

ZEP 67th Advisory Council meeting

15 June 2021, 10:00-13:00

Agenda Item 1: Introduction and welcome

1.a. Virtual meeting instructions

The ZEP AC67 will be a virtual meeting, held on Microsoft Teams.

Below are some instructions in order for the meeting to run smoothly:

- Before the meeting, you will receive an Outlook invitation for the meeting (10:00-13:00 on Tuesday, 15 June). The Outlook invitation contains a link to Microsoft Teams to join the meeting. If you have not received it, please contact the ZEP Secretariat.
- The Chair will let the presenter for each agenda item finalise his/her presentation before giving the floor to other participants.
- If you have a question, use the chat function (if you have not used it before, you will find a button at the bottom of the screen and the chat function will open up in a window on the right-hand side of the screen).
- In order for the Chair to organise the speaking order, please use the following vocabulary when you have a question:
 - “Chair: question to NN”, if you have a written question for the Chair to highlight, or
 - “Chair: oral question” if you want the Chair to give you the floor for an oral question or comment.
- When you are not speaking, we would suggest that you mute your microphone for sound optimisation.

1.b. AC67 meeting agenda

The agenda for the 67th meeting of the Advisory Council is appended as pre-read 1.b.

1.c. AC66 draft meeting minutes

The draft meeting minutes from the 66th meeting of the Advisory Council, which took place on 17 March 2021, are appended as pre-read 1.c.

1.d. ACEC April meeting minutes

The ACEC April meeting minutes are appended as pre-read 1.d.

1.e. ACEC May draft meeting minutes

The ACEC May draft meeting minutes are appended as pre-read 1.e.

1.f. New ZEP AC member

ZEP welcomes new member [Eni S.p.A.](#), joining ZEP in the Oil & Gas constituency. Salvatore Giammetti, Head of CCUS Department, joins the Advisory Council as their representative.

Eni S.p.A. is an integrated energy company whose dedication to the energy transition translates into tangible actions aimed at achieving the total decarbonization of products and processes by 2050.

ZEP 67th Advisory Council meeting

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

Meeting agenda

Item	Lead Presenter	Time
1 Introduction and welcome	Graeme Sweeney	10:00-10:10
2 Horizon Europe work programme – for information		10:10-10:25
<ul style="list-style-type: none"> Presentation and Q&A 	Vassilios Kougionas, DG RTD	
3 ZEP development – preparing for 2022 – for guidance and endorsement	Per-Olof Granström	10:25-10:50
4 Updates from Networks – for information and endorsement	Co-chairs	10:50-11:15
<ul style="list-style-type: none"> Updates from Policy & Economics and Technology 		
5 Updates from the External Relations Group – for information and guidance	Co-chairs	11:15-11:30
6 IEA Net Zero by 2050 report – for information		11:30-11:50
<ul style="list-style-type: none"> Presentation 	Christophe McGlade, IEA	
7 The TEN-E Regulation revision – for information and guidance		11:50-12:10
<ul style="list-style-type: none"> Update on EU institutions' negotiations and ZEP actions 	Liam McDonnell, Office of Seán Kelly MEP (TBC)	
8 EU ETS Directive and Carbon Dioxide Removal – for information and guidance		12:10-12:35
<ul style="list-style-type: none"> EU Commission's work on CDR certificates Updates on the Innovation Fund 	Fabien Ramos, DG CLIMA / Christian Heller, Austrian Environmental Agency Maria Velkova, DG CLIMA	
9 Low-carbon hydrogen – for information		12:35-12:55
<ul style="list-style-type: none"> Presentation of Hydrogen for Europe study 	Gunhild Reigstad, SINTEF	
10 Closing remarks and next meeting	Graeme Sweeney	12:55-13:00

1.c. AC66 draft meeting minutes

DRAFT MEETING MINUTES ZEP 66th ADVISORY COUNCIL MEETING

17 March 2021, 10:00-13:00 CET

Virtual meeting

1. Introduction and welcome

Chair, **GS**, welcomes all to the meeting and reminds of meeting etiquette. Asks for approval of AC66 agenda – notes no further agenda items and adopts agenda. Notes proxies from two AC members. Chair welcomes **Kim Bye Bruun**, Northern Lights JV DA, as new member of the AC. **KBB** gives a short introduction to the Northern Lights JV company. Chair also welcomes **Chris Bolesta**, DG ENER, joining for the meeting and who is pleased to be back in CCS work.

Chair thanks **Rob van der Meer** for his contributions to ZEP.

The meeting minutes from AC65 and ACEC January, as well as the ACEC February draft meeting minutes, are all approved.

2. Secretariat update

POG updates regarding ZEP finances, mentioning the extended ZEP grant ends in October and why €50,000 in the budget is allocated to November and December. The balanced 2021 budget and continued increase in member sponsorship indicates a possible increase of the remaining budget at the end of this year from the approximately €187,000 at the start of 2021. He informs that the ZEP-C General Assembly will be held directly after the June AC meeting. **POG** notes that all actions from the latest AC and ACEC meetings are handled and included in corresponding agenda items for today's meeting, mentioning the two new reports on CDR and hydrogen and thanking all involved. He highlights the upcoming ACEC strategic seminars, to prepare for the new ZEP in 2022, and with a focus on support to stakeholders, the value proposition for members, and to increase ZEP's impact. The first seminar will be held on 24 March. **LE** comments on the budget slide – typo '2020' should be '2021'.

3. Updates from Networks

LE introduces the two new NWPE Co-chairs – **Lina Strandvåg Nagell** and **Christian Schwarck**, who will support the network going forward. Since AC65, much has happened in NWPE and ZEP has responded to several consultations. **LE** summarises ZEP's key messages in responses to the revision of EU ETS Directive. Notes that DG CLIMA approached ZEP regarding the Innovation Fund

to ask if ZEP would endorse a shorter approach to the application process. Following internal discussions in ACEC, ZEP responded supporting the one-step process, but added that any decision by DG CLIMA should not be detrimental for projects which need a two-step process, as large CCS projects can be suited to two-step process. **LE** notes Taxonomy will be addressed later in the meeting.

LE introduces the revitalised Policy & Funding Group and the new Terms of Reference, which was circulated with ACEC members. The kick-off meeting has taken place. Invites **LSN** and **CS** to give their feedback from this meeting. **CS** notes the group helps to drive ZEP's policy positions and consultations. **SC** highlights the importance of standardisation for CO₂ shipping, asking how ZEP will engage. She also asks about TEN-E and interconnections between EU and the UK.

On standardisation, **LE** adds that the TEN-E does not look at this but can help. On infrastructure, the biggest point for DG ENER is that it could not identify any challenges (legal or regulatory) for shipping and did not see that TEN-E needed to address this.

POG refers to the questions by **SC** and notes that ZEP is preparing for an expert seminar on CO₂ transport by ship linked to the EU ETS Monitoring and Reporting Regulation on 12 April, involving a study commissioned by the Dutch government. Here also other standardisation issues linked to CO₂ transport by ship can be included. Regarding TEN-E and the UK, he mentions that from what we understand so far, infrastructure between the UK and an EU Member State can become a PCI and also apply for CEF funding.

GS put forward a set of ideas on TEN-E to Parliament process – standardisation may be of use as part of this to help progress overall activity. **GS** notes that in agenda items 4 and 5, we can hear if we have the right focus or if we should shift our focus to EP for now. **SC** adds on negative emissions: developing a way to assure and accredit them and she mentions the upcoming meeting with Microsoft. **GS** states this can be an agenda item at AC67.

FN gives NWT update and highlights the two recent reports on CDR and hydrogen, which were further communicated at ZEP webinars in February and March. The Network is following work in the ISO, which is steadily progressing in different technical groups, where ZEP can provide input where needed or alerting the ZEP community if needed. NWT will support the work on the CCUS Roadmap to 2030. The TWG CCS for clean power generation has held with meetings between chairs **RdK** and **AH** and the work is to kick-off soon. It will address how CCS can provide flexible power in a situation where there is increasing input from renewable power sources and will take a look at work in previous ZEP working groups.

The TWG Directive on geological storage of CO₂ does not aim to reopen the Directive for review but looks to formulate as best as possible how operators developing CCS or CO₂ storage plans for saline or depleted fields can do so in a less complex manner as the directive seems to outline. Suggest ways to deal with issues that have been highlighted with the directive. The first meeting will take place on 19 March – please contact **FN** or ZEP Secretariat to get involved. The group is chaired by **FN** and **SH**.

RvdM updates on the status of the TWG Carbon-Neutral Biomass, noting the group has 10 people involved looking into how to assess emissions from carbon-neutral biomass within current and future EU legislation. Notes that the group participants present different views and the report will contain various scenarios. The next meeting takes place on 18 March.

FN adds that the working groups aim to provide updates at the AC67 meeting in June. **GS** opens the floor for question and comments.

4. Updates from ERG

MK updates on Communications, mentioning communications work on recent ZEP reports on CDR and hydrogen: through ZEP channels, webinars, and infographics available on the ZEP website. The work coordinated with the ZEP informal Communications Group is also showcased – the CCS/CCU market-ready projects map on ZEP's website, coordination leading up to and at COP26, work on developing a CCS Facts & Information Toolkit to help communicate about CCS, as well as the TEN-E Campaign.

5. TEN-E Regulation revision

POG gives a short introduction and notes some of the given reasons why the European Commission's proposal for a revised TEN-E regulation does not include CO₂ storage and other modalities for CO₂ transport. CO₂ infrastructure is 'still' included in the regulation but the inclusion has been criticised by NGOs and MEPs and there has not been enough support from stakeholders. He highlights the importance of support from all stakeholders and the power in numbers. ZEP now has strong and coordinated action plan with focus on policymakers in the EP, Council and MS.

MK gives update on the upcoming webinar on 23 March that will focus on the TEN-E Regulation and cross-border CO₂ transport and storage infrastructure, co-organised with Bellona Europe and Clean Air Task Force. **GB** provides an update on engagement with stakeholders in EU Parliament and Council. The timeline for exchange of views in the ITRE has been moved to 25 March. There will be opportunities for stakeholders to provide input by the end of April. Next week the topic of TEN-E features on the agenda for the ZEP Government Group meeting.

TM gives a presentation noting The Netherlands has high ambitions for CCS – 10 MT CO₂ per year by 2030. To enable this, there is SDE++ mechanism, and they can see extremely high ambitions for capturing CO₂, expecting high interest for the next SDE++ call after the summer. Developing CO₂ storage sites takes time, and it is necessary to think ahead – how do we encourage companies with technical capabilities to do this and make the investments? TM highlights the strong need to develop CO₂ storage capacity and on time to support for CCS to happen in Europe. How do we prevent this storage bottleneck?

A short discussion follows on development of CO₂ transport and storage. **KBB** adds from a Northern Lights perspective, that they have a team which engaged actively with emitters across Europe – the appetite for storage is there. There is commercial risk involved with making investment decisions in

storage development and technical risk which must be considered by developers. **GS** raises the topic of shipping standardisation and highlights the TEN-E progress as an agenda item for AC67.

6. Low-carbon hydrogen

WH introduces the role of SolarPower Europe in the European Clean Hydrogen Alliance, leading the Secretariat of the Low-carbon and renewable hydrogen production roundtable. **WH** summarises the missions of the ECHA – to identify projects and deliver a project pipeline by May 2021 – and highlights the strong dependency of the EU Hydrogen Strategy.

POG thanks **WH** for the presentation and the ECHA work. ZEP is active in the ECHA production roundtable, giving comments and input based on technology-neutrality during the process. He highlights that the project pipeline must not exclude large scale and cost-efficient projects that can contribute to the EU climate goals and meet the Taxonomy thresholds. **POG** also asks **WH** what she sees as the end result of the work and the use for the project collection?

GS gives an update from his comments at the ECHA CEO meeting, emphasising a science-based and technology-neutral approach, the importance of correctly calculating the carbon footprint of all technologies, and that eligibility criteria must be harmonised with other EU policies, referring to the Taxonomy's TEG report. **GS** notes a question in the chat on what ZEP can do. **WH** responds that the end result has been a moving target. Now the focus is on large as well as medium and small projects if they can scale up. **WH** highlights the importance not to close the project pipeline too early as important pieces of legislation are coming up, such as Taxonomy and RED II revision. The Commission is opening a call next week and the list of projects should inform ongoing work of member states resilience and recovery plans. On how ZEP can help, **WH** says that ZEP is already helping with input shaping archetypes and project attributes. It is also up to ZEP members to submit their projects. **WH** also replies to question from **NR**, that full or partial LCA is still being discussed.

GS urges ZEP members and observers to put forward hydrogen projects they are working on in the European Commission application starting next week.

7. EU Taxonomy

GS gives an update regarding the EU Taxonomy. Substantial discussions are ongoing, a delay is expected and it is unclear how things will play out and if individual views in the process will prevail. There are substantial differences in views.

8. EU funding programmes updates

VK gives an update on Horizon Europe and partnerships, referring to the drafted work programme and expect to start with topics on CCUS in hubs and clusters as well as on cost reductions of CO₂ capture. He also highlights that the aim is to continue the support of ETIPs linked with SET-Plan activities as a common topic for all ETIPs. Internal EC consultation is ongoing on Horizon Europe,

expected to end next week. **VK** also updates on partnerships on hydrogen and the Clean Energy Transition, on national cooperation, Mission Innovation, and notes that the publication is delayed to mid-May.

POG gives a short update on the work of the CCUS SET-Plan, highlighting the CCUS 2030 Roadmap that will provide information to EU and MS policymakers, companies and finance community on what needs to be done during the 2020s to reach the targets. The work is to be finalised by October so it can be used in the communication in the run-up to COP26.

MV gives an update on the Innovation Fund. The small-scale call has closed and they are preparing evaluation. Not as many CCS projects in this call as the large-scale call, that saw great interest with 311 projects. The work on the second call for large-scale proposals is starting and there is a proposed change, which would allow one-step applications, speeding up the process.

EdC asks to clarify the number of projects that will receive a letter informing them of the outcome. **MV** responds that all will receive the letter and 70 will continue on. **LB** notes the subsidy scheme and any plans for increasing the budget for the next round? **MV** responds that there are discussions around this, such as the review of the EU ETS Directive.

JH asks questions regarding the second call if there is any clarity on the grid electricity emissions factor for projects. **MV** responds that at present, they are collecting lessons learned from first stage applications. The emissions factor is not on the table for the moment but will be looked at. She also notes that this is a long discussion but there are differences in Power Purchase Agreements and Guarantees of Origin. The evaluators will look at the types of PPAs. The decision for zero emission factor grid electricity was to focus on reducing burdens on projects and not complicating them further. The focus is to demonstrate the technologies that will deliver in the future and differentiate the support that may be available through RED and CCU fuels.

GS notes that the lifecycle analysis topics will continue to be a key discussion and we will continue to follow this.

9. Closing remarks and next meeting

GS thanks all for their participation and looks forward to work at upcoming ZEP meetings. Closes the meeting.

List of participants

ZEP AC representatives		
1	Jonas Helseth	Bellona
2	Shirley Oliveira	bp
3	Isabelle Czernichowski	BRGM
4	Lee Beck	Clean Air Task Force
5	Chris Littlecott (<i>Proxy to Johanna Lehne</i>)	E3G
6	Stijn Santen	EBN
7	Lamberto Eldering	Equinor
8	Robin Clowes	ExxonMobil
9	Jannicke Bjerkås	Fortum Oslo Varme
10	Rob van der Meer	HeidelbergCement
11	Florence Delprat-Jannaud	IFPEN
12	Kim Bye Bruun	Northern Lights JV DA
13	Syrie Crouch	Shell
14	Nils Røkke	SINTEF
15	Charles Soothill	Sulzer
16	Ward Goldthorpe	Sustainable Decisions
17	Filip Neele	TNO
18	Stanislas van den Berg (<i>Proxy to Hernan Silva</i>)	Total
External speakers		
19	Vassilios Kougionas	European Commission
20	Maria Velkova	European Commission
21	Tom Mikunda	The Netherlands Ministry of Economic Affairs
22	Walburga Hemetsberger	SolarPower Europe

Guests		
23	Lee Chauvin	Air Liquide
24	Marc David	Air Liquide
25	Sidonie Ruban	Air Liquide
26	Eric De Coninck	ArcelorMittal
27	Lina Strandvåg Nagell	Bellona
28	Ceri Vincent	British Geological Survey
29	Alessia Virone	Clean Air Task Force
30	Anastasios Perimenis	CO2 Value Europe
31	Karl Smyth	Drax
32	Svante Söderholm	Energimyndigheten (Swedish Energy Agency)
33	Daniele D'Angelo	Eni
34	Lucie Boost	Equinor
35	Chris Bolesta	European Commission
36	Elisa Todesco	ETN
37	Antonella Sopranzetti	ExxonMobil
38	Paola Mazzucchelli	F. Circe
39	Ståle Aakenes	Gassnova
40	Angus Gillespie	GCCSI
41	Eve Tamme	GCCSI
42	Guloren Turan	GCCSI
43	Christoph Reissfelder	HeidelbergCement
44	Arthur Heberle	Mitsubishi Power Europe
45	Stig Svenningsen	Norwegian Ministry Petroleum & Energy
46	Marleen Ramakers	Port of Antwerp
47	Martijn van de Sande	RVO
48	Mehmet Onal	Shell

49	Christian Schwarck	Shell
50	Marie Bysveen	SINTEF
51	Frederic Linsig	Total
52	Francis Poivre	Total
ZEP Secretariat		
53	Per-Olof Granström	ZEP Secretariat
54	Giorgia Bozzini	ZEP Secretariat
55	Meghann Kissane	ZEP Secretariat
56	Luke Warren	CCSA
57	Dr Graeme Sweeney	Chairman of ZEP

1.d. ACEC April meeting minutes

ACEC April meeting

13 April 2021

9:00-11:00 CET

1. Introduction

Chair, **GS**, welcomes all to the meeting. Asks if there are further matters to be included in ACEC April meeting agenda – no additions and agenda is adopted. Moves to approval of ACEC February meeting minutes and follow-up on actions from the meeting – approved. AC66 draft meeting minutes will guide ACEC activities – no matters arising, and minutes are approved (formally approved at AC67).

GS refers to the AC67 draft meeting agenda and asks ACEC for input. After positive comments from the ACEC, the draft is accepted as the working agenda for AC67.

2. ZEP development

GS notes this item is for information and guidance, and a record of discussions at strategic seminar. It is important that it reflects the matters that arose, and actions needed. There is substantial work to be done around the grant, and decisions to be made by the ACEC, AC, and ZEP-C Directors.

POG gives an overview of the first Strategic Seminar: Regarding '*the call for proposals*', we are awaiting the Horizon Europe programme in mid-May, expecting a single call for proposals for both workstreams, decreased funding, and that the European Commission (EC) would like to see combined proposals. The seminar discussion was focused around how to avoid the risk of relying on the grant holder and to consider a ZEP own organisation. The items for approval by ACEC are: ZEP preferring a single bidder/grant holder, (ii) preparing a grant- and a ZEP-own work programme, and (iii) setting up a structure to ensure independence and employing ZEP-own permanent staff to lead and coordinate the work programmes. **POG** notes that documentation for these items will be prepared for approval at the June AC67 and the ZEP-C AGM, taking place on the same day.

On '*strengthening ZEP's industrial membership base*', **POG** notes that the seminar presentation and discussion highlighted many challenges, with some sectors not yet ready to commit and ZEP's current setup benefitting from observers but, at the same time, indicating limited value for becoming a member. Seeking ACEC approval to prepare a clear value proposition for potential members. On '*primary decarbonisation and offsets*', there are a number of items where ZEP does not yet have a clear position

regarding inclusion in the EU ETS and framework and limitations for CDR. Timelines are clear for the EU ETS review and the CDR certification work and we are in full preparation for this work.

LE agrees with the description from the seminar and supports one party going forward. He asks where the distinction would be between ZEP's own funded work and the grant. **GS** mentions that ZEP is currently operating where there is collaboration through the grant and ZEP own sponsored work, also mentioning that after the grant in November and December this year, all activities will be funded by own resources. The two work programmes are important, we cannot let the bids only meet criteria set by the EC. ZEP has previously published such a programme on the website so that anyone making a bid could take this into account. **GS** proposes a clear set of proposals for AC67 and the ZEP-C AGM in June and asks the ACEC for approval. ACEC approves.

On strengthening ZEP's industrial members base, a value proposition has been proposed. Referring to the primary decarbonisation and offsets, **GS** notes the need to draft a ToR, and a draft position ready for AC67. He suggests this to be done by NWPE Co-Chairs and the ZEP Secretariat. **POG** informs that a meeting with the co-chairs is planned for this afternoon. ACEC approves both items.

Action: Preparations of the two work programmes, the new structure to ensure independence for employment of ZEP-own permanent staff, and the value proposition, all for approval at AC67. Draft proposals to be presented and revised at ACEC meeting in May.

3. Updates from Networks

LE begins Network Policy & Economics update referring to the ZEP expert workshop on CO₂ shipping, held on 12 April. **POG** notes 33 expert participants including members from ZEP, CCSA, and gathered by the Dutch Government. The first part considered work done by DNV GL on the EU ETS MRR and what needs to be changed for shipping to be included. The second part discussed what other CO₂ ship transportation standardisation issues are needed, how these should be standardised, and how this important work can be brought forward. The discussion clarified that standardisation is needed, that time is of the essence and that there is a need to assess what kind of standardisation would be best. ZEP will now prepare a working group and ToR, and work together with CCSA, in order to make this work as broad as possible, and to ensure it is done once and done well. **CSc** mentions the German Government is considering a scheme for CO₂ shipping on the river Rhine. **LE** discusses upcoming consultation response on gas networks. **MD** asks a question on the commonly known tariff. **LE** responds that it is a basic tariff that would be common and open to any customer and is not based on the ability to pay but is based on regulation. **POG** adds that ZEP stopped short of this crucial discussion last year and that it will be brought up at the next Strategic Seminar in May. **LE** says a draft will be circulated in NWPE for feedback and comments and a more concrete document will also be brought to the ACEC or AC for comments.

AH provides an update on Network Technology and the Working Groups. CCS for Clean Flexible Power Generation holds the next call on Thursday. An outline of the report will be presented at AC67. Geological storage of CO₂ scope of work was presented at the ZEP Government Group meeting in March. The next meeting will consider defining the process of developing the report and assigning tasks. Carbon-neutral biomass have prepared the first draft of a report. **AH** notes that the topic of sustainability of biomass was addressed in a recent article by Politico – can share the article. The next NWT meeting is set to take place on 1 July.

4. Updates from External Relations Group

JH and **GS** give an update from the ERG. Planning for a ZEP Conference as a ‘grant farewell’ to be held in September, coordinated with AC68. An ERG strategy meeting will be held to focus on ZEP activities for Q3-Q4 2021. **MK** gives an update on ZEP informal Communications Group and work since the latest meeting in March. Work continuing on CCS/CCU Facts & Information Toolkit, with a small Working Group to be set up to drive the work forward. ZEP will apply to host a Partner Event at EU Green Week 2021. Further focus areas for communications over April-May include TEN-E Regulation, low-carbon hydrogen, CDR.

5. Low-carbon hydrogen

POG updates on the European Clean Hydrogen Alliance (ECHA). The first part of the work is now finalised and the EC has opened project collection until 7 May. The number of companies and organisations in ECHA has increased to over 1,000. There has been strong lobby for green hydrogen, however, the final project attributes includes new low-carbon hydrogen projects and the harmonisation of criteria with the Taxonomy and REDII. The EC is expected to coordinate the collected ECHA and IPCEI projects, assess the needs for infrastructure etc. and inform member states for their resilience and recovery plans. The first results are expected at Hydrogen Forum on 17-18 June, followed by matchmaking meetings with the IPCEI countries, and announcement at the end of the year. **POG** also notes that there is a new organisation focused on hydrogen within DG GROW. **NR** commends the ZEP work done to include blue hydrogen projects. **GS** notes that it will be a straightforward process to apply for ECHA membership and submit projects at the same time.

6. TEN-E Regulation

GB gives an update on the current status of TEN-E Regulation in the ITRE Committee. On CCS, CCU and CO₂ infrastructure, there were good interventions from MEP Berendsen (EPP) and MEP Groothuis (Renew) – in line with ZEP’s messaging. There have also been positive remarks on low-carbon hydrogen, seen in the draft report from the ITRE Committee, taking a technology-neutral approach on hydrogen. This will be discussed at TWG Policy & Funding tomorrow, Wednesday, with the aim to get feedback

on the draft amendments and then send to the Rapporteurs and MEPs that ZEP has been in contact with. The deadline is next week and the approval of the ITRE report will be at the plenary in July. **MD** adds that the draft opinion from the ENVI Committee suggests fully deleting CO₂ from TEN-E. **POG** notes that ZEP will communicate with all important MEPs and assistants on this, but also coordinate the best sender for ENVI, which likely is environmental NGOs. **LSN** suggests engaging with ENVI on this if possible, especially ahead of the final vote. **JH** adds that they are coordinating messaging on TEN-E but also treading carefully within the NGO community.

7. ZEP actions on EU Taxonomy

GS opens the item by noting a lack of clarity and highlighting a range of conversations and input provided, matters that are still not settled, and the timeline to settle them is short. Several open letters have been sent to the EC recently on matters of including or excluding different technologies. There is a shift in the threshold for hydrogen production, which is helpful. At the same time, there does not seem to be progress on how the electricity is provided to grid-connected activities. **GS** mentions that ZEP has communicated on this matter and that it is unclear what more ZEP can do. Opens floor for comments or proposals. **CSc** notes the positive inclusion of CO₂ shipping in Taxonomy. **LSN** adds positive communication around EU Taxonomy and its potential. **NR** highlights importance of Taxonomy and asks why electrolyser manufacturers are so keen to keep the 2.256 threshold? **GS** responds that this is an unachievable threshold. **GS** asks if there is agreement to prepare a paper on the threshold – approved.

Action: ZEP paper that describes why the Taxonomy is important and clarification around hydrogen threshold, full LCA, and electricity use.

8. Closing remarks

NR gives an update on Hydrogen for Europe study. The final report has been submitted to the board of the project and the planned launch with results of the study is set for End-April. Only for internal use but will be ready to be presented at AC67. It considers two different paths: technology diversification pathway (technology-neutral approach) and renewable push pathway. The hydrogen demand is strong, stronger than the EU hydrogen strategy prescribes. In terms of phasing, blue hydrogen is set from now to mid-2040s, while green from 2040 onwards. The CO₂ storage capacity for 2050 is set for 1,4 Gtpa.

GS reminds of upcoming meeting dates and opens the floor for AOB. **CSc** notes an EC public consultation is now open on PCIs, deadline in June. It will be interesting to know what DG ENER's aim is with this consultation. **GS** also notes that DG ENER will be a presenter at AC67. **LE** notes the thematic group around CO₂ storage will have a meeting in April and DG ENER will further inform the group members of the process going forward. **GS** notes that as it becomes more of a political economy conversation, we are

less clear about where ZEP's role is – agenda item for the next Strategic Seminar. **GS** thanks all for participating and closes the meeting.

List of participants

1	Dr Graeme Sweeney	ZEP Chair
2	Jonas Helseth	Bellona
3	Lina Strandvåg Nagell	Bellona
4	Lamberto Eldering	Equinor
5	Arthur Heberle	Mitsubishi Power
6	Mark Driessen	Port of Rotterdam
7	Christian Schwarck	Shell
8	Nils Røkke	SINTEF
9	Marie Bysveen	SINTEF
10	Charles Soothill (<i>Attended 9:00-9:30</i>)	Sulzer
11	Per-Olof Granström	ZEP
12	Giorgia Bozzini	ZEP
13	Meghann Kissane	ZEP
14	Luke Warren	ZEP

1.e. ACEC May draft meeting minutes

ACEC May meeting

18 May 2021

9:00-11:00 CET

Draft meeting minutes

1. Introduction

Chair, **GS**, declares ACEC Vice-Chairs are present. Notes that **NR** will join for 9:00-10:00 and gives proxy to **MB** for 10:00-11:00. Moves to approval of ACEC April draft meeting minutes – minutes are approved. Moves to adopt ACEC May draft meeting agenda – agenda is adopted. Notes that a new member is joining ZEP Advisory Council meeting – Salvatore Giammetti, Eni S.p.A, who will be present at AC67.

2. AC67 draft meeting agenda

POG notes key points in the proposed agenda – the soon to be published Horizon Europe programme, updates and ZEP's actions on the TEN-E Regulation review, the EU ETS and CDR certificates, as well as low-carbon hydrogen – and asks if there are other topics that should be considered. **GS** opens the floor for comments. **NR** suggests the recent IEA report on net-zero narrative, which could be a possible presentation.

3. ZEP development

GS notes this item concerns how ZEP will evolve, the current and future support from the European Commission (EC), and the interim period between grants and hands over to **POG**, who notes this item is for ACEC guidance and endorsement ahead of approval by the AC, where one part is proposed for online AC approval, since the timeline is short with expected publication of the Horizon Europe programme on 27 May. Referring to the pre-reads, **POG** highlights the following:

We are expecting an ETIP/IWG call for proposals that will only fund one CCUS project, and that a combined ZEP/IWG9 grant with coordinated activities is preferred. The call is expected to be open until end-August, with a possible start of the grant at the beginning of 2022. The current ZEP grant ends on 31 October and €50,000 has been included in the ZEP-C budget to fund November and December 2021.

To continue ZEP's work today – delivering in accordance with grant and being active above and beyond this – two work programmes will be defined: one for the grant and

one in addition, funded by ZEP members. The proposed ZEP grant guidance document, which highlights objectives and focus areas for the coming three-year period, is aimed to guide potential applicants for the call for proposals, and to be shared with the EC and published on the ZEP website. The work of ZEP and IWG9 can be efficiently coordinated in the new grant, with the aim to keep the strengths and governance of the two entities at the same time as coordinating meetings and working groups, increasing both impact and benefit for stakeholders. There will be a meeting with the IWG9 co-chairs to discuss both the guidance and the coordination.

The setup for the ZEP own work programme that will be coordinated with the grant work programme to maximise the impact, including increased resources, members-only meetings and seminars, focused and strengthened communication and outreach, campaigns, commissioning of studies, etc. Permanent staff will lead and coordinate the two work programmes.

GS mentions that operating in a mode with grant deliverables complemented by member-funded programme continues with the key difference that the grant funding is decreasing. ZEP has also historically published guidance and it is up to the EC to decide if they take the advice. He also highlights the need to evolve ZEP over the coming grant, to become independent. **GS** opens the floor to ACEC and a short discussion follows.

GS reminds all that the decisions will be made down the road but asks ACEC for endorsement because the Horizon Europe programme is to be published on 27 May. The ACEC endorses. **GS** highlights that the guidance should be discussed with DG RTD and that this will be addressed further at the second ACEC strategic seminar.

Action: Prepare ZEP guidance document – for AC approval

4. Updates from Networks

CSc notes the next Network Policy & Economics meeting takes place on 27 May. The Policy & Funding group recently convened to focus on TEN-E advocacy, with good progress being made in EU Parliament on inclusion of CO₂ shipping and storage. Regarding the Fit for 55 Package, looking to achieve greater incentives for CO₂ shipping in EU ETS, also discussing incentivising CDR and the certification system being developed by DG CLIMA. EU Taxonomy and hydrogen was discussed, as well as CO₂ Projects of Common Interest (PCI) applications. **MD** raises a question on the draft response on gas and hydrogen package, regarding the issue of regulation of CO₂ transport infrastructure. Need to be careful of implications of position on the topic. Where will the ZEP position be finalised? **POG** notes the AC decides ZEP's position. This topic will be discussed at the Network Policy and Economics and ACEC strategic seminar, ahead of approved by the AC.

FN notes the next Network Technology meeting will take place on 1 July. Three working groups (TWG) are ongoing. TWG Carbon-neutral biomass is working on a draft report to be finalised at AC67. The TWG Directive on geological storage of CO₂ continues work, with the next meeting to be held on 19 May. The first meeting of TWG CCS for clean

flexible power generation is starting up. A TWG on CO₂ shipping is being set up and with increased interest in transport by ship, the matter of standardisation will be addressed. A call will take place next week to begin the work. A discussion follows, where it is highlighted that the focus should be on ZEP guidelines – identifying areas where consistency can add value – and to coordinate with other stakeholders involved in standardisation. **GS** concludes that the draft ToR to be updated accordingly ahead of approval at AC67 and first working group meeting.

Action: Update draft Terms of Reference for Temporary Working Group CO₂ Shipping – for AC approval.

5. Updates from External Relations Group

JH notes that the ERG has covered several topics at latest meetings. EU Taxonomy will be addressed later in the meeting agenda. Recently, ZEP supported the agreement on the EU Climate Law. On TEN-E, ITRE Committee's draft report has been released and ZEP engaged P&F to draft and review amendments on inclusion of storage and transport. ZEP will be engaged in the upcoming CCUS Forum organised by DG ENER, planned for 14 June – possibly delayed.

MK gives a short overview of ZEP's communications activities following the recent ZEP Communications Group meeting, and an overview of upcoming events including the proposed programme for a ZEP Conference in September 2021. Further ZEP activities include a TEN-E knowledge-sharing seminar focusing on CO₂ transport and storage infrastructure, EU Green Week where ZEP is co-organising an event with Global CCS Institute, and the possibility to engage at EU Sustainable Energy Week – a joint application has been coordinated between ZEP and other organisations and has been submitted.

GB updates on ZEP's engagement plan, noting a new focus area on the certification framework for Carbon Dioxide Removals. ZEP will meet with DG CLIMA and the Austrian agency for environment, which is working on a CDR certificates study, to discuss. They are familiar with ZEP's reports and definitions of CDR.

6. EU ETS, biogenic CO₂, CDR

GB updates on the EU Climate Law that will be voted on in the EU Parliament Plenary in June, which outlines a climate-neutrality target for 2050 and 55% GHG emissions reduction for 2030. Focus on EU ETS, particularly around CDR and the certification framework. Interest to draft a ToR for ZEP's work following the certification and to keep a focus on the item moving forward.

GS concludes that a ToR for the work on CDR certificates will be prepared and that the position paper on EU ETS will be brought to the AC for approval.

Actions: Prepare Terms of Reference for work on CDR certificates, and the position paper on EU ETS – for AC approval.

7. ZEP actions on low-carbon hydrogen

POG highlights the many ongoing developments on hydrogen, the importance to actively engage, and the interest from members to restart a hydrogen working group with focus on policy. He updates on the Clean Hydrogen Alliance (ECHA), highlighting ZEP's actions and input, the EC projects collection and next steps – with over 1,000 hydrogen projects and screened against the Taxonomy emissions thresholds, and the planned ECHA meeting with Commissioner Breton. **POG** also gives a short update on the adopted Taxonomy delegated act, the complementary delegated act expected this autumn, and the proposed ZEP input to the Taxonomy Platform.

GS opens the floor for comments. **JH** notes a letter from six EU member states on additionality. **GS** asks if the ACEC can endorse the proposed ZEP Taxonomy input and the restart of the hydrogen working group. The ACEC endorses.

Actions: Send ZEP Taxonomy input to the EC. Prepare for a restart of a Temporary Working Group on hydrogen.

8. Closing remarks

GS opens the floor for any other business. Reminds all of upcoming meeting dates and notes that a poll is ongoing for the second ACEC strategic seminar, with the date to be set shortly. Thanks all for participation, support, and closes the meeting.

List of participants

1	Dr Graeme Sweeney	ZEP Chair
2	Jonas Helseth	Bellona
3	Lina Strandvåg Nagell	Bellona
4	Lamberto Eldering	Equinor
5	Arthur Heberle	Mitsubishi Power
6	Mark Driessen	Port of Rotterdam
7	Christian Schwarck	Shell
8	Nils Røkke	SINTEF
9	Marie Bysveen	SINTEF
10	Charles Soothill	Sulzer
11	Per-Olof Granström	ZEP
12	Giorgia Bozzini	ZEP

13	Meghann Kissane	ZEP
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Agenda item 2: Horizon Europe work programme – *for information*

2.a. Presentation and Q&A

Vassilios Kougionas, DG RTD, will present the [Horizon Europe Work Program](#) with a focus on CCS and CCU. *The Coordination Support Action call for proposals – ‘Support to the activities of the ETIPs and technology areas of the SET Plan’ – is further discussed under item 3.*

Agenda item 3: ZEP development – preparing for 2022 – *for guidance and endorsement*

3.a. Finance update per 31 May 2021 and outlook to 31 December 2021

Appended is ZEP-Communications financial management report of 31 May 2021.

- Income: Referring to the ZEP-C budget that was endorsed by the AC65 in December 2020 (and to be approved by the ZEP-C AGM), three new members have joined ZEP, adding €50,000 to the budgeted (€232,500) income for 2021. ZEP-C invoices for 2021 have been issued.
- Expenditure: Due to Covid-19, the expenditure for January through May 2021 is lower than budgeted.
- The current ZEP grant will end on 31 October 2021, and the next grant is not expected to start until several months into 2022, possibly 1 May (given that the call for proposals will be open until 5 January 2022). The ZEP AC has, in anticipation of the risk of a gap in grant funding, built up financial reserves in ZEP-C, amounting to approximately €190,000 at the end of end of 2020. Given the increased membership funding and continued Covid-19 lockdown, the financial reserves are expected to increase to €270,000 by the end of 2021.
- To manage ZEP without the grant funding during November and December this year, €50,000 was included in the 2021 budget.
- Given the long gap in grant funding – six months, should the new grant start on 1 May 2022 – the ZEP-C Board of Directors will be asked how to deal with the provision of secretariat support if a tender should be held or if the current service provider – CCSA – should continue to provide the services during the period between the two grants.

3.b. Horizon Europe ETIP/IWG call for proposals

The European Commission (EC) has posted a final working document – ‘annex VIII to the [Horizon Europe work programme](#) 2021-2022, 8. Climate, Energy and Mobility’ – on its website. The Work Programme is expected to be approved shortly. The programme includes a call for proposals for the next three-year grant: ‘Support to the activities of the ETIPs and technology areas of the SET Plan’ (*the call for proposal text is appended*), where the following is described:

- A single call for proposals for all ETIPs and IWGs.

- Only one project will be funded for CCUS.
- Based on the 'Expected outcome', the EC would like to see proposals combining ETIP and IWG, resulting in a single grant ('... advancement towards more interconnected activities, both in terms of contents and implementation mechanisms').
- The grant funding is decreased: the proposed budget around €1 million for the total three-year grant, which is less than half of the current budgets of €1 million for the ZEP grant and €1.1 million for the IWG9 grant.
- The call will be open between 24 June and 5 January 2022.

3.c. ZEP work programmes

In view of the current ZEP grant coming to an end in October 2021 and a new grant expected to start in 2022, the ACEC is holding strategic seminars to discuss how to further develop ZEP, with a focus on support to stakeholders, a value proposition for new members, and increasing impact. So far, two seminars have been held, in March and June, with the following topics on the agenda: preparing for 2022/the ETIP/IWG call for proposals, strengthening the industrial base in ZEP, Carbon Dioxide Removals, and business models for CO₂ transport. The two latter topics are brought up under agenda item 4. *Updates from Networks*.

Based on the seminars, the ACEC has endorsed the following, for approval by the Advisory Council and ZEP-C general assembly:

- To prepare two parallel work programmes for the upcoming grant period: one describing what should be included in the grant and one describing what should be done in addition, funded by ZEP members.
- To ensure impactful work, continuity, and independence – reducing the risk of relying on a specific grant holder – for ZEP to re-introduce employment of permanent staff funded by the members to lead and coordinate the two work programmes.
- To prepare a public guidance document for ETIP/IWG call for proposals, to support the EC and guide potential applicants.
- To prepare a value proposition for members to strengthen the industrial base in ZEP.

Today, ZEP is delivering in accordance with the three-year EC grant and, in addition, being active above and beyond this. ZEP will continue working in the same way for the upcoming grant period. Based on decreased grant funding in the upcoming grant and strongly increased ZEP members' funding, a 'ZEP own work programme' funded by ZEP

members, in addition to and to further strengthen the grant work programme, will be formalised.

Grant work programme and guidance for applicants

The grant work programme will include both ZEP and IWG9 activities, and a common guidance document has been developed with the aim to support the EC and guide potential applicants for the call for proposals. The document will be shared with the EC and published on the ZEP and IWG9 websites.

The overarching objective for the new three-year project would be to bring together the relevant stakeholders to support the development and implementation of the SET Plan R&I priorities. These are the proposed focus areas – that would also make up project work packages:

- The political economy – European Green Deal and linked initiatives, links to member states' policies.
- Outreach, external relations (also international).
- Development of CCS/CCU Technologies.
- Supporting CCS/CCU market-ready projects.
- Delivery of the CCUS SET-Plan Implementation Plan.
- Governance and management.

The proposed grant work programme guidance document for applicants:

Guidance for the call for proposals: HORIZON-CL5-2021-D3-02-15: Support to the activities of the ETIPs and technology areas of the SET Plan

The SET-Plan Implementation Plan Working Group 9 on CCUS (IWG9) is one of the ten actions of the European Strategic Energy Technology Plan (SET-Plan), whose aim is to accelerate the deployment of low-carbon technologies, improve new technologies and bring down costs by coordinating national research efforts. IWG9 has been established to help the progress of Research and Innovation (R&I) activities required to achieve the 2020 targets for CCS and CCU, agreed by the European Commission, SET-Plan countries and industry. The SET-Plan brings together EU countries, the European Commission, industries and research institutions.

The Zero Emissions Platform (ZEP) is a European Technology and Innovation Platform under the EU's Strategic Energy and Technology Plan (SET-Plan) and technical adviser to the European Commission on carbon capture and storage (CCS) and carbon capture and utilisation (CCU).

ZEP and IWG9 are grateful for the EC's support and grant, as well as for the funding of the upcoming three year's work programme.

IWG9 and ZEP understand that only one Coordination and Support Action (CSA) project within the CCUS sector will be funded and that the EC would like to see proposals combining the support and co-ordination of the ETIP and the IWG, resulting in a single grant.

The IWG9 Chairs and ZEP would like to share the following views with the EC and potential applicants:

- The selection of grant holder should be guided by quality, efficiency, and proven track record.
- IWG9 and ZEP would prefer the outcome where the dedicated fund is granted to a single bidder/grant holder. If the bidder believes that support from other organisations will be needed to run the CSA successfully, these organisations should be included as linked third parties or subcontractors.
- The call's text highlights the 'advancement towards more interconnected activities, both in terms of contents and implementation mechanisms' as an 'expected outcome'. IWG9 and ZEP would like the new grant to preserve the strengths from both the current governance structures in order to engage the broadest possible group of CCUS stakeholders, but at the same time coordinate the activities in order to increase impact and benefits for stakeholders and efficiency.

The IWG9 Chairs and ZEP have identified the following focus areas as crucial for CCS and CCU for the upcoming three-year grant:

- *The political economy – European Green Deal and linked initiatives, links to member states' policies*

In the EC's communication on a European Green Deal, CCS and CCU have been identified as 'breakthrough technology' in support of the trajectory towards climate neutrality by 2050. The work of ZEP/IWG9 will thus be embedded in a political scenario where the EU needs to deliver on higher climate objectives. Co-operation with member states, EU policy-makers and the different parts of the CCUS value chain – represented in the ZEP membership – is crucial to ensure that these technologies can become operational by 2030 and support the EU's decarbonisation pathway.

- *Outreach, external relations (also international)*

Outreach towards the European institutions and national governments should be pursued and increased to further communicate about the role of CCS and CCU in achieving EU's climate goals. International cooperation with existing CCUS initiatives – such as Mission Innovation, CEM CCUS, ERA-NET ACT, etc. – is increasingly important. Activities in support of this – events, knowledge-sharing

seminars, meetings – should be aimed at raising the profile of CCS and CCU, highlighting their current status, potential and developments, enablers and hurdles, and connecting the stakeholders along the value chain.

- *Development of CCS/CCU Technologies*

As CCS and CCU technologies move into operations and are integrated in Europe's industrial value chain, it will be vital to keep a focus on technological developments and ensure that these are shared within and beyond the CCUS community. Technology developments are foreseeable in all the segments of the value chain – capture, transport, storage, and utilisation. Technical reports will be needed to assess the continuous developments on CCS and CCU and offer a continued updated overview on the status of the technologies.

- *Supporting CCS/CCU market-ready projects*

An ever-rising number of CCS/CCU projects is progressing towards becoming operations by mid to late 2020s – projects in all parts of the value chain, linked to industrial processes, combined with the production of low-carbon hydrogen, some offering the possibility to remove CO₂ from the atmosphere, etc. It will be crucial to support these ongoing and upcoming European CCS/CCU projects from a policy and technological point of view, addressing existing barriers for implementation, enabling knowledge-sharing activities and providing technical reports. Enablers and supportive policy frameworks and funding mechanisms are an equal important element in this focus area.

- *Delivery of the CCUS SET-Plan Implementation Plan*

This activity will support the delivery of the R&I activities and targets identified in the CCUS SET-Plan Implementation Plan, where the targets have been [updated](#) for 2030 and endorsed by the CCUS SET-Plan Plenary in October 2020.

The SET-Plan CCUS Implementation Plan has defined these challenges for CCS and CCU development for the coming years:

- Getting the commercial framework right,
- Accelerating deployment at scale of CCS and CCU technologies,
- Driving costs down – through R&I, learning by doing and economies of scale,
- Enabling rapid scale-up to deliver on the climate goals,
- Enabling EU citizens to make informed choices regarding the benefits that CCS and CCU bring.

Developing industrial scale CCS and CCU projects will identify many new challenges that can best be solved by undertaking R&I in parallel with large-scale activities. An iterative process is needed where R&I projects address specific industrial challenges, with the results then implemented in large-scale projects.

- *Governance and management*

This focus area includes the governance, and the service to be provided to support the work of ZEP and the IWG9: in the Advisory Council, Advisory Council Executive Committee, Networks and working Groups, IWG9 Plenary and SCG, etc.

In addition to and to further strengthen the grant work programme, ZEP will also develop an own work programme, funded separately by ZEP members and to be coordinated with the grant programme (as is the case for the current grant). The aim is to enable impactful and well-planned work by adding – leveraging the funding under Horizon Europe in order to maximising the impact – extended/increased resources, commissioning of studies, increased communication, events, campaigns, etc.

The IWG-9 has its own separate targets for 2030 and will continue updating these targets when necessary.

(Text highlighting that this document has been endorsed by the IWG9 Chairs and the ZEP Advisory Council will be finalised after the ongoing process). For transparency reasons, it should be mentioned that employees of CCSA – who holds the secretariat function in the current ZEP and IWG9 grants – have supported in the drafting of this document.

ZEP's own work programme

ZEP's own work programme, to be funded by ZEP members, will be in addition to, planned and coordinated with, and to further strengthen the grant work programme – to leverage the funding under Horizon Europe in order to maximise impact. Strengthened communication and events, campaigns, fact-based advocacy, commissioning of studies, and extended general assemblies, meetings and seminars, etc. are foreseen. Based on input from the ZEP members on what they would like to see as the main focus areas, the ZEP own work programme will be presented together with a proposed budget to the Advisory Council in December this year for endorsement (and then brought to the ZEP-C for approval).

To further strengthen ZEP and ensure continuity and independence – not having to rely on a specific grant holder – ZEP will develop further the current setup of funding resources and re-introduce employment of permanent staff funded by the members to lead and coordinate ZEP work, including both work programmes – the ZEP/IWG9 grant and the ZEP own programme.

3.c. Strengthening the industrial base in ZEP

As the positive momentum for CCS and CCU in Europe continues, there is growing interest from ZEP members to follow the developments and further expand ZEP's membership base. Currently, potential members are categorised under five constituencies that cover the entire CCS and CCU value chain.

To further strengthen ZEP's industrial membership base and attract new members to the Platform, ZEP is preparing a value proposition for new members, clarifying not only the role of CCUS for industrial decarbonisation, but also how ZEP can support industry in a just and cost-efficient transition towards net-zero, identifying industry's needs and what ZEP can deliver. This work is aimed to strengthen ZEP's role as the go-to organisation for CCUS in the EU/Brussels.

Discussions have taken place at the ACEC strategic seminars, where thoughts were shared regarding ZEP's evolution, and the opportunities and challenges for companies when joining ZEP. Based on this, ZEP members and observers will be contacted for input (interviews/questionnaire). In addition to providing a good basis on what would increase value, it would also give valuable input for the development of ZEP's own work programme.

In addition to the strengthening of the member base, there is a need to consider how to best cooperate with sector associations in order to increase visibility of ZEP and knowledge about CCS and CCU.

The aim is to present a draft value proposition to the Advisory Council in September this year.

Extract from 'final working document': 'annex VIII to the Horizon Europe work programme 2021-2022, 8. Climate, Energy and Mobility'.

HORIZON-CL5-2021-D3-02-15: Support to the activities of the ETIPs and technology areas of the SET Plan

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 1.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 9.80 million.
<i>Type of Action</i>	Coordination and Support Actions
<i>Award criteria</i>	<p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>The criteria are described in General Annex D. The following exceptions apply:</p> <p>Only up to one project will be funded in each of the following sectors:</p> <ul style="list-style-type: none"> • carbon capture storage and use; • geothermal systems; • hydropower; • ocean energy; • photovoltaics; • renewable fuels & bioenergy; • concentrated solar thermal energy (CSP & STE); • renewable heating and cooling; • wind energy; • energy efficiency in industry; • energy efficiency in buildings.

Expected Outcome: Engagement of stakeholders is pivotal in the transition to a clean energy system and the achievement of the zero-emissions target.

Project results are expected to contribute to both of the following outcomes:

- Consolidation of strong and sustainable networks in the different technology areas covered through the Strategic Energy Technology (SET) Plan and its integrated roadmap.
- Cooperation among ETIPs and similar stakeholders fora, support to existing SET Plan Implementation Plans and advancement towards more interconnected activities, both in terms of contents and implementation mechanisms.

Scope: In 2015, the launch of the Energy Union saw the SET Plan incorporated as the Energy Union's fifth pillar on 'Research, Innovation and Competitiveness'. Through the Communication "Towards an Integrated Strategic Energy Technology (SET) Plan", the Integrated SET Plan set ambitious R&I targets which remain relevant and essential in the new context of the European Green Deal and the Recovery Plan for Europe.

Depending on the sector, European Technology and Innovation Platforms (ETIPs), and/or SET Plan Implementation Working Groups (IWG) and/or similar stakeholders fora support the development and implementation of the SET Plan R&I priorities by bringing together relevant stakeholders in key areas from industry, research organisations and, where applicable, SET Plan Countries' government representatives. They develop research and innovation agendas and roadmaps, industrial strategies, analysis of market opportunities and funding needs, understanding of innovation barriers and exploitation of research results, which are in line with the Recovery Plan for Europe and latest EU climate and energy related policies. They also provide consensus-based strategic advice to the SET Plan initiative covering technical and non-technological aspects.

Considering the overarching aim of the clean energy transition, ETIPs, IWGs and/or similar fora are encouraged to align and coordinate their activities, defining cross-cutting aspects for accelerating the clean energy transition and contribute to the development of a European Research Area in the field of Energy. Proposals should support ETIPs and/or IWGs and/or stakeholders fora of one of the above-listed sectors, taking into consideration the specific needs of the sector they address and the emerging policy priorities for their implementation as well as the coordination with other initiatives/projects, in order to avoid overlaps.

ETIPs, IWGs and stakeholders fora should ensure the participation of companies (industry and SMEs), research and civil society organisations, universities and European associations representing relevant sectors (as applicable) from a representative number of SET Plan countries establishing links with national authorities. To maximise their impact and widen participation, they are encouraged to develop and implement robust outreach approaches and societal engagement actions to span across the EU and associated countries.

Special attention should be given to the key challenges of the European Green Deal, including, but not limited to, technological pushback, industrial production, societal transformation, and just transition. Likewise, contributions to the goals of the European Research ERA in the field of energy, in particular regarding how to incentivise investing in research and innovation should be addressed.

Furthermore, proposals should develop a dissemination and exploitation strategy and implement dissemination and networking activities with other existing ETIPs and IWGs (e.g. joint workshops, thematic conferences, webinar series, regular exchanges, etc.). Relevant outputs of these CSAs will feed into the SET Plan information system (SETIS).

This topic requires the effective contribution of SSH disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.

Proposals should address one of the following sectors: carbon capture storage and use, geothermal systems, hydropower, ocean energy, photovoltaics, renewable fuels & bioenergy, concentrated solar thermal energy (CSP & STE), renewable heating and cooling, wind energy, energy efficiency in industry, energy efficiency in buildings.

Proposals submitted under this topic are encouraged to include actions designed to facilitate cooperation, across Europe, with other projects and to ensure the accessibility and reusability of data produced in the course of the project. Proposals should include a finance and sustainability plan for future continuation beyond the lifetime of the proposal.

The indicative project duration is 3 years.

The requested budget for actions in the areas of concentrated solar thermal energy, energy efficiency in industry and energy efficiency in buildings should be around EUR 0.6 million because in these sectors there is no ETIP, only a SET Plan IWG with lighter structure and activities. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.

Budget management: Expenditure against 2021 budget

Activity	Contractor	Budget 2021	Comments	To date Spent	Comments	To Date Committed	Comments
Administration / Auditing	Adams accountants / Vandelanotte	€ 8 000		€ 1 083			
Website maintenance	Karakas	€ 1 000		€ 0			
Legal advice	Lawsquare	€ 4 000		€ 0			
Chair	Ardnacraggan Energy Services	€ 67 992		€ 52 080			
Contingency		€ 4 000		€ 1 138			
Communications and events		€ 85 000		€ 0			
Funding for 2021 + Strategic work		€ 62 500		€ 0			
Total		€ 232 492		€ 54 301		€ 0	

Spent: Actually paid or contractually due for delivered work
 Committed: Based on signed contracts, yet to be approved invoices or founded estimates

Spent + Committed € 54 301
 Remaining total budget € 178 191

Forecast

€ 186 871	Starting point 2021 (= Left over budget 2020)
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2021 Total Spend	Comments Relative to budget
€ 8 000	
€ 1 000	
€ 4 000	
€ 67 992	
€ 4 000	
€ 85 000	
€ 62 500	
€ 232 492	Total budget spent 2021

Cash management of ZEP Communications VZW / ASBL

Category	Source	Issued invoices	Comments	Pending invoices	Comments	Received payments	Comments
2021 contributions	O&G			€ 150 000	BP, Shell, Equinor, Total, Eni	€ 36 300	ExxonMobil
	OEM						
	Others (confirmed)			€ 102 500	HC, Gassnova, Port of Rotterdam, EBN, Fortum Oslo Varme, Northern Lights		
	Others (Potential)						

€ 186 300	
€ 0	
€ 102 500	

General	VAT return	€ 2 993	VAT declar 2021/02	€ 3 220	Invoices 2021 to be rec.	€ 3 764	REIMBURS Q01/2021
Total outstanding / pending ZEP-C		€ 2 993		€ 255 720			

€ 288 800	Total forecasted income 2021
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Cash situation (of 8 June 2021)

Current account (KBC - Business compact rekening)			€ 202 747
Savings account (KBC - Spaarrekening)			€ 101
Actual cash at bank and in hand			€ 202 849

243 179,00	Forecasted Left over budget 2021
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Expenditure situation

Source	Outstanding invoices	Comments	Pending invoices	Comments
Short term creditors	€ 0		€ 15 333	VDL + CA + CCSA
Outstanding invoices in spent to date, to be paid		€ 0	€ 15 333	

Cash boundaries

Minimum virtual financial position (all creditors paid, no more income) € 187 515
 Maximum virtual financial position (all creditors paid, all income realised) € 446 228

Agenda item 4: Updates from Networks – *for information and endorsement*

4.a. Network Policy & Economics

The latest Network Policy & Economics meeting took place in May 2021. The following items were discussed:

- The revision of the TEN-E regulation, with an update on ZEP actions.
- Consultations on PCIs and hydrogen markets.
- ZEP's draft position on the revision of the EU ETS Directive.
- New work starting on CDR and hydrogen.

These were the actions taken:

- The TWG Policy & Funding (P&F) will be leading ZEP's work on carbon dioxide removals. The ToR – which will guide the work of the group – is [appended](#) as a pre-read for the AC's approval.
- The TWG P&F, with addition of experts, will be leading on the work on hydrogen, with the aim of following several processes on hydrogen, such as the continued work of the European Clean Hydrogen Alliance, the gas and hydrogen markets decarbonisation package, and the Taxonomy complementary delegated act that is expected for this autumn. The ToR is [appended](#) for the AC's approval.

Update on consultations

The NWPE and TWG P&F have also been engaged in responses to open consultations by the European Commission.

- ZEP [response](#) to the gas and hydrogen market decarbonisation package, deadline 18 June.
- ZEP [response](#) to the consultation on candidate PCIs on CO2 infrastructure, deadline 18 June.

Both responses are provided for the AC's approval.

These responses have been submitted to the European Commission and are presented for the AC's approval:

- ZEP [response](#) to the European Taxonomy's adopted delegated act
- ZEP [response](#) to the Inception Impact Assessment on 'Hydrogen and gas market decarbonisation package'

4.b. Network Technology

The next Network Technology meeting will take place on 1 July.

Update on ZEP-ISO liaison status

Following ZEP's application to become a liaison organisation within the ISO/TC 265 technical committee, ZEP liaison with ISO/TC 265 is confirmed and registered.

The ISO TC265 is a technical committee which deals with several matters, such as the standardization of design, construction, operation, environmental planning and management, risk management, quantification, monitoring and verification, and related activities in the field of carbon dioxide capture, transportation, and geological storage (CCS).

Updates from Temporary Working Groups

TWG Carbon-neutral biomass

The group held several meetings to assess the status of the report and a first draft of the report was produced. While the report awaits the final contributions, the outline of the report will be the following:

- The value of biomass and the potential for industrial decarbonisation.
- The description of the different types of biomass and their applications.
- When emissions from biomass can be seen as carbon-neutral.

The report will also include examples from industries that plan to deploy solutions such as BECCS, waste-to-energy with CCS, steel and cement industries. The report will not provide any policy recommendations.

The aim is to present the report at the 68th Advisory Council meeting in September.

TWG Directive on geological storage of CO₂

Several meetings have taken place and the work on a report has started. The group is co-chaired by Stuart Haszeldine (SCCS) and Filip Neele (TNO). The discussions have resulted in a report outline, which is guiding the work of the working group. The report will look at how the directive applies to different types of storage, examine closure and handovers of storage sites and discuss issues related to financial security.

The report will also include a knowledge-sharing element, guiding member states in integrating the Directive into their own national legislation with experience gained from ongoing projects and previously submitted applications for storage permits.

The aim is to present the report at the 68th Advisory Council meeting in September.

TWG CCS for Clean Flexible Power Generation

The first meeting will take place on 17 June. A report outline is in preparation and will be shared ahead of the meeting with the members of the working group. The outline will be based on the discussions held so far with the co-chairs. ZEP is actively seeking more members to join this working group.

An update on the work will be given at AC67, with the aim to have the final report ready later this year.

TWG CO₂ shipping – *coordinated with the CCSA*

To actively support planned and upcoming European CCS projects, ZEP and the Carbon Capture and Storage Association (CCSA) are setting up a working group, that will be coordinated by ZEP under Network Technology, to work on CO₂ shipping. The overarching aim is to develop consensus on international standards for key elements of CO₂ transport by ship – maritime and inland waterways – that are needed to facilitate the development of safe and efficient European CO₂ infrastructure and identify areas where standardisation could add value.

ZEP will tap into the expertise of the parties involved in planned and upcoming European CCS projects. Two co-chairs have been appointed for the group and the first meeting will take place on 1 July. A draft ToR has been developed, discussed with the co-chairs and the ACEC. The work will be led by ZEP, but the working group will also have members from CCSA.

Below are the Terms of Reference for approval.

Draft Terms of Reference – Standards for CO₂ transport by ship

Transport of CO₂ by ship is a vital part – contributing strongly to equitable access for all member states – of the CO₂ infrastructure that will enable emitters across Europe to connect to safe and permanent storage. CCS projects, including both cross border European CO₂ infrastructure projects of common interest (ref.) and domestic projects, have identified the need for both inland and maritime shipping solutions. Transporting CO₂ by ship will be crucial for large-scale CCS deployment in Europe.

Transport of CO₂ by ship has been recognised both at EU level – in the European Taxonomy for Sustainable Activities as well as within the EU ETS Directive – and on national level – e.g. in the Dutch SDE++ subsidy scheme and UK CCUS programme.

For CCS projects aiming at transporting CO₂ by ship, interoperability will be very important in order to optimise the development of CO₂ infrastructure. There is a need for standards on CO₂ specifications (composition, pressures, temperatures, etc.), ship design and specifications (e.g., referring to loading and off-loading). As many CCS projects will become operational in the mid-2020s, many new ships for CO₂

transportation will be needed within five years, making these standards urgent and needed.

A Zero Emissions Platform (ZEP) workshop with experts was organised in April 2021 and ZEP has been asked to coordinate the work going forward. At the same time, the Carbon Capture and Storage Association (CCSA) would also like to see this work progressed. Therefore, it is proposed that a joint ZEP-CCSA working group is established and coordinated by ZEP in order to bring the work forward effectively and efficiently.

Objectives

The overarching aim is to develop consensus on international standards for key elements of CO₂ transport by ship – maritime and inland rivers and canals – that are needed to facilitate the development of a safe and efficient European CO₂ infrastructure. Such infrastructure would support cost-efficient CCUS deployment in multiple regions and countries in Europe.

This work aims to:

- Identify the expected scale and geographical distribution of European requirements for CO₂ ship transport, and to consider how these may evolve over time.
- Identify areas where consistency can add value, and elements that require standardisation (build on existing experience, e.g. from LNG shipping, ISO TC265, etc.)
- Prepare ZEP technical guidelines/light standard for CO₂ ship transport.
- Assess which existing standardisation organisation would be best placed to adopt and advance on standards for CO₂ transport by ship (standards bodies, IMO, shipping classification societies, etc.), as well as identify and agree on next steps.

Timing

This work will start in July 2021. The proposed timeline is:

- Approval and first oral update at ZEP AC in June 2021.
- First draft outline for comments and presentation at ZEP AC in September 2021.
- Conclusion of the first phase of the work and proposed way forward at ZEP AC in March 2022.

Experts

The working group will be equipped with experts from CCS projects, companies involved in shipping, port operators and emitters. Governments, the European Commission and national regulators will be invited to observe the work.

Agenda item 5: Updates from the External Relations Group – *for information and guidance*

5.a. Updates from the External Relations Group

The next External Relations Group meeting will take place on 11 June and will address ZEP's communications and outreach priorities for Q3 2021.

The main items to discuss include:

- ACEC strategic seminar: The second ACEC strategic seminar was held on 1 June. The focus was on ZEP development, the Horizon Europe work programme and call for proposals, the ZEP value proposition for members, and business models for CO₂ transport.
- ZEP Communications Group: Update on discussions at the meeting on 10 June and the ongoing work. (*Further information outlined in 5.b.*)
- ZEP conference 2021: ZEP is planning a conference in coordination with the ZEP 68th Advisory Council meeting on 22 September. (*Further information outlined below.*)
- Coordination with other stakeholders: How best to ensure effective and efficient stakeholder cooperation based on topic and policy.

ZEP Conference 2021

ZEP is planning a conference in coordination with the ZEP 68th Advisory Council meeting. The conference is proposed to take place at 14:00-17:00 CET on 22 September, coinciding with the end of the current ZEP grant in October, as well as being timely in the lead up to COP26 in November. The conference programme will reflect on positive developments in CCS/CCU, keeping the momentum looking ahead to 2022, and will focus on the main challenges ahead.

ZEP engagement plan

ZEP's ongoing engagement plan throughout 2021 will mirror the main policy initiatives from the European Commission. Going forward, the focus will remain on the TEN-E regulation, low-carbon hydrogen, CDR and the revision of the EU ETS directive.

Recently, ZEP has held several meetings:

- In May, ZEP met with the Austrian Agency for Environment, which is coordinating the study on certificates for CDR that will feed into the work of DG CLIMA.

- ZEP had a working meeting with DG CLIMA to discuss the certification framework for CDR and the EU ETS revision.
- Follow-up with office of MEP Seán Kelly on the TEN-E Regulation.

ZEP's communication around EU Taxonomy

Following the adoption of the first delegated act of the European Taxonomy for Sustainable Finance by the European Commission, ZEP drafted input to the European Commission. At the ACEC May meeting on 18 May, the ACEC endorsed the proposed ZEP Taxonomy input, as well as restarting the ZEP temporary working group on hydrogen.

[ZEP's input](#) on the Taxonomy aiming at the complementary delegated act that is expected this autumn, and focused on the important areas where the input can make a difference.

Overview of past and upcoming ZEP events and participation

EU Green Week 2021

As part of [EU Green Week 2021](#), ZEP and the Global CCS Institute co-organised a webinar looking at how CCS can support reaching a climate-neutral EU by 2050. Speakers from the European Commission (DG GROW), Air Liquide, Eni, and Gassnova joined for the discussion on opportunities and challenges for CCS projects in Europe, incentivising CCS, the important role of cross-border European CO₂ transport and storage infrastructure, and assessing up-and-coming regions, well placed to support CCS and climate neutrality targets.

- Setting the scene for the event, Lamberto Elderling, Vice-Chair of ZEP, provided an overview of CCS in Europe, from early developments to the current status. Highlighting the renewed and growing interest in CCS for industry and importance of the 2020s to develop CCS, make technologies investable, and scale up development.
- Discussing CCS from a policy perspective, Vincent Basuyau, DG GROW, European Commission, highlighted the increased ambition for zero and low carbon technologies and business concepts to be developed and tested at scale in this decade to meet the EU's climate neutrality ambitions.

A panel discussion followed, moderated by GCCSI. Key discussions included:

- The importance of CO₂ transport and storage infrastructure. With CO₂ emitters widely distributed across Europe, and geological storage sites not evenly distributed, the large-scale deployment of cross-border, European CO₂ infrastructure allows all CO₂ emitters across Europe to connect to safe, geological storage, and is crucial to reach the EU's objective of net-zero GHG emissions by 2050.

- Including all modes of CO₂ transport – pipeline, ships, barge, truck, and train – is crucial to support the development of CCS.
- The potential for onshore and offshore CO₂ storage in Europe. Geological permanent storage is safe and secure.
- The role of CCS to reach Europe's climate targets. Policy framework for the full CCS value chain is needed, ensuring certainty from a legal and regulatory point of view.

CCUS Forum

Organised by DG ENER, the first CCUS Forum is expected to take place on Monday, 5 July. ZEP has been asked to organise and moderate a session.

EU Sustainable Energy Week 2021 (EUSEW) (25-29 October)

ZEP has the opportunity to engage in [EUSEW 2021](#) through co-organising a policy session. Coordination is ongoing with the other organisations involved and a joint application was submitted in May. Feedback on the application will follow in mid-June.

COP26 – EU Pavilion call for applications (Deadline 30 June)

COP26 is scheduled to take place on 1-12 November 2021 in Glasgow. The EU and Member States will take part as Parties to the UN Framework Convention on Climate Change (UNFCCC). A [call for applications](#) has been launched to allow side event organisers to include their events in the EU Pavilion programme at COP26. ZEP is preparing an application to be discussed with the ERG for input and approval.

5.b. Updates from the ZEP informal Communications Group

At the next meeting of the ZEP informal Communications Group on 10 June, the following items will be up for discussion:

- **EU policy update – CCS and CCU perspective:** Overview and timeline of ongoing and upcoming policy initiatives, with a focus on ZEP's and the Group's activities. Looking ahead, the TEN-E Regulation revision and Fit for 55 Package, as well as engagement on low-carbon hydrogen and the European Clean Hydrogen Alliance and EU Taxonomy, remain focus areas for ZEP.
- **Communications activities and events:** Update from ZEP and the Group on May activities and planned communication activities and events for June-July. Highlights include a discussion on the ZEP conference 2021 draft programme and activities in the lead up to COP26.

- **Hydrogen for Europe study:** Discussing the recent Hydrogen4EU [report](#) findings and how to use the report in the best of ways for communication and outreach activities.
- **ZEP CCS/CCU Facts & Information Toolkit:** Presentation of Volume 1 of the Toolkit. The toolkit will serve as a point of reference to determine how to react to CCS/CCU criticism when it arises. In addition, it aims to take a positive approach and to be proactive, by informing about CCS/CCU technologies and explaining the complementary role of CCS in combatting climate change.

Agenda item 6: IEA Net Zero by 2050 report – *for information*

6.a. Presentation of the IEA report Net Zero by 2050 – A Roadmap for the Global Energy Sector

Samantha McCulloch, head of Carbon Capture Utilisation and Storage unit at IEA, has been invited to give a presentation on the [Net Zero by 2050](#) report.

Agenda item 7: The TEN-E Regulation revision – *for information and guidance*

7.a. Update on EU institutions' negotiations

The discussions within the European Parliament have begun and the ITRE Committee is leading on this file.

The first exchange of views on the report took place in the ITRE Committee in March. The Commission was also in attendance. The rapporteur (MEP Krasnodębski, ECR/PL) gave an overview of the report, highlighting the importance of a future-proof, revised TEN-E regulation. Although most of the remarks focus on the exclusion of natural gas from the regulation, some MEPs made positive remarks about the role of CO₂ infrastructure and CCS projects in achieving climate neutrality.

- It was highlighted that transport of CO₂ should be enabled by all modalities and that CO₂ storage should be included.
- It was highlighted that CCS can enable the delivery of low-carbon hydrogen.
- It was also mentioned that the Commission should keep a technology-neutral approach and that several technologies will need to be deployed to achieve net-zero GHG emissions.

In April, the ITRE Committee published and discussed its [draft report](#). Following the rapporteur's presentation, the following points were raised on CO₂ infrastructure:

- CCS is essential for the decarbonisation of energy-intensive industries and the production of low-carbon hydrogen. [Amendments](#) to support all CO₂ modalities and CO₂ storage have been tabled by EPP Group, I&D and some MEPs from Renew Europe.
- Positive remarks in favour of low-carbon hydrogen and a technology-neutral approach were made.

Technical discussions began at the end of May, with the aim to propose compromise amendments, while political and high-level discussions on the TEN-E regulation followed in June. Meanwhile, the ambassadors at the Council have been meeting regularly to discuss the Commission's proposal and to prepare for further negotiations with the EU Parliament and Commission.

At the European Council level, a draft general approach was published. Key points are summarised below:

- In the description of the priority areas, cross-border carbon dioxide networks are defined as 'development of carbon dioxide transport and storage infrastructure between Member States and with neighbouring third countries in view of the

deployment of carbon dioxide capture and storage as well as and enabling CO₂ utilization including for synthetic fuel gases leading to the permanent neutralization of carbon dioxide'. The addition of CO₂ storage is the new element.

- The description of the energy infrastructure category highlights CO₂ infrastructure as:
 - Dedicated pipelines, other than upstream pipeline network, used to transport carbon dioxide from more than one source;
 - Facilities for liquefaction and storage of carbon dioxide in view of its further transportation. Without prejudice to those Member States in which geological CO₂ storage is prohibited, this also includes infrastructure within a geological formation used for the permanent geological storage of carbon dioxide, not involving the use of CO₂ for enhanced recovery of hydrocarbons, pursuant to Directive 2009/31/EC and associated surface and injection facilities. The infrastructure for geological storage that is applicable to this regulation is limited to the associated surface and injection facilities necessary to allow the cross-border transport and storage of CO₂. This latter sentence on infrastructure for CO₂ storage in the second point is the new element.
 - Any equipment or installation essential for the system in question to operate properly, securely and efficiently, including protection, monitoring and control systems.

ZEP has also engaged the Government Group, sharing input and consultation responses with them in March 2021.

Timeline:

- 11 June: Energy Council meeting
- 15 July: ITRE Committee vote on TEN-E regulation

7.b. ZEP actions on TEN-E Regulation revision

Webinar: Cross-border, European CO₂ transport and storage infrastructure: A real enabler for European decarbonisation

On 23 March, a webinar co-organised by ZEP, Bellona Europa, and Clean Air Task Force was held to emphasise the necessity of European CO₂ transport and storage infrastructure.

- Dr Graeme Sweeney, Chair of ZEP, opened the event by reiterating the importance of European CO₂ transport and storage infrastructure – crucial to enable an industrial transition, which is just for society and can help keep European industries and regions competitive.

- MEP Seán Kelly, European People's Party and MEP for Ireland, gave the keynote speech: "We need to broaden the cross border criteria in the TEN-E Regulation so that any project which is necessary for at least one of the energy infrastructure priority corridors and thematic areas should be eligible for PCI status. Without this, we could be in a situation where we exclude projects that contribute substantially to EU energy and climate targets."
- Lina Strandvåg Nagell, Sustainable Finance and Economy Manager at Bellona Europa, took a closer look at what the importance of TEN-E is, as well as the benefits available through Projects of Common Interest (PCI) status.

The setting the scene for the webinar and highlight on TEN-E was followed by short presentations from four panellists, which brought different perspectives on CO₂ transport and storage infrastructure.

- Rob van der Meer, Director EU Public Affairs at HeidelbergCement, discussed the different pathways for CO₂ from sources such as cement plants to CCUS hubs, emphasising that time is of the essence for development of CO₂ infrastructure.
- Kim Bye Bruun, Communications and Government Relations Director at Northern Lights JV DA, brought the perspective of a company developing the world's first open-source CO₂ transport and storage infrastructure, and explains CO₂ transport and storage at scale and how this can enable industrial decarbonisation.
- Jacob Hartvig Simonsen, ARC CEO and spokesman of C4 (Carbon Capture Cluster Copenhagen), presented the plan for CO₂ capture at the ARC Waste-to-Energy plant in Copenhagen, which has the potential to capture and store 500,000 tonnes of CO₂ annually.
- Stijn Santen, Senior Business Advisor CCS at EBN, outlined CO₂ storage opportunities in The Netherlands and highlighted that while CO₂ storage sites are unevenly distributed in Europe, a European cross-border CO₂ transport and storage infrastructure will allow any CO₂ emitter to have access to secure geological storage and decarbonise the industrial activity.

A panel discussion followed, moderated by Sonja van Renssen, Energy Monitor. Crucial topics that were addressed included:

- Cross-border CO₂ transport and storage infrastructure will enable CO₂ emitters across Europe to connect to safe, geological storage, enabling a cost-efficient transition to a climate-neutral economy.
- A revised TEN-E Regulation proposal needs to include both CO₂ storage and all CO₂ transport modalities – not only pipeline but also ship, truck, train, and barge.
- There is a need to develop CO₂ infrastructure now as it will also kick-start a clean hydrogen economy.

Lee Beck, CCUS Policy Innovation Director at Clean Air Task Force, summarised the crucial points and stressed that a revised TEN-E regulation that includes both CO₂ storage and all modalities of CO₂ transport – ship, barge, truck, and train, as well as pipeline – would ensure more certainty for investors.

ZEP knowledge-sharing seminar on CO₂ infrastructure

Following an initial webinar on 23 March and as the work on the TEN-E regulation progressed in the European Parliament and the Council, ZEP organised a knowledge-sharing seminar on 25 May for attendees from EU Member State governments, Energy and Climate attachés at Permanent Representations, and MEP assistants. The seminar focused on CO₂ infrastructure in the revised TEN-E regulation and aimed to be as informative as possible by providing real-life perspectives, experience, and views on CO₂ transport and storage infrastructure in Europe from projects, industry, society, and an EU Member State.

The programme for the seminar:

Introduction and setting the scene – Zero Emissions Platform

Insights into CO₂ transport and storage in Europe, bringing perspectives from projects, industry, society, and an EU Member State:

- *Carl van der Horst, Director European Affairs, Tata Steel Europe*
- *Kim Bye Bruun, Communications & Government Relations Director, Northern Lights JV DA*
- *Keith Whiskey, Deputy Director, Bellona Europa*
- *Svante Söderholm, Senior Advisor, Research, Innovation and Business Development, Swedish Energy Agency*

Questions & Answers with the speakers

Agenda item 8: EU ETS Directive and Carbon Dioxide Removal – *for information and guidance*

8.a. Update on revision of EU ETS Directive

While expecting the presentation of the 'Fit for 55' Package in July 2021 – where the Commission will review a series of policy initiatives, such as the EU ETS Directive – ZEP has been working on a draft position paper.

The draft position paper was discussed with NWPE, the TWG Policy & Funding and the ACEC, and it summarises the agreed ZEP positions ahead of the review. It is built on previous consultation responses and further discussions.

It is [included](#) in this item and presented for the AC's approval.

8.b. EU Commission's work on CDR certificates

In 2020, the European Commission announced the beginning of its work on a certification framework for carbon dioxide removals (CDR). The work is being led by DG CLIMA and a study has been commissioned, which will feed into the certification work that will be ready in Q1 2022.

ZEP recently met with DG CLIMA regarding the certifications for CDR. DG CLIMA will release two communications at the end of 2021 – one on carbon farming and one on carbon removals, outlining a vision for 2030 and 2050, with a focus on the capture of carbon. A stakeholders' survey will also be launched in the coming weeks, and ZEP members are invited to give input by responding to it.

ZEP will follow this work by engaging the TWG Policy & Funding, as outlined under agenda item 4. *Updates from Networks*.

8.c. Updates on the Innovation Fund

An update on the Innovation Fund will be given at the meeting by Maria Velkova, DG CLIMA European Commission.

Innovation Fund

First call for large-scale projects: In March, the European Commission communicated about projects that have made it to the second stage of the first Innovation Fund call for large-scale projects. Following the [evaluation](#) of the first stage of the application process (where 311 proposals were received), 70 projects are invited to continue on to the

second stage and submit full applications, where they will be assessed on all the criteria, including scalability and cost efficiency, by 23 June 2021.

First call for small-scale projects: Following the first Innovation Fund call for small-scale projects, the European Commission received 232 applications for innovative clean tech projects in renewable energy, energy-intensive industries, energy storage, and carbon capture, use and storage. The number of applications per sector:

- About 125 for energy-intensive industries, including CCUS – out of which around a third in hydrogen and around a sixth in bio-refineries.
- About 60 for renewable electricity and heat – out of which almost half in solar energy.
- About 50 for energy storage.

ZEP response to the Innovation Fund consultation

ZEP [responded](#) to the Innovation Fund consultation on an amendment of the delegated regulation to enable a choice between a one-stage or two-stage application procedure for the next large-scale call.

The response highlighted the same message that was communicated in the previous response:

- One-stage application process gives more flexibility for less complex projects.
- The two-stage application process was more likely to result in a balanced selection of projects.
- Positive reply is therefore conditional on:
 - Introducing a one-stage process will not create a disadvantage for more complex projects, applying in accordance with the two-stage process for being rewarded funding.
 - That projects applying for the one-stage process will not be eligible for Project Development Assistance.

Agenda item 9: Low-carbon hydrogen – for information

9.a. Presentation on the European Clean Hydrogen Alliance and Hydrogen IPCEI

The project collection of the European Clean Hydrogen Alliance, launched by the European Commission, was finalised on 7 May. A total of more than 1,000 projects have been collected, including more than 40 GW of electrolysis projects. The next step for the Commission is to screen the projects against the criteria (such as threshold on emissions) set by the Alliance. It is understood that the Commission will have an inclusive view, in light of the infrastructure assessment.

To prepare for a meeting with Commissioner Breton, the roundtable facilitator has prepared an 'Outcome document', aimed to summarise the work and discussions held over the past months within the roundtable on renewable and low-carbon hydrogen production. The document will be used as a basis for the CEO's presentation at the meeting – where the Roundtable on hydrogen production will be represented by CEO of Ørsted, Mads Nipper. The document highlights some takeaways from the discussions and CEO meetings, and highlights project archetypes, key barriers and mitigation measures for the development of hydrogen in Europe. ZEP gave input to the document, highlighting the importance of technology neutrality, the definitions of hydrogen, LCA for all technologies, additionality, etc. resulting in a more balanced version.

The European Hydrogen Forum will take place on 17-18 June 2021, with further details and [registration](#) open. The deadline for the work of the alliance is set to the Hydrogen Forum in November 2021.

9.b. Presentation of Hydrogen for Europe study

The [Hydrogen4EU study](#) will be presented at the AC67 meeting.

The study supports the realisation of EU targets for 2030 and 2050 by assessing which mix of hydrogen technologies can best contribute to the EU's current and future energy landscape and what support is needed to enable this.

Agenda item 10: Closing remarks

10.a. Next meeting dates

ACEC July meeting: 13 July 2021

ACEC August meeting: 17 August 2021

68th Advisory Council meeting: 22 September 2021