vergine	Eni
84	Keith Hester	Eni
85	Roberto Ferrario	Eni
86	Valeria Di Francesco	Eni
87	Till von Versen	EON
88	Ulrich Almeida	Equans
89	Camille Fleuriault	Eramet
90	Sophie Wilmet	European Chemical Industry Council
91	Eirik Lonning	European Commission
92	Carol Paquier	French Ministry for Environment and Sustainable Development
93	Darshak Mehta	GCCSI
94	Anghel Sorin	GeoEcoMar
95	Torsten Brandenburg	German Federal Ministry of Economics and Technology
96	Reinier van Noort	IFE
97	Caterina De Matteis	IOGP Europe
98	Yoshihiro Sawada	Japan CCS
99	Tomisław Kozubik	KGHM
100	Bruno Langlois	Khimod
101	Alexis Perrier	Lhoist
102	Caroline Båth	Liquid Wind
103	Mariana Lyra	LUT
104	Christopher Fernandes	Mitsubishi Heavy Industries
105	Arthur Heberle	Mitsubishi Power Europe
106	Arnoldo Perez	n/a
107	Jan Christopher Brandt	n/a

108	Marta Dołęga-Łasisz	n/a
109	Veronica Lupu	n/a
110	Jean-Louis Roux Dit Buisson	NeoCarbons SA
111	David Barratt-Due	Norwegian Ministry of Petroleum and Energy
112	Sina Prestmo	NTNU
113	Scot Bryson	Orbitan
114	Martyna Żatkiewicz	Orlen
115	Przemysław Grojs	Orlen
116	Eric Ingels	Pall Corporation
117	Dominika Niewierska	PKN Orlen
118	Florian Schabus	Planet A
119	Ragnhild Rønneberg	RCN
120	Arash Hedayat	Repsol
121	Joni Jupesta	Research Institute of Innovative Technology for the Earth
122	Chris Davies	Rud Pedersen
123	Martijn van de Sande	RVO
124	Philippe Lavagna	SBM Offshore
125	Miguel Angel Hernando	Tecnicas Reunidas
126	Luis F. Piedra-Garza	Thyssenkrupp
127	Nina Kolbe	Thyssenkrupp
128	Cyril Vock	TotalEnergies
129	Liliana Guevara	Trinomics
130	Wim de Jong	Twence
131	Christian Heller	UBA
132	Sebastian Schmid	Umwelttechnik Baden-Württemberg
133	Jarand Gauteplass	University of Berge
134	Xuan Ponchon	Véolia
135	Cecile Boyer	Vicat
136	Yosra Briki	Vicat
137	Frederik Selhorst	Victrol

138	Ludo Diels	Vito
139	Chris Phillips	Wood Plc
140	Hooman Haghighi	Wood Plc
ZEP Secretariat		
141	Per-Olof Granström	ZEP Secretariat
142	Charles-Albert Bareth	ZEP Secretariat
143	Murillo Salvador	ZEP Secretariat
144	Ana Faria	ZEP Secretariat