

MEETING MINUTES

ZEP 67th ADVISORY COUNCIL MEETING

15 June 2021, 10:00-13:00 CET

Virtual meeting

1. Introduction and welcome

Chair, **GS**, begins the meeting and reminds all of the meeting rules.

Chair invites the AC members to approve the AC67 meeting agenda, AC66 meeting minutes, ACEC April meeting minutes, and ACEC May draft meeting minutes. Minutes and actions recorded in the minutes, are all approved.

Chair welcomes new ZEP member Eni represented by Salvatore Giammetti.

Chair thanks Luke Warren for his extraordinary contributions to the Platform over the years.

Chair highlights the AC members' proxies for the meeting.

2. Horizon Europe work programme

Vassilios Kougionas, DG RTD European Commission, gives an update on the Horizon Europe work programme. The work programme is planned to be adopted today and published in one week, by 22 June. **VK** discusses the activities and topics that will be published. 'Information days' will be held on 5 and 6 July. On the work programme, CCUS will play a crucial role in Horizon Europe and the European Green Deal for energy-intensive industries.

Chair notes that the items addressed in **VK**'s update will be instrumental in agenda item 3.

Chris Bolesta, DG ENER European Commission, gives a general update from DG ENER. **CB** informs that the CCUS Forum is postponed until after the summer holidays. With additional time to propose a date, there is a possibility to update the programme. There are a number of CCS projects in national recovery plans and hopes that at a stage when the plans have been adopted, he can provide an overview of the projects.

NR asks about Mission Innovation and previous challenges and Clean Energy Ministerial CCUS topic. A short discussion follows.

3. ZEP development – preparing for 2022

POG presents the ZEP-C finances and outlook, the CSA call for proposals in the Horizon Europe work programme and the IWG9/ZEP guidance document, and the ZEP setup with two parallel work programmes.

On the call for proposals, he highlights the EC's interest in proposals leading to a combined IWG9/ZEP grant, and that the EC funding is halved – around €1 million – compared to current grants. The call deadline is set to 5 January, indicating a possible grant start not earlier than May 2022, which would result in a six-month funding gap between grants. On ZEP-C finances, **POG** highlights that €50,000 is included in the budget for November-December after the end of the

ZEP grant and, that the financial reserves by the end of 2021 are expected to increase to €270,000 – due to increased membership income and lower expenditure. With a start of the new grant 1 May 2022, another €100,000 will be needed for January through April next year. He notes that the ZEP-C General Assembly will be held directly after this AC meeting and that the ZEP-C Board of Directors will be asked how the secretariat support will be provided during the funding gap – to hold a tender or continue with the current provider, CCSA.

On the new grant, **POG** highlights that ZEP will formalise the continuation of delivering on the grant objectives as well as above and beyond, in a IWG9/ZEP work programme and, in parallel, a ZEP own-work programme funded by ZEP members. To lead and coordinate the two work programmes, ZEP will continue to fund resources or re-introducing employment of staff. The own work programme will be presented together with the budget in December 2021. Based on the interest to expand ZEP membership, a value proposition for new members is also being developed, to be presented at the AC in September. He also presents the guidance document for potential grant applicants that has been prepared by the IWG9 Chairs and ZEP.

POG notes that the ACEC has endorsed the presented way forward, now up for approval and further guidance from the AC today.

AP asks how a single grant holder will handle the workload that beforehand was handled by a consortium. **POG** responds that the work going forward will be different from the current grants, that there is a wish from the EC and a possibility to efficiently coordinate the two work programmes and engage the stakeholders, and that the funding for the new grant will be halved compared to the current grants. It will be very difficult to ensure this with more than one entity and sharing the budget. **GS** adds that the scope of this grant is substantially less than the two grants that came before. In order to have best return on funding, we need a coordinated work programme dealing with both institutions. **AP** notes his doubts on the efficiency of handling both grants with a single grant holder, but thanks for the responses.

GS asks for AC to:

- Support and recommend the 2021 budget, in particular since the members will fund the services in November and December? **The AC supports and recommend the budget.**
- Approve the guidance document describing the proposed common IWG9 and ETIP ZEP work programme. **The AC approves the guidance document and supports the common programme and topic areas.**
- Endorse the direction of travel regarding a proposal in September and approval in December. **The AC endorses.**

4. Updates from Networks

CS provides an update from Network Policy & Economics, discussing work on TEN-E regulation revision, draft consultation responses on CO₂ PCIs and gas decarbonisation package, and draft position on revision of EU ETS Directive. CDR and hydrogen have also been discussed at the latest meeting, with ToRs drafted for AC endorsement.

GS asks AC for endorsement of:

- ZEP consultation response for hydrogen and gas market decarbonisation package
- ZEP consultation response on candidate PCIs CO₂ infrastructure

- ZEP previous responses and communication on EU Taxonomy
- The ToRs for the ZEP work on CDR and hydrogen.

The AC endorses.

FN updates from Network Technology, noting the next meeting is 1 July. Several working groups are ongoing. The group working on the Directive on geological storage of CO₂ focuses on knowledge sharing and advising newcomers to CO₂ storage by sharing best practices and experiences, as well as discussing improvements to the guidance documents. An update will be provided at AC68 in September. The group on CO₂ shipping will have its first meeting on 1 July and aim to focus on standards for CO₂ transport by ship. **FN** adds that ZEP is a liaison member of ISO/TC 265, which will be of use for CO₂ shipping work.

AH updates on the working group on CCS for Clean Flexible Power Generation, holding a meeting on 17 June. The main topics to discuss are the role of CCS in sector integration, integration of heating, low-carbon hydrogen, what can be learned from examples outside of Europe, and the role of biomass and waste-to-energy.

RvdM provides an update on biomass report, which is being finalised and brought back to the AC for approval.

GS asks for AC approval of the ToR for the working group on CO₂ shipping – **The AC approves.**

5. Updates from the External Relations Group

LB updates, highlighting coordination with other stakeholders and cooperation and outreach on CCS topics, to ensure ZEP takes the forefront and can come out with joint positions. On EU Taxonomy, the pre-reads contains a document on ZEP's support of a complementary delegated act. The ZEP Conference planned for September coincide with AC68 meeting and to address some challenges. **LB** discusses the conference programme and challenges to highlight including CO₂ storage, CO₂ infrastructure, and a CCS strategy.

MK gives an overview of ZEP's communications and events activities in the past months and an update on planning looking ahead. Recent activities include updates to the ZEP CCS/CCU market-ready projects map, partner event at EU Green Week co-organised by ZEP and GCCSI, and a joint application for EUSEW 2021. Looking ahead, ZEP has been asked to organise and moderate a session at the CCUS Forum, ZEP is preparing an application to organise a side event at EU Pavilion at COP26, and work continuing on the CCS/CCU Facts & Information Toolkit.

GB highlights ZEP's engagement plan over the past months, noting focus areas of low-carbon hydrogen, CDR, TEN-E Regulation. Recent meetings held with DG CLIMA and Austrian Environment Agency on CDR.

GS raises the topic of coordination with other stakeholders, highlighting a recent letter from IOGP requesting ZEP to sign. Short timelines means it can be difficult for ZEP, and following extensive discussion with ERG, **GS** took the decision not to sign the letter as some matters did not align with ZEP's positions.

CS asks if a CCS strategy at EU level, could be something to consider at CCUS Forum. **CB** responds that it is a good idea and would encourage it. **GS** notes we will progress with this and have a substantial session on it at the conference.

The AC endorses the draft conference agenda.

6. IEA Net Zero by 2050 report

Samantha McCulloch, IEA, presents the recent Net Zero by 2050 report. 2020s decade is crucial to develop technologies and roll out. Need to scale up CCUS to more than 7.6 Gtpa abated by 2050.

NR asks about scale up from 40 MT to 7.6 GT and the role of CCS. What are the known and unknown technologies and is CCS seen as a mature technology? **SMC** replies that it is a significant scale up of CCUS and relative to other scenarios consistent with 1.5 degrees of 2050 pathway have not had as much reliance on CCUS. The scale up is symptomatic of the challenge of reaching a 2050 global net zero pathway. This scale up is of a similar magnitude for other technologies. We look at CCUS as separate technologies.

SS asks if they see specific sectors deploying more CCUS and is a specific growth of capture technologies required? **SMC** replies that for the sectors, we see a role in power generation and heavy industry but also low-carbon hydrogen, ammonia and direct air capture. By 2050, only 50% of CO₂ being captured is fossil-based. We see that for the most part there are technologies available that are mature but there is further work to be done to deploy these at scale.

SH asks how does the IEA model work to produce vast deployment of CCUS deployment? **SMC** replies: Primarily cost-optimised model but also taking into account energy security, deployment rates. Recognising global ambition to reach net zero by 2050. Would require policy action, not just carbon price.

LB asks when it comes to CCS and CCU, do you see value in separating the value chain as there is a difference in maturity and business case? **SMC** replies: In terms of a TRL discussion, certainly. In the context of modelling, we assume storage is available for the 95% of CO₂ that is captured (and not the 5% used for CCU).

CSO asks, investment in energy infrastructure, but what CCUS is included in this and how much? **SMC** replies: In general, we look at CO₂ transport and storage infrastructure. Needs to be early investment in transport and storage infrastructure.

Chair notes that it would be good to keep in contact regarding further questions.

7. The TEN-E Regulation revision

Liam McDonnell, from the office of MEP Seán Kelly, gives a brief update on the TEN-E Regulation negotiations in European Parliament. Slow progress on the file and political points on electrolysers, CCS and natural gas have not been agreed upon yet. Timetable was to have a vote in ITRE Committee in July, which seems to be delayed, possibly October/November. The Rapporteur has included storage, which was not the case for the Commission's proposal.

8. EU ETS Directive and Carbon Dioxide Removal

Fabien Ramos updates on DG CLIMA work on CDR certificates. Soon setting up an online form to submit views on CDR certification work. The Commission will for this autumn prepare a communication on carbon removals, carbon farming and certification of removal. There is a plan

to hold a conference early 2022. **Christian Heller**, from the Austrian Environmental Agency, updates on carbon removal mechanisms work and project structure.

A short discussion with questions follows.

Maria Velkova gives an update on the Innovation Fund, highlighting the following: Right now finalising evaluations of the small-scale call. On the large-scale call, next week is the deadline for the 70 applicants invited to submit full proposals for the second stage with results expected at the end of 2021. The plan is to announce the second large-scale call end of October this year, with deadline end of February 2022. An Innovation Fund expert group meeting will be organised in July.

Questions and short discussion follow.

9. Low-carbon hydrogen

Gunhild Reigstad from SINTEF gives a presentation on the Hydrogen for Europe study. Questions regarding meeting 2030 targets and a short discussion follow. **GS** notes the upcoming Hydrogen Forum and the possibility to re-discuss the topic following this.

10. Closing remarks and next meeting

GS notes that the ZEP-C meeting takes place following AC67.

ACEC August meeting will take place at a later date, 24 August, to be communicated.

GS Thanks all speakers and participants and closes the meeting.

List of participants

ZEP AC representatives		
1	Vicente Cortes-Galeano	AICIA / University of Sevilla
2	Jonas Helseth	Bellona
3	Isabelle Czernichowski	BRGM
4	Shirley Oliveira	bp
5	Stijn Santen	EBN
6	Salvatore Giammetti	Eni
7	Lamberto Eldering (<i>Proxy to Lucie Boost</i>)	Equinor
8	Robin Clowes	ExxonMobil
9	Constantin Sava	GeoEcoMar
10	Florence Delprat-Jannaud (<i>Proxy to Paula Coussy</i>)	IFPEN

11	Kim Bye Bruun	Northern Lights JV DA
12	Stuart Haszeldine (<i>Attending 11:00-13:00</i>)	SCCS
13	Syrie Crouch (<i>Proxy to Christian Schwarck</i>)	Shell
14	Nils Røkke	SINTEF
15	Charles Soothill (<i>Attending 12:00-13:00. Proxy to ZEP Chair 10:00-12:00</i>)	Sulzer
16	Ward Goldthorpe	Sustainable Decisions
17	Filip Neele	TNO
18	Stanislas van den Berg (<i>Proxy to Frédéric Linsig</i>)	TotalEnergies
External speakers		
19	Christian Heller	Austrian Environmental Agency
19	Fabien Ramos	European Commission
20	Chris Bolesta	European Commission
21	Vassilios Kougionas	European Commission
22	Maria Velkova	European Commission
23	Liam McDonnell	Office of MEP Seán Kelly (EPP/IE)
24	Samantha McCulloch	IEA
25	Gunhild Reigstad	SINTEF
Guests		
26	Lea Chauvin	Air Liquide
27	Bernice Cruz	Air Liquide
28	Armin Guenther	Air Liquide
29	Frederik Pieters	BASF
30	Eric De Coninck	ArcelorMittal
31	Lina Strandvåg Nagell	Bellona Europa
32	Ceri Vincent	British Geological Survey

33	Paul Zakkour	Carbon Counts
34	Rob van der Meer	CEMBUREAU
35	Magnolia Tovar	Clean Air Task Force
36	Alessia Virone	Clean Air Task Force
37	Anastasios Perimenis	CO ₂ Value Europe
38	Karl Smyth	Drax
39	Tom Mikunda	Dutch Ministry of Climate and Economics
40	Domien Vangenechten	E3G
41	Daniele D'Angelo	Eni
42	Roberto Ferrario	Eni
43	Maria Francesca Nociti	Eni
44	Brian Murphy	Ervia
45	Jan Steinkohl	European Commission
46	Antonella Sopranzetti	ExxonMobil
47	Paula Mazzucchelli	F Circe
48	Markus Sebastian Hole	Fortum
49	Ståle Aakenes	Gassnova
50	Anghel Sorin	GeoEcoMar
51	Angus Gillespie	Global CCS Institute
52	Eve Tamme	Global CCS Institute
53	Guloren Turan	Global CCS Institute
54	Marlene Arens	HeidelbergCement
55	Winston Beck	HeidelbergCement
56	Jan Theulen	HeidelbergCement
57	Caterina de Matteis	IOGP
58	Iskren Kirilov	IOGP
59	François-Régis Mouton	IOGP
60	Cedric de Meeûs	Lafarge Holcim
61	Arthur Heberle	Mitsubishi Power Europe

62	Stig Svenningsen	Norwegian Ministry Petroleum & Energy
63	Mark Driessen	Port of Rotterdam
64	Bram Sommer	Port of Rotterdam
65	Martijn van de Sande	Rijksdienst voor Ondernemend Nederland
66	Pietro Gimondo	RINA
67	Mehmet Onal	Shell
68	Kristin Jordal	SINTEF
69	Svante Söderholm	Swedish Energy Agency
70	Tim Peeters	Tata Steel Europe
71	Carl van der Horst	Tata Steel Europe
72	Anders Krag	Technical University of Denmark
73	Francis Poivre	Total
74	Hernan Silva	Total
ZEP Secretariat		
75	Per-Olof Granström	ZEP Secretariat
76	Giorgia Bozzini	ZEP Secretariat
77	Meghann Kissane	ZEP Secretariat
78	Luke Warren	CCSA
79	Chris Gent	CCSA
80	Dr Graeme Sweeney	Chairman of ZEP